

Appendix M

DEIS Comment Responses and Comments

CHRLF DEIS COMMENTERS

Commenter Number	Name	Attachment Document Included?
1	Albert Andres	No
2	Bill Roberts	No
3	Kerbad Palkhivala	No
4	Ricky Wong	No
5	John Hansen	No
6	Maggie Leonard	No
7	Jelena Ramsey	No
8	Allison Donald	No
9	Marie McPeak	No
10	Virginia Brokx	No
11	John Hansen	No
12	Carrie Koperski	No
13	Nora Williams	No
14	Kathi Middlekauff	No
15	Craig Cottrill	No
16	Kathy Dolphin	No
17	Dave and Susan Liebling	Yes
18	John MacGillivray	No
19	Janet Kim Lin	No
20	Allyson Crawford	No
21	Florian Laplantif	No
22	David Linnenkamp	No
23	Edward Sweeney	No
24	Kimberly Searing	No
25	Stephen & Flora Smading	No
26	Dave Prochazka	Yes
27	Tim Shupe	No
28	Naomi Benton	No

Commenter Number	Name	Attachment Document Included?
29	Mike O'Halloran	No
30	Eric Prince	No
31	David Sheridan	No
32	Eric Hudson	No
33	Eric Hudson	No
34	Eric Hudson	No
35	Eric Hudson	No
36	Eric Hudson	No
37	Laurie Walker	No
38	Curtis and Leslie Green (Leslie Morgan)	Yes
39	Armondo Pavone / City of Renton	Yes
40	Zoë Mullendore / Dave Upthegrove	Yes
41	Pon, Yolanda / PHSKC	Yes
42	Susan Sander	Yes
43	Kramer, Karen	No
44	Hardy Kramer	No
45	Eric Hudson	No
46	Valerie Paganelli	No
47	Bradley Jones	Yes
48	Tom Neider	No
49	Peter Rimbos / GMVUAC	Yes
50	Eric Hudson	No
51	Eric Weber / Queen City Farms, LLC	Yes
52	Dave and Lisa Peterson	No
53	Valerie O'Halloran	No
54	Eric Hudson	No
55	Eric Hudson	No
56	Janet Dobrowolski	Yes
57	Bob Shaw	No

Commenter Number	Name	Attachment Document Included?
58	Stevens, Savanna	No
59	Rick and Kim Brighton	Yes
60	Jeff Dineen	No
61	Jacquelyn Green	Yes
62	Sean Kronberg	Yes
63	Richard Honour	Yes
64	Steven Bergman	No
65	Janet Dobrowolski	Yes
66	Rick and Kim Brighton	Yes
67	Eric Hudson	Yes
68	Eric Hudson	No
69	Ken and Heidi Johnston	No
70	Community of 4-Lakes	Yes

CHRLF DEIS COMMENT RESPONSES

Commenter	Topic	King County Solid Waste Division Response
Fact Sheet; Summary		
42	A. Validity of purpose and need	The Purpose and Need for the proposed project are based on the information contained in the 2019 Solid Waste Comp Plan, the direction of the King County Council, and the stated objectives of the KCSWD.
46	B. Interlocal Agreements	A list of participating King County cities and their Amended and Restated Interlocal Agreements are available on King County's website: https://kingcounty.gov/depts/dnrp/solid-waste/about/interlocal-agreements.aspx . This information has been added to the Existing Interlocal Agreements section of the Summary chapter.
Chapter 1: Introduction and Background		
61	A. BEW Operation	Some comments indicated that the description of BEW's operation, including its waste stream, was incomplete. Additional clarifying text has been added to Section 1.3.5.
61	B. Buffer Description	Some comments indicated that the description of the west buffer zone was inaccurate. Additional clarifying text has been added to Section 1.3.1.
49	C. Solid Waste Comp Plan Reference	Some comments indicated that the Alternatives referenced in the 2019 Comprehensive Solid Waste Management Plan Final EIS were not clear. Additional clarifying text has been added to Section 1.7 to specify relevant Alternatives in the Solid Waste Comp Plan.
39, 46, 49	D. Environmental Review Process	Some comments indicated concern that the environmental review process did not include the entire community potentially affected by the proposal. Please see Section 1.5 for a discussion of the efforts taken by KCSWD to engage affected communities. KCSWD followed all requirements for public engagement as outlined in WAC 197-11-510, KCC 20.44.060, and KCC Title 20 in general. Study areas for potential air and noise impacts are those areas where existing and current impacts may be felt. The term "neighbors" is specific to a group that received certain forms of outreach and communication and does not define a study

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		<p>area(s). Additional clarifying text has been added to Section 1.5 to clarify the areas surrounding the CHRLF that were included in public notifications.</p> <p>KCSWD reviewed all comments submitted on the DEIS by all stakeholders, including members of the public, Tribes, non-profit organizations, and other agencies. KCSWD considered all the comments received and determined that additional or revised environmental studies were needed to proceed with preparation of this Final EIS, including those focused on health risk, air toxics, odor, noise and vibration, and aesthetics. See the Appendices to the FEIS for updated technical reports in those areas.</p> <p>Some comments asked for clarification on the purpose and scope of the Final EIS. A Final EIS documents public comments on the Draft EIS, and it reflects any changes to the proposed alternatives and the discussion of potential impacts based on public comment. A Final EIS is used by decision makers to select an alternative to implement. Those decision makers may elect to not carry a project forward based on the potential impacts disclosed in an EIS, or they may elect to modify the proposed action alternatives based on the potential impacts. In addition to the FEIS, decision -makers also consider other relevant information, including but not limited to, cost and financial information, equity information, technical and engineering considerations, and other community input.</p>
49	E. Community Equity	<p>Some comments suggested that KCSWD conform to the minimum standards outlined in the King County Equity and Social Justice Strategic Plan for CIP projects such as the CHRLF expansion.</p> <p>The purpose of the EIS is to evaluate environmental impacts pertaining to the Elements of the Environment defined in WAC 197-11-444. See Chapter 11, Land and Shoreline Use, for a discussion of the County policies that govern allowed uses for the CHRLF parcels and surrounding areas and impacts to rural character in the context of essential public facilities such as CHRLF.</p> <p>King County considers equity and social justice in capital program elements of the CIP process in accordance with the King County Equity and Social Justice Strategic Plan. This EIS and any of the mitigation measures it identifies, and the ongoing public engagement facilitated by KCSWD, further the County's efforts to</p>

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		<p>minimize impacts of operation and expansion on the communities surrounding CHRLF, while continuing to allow this Essential Public Facility to serve nearly all residents of King County (excluding Seattle and Milton).</p>
47, 49	F. Indirect Impacts/Long-Term Disposal Options	<p>Some comments express concern that the EIS does not adequately evaluate the impacts associated with potential long-term disposal options, including waste export by rail and waste export to a regional landfill.</p> <p>King County has not yet selected the long-term disposal option that will be used once the CHRLF reaches its capacity. The 2019 Solid Waste Comp Plan and the Solid Waste Comp Plan FEIS considered waste export and a waste to energy (mass burn) facility alongside an expanded CHRLF as disposal options in the Public Review Draft Comp Plan and compared the associated environmental impacts of each of those alternatives. Because expansion of CHRLF was ultimately recommended by the County Executive and approved by the King County Council as part of the Solid Waste Comp Plan process, KCSWD brought forward the alternatives being evaluated in this EIS. The purpose of this EIS is to evaluate the expansion alternatives at CHRLF and the facility relocation options, as directed by the King County Council, not the long-term disposal options once the CHRLF reaches its capacity.</p> <p>The Final 2019 Solid Waste Comp Plan indicated that either waste export by rail to a regional landfill or a WTE facility located somewhere in King County could be undertaken after expansion of CHRLF. This EIS does document potential indirect impacts associated with the alternative long-term disposal options under policy consideration. For each element, a qualitative summary of these indirect impacts is provided.</p>
44, 46, 61	G. Landfill History	<p>Some comments indicated that the history of the landfill is not adequately described in this EIS. KCSWD believes the relevant history of the CHRLF is included in Section 1.0, including any litigation that currently conditions further development of the landfill. Changes in the operation of CHRLF are based on changes in population, environmental regulations, and improvements in practices, design, and technology. It is beyond the scope of this EIS to include a history of all landfills in the region and decisions regarding their operation and closure.</p>

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		<p>However, some additional historical information has been added to Section 1.2 to provide additional context to the current proposal.</p>
49	H. Mitigation Measures	<p>Some comments express concern that neither the full scope of impacts, nor the full range of possible mitigation measures, is included in the EIS.</p> <p>Based on the comments received KCSWD determined that additional or revised environmental studies were needed to proceed with preparation of this Final EIS, including those focused on health risk, air toxics, odor, noise and vibration, and aesthetics. Each section of the FEIS includes the full range of impacts identified, with many including updates based on the results of the additional technical studies. Proposed mitigation for several elements has been updated.</p>
61	I. North Flare Station	<p>A comment questioned the accuracy of the description of the North Flare Station. Please see Section 1.3.6 for a revised description that acknowledges that the frequency of flare use can vary during the year.</p>
63	J. Past Landfilling Practices	<p>Some comments referenced past landfilling practices as a potential source of environmental contamination. Regardless of when waste was placed at CHRLF, the best measure of the effectiveness of environmental control systems at the landfill are the results of surface and stormwater, groundwater, and leachate monitoring required by WAC 173-351.</p> <p>Please see Section 2.1.1.2 for a description of the surface and stormwater monitoring requirements at CHRLF, Section 2.1.1.3 for the groundwater monitoring requirements at CHRLF, and Section 5.1.4.1 for a description of the leachate effluent limitations and self-monitoring requirements specified in Wastewater Discharge Permit No. 7842-03.</p> <p>Environmental monitoring results for stormwater are included in the CHRLF Quarterly Environmental Monitoring Reports, which are available on KCSWD's website (<https://kingcounty.gov/depts/dnrp/solid-waste/facilities/documents.aspx#cedar_reports>). The stormwater monitoring reports for the past several years indicate that parameter concentrations in samples from the landfill typically fall well below their respective benchmark values, or effluent limits.</p>

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		<p>Section 6.1.5 provides a summary of groundwater quality at and around the CHRLF, and while overall, groundwater quality in the vicinity downgradient of the CHRLF has been impacted, none of the issues are directly attributed to the CHRLF.</p> <p>Environmental monitoring results for leachate are also included in the CHRLF Quarterly Environmental Monitoring Reports, which are available on KCSWD's website (see above). Section 5.1.4.1 also contains a revised discussion of leachate monitoring results.</p> <p>Sewage treatment grit and screenings could have been and may be disposed of at the CHRLF if they did not or do not contain free liquids and are accompanied by a Waste Clearance Decision. Sewage treatment material typically disposed of at CHRLF in the past consisted of grit and screening derived from the pretreatment of sewage and is not considered a biosolid. Biosolids would be accepted only when directed by Public Health-Seattle & King County (Public Health) under a declared emergency.</p>
45	K. Petroleum Contaminated Soil	<p>Under King County's Waste Acceptance Rule, contaminated soils are defined as "soils where there is the presence of pollutants at concentrations above background levels that pose a potential health or ecological risk but are not designated as dangerous waste." Contaminated soil that does not meet the definition of Dangerous Waste is accepted at CHRLF only accompanied by a Waste Clearance Decision. Generally, these soils are used as daily cover in small quantities and are not accepted at CHRLF for disposal.</p>
17, 43	L. Property Values	<p>The purpose of the EIS is to evaluate environmental impacts. Property values were not an element discussed in the Draft EIS and will not be addressed as part of the Final EIS.</p>
47, 49, 55, 61, 63, 65	M. Regulatory Compliance / History	<p>Some comments expressed concern that the EIS does not take into consideration the history of compliance with statutory, regulatory, or permitting restrictions, or past lawsuits, and that it is unclear how the proposal would achieve compliance in the future.</p> <p>The EIS Fact Sheet and Section 2.1 together contain a discussion of all regulatory requirements faced by the project. Section 2.1 also provides reference to the local</p>

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		<p>and state agencies responsible for enforcement of permit and monitoring requirements and design standards. While PHSKC must issue the Municipal Solid Waste Landfill Permit, Ecology must concur with KCSWD's approach to meeting requirements under WAC 173-351 prior to issuance of the permit.</p> <p>KCSWD fully intends to meet or exceed all federal, state, and local standards for protection of public health and the environment, even considering the materials that are disposed of in the landfill. Each chapter of the FEIS provides details on the relevant regulatory standards, potential impacts, associated potential mitigation measures, significant unavoidable adverse impacts, and provides detailed contrasts among the No-Action Alternative and the three Action Alternatives.</p> <p>Regulatory citations are not included in the EIS because they are not part of the proposed action or the potential impacts. Section 1.3 contains additional text regarding the complex nature of CHRLF systems and the risks and responses to accidents, mechanical failures, and unanticipated emergencies. Chapter 8, Human Health, contains additional text addressing the potential impacts associated with unforeseen accidents, mechanical failures, and emergencies. As stated above KCSWD believes the relevant history of the CHRLF is included in Section 1.0, including any litigation that currently conditions further development of the landfill.</p>
42, 49, 64	N. Scope of EIS	<p>Several comments questioned the basic assumptions underlying the analysis, such as evaluation of operational activities prior to closure, projected waste volumes, evaluation of impacts and mitigations, and the costs and benefits to operate and maintain the CHRLF.</p> <p>Section 1.3 provides information on current CHRLF facilities and operations. Chapter 2 provides extensive information on the common elements of landfill design and operation. Each of the chapters that address an element of the environment (Chapters 3 through 14) detail impacts and mitigations from construction activities and operational activities for the No Action Alternative and for all Action Alternatives, including those related to the differing timelines of operation associated with each.</p> <p>The projected waste volumes described in Section 1.6 are developed by KCSWD based on a model that considers disposal tonnage history and trends, projected</p>

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		<p>population growth from Washington State Office of Financial Management, projected employment growth from the Puget Sound Regional Council, estimates of sales tax revenue/retail sales from the Puget Sound Economic Forecaster, and real landfill tipping fees from KCSWD. The waste projections are purposefully conservative in nature, assuming no additional recycling activities beyond what is currently done all, for all years under consideration so that facility planning anticipates “worst-case” conditions. King County focuses extensive effort and funding to reduce waste disposal at CHRLF, emphasizing waste reduction and achievement of Zero Waste of resources. The 2019 Solid Waste Comp Plan details that effort. The varying recycling rate is one of the variables that affects the overall lifespan of the landfill, with increased recycling rates reducing airspace utilization in the landfill.</p> <p>As per WAC 197-11-448 and -450, “the environmental impact statement is not required to evaluate and document all of the possible effects and considerations of a decision or to contain the balancing judgments that must ultimately be made by the decision makers.” A cost-benefit analysis (WAC 197-11-726) is not required by SEPA. However, cost, and potential impacts on ratepayers are important considerations and will be considered by KCSWD, the County Executive, and the King County Council when determining which alternative would be considered for implementation.</p>
46, 49, 63	O. Site Development Plan / Comprehensive Solid Waste Management Plan Processes	<p>Some comments questioned the criteria used for expanding the CHRLF and what criteria would be used for selecting a preferred alternative.</p> <p>The 2019 Solid Waste Comp Plan and the Solid Waste Comp Plan FEIS considered waste export and a waste to energy (mass burn) facility alongside an expanded CHRLF as disposal options in the Public Review Draft Comp Plan. At that time, KCSWD considered cost per ton, lifecycle greenhouse gas emissions, annual greenhouse gas emissions, a qualitative assessment of risks, and environmental impacts (via the Solid Waste Comp Plan FEIS) to help determine the Executive’s recommendation. In addition, extensive engagement occurred with regional partners (cities holding ILA) and the public, including public hearings associated with King County Ordinance 18893.</p>

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		<p>The 2020 Site Development Plan Alternatives Analysis also included a process to consider the economic, environmental, and community impacts of different expansion configurations at CHRLF. That process is described in the final report, which is available from KCSWD upon request.</p> <p>For Selection of the long-term disposal option once the CHRLF closes, the 2019 Solid Waste Comp Plan outlines the screening and evaluation criteria to be used by King County's Office of Performance, Strategy and Budget. They will also engage with the Solid Waste Division and the regional partners to develop the plan for long-term disposal. That decision will also likely include SEPA environmental review. The 2019 Solid Waste Comp Plan is available on King County's website at: https://kingcounty.gov/depts/dnrp/solid-waste/about/planning/comp-plan.aspx</p>
65	P. SEPA methods for Determining Significance	<p>As per WAC 197-11 440, this EIS compares the impacts under the Action Alternatives and the No Action Alternative for each Element of the Environment (see WAC 197-11-444) to assess the potential for and significance of impacts. In some cases, a comparison is made between the No Action Alternative or the Action Alternatives and current conditions. These comparisons are meant to add perspective to the analysis by referencing known conditions currently experienced by neighboring communities and other stakeholders. Descriptions of current conditions, where appropriate, also include the cumulative impacts of past and present activities, which SEPA requires. This comparison is not meant to supplant the required comparison between the Action Alternatives and the No Action Alternative.</p> <p>There are no objective criteria in the SEPA Rules to define significance for use in each element, and assessment involves some subjectivity and judgement. KCSWD does quantify impacts where they can add context, such as transportation trips, acres of affected land, projections of criteria air pollutants, etc., but these scales do not in and of themselves, assign significance. As acknowledged in WAC 197-11-330, it can be impossible to forecast the environmental impacts with precision, because some variables cannot be predicted, or values cannot be quantified. To evaluate the possible significance of an impact, consistent with the SEPA Rules, KCSWD assesses whether there is a reasonable likelihood of more</p>

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		<p>than a moderate adverse impact on environmental quality (WAC 197-11-794). In making this assessment, the following are considered:</p> <ul style="list-style-type: none"> • The context of the proposal, including the physical setting (WAC 197-11-794) • The intensity of the impact, which depends on its magnitude and duration (WAC 197-11-794) • The likelihood of the impact's occurrence. (WAC 197-11-794) <p>In many cases, regulatory thresholds are used to judge significance, that is, if actions would meet regulatory thresholds (e.g., surface water quality standards, noise standards, air quality standards) then the determination is often that the level of impact is unlikely to be significant.</p>
Chapter 2: Alternatives		
26, 46, 56	A. Lawsuit Conditions	<p>Several comments focused on the height limits set by the 2000 Settlement Agreement (see FEIS Fact Sheet; Section 1.2). The Settlement Agreement specifies that "King County agrees to make a good faith effort to keep the maximum height of areas 5,6, and 7 of the Landfill at or below 788 feet above sea level. The Alternatives described in the Draft and Final EIS comply with this requirement. A decision about expanding the CHRLF was considered during the 2019 Solid Waste Comp Plan process, which included preparation of an EIS, and resulted in the decision by the King County Council to maximize the capacity and lifespan of the CHRLF. A Special Use Permit is required to implement Options 1 and 2. There is no Alternative 4.</p> <p>King County operates CHRLF under a Municipal Solid Waste Landfill Permit (#PR0015736, see Appendix B) issued by Public Health Seattle & King County and in accordance with approved Plans of Operation, Washington Administrative Code (WAC) Chapters 173-304, 173-350, and 173-351 and Title 10 of the King County Code (KCC). When the current landfill permit was issued in May 2019, it specified the in-place volume of the landfill at 65,000,000 cubic yards and the remaining landfill capacity range from 10,850,000 to 12,140,000 cubic yards based on the intention to develop remaining [permitted] areas to a maximum final height</p>

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		<p>of 788 feet above mean sea level. King County would seek to revise its current landfill permit to allow the additional landfill capacity associated with the selected alternative.</p> <p>The Final EIS evaluates impacts associated with each Action Alternative compared to the No Action Alternative, including the impacts associated with revising the height of the landfill in some areas, but not including Areas 5,6, and 7, which would remain at or below 788 feet in accordance with the Settlement Agreement.</p>
46	B. Alternatives Rejected	<p>The Alternatives evaluated in the 2017 Alternatives Analysis (KCSWD 2017b) were not evaluated in an EIS, nor were they required to be evaluated in an EIS. A range of alternatives were evaluated against criteria established by KCSWD, with a final set of Alternatives selected and brought forward into this SEPA environmental review. Please see Section 2.2 of this EIS for a description of that process. The Final report of the Alternatives Analysis, including a description of the criteria used, is available from the KCSWD upon request.</p>
24, 26, 61, 62	C. Buffer Requirements	<p>Several commentors noted the importance of the buffer and the existing requirements for maintaining the landfill buffer contained in the 1960 Special Permit, and those comments are noted. As noted above and in the FEIS Summary and Section 2.1.4.3, among others, King County would pursue a Special Use Permit under King County Code chapters 21A.42 and 20.22 to place the landfill support facilities within the existing buffer zone under Options 1 or 2; incorporation of additional property into the landfill parcel under Alternative 3 would require revision to the existing Special Permit or issuance of a new Special Use permit. The Special Use Permit process would follow a landfill support facility and/or landfill cell design process that would seek to mitigate impacts identified in this EIS and meet appropriate building, land use, and environmental codes established in King County Code, and would include additional public comment on the proposed facility.</p> <p>The EIS describes all proposed uses within the existing buffer in Section 2.4. No additional areas are proposed. In addition, the proposed locations of Options 1 and 2 are included in the impact evaluations throughout this EIS, and with mitigation,</p>

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		no significant unavoidable adverse impacts were identified for air quality, odor, fugitive dust, noise, or vibration related to operation of the landfill support facilities.
1, 3, 4, 5, 12, 16, 18, 20, 23, 25, 43, 46, 62, 69	D. Option 3 Location	<p>Several commentors provided their perspectives on which of the Alternatives and options they preferred, and those comments are noted. Some additional comments focused on the Option 3 location in Renton.</p> <p>The Renton location under Option 3 would be used only as CHRLF support facilities; no waste disposal would occur at that location. Revised analysis contained in Section 13, Transportation, did not find a significant pedestrian safety issue in the vicinity of the Renton site (see revised text in Section 13.1.4.2) or any significant traffic impacts in the vicinity of the Renton site under proposed conditions. However, the review shows there is a speeding issue along NE 3rd Street for both general vehicles and trucks, which is related to the downhill grade and suggests consideration could be given to speed radar signs to help slow traffic along NE 3rd Street.</p> <p>The proposed landfill support facilities, regardless of where they will be located, will serve as maintenance, operations, trucking, staff, monitoring, and lab testing bases for the duration of the time the CHRLF remains open, to approximately 2028 under the No Action Alternative, up to approximately 2046 under Action Alternative 3. In addition, these facilities will also provide a base of operations for maintenance, trucking, staff, monitoring, and lab testing during the post-closure care period, which could last an additional 30 years after disposal operations cease. Facility use as a base for waste transfer trucking would last as long as KCSWD is responsible for managing waste disposal for King County or until the end of the facility's useful life.</p>
47	E. Inclusion of BEW Impacts	Some comments indicated King County's responsibility to include impacts from BEW in the FEIS. The impacts of continued operation of Bio-Energy Washington (BEW) is now included in the direct and indirect impact analyses contained in the FEIS. Text revisions to include these impacts have been made throughout the document.
10, 17, 22, 33, 38, 44, 45	F. Community Equity	The purpose of the EIS is to evaluate environmental impacts pertaining to the Elements of the Environment defined in WAC 197-11-444. See Chapter 11, Land

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		<p>and Shoreline Use, for a discussion of the County policies that govern uses and impacts to rural character in the context of essential public facilities such as CHRLF. Impacts on land use, air quality, noise, aesthetics, and other elements of the environment that may together be considered part of a neighborhood's "quality of life" are discussed in their respective chapters. Property values were not an element discussed in the Draft EIS and will not be addressed as part of the Final EIS.</p> <p>King County considers equity and social justice in capital program elements of the CIP process in accordance with the King County Equity and Social Justice Strategic Plan. This EIS and any of the mitigation measures it identifies further the County's efforts to minimize impacts of operation and expansion on the communities surrounding CHRLF, while continuing to allow this Essential Public Facility to serve nearly all residents of King County (excluding Seattle and Milton).</p>
51	G. Other Easements	<p>A commenter provided clarification on the easements presented to King County. See Section 2.1.6 for a revised description of the easements presented to King County.</p>
46, 63	H. Post Closure Care	<p>Several comments expressed concern with the timing of landfill closure and the responsibilities of King County after landfill closure. King County operates CHRLF under a Municipal Solid Waste Landfill Permit (#PR0015736, see Appendix B) issued by Public Health Seattle & King County and in accordance with approved Plans of Operation, Washington Administrative Code (WAC) Chapters 173-304, 173-350, and 173-351 and Title 10 of the King County Code (KCC). When the current landfill permit was issued in May 2019, it specified the in-place volume of the landfill at 65,000,000 cubic yards and the remaining landfill capacity range from 10,850,000 to 12,140,000 cubic yards based on the intention to develop remaining [permitted] areas to a maximum final height of 788 feet above mean sea level. King County would seek to revise its current landfill permit to allow the additional landfill capacity associated with the selected alternative. The CHRLF would be considered complete (full) when the permitted capacity is reached and no additional permitted capacity is under application or in process.</p> <p>Following the time at which the CHRLF stops accepting waste and the final disposal area is closed per WAC 173-351-500, King County is obligated by WAC</p>

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		173-350-500 to maintain environmental controls at CHRLF and continue all required monitoring "for thirty years or as long as necessary for the landfill to become functionally stable. A landfill is functionally stable when it does not present a threat to human health or the environment at the point of exposure for humans or environmental receptors. The point of exposure is identified as the closest location at which a receptor could be exposed to contaminants and receive a dose by a credible pathway from the MSWLF unit. (WAC-173-351-500(2)(a)).
8, 17, 19, 21, 26, 39, 43, 44, 46, 49, 63, 65	I. Preferred Alternative	Several comments provided preferences for Alternatives and/or Options discussed in the EIS, and those comments are noted.
61	J. MTCA Designation	One comment requested clarification on those portions of the CHRLF that were subject to the Model Toxics Cleanup Act (MTCA) cleanup requirements. Please see Section 6.1.5.1 for a discussion of areas of the CHRLF being managed under MTCA.
56, 61, 65	K. Landfill Design	<p>Some comments expressed concern about King County's adherence to landfill design criteria in the WACs, with questions surrounding the ability of older disposal areas to receive new waste and use of daily cover.</p> <p>Section 2.3.1.1 discusses the landfill systems engineered, constructed, and operated to comply with the requirements in WAC 173-351. Older landfill cells are extremely stable for several reasons. Landfill cells at CHRLF are built on firm native glacial till and become more stable over time as the waste material settles and compresses. This natural settlement and decrease in elevations has been verified by land surveys and is accounted for in the landfill design. At older closed cells, the LOURA cover system (see Section 2.3.1.1) prevents stormwater from infiltrating, and the water content diminishes as the waste is dewatered by gravity, and leachate is captured in the collection system.</p> <p>A new subsection, Landfill Gas Collection System, Impacts has been added to Section 3.2.1.3 to address liner integrity as waste is added to old cells and new LFG collection piping installed to prevent LFG migration. Also discussed is how piping used for LFG collection systems is designed and specified to withstand breakage from the weight of soil and refuse placed above it, and analysis performed during design of landfill cells confirms that the proposed geometry and</p>

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		<p>additional weight will not cause failure through the foundation material (i.e., native glacial till).</p> <p>Soil is used for daily cover in combination with tarps and the tarpomatic system. The tarp system is used on the active "working face" while a "lift" is in the process of being filled to a specified height within the disposal cell. Soil is placed on side slopes during filling operations and once completed sections of a "lift" reach the specified height. Additional clarifying text has been added to Section 2.3.1.2.</p>
61	L. Soil Surcharging	<p>One comment expressed concern about the impacts of soil surcharging. EIS Section 2.3.1.1 acknowledges that soil surcharging has the potential to cause pipe restrictions and LFG hotspots, describes how hotspots would be detected during routine monitoring, and explains that additional collection trenches would be installed to collect the gas.</p>
17, 26, 42, 46, 47, 48, 49	M. Long Term Disposal Options	<p>Several comments expressed preferences for long term disposal options or questioned why long term disposal options are not discussed in this EIS.</p> <p>King County has not yet selected the long-term disposal option that will be used once the CHRLF reaches its capacity under the alternative selected as the result of this EIS process. King County Ordinance 14236 prohibits the county from developing a replacement landfill either in King County or in another county. The 2019 Solid Waste Comp Plan and the Solid Waste Comp Plan FEIS considered waste export to an out of county regional landfill and a waste to energy (mass burn) facility along with an expanded CHRLF as disposal options in the Public Review Draft Comp Plan, but expansion of CHRLF was ultimately recommended by the County Executive and approved by the King County Council. This EIS looks only at the options to expand the CHRLF.</p> <p>The Final 2019 Solid Waste Comp Plan indicated that either waste export by rail to a regional landfill or a WTE facility located somewhere in King County could be undertaken after expansion of CHRLF. But the Solid Waste Comp Plan further specified that the King County's Office of Performance, Strategy and Budget will engage with the Solid Waste Division and the regional partners to develop a plan for long-term disposal, to be recommended to the King County Executive, who will transmit legislation to the King County Council implementing the next long-term</p>

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		<p>disposal method. The Executive will transmit a progress report that outlines how this plan will be developed, including timing for development and transmittal of this plan, to the Council by December 31, 2021. It is anticipated that costs will be considered in King County's evaluation of long term disposal options as part of that process.</p>
42, 56, 61	N. Current Conditions	<p>Some comments expressed concern that the EIS does not take into consideration past operational conditions or the potential for future accidents while assessing potential impacts associated with action alternatives. Section 1.3 contains additional text regarding the complex nature of CHRLF systems and the risks and responses to accidents, mechanical failures, and unanticipated emergencies. Chapter 8, Human Health, contains additional text addressing the potential impacts associated with unforeseen accidents, mechanical failures, and emergencies.</p> <p>As per WAC 197-11 440, this EIS compares the impacts under the Action Alternatives and the No Action Alternative for each Element of the Environment (see WAC 197-11-444) to assess the potential for and significance of impacts. In some cases, a comparison is made between the No Action Alternative or the Action Alternatives and current conditions. These comparisons are meant to add perspective to the analysis by referencing known conditions currently experienced by neighboring communities and other stakeholders. Descriptions of current conditions, where appropriate, also include the cumulative impacts of past and present activities, which SEPA requires. This comparison is not meant to supplant the required comparison between the Action Alternatives and the No Action Alternative.</p>
49	O. Need for New Facilities and Waste Reduction	<p>One comment expressed concern that the construction of new landfill support facilities was not needed and went against the County's Zero Waste goals. The Solid Waste Comp Plan outlines the significant dedication of effort and funding toward achieving Zero Waste of resources in King County.</p> <p>The proposed landfill support facilities, regardless of where they will be located, will serve as maintenance, operations, trucking, staff, monitoring, and lab testing bases for the duration of the time the CHRLF remains open, to approximately 2028 under the No Action Alternative, up to approximately 2046 under Action Alternative 3. In addition, these facilities will also provide a base of operations for</p>

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		<p>maintenance, trucking, staff, monitoring, and lab testing during the post-closure care period, which could last an additional 30 years after disposal operations cease. New facility use as a base for waste transfer trucking would last as long as KCSWD is responsible for managing waste disposal for King County or until the end of the facility's useful life.</p> <p>It is anticipated that King County will seek to replace the landfill support facilities with modern, efficient, and sustainable structures that meet LEED or similar green building standards.</p>
39, 53	P. Development of Alternatives	<p>Several comments questioned whether other alternative locations for landfill support facilities were considered. The Cedar Hills Regional Landfill Support Facilities Evaluation—Phase 2 Report describes all sites considered for the relocated facilities. At the CHRLF site, locations suitable for relocation of landfill support facilities were constrained by existing and proposed landfill disposal areas, existing support facilities, and for the southern buffer zone in particular, the BPA, who limits the types and height of structures within their easement.</p> <p>One site initially reviewed was the Factoria Recycling and Transfer Station site. King County's Factoria Recycling and Transfer station sits on a KCSWD-owned 15.6 acre property, which is surrounded by privately owned parcels. The Recycling and Transfer Station site was included in preliminary investigations for facility relocation options (See King County 2019a), including consideration of the adjacent property owned by Puget Sound Energy, but found to be unsuitable for the facilities and trucking operations planned for a new site.</p>
26, 42	Q. Cost of Alternatives	<p>Cost analysis or cost comparisons of alternatives is not a required element of the EIS. It is anticipated that costs, including any potential rate impacts on County ratepayers, will be considered in King County's evaluation of a preferred alternative, including facility relocation options.</p> <p>For the alternatives, capital costs generally increase in sync with the additional capacity added, with the least capital required for the No Action Alternative and the most for Action Alternative 3. Because debt and interest payments are considered during customer rate-setting, in general, increased capital requirements funded</p>

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		through either rate-funded methods or bonds would increase pressure to raise rates. See Section 14.2.1.2 for a revised discussion of potential rate impacts.
Chapter 3: Earth		
32, 34, 42, 46, 49, 61, 67	A. Seismic hazard	<p>Additional detail has been added to EIS Section 3.1 to better clarify existing conditions, including Section 3.1.3.5, Seismic Hazards.</p> <p>EIS Section 3.1.3.5 discusses seismic hazards, faults and folds, earthquake risk, and seismic analyses completed for CHRLF, and acknowledges that CHRLF is located in a seismic impact zone because it is located in the seismically active Puget Sound region. This section describes how landfill containment structures, including liners, leachate collection systems, and surface water control systems are designed to withstand seismic conditions with a higher protective standard than used to design bridges and other structures for life safety. This section also discusses stability analyses and displacement analyses performed for cover systems, material interface shear strengths, drainage layers, piping materials, and geosynthetic layers. This section discusses how earthquake ground motions were calculated with consideration for surface rupture hazard as well as how strong shaking would be at the Renton and CHRLF sites.</p> <p>EIS Section 3.2.1.3 describes the type of damage that may be expected from an earthquake and how inspections and repairs to landfill systems would be undertaken.</p> <p>The cross section has been updated to show the Buffer Line and that the toe of the MSE wall will not encroach into the buffer. Once the preferred alternative is selected, the final design will be completed and incorporate survey data to confirm that there is no buffer encroachment, etc. The specifics of the design will not be known until the final design is completed. A third-party Construction Management firm will ensure that construction meets the design specifications and objectives.</p> <p>Under normal landfill operations there is no ground movement. Comprehensive stability analyses have been performed to assess the potential for ground movement under static (i.e., normal landfill operations) and seismic (i.e., earthquake) loading conditions. Landfill geometry and materials are selected to</p>

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		<p>provide acceptable factors of safety against movement. The design considers predicted seismic loading conditions and allows movements within acceptable levels as established by the US EPA and standard industry practice.</p> <p>Facilities such as CHRLF are designed and tested to meet federal and state codes that account for earthquakes and other hazards and ensure that stringent factors of safety are met. Waste cells at the landfill are designed to prevent movement of the waste during an earthquake, which also limits damage to liners and piped systems within the landfill. Furthermore, structures above ground are designed to meet the earthquake code, and to be readily removed from service and repaired if necessary.</p> <p>In the event of an earthquake, King County staff would inspect the following: landfill and landfill systems (as soon as safe and accessible) to identify any potential displacement of waste; integrity of slopes and the landfill cover system; piping that conveys leachate, stormwater, and landfill gas; stormwater ponds and leachate lagoons; roads, buildings, and other support facilities.</p>
34, 39, 54, 61	B. Landslides and steep slopes	<p>Additional text has been added to EIS Section 3.2.1.3 to discuss soil erosion and landslides/slope failure; the soil erosion and sloughing that occurred in February 2020 was not a landslide and was repaired as part of the County's ongoing Operations and Maintenance activities.</p> <p>Section 3.2.1.3 discusses how displacement analysis performed for CHRLF showed that modeled displacements of the landfill mass and slopes (i.e., landslides) are within allowable factor of safety limits. This section also discusses that the design slope steepness for areas where waste will be placed will remain the same as existing slopes at CHRLF and will not be increased or made steeper, and the design slope steepness is less steep than steep slopes defined by King County criteria.</p>
61	C. Liquefaction, leachate buildup, cover system (interim vs. final)	<p>Additional text has been added to EIS Section 3.2.1.3 to discuss why waste material is not susceptible to liquefaction, and how the County would take immediate action to make repairs if a leachate seep were identified during routine inspections of the final cover system. This section also discusses how interim cover systems are designed to reduce infiltration of stormwater, minimize</p>

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		contamination of surface water runoff, provide physical containment of the waste, prevent contact with the waste by wildlife, and allow basic landfill gas collection until the final cover system is constructed.
49, 61	D. Liner integrity, added weight, soil surcharging	<p>A new subsection, Landfill Gas Collection System, Impacts has been added to Section 3.2.1.3 to address liner integrity as waste is added to old cells and new LFG collection piping installed to prevent LFG migration. Also discussed is how piping used for LFG collection systems is designed and specified to withstand breakage from the weight of soil and refuse placed above it, and analysis performed during design of landfill cells confirms that the proposed geometry and additional weight will not cause failure through the foundation material (i.e., native glacial till).</p> <p>EIS Section 2.3.1.1 acknowledges that soil surcharging has the potential to cause pipe restrictions and LFG hotspots, describes how hotspots would be detected during routine monitoring, and explains that additional collection trenches would be installed to collect the gas.</p>
61	E. Coal mines	See EIS Section 3.1.2.1 that identifies previous studies completed for site soils and geologic units at CHRLF. Also see reference added to Section 3.1.3.1 for detailed mapping of local geology and coal deposits (by Vine 1969).
47	F. Vibrations and flare stack rumble	See EIS Section 10.1.5, Section 10.2, and Section 10.2.1.2 for discussions of existing vibration levels, environmental impacts, and a discussion of worst-case calculated vibration levels as well as results of a 2014 study at CHRLF and an updated 2021 Vibration analysis in Appendix G.
61	G. Impacts and mitigation	See EIS Section 3.2.2, Section 3.3, and Section 3.4 for discussions of different types of impacts and how various impacts are mitigated.
39	H. Miscellaneous, wall height, clearance to electrical lines, TESC	Modifications pursuant to RMC 4-9-250D for retaining wall heights at the Renton Recycling and Transfer Station will be addressed at time of permitting if necessary based on a facility design. See Section 3.2.1.3 for a discussion regarding safety clearances to power lines, and Section 3.3 for reference to the Renton Surface Water Design Manual for BMPs to control erosion.
Chapter 4: Air and Odor		

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38,49,61	A. Gas collection efficiency	<p>Several comments questioned the validity of using an assumed gas collection efficiency of 92.4 percent in performing calculations of emissions of toxic air pollutants (TAPs). An updated analysis of air toxics impacts (Appendix D) has been performed with a lower, and more conservative, assumed gas collection efficiency of 75 percent, derived from the U.S. Environmental Protection Agency's Compilation of Air Emission Factors.</p>
38,46,47,49,56,61,63	B. Air dispersion modeling	<p>Several comments questioned the validity of the dispersion modeling conducted to assess the potential for impacts from air toxics. The original and updated air toxics analysis evaluated emissions of landfill gas, leachate pond emissions, and diesel engine emission particulates (DEEP). The updated dispersion modeling used a revised set of conservative (i.e. likely to lead to greater impacts) inputs that included toxic air pollutants (TAPs), sulfur dioxide, hydrogen chloride, and carbon monoxide concentrations in landfill gas based on flare inlet and outlet analyses conducted in 2021 and BEW engine outlet analyses conducted in 2021, along with concentrations derived from the U.S. Environmental Protection Agency's Compilation of Air Emission Factors for TAPs not included in the flare inlet test results. Landfill gas efficiency and flare and engine destruction efficiencies used in modeling were also based on the U.S. Environmental Protection Agency's Compilation of Air Emission Factors. For each TAP (except ammonia) detected in analyses of leachate pond emissions, the maximum concentration value from all sampling runs was used. For TAP not detected in leachate pond analyses, one half of the detection limit was used in modeling. Levels of ammonia in leachate pond emissions were based on the peak project daily flow rate of leachate to the ponds and a rate of ammonia release into air from the ponds of 2 percent of total ammonia based on peer-reviewed research.</p> <p>The modeling results were evaluated against de minimis, small quantity emission rate (SQER), and acceptable source impact level (ASIL) criteria established by the state and contained in the Washington Administrative Code (WAC 73-460-150). These criteria are intended to sufficiently control the emission of air toxics to protect human health and the environment. The conclusion of the updated air toxics analysis concluded that, under any of the alternatives, no TAP, with the possible exception of 1,2-Dibromo-3-chloropropane (DBCP), is expected to exceed the health-based acceptable source impact level (ASIL) at any location outside the</p>

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		<p>landfill property line. For the purposes of modeling impacts, DBCP was assumed to exist in the CHRLF's landfill gas, although all analyses of actual landfill gas did not detect DBCP.</p> <p>Modeling of DEEP emissions concluded that under any of the action alternatives, DEEP emissions will not increase relative to No Action and estimated emissions were less than the state's small quantity emission rate for DEEP.</p>
41,49,61	C. Leachate odors	<p>Several comments stated that leachate odors needed to be addressed. The updated odor analysis specifically addresses potential odor impacts from the leachate ponds. Although the analysis indicated that the leachate ponds are not the largest source of odors from the landfill, odors from the leachate ponds do contribute to overall odor impacts. As indicated in the Final EIS, the County is evaluating different options for enhancing treatment of leachate discharges that would also help mitigate leachate odors, including covers and chemical treatment.</p> <p>One comment questioned the use of leachate for compaction, however, the County does not use leachate for compaction at the CHRLF.</p>
22,24,44,47,49,61,62,65	D. Odor analysis	<p>Several comments questioned the validity of using only hydrogen sulfide to assess potential odor impacts or questioned the methodology or overall conclusions of the odor analysis in the Draft EIS. These comments are noted. The original odor analysis contained in the Draft EIS analyzed hydrogen sulfide because that compound is considered to be the most prevalent odoriferous compound in the landfill's odoriferous emissions. An updated odor analysis has been performed (Appendix D) that is based on the approach of assessing overall odoriferous emissions at the two primary sources – active working face where landfilling is occurring and the leachate ponds – and calculating the dispersion of those emissions under the expected range of meteorological conditions. This updated approach accounts for the contribution of all odoriferous compounds to expected odor impacts.</p> <p>Important conclusions based on the updated odor analysis are that detectable odors at least moderate in intensity would affect residential areas primarily west and north of the landfill one to several percent of the time that the active working face is open and detectable odor that most people would experience as intense</p>

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		<p>would be experienced over most of the residential areas surrounding the landfill once to perhaps several times a year. Based on these conclusions, the Final EIS concludes that significant odor impacts would be likely to occur under any of the alternatives and discusses mitigation that would reduce those impacts and avoid significant unavoidable adverse odor impacts.</p>
38,47,49	E. Odor complaint history	<p>Several comments suggested that the odor complaint history at the landfill should be described in detail and used for the odor analysis. The Final EIS does acknowledge the odor history at the landfill, but uses an objective methodology, described in Chapter 4, to assess potential odor impacts noting that the results of that analysis indicate that odor impacts would be significant without additional mitigation. Additional mitigation measures to reduce odor impacts are then discussed in Chapter 4. One of the recommended mitigation measures is implementation of an expanded and strengthened monitoring program to assess actual odors at source and receptor locations. This program would necessarily include an enhanced protocol for response to excessive odor levels and could incorporate evaluation of and response to odor complaints.</p>
42,61	F. BEW emissions	<p>Several comments requested that emissions from the BEW facility be included in the air toxics analysis. The updated air toxics analysis contained in Appendix D explicitly includes emissions from the BEW flares and engines.</p>
47,49,61	G. Adjacent sources of odor	<p>Several comments suggested that the odor discussion in the Draft EIS overemphasized contributions to odor impacts from land uses adjacent to the landfill, notably Cedar Grove Composting. The updated odor analysis contained in Appendix D of the Final EIS bases its modeling on odor sampling taken at the two primary sources of odor at the landfill and derives its conclusions on that sampling. The discussion in Chapter 4 of the FEIS, while noting that there are other sources of odor in the landfill's vicinity, focuses on odor from the landfill and discusses potential odor impacts from the landfill and recommends mitigation for those potential impacts.</p>
47,49	H. Surface monitoring of methane in air toxics analysis	<p>Several comments requested that the results of surface monitoring of methane at the landfill be used in the analysis of air toxic impacts. Appendix D in the Final EIS contains an updated air toxics analysis that assumes a conservative landfill gas collection efficiency of 75 percent. This assumed collection efficiency is lower than</p>

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		<p>the collection efficiency that would be calculated based on surface monitoring of methane (fugitive gas emissions) and measurements of the volumes of collected gas. The assumption of a 75 percent collection efficiency results in calculated impacts greater than what would be calculated if the collection efficiency were based on surface monitoring and measured gas volumes.</p>
42,47,49,61	I. Landfill flares	<p>Several comments asked questions regarding the gas flares and their operation. Since October 2010, when the BEW facility began operation, the flares at the North Flare Station operate about twice a month (though the Final EIS notes that this can vary). In accordance with KCSWD's Title V Air Operating Permit Number 10138 issued by the Puget Sound Clean Air Agency (PSCAA) and consideration of the intermittent operation of the flares, source testing is required every five years to determine emission levels during typical operation of the flares. The most recent test of the landfill's flares occurred in late January-early February 2021.</p> <p>The candlestick flare located in the north part of the landfill operates continuously. It operates within its permitted operating parameters. Operating within these parameters is sufficient to provide the required destruction (98%).</p>
47,62,65	J. Best management practices	<p>Several comments suggested that the 2013 pipeline failure at the landfill was an indication that the County was not implementing best management and engineering practices. In discussing impacts, Chapter 4 in the Final EIS, acknowledges that in a complex facility such as the landfill, there is a risk, despite implementation of best management and engineering practices, of rare system failures such as the 2013 pipeline break. For the gas collection system, the text of Chapter 4 then describes system controls that have been put in place to rapidly detect and control a potential pipeline failure.</p>
49	K. Additional mitigation	<p>Several comments asked that the Final EIS address mitigation in addition to standard best management and engineering practices, address impacts if mitigation isn't effective, and address significant unavoidable adverse impacts. The State Environmental Policy Act (SEPA) requires that an EIS "Clearly indicate those mitigation measures..., if any, that could be implemented or might be required, as well as those, if any, that agencies or applicants are committed to implement" and requires that an EIS "Summarize significant adverse impacts that cannot or will not be mitigated". The Draft EIS did describe mitigation that would address identified</p>

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		<p>potentially significant impacts, and identified significant unavoidable adverse impacts. For air and odor, the Final EIS revised the discussion of impacts and mitigation primarily based on the updated air toxics and odor analyses. In particular, as the updated odor analysis identified potentially significant adverse odor impacts, the discussion of odor mitigation in the Final EIS includes additional measures not discussed in the Draft EIS. The additional measures include operational changes at the working face as well as an expanded and strengthened odor monitoring and response program. If these measures are implemented, the Final EIS concludes that significant unavoidable adverse odor impacts can be avoided.</p>
49	L. Past instances of air pollutant and odor releases	<p>One comment asked that the EIS document all past instances of air pollutant and odor releases and the mechanisms and pathways by which those pollutants are transmitted. The EIS does acknowledge the risk of an inadvertent release of air contaminants or odor, but a detailed listing of past releases is not germane to an assessment of future impacts of the proposed action, particularly when a large number of LFG system improvements have occurred in the intervening years and are planned for the future (see FEIS Section 1.3 and Chapter 4). The air toxics, fugitive dust, and odor analyses contained with Appendix D describe the mechanisms by which air contaminants and the human health analysis in Appendix L describes the pathways through which air contaminants could impact human health.</p>
49	M. Potential multi-modal facility	<p>The Draft EIS noted that a multi-modal facility to handle solid waste for export after the CHRLF was closed would likely be located in an industrial area. One comment asserted that such an industrial facility should not be located at the CHRLF. If waste export were selected as the method of waste disposal after the CHRLF closes, the multi-modal facility would likely function to transfer solid waste from trucks to rail, or possibly to barge. Such a facility could not be located at the CHRLF but would need to be located adjacent to a major rail line (for truck to rail transfer) or a waterfront (for truck to barge transfer).</p>
39,57	N. Renton site	<p>Several comments questioned the sufficiency of the air quality, odor, and noise analyses for the Renton site. Both the air toxics and noise analyses included in the Draft EIS have been updated with expanded analysis of the Renton site. Vehicular</p>

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		<p>traffic to and from the site would be the primary generator of potential air quality and noise impacts. The updated air toxics analysis evaluates diesel engine particulate emissions (DEEP) from Renton site traffic and concludes that DEEP emissions would be less than the Washington State Department of Ecology small quantity emission rate (SQER) and therefore no significant adverse impact on air quality would occur. The updated noise analysis concluded that nighttime noise would likely exceed City regulatory limitations, described mitigation in the form of noise walls that would reduce nighttime noise levels to within City regulatory standards. The Final EIS acknowledges that the necessary height of the walls may not be aesthetically appropriate and may not be able to meet City zoning requirements.</p>
2,7,15,22,26,27,37,41,43,61	O. Comments noted	<p>Several comments expressed opinions regarding aspects of landfill operation and its effects but did not comment directly on the EIS or its contents. These comments are noted.</p>
38,47,49,56,59,61,65	P. Miscellaneous comments	<p>Several comments requested that issues be addressed in the EIS that either are not required to be addressed in the EIS or issues that were addressed in the Draft EIS.</p> <p>Issues that are outside of the scope of the EIS and therefore do not need to be addressed include a listing of past permit violations and system failures. The EIS does acknowledge that past permit violations have occurred (e.g. landfilling in the buffer) and rare system failures have occurred (e.g. a 2013 break in the pipeline delivering gas to the BEW facility), however a detailed listing of past events is not germane to an assessment of anticipated impacts from the current proposal (see response in Topic L, above). The EIS does acknowledge the risk of future system failures and describes current practices to minimize the risk, monitoring practices to identify a system failure should one occur, and response procedures if a system failure is identified.</p> <p>Issues that were raised in comments that are addressed in the EIS and its analyses include:</p> <ul style="list-style-type: none"> Gas migration from unlined and older areas and emissions and sampling results from areas 5, 6, and 7, and incorporating these items into air

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		<p>dispersion modeling. The modeling, which assumes a conservatively low gas collection efficiency of 75%, implicitly accounts for fugitive gas emissions from unlined and older areas as well as from areas 5, 6, and 7. Gas extraction wells have been placed in older areas and along the perimeter of areas 5 and 7 to draw gas generated in those areas into the gas collection system and dual-phase wells collecting both gas and leachate are being placed in Area 7.</p> <ul style="list-style-type: none"> • The effect of shutting down a portion of the gas collection system to conduct routine maintenance or to conduct repairs or respond to emergencies is generally described in Section 1.3.7 of the EIS and procedures for these activities are described in detail in the landfill's Landfill Gas Operation and Maintenance Manual Update dated February 2015. A lengthy shut-down of the entire gas collection system would be an extremely rare and unlikely occurrence. • An analysis of best case, worst case, and most likely case situations for emissions of air toxics and the effects on area residents is addressed in the air toxics analysis which by employing conservative inputs to its modeling describes the worst-case situation, which is required under SEPA. The conclusion of the analysis that air toxic impacts are unlikely to occur would pertain also to a hypothetical "best-case" and "most likely" situation. • Soil surcharging is described in Section 2.3.1 of the EIS where it is noted that surcharging has been conducted at the CHRLF in the past without adverse effects on environmental systems such as the leachate and gas collection systems. • The term "landfill as a whole" as it would apply to the air toxics analysis would include all landfilled areas and the area currently being landfilled within the landfill footprint as well as the leachate ponds, north flare station, and other facilities and activities that could result in toxic air emissions.

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		<ul style="list-style-type: none"> Existing mitigation measures related to enclosing landfill cells and areas and collecting, conveying, and processing landfill gas are described in Chapter 1. Additional mitigation measures incorporated in the proposed project are described in Chapter 4.
49,61	Q. Air quality monitoring	<p>Several comments raised questions regarding the landfill gas and air quality monitoring that occurs at the landfill. The text of Chapter 4 has been revised in the Final EIS to clarify the monitoring that occurs. Related to this, one comment also requested clarification of the status of the attainment area within which the CHRLF is located, and another comment asked that ground-level ozone be considered locally, not regionally.</p> <p>Monitoring of the landfill focuses on source monitoring (air sampling and equipment inspections) as required by the landfill's Air Operating Permit and other operating requirements and because monitoring at the source is the best practice for identifying and controlling any problems in the gas management system. Currently, monitoring of the landfill gas system and the landfill's air quality includes, in part:</p> <ul style="list-style-type: none"> monitoring collection system wells twice a month monitoring collection piping monthly with isolation valves inspected annually monitoring vertical extraction wells monthly monitoring valve stations monthly inspection of the condensate system weekly periodic performance testing of the flares monitoring surface concentrations of methane throughout the landfill on a quarterly basis visual inspections for opacity to detect fugitive dust and other emission monthly during operations continuous monitoring of oxygen levels at BEW to detect leaks

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		<ul style="list-style-type: none"> • monitoring of the landfill's 729 gas wells monthly for pressure and twice each month for temperature and oxygen or nitrogen (to detect leaks) • monitoring of odor in the buffer, at the active face, and at the leachate lagoons five times a day <p>Monitoring allows for problems to be detected and rapidly traced to their source for correction.</p> <p>The CHRLF is located in an attainment area for the six federally designated criteria air pollutants – carbon monoxide, lead, nitrogen dioxide, ozone, particulates, and sulfur dioxide. The attainment area covers all of Washington state except for a small area within Whatcom County. The attainment area designation is based on air monitoring data collected by regional air quality agencies. Attainment status for most of the state has been recommended by the Washington State Department of Ecology and approved by the US Environmental Protection Agency. Attainment status means that ambient air standards for the six criteria pollutants are met within the attainment area. As stated in the Draft EIS, ground-level ozone is handled regionally, not locally, and hydrocarbon emissions at the landfill would contribute only minimally to regional ozone levels,</p>
61	R. Fugitive dust	<p>One comment contended that fugitive dust from operations above the 788-foot elevation and activities that use contaminated soil or involve the construction of berms increase fugitive dust impacts. The fugitive dust analysis included in Appendix D of the Draft EIS and the updated fugitive dust analysis included in Appendix D of the Final EIS focuses on dust generated by traffic on roads within and outside of the landfill as the primary source of fugitive dust from landfill-related operations. Although handling of soil within the landfill does generate some dust, the contribution to overall levels of fugitive dust is considered minimal. The conclusion of the fugitive dust analyses is that under worst case conditions, which are associated with Alternative 3, the CHRLF will continue to meet applicable particulate matter ambient air quality standards, and that no significant fugitive dust impacts would occur under any alternative.</p>
49,61	S. Impacts from areas without final cover	<p>Several comments focused on air quality and odor impacts from areas that have not received final cover or are being excavated to integrate new liner, leachate,</p>

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		<p>and stormwater conveyance facilities with existing systems and to provide space for new landfilling. The updated air toxics analysis contained in Appendix D of the Final EIS employs a conservative assumption of gas collection efficiency that more than adequately accounts for fugitive gas emissions from closed and unclosed areas of the landfill. The updated analysis concluded that under any of the alternatives, no toxic air pollutant, with the possible exception of 1,2-Dibromo-3-chloropropane (DBCP), is expected to exceed the state's health-based acceptable source impact level (ASIL) at any location outside the landfill property line (see Topic B, this section). Based on this conclusion, no significant adverse air quality impacts associated with air toxics are likely to occur.</p> <p>Under Alternative 3, approximately 3¼ million cubic yards of waste would be excavated from two areas in the north portion of the landfill. The Final EIS does address potential odor control during excavation. Air toxics, fugitive dust, noise, and wetland impacts associated with excavation are unlikely to be significant.</p>
Chapter 5: Surface Water		
63	A. Accuracy of maps in EIS	<p>See revised text in Section 5.1.1.</p> <p>Only existing streams are shown in the Draft and Final EIS, not historical streams or previous topography. The landfill operates under an Industrial Stormwater General Permit (ISGP) in compliance with Washington Department of Ecology (Ecology) requirements. Stormwater runoff from the landfill is not adversely affecting the quality of water in creeks and rivers in the area (see Section 5.1.7). Runoff that comes into contact with waste is considered contaminated stormwater (CSW) and is treated in the CSW lagoon (see Section 5.1.5). Existing streams and water bodies were obtained from King County's 2009 and 2012 GIS data.</p>
49, 62	B. Maintenance/repair of leachate and CSW system	<p>See revised section 5.1.7.1, which provides information on where effluent exceedances are reported (KCSWD Annual Reports).</p> <p>Landfill management and operations are inherently complex. KCSWD continuously works to improve the operation and environmental systems at CHRLF. See revised Section 1.2 and 1.3 for more information.</p>

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49, 63	C. Impacts discussion	<p>Comment noted. Impacts resulting from action alternatives are included in Section 5.2, however none of them were found to be significant. CSW and leachate are collected and treated onsite prior to discharge to the King County Wastewater Treatment Division (KCWTD) system and ultimately the publicly owned treatment works (POTW) (see Section 5.1.4 and 5.1.5). Stormwater runoff that does not come into contact with waste is managed separately and per Section 5.1.7.1, KCSWD routinely monitors the quality of stormwater runoff from the landfill in accordance with permit requirements. Quarterly and annual reports filed with Public Health and Ecology provide a summary of the data. Sampling results from the past four years have met applicable benchmarks set forth by the ISGP. Please see revised Chapter 9, Human Health, for an updated discussion on the risks to human health from leachate.</p>
39	D. Stormwater at the Renton Site	<p>See revised text in Section 5.1.5.2 and 5.2.1 acknowledging the requirements to be met under the Renton Surface Water Design Manual (RSWDM).</p> <p>Typical of most KC transfer stations and areas where waste refuse trucks are parked, only those portions of the Renton site where stormwater or wash water come into contact with waste would drain to a collection system that ultimately discharges to the KCWTD POTW for treatment (see Section 5.2.1.2). This practice is common at most other KC waste facilities, including the Renton Recycling and Transfer Station. Stormwater that does not come into contact with waste would be collected and discharged to the existing stormwater system. Where feasible, waste trailer parking areas would be covered to minimize stormwater contact with waste and reduce flows to the CSW system or KCWTD sanitary sewer system. Flows to the sewer will be calculated and conveyance will be designed as part of future design phases. Stormwater modeling and design will follow the most current version of the KCSWDM and RSWDM. As stated in the revised section 5.2.1, KCSWD will determine specific areas and conveyance needs during design and will coordinate with City of Renton and KC WTD to ensure the required capacity is available in the existing sanitary sewer system or that new infrastructure is installed.</p>
49, 51	E. Stormwater flows to QCF from CHRLF	See revised text in Section 5.2.1.2.

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		<p>Any development of new landfill disposal areas or landfill support facilities on the CHRLF property will adhere to the current KCSWDM. The current adopted KCSWDM is from 2021. 1979 was the first year KC adopted stormwater flow-control requirements. Since then, updates have required more stringent performance standards. The 2021 KCSWDM requires that the result in peak flow rates from any development through the 50-year design storm will match historic forested conditions. This will reduce the peak runoff rates from their current conditions. Future design phases will determine whether the runoff will go to the south or southeast discharge point. If needed, additional stormwater management capacity, storage, and treatment will be incorporated into the final design.</p> <p>As part of the Area 8 facilities relocation project (developed under the 2016 KCSWDM), the construction of the southwest siltation pond led to stormwater improvements that allow 155.1 acres from the south part of the landfill to function at the same level as it did when it was historic till forested land cover. This resulted in significant attenuation of peak stormwater flows to QCF property.</p>
49, 61	F. Final/interim cover	<p>Comments noted. See revised text in Section 5.1.4.1. As part of landfill development and design, King County estimates the amount of leachate flow generated to confirm the leachate lagoons are adequately sized and to size the leachate side slope pumps and conveyance piping to the lagoons. These evaluations take into consideration the difference between an area of the landfill that is closed (whether final or interim) with a soil cover versus an exposed geomembrane cover (see Area 8 Development Engineering Report, King County, 2017). Leachate flows are pumped from the bottom of the cell and are designed to satisfy regulations in WAC 173-351-300, which requires that the depth of liquid over the liner is less than 1 foot (less than 2 feet in sump areas).</p> <p>KC landfill closure design for final and interim cover meet the low permeability requirement of 10-5 cm/sec (per Area 7 Staged Closures Basis of Design Report, King County, 2012). CHRLF cell closure designs comply with the regulatory requirements as defined in WAC 173-351 and administered by Ecology. The WAC does not provide specific requirements for interim cover systems such as those used at CHRLF that are intended to have only a limited lifespan (e.g., five to eight years for Area 7). The Public Health Municipal Solid Waste Permit for CHRLF sets</p>

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		<p>forth general requirements for placing additional cover soils over refuse areas that are not actively receiving waste. Daily cover consists of six inches of cover, while interim cover consists of six to 12 inches over/on top of the daily cover. Interim covers improve soil stability and erosion control; provide effective separation of clean stormwater and CSW; provide active and passive LFG emission controls; and control leachate seeps (Area 7 Closure Basis of Design Report, 2012). Only Areas 5 and 6 would likely remain under Interim cover until Area 9 is filled. All alternatives include removal of interim cover in Areas 5, 6 and 7 and placement of final cover (Section 2.3.1).</p> <p>Cover system alternatives analyses consider damage from wildlife, vectors, and vegetation when assessing advantages and disadvantages to various cover system alternatives, and these potential impacts are accounted for in operations and maintenance planning (Cover System Alternatives and Design Details Memorandum, 2012).</p>
34, 49, 68	G. Climate change and stormwater volumes	<p>See revised text in Section 5.1.6.1.</p> <p>Proposed stormwater ponds and on-site facilities will be designed to meet the requirements of the most current KCSWDM and WAC. During design of the stormwater facilities, stormwater modeling is conducted to determine the size and components of the facility required to handle stormwater flows on site. Stormwater runoff is managed in accordance with the most current version of the KCSWDM. These standards ensure that adequate flow control and water quality measures are installed relative to the scale of development. The current adopted manual (2021) does not require accounting for forecasted climate change scenarios. If they are added to a future manual, they will be incorporated into the design of stormwater facilities. A factor of safety is frequently applied to the design of stormwater facilities, and those are determined by the engineer of record.</p>
49	H. Stormwater Flows and Modeling	<p>See revised text in Section 5.2.1.2.</p> <p>The EIS recognizes that Alternative 3 may result in increased impervious areas (see Section 5.2.1.5). Per Section 5.2.1.2, BMPs to minimize potential impacts are currently implemented, and will be in the future. These include dedicated stormwater facilities for runoff from impervious areas. Stormwater runoff is</p>

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		<p>designed and managed in accordance with the most current version of the KCSWDM and the WAC. These standards ensure that adequate flow control and water quality measures are installed relative to the program.</p> <p>During the design phase, stormwater modeling is conducted to determine the size and components of the stormwater facilities required to handle stormwater flows on site.</p>
63	I. Closed Landfill Monitoring	<p>Comment noted. KCSWD designs and operates closure at the CHRLF in compliance with the Cedar Hills Regional Landfill Plan of Operation and the WAC 173-531 Municipal Solid Waste Regulations. KCSWD manages closed landfills by conducting routine monitoring of groundwater, surface water, wastewater, and LFG. WAC 173-351 requires that "owners and operators of all MSWLF must install a final cover system that is designed to minimize infiltration and erosion.</p> <p>From the WAC 173-351:</p> <p>(i) The final cover system must be designed and constructed to:</p> <p>(A) Have a permeability less than or equal to the permeability of any bottom liner system and natural subsoils present, and minimize infiltration through the closed MSWLF by the use of an anti-infiltration layer that contains a composite layer as defined in (a)(i)(B) of this subsection;...". WAC 173-531 also requires post-closure monitoring, including environmental monitoring systems. KCSWD monitors groundwater in accordance with WAC 173-531-400. KCSWD also prepares and submits a post-closure plan which provides a description of the monitoring performed and an estimate of the time required for the landfill unit to be functionally stable. WAC 173-351 states that a landfill functional stability considers: "(A) Leachate. Leachate production and quality must be such that maintenance and operation of the leachate collection system can be ceased beyond the post-closure care period without posing a threat to human health or the environment.</p> <p>(B) Landfill gas. Landfill gas production and composition must be such that maintenance and operation of the gas collection system can be ceased beyond the post-closure care period while meeting the criteria in WAC 173-351-200 (4)(a)(i)</p>

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		<p>through (iii) and not pose a threat to human health or the environment from methane or nonmethane compounds.</p> <p>(C) Settlement and cover integrity. The cover system must attain geotechnical stability for slope and settlement. Vegetation and other erosion controls must prevent exposing waste or otherwise threaten integrity of the cover system. The cover system must stabilize such that no additional care is required beyond the post-closure care period to ensure its integrity from settlement or erosion.</p> <p>(D) Groundwater quality. Groundwater quality must remain in compliance with the protection standards established in WAC 173-351-440(8) at the relevant point of compliance."</p>
47, 61, 63	J. Leachate, CSW compliance	<p>See revised section 5.1.7.1, which provides information on where effluent exceedances are reported (KCSWD Annual Reports).</p> <p>Landfill management and operations are inherently complex. KCSWD continuously works to improve the operation and environmental systems at CHRLF. See Section 1.2 and 1.3 for more information.</p>
42	K. Leachate pond capacity	<p>Comment noted. As part of landfill development and design, King County estimates the amount of leachate flow generated by new areas to confirm the leachate lagoons are adequately sized or if they will need upgrades, and to size the leachate side slope pumps and conveyance piping to the lagoons. Leachate generated from Area 9 will be collected, treated, and disposed of per the requirements set forth in the CHRLF Wastewater Discharge Permit administered by the King Count Industrial Waste Discharge Program. There is no record of existing leachate ponds overflowing onto adjacent property.</p>
62	L. Surface water facility locations	<p>Comment noted. KC acknowledges the constraints required in the 1960 permit (see Section 1.3.1) and the existence of facilities or structures in the buffer zone (see Section 2.1.4). The EIS includes discussion of the necessity to obtain a special use permit for operations within the buffer, see Land Use Section 11.</p>
42, 61, 63	M. Stormwater Volumes and Treatment	<p>See revised text in Section 5.1.4.1.</p> <p>The landfill is on a land parcel that is 920 acres in size. Per the approved hydrologic model used by King County (MGS Flood) in an average year, 52-inches</p>

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		<p>of precipitation falls onto the landfill. This results in 1.3 billion gallons of precipitation that falls onto the site. Clean stormwater that doesn't come into contact with waste is collected, treated, and safely conveyed from the landfill property (Section 1.3.2) and not to the KCWTD POTW. CSW and leachate are collected separately and are ultimately sent to the leachate lagoons for pre-treatment and then offsite to a KCWTD POTW.</p> <p>Per Section 1.3.3, Contaminated stormwater (CSW) is generated when surface water runoff contacts refuse, such as when waste is first disposed but has not yet been covered. At CHRLF, CSW is collected separately from leachate and uncontaminated (clean) stormwater runoff. Collection, conveyance, and temporary storage of CSW runoff is achieved through a system of berms, ditches, pipes, and culverts, which direct CSW flows to the CSW lagoon located southeast of Area 8 (Figure 1 3). The CSW lagoon stores the CSW and helps with pre-settling of solids before discharging to the leachate lagoons and ultimately offsite to a KCWTD publicly owned treatment works (POTW).</p> <p>The CSW lagoon is sized to contain flows from approximately 96-acres of landfill and runoff resulting from the 100-year, 24-hour storm. The leachate system was originally designed with sufficient capacity for all leachate generated through the development of Area 7 during the 100-year storm. During Area 8 design, an evaluation of storage capacity of the existing lagoons with the revised leachate generation yield coefficients, the addition of Area 8, and the actual pump capacities of LEPS was completed. This analysis used site specific design storm events of a 25-year, 24-hour event of 3.7 inches and a 100-year, 24-hour event of 4.4 inches. The storage analysis indicated that with the existing capacity of the CSW and leachate lagoons and current maximum pumping rates at LEPS that there was sufficient capacity to manage the increased peak flows associated with the development of Area 8. However, improvements to the leachate lagoon piping were required to convey the flow between the leachate lagoons and LEPS. (Area 8 Development Agency Submittal Engineering Report, HDR 2017). During peak storm events, CSW can be detained in the CSW lagoon and released into the leachate system when the storm subsides and storage capacity in the leachate lagoons becomes available.</p>

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		<p>Calculations for leachate flow projections for action alternatives conducted for this EIS determined that additional capacity will not be required in the leachate system. Future design phases will calculate leachate flow projections for the selected alternative to determine whether additional capacity will be required in the leachate system. Leachate flow projections will likely be determined by leachate models (including empirical models based on measured leachate flows, recorded precipitation, characterization, and contributing areas; and a model utilizing yield coefficients from the first model together with contributing area conditions for the landfill development condition to be analyzed and one-year of synthetic precipitation data that includes a multi-day 100-year storm event).</p>
49	N. Soil Contamination from QCF	<p>Comment noted. The practice of burning waste in the QCF occurred from 1955 - 1964 per EPA Superfund Information. EPA began to investigate wastes, soils, and groundwater at the site in 1979. In 1980, the ponds were sampled by EPA; heavy metals and VOCs were found in the water, sludge, and sediment. On September 21, 1984, the EPA added the site to the National Priorities List. In 1985, EPA issued an interim cleanup plan that focused on closing the three waste ponds. On December 31, 1992, EPA issued a Record of Decision that selected cleanup actions to address contaminated soil and groundwater at the site. The groundwater plan was amended in 2014 to provide for groundwater extraction and treatment. EPA has provided oversight of potentially responsible parties actions to investigate the site, evaluate cleanup alternatives and implement the cleanup. Every five years, EPA reviews the protectiveness of the remedy.</p> <p>See Section 3.0 for information on soil remediation at QCF, Section 6.1.2.1 for information on the groundwater remediation at QCF, and Section 9.0 - Human Health for any lingering risk from contamination of CHRLF from those QCF practices.</p>
63	O. South Renton Treatment Plant	<p>Comment noted. The South Treatment Plant in Renton treats wastewater coming from cities located east and south of Lake Washington. Approximately 90 million gallons a day (mgd) of wastewater is treated at this facility during the dry months and up to about 300 mgd flows can be treated during the rain/storm season. The South Treatment plant is a secondary treatment facility that uses an activated sludge process for wastewater treatment. After secondary treatment, King County</p>

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		<p>disinfects the treated wastewater and returns it to the environment. It is also called biological treatment because oxygen is added to activate the living microorganisms (such as bacteria) that eat the dissolved organic material still in the wastewater. The South plan uses an 'activated sludge' treatment process where the organisms are maintained at a very high level to accelerate the consumption process.</p> <p>The South Treatment Plant produces about 60,000 wet tons of biosolids per year.</p> <p>Biosolids contain water, organic matter, sand, nutrients, microorganisms, trace metals, and trace organic compounds. Biosolids are classified as Class A or Class B based on the level of pathogen reduction. Class A biosolids are treated to kill pathogens and can be used in public spaces and home gardens without additional treatment. Class B biosolids are treated to significantly reduce, but not eliminate, pathogens. Therefore, Class B biosolids have restrictions on where they can be used, when crops can be harvested, and restrictions on access to the site.</p> <p>The King County Environmental Lab tests biosolid samples monthly for the presence and concentrations of metals, conventional, microbiological and organic parameters.</p>
49	P. Precipitation Changes	<p>Comment noted. Per Section 5.2.1.2, BMPs to minimize potential impacts are currently implemented, and will be in the future. These include dedicated stormwater facilities for runoff from impervious areas. Stormwater runoff is designed and managed in accordance with the most current version of the KCSWDM. These standards ensure that adequate flow control and water quality measures are installed relative to the program.</p> <p>During the design phase, stormwater modeling is conducted to determine the size and components of the stormwater facilities required to handle stormwater flows on site. Basin delineations used for stormwater models are typically 2-dimensional areas, and differences in topographic conditions are negligible in overall modeled volumes of stormwater runoff.</p> <p>The current adopted manual (2021) does not require accounting for forecasted climate change scenarios. If they are added to a future manual, they will be incorporated into the design of stormwater facilities. A factor of safety is frequently</p>

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		<p>applied to the design of stormwater facilities, but those are determined by the engineer or record. .</p>
49	Q. VOCs in Stormwater Runoff	<p>See revised section 5.1.7.1, which provides information on where KCSWD posts annual reports online.</p> <p>KCSWD releases quarterly and annual reports summarizing environmental monitoring data.</p> <p>KCSWD conducts self-monitoring for several VOCs from regional aquifers, perched zones and in blanks which are reported in the KCSWD Annual Reports for CHRLF.</p> <p>In regard to what stormwater is tested for: as part of KC's Industrial Stormwater General Permit, the County tests stormwater for nine parameters on a quarterly basis: pH, turbidity, oil sheen, copper, zinc, BOD, TSS, Ammonia-N, Alpha Terpeneol, benzoic acid, 4-methylphenol, and phenol. Sampling occurs at three locations: SW-N4, SW-SL3 and SW-GS1, see Figure 5-3 of EIS for their locations.</p> <p>Beginning in 2017, a Construction Stormwater General Permit (CSWGP) was issued for CHRLF (permit number WAR305034 with Ecology) for the Area 8 construction activities. A separate Stormwater Pollution Prevention Plan (SWPPP) was also created for this CSWGP permit. Four (4) discharge locations were monitored weekly for compliance with the CSWGP in accordance with the SWPPP by the contractor during the active phase of the project.</p> <p>Area 8 was substantially completed during the second quarter of 2019, and construction stormwater monitoring by the contractor discontinued at the time of completion. The permit however remains active, with monitoring continued by SWD staff monthly.</p> <p>See revised Chapter 9, Human Health, for additional information on potential impacts from a wide range of chemicals of concern.</p>
49	R. Landfill Closure	<p>See revised Section 5.2.1.1, 5.2.1.2 and 5.2.1.3.</p> <p>As part of landfill closure planning and design, stormwater modeling and design of system upgrades is done for the most conservative land cover closure type. For post-closure activities that include installation of a surface that will result in</p>

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		<p>increased runoff, the stormwater system will be resized and upgraded to accommodate increased flows. Design and construction will be in accordance with Ecology's 2019 Stormwater Management Manual for Western Washington, the SWDM, the City of Maple Valley's Stormwater Management Program (City of Maple Valley, 2020) for CHRLF, and the City of Renton's 2017 Surface Water Design Manual for any new facilities in Renton (City of Renton 2017), or the versions of these manuals in effect at the time of closure. These standards ensure that adequate flow control and water quality measures are installed relative to the scale and timing of development and closure (see Section 5.2.1.2).</p>
61	S. Stormwater flow distribution	<p>A commentor questioned the effects on water flows to wetlands, key waterways, and water rights, including tribal, when existing closed areas are opened to additional disposal.</p> <p>Top filling of currently closed areas would result in runoff that is currently routed to the stormwater network to be re-routed to the CSW network. This will temporarily reduce the volume of clean stormwater being discharged from the landfill site. When the top filled areas are re-closed, stormwater will be managed in accordance with the current KCSWDM to meet water quality and quantity standards.</p> <p>King County is home to the Federally-recognized Muckleshoot and Snoqualmie Tribes. Neither Tribe has Tribal land within the vicinity of the landfill.</p> <p>KCSWD's practice is to minimize the interim-closed refuse areas and the open active face of the landfill at any given time. This also reduces the volume of water sent to the CSW system vs the clean stormwater system. The number of acres that remain open at any given time is typically 1-3 acres, and no more than approximately 30 acres drain to CSW at any one time.</p> <p>Stormwater from the northern portion of the landfill drains to the Issaquah Creek basin (which includes McDonald Creek, see Section 5.1.1), which drains approximately 37,000 Acres. Stormwater from the Southeast corner of the landfill drains to the Lower Cedar River drainage basin, which drains approximately 43,000 Acres. The area draining to CSW at any one time at CHRLF is approximately 0.004% of the total area of the drainage basins, and will not have a significant impact on the downstream system.</p>

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Chapter 6: Groundwater		
26, 35, 45, 61	A. Liner Integrity and groundwater contamination	<p>Several commentors expressed concern for the potential for landfill liners to fail or otherwise allow groundwater contamination to occur.</p> <p>All proposed new development areas will be constructed using a bottom liner and leachate control system that is designed in accordance with WAC 173-351-300. No additional unlined “pits” (i.e., disposal areas) are proposed. A new subsection, Collection and Conveyance System, Impacts has been added to Section 3.2.1.3 to address liner integrity as waste is added to old cells. Also discussed is how piping used for collection systems is designed and specified to withstand breakage from the weight of soil and refuse placed above it, and analysis performed during design of landfill cells confirms that the proposed geometry and additional weight will not cause failure through the foundation material (i.e., native glacial till). None of the areas proposed that include use of a LOURA (see Section 2.3.1.1) extend over impacted perched saturated zones.</p> <p>CHRLF operates a groundwater monitoring program that conforms to the requirements in WAC 173-351-400-450. As discussed in EIS Section 6.1.5, groundwater quality in the regional aquifer in 2019 was generally consistent with historical water quality, and all groundwater samples collected from regional aquifer monitoring wells downgradient of refuse areas met primary drinking water quality standards. Groundwater monitoring reports are available through KCSWD’s website <https://kingcounty.gov/depts/dnrm/solid-waste/facilities/documents.aspx#monitoring>. Section 6.1.4.1 has been revised to note that future modifications to the groundwater monitoring program or network would be managed under WAC 173-351-400.</p> <p>Section 6.1.1.1. has been revised to emphasize that CHRLF is not located above a sole source aquifer and that groundwater beneath CHRLF does not discharge to a sole source aquifer.</p>
61	B. Final/interim cover	<p>Comment noted. All proposed new development areas will be constructed using a bottom liner and leachate control system that is designed to prevent leachate from accumulating to depths exceeding 12 inches above the bottom liner (less than 2 feet in sump areas) at any time (WAC 173-351-300), eliminating any potential</p>

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		<p>"bath tub effect." As part of landfill development and design, King County estimates the amount of leachate flow generated to confirm the leachate lagoons are adequately sized and to size the leachate side slope pumps and conveyance piping to the lagoons. These evaluations take into consideration the difference between an area of the landfill that is closed (whether final or interim) with a soil cover versus an exposed geomembrane cover (see Area 8 Development Engineering Report, King County, 2017). Leachate flows are pumped from the bottom of the cell and are designed to satisfy regulations in WAC 173-351-300.</p> <p>KC landfill closure design for final and interim cover meet the low permeability requirement of 10-5 cm/sec (per Area 7 Staged Closures Basis of Design Report, King County, 2012). CHRLF cell closure designs comply with the regulatory requirements as defined in WAC 173-351 and administered by Ecology. The WAC does not provide specific requirements for interim cover systems such as those used at CHRLF that are intended to have only a limited lifespan. The Public Health Municipal Solid Waste Permit for CHRLF sets forth general requirements for placing additional cover soils over refuse areas that are not actively receiving waste. Daily cover consists of six inches of cover, while interim cover consists of six to 12 inches over/on top of the daily cover. Interim covers improve soil stability and erosion control; provide effective separation of clean stormwater and CSW; provide active and passive LFG emission controls; and control leachate seeps (Area 7 Closure Basis of Design Report, 2012). Only Areas 5 and 6 would likely remain under Interim cover until Area 9 is filled. All alternatives include removal of interim cover in Areas 5, 6 and 7 and placement of final cover (Section 2.3.1).</p>
39, 61, 63	C. Potential for hazardous materials and contamination impacts on groundwater	<p>Some comments expressed a desire for additional discussion of the potential for hazardous materials and other potentially toxic contamination to affect groundwater.</p> <p>EIS Section 6.1.1.2 and 6.1.6.2 were modified to note the Aquifer Protection Area definition and standards applicable to the Renton site. EIS Section 6.2 was also modified to note that appropriate management practices are already required at the existing facility.</p> <p>Regarding known and expected groundwater contamination related to CHRLF, Section 6.1.5.1 states that "groundwater quality in two localized perched</p>

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		<p>groundwater zones has been impacted". The quoted discussion of vertical travel times was excerpted from a draft report (Aspect 2016; East Perched Zones Remedial Investigation and Feasibility Study, Agency Draft) and represents the results of one numerical modelling evaluation. Numerical modelling results necessarily rely upon fundamental assumptions, such as the assumption that a saturated flow path exists or can be created between a perched saturated zone and its underlying aquifer. Additional discussion has been added to section 6.1.5.1 stating "Investigations of the impacted perched saturated zones and regional aquifer have not identified any saturated flow path via which groundwater flows from any of these zones to the underlying regional aquifer." Further, responses to Topic A of this section discuss existing groundwater monitoring and monitoring results. Additional discussion has been added to Section 6.1.6.1 noting that "Operation of the CHRLF has not affected the ability of surrounding landowners to rely upon the regional aquifer as a potable water resource. "</p>
42, 45, 61	D. Potential risk to drinking water	<p>Several comments noted the potential risks from the CHRLF on area drinking water supplies. Several areas of the EIS have been revised to provide additional detail on the relationship between the CHRLF, the regional aquifer, and the movement of area groundwater.</p> <ul style="list-style-type: none"> • Section 3.1.3.1 was revised to note that the Cedar Mountain Mine is located southwest of CHRLF. "Mining" mentioned in the EIS at CHRLF refers to surface extraction of gravel deposits prior to development of the landfill, not coal mining. Detail has been added to Section 3.1.2.1 to clearly identify previous studies completed for site geology at CHRLF. Reference added to Section 3.1.3.1 Coal Mine Hazards for detailed mapping of geology and coal deposits (by Vine 1969) that shows where local coal deposits are located, and the nearest deposit approximately one-quarter mile southwest of CHRLF does not extend beneath CHRLF. • Section 6.1.1.1 was revised to emphasize that groundwater flow beneath the CHRLF property is to the north and northeast, that the regional aquifer beneath CHRLF does not flow westward towards the Cedar River at any time, or in any location beneath the site, and that the site does not extend above or discharge to the Cedar Valley aquifer.

Commenter	Topic	King County Solid Waste Division Response
		<ul style="list-style-type: none"> • Discussion was added to Section 6.1.6.1. to note that operation of the (permitted) non-potable water wells at CHRLF does not affect the regional aquifer groundwater supply or quality and that their use is regulated by existing permits. • Discussion was added to Section 6.1.6.1 noting that "Operation of the CHRLF has not affected the ability of surrounding landowners to rely upon the regional aquifer as a potable water resource. " • Section 6.1.1.1 was revised to emphasize that groundwater flow beneath the CHRLF property is to the north and northeast, that the regional aquifer beneath CHRLF does not flow westward towards the Cedar River at any time, or in any location beneath the site, and that the site does not extend above or discharge to the Cedar Valley aquifer. <p>In addition, it should be noted that Section 10.2.1 discusses the impact associated with worst-case vibration levels on the landfill buffer line or at the extents of the proposed facilities developments. Results indicated that for each type of equipment, the projected vibration level is below the threshold for Category III building damage; below the 72 VdB threshold for human annoyance; and below the 65 VdB threshold for human perception. These conclusions indicate that damage to water supply wells is unlikely.</p>
49	E. Groundwater monitoring gaps during construction	A comment questioned how groundwater monitoring would avoid disruption during construction of proposed areas. Section 6.1.4.1 was revised to note that all modifications to the groundwater monitoring network are managed under WAC 173-351-400. These requirements would assure continuous monitoring during construction.
61	F. Soil surcharging impacts on groundwater	One comment questioned how soil surcharging on areas adjacent and on top of the Main Hill may affect the sole source aquifer under CHRLF. Section 6.1.1.1. has been revised to emphasize that CHRLF is not located above a sole source aquifer and that groundwater beneath CHRLF does not discharge to a sole source aquifer. Section 6.1.1.1. was also revised to emphasize that groundwater flow beneath the CHRLF property is to the north and northeast, that the regional aquifer beneath CHRLF does not flow westward towards the Cedar River at any time, or in

Commenter	Topic	King County Solid Waste Division Response
		any location beneath the site, and that the site does not extend above or discharge to the Cedar Valley aquifer.
Chapter 7: Plants and Animals		
49	A. Noxious weeds	A commenter expressed concern that some species of noxious weeds were not included in the Draft EIS. An updated description of noxious weeds presence and control is provided in Section 7.1.2.
42,49	B. Bald eagle protection and potential harm due to ingesting toxic waste and foam used for daily cover	Commenters noted that Bald eagles are federally protected under the Bald and Golden Eagle Protection Act and the Endangered Species Act (ESA). They are no longer listed under the ESA but are still protected under the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act. Section 7.1.4.1 provides additional information about bald eagle protection and management of scavenging by eagles and other birds. A comment referred to the health effects on eagles of consuming foam that was previously used as alternative daily cover. Foam is no longer used as alternative daily cover.
34	C. Potential contamination of SPU water supply due to bird scavenging.	Seattle Public Utilities (SPU) was invited to comment on the draft EIS, but did not provide any input, and has not expressed concern about potential impacts on its water supply. SPU verified that all intakes for Seattle drinking water are upstream from Chester Morse reservoir, over 16 miles upstream from any of the tributaries in the landfill vicinity.
49, 61	D. Daily cover	Commenters referred to the adequacy of daily cover in preventing scavenging by wildlife. Additional information about approved daily cover, performance testing and measures to control scavenging is included in Section 7.1.4.1
42,49	E. Deer, elk and other terrestrial wildlife use of the site	Comments mentioned use of the landfill as a migration corridor and important foraging area for terrestrial wildlife. Additional information about use of the site by deer, elk and other wildlife is included in Section 7.1.4.1
49,63	F. Fish and Orcas	Some commenters expressed concern about potential downstream water quality impacts on fish at the local watershed scale and for Puget Sound as a whole. Additional information about fish presence, water quality controls and sampling to detect potential pollutants at the landfill is included in Section 7.1.4.1 and 7.2.1.2.

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		Section 7.2.2 includes discussion of Cedar Hills contribution to cumulative impacts on fish and wildlife.
49	G. Long term impacts on plants and animals	Comments regarding long term impacts and mitigation included concerns about regionwide loss of habitat, including tree canopy. Post-closure impacts on plants and animals is discussed for each alternative and in Section 7.2.2 Cumulative Impacts.
49	H. Impacts and mitigation	A comment regarding lack of detail on mitigation for impacts of the alternatives on habitat is addressed in Section 7.3 describing additional mitigation measures.
49	I. Water quality/aquatic habitat	Concerns about water quality included the potential for aerial dispersion of leachate to affect aquatic habitat. Additional information about sampling to detect potential impacts of airborne pollutants is included in Section 7.2.1.2 and additional detail about mitigation is included in Section 7.3.
49	J. Significant impacts	A comment addressed adequacy of the discussion of Significant Unavoidable Adverse Impacts Additional information was added in Section 7.4
49	K. Cumulative impacts	A comment concerned adequacy of the discussion of Cumulative Impacts. Additional information regarding cumulative impacts on terrestrial and aquatic habitats was added in Section 7.2.2
49	L. Impacts on wildlife health from scavenging	Some commenters expressed concern about the health impacts on wildlife from consuming waste. Section 7.2.1.1 includes additional information about impacts on wildlife health from scavenging.
49	M. Long term adequacy of liners	There is concern about long-term performance of the liner system as wildlife forage for food. Information about the liner system is covered in Section 2.3.1.1 including depth of cover and stability of the liner.
49	N. Soil contamination from Queen City Farm	There is concern about soil contamination from operations at neighboring Queen City Farm. Section 7.2.1.2 was updated to acknowledge this potential impact under all Action Alternatives. Potential soil contamination from Queen City Farm would have occurred decades ago and may or may not be on the CHRLF site and distinguishable from other sources of potential contamination such as traffic exhaust, etc. Before disturbing soil in Area 9, soil samples would be analyzed and

Commenter	Topic	King County Solid Waste Division Response
		any contaminated soil would be separated and disposed of at an approved location.
49	O. Vibration effects on animals	A comment regarding effects of vibration on wildlife is addressed with additional information provided in section 7.2.1.1.
49	P. Water quality/habitat/leachate pipes	A comment about potential leakage from leachate pipes is addressed with additional information about protection of the pipes in Section 7.2.1.2.
49	Q. Wetlands and streams	There is concern with the lack of recent wetland and stream data for analyzing impacts of the alternatives. Prior to final design new wetland and stream delineations would be conducted to assure aquatic resources are protected, or to determine any mitigation required.
49	R. Waste to Energy effects on plants and animals	There is concern about the potential effects of a WTE facility on plants and animals. Potential impacts from a WTE facility on plants and animals is discussed in the 2019 Solid Waste Comp Plan EIS.
Chapter 8: Greenhouse Gas Emissions		
5, 49	A. Evaluation of the significance of impacts	<p>Climate change has been characterized in the King County Strategic Climate Action Plan (SCAP) as "a paramount challenge with fundamental and far-reaching consequences" for the people, economy, and environment of King County. The SCAP is the guiding policy document for King County's greenhouse gas mitigation and adaptation strategies for climate change and was unanimously adopted by the King County Council in May 2021.</p> <p>Currently, no final state or federal guidance exists for determining the significance of GHG emissions in the SEPA process. However, Washington Department of Ecology (Ecology) was directed by the Governor to develop regulations to guide greenhouse gas assessments for major projects in Washington, including new public or private facilities, or changes to an existing facility, that require review under SEPA. Those regulations, called the Greenhouse Gas Assessment for Projects (GAP) Rule are not final and are undergoing public comment and have yet to undergo official rulemaking. Likewise, the Council on Environmental Quality (CEQ) issued "Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in</p>

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		<p>National Environmental Policy Act Reviews" in August of 2016 (81 FR 51866), which was rescinded in April 2017 (82 FR 16576). However, in January 2021, Executive Order (EO) 13990 directed CEQ to review, revise, and update the 2016 guidance for eventual reinstatement. While the update is ongoing, CEQ directs federal agencies to use the 2016 GHG guidance, if appropriate and relevant.</p> <p>Under SEPA, Lead Agencies are to require mitigation for significant adverse environmental impacts (WAC 197-11-440), which are determined based on the consideration of context and intensity, as set forth in the SEPA Rules (WAC-197-11-794). Please see Section 8.4 for a revised discussion of the significance of quantified GHG emissions.</p> <p>The proposed GAP rule does not include guidance for consideration of project GHG emissions compared to global emissions. In addition, the 2016 CEQ guidance for evaluation under NEPA includes guidance that agencies should not limit themselves to calculating a proposed action's emissions as a percentage of sector, nationwide, or global emissions in deciding whether or to what extent to consider climate change impacts under NEPA. We have retained the reference to global emissions as context for GHG emissions related to the action alternatives but have revised the text to include a discussion of GHG emissions from the action alternatives compared to the GHG emissions reduction targets in the SCAP, and those enacted into law in Washington State.</p> <p>Cumulative impacts related to GHG emissions are described in Section 8.2.2. Additional text has been added to reflect the totality of GHG emissions resulting from the action alternatives, including those from landfill gas sold to, processed, and distributed by Bio Energy Northwest (BEW). The EIS now identifies the emissions from the proposed alternatives, when combined with other global emissions, a significant unavoidable adverse cumulative impact.</p>
6, 49	B. Quantification of Emissions, Including Fugitive Emissions, Use of Model, and Model Assumptions	<p>King County has revised its discussion and quantification of GHG emissions by using three independent models to estimate facility emissions – those from the project facility or core project infrastructure, and for the life cycle of GHGs associated with the project. This methodology is also generally consistent with the proposed GAP Rule (see response to Topic A, above). Appendix K provides detail</p>

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		<p>on the methodology, assumptions and values included in the GHG emissions calculations</p> <p>Revised GHG estimates, including for fugitive emissions and with appropriate consideration of the most recent guidance on treatment of biogenic emissions, account for emissions over a 100-year period and can be found in Section 8.2.1.</p> <ul style="list-style-type: none"> • Table 8-1 has been revised to show a more conservative assumption regarding landfill gas capture. • Table 8-2 has been revised to show additional detail and consolidated description of GHG emissions from all sources related to the No Action Alternative using the WARM model. • A new Table 8-3 has been revised to show additional detail and consolidated description of GHG emissions from all sources related to the No Action Alternative using the MSWDST model. • added to show estimated GHG emissions from relocation and construction of support facilities. • A new Table 8-4 has been added to show additional detail and consolidated description of GHG emissions from all sources related to construction of landfill cells/closure, and WTE and WEBR facilities for the No Action Alternative using the AFLEET model. • Table 8-5 replaces Table 8-3 in the DEIS to provide estimated GHG emissions from landfill support facilities construction, during construction and over the facility lifecycle. • Revised Table 8-7 (DEIS Table 8-5) includes a consolidated description of GHG emissions from all sources related to the proposed action alternatives, both including and excluding credits, using the WARM model. GHG emissions from transport of waste from King County Recycling and Transfer Stations is included in the WARM model. • Revised Table 8-8 includes a consolidated description of GHG emissions from all sources related to the proposed action alternatives, both including

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		<p>and excluding credits, using the WARM model. GHG emissions from transport of waste from King County Recycling and Transfer Stations is included in the MSWDST model.</p> <ul style="list-style-type: none"> • New Table 8-10 replaces DEIS Table 8-7, with estimates of emissions from landfill cell closure and construction under both WTE and WEBR scenarios, for both CHRLF and a regional out of county landfill. • Additional use of equipment related to landfill operations and construction has been added to the analysis and is included in Table 8-5. • Appendix K provides more detail on the methodology, assumptions and values included in the GHG emissions calculations; Comment responses to Topic E, below, also provide additional context for the methods and models used for GHG emissions estimates. <p>Additional clarifying text is also included in Section 8.1.1.1 discussing fugitive emissions, with some added emphasis on the role of cover systems in preventing fugitive GHG emissions. The type of landfill cover and the timing for landfill cover placement is determined by a number of factors, including adherence to WAC 173-351-500 which stipulates required covers; creating space for storage of soil for daily cover; time to allow for settlement of waste in order to maximize the density of in-place waste; and maintaining surge capacity in the event of a natural or other disaster.</p> <p>Please see Section 3.2 of the Cedar Hills Facility Relocation Study, Volume II for a description of the assumptions for employee and staff aggregate commute distances. A reference has been added Section 8.2.1.3, Support Facility Options to clarify the source of the assumption.</p>
49	C. GHG assumptions for regional landfill development	<p>As mentioned above in Topic B, King County has revised its discussion and quantification of GHG emissions using methodologies generally consistent with the proposed GAP Rule, including the addition of Appendix K, which provides more detail on the methodology, assumptions and values included in the GHG emissions calculations.</p>

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		<p>All landfills in the United States must meet the criteria set by the Resource Conservation and Recovery Act (RCRA) Subtitle D for Municipal Solid Waste Landfills. All new and lateral expansions of landfills in Washington state must meet the requirements of WAC 173-351, including the design criteria set by WAC 173-351-300, the operating criteria set by WAC 173-351-200, and the closure and post-closure care requirements set by WAC 173-351-500. While some alternative designs are allowed based on the specific environmental and locational setting of the landfill, all design criteria must be met.</p> <p>The revised text throughout Section 8.2.1 and the Comparative Greenhouse Gas Emissions Analysis (see Appendix K) recognizes that while similar, the type and sequencing of construction, the location of the construction, and the type and configuration of buildings associated with the CHRLF versus a regional out-of-county landfill will cause some variation in the GHGs emitted. These variations are accounted for in the analysis and revised estimates contained in Table 8-2, 8-3, 8-4, 8-5, 8-7, 8-8, and 8-10.</p> <p>Additional information on the potential regional landfills likely to be considered as a long-term disposal option is included in the Final EIS for the 2019 King County Comprehensive Solid Waste Management Plan, which is incorporated by reference into this Final EIS.</p> <p>Additional clarifying text is also included in Section 8.2.1.3 discussing the comparison of GHG emissions from the construction and operation of the action alternatives with construction and operation of the two long-term disposal options.</p> <ul style="list-style-type: none"> • Table 8-10 has been added to show estimated GHG emissions from construction of the two long-term disposal options. Additional assumptions about the scope and duration of construction of each of the facilities is provided in Appendix k. • Revised Table 8-7 (DEIS Table 8-5) and Table 8-8 include a consolidated description of GHG emissions from all sources (including fugitive emissions) related to the proposed action alternatives under both of the two long-term options, both including and excluding credits, using the WARM model and MSWDST model, respectively. GHG emissions from

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		<p>transport of waste from King County Recycling and Transfer Stations is included in the WARM model as are emissions from onsite operations equipment. Results for long term disposal options at out-of-county landfills also include fugitive emissions and onsite operations equipment.</p> <ul style="list-style-type: none"> Appendix K provides more detail on the methodology, assumptions and values included in the GHG emissions calculations; Comment responses to Topic E, below, also provide additional context for the methods and models used for GHG emissions estimates.
49	D. GHG assumptions for WTE vs Alts	<p>As mentioned above in Topic C, King County has revised its discussion and quantification of GHG emissions using methodologies generally consistent with the proposed GAP Rule, including the addition of Appendix K, which provides more detail on the methodology, assumptions and values included in the GHG emissions calculations.</p> <ul style="list-style-type: none"> Additional clarifying text is included in Section 8.1.3.1 discussing the similarity of the types of GHG emissions from construction of a new landfill disposal area at CHRLF, construction of disposal capacity at a regional landfill disposal area, and the GHG emissions from construction of a WTE facility. Revised Tables 8-7 and 8-8 includes a more detailed and consolidated description of GHG emissions from all sources related to the proposed action alternatives, including the net calculation GHG emissions with and without credits under both of the two long-term options, which is also shown in Table 8-2. Appendix K provides more detail on the methodology, assumptions and values included in the GHG emissions calculations; Comment responses to Topic E, below, also provide additional context for the methods and models used for GHG emissions estimates. Section 8.2.1 has been revised to include clarifying discussion about the potential indirect effects of GHG emissions from combustion of waste in a WTE facility.

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		<p>The Action Alternatives considered in this EIS are the result of direction provided in the Solid Waste Comp Plan adopted by the King County Council in 2019. The 2019 Solid Waste Comp Plan specifically identified a WTE plant located somewhere in King County and Waste Export by Rail as the potential long-term disposal options once Cedar Hills Regional Landfill closes. The purpose of including analyses from the Arcadis or Normandeau reports is to provide additional context for the comparison of GHG emissions from the action alternatives. The conclusions reached by those studies will be included among the range of information King County uses to assess and decide on a long-term disposal option once the CHRLF closes.</p> <p>It is a reasonable approach to use planning-level analysis of WTE feasibility at this stage of environmental review. The King County studies represent the most comprehensive and recent analyses of WTE feasibility for a facility to service King County. Comment noted.</p>
49	E. Use of Mitigation Measures	<p>Additional proposed mitigation measures are detailed in Section 8.3.</p> <p>Carbon neutral offsets are a valuable part of reducing the effects of GHG emissions. The 2020 SCAP includes principles and policies that guide the use, purchase, sale, and reinvestment of carbon offsets and the County is committed to purchasing carbon offsets that are high quality, but only as a final option. KCSWD follows the County's GHG emissions reduction tactics (in order) - avoidance, reduction, replacement, removal or sequestration, and purchasing offsets.</p> <p>Specifically, the County will consider the use of soil as daily cover on the active face of the landfill where Tarps are currently used. The County conducted a test of the most effective daily cover options for reducing odor from the active face of the landfill, and concluded that the use of Tarps was the most effective for control of odor, while soil yielded the lowest gas emissions, albeit with a low number of readings taken by comparison.</p>
Chapter 9: Human Health		

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28,37,43,50,61,62	A. Comments noted	Several comments expressed opinions regarding aspects of landfill operation and its effects but did not comment directly on the EIS or its contents. These comments are noted.
57	B. Impacts at Renton site	One comment expressed a concern regarding potential health impacts from noise and air toxic emissions at the Renton site. The updated noise analysis contained in Appendix F of the Final EIS evaluates potential noise impacts at the Renton site and concluded that with implementation of recommended mitigation noise levels would meet City required standards. If noise standards are met, human health impacts from noise would be unlikely. The updated air toxics analysis contained in Appendix D evaluates diesel engine particulate emissions (DEEP), which would be the only substantial toxic air emission at the Renton site. The conclusion of that analysis is that estimated DEEP emissions would be approximately 1/12 the state's Small Quantity Emission Rate for DEEP. With emissions at this low level, human health impacts from DEEP emissions would be unlikely.
17,28,31,34,38,42,43,45,49,50,56,59,61,62,63,65,66	C. Need for health risk analysis	<p>Many comments questioned validity of the human health discussion in Chapter 9 of the Draft EIS, and the lack of a separate health risk analysis underlying that discussion. The Final EIS does include a health risk analysis that is contained in Appendix L and discussed in Chapter 9. Key aspects of the health risk analysis include:</p> <ul style="list-style-type: none"> • The health risk analysis evaluated the risk of toxicity and disease from landfill construction and operation. • The health risk analysis evaluated six exposure pathways: <ol style="list-style-type: none"> 1. Surface water/stormwater 2. Groundwater 3. Noise and vibration 4. Pest species/animals 5. Air toxics 6. Odor

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		<ul style="list-style-type: none"> • Risk equals hazard times exposure. In other words, the likelihood of toxicity or disease is the product of the nature and harm that a potentially hazardous agent (for example a chemical) may inflict and the degree and manner in which a person comes into contact with the potentially hazardous agent. • Actual or perceived contact with a potentially hazardous agent or the existence of levels of contact that may be perceived as an adverse impact may or may not equate to an actual significant health risk. • The analysis concluded that adverse health effects for residents and visitors in the surrounding community for any of the exposure pathways is unlikely to occur, with one possible exception. That exception is associated with nighttime noise adjacent to the southeast portion of the landfill. Nighttime noise in this area is primarily associated with the BEW facility. The health risk analysis recommends further investigation to validate the expected noise levels and to explore mitigation to reduce nighttime levels to within regulatory standards.
36,49,59, 66	D. Cumulative impacts	<p>One comment stated that the EIS should consider the health cumulative effect of air toxics and odor emissions from the landfill with air toxic and odor emissions from other sources in the area.</p> <p>The air toxics analysis contained in Appendix D of the Final EIS concludes that the landfill's air toxics emissions results in concentrations within the community surrounding the landfill that, with one possible, but unlikely, exception are within state standards. The health risk assessment contained in Appendix L of the Final EIS concludes that the landfill emissions of air toxics are unlikely to cause adverse health effects in the surrounding community. Based on this, the landfill's emissions of air toxics are unlikely to increase any cumulative adverse health effects that may exist from other known and unknown present or future sources of air toxics in the surrounding area and region.</p> <p>The odor analysis contained in Appendix D of the Final EIS, and the discussion in Chapter 4 based on that analysis, concludes that impacts from odor emissions at the landfill would be significant, and then describes mitigation that would reduce</p>

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		<p>those odor impacts. The health risk assessment contained in Appendix L of the Final EIS includes an assessment of health risks due to odors, and notes that "Unpleasant odors directly stimulating the sensory neurons can be perceived to cause toxicity. However, the detection of odor is not a reliable indicator of toxicity." The health risk assessment concludes that while the odor analysis in Appendix D acknowledges the potential for odor impacts, the "potential for adverse health effects is low". Based on this, as for air toxics, the landfill's emissions of odor is unlikely to increase any cumulative adverse health effects that may exist from other known and unknown present or future sources of odor in the surrounding area and region.</p>
46,47,49,61,62,65,66	E. Miscellaneous comments	<p>Several comments requested that issues be addressed in the EIS that either are not required to be addressed in the EIS or issues that were addressed in the Draft EIS.</p> <p>Issues that are outside of the scope of the EIS and therefore do not need to be addressed include a listing of past permit violations and system failures, an accounting of the health of employees working within the buffer over the past ten years, impacts relating to the use or eventual treatment and disposal of leachate, and potential contamination of vegetated soil on the landfill from activities at Queen City Farms.</p> <ul style="list-style-type: none"> • The EIS does acknowledge that past permit violations have occurred (e.g. landfilling in the buffer) and rare system failures have occurred (e.g. a 2013 break in the pipeline delivering gas to the BEW facility), however a detailed listing of past events is not germane to an assessment of anticipated impacts from the current proposal particularly when a large number of LFG and leachate system improvements have occurred in the intervening years and are planned for the future (see FEIS Section 1.3. The EIS does acknowledge the risk of future system failures and describes current practices to minimize the risk, monitoring practices to identify a system failure should one occur, and response procedures if a system failure is identified. • The health of employees working within the buffer in the past ten years is not germane to the expected health impacts from future operation of the

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		<p>landfill under the proposed construction and operation, particularly when the large number of LFG and leachate system improvements that have occurred in the intervening years and are planned for the future (see FEIS Section 1.3) is taken into account.</p> <ul style="list-style-type: none"> • Leachate is treated at the landfill and then conveyed to the County's wastewater treatment system for final treatment and disposal. Biosolids from the County wastewater treatment system have been used to enhance the fertility of soils. Wastewater treatment and the use of biosolids are projects separate from the landfill, that have undergone their own separate SEPA analyses for impacts, and that have been separately permitted by regulatory agencies. • Soil used at the landfill is evaluated for contamination and only clean soil is used. The occasional disturbance of soil outside of the landfill footprint is unlikely to release any contaminants that exist to a sufficient extent that health effects to the surrounding community would occur. <p>Issues that were raised in comments that are addressed in the EIS and its analyses include:</p> <ul style="list-style-type: none"> • Mitigation measures to effectively enclose landfill cells and areas and to effectively manage landfill gas, which are described in Chapters 1 and 4. • The use of alternative daily cover, which is described in Chapter 1 and for which Public Health – Seattle & King County has issued approval • Soil surcharging is described in Section 2.3.1 of the EIS where it is noted that surcharging has been conducted at the CHRLF in the past without adverse effects on environmental control systems such as the leachate and gas collection systems. • The safeguards in place to protect the surrounding community, which include the gas and leachate management systems and other environmental control system at the landfill that are described in Chapter 1. Chapter 2 describes how those systems would function under the various alternatives.

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Chapter 10: Noise and Vibration		
38,47,49.59.61.66	A. Harmonic vibrations	Several comments requested that the EIS address harmonic vibrations from the landfill's flare system. The flare system is a back-up system activated only when collected landfill gas cannot be delivered to the BEW facility. Past issues with vibration from the flare system, which were associated with imbalanced operating conditions among the three flares, have been addressed. As described in the DEIS, a 2014 study concluded that vibration levels from the flares at the landfill property boundary and in the adjacent community were not distinguishable from background vibration levels, and no adverse vibration impacts from the flares would be expected under any of the alternatives.
38.42.49.59,61,66	B. Validity of vibration assessment	Several comments questioned the validity of the vibration assessment contained in the Draft EIS and requested additional analysis. Appendix G includes additional analysis of potential vibration impacts, and Chapter 10 has been revised to incorporate that additional analysis. The analysis focused on vibrations from the landfill's vibratory roller, which is the source of the highest vibrations at the landfill. The analysis included on-site vibration measurements of the roller, used those measurements to calculate expected levels of vibration at various locations in the surrounding community, and compared the expected levels to known thresholds of detection and impact. The conclusion of the analysis is that vibration levels outside the landfill boundary would be below the typical threshold for human detection, and significant vibration impacts are unlikely to occur, and therefore additional mitigation measures to reduce vibration are not necessary.
38,49,61	C. Noise impacts from BEW facility	Several comments stated that the noise analysis should include the noise impacts from the BEW facility. The noise analysis has been updated (Appendix F - Addendum to Noise Technical Report) to include noise from the BEW facility, and the text in Chapter 10 has been revised to incorporate that analysis. A primary conclusion of the analysis is that nighttime noise exceeding the County's 39 dBA rural district nighttime standard would occur outside of the southeast, southwest, and south landfill boundaries under any alternative. This exceedance is due to BEW operations, and landfill activities, which are limited during nighttime hours, would contribute minimally to cumulative nighttime noise. Analysis indicates that a reduction of about 6 dBA in nighttime noise from BEW would be needed to reduce

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		projected noise levels below the 39 dBA standard. The practicality of this level of BEW noise reduction is uncertain.
15,16,24,39,57	D. Renton site	Several comments questioned aspects of the noise analysis for the Renton site. The noise analysis included in the Draft EIS has been supplemented and is included in Appendix F of this FEIS. The supplemental noise analysis includes analysis of traffic noise along NE 3 rd Street, includes an assumption that the gravel property to the northeast would be filled up to grade level prior to being developed residentially, and includes an assessment of the potential for the landfill to move to a five-day work week. The analysis concludes that nighttime noise levels would exceed City regulatory limits and describes mitigation to bring noise levels within those limits. However, the mitigation includes tall noise walls around much of the site, and the FEIS acknowledges that whether these noise walls could be constructed in a manner that would be aesthetically appropriate and consistent with City zoning regulations is uncertain.
38,61	E. Buffer vegetation as noise mitigation	Several comments questioned the extent to which buffer vegetation moderated noise levels, and, in particular, suggested that any moderation effect is substantially reduced during winter months when leaves are off the buffer's deciduous trees. Appendix F includes a study conducted involving actual noise measurements at the inner edge of the buffer and at the landfill boundary at the outer edge of the buffer. Comparison of the measurements with modeled levels of noise at the two locations indicated that modeling assumptions regarding the level of noise attenuation associated with buffer vegetation were conservative, i.e. modeling resulted in less attenuation than indicated by the measurements.
56,65	F. Construction noise	Several comments stated that construction noise from the landfill has been occurring for years and that noise from operations should not be considered construction noise. The noise analysis from the Draft EIS and the updated noise analysis are in Appendix F of the Final EIS. For those analyses, operations involving the handling of incoming waste and sounds associated with on-site maintenance personnel and building HVAC equipment were considered operations and not construction. Shorter-term activities that would classify as construction were not explicitly modeled, but were assessed for their potential contribution to

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		overall noise levels. The conclusion of the assessment was that the increase in noise from construction would not be significant.
49,61	G. Noise mitigation	<p>Several comments expressed skepticism regarding the adequacy of recommended measures to mitigate noise, and suggested that the landfill would result in significant unavoidable adverse impacts. The noise analysis in Appendix F of the Draft EIS based its recommended mitigation measures explicitly on the results of the noise modeling and the type and extent of mitigation necessary to bring down noise levels to within required standards. The updated noise analysis contained in Appendix F of the Final EIS updated the original analysis to include noise from the BEW facility and to include impacts resulting from the potential shift to a five-day workweek at the landfill. As a result of the updated analysis of impacts, measures recommended to mitigate noise were revised, including revisions to recommended noise walls in the northwest portion of the property. One conclusion of the updated noise analysis is that nighttime noise levels adjacent to the southeast corner of the landfill would exceed regulatory standards primarily due to noise from BEW operations. Whether BEW noise can be reduced sufficiently to meet nighttime standards is uncertain.</p>
38,49,62	H. Noise impacts considering terrain and structures	<p>Several comments expressed skepticism that the noise analysis adequately accounted for the effects of terrain and structures.</p> <p>The noise model used to calculate future noise levels included accurate elevations of the landfill footprint at various stages of development and accurate elevations of the land outside of the footprint within and adjacent to the landfill. The landfill is located on an upland, rather than in a canyon as a comment asserted, and the nearest areas at or above the elevation of the landfill are 3,000 feet or more in distance from the landfill. At that distance, noise from the landfill would be attenuated to such an extent that the levels of any reflected noise would be low. The vegetation and limited extent of acoustically "hard" surfaces on higher elevation areas surrounding the landfill would also serve to limit noise reflection.</p> <p>Several comments stated that the noise analysis in the Draft EIS did not adequately assess noise from operations above the 770 elevation that was used in the noise analysis. The updated noise analysis in Appendix F of the Final EIS analyzes noise from operations at the higher close-out elevations, and concludes</p>

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		<p>that noise from operations at that level would be no greater the noise from operations at the 770-foot level for two reasons: noise emanating from both the 770-foot elevation and the close-out elevations are above the height of the buffer trees, and operations at the close-out elevations would be slightly farther from the landfill's property line than operations at the 770-foot elevation.</p>
49,59,66	I. Noise as a "nuisance" under state law	<p>Several comments asserted that the EIS should assess noise from the landfill from the perspective of nuisance as defined in RCW 7.48.120. The RCW section referred to states that a nuisance consists of unlawfully doing an act or omitting to perform a duty that results in deleterious effects on others as defined in the statute. The proposed action is for the County to construct and operate the CHRLF in accordance with applicable laws and permit conditions and, with respect to noise, the duty of the County is to construct and operate the landfill in accordance with required regulatory standards. With mitigation recommended in the Final EIS, the County would be constructing and operating the landfill in accordance with regulatory standards and requirements and a nuisance, as defined in RCW 7.48.120, related to noise would not occur.</p>
6,22,26,31,43,44,47,56,62,65	J. Comments noted	<p>Several comments expressed opinions regarding aspects of landfill operation and its effects, but did not comment directly on the EIS or its contents. These comments are noted.</p>
28,38,49,56,61,62,65	K. Validity of noise assessment	<p>Several comments questioned the validity of aspects of the noise analysis including whether the analysis was based on realistic noise data, whether the noise analysis assessed noise impacts at a sufficient distance from the landfill to account for valley topography, whether the noise analysis considered impacts from berm construction, noise from back-up alarms and equipment when the equipment is employing maximum power, noise impacts from opening closed areas, and when various alternatives would achieve compliance with noise regulations.</p> <p>The original and updated noise analyses contained in Appendix F of the Final EIS uses actual measurements of ambient noise taken at locations along the perimeter of the landfill and at various locations within the surrounding community and actual measurements were taken of a wide range of vehicles, facilities, and construction equipment used at the landfill. Measurements were also taken of various activities to determine noise levels involving multiple activities and sets of equipment. The</p>

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		<p>measurements were supplemented by manufacturer data for some equipment for which noise measurements were not readily obtainable.</p> <p>Noise impacts were determined through modeling of noise levels using a reasonable maximum level of activity and equipment for both daytime and nighttime operations and expected landfill terrain changes as the landfill develops into the future. To evaluate impacts from the action alternatives, Alternative 3 was used as representing the “worst-case” (greatest impact) situation.</p> <p>Modeling evaluated noise from 11 separate source areas on the landfill focused on the perimeter of the landfill footprint and closest to adjacent residential areas and at over 100 separate locations at the landfill for truck noise. Projections using these source areas/locations assure that noise from opening closed areas for excavation and all future landfiling are unlikely to generate noise levels greater than projected levels. Projected noise levels were calculated using meteorological conditions favorable to noise propagation and noise contours were developed showing the distance from the landfill activity beyond which compliance with regulatory standards would occur, and no significant noise impacts would be expected. Where noise levels exceeding regulatory standards were projected to extend beyond the landfill property boundary, the EIS recommends measures to reduce levels to within required standards throughout future landfill operation.</p> <p>Construction noise was not explicitly modeled, but noise levels from construction were assessed and concluded to not be significant. Back-up alarms were also not specifically modeled, but in recognition of the concerns expressed by nearby residents about back-up alarms, the EIS includes recommended measures to reduce the adverse effects of these alarms while still meeting Occupational Safety and Health Administration standards.</p>
Chapter 11: Land and Shoreline Use		
42, 47, 56, 61, 65	A. Buffer uses	<p>Several comments expressed concern about past and present landfill-related activities conducted in the landfill buffer. The existing 1960 special permit under which the CHRLF has been operating includes the condition: “A 1,000’ buffer strip surrounding the entire site will be left in its natural state for the protection of the surrounding properties. There will be no sanitary operations in this strip other than</p>

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		<p>access." Since 1960, King County has allowed a variety of activities and land uses within the buffer, including gas probes and groundwater wells for environmental monitoring; leachate treatment lagoons and a wastewater conveyance pipeline transferring wastewater from the lagoons to King County's sanitary sewer system; the landfill access road; a non-potable water tank; potable water transmission line; and Passage Point, a King County-owned transitional housing facility. More than 35 years ago, some solid waste disposal occurred in the buffer on the east side of the landfill. In addition, Bonneville Power Administration and Northwest Pipeline have developed transmission utilities crossing the buffer.</p> <p>All action alternatives would require issuance of a special use permit unless support facilities are relocated to Renton. If support facilities are relocated to Renton, only Alternative 3 would require issuance of a Special Use Permit to revise the site boundary to include new property adjacent to the northeast corner of the existing site. That special use permit would specify the nature and character of future uses within the buffer.</p>
44	B. Property values and SEPA requirements	<p>Comments have expressed concern regarding the effect of the CHRLF on property values in the surrounding community. Neither the list of elements in an environmental checklist (WAC 197-11-960) nor the list of elements of the environment (WAC 197-11-444) include an item regarding property values, and the state's SEPA rules do not require that this EIS consider the proposal's effects, if any, on property values. Housing impacts are required to be considered, but potential housing impacts relate solely to the provision or elimination of housing units.</p>
49, 62	C. Consistency with Special Use Permit criteria	<p>Several comments asserted that the proposed alternatives to extend the life of CHRLF do not meet all criteria that must be met for the County to grant the necessary Special Use Permit. Section 11.1.3.1 of the Draft EIS discusses the proposal's consistency with Special Use Permit criteria.</p> <p>KCC 21A.44.050 states: "A special use permit shall be granted by the county, only if the applicant demonstrates that:</p> <p>A. The characteristics of the special use will not be unreasonably incompatible with the types of uses permitted in surrounding areas;</p>

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		<p>B. The special use will not materially endanger the health, safety and welfare of the community;</p> <p>C. The special use is such that pedestrian and vehicular traffic associated with the use will not be hazardous or conflict with existing and anticipated traffic in the neighborhood;</p> <p>D. The special use will be supported by adequate public facilities or services and will not adversely affect public services to the surrounding area or conditions can be established to mitigate adverse impacts;</p> <p>E. The location, size and height of buildings, structures, walls and fences, and screening vegetation for the special use shall not hinder or discourage the appropriate development or use of neighboring properties; and</p> <p>F. The special use is not in conflict with the policies of the Comprehensive Plan or the basic purposes of this title. (Ord. 10870 § 626, 1993)."</p> <p>With respect to the first two criteria, this EIS concludes that, if the landfill is designed and operated as proposed and recommended mitigation is implemented to address potential noise, air quality, odor, human health, and other impacts, the CHRLF can be operated so that the surrounding community does not experience significant adverse impacts under any of the action alternatives. Many comments to the Draft EIS expressed particular concern about impacts associated with air quality, odor, human health, noise, and vibration. Those comment responses are contained in their respective chapters in this Appendix.</p> <p>The transportation analysis conducted for this EIS concludes that, if identified mitigation is implemented, none of the alternatives would result in pedestrian or vehicular traffic that would be hazardous or conflict with anticipated traffic on surrounding roads. The transportation analysis did identify a significant adverse traffic impact at the SR 169/SE Renton Maple Valley Highway/Cedar Grove Road SE intersection and determined that a right-hand turn lane along northbound SR 169 at the intersection would mitigate this potential traffic impact.</p> <p>The analysis of public services and utilities conducted for this EIS concludes that police, fire and emergency, communications, maintenance services, and water,</p>

Commenter	Topic	King County Solid Waste Division Response
		<p>sewer, natural gas, electricity, and solid waste utilities would not be adversely impacted in the area surrounding the CHRLF.</p> <p>The analysis of aesthetics and light and glare conducted for this EIS concluded that no specific, significant visual impacts would occur under any of the action alternatives, as long as the County maintains existing visual mitigation, such as maintenance of buffer vegetation and the use of neutral-colored and non-reflective materials. With the continuation of these measures, the location, size, and height of the CHRLF and its associated buildings, structures, walls and fences, and screening vegetation would not adversely affect development or use of properties the area surrounding the landfill.</p> <p>As described in the EIS and discussed in the response to comments on the proposal's consistency with King County Comprehensive Plan policies, implementation of any of the alternatives would not conflict with the County's comprehensive plan policies.</p>
49	D. Consistency with King County Comprehensive Plan (KCCP) Policies	<p>Several comments asserted that extending the life of the CHRLF is not consistent with several King County Comprehensive Plan policies. Section 11.1.2.1 in the Draft EIS discusses consistency of the action alternatives with King County Comprehensive Plan policies.</p> <p>The KCCP states that "it may be necessary to locate some public facilities in the Rural Area".</p> <p>Policy R-324 states in part that "Nonresidential uses in the Rural Area shall be limited to those that:</p> <p>...b. Require location in a Rural Area;..."</p> <p>Policy R-201 states in part that "King County's land use regulations and development standards shall protect and enhance the following attributes associated with rural character and the Rural Area:</p> <p>...i. Rural uses that do not include primarily urban-serving facilities."</p> <p>The CHRLF and the proposed alternatives for its expansion require location in a rural area of the county. Policy R-324 provides five criteria for nonresidential uses in the Rural Area, and the policy is written such that a nonresidential use does not</p>

Commenter	Topic	King County Solid Waste Division Response
		<p>need to meet all five criteria but is consistent with the policy if it meets any one of the five criteria. The land area required for the CHRLF can only be accommodated in a Rural Area of the county. The landfill, including its peripheral buffer, encompasses approximately 1½ square miles of contiguous land, essentially the same area included in the landfill when it was originally permitted in 1960. Urban areas in the county almost entirely support dense development, and there is no sufficiently large contiguous land area with the appropriate physical characteristics available in the urban portion of the county.</p> <p>The CHRLF is not a facility that acts primarily as an urban-serving facility, but is a public facility that is an integral part of the County's solid waste management system and serves the entire county, not just its urban areas. An example of a primarily urban-serving facility would be a wastewater treatment facility that is a component of a system intended to provide an exclusively urban level of service.</p> <p>Policy R-401 states: "King County shall work with cities and other agencies providing services to the Rural Area and Natural Resource Lands to adopt standards for facilities and services in the Rural Area and Natural Resource Lands that protect basic public health and safety and the environment, but are financially supportable at appropriate densities and do not encourage urban development."</p> <p>This policy addresses facilities and services to rural, not urban, areas and is intended to assure that those facilities and services do not foster urban levels of service or urban densities in rural areas. The existing CHRLF does not, and the alternatives to extend the landfill's life would not, foster urban levels of service or encourage urban development in the rural area of the County.</p> <p>Policy R-402 states that "Public spending priorities for facilities and services within the Rural Area and Natural Resource Lands should be as follows:</p> <ol style="list-style-type: none"> a. First, to maintain existing facilities and services that protect public health and safety;..." <p>The CHRLF is an existing facility that is a component of the solid waste management system intended to handle the county's solid waste in a manner to protect the health and safety of the county and its residents. All alternatives would maintain the facility and the services that it provides to county residents.</p>

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		<p>Policy R-403 states: "In the Rural Area and Natural Resource Lands, standards and plans for utility service should be consistent with long-term, low-density development and resource industries. Utility facilities that serve the Urban Growth Area but must be located in the Rural Area or on Natural Resource Lands (for example, a pipeline from a municipal watershed) should be designed and scaled to serve primarily the Urban Growth Area...."</p> <p>The intent of this policy is to prevent utility services within the Rural Area, whether they serve the Rural Area and/or the Urban Growth Area, from being designed and planned in such a way that they foster urban growth in Rural Areas. The existing CHRLF does not, and the proposed alternatives to extend the life of the landfill would not, foster urban growth in rural areas of the county.</p>
17, 26	E. Landfill location and zoning	<p>Several comments questioned the compatibility of the landfill with the surrounding community. These comments are noted. Section 1.2 and 1.3 of the Draft EIS describes the history of the landfill and its operation since the 1960s under a Special Permit approved in 1960, notes instances where solid waste disposal occurred in the east buffer prior to the 1980s; acknowledges the inherent complexity of the systems operating at the CHRLF and the continuous work to improve those systems; and describes the Settlement Agreement entered into by King County in 2000 for several consolidated class action cases regarding operation of the landfill.</p> <p>The EIS considers a wide range of elements that would affect the landfill's compatibility with the surrounding community, including the elements of air quality and odor, noise and vibration, human health, traffic and transportation, and aesthetics. In evaluating compatibility, the EIS is required to assess the alternatives as they are proposed to be constructed and operated together with recommended mitigation measures. As a result of the assessment of elements affecting compatibility--including the results of technical analyses prepared for the Draft EIS and expanded for this Final EIS--the EIS concludes that if the landfill is constructed and operated as proposed and if measures identified in this EIS to mitigate potentially significant adverse impacts are implemented, the landfill would be reasonably compatible with the surrounding community.</p>

Commenter	Topic	King County Solid Waste Division Response
15, 30, 39, 60	F. Renton option	<p>Several comments expressed concern regarding the suitability of the Renton site option for the landfill's support facilities. Those comments are noted.</p> <p>Additional comments noted several inaccuracies in the Draft EIS regarding Renton zoning requirements and comprehensive plan designations. The text of the EIS has been revised in response to these comments.</p>
46, 57	G. Comments regarding issues not required to be addressed in the EIS	<p>Several comments raised issues related to land use that are not required to be addressed in this EIS. The EIS is not required to compare the CHLRF to other landfills adjacent to similar communities and is not required to address the manner by which property adjacent to the landfill was acquired in the past. The Affected Environment sections in chapters 3.0 through 14.0 of the EIS describe current existing conditions as the baseline against which probable impacts of the alternatives are assessed. The EIS is not required to describe or assess past conditions of the landfill or the surrounding community. The EIS considers probable significant adverse impacts resulting from the proposed action and its alternatives, but is not required to speculate on whether residents in the surrounding community may choose to relocate.</p> <p>The EIS does address cumulative impacts resulting from the proposal plus other known or reasonably foreseeable actions. In its consideration of potential cumulative impacts, the EIS necessarily includes the reasonable assumption that any ongoing or future development could only occur if it met applicable land use policies and regulations and received necessary regulatory approvals.</p> <p>The EIS addresses the potential impacts that could result after the CHLRF closes from either disposal of the county's waste at another regional landfill (waste export) or at a waste-to-energy facility. The uncertainties regarding the location of facilities associated with either post-closure option necessitates that the discussion of potential impacts from post-closure disposal be very general. Impacts from both post-closure disposal options are discussed programmatically in the EIS for the 2019 King County Comprehensive Solid Waste Management Plan (King County 2019d).</p>
42	H. Cultural resources	<p>Section 11.1.1.1 of the Draft EIS describes the results of historical and cultural resource studies that have been conducted on the CHLRF site and within two</p>

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		<p>miles of the landfill. Those studies concluded that the CHLRF site, including the buffer, has a moderate probability of containing archaeological sites, while the landfill footprint (the site area excluding the buffer) has a low probability of containing archaeological resources because of site geology and previous site disturbance from logging, grading, and construction. The CHLRF site has no buildings that would be eligible for listing on local or national historic registers. Off the landfill site, the nearest recorded historic or cultural site is the Cedar Mountain Bridge and Ramp 0.9 mile from the landfill. For the Renton site, the probability of encountering cultural resources is low.</p> <p>EIS Section 11.3 recommends implementing standard measures to minimize the likelihood of generating adverse impacts on cultural resources.</p>
37, 66	I. Equity and Social Justice	<p>Several comments expressed concern that expanding the CHLRF would not be consistent with the County's Equity and Social Justice Plan. Neither the state SEPA rules (WAC 197-11) nor the County Environmental Procedures (KCC 20.44) require an EIS to consider equity and social justice issues. As stated in WAC 197-11-448(1): <i>SEPA contemplates that the general welfare, social, economic, and other requirements and essential considerations of state policy will be taken into account in weighing and balancing alternatives and in making final decisions. However, the environmental impact statement is not required to evaluate and document all of the possible effects and considerations of a decision or to contain the balancing judgments that must ultimately be made by the decision makers. Rather, an environmental impact statement analyzes environmental impacts and must be used by agency decision makers, along with other relevant considerations or documents, in making final decisions on a proposal.</i> In making its decision regarding which alternative to implement, King County will take into account its Equity and Social Justice policies, along with the analysis and conclusions of this EIS and other relevant policies and factors.</p>
Chapter 12: Aesthetics Light and Glare		
39	A. Aesthetic impacts at Renton site	<p>Several comments requested more detailed analysis of aesthetic impacts at the Renton site. The text of the EIS, Chapter 12, Aesthetics, Light and Glare has been revised to include additional analysis of potential aesthetic impacts at the Renton</p>

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		<p>site. The conclusion of the additional analysis is that development of the Renton site, if recommended mitigation is implemented, would not result in significant adverse aesthetic impacts. Detail regarding this additional analysis can be found in the addendum to the Visual Quality and Aesthetics Technical Memorandum contained in Appendix ?.</p>
61, 62	B. Buffer	<p>Several comments questioned the accuracy of the buffer description in the Draft EIS and the conclusions regarding its effectiveness in visually screening the landfill. In Appendix H, Scenic Resources, Aesthetics, Light and Glare Technical Memorandum in the EIS the perimeter buffer zone is described in detail as follows:</p> <p>The perimeter buffer zone is a 1,000-foot-wide strip that separates the area of landfill activities from surrounding properties. It consists primarily of a mixed coniferous and deciduous forest, but the density of the vegetation varies, with the highest densities in the northern buffer and the lowest densities in the southeastern buffer. The character of the vegetation and allowed activities within the perimeter buffer are described below:</p> <p>North: The north buffer area is comprised of dense, mature, second-growth mixed conifer and deciduous forest. Trees here reach heights of approximately 100 to 150 feet. This area is maintained in a natural state and there are no disturbances to wetlands. Dirt roads provide access to environmental monitoring systems.</p> <p>South: High-voltage electrical transmission lines running east to west divide the southern buffer. The area north of the transmission lines is covered by low, shrubby vegetation. A deciduous and coniferous forest grows south of the transmission line easement in the remaining 700-foot-wide buffer area and thrives in a natural state. Allowed uses in this area of the buffer include two leachate treatment lagoons. Additionally, a small portion of the former South Solid Waste Area extends into the south buffer.</p> <p>East: The northern portion of the eastern buffer contains mature, second-growth mixed conifer and deciduous forest. In the southern portion of the eastern buffer, vegetation was cleared or thinned along the interior edge of the buffer to accommodate an alcohol treatment facility that has been closed. This facility now serves as Passage Point – a transitional housing and support facility for parents</p>

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		<p>reuniting with their children and returning to the community after a period of incarceration. The southern portion of the eastern buffer also contains the Southeast Pit Refuse Area, an area consisting of grass over landfill cover, filled in the earliest years of the landfill prior to accurate survey of the buffer line. This eastern buffer also contains power transmission lines and many allowed uses, including the landfill access road, 228th Avenue SE, in the southeast corner; and a non-potable water tank.</p> <p>West: The western buffer vegetation consists of a mix of conifer and deciduous forest that has grown to a height of approximately 60 to 80 feet.</p> <p>The topography varies within the perimeter buffer and is generally characterized by rounded knolls.</p> <p>The existing landfill buffer is identified in the section elevation for each viewpoint. Unless otherwise described in appendices H or I in the EIS, topography and existing vegetation obstruct views of the landfill buffer where vegetation clearing and construction of project alternatives are proposed.</p>
26, 56	C. View impacts from locations north of landfill including Squak and Tiger mtns.	<p>Several comments expressed concern about visual impacts to properties north of the landfill, including impacts to areas and recreation facilities on Squak and Tiger mountains and impacts on views of Mount Rainier.</p> <p>Views of Mount Rainier from locations north of CHRLF include:</p> <p>Between May Valley Road and the north buffer and perimeter of CHRLF: On May Valley Road, beginning at the average elevation of 330 feet, the natural topography varies little for 0.25 mile and then abruptly rises to 512 feet in approximately 0.3 mile. Moderately dense vegetation covers this rise. The combination of topography and vegetation obscures both the view of Mount Rainier and CHRLF.</p> <p>Views of Mount Rainier from Squak Mountain: Squak Mountain is a heavily forested state park with steeply sloping terrain that climbs from May Valley Road approximately 1.75 miles to the summit at 2,024 feet. The dense vegetation along the south face of the park affords no views of the landfill and likely no views of</p>

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		<p>Mount Rainier. At the location of the microwave towers at the summit, there are no views of CHRLF.</p> <p>Views of CHRLF on the hills west of Squak Mountain are documented in the technical memoranda contained in appendices H and I of the EIS. The photo simulations from Viewpoint #2 illustrate how distance and atmospheric conditions as well as topography and existing vegetation diminish the view of the landfill and would also minimize views of active filling operations. The now grass-covered landfill as seen from this residential area will be earth toned during active filling and will be covered with grass when filling is complete. Equipment, if visible, will appear as dark specks. Movement of the equipment as well as night lighting such as headlights would attract a viewer's attention, but the scale and atmospheric conditions would diminish this impact.</p> <p>The summit of Poo Poo Point trail on Tiger Mountain is at 1,825 feet and is approximately 3.23 miles from the landfill. From this vantage point, there is a distant view of the landfill. Distance and atmospheric conditions somewhat diminish the view of the landfill and will also minimize views of active filling operations. The now grass-covered landfill as seen from the trail will be earth toned during active filling and will be covered with grass when filling is complete. Equipment, if visible, will appear as dark specks.</p>
43, 44, 47, 61, 65	D. Opinions regarding alternatives and effects	<p>Several comments expressed preference for the No Action alternative, indicated disagreement with the conclusions of the aesthetics analysis, and described landfill-related impacts experienced by the commentors. These comments are noted.</p>
61, 65	E. Methodology and objectivity of aesthetics analysis	<p>Several comments questioned the methodology and objectivity of the assessment of aesthetics and light and glare.</p> <p>The methodology used in the assessment of aesthetic and light and glare impacts is described in detail in Appendix H. The visual quality assessment evaluates before- and after-project qualities through degrees of vividness, intactness, and unity. The assessment takes into consideration whether changes caused by the project are adverse, beneficial, or neutral when compared to the existing permitted landfill conditions represented by the baseline visual quality. Qualitative</p>

Commenter	Topic	King County Solid Waste Division Response
		<p>evaluations are identified as best practices in the FHWA Guidelines for Visual Assessments, which is the industry standard for this type of assessment.</p> <p>Viewpoints were selected for specific analysis of impacts based on four criteria:</p> <ul style="list-style-type: none"> • Will people be able to see significant visual change from the viewpoint? • What would be the duration of the view? • What are the expectations of the viewers? • How far away is the landfill from the viewpoint? <p>Based on these criteria, viewpoints were selected that were both representative of the impacts that the surrounding community would experience and that would have the greatest potential for visual impacts.</p> <p>All fieldwork and photography from identified viewpoints were completed the first week of April 2016. Spring leaf-out was in its early stage; some deciduous trees were leafless, while other deciduous trees showed evidence of early small leaves and a sheen of spring color. The lack of density of the spring foliage afforded views sufficient for completing visual analysis appropriate for the year-round condition.</p>
Chapter 13: Transportation		
6, 16	A. Transportation Alternatives Analysis	<p>A detailed analysis of transportation impacts of the No Action and action alternatives is provided in Appendix J of the DEIS and Appendix J of the FEIS. Table E-1 in Appendix J provides a summary of the transportation impacts. The transportation analysis is based on typical/normal traffic conditions without influence of the COVID-19 pandemic.</p>
49	B. Traffic Forecasts	<p>Traffic forecasts were determined using industry standard practices. As described in Appendix J, the Opening Year (2025) forecasts are determined by applying an average annual growth rate and adding traffic from pipeline or planned development with no assumed changes in travel patterns. Appendix J describes that the Design Year (2040) forecasts were determined based on the Maple Valley and Puget Sound Regional Council (PSRC) travel demand models. These models have been accepted and developed by the cities and region and determine travel forecasts based on industry best practices. PSRC provides the foundation of the</p>

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		<p>travel demand models and refinements are made in the local area. The travel demand models account for employment and population growth in the nearby communities including Maple Valley, Covington, Black Diamond, and Renton. The model also accounts for planned transportation improvements in the region. Growth in employment and population does not directly translate into growth in traffic volumes given factors such as people traveling at different times of the day, mode choices (auto vs. non-auto), not all population being driving age, and the variety of route choices. The models used to determine traffic forecasts for this study take into consideration these travel behaviors.</p> <p>The Design Year forecast consider planned transportation improvements and future changes in travel patterns and modes, and recognize the capacity constraints of the transportation system. With capacity constraints, it is recognized that in the future there may be a shift to other non-auto modes, spreading of travel over multiple hours during the peak periods and use of alternative routes (if available) for the background growth. The forecasting accounts for the available capacity of the roadway system and is founded on transportation research that shows traveler decision making for route and mode choice is influenced by travel times. Travel behavior will change when roadways are nearing capacity such that drivers may use a different mode, travel during a different hour, or take a different route. The travel forecasts for this study area based on information adopted by the region.</p> <p>The alternative trips were manually assigned to the study intersections and not assigned using the travel demand model. Trip distribution is shown in Appendix J on Figures 4-1 to 4-3 and 4-16 to 4-17. There are no shifts in traffic or changes in travel assumed in the primary analysis as a result of the alternatives.</p>
49, 58, 62	C. Transportation Study Area	<p>The transportation study area has been expanded to incorporate additional study intersections. A detailed list of study intersections is provided in Appendix J, Table 1-1 of the FEIS. The expanded study area includes additional intersections along SR 169 as well as locations along Issaquah Hobart Road SE, May Valley Road, SR 18, and NE 3rd Street/NE 4th Street.</p>
16, 24, 25, 39	D. Option 3 Renton	<p>Option 3 would locate the support facilities at the existing Renton Recycling and Transfer Station, which already has truck traffic to and from the facilities. Additional</p>

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		<p>detail has been added to the FEIS, Appendix J, on the surrounding transportation system, including the planned bicycle improvements along NE 3rd and 4th Streets. In addition, the discussion of safety impacts for the No Action alternative (section 4.1.1.4) and all alternatives (section 4.1.2.1.1) has been updated to note the potential for increased conflicts between vehicles to/from the Option 3 site and non-motorized traffic. The safety discussion also addresses speeds along NE 3rd Street. KCSWD could partner with the City of Renton to add speed radar signs to help slow traffic along NE 3rd Street.</p> <p>The Renton Technical College (RTC) is located along NE 4th Street north of the Option 3 project site. RTC has prepared a Campus Master Plan, which identifies potential expansion on the site located at the southeast corner of the Jefferson Avenue/NE 3rd Street/NE 4th Street intersection. As described in Appendix J of the FEIS, the RTC Campus Master Plan identifies the need to implement pedestrian crossing improvements as part of the expansion.</p> <p>Transportation impacts are evaluated for the action alternatives/Option 3 at the NE 3rd Street/Sunset Blvd N intersection, see detail in Appendix J of the DEIS.</p>
39, 49	E. Appendix J	<p>The following additions, changes, or clarifications are provided for comments related to Appendix J:</p> <ul style="list-style-type: none"> • Appendix J of the FEIS subsection 3.1.2, Transportation Discipline Report, has been updated to note the bus stop on NE 3rd Street at Edmonds Avenue SE. • Appendix J section 2.3 describes the performance measures used to determine potential significant impacts. These performance measures are consistent with the King County, City of Renton, and Washington State Department of Transportation standards. • Appendix J Section 2.3.1, Table 2-1 and other tables describing LOS have been updated to reflect the correct LOS standard and responsible jurisdiction. • Appendix J Table 1-1 has been updated to reflect Renton as the responsible jurisdiction.

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		<ul style="list-style-type: none"> As documented in Appendix J Section 3.2, the study periods were based on a review of hourly traffic volumes. The review shows that 6 to 7 a.m. traffic volumes are lower than 7 to 9 a.m.
9, 11, 13, 14, 15, 15, 29, 31, 40, 42, 43, 52	F. Comment Noted	Thank you for your comment. No additional response is necessary and no changes have been made to the FEIS.
Chapter 14: Public Services and Utilities		
61	A. Elementary School and Emergency Service impacts	<p>Comment noted. The location of Maples Hills Elementary School and its proximity to the CHRLF is noted in Section 14.1.6.1. The school's location is included within the area assessed for impacts, including those from odors, noise, aesthetics, and other elements of the environment. Revised text has been included in Section 14.2.1.2 to reflect potential impacts on schools.</p> <p>East Side Fire and Rescue is noted in Section 14.1.5.1 and the location of their closest facility to the CHRLF has been added to the description. Revised text has been included in Section 14.2.1.2 to reflect potential impacts on fire and emergency medical personnel.</p>
61	B. Mitigation	Some commenters suggested additional mitigation measures for utilities and services within the study area. Additional mitigation measures have been added to Section 14.3.
41	C. Requirement for wastewater permit	As discussed in Section 14.1.1.1, the sanitary sewer system serving the CHRLF administration and support facilities discharges to a KCWTD sanitary sewer pipeline. Relocated landfill support facilities would be designed with sewer connections for wastewater and human waste that discharge to the King County Wastewater Treatment system, the sanitary sewer system currently serving the landfill. Additional clarifying text has been added to Section 14.2.1.2.
42	D. Damage to utilities from vibration	As discussed in Section 10.2.1, worst-case vibration levels were calculated by using the highest vibration causing source, the vibratory roller, and by assuming that it was operating on the landfill buffer line or at the extents of the proposed facilities developments, whichever was closer to the property boundary. Results indicated that for each type of equipment, the projected vibration level is below the threshold for Category III building damage; below the 72 VdB threshold for human

Commenter	Topic	King County Solid Waste Division Response
		<p>annoyance; and below the 65 VdB threshold for human perception. Revised vibration analysis validates the conclusions presented above and can be found in the revised Vibration Technical Memo (Appendix G). A reference to these results has been added to Section 14.2.1.2.</p>

From: [Albert Andres](#)
To: [PlanEIS, CedarHills](#)
Subject: Open House Comment for Cedar Hills
Date: Friday, September 18, 2020 5:18:27 PM

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Hello,

My name is Albert Andres and I am a resident of Renton, WA in the Renton Highlands area and I oppose moving the site to the Renton Highlands location.

The new facility should be built within the same space in the Cedera hills Regional Landfill site. Tractor Trailer repairs should be fixed on site, people should work on-site to monitor progress. In order to extend the life of this landfill, drastic measures will need to be implemented like getting more people to compost as opposed to just being lazy and throwing everything away in the garbage. Education is key to extending the life.

I don't want the transfer site to be moved near up home in the Renton Highlands community. Do you not see the quality of NE 4th street which hasn't been fixed for years? Adding more trucks isn't ideal, the distance between the landfill and the site doesn't make sense. If you work t monitor the landfill you should work close to it and not far away from it.

Thank you,

ALBERT ANDRES
Mobile: 415.367.5801

From: [Bill ROberts](#)
To: [PlanEIS, CedarHills](#)
Subject: Comment: Draft EIS for CHRLF 2020 site development plan
Date: Friday, September 18, 2020 6:20:23 PM

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We welcome your comments on the Draft Environmental Impact Statement (EIS) for the Cedar Hills Regional Landfill 2020 Site Development Plan Facility and Facilities Relocation Project. Please enter your comments below:

We need a new location for solid waste. Despite numerous court supervised settlements and so called clean up and remediation plans, the obnoxious smells from Cedar Hills continue to spread far and wide, and usually when the office is closed so no one to observe in real time.

Quit making this part of the county the dumping ground for the whole county.

Do not allow any further expansion at Cedar Hills!

Bill Roberts
19504 SE 134th St.
Renton 98059
206-799-4592

From: [Kerbad Palkhivala](#)
To: [PlanEIS, CedarHills](#)
Subject: Comment: Draft EIS for CHRLF 2020 site development plan
Date: Friday, September 18, 2020 6:23:40 PM

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We welcome your comments on the Draft Environmental Impact Statement (EIS) for the Cedar Hills Regional Landfill 2020 Site Development Plan Facility and Facilities Relocation Project. Please enter your comments below:

Option 3 to get the most value from that land.

Get [Outlook for Android](#)

From: [ricky wong](#)
To: [PlanEIS, CedarHills](#)
Subject: Cedar Hills Regional Landfill 2020 Site Development Plan & Facilities Relocation
Date: Sunday, September 20, 2020 9:15:52 PM

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Dear Sir/Madam,

I oppose the relocation of landfill support facilities at a county- owned property at 3005 NE 4th St, Renton 98056. This location is too close to residential area. Thank you.

Lesley Wong
4401 NE 6th Pl
Renton, QWA 98059

From: [John Hansen](#)
To: [PlanEIS, CedarHills](#)
Subject: Comments on Proposal
Date: Sunday, September 20, 2020 9:24:55 PM

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Is there any intention of using the 3005 NE 4th St in Renton as part of the landfill, other than just as a support facility. I hope not, because that would be completely unacceptable.

I object to identifying "greenhouse gas emissions" as an impact because there is no scientific reason whatsoever for believing that such emissions cause an adverse impact. Assertions that "greenhouse gas emissions" are a concern are strictly political in nature and are raised as an issue to justify extensive government involvement and creation of vast, expensive, and overbearing bureaucracies.

Thank you

John Hansen
john.hansen3@comcast.net

From: [Maggie Leonard](#)
To: [PlanEIS, CedarHills](#)
Subject: Comment: Draft EIS for CHRLF 2020 site development plan
Date: Monday, September 21, 2020 12:59:15 PM

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We welcome your comments on the Draft Environmental Impact Statement (EIS) for the Cedar Hills Regional Landfill 2020 Site Development Plan Facility and Facilities Relocation Project. Please enter your comments below:

I prefer the support facilities be kept on site of the land fill. I live at 2513 NE 4th and have significant noise from the freeway and local traffic. I don't want more noise due to the large trucks. I would expect using this location would have a negative impact on traffic, as well. Keeping the support vehicles on the current site shouldn't create these new problems and would likely minimize fuel usage and wear and tear.

Kind regards,

Margaret Leonard
2513 NE 4th St #332, Renton, WA 98056

From: [Jelena Ramsey](#)
To: [PlanEIS, CedarHills](#)
Subject: Comment: Draft EIS for CHRLF 2020 site development plan
Date: Tuesday, September 22, 2020 12:25:08 AM

[EXTERNAL Email Notice!] External communication is important to us. Be cautious of phishing attempts. Do not click or open suspicious links or attachments.

Please do not expand the landfill! This is a populated area and we already suffer from terrible smell this facility is producing.

Thank you

We welcome your comments on the Draft Environmental Impact Statement (EIS) for the Cedar Hills Regional Landfill 2020 Site Development Plan Facility and Facilities Relocation Project. Please enter your comments below:

Sent from my iPhone

From: [Allison Donald](#)
To: [PlanEIS, CedarHills](#)
Subject: CHRLF feedback
Date: Tuesday, September 22, 2020 5:38:50 PM

[EXTERNAL Email Notice!] External communication is important to us. Be cautious of phishing attempts. Do not click or open suspicious links or attachments.

As a resident of both King County and the City of Renton, I support the following:

Action Alternative 3 because it makes sense to extend the life of the landfill as much as possible. Finding another site within the county to provide waste disposal service will be difficult and certainly seems unfeasible before 2028.

Option 1 and 2 seem more efficient than having to send equipment off site for maintenance and repair. That said, if Option 3 is more cost effective and efficient than that is fine.

Allison Donald
2704 NE 6th Pl.
Renton, WA 98056
2063549137
Get [Outlook for iOS](#)

From: [Young, Polly](#)
To: [Lui, Kinyan](#)
Subject: Fw: King County Solid Waste Division has received your request ISS-86614-N6K1D5 KC:0106048624
Date: Friday, September 25, 2020 5:35:56 PM

Hi Kinyan,
 I assume you have seen this?

Polly

From: King County Solid Waste <solidwaste@kingcounty.gov>
Sent: Friday, September 25, 2020 4:25 PM
To: Marie McPeak <mlm2894@comcast.net>
Subject: RE: King County Solid Waste Division has received your request ISS-86614-N6K1D5 KC:0106048624

Marie,

Thank you for submitting your comment. I'm forwarding it to our communications team for their review and record.

Chris Varo – Customer Service

King County Solid Waste Division • Customer Service • Phone: 206-477-4466

201 S. Jackson St, Suite 701, Seattle WA 98104 • www.kingcounty.gov/solidwaste

Waste Prevention • Resource Recovery • Waste Disposal

----- Original Message -----

From: # King County, WA – Customer Service;
Received: Fri Sep 25 2020 16:08:23 GMT-0700 (Pacific Daylight Time)
To: Marie McPeak;
Subject: King County Solid Waste Division has received your request ISS-86614-N6K1D5 KC:0106048624

Marie McPeak :

Thank you for submitting your comments to King County Solid Waste Division. Your message has been forwarded to appropriate staff who will contact you shortly. If this is an odor complaint that requires immediate assistance please call 206-477-4466 or after our business hours 206-296-8100.

Below is a copy of your request:

 Constituent: Marie McPeak

Date Received: 9/25/2020 4:08 PM

Email: mlm2894@comcast.net

Phone: 425-271-0241

Zip: 98056

Subject: Location of New Maintenance & Office Facility

Message: I am very much against locating this facility in the Renton Highlands. The traffic on NE 3rd/4th (Cemetary Road) is already very difficult & to have more heavy vehicles going up that road/hill all day long will only impede it further as these vehicles will constantly slow the traffic considerably.

From: [Virginia Brokx](#)
To: [PlanEIS, CedarHills](#)
Subject: Comment: Draft EIS for CHRLF 2020 site development plan
Date: Friday, September 25, 2020 5:23:53 PM

[EXTERNAL Email Notice!] External communication is important to us. Be cautious of phishing attempts. Do not click or open suspicious links or attachments.

We welcome your comments on the Draft Environmental Impact Statement (EIS) for the Cedar Hills Regional Landfill 2020 Site Development Plan Facility and Facilities Relocation Project. Please enter your comments below:

I am opposed to any expansion of the Cedar Hills Landfill. Renton has long been a lower priority than other communities, we deserve to have more positive investments in our city. Expanding the dump is not one of them. We are not the dumping ground for all the other affluent communities in King County. It is time Renton gets it's fair share of infrastructure and transportation investments as Seattle, Bellevue, Redmond, and Issaquah does. We need to invest in smarter technologies, set mandates that restrict companies from using single use plastics and improve education and ways for people to decrease waste and increase recycling and composting.

Thank you,
Virginia Brokx
A Renton Resident

Sent from my iPhone

From: [John Hansen](#)
To: [PlanEIS, CedarHills](#)
Subject: Objection to Option 3
Date: Friday, September 25, 2020 7:42:27 PM

[EXTERNAL Email Notice!] External communication is important to us. Be cautious of phishing attempts. Do not click or open suspicious links or attachments.

As a resident of Renton Highlands, I object to the Option 3 location. Apparently this would entail a great deal of heavy vehicle traffic and extensive handling of waste. This is inappropriate for this location.

I think there was an amount of deceit in the materials that were distributed to the public in that these materials implied that it was to be an office and maintenance location. Evidently that was not really true.

Thank you

John Hansen
john.hansen3@comcast.net

From: [Carrie Koperski](#)
To: [PlanEIS, CedarHills](#)
Subject: Comment: Draft EIS for CHRLF 2020 site development plan
Date: Friday, September 25, 2020 9:23:51 PM

[EXTERNAL Email Notice!] External communication is important to us. Be cautious of phishing attempts. Do not click or open suspicious links or attachments.

We welcome your comments on the Draft Environmental Impact Statement (EIS) for the Cedar Hills Regional Landfill 2020 Site Development Plan Facility and Facilities Relocation Project. Please enter your comments below:
Hello,

My name is Carrie Koperski. I am writing to oppose the third option, i.e. the Renton Highlands location.

My family and I built a house in the Renton Highlands in 2005. Our home is part of the Maureen Highlands development, and the main entrance is on 4th (128th).

I oppose the third facilities relocation option for the same reasons the Renton City Council and mayor have cited. We already experience considerable odor coming from the Cedar Grove landfill and deal with traffic congestion on the local roads connecting Maple Valley Highway and 4th. We also know even with COVID cutting down on traffic, there are still plenty of cars and trucks from QFC all the way through to 405 past Renton Technical College.

We recognize the need to extend the capacity of the landfill but agree that there would be much less negative impact on residents by the two options at the north and south end of the landfill, rather than so close to homes, the college and businesses in the Highlands.

The Highlands is already stressed by overdevelopment in the area closest to unincorporated King County and increased crime/the need for redevelopment along Sunset.

The last thing we should do is make things worse by the third option.

Thank you for considering my concerns. Sincerely, Mrs. Carrie Koperski 662 Rosario Place NE, Renton.

Sent from my iPhone

From: [NORA WILLIAMS](#)
To: [PlanEIS, CedarHills](#)
Subject: Cedar Hills Landfill EIS Comment
Date: Saturday, September 26, 2020 2:13:16 AM

[EXTERNAL Email Notice!] External communication is important to us. Be cautious of phishing attempts. Do not click or open suspicious links or attachments.

Sent from my Samsung Galaxy , an AT&T LTE smartphone

I am writing regarding the Cedar River Landfill Offices and Facilities which are under consideration on NE 4th Street Renton 98059.

This would increase traffic on an already very congested road. CURRENTLY the traffic often backs up on this road, and bringing in more facilities and employees is not what we need or want in the Renton Highlands area.

There is always a heavy flow of traffic at the bottom of NE 4th/3rd which leads to I- 405 and Maple Valley Highway. Any new facilities in this area would cause terrible backups.

Thankyou for your time.

Nora Williams
4508 NE 6 Place,
Renton WA 98059

From: [Kathi Middlekauff](#)
To: [PlanEIS, CedarHills](#)
Subject: Opposition to 3005 NE 4th Street
Date: Saturday, September 26, 2020 12:30:46 PM

[EXTERNAL Email Notice!] External communication is important to us. Be cautious of phishing attempts. Do not click or open suspicious links or attachments.

To Whom It May Concern:

I **adamantly oppose** relocating landfill support facilities to the 8-acre, County-owned parcel located at 3005 NE 4th Street, Renton (adjacent to the Renton Transfer Station).

Traffic up and down that hill is already terrible and getting worse. In addition, there is not an adequate buffer zone between the facility and residences. This proposed facility would have a very negative impact on the Renton Highlands.

Kathi Middlekauff

From: [Craig Cottrill](#)
To: [PlanEIS, CedarHills](#)
Cc: [Nora Cottrill](#)
Subject: Cedar hills facilities
Date: Saturday, September 26, 2020 3:21:46 PM

[EXTERNAL Email Notice!] External communication is important to us. Be cautious of phishing attempts. Do not click or open suspicious links or attachments.

We are very much against moving Cedar Hills facilities to RENTON HIGHLANDS because of additional traffic, noise, the big trucks, the various early to late hours and public safety. The tech school students, general public and children are at risk. Air quality., Pollution is also a big issue.

We moved here 24 yrs ago. And hope you will not ruin our neighborhood.

Thanks for your consideration.

Craig Cottrill

Peachtree lane townhomes

Renton Wa 98059

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From: ilflipper@aol.com
To: [PlanEIS, CedarHills](#)
Subject: King County Solid Waste Division Support Facilities Relocation Option 3
Date: Saturday, September 26, 2020 3:29:37 PM

[EXTERNAL Email Notice!] External communication is important to us. Be cautious of phishing attempts. Do not click or open suspicious links or attachments.

Dear Mr. McLaughlin,

I have been researching and reading with keen interest the information being sent regarding the potential use of the county-owned property at 3005 NE 4th Street, Renton 98056.

Having reviewed the maps and the draft EIS, I would like to register my extreme concerns regarding relocating support facilities to the Renton Highlands area. They are centered on 3 main areas:

1. **Traffic flow.** I have been a resident in the Highlands area for 16 years. Traffic has increased significantly over that time. The addition of your support facility will aggravate the situation. Plus, with the hours of operation, rush hour traffic will really be nasty!
2. **Proximity to Liberty Ridge homes.** From what I could see on the map, the proposed facility would be very close to the Liberty Ridge development. This is not the case with the other 2 options (being that close to a residential area). Again, the hours of operation will intensify the problem, potentially increasing the noise level for Liberty Ridge residents. This could impact re-sale value of these homes.
3. **Renton Technical College.** I understand that RTC has plans to expand its facility to that side of 4th Street. This translates into more pedestrian traffic crossing the street.

What measures are you taking to preserve their safety?

While I appreciate the need for expansion, I would ask that you narrow your search to options 1 and 2 and preserve the Highlands community as it is today.

Thank you for your consideration.

Stay safe! Stay Healthy!

Kathy

Kathy Dolphin
621 Vashon Place NE
Renton, WA 98059

9-28-2020

King Co. Solid Waste Div.

201 S. Jackson St., Ste 701

Seattle, WA. 98104

Attn: Pat McLaughlin

Dear Solid Waste Division:

We live in the community of 4-Lakes, 1- mile North West of the landfill, and are very much opposed to your plan to increase the length of time to accept garbage at the Cedar Hills landfill. This action will continue to leach toxins into the soil, water table and adjacent streams; have medical waste products deposited into adjacent home properties by the birds, and depress our land values.

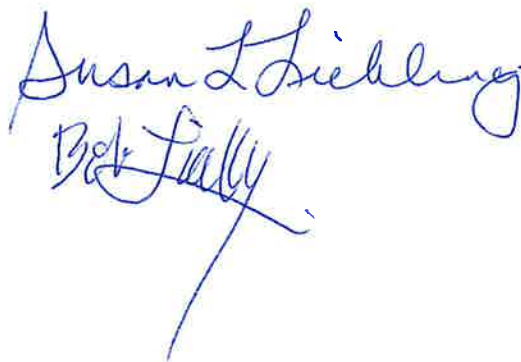
Over the last 30-40 years you have given us several end dates to the use of the land fill, only to be rescinded when those end dates are coming due. We, along with over 100 other concerned residents who live near the landfill, gave testimony and examples in 2019 of the negative impacts the landfill has had on our properties. You didn't listen to us then and didn't offer any other alternatives, except expansion of the existing landfill. Consideration of transporting the garbage to another area or building a burn- plant, which might cost us more than the proposed expansion, didn't seem even to be alternatives. Changing the landfill operation is going to cost money and should have been invested in years ago. It is past the time to continue on politically or financially motivated short term solutions.

The use of this landfill is no longer appropriate due to its location in a suburban environment. When this landfill location was first conceived, I'm sure the area was very rural. But that is not the case now, and hundreds of properties and peoples quality of life are being affected now.

In summary, we ask you to NOT expand the landfill, and close it by 2028. Instead, give us a cost analysis alternative to relocate the garbage to the Eastern Washington desert or build a burn-plant, so we can decide if this makes sense.

Cordially,

Bob & Sue Liebling



From: [John MacGillivray](#)
To: [PlanEIS, CedarHills](#)
Subject: City of Kirkland Solid Waste Division Comments on CHRL EIS
Date: Monday, September 28, 2020 2:50:22 PM
Attachments: [image001.png](#)
[image002.png](#)
[image003.png](#)

[EXTERNAL Email Notice!] External communication is important to us. Be cautious of phishing attempts. Do not click or open suspicious links or attachments.

Hello –

Thank you for the opportunity to review and comment on the draft Environmental Impact Statement for the Cedar Hills Regional Landfill 2020 Site Development Plan and Facility Relocation.

As it pertains to the alternatives to develop more capacity at the landfill, we are supportive of Alternative 3. This option will provide King County and its cities with a reliable and relatively more affordable disposal method through at least 2046. We believe that the life of this critical resource must be maximized to the fullest extent possible given that the costs, both fiscal and environmental, of other disposal methods such as waste export by rail or incineration are anticipated to be much higher than landfilling our waste.

With regard to the relocation of landfill operations facilities we are supportive of either Option 1 or Option 2 and, of these two options, we encourage the County to select the option that is most cost effective. We are not, however, supportive of Option 3. As a long time host to the Houghton transfer station, we are sensitive to regional equity and to adding more essential public facilities to our community and can appreciate any opposition the City of Renton may have to Option 3. The City of Renton is already host to the Renton Transfer Station and other essential facilities such as the Republic Services Black River Transfer Station and the South Waste Water Treatment Plant. Moving the operations facility from the landfill site into the City of Renton at 3005 NE 4th adjacent to the Renton Transfer Station will disproportionately impact the City of Renton in terms transportation impacts, noise, public safety, and other negative impacts on the environment and livability of the area surrounding the facility. For these reasons, we oppose Option 3.

Thanks again for the opportunity to comment.

Sincerely,

John MacGillivray

Solid Waste Programs Supervisor
 City of Kirkland
 (425) 587-3804 (office)
 (206) 861-4823 (home office)

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From: [Janet Kim Lin](#)
To: [PlanEIS, CedarHills](#)
Subject: Comment on Cedar Hills Regional Landfill
Date: Thursday, October 1, 2020 5:07:07 PM

[EXTERNAL Email Notice!] External communication is important to us. Be cautious of phishing attempts. Do not click or open suspicious links or attachments.

As a resident of south Issaquah, I oppose any extension or expansion of the Cedar Hills Landfill. Our focus should be directed to minimizing waste rather than postponing an inevitable problem.

From: [Allyson Crawford](#)
To: [PlanEIS, CedarHills](#)
Subject: Cedar Hills Landfill
Date: Friday, October 2, 2020 9:08:42 AM

[EXTERNAL Email Notice!] External communication is important to us. Be cautious of phishing attempts. Do not click or open suspicious links or attachments.

Do not move the landfill to 3005 NE 4th St Renton. Go with one of the three alternatives to extend the current location.

Allyson



Virus-free. www.avast.com

From: [Florian Laplantif](#)
To: [PlanEIS, CedarHills](#)
Subject: Comment: Draft EIS for CHRLF 2020 site development plan
Date: Monday, October 5, 2020 1:39:04 PM

[EXTERNAL Email Notice!] External communication is important to us. Be cautious of phishing attempts. Do not click or open suspicious links or attachments.

We welcome your comments on the Draft Environmental Impact Statement (EIS) for the Cedar Hills Regional Landfill 2020 Site Development Plan Facility and Facilities Relocation Project. Please enter your comments below:

I am in favor of the "No Action" option. We are just kicking the can down the road by extending the lifetime of this existing facility, while also continuing to affect nearby residents with bad smells and noise on a regular basis.

King County needs to face the fact that this facility is nearing the end of its useful lifetime and that a new site needs to be located to deal with the King County trash. We should finish filling existing areas and move on to a new site somewhere else, where there are less residences nearby that could be affected, including looking at using facilities located in a more rural area outside KC.

Alternatively using the proposed Area 9 + north or south facilities option at least minimizes changes to the current situation but I still believe that we are just kicking the can down the road instead of tackling the issue head on right now and looking for a new long term option immediately.

Florian Laplantif - Property owner near the Landfill

From: [David L](#)
To: [PlanEIS, CedarHills](#)
Subject: Cedar Hills Landfill EIS comments
Date: Wednesday, October 7, 2020 10:02:39 AM

[EXTERNAL Email Notice!] External communication is important to us. Be cautious of phishing attempts. Do not click or open suspicious links or attachments.

To Whom It May Concern,

The subject landfill has been an excellent neighbor for many years and the original property utilization plan was consistent with expected population growth for the region. However, continued expansion and use of the property for landfill purposes, and more recently gas reclamation, is seriously impacting the quality of life in the surrounding communities as well as having an adverse impact on property values.

It is acknowledged that the surrounding communities are not impacted by the foul odors and gas smells emanating from the site at all times, but if you're downwind of the site, you're impacted. In our case, that means windows and doors closed and generally staying inside until the wind shifts direction. We are also in relative close proximity to the site as our property is less than a 1/4 mile from the western property line and so we are also negatively impacted by the noise of the heavy dirt moving equipment and the gas reclamation process.

The above comments are provided to help King County understand that the time has come to retire the Cedar Hills Landfill site. Many community presentations over the years by the landfill have clarified that the decision to continue to expand and use the property is purely an economic one. I suggest that the economic analysis for continued use not be sub-optimized by considering just county landfill operations since that doesn't reflect the economic impacts to communities located near the site.

Thanks for the opportunity to comment.

David Linnenkamp

From: [Edward Sweeney](#)
To: [PlanEIS, CedarHills](#)
Subject: Cedar Hills Landfill changes
Date: Wednesday, October 7, 2020 2:51:23 PM

[EXTERNAL Email Notice!] External communication is important to us. Be cautious of phishing attempts. Do not click or open suspicious links or attachments.

To whom it may concern,

I am in agreement to expand the landfill capacity. It sounds like a necessary step.

Of the three options for the landfill support facilities, the first two are acceptable.

What is absolutely not acceptable is the relocation to the property at 3005 NE 4th. street in Renton next to the Renton Transfer Station.

The addition traffic and congestion it would create is unacceptable! 3rd Ave. at the 405 Freeway all the way up the hill to where it becomes

4th Ave. is all ready a traffic bottle neck/ nightmare! This should never be allowed to happen. this would be a disaster to the traffic flow

in this area of the community. Please keep it at the landfill where it belongs!

Respectively,

Edward Sweeney
4606 NE 5th Street
Renton, Wa 98059

From: [Kimberly Searing](#)
To: [PlanEIS, CedarHills](#)
Cc: [Kimberly Searing](#); "tjsearing@outlook.com"
Subject: Support Facility Center - please do not locate in the Renton Highlands
Date: Sunday, October 11, 2020 1:27:02 PM

[EXTERNAL Email Notice!] External communication is important to us. Be cautious of phishing attempts. Do not click or open suspicious links or attachments.

We are writing in regards to the proposed location of the Support Facility in the Renton Highlands. As **residents of Liberty Ridge** located just west of the proposed location, we are requesting that you **DO NOT** locate the facility here as proposed under Option 3.

We have several reason for making this request.

- We are concerned by the additional traffic that will result from this location. When work life is "normal" we have a stream of vehicles on 3rd/4th/Cemetery road making it difficult to turn out of Liberty Ridge, this would increase the congestion with additional truck storage and maintenance.
- We currently exercise outdoors every morning and frequently experience odor coming from the station. We are concerned (and convinced) that additional activity equates to additional odor, litter and noise.
- The buffer at the other two locations is substantially greater than that from Liberty Ridge and just makes common sense.

Thank you,

Tim and Kimberly Searing
2100 SE 2nd Pl.
Renton, WA 98056
425) 736.1029

From: steve.smading@gmail.com
To: [PlanEIS, CedarHills](#)
Subject: Comments
Date: Monday, October 12, 2020 7:06:51 AM

[EXTERNAL Email Notice!] External communication is important to us. Be cautious of phishing attempts. Do not click or open suspicious links or attachments.

To whom it may concern,

We live in the Liberty Ridge neighborhood in Renton which is adjacent to the NE 4th Transfer Station. We are not in favor of moving the truck maintenance facility to the property at 3005 NE 4th Street in Renton. We believe the better option would be to place the facilities at one of the two proposed locations at the Cedar Hills landfill site. Our reasoning is as follows:

- It will be more efficient to maintain the trucks at the Cedar Hills site since they must travel to that site anyway.
- Locating the maintenance facility at the NE 4th street transfer station will increase local air pollution and incur additional fuel costs.
- Moving the maintenance facility to NE 4th Street in Renton will increase traffic but maintaining the trucks at the Cedar Hills site will not.
- NE 4th Street is already congested with residential traffic and the existing truck traffic traveling to and from the transfer station. This is particularly true at the intersection of NE 3rd Street and Sunset Blvd. N. Additional truck traffic would only compound the existing congestion.

Thanks,
Stephen & Flora Smading
274 Camas Ave SE
Renton, WA 98056-8869 USA
Tel: +1.206.334.8735

From: [Dave Prochazka](#)
To: [PlanEIS, CedarHills](#)
Subject: Expansion Of Cedar Hills Landfill.
Date: Saturday, October 17, 2020 1:42:16 PM
Attachments: [King Co.docx](#)

[EXTERNAL Email Notice!] External communication is important to us. Be cautious of phishing attempts. Do not click or open suspicious links or attachments.

Attached are my concerns with the Subject.

Please consider them and REPLY!

Dave Prochazka

King Co. Solid Waste Div.

17-Oct-2020

201 S. Jackson St.

MS: KSC-NR-0701

ATTN: Kinyan Lui Project Manager

Seattle, WA. 98104-3855

Dear Solid Waste Division:

In 2001 we settled our Lawsuit against the King Co. Solid Waste Div. for about 10% of what we thought was reasonable for our damages. We did this because King Co seemed to be putting forth a good effort to correct their problems and illegal practices. We were more interested in getting the problem fixed than the money. The money was mainly to force compliance because the County would not move without a financial incentive to have good practices, be a good neighbor, and the comply with the law.

When I moved here in 1977 the King Co zoning records showed the Landfill as Recreational. The zoning records did not show there was a small landfill operating on a conditional use permit. Even that didn't look too bad because I soon learned that it was scheduled to close in 1980. Since then, about every 5 years, an expansion is planned. This has resulted in the conditional use permit being grandfathered into one of the largest landfills in the world.

Now you have presented us with 4 Alternatives to expand and extend the life of the Landfill again. It shows that King Co Landfill does not want to put forth a good faith effort to comply with the Lawsuit, do reasonable long range planning other than expand the Landfill, or be a good neighbor. Only Alternative 4 is in compliance with the Lawsuit because it limits the height to the 788 feet and does not infringe on the 1000-foot buffer.

All the other Alternatives propose exceeding the 788 feet and going into the buffer. The added height will increase the airflow spreading more odor, dust, noise, and will be an eyesore. Studies can say this is a small amount but they can not deny that there will be an increase – we have had enough; we don't want even a little more. Again, going into the buffer defeats the propose of the buffer. The buffer helps stop noise, dust, and odor from leaving the landfill. The Landfill is visible the from the Poo Poo Point trail on Tiger Mt. Right now, it appears as a green hill but increasing the height will again make it visible as a garbage dump. This is one of the most popular hiking

trails in the state and it is a disgrace, in a state that prides itself in ecology, to have a garbage dump visible from this popular trail.

The proposal to add to existing pits really pushes what possibility could be called reasonable. These pits do not have state of the art liners and are bound to greatly increase the chance of polluting the aquifer which is our source of our water.

The only Alternatives in this proposal are to expand the Landfill. Why aren't there other alternatives such as shipping out or incinerating the garbage. We have been told these were expensive. I have requested an estimate how much these alternatives would cost the average residential customer but Solid Waste Division has not bothered to reply. I suspect the increase would be small and they don't want to tell anyone that. Please provide this information! I also suspect the Landfill is a significant revenue source for the County – they don't want to tell us about that either.

In conclusion:

1. Please don't extend the life of Cedar Hills Landfill past 2028.
2. Please comply with the intent of the settlement of the Lawsuit.
3. Please don't force us into another lawsuit.
4. Please look at other alternatives and include with these the estimated cost to the average residential customer.
5. Please provide the cost information I have repeatedly requested.

Thank you,

David Prochazka

16407 239th Ave SE

Issaquah, WA 98027

From: [Tim Shupe](#)
To: [PlanEIS, CedarHills](#)
Subject: Attn: Kinyan Lui, Project Manager Cedar Hills Regional Landfill
Date: Monday, October 19, 2020 8:14:30 AM

[EXTERNAL Email Notice!] External communication is important to us. Be cautious of phishing attempts. Do not click or open suspicious links or attachments.

Kinyan,

We moved to Issaquah in September of 2019 after doing a lot of research on the greater East Side Seattle Suburbs. No one told us that our beautiful yard would be nearly unusable during the limited sunny days each year due to the horrific, putrid, rotten smell coming from Cedar Hills Landfill. We even paid to have our septic system inspected thinking there had to be a problem causing the smell, only to learn from our neighbors that it was the "unfortunate normal" coming from Cedar Hills Landfill when the weather is warm and the winds blow from the West (most of the time).

I understand the need for a Landfill and the cost of updating and maintaining it, I do not understand how other landfills can have little to no odor at a mile away and Cedar Hills is unbearable at 3 miles from my home. If they are unable to provide odor mitigation, then they should not be allowed to expand. Period.

Sincerely very disappointed King County Residents.
Timothy Shupe, Misti Shupe, Aspen Shupe

25250 SE Mirrormont Way
Issaquah, WA 98027
801-691-6890

From: [Naomi Benton](#)
To: [PlanEIS, CedarHills](#)
Subject: Move from Cedar Hills land fill
Date: Tuesday, October 20, 2020 10:30:33 AM

[EXTERNAL Email Notice!] External communication is important to us. Be cautious of phishing attempts. Do not click or open suspicious links or attachments.

To Whom It May Concern:

I Have lived here in the Cedar Hills Land fill area for over 35 years. I remember meeting at the Maple Hills Elementary school , seeing projections of the land fill closed and looking like a park with families walking through. What happened to that vision. We have now become the dumping ground for everyone's trash! My children lived next to Maple hills and the stench from the area caused them to have constant sinus and other health issues. the noise from the machines operating They decided to move out of the state due to the tax increases and the health issues from the dump. I think it is time our children and families are considered in the decisions being made.

Give us the clean air that this state says it is moving towards.

Kind Regards,

Naomi Benton
13363 202nd Ave SE
Issaquah, WA 98027

From: mvohall@aol.com
To: [PlanEIS, CedarHills](#)
Cc: mvohall@aol.com
Subject: Impact of storing garbage transfer trucks on the Renton Highlands area
Date: Wednesday, October 21, 2020 6:07:05 PM

[EXTERNAL Email Notice!] External communication is important to us. Be cautious of phishing attempts. Do not click or open suspicious links or attachments.

Dear fellow citizens,

I am opposed to the building and placing a storage and maintenance facility of Class 8 trucks and garbage transfer container trailers at 3005 NE 4th Street in the Renton Highlands.

The Renton Highlands location would be within 100 feet of a large housing development.

The Renton Highlands location is very close to The Renton Technical College and would interfere with their future education facilities growth and delay the ability of students to arrive to the school on a timely basis.

The Renton Highlands location would impact and impede traffic on the NE 3rd / Ne 4th traffic corridor which is heavily traversed by local residents and drivers seeking to bypass Hiway 405 to a job in Bellevue or Issaquah. Also, truck traffic to the facility will have to climb 250 feet up a steep grade to reach the Highlands facility. Currently when a King County container truck turns south from NE 3rd Street to Sunset Boulevard, the transfer station truck must take up two of the three left hand turn lanes to make the turn towards the Cedar Hills location.

The Renton Highlands maintenance location could also dispatch trucks in an easterly direction to 156th Ave SE then heading south to Maple Valley Hiway and ultimately to the Cedar Hills garbage dump. Currently, many drivers are using 156th SE as another Highway 405 bypass via Duvall Avenue or Sunset Boulevard to jobs in Bellevue or Issaquah.

The Renton Highlands location does not fit with the existing King County Road maintenance facility infrastructure impacts. I have witnessed KC Road trucks cut through Highlands neighborhoods with multi axle vehicles using Monroe Avenue NE arriving from the north to enter the current facility.

Please do not place this in the Renton Highlands.

Best regards,
Mike O'Halloran
Renton Highlands Resident

From: [Eric Prince](#)
To: [PlanEIS, CedarHills](#)
Subject: County Proposes Landfill Service Facility in Renton
Date: Thursday, October 22, 2020 12:03:38 PM

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As a Renton/King County resident, I support Mayor Armando Pavone's call to change the proposed location of the new landfill so that it does not negatively impact Renton Technical College and the surrounding residential area.

Thank you,
Eric Prince
602-920-6733

From: [davesher](#)
To: [PlanEIS, CedarHills](#)
Subject: Cedar Hills Landfill Expansion
Date: Friday, October 23, 2020 3:21:36 PM

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To: Whom it may concern
RE: Cedar Hills Landfill Expansion

As a local resident of Maple Valley area, I would like to voice my concerns in regards to the proposed expansion of the Cedar Grove Landfill.

Several issues that need to be addressed are as follows.

1) Noise from the landfill. I live several miles away and can hear the machinery working late in to the night. Hours of operation should be limited as to not interfere and disturb the surrounding community.

2) Excessive truck traffic. Between the landfill, Cedar Grove Compost, and the various gravel pits and similar businesses, there is a heavy volume of truck traffic on Cedar Grove and Lake Francis Road. This leads to heavy wear on the roads in the area and unsafe driving conditions. The residents in the general area are burdened by this excessive truck traffic.

3) Air pollution and offensive odors. Between the landfill and Cedar Grove Compost, local residents are forced to breathe unhealthy air. The heavy concentrations of air contaminates in the area are of grave concern. More needs to be done to protect local residents from the potentially lethal effects of breathing in the dust and debris from the landfill and Cedar Grove Compost.

In summary, I feel that the local residents in the area are unduly burdened with the noise, excessive large truck traffic and poor air quality.

I strongly oppose any further expansion of the Landfill and believe it should be closed within the next few years.

Regards,

David Sheridan
24312 SE 182nd St
Maple Valley, WA 98038

Phone: 425-471-1813

From: [Eric Hudson](#)
To: [PlanEIS, CedarHills](#)
Subject: Comment on Landfill Expansion EIS
Date: Tuesday, October 27, 2020 10:55:20 PM

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King County representatives,

Unincorporated Area residents living around the landfill have this comment (among others):

Cedar Hills landfill is located in Seismic Impact Zone as defined in the RCW and WAC. The location would be illegal except that its location has been grandfathered in due to being initiated prior to the rule being adopted. The point is not to debate the legal definition of a Seismic Impact Zone, however.

Whether legally defined or not, there is SIGNIFICANT SEISMIC RISK and EMERGENCY PLANS are called for.

When the predicted seismic event occurs, the presence of the landfill will magnify and multiply the environmental harm to the surrounding region by introducing contaminants into the nearby rivers, creeks and aquifer . Toxic chemicals, oil-contaminated soil and biomedical waste will be released into the nearby Cedar River, Issaquah Creek and local aquifer, and potentially impact the city of Seattle water supply which comes from upstream on the Cedar River.

However, there are little or no emergency plans in the EIS or other documents which describe preparations for the predicted Seismic event.

Please make additions to the existing EIS or referenced documents which describe emergency plans.

A seismic event will also likely render the landfill inaccessible, yet there are no emergency plans for where to send the garbage in the event Cedar Hills is unavailable.

Please add something to the EIS or supporting documents describing what will be done in the event the landfill is unavailable for disposal.

Thank you

Eric

From: [Eric Hudson](#)
To: [PlanEIS, CedarHills](#)
Subject: Comment on Landfill Expansion EIS
Date: Tuesday, October 27, 2020 11:22:10 PM

[EXTERNAL Email Notice!] External communication is important to us. Be cautious of phishing attempts. Do not click or open suspicious links or attachments.

Hello,

Residents living around the landfill have this comment (among others):

Equity has been an important topic in 2020, and Environmental Equity should be a topic of the Landfill Expansion EIS. Environmental equity and justice is also one of King County's documented goals.

Yet, the Cedar Hills expansion proposal is the polar opposite of environmental equity. King County is the 11th most populous county in the United States, yet **only one environmentally sensitive Unincorporated Area neighborhood has received nearly all of King County's waste for more than 50 years.**

Therefore it is incumbent upon King County to address how to restore this Equity imbalance in the EIS. The proposal inequitably threatens the environment, life and health of the landfill workers and the 74,000+ residents who live within a 5 mile radius of the landfill.

The EIS needs to contain acknowledgement of the equity imbalance and how it will be addressed.

Since the King County council has chosen to expose Cedar Hills residents to greater environmental risk, it is incumbent upon them to provide ways to restore the equity balance in the EIS.

What could King County do to create more balance? At a minimum, it would seem appropriate to dedicate more funds to environmental improvements and/or parks in neighborhoods around the landfill. Yet little or nothing is discussed or proposed for how to make this a more equitable

situation. Cedar Hills neighbors are just being dumped on again.

Please add something to the EIS to address this.

Thank you

Eric and other Cedar Hills residents

From: [Eric Hudson](#)
To: [PlanEIS, CedarHills](#)
Cc: [mami.hara@seattle.gov](#); [Taryn.sass2@seattle.gov](#)
Subject: Cedar Hills Expansion EIS Comment - Impact on SPU Water Supply
Date: Wednesday, October 28, 2020 12:19:01 AM

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King County representatives,

Cedar Hills residents request that Seattle Public Utilities technical experts review and approve landfill modifications intended to reduce landslide and/or mudslide impact and risk to the nearby Cedar River.

In addition, birds represent a potential disease vector and a contamination risk to Lake Young's, and therefore SPU experts should also review and approve bird mitigation strategies. Eagles have already been documented as dropping biomedical waste onto nearby resident properties.

The risk of landslides at Cedar Hills is significant, since Cedar Hills is located in a Seismic Impact Zone, and also since "heavy rain events" brought about by climate change will increase mudslide risk in coming years.

The advent of Covid-19 and the recent documented cases of bird vector contamination in Cedar Hills surrounding properties make it incumbent upon King County to include SPU in bird mitigation strategies and to address these problems in its EIS.

Since the consequences of harm to the SPU water supply are so great, King County must include SPU in the approval process for landfill modifications.

Thank you

Eric and Cedar Hills residents

From: [Eric Hudson](#)
To: [PlanEIS, CedarHills](#)
Subject: EIS Comment: Landfill Liner Failure Impacts need to be addressed
Date: Wednesday, October 28, 2020 8:54:42 PM

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Hello,

Cedar Hills residents have the following comment on the EIS:

The EPA has stated that every landfill liner will fail at some point. The environmental and regional impact of a failure can be significant.

The additional weight added by the landfill expansion will cause more stress on the liner and make liner failure more likely.

In addition, higher temperature cycling brought about by climate change can also contribute to early liner failure.

The EIS contains little or no discussion of how landfill liner leaks are monitored and detected.

Since this is a technical question we request that Herrera consultants provide a response in addition to any KC response.

Thank you

Eric and Cedar Hills residents

From: [Eric Hudson](#)
To: [PlanEIS, CedarHills](#)
Subject: Landfill Expansion EIS comment
Date: Wednesday, October 28, 2020 9:14:17 PM

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Hello,

Cedar Hills residents have the following comment on the EIS:

The total toxic burden on the Cedar Hills neighborhood needs to be analyzed in the Cedar Hills EIS including surrounding Industrial sites. The presence of Cedar Grove Composting, Williams Natural Gas Pipeline, Bonneville Power High Voltage lines, Queen City farms Superfund site, and the Lakeside Asphalt Plant surrounding the landfill amplify the toxic impact on the Cedar Hills environment and Cedar River watershed.

These facilities are so close to each other that an analysis of impact on the local environment should consider all the facilities as single point source. Cedar Hills residents believe the total toxic burden borne by their community far exceeds legal standards. The Cedar Hills EIS should include an analysis of the total impact upon the neighborhood, including the impact of the facilities mentioned above.

Also the presence of these facilities near each other will amplify the consequences of an environmental failure at any one facility. A failure in one facility such as the natural gas pipeline for example, would probably impact the landfill and the other nearby industrial plants. King County is unprepared for a failure of the natural gas pipeline or BPA power lines that could cause fires or explosions. The EIS needs to include potential failures of the nearby facilities in its analysis of impact on the local environment.

Since these questions are technical in nature, we request that Herrera consultants provide a response in addition to any King County response

Thank you,
Eric and Cedar Hills residents

From: [laurie walker](#)
To: [PlanEIS, CedarHills](#)
Subject: Comment: Draft EIS for CHRLF 2020 site development plan
Date: Thursday, October 29, 2020 10:28:01 AM

[EXTERNAL Email Notice!] External communication is important to us. Be cautious of phishing attempts. Do not click or open suspicious links or attachments.

We welcome your comments on the Draft Environmental Impact Statement (EIS) for the Cedar Hills Regional Landfill 2020 Site Development Plan Facility and Facilities Relocation Project. Please enter your comments below:

I have been a resident of Shadow Ridge in Renton for 30 years. When we first moved into this neighborhood, I never experienced the smell in the air from the facilities in the Cedar Grove and the landfill areas for the first several years. Now, it is a common occurrence with the air quality in this area, due to the two facilities. I also have an abundance of crows in my yard, bringing pieces of garbage on a regular basis. It is time to move to another location for the expansion. We have done our part in putting up with the landfill in our area and it certainly does not need to be expanded just to keep up with everyone else's garbage to be dumped in our area.

Resident of Shadow Ridge
Sent from [Mail](#) for Windows 10

From: [Curtis and Leslie Green](#)
To: [Lui, Kinyan](#); [PlanEIS, CedarHills](#)
Subject: Cedar Hills Regional Landfill - Draft EIS Comments - Leslie Morgan
Date: Thursday, October 29, 2020 3:30:37 PM
Attachments: [Draft EIS Statement - Leslie Morgan.pdf](#)

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Hi Kinyan,

Attached are my formal comments for the Cedar Hills Regional Landfill Draft EIS.

Can you kindly confirm receipt?

Thanks,
Leslie

Hi Kinyan & CHRLF EIS Team,

Thank you for the opportunity to comment on the Cedar Hills Regional Landfill Draft EIS. It is my hope that citizen comments, experiences, and historical knowledge is valued, and our comments are addressed in the EIS.

Below is a quick overview of how I organized each comment section:

1. Area of concern/impact
2. Quoted reference from the Draft EIS document
3. My comments related to the area of concern/impact and draft EIS document

Please let me know if you need any clarifications after review.

Vibrations

EIS Reference:

3.4.1 “Heavy Equipment Vibration Levels The FTA report presents vibratory data for a variety of rail and construction equipment sources. These construction equipment levels are applicable to sources at CHRLF and are summarized in Table 3.3. The expected vibration sources to be operating at the landfill are bulldozers (large and small), loaded trucks, and, potentially, vibratory rollers that may be used in road construction near the edges of the buffer zone. When moving, excavators on site would create maximum vibration levels similar to the large or small bulldozer.

To further support this finding, Figures 3.3 to 3.6 graphically show the outermost contours of the vibration levels that could cause damage, annoyance, or be noticeable assuming that vibration generating equipment is on the landfill buffer line. Each contour is well within the CHRLF property line. Under the vast majority of circumstances, equipment would be further from the buffer line, so normal operational vibration contours would generally be closer to the center of the landfill than those shown in the figures.

Projected vibration levels at the property line would remain below the threshold for noticeability for all Action Alternatives. Since they would not be noticeable, there is no change compared to the No Action Alternative”

Comments:

1. The above conclusion ignored public SEPA comments of substantiated offsite vibrations. One of these events occurred in 2018 with the use of a vibratory compactor for construction of a road on the landfill face, not at landfill buffer line. Testing was done at western buffer perimeter directly adjacent to one of the homeowners experiencing vibrations. The homeowner was present at the time of testing, relaying when she was experiencing the vibrations in her home. The technician concurred that it lined up with the use of the vibratory compactor and he was getting readings at that time. He stated that the vibrations would be “more noticeable in her home”. When the final test report was submitted the report did not match up with what had occurred in the residences home at the time of the test. Even of greater concern was regardless of the multiple reports, phone calls, meetings and emails to the KCSWD (reporting intense headaches, ear pain lasting for days following the vibrations and property damage), the decision to continue with the vibratory compactor

- in order to meet specifications was made. Another example of complaints of vibrations from homeowners was flare stack rumble. Seismic testing was used by the SWD resulting in the assumption that there were no impactful vibrations regardless of the complaints from homeowners. It was later discovered through the resulting class action lawsuit; it was harmonic vibrations. This proved to be consistent with the complaints from homeowner of it being quiet outside but loud inside. When modeling and testing methods are used to make assumptions, but not consistent with actual experienced offsite impacts, they are flawed or invalid. Therefore, with the historically significant vibrations to homeowners, from previous levels of activity, it is not reasonable to conclude that “projected vibration levels at the property line would remain below the threshold of noticeability for All Action Alternative”. The proximity of homeowners, sensitive areas, compromised buffer, scope of construction projects, (Alternative 3 Berm is adjacent to the most impacted boarder of the landfill for significant offsite vibrations and will require an extensive construction project) increased elevations well above buffer, makes each Action Alternative unique in its potential for significant unavoidable adverse effects. The precedence has been set by the KCSWD and Contractor that if offsite vibrations do occur, they will not mitigate, due to specifications, deadlines and cost. Further studies and modeling are needed, due to fact that the conclusion is not consistent with historical actual significant adverse effects.
2. BEW is an integral part of operations at Cedar Hills Landfill. It is a current emitter of vibrations at Cedar Hills Landfill. Specific vibration studies including seismic and harmonic should be included in this study. All Action Alternative’s will produce different levels of gas production sent to BEW affecting their operations as well as changes in topography around the facility which may have significant unavoidable adverse effects in offsite vibrations. The EIS is incomplete with the exclusion of this tenant.
 3. The EIS did not include harmonic vibration testing for flare stack rumble. This is essential since this is the type of vibrations that caused damages in the 1990’s and damages were paid for this impact in the Class Action Lawsuit.

Noise

EIS Reference:

“Once the noise levels are compliant with the noise code, the projected increase in cumulative community noise at residences is about 5 dB or less during the 6-7 a.m. time frame and even less during normal daytime operations. Based on the projected increase in community noise levels (including mitigation described herein), the noise associated with each Action Alternative and Option under consideration do not represent an unavoidable significant adverse noise impact compared to the No Action Alternative.

The Action Alternatives and Options proposed by the County will increase the lifespan of the landfill beyond the 2028 closure forecast for the No Action Alternative. Thus, the community will hear landfill noise for an extended duration compared to the No Action Alternative. The duration will depend on the Alternative selected. Nonetheless, based on the relatively small increases in existing noise and continued compliance with the noise code, the noise levels associated with the Action Alternatives under consideration do not represent an unavoidable significant adverse noise impact compared to the No Action Alternative”

Comments:

This statement needs to be quantified. When will each Action Alternative achieve noise level compliances? All Action Alternatives other than No Action Alternative rely on extensive, multiple construction projects lasting for years. These projects are in combination with landfilling activities in previous areas at higher elevations. Recognizing that various types of construction will be given noise exceedance exemptions it is necessary to explicitly model each Alternative to accurately assess the extent and duration of those projects that will be afforded the noise exemptions. It is not reasonable to expect relatively small increases in existing noise, or noise compliance.

EIS Reference:

“10.3 Noise Propagation Conditions Noise attenuation provided by trees/vegetation was calculated per ISO-9613-2 [Ref. 5]. Maintaining the existing or better vegetation in the buffers, aside from the facilities relocation proposed herein, is a requirement. The salient results are that for all Alternatives and Options there are sections of land (generally in either the northwest or southeast corners) where the projected noise levels exceed the noise limits”.

Comments:

This mitigation has proven historically unattainable, since it has been required for years that the Western Buffer be reforested with evergreens and bring it back to pre-illegal logged status. The SWD has had consultants look at this area and have been unsuccessful in an adequate, or successful reforestation plan. The Western existing buffer currently provides minimal noise mitigation. All Alternatives and Options will have sections where the projected noise levels will exceed the noise limits causing significant unavoidable adverse effects. The No Action Alternative would have the least impact on noise for the northwest corner.

EIS Reference:

“12.0 UNMITIGATED ALTERNATIVE NOISE LEVELS Initiating new activity in the northern portion of the Main Hill (Alternative 3) and Areas 2/3, and 4 (Alternatives 2 and 3) would increase sounds to the northeast and northwest of the landfill beyond what is currently observed, but would likely be similar in nature to the sound levels observed when those areas of the landfill were originally filled. Sound levels due to landfilling in those areas would not be a significant increase above those under the No Action Alternative”.

Comments:

It is not reasonable to assume that “increase sound would be similar in nature to sound levels observed when those areas of the landfill were originally filled” This conclusion fails to acknowledge the multiple construction projects that will be required when returning to these areas, as well as their elevations with no mitigation of buffer due to their respective heights. The No Action Alternative has no construction activities or landfilling in this portion of the landfill. therefore, it is not reasonable to assume sound levels would not be significantly different from other Alternatives.

EIS Reference:

10.0 PROJECTED CHRLF NOISE LEVELS “The terrain elevation used for noise evaluation in Areas 4, 5, and 6 was 770 ft MSL. These methods were applied to all action alternatives. Figures 10.3 to 10.6 compare the terrain model used for noise prediction versus the final landfill contours upon completion of the top deck”.

Comments:

770 ft is not the final height of any of the Action Alternatives. Construction noise at the completion of the top deck will be a significant noise contributor so the actual completed heights are imperative to use. Heights of landfilling will be above the tree line thus no buffer for noise mitigation. The terrain elevations must be precise with each Alternative at final landfill contours to accurately assess the significant unavoidable impacts of each Alternative.

EIS Reference:

"10.2.1 Direct and Indirect Impacts Noise was evaluated for day and night operations. Daytime and early morning (considered nighttime under regulations) noise was evaluated for typical landfilling and facilities operations for the No Action and Action Alternatives (additional detail regarding the conditions evaluated is found in Appendix F – Noise Technical Memo). BEW operates under its own Conditional Use Permit and EIS and is responsible for its nighttime noise emissions; therefore, it was not included as part of the nighttime noise assessment. The noise study used traffic volumes for the month of June, which has the highest average daily volumes of any month. Preliminary data for the traffic analysis indicated that the maximum hour for waste volume occurs in the 10-11 a.m. time period. This was used for the daytime noise analysis. Similarly, the 6-7 a.m. period had the most trips in the early morning period, and this period was used for the nighttime noise analysis. The study evaluated truck noise by treating trucks (or other mobile sources) as point sources spread along the applicable route."

Comments:

BEW is an integral part of its Cedar Hill Landfill operations, and directly affected by gas production. It is a known significant nighttime noise contributor, (was included in the 2015 noise study). Studies should include this tenant's day/night noise with each Action Alternative. Noise studies should include effects of topography changes with each Alternative as well as expected facility expansion or upgrades to manage additional gas production that may further significant unavoidable noise impacts

Social and Environmental Justice and Equity

EIS Reference:

"King County should strive to site essential public facilities equitably so that no racial, cultural, or socio-economic group is unduly impacted by essential public facility siting or expansion decisions. No single community should absorb an inequitable share of these facilities and their impacts. An assessment of existing facilities should be conducted when siting new facilities. Siting will consider equity, environmental justice and environmental, economic, technical and service area factors. Communities with a disproportionate share of existing facilities should be actively engaged in the planning and siting process for new facilities. The net impact of siting new essential public facilities should be weighed against the net impact of expansion of existing essential public facilities, with appropriate buffering and mitigation. King County should strive to site essential public facilities equitably so that no racial, cultural or socio-economic, group is unduly impacted by essential public facility siting or expansion decisions."

Comments:

1. "No community should absorb an inequitable share of these facilities and their impacts." This has happened for decades to this community. We are the very definition of Systematic Social

and Environmental Injustice and Inequity. We have Queen City Farms (Federal Super Fund Site), Cedar Grove Compost, Cedar Mountain Reclamation and Cedar Hills Landfill all adjacent to each other in our rural region. All but Queen City Farms has expanded over the years regardless of the significant historical and continual exceedances resulting in noncompliance of their permits

2. According to the World Health Organization children are often more vulnerable to pollutants than adults due to differences in behavior, physiology and biology, that can lead to greater exposure and/or unique windows of susceptibility during development. Children are politically powerless which places them as one of the most vulnerable classes of people completely dependent on adults for their safety. Let's be clear, children are not little adults! When compared to adults, children eat, breathe, and drink more relative to their body mass, have a more permeable blood-brain barrier, less effective filtration in nasal passages, highly permeable skin, and lower levels of circulation of plasma proteins. Digestive system, metabolic pathways, renal clearances and vital organs are still developing. Children breathe more air per kilogram of body weight than adults at rest. A 6-year-old has double the minute ventilation of an adult. Thus, breathing in 2 x the toxins! Children also tend to be more physically active than adults, just look out at our playgrounds.

Our area has several schools that are impacted by the siting and expansions of both Cedar Hills Landfill and Cedar Grove Composting. Maple Hills Elementary is the most vulnerable school since it is located 1800 ft from property boarder of Cedar Hills Landfill with Cedar Grove Compost adjacent to the Landfill. Our school children for decades have had to learn and play in stench. All due to violations of these entities operating permit. We have reached out to public health for years with concerns for our children's health, but no studies or surveys have ever taken place. The expansion of CHRLF has significant impacts on children at this school and was not adequately studied or addressed in the EIS.

3. We are unable to enjoy our neighborhood parks or spend time outside on our property as those who send their garbage to our community. We are frequently held hostage in our homes, having to breath in noxious odors and toxins emanating from these facilities. The surrounding communities have literally filed 1000's of complaints with the PSCAA over the years. We have reached out to Public Health and the Department of Ecology, hoping these governing and permitting agencies will hold these facilities to their permit requirements. Community members have participated exhaustively in public venues over decades to give input on the adverse impacts, but absolutely nothing has changed except for continued expansion of the detrimental facilities. Our community testified before the King County Council (refer to King County Council meeting at New Life Church) where 100's of people came to tell of the impacts they have suffer for the years, yet again deaf ears.
4. Multiple Lawsuits have been filed due to vibrations, odors, birds, toxins, loss of enjoyment of life and property. Regardless of the success in these lawsuits the expansions and impacts continue.
5. Our rural community is a victim of many factors, including discriminatory siting, misguided regulatory policy, unequal regulation enforcement, and unequal political power. Policy makers continually fail to acknowledge or recognize the magnitude or significance of the decades of the marginalization of our rural community. It is from that marginalization we have been unduly impacted.

The further expansion of Cedar Hills Landfill will have devastating cultural, social and environment consequences for years to come. The No Action Alternative is the only Alternative that will meet the Social and Environmental Justice and Equity standards the County has adopted. The

EIS is incomplete and should include studies on Rural Culture, Social and Environmental Justice and Equity with each Alternative.

Odors

EIS Impact Statement Reference:

“In 2017, the County received about seven to eight complaints per month. In 2018 and the first half of 2019, the frequency of complaints was about one per month. PSCAA maintains records of odor complaints from across its jurisdiction but does not generally provide field investigations for complaints received. In 2019, PSCAA received 1,357 odor complaints for the Maple Valley area of which 881 (65 percent) cited Cedar Grove, 193 (14 percent) specified the landfill, and 283 were uncertain as to whether the source was the landfill or Cedar Grove (KCSWD 2020c).”

Comments:

1. The numbers of odor complaints are significant. In 1994-1998 there were 850 odor complaints to PSCAA identifying Cedar Hills Landfill. This time frame was included in the class action lawsuit costing the County over \$12,000,000 for their portion. In 2019 alone there were 193 identifying Cedar Hills Landfill, plus an additional “283 uncertain” reported to PSCAA. If you add 21 more to Cedar Hills Landfill (to be conservative) for the uncertain, it equals 221 in 2019. If you divide the 1994-1998 complaints to annual complaints it is 212 annually. These numbers are significant, since odors were the largest portion of the Brighton vs KC class action lawsuit. Complaints from neighbors directed to the SWD frequently fail to confirm odor sources or identify causes causing residences to lose confidence in their ability to identify odor sources or the willingness to admit they were the source. This most likely explains the decrease in complaints to the SWD.

Air Quality and Odor

EIS Impact Statement Reference:

“Based on the analysis described in this memo, implementation of any of the Action Alternatives proposed in the CHRLF 2020 Site Development Plan is not expected to cause any TAP, including DEEP at both CHRLF and RRTS, to exceed the ASIL at or beyond the facility’s property line”.

Comments:

The Toxics Air Pollutants (TAP) memo attached as an appendix to the DEIS does not distinguish areas from which landfill gas is generated and considers emissions from the landfill as a whole. A clarification of what specific surfaces at Cedar Hills Landfill are included in the definition of “landfill as a whole”. In the 2017 lawsuit several areas that are in peak gas producing levels are considered “Active Areas” therefore they are not included in the gas monitoring for Cedar Hills Landfill. There are other concerns regarding actual gas capture rates. One example of this is an internal email used in the 2017 lawsuit. This email states “40% of the LFG extraction wells are not functional most of the year, 40 parts per million of methane seeps out through unsealed surfaces of the CHRLF top deck. The email goes on to state “So far under the ECSM project, we have narrowed down the root cause of LFG control systems to several potential factors:

- The impact of refuge density on landfill settlement, decomposition, and porosity due to waste compaction at transfer stations.
- Increased landfill settlement that shifts, separates, bends or blocks some of the LFG extraction wells over time.

- A poorly designed pipe size selection interlocking horizontal LFG extraction pipes that otherwise should be free to adjust to landfill settlement.
- A poorly selected backfill material used during the installation of the LFG horizontal wells that blocks and biofouls the perforated opening spaces of the pipe.
- A poorly designed and installed perforated pipe that does not allow for LFL release inside the LFG well.
- Poorly designed and spaced horizontal and vertical LFG wells that are inadequate to capture all the LFG greater within.”

This email raises questions on what the current operational issues are at Cedar Hills Landfill? With historical gas leaks, pipe breakage, gas monitoring wells not functioning properly, exceedances of acceptable toxins the assumption of 92.4 seems overly optimistic at best and there needs to be a technical analysis as to why it is reasonable to assume the 92.4% capture rate is valid. During the 1990’s class action suit higher percentages were initially used as well for the EIS. The consultant brought forth her grave concerns, so she threw out the high percentage she was given and used the EPA standard which she was much more comfortable with. When she did this, she was alarmed at what she found. Several additional toxins were identified some at exceedance of over 30% the acceptable levels. These findings were substantiated during the class action lawsuit resulting in \$12,000,000 for KC portion of the settlement. It is not reasonable and negligent to assume that any Action Alternatives will not cause any TAP, including DEEP at both CHRLF and RRTS, to exceed the ASIL at or beyond the facility’s property line. This conclusion completely ignores the historical real operational challenges and failures, multiple lawsuits due to significant adverse effects from odors and toxins as well as the current significance adverse offsite impacts.

Thank you for your consideration of my Draft EIS comments. I look forward to receiving a response from the SWD and their consultants.

Sincerely,
Leslie Morgan

From: [Armondo Pavone](#)
To: [PlanEIS, CedarHills](#)
Cc: [Constantine, Dow](#); [Communications, Comments](#); [ORG CITY COUNCIL](#); [Martin Pastucha](#); [Chip Vincent](#); [Kelly Beymer](#); [Ronald Straka](#); [Vanessa Dolbee](#); [Jim Seitz](#); [Linda Knight](#); [Doug@outcomesbylevy.onmicrosoft.com](#); [True, Christie](#); [McLaughlin, Pat](#)
Subject: City of Renton comments re: Draft EIS for Cedar Hills Landfill Relocation Facilities Options
Date: Thursday, October 29, 2020 3:32:11 PM
Attachments: [image002.png](#)
[20-083.pdf](#)

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Please see the attached letter, which outlines the City of Renton's comments and concerns regarding the Draft EIS for the Cedar Hills Landfill Relocation Facilities Options. Thank you for taking the time to consider our observations.

Respectfully,



Armondo Pavone
Mayor, City of Renton
425-430-6500
apavone@rentonwa.gov



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Armondo Pavone Mayor

October 29, 2020

Ms. Kinyan Lui
Project Manager
King County Solid Waste Division
201 S. Jackson St., Suite 701
Seattle, WA 98104-3855

Sent by electronic mail

**RE: Cedar Hills Regional Landfill, 2020 Site Development Plan Facility Relocation
Comments on Draft Environmental Impact Statement**

Dear Ms. Lui:

Over the years, the City of Renton has recognized the importance of, and has been an accommodating host to, many regional facilities that have a significant impact on our community, residents, and businesses. This includes two solid waste transfer stations; the South Wastewater Treatment plant and associated interceptor facilities; and the traffic impacts that come with regional transportation corridors running north, south, east, and west through the city, including Interstate 405 and State Routes 167 and 169. We understand very well the idea of absorbing local impacts in the name of contributing to important regional needs.

However, in this case, the city wishes to relay its serious concerns with a Renton Highlands siting option that is a part of the Cedar Hills Regional Landfill 2020 Site Development Plan and Facility Relocation Draft Environmental Impact Statement (Draft EIS). While Renton remains supportive of the expansion of the landfill to meet the region's future solid waste disposal needs, the detailed information included in the Draft EIS corroborates and confirms the city and community concerns with Option 3: to relocate and build landfill support facilities at 3005 NE 4th Street in Renton.

This letter again highlights key areas of concern. Additionally, the attached technical memorandum includes substantive comments provided by professional staff of the city's Public Works, Community and Economic Development, and Community Services departments.

The city maintains serious concerns about the suitability of the site identified in Option 3 and the impacts to planned surrounding land uses, as well as the lack of any buffer for the property. The Option 3 site is bounded by residential land uses to both the east and west. In addition, the 30-acre campus of Renton Technical College (RTC), a nationally recognized and diverse college serving over 9,600 students and employing over 4,000 full-time employees, is located across

NE 3rd Street and NE 4th Street. In addition, the Draft EIS failed to recognize the planned residential development to the east in many of its technical studies.

The Draft EIS confirmed that the project would result in significant unavoidable traffic impacts, at the intersection of I-405 and SR 169, under all alternatives. Beyond these unavoidable traffic impacts within the city, the transportation studies failed to evaluate or contemplate any actions to mitigate pedestrian impacts related to RTC students and staff crossing NE 3rd Street and NE 4th Street while large trucks speed through signaled intersections along NE 3rd and NE 4th streets. This safety conflict will be magnified by a recent RTC property acquisition across NE 3rd/NE 4th, as we noted in our previous letter to the county.

Impacts to pedestrian safety are important considerations as the city examines potential elevated risks caused by increased passenger and truck trips related to operations at the subject site. It remains the city's position that Option 3 creates major safety hazards, as well as being at odds with the vision and the considerable infrastructure investments by Renton in this area to accommodate the growth of neighborhoods and the expansion of higher education facilities (RTC).

In our previous letters to Pat McLaughlin, Director, King County Solid Waste Division dated February 24, 2020 and August 6, 2020, the city expressed concerns regarding truck hours and noise. The Draft EIS has intensified these concerns with the verification of operating hours beginning at 6:00 a.m., instead of the assumed 7:00 a.m. start time. Furthermore, it confirmed that the noise created at the facility would be in violation of the city's noise ordinance and Washington Administrative Code (WAC). The city recognizes that mitigation was identified in the form of sound walls nearly surrounding the property. However, this potential solution is not only costly, but at odds with the city's development code and also untenable in relation to the general aesthetics of the neighborhood.

We would also like to comment on Option 3 in relation to equity and social justice, which is a priority of King County's overall mission and strategic plan. In order to develop pro-equity policies and operational practices it is imperative to include the voices of those communities often sidelined in the process. The landfill support facility Option 3 is located in the Renton Highlands, a community that has 12 percent of its population living at or below the poverty line; has more than 4 in 10 residents who are non-English speaking; has 16 percent of its residents receiving Supplemental Nutritional Assistance Program (SNAP) funding; and has 10 percent of its population both over age 65 and at or below the poverty line. The city continues to be concerned with the outreach to the community and those most impacted by Option 3. While the Draft EIS addresses public outreach, efforts to directly engage the community appear to be limited. Renton would expect the county to take into consideration the populations most impacted by the proposed project.



We are supportive of the expansion of the landfill as a cost effective means to meet the region's future solid waste disposal needs. However, we believe that the support facilities relocation Options 1 or 2 are better suited and will serve the operational needs of the Cedar Hills Landfill with the greatest flexibility and with the least impact to the environment, traffic, neighborhoods and businesses.

We look forward to reviewing how you have addressed our concerns in the Final EIS.

Sincerely,



Armondo Pavone
Mayor

Attachments

cc: Dow Constantine, King County Executive
King County Councilmembers
Renton City Councilmembers
Christie True, King County Department of Natural Resources and Parks
Pat McLaughlin, Director, King County Solid Waste Division
Martin Pastucha, Public Works Administrator
Chip Vincent, Community and Economic Development Administrator
Kelly Beymer, Community Services Administrator
Ronald Straka, P.E., Utility Systems Director
Vanessa Dolbee, Planning Director
Jim Seitz, Transportation Director
Linda Knight, Solid Waste Coordinator
Doug Levy, Outcomes by Levy



DEIS Technical Comments Compiled by the City of Renton

1. Traffic Impacts

Following comments related to Appendix J – Transportation Discipline Report of the DEIS relative to the Renton Site for Option 3:

- a. Table 1-1 Summary of the Study Area: The Study Intersections No. 4 and No. 5 at I-405 are not under the Jurisdiction of WSDOT, but are City of Renton's responsibility previously turned over to the city by WSDOT.
- b. Section 2.2.2 Alternatives Trip Generation Subsection 2.2.2.1 Primary Trips Landfill Operations: The following statement about the morning peak period does not recognize that the peak period is in fact between 6 – 9 a.m. on weekdays (traffic from 6-7 a.m. is as heavy as during the 7-8 a.m. time period). This results in the peak period being impacted by trucks and staff entering and leaving the Renton site beginning at 6:00 a.m. and will ultimately impact the level-of-service analyses considering the truck percentages would be expected to go up amongst the general traffic. Therefore, the peak hour of 6-7 a.m. should be considered, the LOS results updated to reflect the impacts of the truck volumes on the existing over capacity intersections in Renton, and the following incorrect statement should be updated:

In addition, with action alternatives Option 3 (the relocation of support facilities to the Renton Site), waste transfer trucks and trailers from CHRLF would be stored at the Renton facility. The waste transfer trucks would leave the Renton facility in the morning (before the weekday AM commuter peak period) and travel to recycling and transfer stations. In the evening, the waste transfer trucks would travel from the CHRLF or one of the KCSWD Recycling and Transfer Stations to the Renton facility storage after the weekday PM commuter peak period.

- c. Section 2.3 Identification of Performance Measures – Subsection 2.3.1 Intersections lists the responsible jurisdictions incorrectly for SR 169 and I-405 ramp intersections as being WSDOT, when under WSDOT/cities local agreement, they belong to Renton as stated above for Table 2-1 so the LOS Standards are wrong and should be adjusted accordingly.
- d. Section 3.1 Street System Inventory: Subsection 3.1.2 left out the bus stop on NE 3rd Street east of Edmonds Avenue North, just one block west of the entrance to the Renton site, of the analysis.
- e. Section 3.4 Traffic Safety only makes a general statement about what traffic crash analysis and rate entails, but does not include information addressing the crash rates. An analysis should be presented that addresses the concerns related to the steep hill climb and descent on NE 3rd Street with trucks that have been observed speeding and failing to stop at the signal for Monterey Drive NE.

The NE 3rd Street and NE 4th Street corridor is an important bicycle route that provides a connection to area parks. The Renton Trails and Bicycle Master Plan identifies a future shared use path adjacent to NE 3rd Street in the immediate vicinity of the location of Support Facilities Relocation Option 3. In addition, a future striped bike lane is planned along NE 3rd Street and NE 4th Street to connect to the existing NE 4th Street bike lanes to serve the corridor. Option 3 will create a substantial number of additional heavy truck



trips, which would have an impact on the safety of these future bicycle, and new and existing pedestrian facilities. Heavy trucks crossing the future shared use path would create additional wear and tear. The EIS cites the limited amount of non-motorized activity in the vicinity warranting no further discussion, however impacts to these future facilities should be considered and evaluated for mitigation.

2. Noise Impacts

- a. Section 10.1.4.2 evaluates noise impact to Liberty Ridge to the west but misidentifies the future planned residential development to the east, 301 Monroe Avenue NE. This section mistakenly identifies properties to the east as industrial. Noise studies similar to those conducted for Liberty Ridge to the west should also be conducted for the R-10 zoned property located directly east of the proposed Option 3 Renton site. Appendix F did not indicate that any noise monitoring was conducted on the R-10 property located east of the site, furthermore the analysis assumed noise impacts based on the current topographical conditions of this site. This site is permitted to be filled and residential development would be developed at the grade of the existing King County property. Additional noise analysis should be provided for this site with an assumed future condition of medium design residential development at grade. Additional mitigation should be identified for the future residents that will reside on this property.
- b. The extensive mitigation already required to reduce noise limits to code standards at 6-7 a.m. of a minimum 12-foot noise wall would not meet any sections of the Renton Municipal Code regarding screening, walls and site plan review. It is clear extensive noise mitigation is necessary however, alternatives may need to be proposed that would meet Renton's development standards.

3. Neighborhood Impacts

The Option 3 site lack of buffer with the adjacent Liberty Ridge residential neighborhood will increase the potential for noise, light, and odor impacts to the neighborhood. The distance from the Option 3 site to the existing homes in the Liberty Ridge residential neighborhood is 90 to 100 feet. The Support Facilities options being considered at the landfill site (North Support Facilities Option 1 and South Support Facilities Option 2) provide a 500-foot buffer from existing residential properties that are developed at rural land use densities, much less than the existing R-10 land use density in the Liberty Ridge residential neighborhood.

4. Land and Shoreline Use

- a. The city regulations would require both a Hearing Examiner Conditional Use Permit and Site Plan Review, in addition to the building and construction permits listed. Site Plan Review was excluded throughout the document when referencing City of Renton permit requirements of relocation Option 3.
- b. Section 11.1.2.2 incorrectly identifies the site to the east having a Comprehensive Plan Land Use Designation of Employment Area, this site (301 Monroe Avenue NE) has a Comprehensive Plan Land Use Designation of Residential High Density.
- c. Section 11.1.3.2 Renton zoning, fails to include the R-10 zone for the Liberty Ridge neighborhood to the west and 301 Monroe Avenue NE to the east.



5. Earth

- a. Section 3.2.1.3 proposes 15-foot high walls, which is not supported by City of Renton regulations.
- b. Section 3.2.1.3 identifies that Option 3 will require significant fill in order to create a stable parking area. This proposal is likely to require significant fill beneath the existing power lines yet there is no analysis to show what the effects of doing this would be and whether safety clearances can be met.
- c. Section 3.2.1.3 does not address or evaluate the impacts of the existing protected steep slopes on the proposed in Option 3.
- d. Section 3.3 improperly identifies that the erosion control measures for Option 3 (Renton site) shall be implemented in accordance with the King County Surface Water Design Manual as opposed to the required Renton Surface Water Design Manual (RSWDM).

6. Water Quality

a. Groundwater

The support facilities relocation Option 3 is located in the City of Renton Aquifer Protection Area (APA) Zone 2. The DEIS does not address what hazardous materials would be used and/or stored on-site, or if there is any potential for impacts to groundwater from accidental spills of hazardous materials on the Renton site. No mitigation measures were proposed to protect groundwater from accidental or leaks of hazardous materials used or stored on the site other than monitoring. A minimum of secondary containment for hazardous materials stored on the site is required in APA Zone 2.

b. Surface Water

1. Section 5.2.1.2 identifies for Option 3 that waste trailer parking areas at the Renton site would be routed to the City of Renton sanitary sewer and KCWTD POTW site but fails to note that these areas must all be covered as well as not to (1) reduce the amount of stormwater to the downstream causing unmitigated impacts, or (2) unduly increase stormwater flows to the City of Renton sanitary sewer system with finite capacity and KCWTD POTW.
2. Section 5.2.1.2 fails to identify that the construction best management practices on the Renton site for Option 3 shall be implemented in accordance with the Renton Surface Water Design Manual (RSWDM).

7. Air Quality and Odor

Section 4.2.1.2 only evaluates odor coming from diesel engine exhaust particulates (DEEP) and does not consider odor that may come from empty trucks and trailers that have transported material to the landfill and have been parked in the elements. The impact of the cumulative odor from DEEP and parked empty trucks and trailers should be evaluated at the Renton site and the additional odor produced should be compared to that of the existing Renton background.

8. Aesthetics, Light and Glare

This section identifies that support facilities developed in Renton would be similar in bulk and character to existing development in the area. Therefore it appears that no mitigation for aesthetics or light and glare are proposed for the Renton site. Section 12.3 Mitigation Measures specifically identifies screening vegetation and other mitigation for lights and colors to reduce impacts at the landfill site but does not expand these mitigation measures to the Renton site. All identified



mitigation measures in Section 12.3 should be expanded to apply to the Renton site. Additionally, the analysis and conclusions of the aesthetic impacts at the Renton site are inaccurate, primarily because the analysis appears to evaluate bulk and scale without taking into consideration the following: 1) the 15-foot high retaining wall needed to level the site; 2) the 12-foot high noise mitigation wall that could be placed on top of the retaining wall; 3) the total impact of a potential 27-foot wall in some locations; and 4) the bulk and scale of the future R-10 development anticipated to the east which would be drastically different than the industrial bulk and scale of the proposed development. The aesthetic, light and glare analysis should be expanded to include the impacts of the walls and future residential development as listed above and appropriate mitigation for impacts should be proposed.

Support Facilities Relocation Options Evaluation

South Support Facilities Relocation Option 1:

The South Support Facilities site (Option 1) would have the least amount of environmental impact, allows for consolidation of all landfill support facilities needs to one location on the landfill site and would be the best option for supporting all landfill operations. Regardless of which support facilities relocation option is selected, the truck scale and house, vehicle washing facility, heavy equipment maintenance facility, emergency generator, moderate risk waste storage area and some empty tractor and refuse trailer parking that need service or full trailers queuing for tipping on the active landfill face, would all need to be relocated to the south. The additional support facilities (tractor/trailer maintenance building, tractor/trailer and employee parking, administration building and laboratory space) could be included with the site planning needed for relocating the facilities that have to be moved south under all support facilities options. This would allow for all support facilities to be located in a common location to allow for more efficient operations and would minimize environmental impacts on multiple sites, even though there would be some intrusion into the southern 1,000-foot buffer.

The intrusion into the 1,000-foot south buffer could be minimized by creating space for the landfill administration staff laboratory by incorporating a second floor as part of the tractor/trailer maintenance building and/or the heavy equipment maintenance facility building. The intrusion into the south 1,000-foot buffer would have minimal impact to adjacent property owners, since the Cedar Grove Compost facility (Queen City Farm's site) is located along the southern property line of the Cedar Hills Regional Landfill. The Cedar Grove Compost facility is a similar, compatible land use type and there are no residential land uses located to the south of the landfill. By implementing the South Support Facilities site Option 1, the support facilities would be no closer to adjacent residential properties and may actually be further in distance from existing residential properties, than the location of the existing support facilities on the landfill site. Even with some intrusion into the buffer, the buffer width would be much larger than the buffer from adjacent higher density residential properties immediately adjacent (less than 100-feet) to the Renton site support facilities Option 3.

The impact to adjacent properties and the 1,000-foot buffer would be further minimized by relocating the south stormwater lagoon into the buffer so that all support facilities could be located outside of the 1,000-foot buffer. Even though the south stormwater lagoon would be in the buffer, it would not have



the same level of impact as locating the support facilities in the buffer, since there would be minimal maintenance activities associated with the relocated south stormwater lagoon. In addition, the relocated south stormwater lagoon could allow for landscaping to match the existing landscape and would look like a natural feature in the 1,000-foot buffer. The DEIS did not evaluate this alternative for relocating the south stormwater lagoon into the 1000-foot buffer, which would allow for all required support facilities to be located outside of the 1,000-foot buffer. We recommend the south support facilities Option 1A be created to evaluate the relocation of the south stormwater lagoon into the buffer so that all or a majority of support facilities can be located outside the 1,000-foot buffer. This Option 1A should be included in the DEIS environmental analysis for consideration.

The traffic impacts and pollution generation impacts with Support Facilities Option 1 would be the same as the no action alternative, which are less than the traffic and pollution impacts than the additional distances needed to travel on city streets to reach the Renton site support facilities relocation Option 3. The stormwater, water quality and groundwater impacts would be the least since some of the area is already developed, especially if some of the recommended changes described above are implemented.

North Support Facilities Relocation Option 2:

The next best support facilities relocation option is the North Support Facilities Option 2. It is located on the landfill site would not have the additional environmental impacts that Option 3 has and would allow for keeping the operational benefits of all support facilities being located on the landfill site, even though at a different location within the landfill site. Support facilities relocation Option 2 would allow for a larger buffer between the support facilities and residential properties adjacent to the landfill site than the buffer at the Renton site (Option 3). The Option 3 buffer is less than 100-feet and is adjacent to an existing neighborhood that is a higher density of residential properties than what exists adjacent to the landfill. There would essentially be no additional traffic and pollution impacts with Option 2 since all traffic would still be going to the landfill site instead of having to travel further distances on local city streets to get to the Renton site (Option 3). The stormwater, water quality and groundwater impacts with the North Support Facilities Option 2 would be slightly greater than Option 1, but similar to the Renton site (Option 3). However the discharge of stormwater runoff into the sanitary sewer as proposed with Option 1 and Option 2 would not be allowed at the Renton site (Option 3). The King County Wastewater Treatment Division does not allow the discharge of stormwater into the sanitary sewer system, unless it is in an area served by a combined sewer and stormwater system. Renton's sewer system is separate from the stormwater system. Also there could be sewer capacity problems with the Renton sewer system if the stormwater runoff from the Renton site (Option 3) were to be allowed to discharge into the city's sanitary sewer system, which was not considered or analyzed in the DEIS.

Renton Site Support Facilities Relocation Option 3:

The support facilities relocation Option 3 (Renton site) is the worst support facilities option for the following reasons:

1. Option 3 generates greater traffic impacts due to the need for the trucks to travel over city streets with lower speed limits and a further distance than the current trips to the landfill under support facilities relocation Options 1 and 2.



2. Option 3 does not allow the operational efficiencies that Options 1 and 2 provide by having all support facilities located on the landfill site. Due to portions of the support facilities being located in Renton and portions located at the landfill under Option 3 there could be circumstances that cause additional trips that are not accounted for in the DEIS.
3. Option 3 has the greatest impact to the number of residential neighborhoods due to the higher density of residential properties and the lack of any sufficient buffer when compared to the support facility Options 1 and 2.
4. To compensate for the lack of buffer, the proposal for 12-foot high noise walls along with the need for 15-foot high retaining walls due to the significant amount of landfilling associated with the development of the Renton site (Option 3), the resulting aesthetic impacts to the neighborhood would give the appearance equivalent to a prison.
5. The lack of buffer, increased heavy truck traffic and the parking of a large number of trucks and trailers that haul garbage, increase the potential for noise and odor impacts to the surrounding residential, educational institutions (Renton Technical College) and businesses. These issues would not be as significant of an impact with Option 1 or 2 at the landfill site, since they are already occurring on the site under the no action alternative and there are much larger buffers at the landfill site.
6. The assumption that the stormwater runoff from the Renton site (Option 3) can be discharged into the Renton sanitary sewer system for conveyance to the King County Wastewater Treatment facility is a fatal flaw and not allowed by the city per King County Wastewater Treatment requirements. Also, the city's sanitary sewer system would have to convey the stormwater to the King County interceptors that convey the region's wastewater to the King County South Treatment Plant would likely not have the capacity and would impact sewer availability for new connections. The impacts associated with discharging stormwater into the city's sewer system were not addressed in the DEIS.
7. Option 3 increases impacts to recreational uses and pedestrian safety due to the increase in the number of heavy trucks on city streets with intersections, crosswalks and bike paths. These impacts do not increase with Option 1 or 2, since they are the same as current conditions under the no action alternative.

This concludes the city's comments on the DEIS, although we have identified a number of issues above needing further clarification and analysis prior to the city providing comment due to the lack of clarity and inconsistencies. The city reserves the right to provide comment once the above identified issues are resolved.



From: [Mullendore, Zoe](#)
To: [PlanEIS, CedarHills](#)
Subject: King County Councilmember Dave Upthegrove Comment Letter
Date: Thursday, October 29, 2020 3:51:22 PM
Attachments: [Upthegrove Letter re SWD Support Facilities Center.pdf](#)

Good afternoon,

Please find attached above a comment letter from King County Councilmember Dave Upthegrove regarding the Support Facilities Center for the Cedar Hills Landfill. Please let me know if you have any questions.

Thank you,

Zoë

Zoë Mullendore
Policy and Outreach Aide, Councilmember Dave Upthegrove
King County Council, District 5
P: 206-263-0817

Follow CM Upthegrove on social media:

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Dave Upthegrove
Councilmember, District 5
Metropolitan King County Council

Thursday, October 29, 2020

Mr. Pat McLaughlin
Division Director, King County Solid Waste
201 S Jackson St
Seattle, WA 98104

Dear Mr. McLaughlin,

I am writing to convey my concerns regarding the Renton Highlands (Option 3) site on the list of alternatives for the relocation of the Solid Waste Division's Support Facilities Center.

I appreciated the opportunity to meet with Solid Waste Division staff to better understand the capital and operational needs under consideration. I have also heard from elected leaders and constituents in my district who have valid concerns about the viability of the Renton Highlands site. I share their concerns. Based on the information I have at this point, I don't believe this alternative merits further consideration as a Support Facilities Center.

I recognize this has been a multi-year effort by King County Solid Waste Division to identify potential sites for a Support Facilities Center close to Cedar Hills Landfill in order to continue serving the region's needs adequately. Understanding that siting facilities such as this is difficult, I believe the Renton Highlands site and its adjacent land uses make this option inappropriate. This site directly abuts Renton Technical College and more specifically, a parcel the college planned to develop into a new Health Sciences Building. The anticipated truck traffic produced by the Solid Waste facility causes pedestrian safety concerns for the college as well as the City of Renton. I believe Options 1 and 2 – which are next to Cedar Hills Landfill and provide operational efficiencies the Renton Highlands site does not – would be more suited for the Support Facilities Center.

As a public agency, Solid Waste has a responsibility to listen to the needs and desires of the citizens who have authorized and funded our regional system. As an elected official, it is my duty to speak on behalf of, and act upon the interests of, the people I represent.

In reviewing the Draft Environmental Impact Statement (DEIS), I believe there are other more appropriate sites adjacent to Cedar Hills Landfill for King County to take into the final environmental review phase of the project instead of the Renton Highlands site.

Please feel free to contact me if you have any questions.

Dave Upthegrove
King County Councilmember, District 5

From: [Pon, Yolanda](#)
To: [PlanEIS, CedarHills](#)
Cc: [Dhillon, Darshan](#); [Tan, Shirlee](#); [Welyczko, Roman](#); [Kellogg, Ryan](#); [Orr, Dylan](#); [Rodgers, Darrell \(EHS Director\)](#)
Subject: Public Health comments on EIS for Cedar Hills Regional Landfill
Date: Thursday, October 29, 2020 6:03:46 PM
Attachments: [Public Health Comments on EIS for CHRLE.pdf](#)

Attention to: Kinyan Lui

Please see the attached comments letter from Public Health's Solid Waste program for your consideration. Thank you.

Yolanda Pon

Solid Waste Program Supervisor
Solid Waste, Rodent and Zoonotics Program
Environmental Health Services Division
Public Health – Seattle King County
401 5th Avenue, Suite 1100
Seattle, WA 98104
Phone: (206) 263-8459
Office hours: Tuesday - Friday

Environmental Health Services Division

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October 29, 2020

Pat McLaughlin, Director
Solid Waste Division (SWD)
Department of Natural Resources and Parks (DNRP)
King Street Center
201 South Jackson Street, Suite 701
Seattle, WA 98104-3855

RE: Public Health Comments on the Environmental Impact Statement (EIS) with Regards to Future Expansion and Alternatives at Cedar Hills Regional Landfill. PR#0015736

Dear Mr. McLaughlin:

Public Health - Seattle & King County (Public Health) reviewed the EIS and submitting following comments with regards to the EIS:

1. If the facilities were to be relocated within the landfill buffer zone as proposed, then construction standards for methane control for those facilities must meet King County Board of Health Code section 10.09.060.
2. The proposed relocation of service buildings generating onsite wastewater and human waste at the Cedar Hills Regional Landfill will require septic permits from Public Health's Onsite Sewage System Program.
3. Continue exploring new technologies of leachate odor mitigation methods and their implementation for odor controls.

Sincerely,

A handwritten signature in black ink, appearing to read "Darshan Dhillon". The signature is fluid and cursive, with a long horizontal stroke at the end.

Darshan Dhillon, Health & Environmental Investigator III
Solid Waste Program
Public Health - Seattle & King County

October 29, 2020

To whom it may concern:

This Letter provides a Comments and Recommendations/Solutions regarding the Cedar Hills Regional Landfill 2020 Site Development Plan and Facility Relocation DEIS.

Based on the review of the DEIS, Environmental/Engineering Investigations, and the Site Assessments/Tours of the King County's Cedar Hills Landfill/Buffers/Infrastructure- the purpose/need for the project is not valid or justified, and does not provide a "reliable and cost-effective solid waste disposal services to its rate payers". Also, it does not have the "lowest rate impact of all disposal options, greenhouse gas emissions, and the lowest risk due to long-term operations". Our basic analysis indicates that each of these statements are inaccurate and damaging to our Residents, Businesses, and the Puget Sound Region. The statement regarding the expansion of the Cedar Hills Landfill is "less expensive and delay expenses" is simply not valid and legal defensible. Previous Studies and this DEIS, does not provide cost effective solutions, waste prevention, waste reduction, and recycling. They also do not provide key options regarding adequate transfer and disposal capabilities for non-recycled waste. In addition, King County has not designed/operated/maintained the County's Solid Waste System that protects public health, the environment, conserves energy and natural resource, and minimizes greenhouse gas emissions. They also do not comply with Key-Federal/State/Local Governmental Regulations that protects the Public and the Environment.

There are Significant Environmental Impacts that are a result of King County depositing Solid Waste and Toxic Materials into the Landfill Units # 1-8 and now the Proposed Area 9, the Past and Present Operation/Maintenance of the Cedar Hills Landfill, and the relocation of the Landfill Support Facilities on Site or offsite to the KC Recycling & Transfer Station in Renton.

It is our recommendation that the Cedar Hills Landfill (LF) should not be expanded, it should be phased out over the next 10 years, and replaced with an environmentally viable and proven solutions with integrated waste management systems, elimination/mitigation of the pollution from the landfill on the adjacent communities/region, and development of economically/environmentally beneficial options.

This document will summarize the impacts/issues on the DEIS's Natural and Built Environment and propose key solutions for mitigation and the restoration of the Key Areas, Structures, Residents/Businesses that have been adversely affected by the Cedar Hills Landfill.

IMPACTS/ISSUES-

Natural Environment

1.Earth- In the Cedar Hill Landfill Area, there are a number of Coal Mines and Mine Shafts. The mine shafts enable leachate/runoff to flow through the shafts and it currently flows throughout the adjacent properties/region. Also, this effluent may be flowing into adjacent wells and the City of Seattle Water Aquifer which obtains a portion of its water from this area. Regarding the Soils/Topography and Erosion/Stormwater runoff - The landfill is in an earthquake area and it could collapse, and the soil/waste/water would move into the adjacent properties and the region. In addition, the landfill produces a large amount of leachate, which will increase- If Area 9 is expanded. It also fills up the leachate ponds, which often overflow into adjacent properties. In addition, leachate is being piped to

the Renton WWTP and this toxic substance has flowed numerous times from the plant into Lake Washington/Puget Sound (via the Locks) and surrounding water resources/properties. These toxics flow by the Seahawk Facility, I-90, Key Residents- Russell Wilson/Gill Gates, SR520, UW, Lake Union, and the Ballard Locks.

2. Air Quality- The Effluent, Odor, Dust, etc. is emitted daily from the solid waste deposited at the landfill. This will continue if the LF is expanded and there will be additional Flares that burn gas and toxics. All these emissions have and will further impact the residents and in the region. The Flare systems currently emits odor and heat to nearby properties, residents' homes, and impact them frequently. If this system is expanded, it will continue to cause significant damage to adjacent residents/animals and structures. It also, if there is a weather or Earthquake, or another event, it can create a fire hazard.

3. Water- The additional solid waste that would be added to the LF if expanded, will increase the toxic runoff, and will further be absorbed into the adjacent properties/structures and region. This effluent can further impact the aquifers, streams, rivers, lakes, Puget Sound, etc., and will continue to contribute to the reduction of salmonids in the region and the impact to the Orcas.

4. Plants and Animals- All plants and animals in the adjacent properties and the region are adversely impacted by the landfill. The fact that the Queen City Farm-Boeing site is a Super Fund Site and there is a possibility that the Cedar Hills Landfill could also be listed as a superfund site in the future. The site's Buffer have been reduced due to roads being built in them and trees have not been replanted- these actions have damaged the adjacent properties, residents, and their homes. In addition, the most significant species that feed at the LF is a nationally "Protected Species"- 200+ Bald Eagles and seagulls/other birds also feed at the landfill. The Eagles feed and nest near the LF. In addition, they are consuming waste that is toxic and, the Foam that is now put on the units can adversely impact this species too. Eagles are listed as threatened/endangered and this feeding area must be removed, and the juveniles and adults need to be assessed to ensure that they can survive once the LF is closed. They might need to be relocated, since usually one pair is nesting and does not have any other pairs nesting within 25+miles. The area is also known as a "Wildlife Migration Route" for Deer and Elk and other species are known to exist on the site too.

5. Energy and Natural Resources- The BioEnergy Washington- INGENCO facility is sited at Unit 9 and emits odor and gas periodically. If it is moved and reconstructed, it needs to be monitored so the system can be improved. It should continue to operate even after the landfill is closed, since it provides renewable gas to Puget Sound Energy for over 19,000 homes in King County.

Built Environment

1. Environmental Health- Air (Dust/odor), Water (Ground/storm/surface Water), and Noise/Vibration are issues that occur from the operation of the LF. The noise/vibration is emitted from the compaction process at the Units to compress the land and the trucks transporting the waste to the landfill. The truck traffic is an issue due to the increasing volume of solid waste that is being transported/deposited and adversely impacts the resident and the region at numerous day/night times and days of the week.

2. Land Use- The LF has been repeatedly expanded over decades since 1965 and no significant mitigation has ever been provided to residents, property owners, agencies, etc. The LF has also moved reduced or modified the buffer around the 920-acre site. Numerous issues have been repeatedly identified and no mitigation provided, and property taxes have increased, even though property values

have decreased due to numerous impacts. Many of the structures in the area are older than 50 years old and qualify to be certified as Historic Structures. Also, on the LF site there has been native American artifacts found in the area and cultural preservation must occur too, this needs to be evaluated and a Local Tribe needs to be contacted.

3.Transportation- The Transportation System in Maple Valley has been impacted by the increase in the volume of traffic with more than 130-200 trucks/day on the road systems and the noise, vibration, and air quality issue are impacting the region. Also, the road continues to be damaged due to the volume of waste in the trucks and it has created traffic hazards too. This situation will worsen with the continuation of truck traffic in the region.

4.Public Services and Utilities- There has been a number of issues in the region with “Well Water” being polluted, water supply, and natural gas pipes being damaged/ broken due to the vibration from the truck traffic and the unit compaction. There will be additional impact if the LF is expanded and the buffers minimized.

5.Economic Assessment - An Economic Assessment (which can be part of the SEPA process) should be prepared to review King County’s past and current costs/benefits to operate/maintain the Cedar Hills Landfill, the past lawsuits regarding the landfill operation, the current/proposed future impacts of the landfill on all adjacent properties/resources in the region, all impacts to flora/fauna (e.g. eagles, fish-salmonids) orcas, etc.), and the cost to mitigate any and all issues that have been identified. This assessment will provide an overview of the key past and present costs and benefits regarding the Landfill.

RECOMMENDATION AND SOLUTIONS: The Cedar Hills Landfill should not be expanded, since no Key Natural and Built Environment Issues and Impacts have been mitigated in the adjacent and/or regional private/public properties, since the Landfill was opened in 1965. These issues and impacts have been repeatedly documented and reported to King County and other Governmental Agencies and they have not been resolved and mitigated, except for the resolution of several lawsuits in the past.

There are numerous **INNOVATIVE SOLUTIONS/OPTIONS** that are available to King County to avoid expending Key Funds to expand the Cedar Hills Landfill and continue to deposit solid waste in a polluted area, such as:

1. Assess the Cedar Hills Landfill and the Adjacent Properties (e.g. Residents Homes and Structures) for key impacts and identify potential mitigation measures/solutions.
2. Develop a Redevelopment/Restoration Plan for the Cedar Hills Landfill and Adjacent Properties (e.g. Residents Homes/Businesses/Public Properties and Structures) and Cedar Grove Composting, Queen City Farm (Former Boeing Site), and the proposed Asphalt Plant location.
3. Mine the landfill and use the waste in the WTE facility and Clean up (e.g. remove waste, reline areas, and restore them as natural areas) the areas at Cedar Hill that maybe designated as Superfund sites.
4. Close the Cedar Hills LANDFILL and do not expand Unit 9/move the Operation/Maintenance Facilities. Mitigate all properties/structures that have been damaged by the landfill and its operation. The site should be restored and redeveloped into a Park/Recreational Facility and possibly having a WTE on the site.
5. Build a Waste-to-Energy Facilities and/or Integrated Waste Management Facilities (Recycling, Reuse, Sewage Sludge Elimination Facility) on the site or off site (It is a better option.) on an

alternative King County/Regional former Landfill or Wastewater Treatment Facility. Waste-to-Energy (WTE) is an option and is a valid technology that has existed/operated for decades in the US and across the World. (The first and only WTE Facility in Washington State is in Spokane and it is still Operational. A WTE Facility has been investigated and can be designed/built and located in King County to eliminate all of the County's Solid waste and generate power. In addition, other key facilities- Integrated Waste Management Facilities can be built in the region to help reuse/recycle/recover other waste sources including a facility to burn Sewage Sludge and generate power too.)

From: [Kramer, Karen](#)
To: [PlanEIS, CedarHills](#)
Subject: Comment: Draft EIS for CHRLF 2020 site development plan
Date: Thursday, October 29, 2020 7:28:58 PM

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We welcome your comments on the Draft Environmental Impact Statement (EIS) for the Cedar Hills Regional Landfill 2020 Site Development Plan Facility and Facilities Relocation Project. Please enter your comments below:

We welcome your comments on the Draft Environmental Impact Statement (EIS) for the Cedar Hills Regional Landfill 2020 Site Development Plan Facility and Facilities Relocation Project. Please enter your comments below:

The Cedar Hills Landfill has been in this location for 55 years and is now housing 70% of King County's waste. For those of us who own property in the nearby area east of the landfill, are extremely disappointed with these options. The landfill was supposed to have closed in 2028, if not sooner and it has been a bad neighbor for years. Many of our neighbors have written and filed complaints for years and I don't feel the county has listened to their or our concerns. Our property values have decreased with the landfill nearby but our property taxes seem to continue to increase.

We have had to limit social gatherings in our yard due to noise, extremely foul odors, and views of a "mountain" of garbage. Many of us moved to this area to be away from the city, noise and pollution. We aren't happy with any of the options proposed but would prefer to see Alternative 1, option 3 put into place and to have the facilities at the Renton Location. The area provided in Renton allows space for equipment and facilities and doesn't seem to affect so many homes.

We have seen an increase of traffic on Cedar-Grove road which not only contributes to the noise, pollution but wear and tear on the road. I am concerned about the quality of air pollution. Currently being a cancer patient, I'm extremely careful about what goes into my body but I have no control over the air pollutants that could possibly be affecting my health from the landfill.

With all of the resistance over the years from those of us who have been affected on a daily basis, I have difficulty understanding how this landfill continues to remain open and is now going on beyond 2028? We don't feel like we're being heard and are wondering how many members of this planning committee would like to live next to a landfill and be subjected to the negative issues that come along with it?

My hope is that the committee **will listen and act** upon our concerns sooner than later. This issue has come up many times over the years in conversations with people from Maple Valley, Renton, Issaquah, and other neighboring areas and I'm amazed at how many people the landfill has affected negatively and how many people have complained over the years but the conditions seem to get worse.

I am hopeful that my input will be received and that King County and this planning committee

will realize that a new landfill needs to be developed so that this area can finally get a break from the downfalls of a landfill. The thought of having the landfill until 2037 is more than enough but even worse thinking it could possibly be extended to 2046 and have been in existence for 81 years. It's time for a change, please help us to eliminate this problem and clean up our area.

Thank you for your time and consideration~ Karen Kramer

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From: [Hardy Kramer](#)
To: [PlanEIS, CedarHills](#)
Subject: Cedar Hills Regional Landfill Environmental Impact - Feedback from residents
Date: Thursday, October 29, 2020 9:55:24 PM

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We welcome your comments on the Draft Environmental Impact Statement (EIS) for the Cedar Hills Regional Landfill 2020 Site Development Plan Facility and Facilities Relocation Project. Please enter your comments below:

King County has mistreated the taxpayers in the Southeastern region of the county long enough. It is time for King County to find another part of the county to use as its garbage can. The taxpayers in south east rural King County in SW Issaquah, east Renton, and northern Maple Valley have had to put up with the land fill long enough and it is time some other part of the county had their turn for 50 or so years. No room anywhere else in the county? - find somewhere else and deal with it.

Your options provided are three choices of bad, worse, and worse yet. The noise coming from the land fill over this past summer has diminished our quality of life. The land fill and nearby Cedar Grove above-ground rotting-meat site leave obnoxious odors. The landfill should have been closing around 2024, but now you wish to keep in open until 2037, 2038, or possibly even as long as 2047. Best case scenario is it finally closes in 2037, which by then you will no doubt find a way to pile the trash to 1000 feet elevation. There's a 1000 foot buffer for a reason and that is already far too small, yet that doesn't stop you from pursuing Special Use permits. Have you no shame?

King County taxes over two dozen residences as if the property values were no different than any other part of the county not affected by being neighbors to the Cedar Hills Regional Landfill, yet we live on private roads, while paying the same property taxes and road taxes as other county residents, while having to maintain our roads at our own expense receiving little to nothing in return except nosey assessors jacking our property values up higher and higher. And King County wants to kick us again with the insult of losing daylight when the sun goes down behind the man-made mountain of trash, and build more infrastructure, and spread more obnoxious odors, and light up my bedroom in the night when the 10-20 foot flames burning off excess "bio-energy" gets lit up in the middle of the night like the burning man festival in the desert disturbing my sleep.

Pretty much anything to do with King County is bad for citizens and this is no different. I have lived 54 of my 59 years in King County. This is just another of many reasons I will leave King County once I am old enough to retire. Seattle was once a nice place but has held the title of arm pit of the state for several years up until recently relinquishing that title. I actually warn tourists not to come to Seattle as part of my civic duty. These proposals by King County

promote it to the former title held by Seattle as the new "arm pit of the state". That is nothing to celebrate. Only that Seattle is still outdoing the county for abuse of the citizens. BTW how much of the 70% of county residents trash comes to Cedar Hills Landfill from within Seattle which, judging by the recent insanity of the Seattle City Council, now hold the revised title of "ass-crack of the state".

If the King County Solid Waste Division had any decency it would petition for the residents in a 3-mile radius to the land fill to have their property taxes reduced by at least 50% for the suffering of having the land fill next door.

I would choose none of the above of your lame proposals. But since you're going to go ahead with it anyway, I will begrudgingly submit my request for the least impact praying that I will still be able to sell my house when I do retire and get a reasonable price for it while living next to "the dump" that should have been closing in 3 years not another 17 to 26 years. The property values are negatively affected by the dump next door to everyone except the Kangaroo court King County Board of Appeals. The residents of SW Issaquah, east Renton, and northern Maple Valley have put up with this nuisance for 65 years already: enough is enough! I therefore choose Alternative 1 - Option 3 in hopes the nightmare can be over by 2037. So please start your search for a new home for the landfill now.

Sincerely,

Hardeman Kramer, Home owner and resident
22905 SE 159th Street
Issaquah, WA 98027
...a far better neighbor than the landfill is to us.

From: [Eric Hudson](#)
To: [PlanEIS, CedarHills](#)
Cc: [Lui, Kinyan](#); [Mullet, Sen. Mark](#)
Subject: Landfill Expansion EIS Comment - Petroleum Contaminated Soils Environmental Injustice
Date: Thursday, October 29, 2020 9:56:21 PM

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Cedar Hills neighbors have the following comment on the draft EIS:

There is little or no discussion of whether the inequitable practice of transferring polluted petroleum contaminated soil from Industrial sites to the Cedar Hills neighborhood will stop.

We in the Cedar Hills neighborhood did not create this pollution, yet it is being dumped in our area and will be a risk to contaminate our water supply for millenia to come.

Insanely, this practice is labeled a "clean up" program, but all it does is transfer polluted soil from one place to another, from Industrial sites to the Cedar Hills neighborhood, adding to the already overwhelming toxic burden that the Cedar Hills neighborhood must bear.

This program rewards polluters by cleaning up their site, while placing more health risk upon the already dumped up Cedar Hills neighborhood.

"All liners will fail" - per the EPA. The EIS needs to contain plans for how to inspect and monitor for liner failure and what will be done if it occurs.

Polluters at Industrial sites need to install their own liner at their polluted site and retain the pollution there, instead of transferring it to an innocent residential neighborhood.

What does King County and its cities have against us, that 37 incorporated areas send all their polluted soil and garbage to one residential, environmentally sensitive neighborhood for the past 50 years?

Please add something to the EIS on this topic

Thank you

Eric and Cedar Hills Residents

From: [Valerie Paganelli](#)
To: [PlanEIS, CedarHills](#)
Subject: Comment: Draft EIS for CHRLF 2020 site development plan
Date: Thursday, October 29, 2020 11:42:56 PM

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We welcome your comments on the Draft Environmental Impact Statement (EIS) for the Cedar Hills Regional Landfill 2020 Site Development Plan Facility and Facilities Relocation Project. Please enter your comments below:

As a resident in unincorporated King County, near Hobart, with a Maple Valley address and zip code (98038), I am a regular attendee of the Greater Maple Valley Unincorporated Area Council (GMVUAC). Based on my residency, I also serve as an elected school board director for the Tahoma School District which covers a large service area of unincorporated King County. I also have my business in unincorporated King County, in Ravensdale. I'm generally very active and involved in the Greater Maple Valley community since moving here from the Queen Anne area of Seattle in 2011. I was also actively aware and involved in our community while in Seattle.

I share this introduction because it serves as a reference point to the King County Solid Waste Division (SWD) that I am an engaged and aware community member. The SWD received written public comment from me on August 26, 2019 regarding the EIS scoping for Cedar Hills Regional Landfill (CHRLF) shortly after becoming aware of a public comment period and meeting while attending a GMVUAC meeting. At that time I noted CHRLF had the same zip code as my home (98038), yet the "Neighbors of Cedar Hills Regional Landfill" did not include households with that zip code and were thus not made aware of the opportunity for public comment via mail. Additionally, when I requested a copy of the mail distribution map from SWD I noted the distribution was outdated (last updated in 2011), did not have an established process for determining distribution based on the current request for input, was not geographically concentric to the landfill site, did not reflect the growth in the area and did not acknowledge the regional community being served. The only known adjustment made by SWD to their communication distribution since August 2019 was to add my contact information to their distribution going forward. This suggests that if I were to request a current map of the mailing distribution today, the boundaries will have remained abhorrently remedial (but may now also have a single dot outside those boundaries at my address).

Regarding public comment on the Draft EIS, I am aware of and personally contributed to and endorse the significant and comprehensive comments being submitted by GMVUAC. Additionally, I repeat some of my previous comments here in response to the Draft EIS.

The CHRLF EIS is significantly relevant to ALL residents in the 37 cities served by CHRLF. Those environmentally impacted and eligible for comment extend beyond simply the "adjacent neighbors". The population to engage in this process is the entire regional population being served! I contend that the process used by SWD and the population reached for public comment on the Draft EIS is unlawfully delinquent and invalid and thus King County should extend the

timeline for comment until properly updated communication methods are in place and the opportunity to contribute public comment is afforded to *the entire* King County community being served by CHRLF.

I also offer the following input / comments / questions regarding the Draft EIS, some of which may be redundant to my comments in August 2019 due to the lack of response to them in the Draft EIS:

- Did the alternatives rejected in April 2019 undergo an EIS? If so, what were the results? If not, why not and why could they not be included in this portion of the process?
- One of the “aspects of the environment that should be studied” is the “community environment” and the impact that a lack of communication by King County has on the process and review of alternatives and how the limited awareness leads to potentially long-term unintended / unsupported / unbalanced damaging effects.
- The definition of “Neighbors” to the landfill should extend beyond the immediate area and those who call to complain about sounds, smell and earth-moving residuals of the operations, thus expanding the “environment footprint” in the Final EIS.
- Impacts to the soil, runoff, aquifer, Cedar River, birds of prey, neighboring human and other animal inhabitants should be fully evaluated and disclosed.
- Air quality under various weather conditions that are pertinent to the location of CHRLF should be examined, not the weather conditions of areas outside of the geography that don’t model similar patterns.
- Modeling of earth movement impacts from normal operations at the landfill site versus projected land/landfill movement under varying degrees of magnitude earthquakes.
- The previously established lifespan of the existing landfill site should be fully explained and the previous lawsuits should be fully disclosed and considered as part of the Final EIS.
- The Final EIS should include factual information and decision rationale about the overall landfill history in the county and how these decisions are informing prospective environmental decisions of this kind. How are decisions being made consistently, or if we are making differing decisions, how are they supported by improved or altered environmental impacts. For example:
 - When were the various landfills in the region put into operation? What were the population and environmental conditions when these decisions were made?
 - When and why were some of the landfills closed? Was the capacity deemed maximized prior to close, and if so, what determination was made regarding measuring capacity?
 - What was the “neighboring” population to CHRLF in the 1960s when it was established, how has it evolved and what is it today?
 - What is the population count being served by CHRLF today versus at each juncture in the past when the landfill lifespan was deemed extended? How does this compare to landfills operated in other like-size communities throughout the U.S.?
 - What is the underlying projected population being served over the various life spans of the alternatives being presented?
- From an environmental impact, when and how is a landfill deemed “full”?
- When King County made maximizing capacity at CHRLF one of its “primary goals and a central facet in its operational planning” what threshold requirements on environmental impacts/preservation and social equity were put in place to do so? What does “develop landfill capacity” mean from an environmental threshold impact as it relates to the 2010 deemed site development authorization to the SWD?
- Please clarify the purpose of the Final EIS. Is it strictly intended to identify potential impacts so actions can be proposed to avoid, reduce or offset those impacts or does the Final EIS have the potential to negate or reverse a proposal entirely due to the extent of the potential impacts?
- Will the county only review comments put forth by the limited community aware of the opportunity or will the Final EIS also incorporate the relevant environmental and scientific expertise needed to assess the alternatives?

- What are the threshold environmental impacts when considering “maximum capacity” or “deemed to be full by 2028”?
- Please examine how the relocation of operational support facilities is an appropriate environmental impact investment based on the temporary usage of the landfill site alternatives.
- If prior lawsuits limited the elevation of landfill to 788 feet, why would (and how can) the County Council authorize a directive that might lead to landfill heights of 830 feet, creating a legal risk/liability to county taxpayers due to the environmental impacts?
- As part of the Final EIS, please document the record of reported health for Passage Point and employees working within the 1000 foot buffer of the landfill over at least the last ten years.
- Please consider private property owners having to leave their property as one of the environmental impacts in the Final EIS for the alternatives being proposed.

Separately, I request responses to the following which were originally requested in my August 26, 2019 public comments and for which the information has not yet been provided:

- **Please provide a copy of the SWD interlocal agreement and a list of those cities who signed the agreement.**
- Why is King County acquiring properties near the buffer? How were these property owners considered “willing”? **Please provide a copy of the initial communication from the County to these property owners.**
- Why is 2028 (nine years) not considered long enough to plan for a long-term waste management plan? Why is the county not immediately dedicating its current resources to that study?

Finally, **I continue to endorse the “NO ACTION” alternative** because I believe **the process to-date has been significantly flawed** and decisions to support the interlocal agreement with 37 cities of King County (all except Seattle and Milton) are not based on sound and complete rationale that honors environmental impacts. The county needs to begin dedicating its immediate resources to a long-range plan that is safe, viable and sustainable rather than dedicating resources to “maximizing capacity” alternatives at Cedar Hills.

Submitted by,
Val Paganelli
vbpaganelli@comcast.net

Bradley B. Jones
 Direct: (206) 676-7677
 E-mail: bjones@gth-law.com

October 30, 2020

VIA EMAIL and U.S. Mail

King County Solid Waste Division
 201 S. Jackson St.
 MS:KSC-NR-0701
 Seattle, WA 98104-3855
 ATTN: Kinyan Lui, Project Manager
CedarHillsPlanEIS@kingcounty.gov

RE: Comments on the Draft Cedar Hills 2020 Site Development Plan EIS

Dear Ms. Paterson:

I am an environmental attorney and have practiced environmental law for over 33 years. During many of those years I have been engaged in litigation against the King County Solid Waste Division regarding its ownership, design, construction and operation of the Cedar Hills Regional Landfill (the "Landfill"). My first involvement with the Landfill started in 1997 when a group of residents near the Landfill approached my firm and asked us to initiate a class action lawsuit on their behalf against King County, for its operation of the Landfill, and against Cedar Grove Composting, Inc., for its operation of a nearby composting facility. That lawsuit, *Brighton, et al. v. Cedar Grove Composting, et al.*, King County cause No. 97-2-21660-5 SEA, was consolidated with *Anderson, et al. v. Cedar Grove Composting, Inc., et al.*, King County cause No. 97-2-22820-4 SEA. After three years of litigation, the County and over 8,000 class members entered into a Settlement Agreement. Under its terms the County agreed to settle the *Brighton* lawsuit for \$16.5 million in cash together with a number of important operational changes and commitments. Under terms of the *Brighton* Settlement Agreement, the County is required to maintain the 1,000 foot buffer imposed by its 1960 Special Use Permit and to limit the height of Areas 5, 6 and 7 of the Landfill to no more than 788 feet above sea level. A copy of the *Brighton* Settlement Agreement is attached as Exhibit 1.

In 2014 I was approached by a couple who lived on the eastern boundary of the Landfill, Jim Howe and Sharon Kay, and they asked that I represent them in connection with odors and toxic landfill gasses that they had been exposed to during a December 7, 2013

Reply to:

Seattle Office
 520 Pike Street, Suite 2350 (206) 676-7500
 Seattle, WA 98101 (206) 676-7575 (fax)

Tacoma Office
 1201 Pacific Ave., Suite 2100 (253) 620-6500
 Tacoma, WA 98402 (253) 620-6565 (fax)

pipeline break and during the months and years that followed. That lawsuit, *Sharon Kay and Jim Howe v. King County*, King County cause No. 15-2-08235-3 KNT, was consolidated with a different lawsuit brought by another couple who lived next door to Kay and Howe, *Thomas and Marie Dickens v. King County*, King County cause No. 15-2-08485-2 KNT. The consolidated cases went to trial in September of 2017 before a 12 person jury of King County citizens. At the conclusion of a three week trial, in which the jury heard from a number of national landfill experts, the jury concluded that the County was negligent in the operation of the Landfill, that the operation of the Landfill caused a nuisance under the law, and that the operation of the Landfill had caused a “taking” or inverse condemnation of the Sharon Kay’s property. The jury awarded each plaintiff \$50,000 in nuisance and negligence damages and found that the property owned by Ms. Kay had been reduced in value by \$65,000. A copy of the jury’s special verdict form is attached as Exhibit 2.

As a result of the above, I have developed significant knowledge about the Landfill, its history, design, construction, operation and maintenance. I have reviewed tens of thousands of pages of environmental reports, internal County analysis, regulatory records and other documents related to the Landfill. I have deposed approximately 20 County employees involved in design and operation of the Landfill and a number of the Landfill’s regulators at the Department of Ecology, the Puget Sound Clean Air Agency, and the Seattle-King County Department of Health. The only conclusion to be drawn from the totality of this information is that the County was and is incapable of operating the Landfill in compliance with the law.¹ That conclusion is simply reinforced by some of the more recent regulatory citations against the County. And that leads me to my first comment:

1. The EIS Cannot Assume The County Will Comply With Environmental Regulations. The County has consistently demonstrated over the last 20 years that it cannot operate and manage the Landfill in compliance with existing laws, regulations and permits. The County has been cited dozens of times by the Seattle-King County Health Department and failed numerous inspections by the Puget Sound Clean Air Agency (“PSCAA”). None of those regulatory citations are included in the draft EIS. The County’s continued defiance or inability to comply with applicable laws, whether intentional or not,

¹ Attached as Exhibit 3 is a copy of an internal King County email from Toraj Ghofrani, a professional civil engineer for the Solid Waste Division. His email establishes that 40% (forty percent) of the landfill gas extraction wells “are not functional most of the year;” “40 parts per million of methane seeps out through unsealed surfaces;” and that the Landfill has “poorly designed pipe size selection . . . poorly selected backfill material . . . that blocks and biofouls the perforated openings, . . . poorly designed and installed perforated pipe . . . [and] poorly designed and spaced horizontal and vertical LFG wells that are inadequate to capture all of the LFG generated.”

merely underscores that western Washington state is not an environmentally safe location for landfills. The volume of precipitation received at the Landfill makes it impossible to maintain the landfill gas collection system and leachate. The EIS must identify each regulatory violation over the last ten years. The EIS cannot assume or rely upon the County to comply with regulations regarding odors, leachate, or vector control.

2. Landfill Gasses, Odors and Toxins. The single most significant problem for the County over time has been its inability to control landfill gasses generated by the Landfill. Currently the Landfill produces approximately 10,000 cubic feet of landfill gas *per minute*. That is enough landfill gas to overfill every minute a room 30 feet long, 30 feet wide and ten feet high. The older cells of the Landfill are unlined, though the rate of production of landfill gas from those areas is relatively modest compared to the rest of the Landfill. Landfill gas is emitted through the active face, other areas that have not received final cover, and has escaped the liners on many existing cells. In fact, such a large volume of fugitive emission occur that landfill gas has migrated into both the eastern and western buffers. And whenever the BEW plant is off-line and the North Flare Station is down for whatever reason (e.g. power failure, inability to instantly respond to BEW's unscheduled shutdowns, etc.), the landfill gas has nowhere to go but to seek to escape into the atmosphere.

The County's landfill gas problem has been exacerbated by its novel use of "interim final cover" on Areas 5, 6, and 7. The County's own nationally-recognized expert witnesses in the *Kay and Howe* case admitted that the County's use of "interim final cover" to avoid placing regulatorily required and more protective final cover on cells is unique, not recognized by the regulations, and that they had never seen use of "interim final cover" before. And the evidence showed that the lack of final cover on those areas was causing landfill gas emissions into the air and surrounding neighborhoods. Furthermore, by calling it "interim final cover" the County believed it could avoid doing surface emissions monitoring of methane emissions in those areas. As a result, it is *impossible* for the County to claim compliance with federal and state air regulations by simply ignoring methane (and other landfill gas constituents) that is escaping the "interim final cover." The EIS must include the results of multiple rounds of surface emission monitoring from Areas 5, 6 and 7, including all areas of "interim final cover," as those are currently the areas generating the highest volume of landfill gas and they have the least amount of cover.

Among the most significant concerns of area residents is their potential exposure to toxic chemicals in the landfill gas. Prior studies prepared for the County's 1998 Draft EIS demonstrated toxic chemicals above ASILs were leaving the boundary of the Landfill. However, by the time of the Final EIS the results of the study had been changed, and the revised study found no toxics above ASILs. Landfill gas is a soup of dozens of

different chemicals, many of which are toxic at relatively low doses. The EIS must include a detailed analysis of best case, worst case and most likely case of toxic landfill gas emissions from Areas 5, 6 and 7 and any other proposed cells or areas. The EIS must include an evaluation of what happens when the landfill gas collection system is shut down for any period of time. The County's North Flare Station logs will show the frequency and duration of such shutdowns. These are the times when the greatest potential for exposure to landfill gas occur.

The draft EIS concludes that "no significant unavoidable adverse air quality or odor impacts would occur under any of the alternatives." (p.4-13). With respect to odors, the draft EIS found that "[m]odeling results" indicated that "under normal operating conditions [which are not defined], none of the alternatives would result in significant odor impacts or any increased odor compared to existing conditions." (p.4-10). These conclusions are contrary to the Landfill's history, the evidence, and common sense. By definition, the continued operation of an odor source will have greater impacts than its closure. Landfill gas generation levels reach their peaks 2-5 years after disposal. So the sooner disposal stops, the sooner will be the peak in production and then a long declining trend. Stretching operations—and production of peak levels of landfill gas—will of course lengthen the period of exposure to odors.

The bias in the draft EIS regarding odors and air toxics is evident in many respects. For example, the draft attempts to shift blame for the Landfill's odors to others: "Historically, [unnamed] adjacent industrial-zoned properties have been the major source of odors in the community surrounding" the Landfill. (p.4-11). This is simply false. While odors from the Cedar Grove Composting facility do affect the community, it and the Landfill account for over 90% of area odor complaints. There are no other "major sources" in the area that cause odors anywhere near the level of the Landfill. The bias continues in the air dispersion modeling. Instead of using data from the Landfill, the draft EIS defaults to EPA's AP-42 assumptions. In the 2017 *Howe and Kay* trial, the County's engineers admitted that the AP-42 values are far different than the actual conditions at the Landfill. Due primarily to the significant amount of rain at the Landfill and its infiltration into the cells, together with the production of leachate, which renders much of the landfill gas collection system inoperable, the rate of production of landfill gas at the Landfill far exceeds the AP-42 assumptions. They also testified that the assumptions on the level of oxidation that occurs from landfill gas passing through the covers in the cells is far too high. Actual level were closer to 10%, not the ranges used in either AP-42 or EPA's Landfill Gas Emissions Model.

It's also important to note that the likely single largest area of odor generation is not being tested, or at least not being reported publicly. During the *Howe and Kay* trial it was

discovered that the County was not performing surface emissions monitoring in Areas 5, 6 or 7. See SEM map attached as Exhibit 4. Thus the public, and the draft EIS, have no information about the levels of methane being released from the areas of the Landfill that currently have the highest generation rates of landfill gas. The final EIS must include sample results from the surface of Areas 5, 6, and 7 and incorporate those actual results into its modeling.

Finally, the bias in the draft EIS can also be seen in its description of historic odors. This section describes information between 2017 and 2019. First, it contains no information whatsoever about the *Howe* and *Kay* litigation in late 2017, where the jury found the Landfill was releasing volumes of landfill gas sufficient to cause a nuisance to area residents. Second, it claims that the County only received “about seven to eight complaints per month” in 2017 and “[i]n 2018 and the first half of 2019, the frequency of complaints was about one per month.” (p.4-6). The draft EIS says **nothing** about odor complaints in the last 16 months. The draft then notes that PSCAA received 193 odor complaints about the Landfill in 2019, and another 283 that couldn’t identify the source. Taking 22% of the “couldn’t identify” complaints (the ratio of identified complaints between the Landfill and Cedar Grove) together with the 193 that did identify the Landfill equals 255 complaints, or over 21 per month. That clearly demonstrates an adverse environmental impact and proves the fallacy of the draft EIS’s modeling and conclusions.

The final EIS must: 1) include an accurate description of odor history, including complaint data through June 30, 2020, the *Howe* and *Kay* decision, and the money the County has spent in the last three years acquiring neighboring properties because of odor impacts; and 2) perform more accurate modeling using Landfill-specific data that models the conditions that actually exist at the Landfill.

Finally, with respect to Comment 1 above, there is simply no reasonable basis to assume that the County can operate the Landfill in compliance with odor regulations and nuisance law. The December 7, 2013 pipe break serves as a prime example of the County’s negligence. When the BEW plant opened at the south end of the Landfill, the County needed to redirect 10,000 cubic feet per minute of landfill gas from the North Flare Station to the BEW plant, approximately a mile away at the south end of the Landfill. However, in order to save money, the County elected not to buy new pipe but to instead dig up old, used landfill gas pipe that had been wallowing in refuse for 20 years or more. At the time the County’s consultant, Parametrix, told them it was a bad idea and that the pipe would fail. Nonetheless the County proceeded with the old pipe and three years later the pipe did exactly what Parametrix said it would when it burst after dark. It took the County over four hours to even find the pipe break. Over a half million cubic feet of Landfill gas vented directly to the atmosphere during this event.

3. **Landfill Height Cannot Exceed 788 Feet Above Sea Level.** The 1998 EIS for the Landfill had identified light/glare and noise as two of the adverse impacts from continued operation. Discovery in the *Brighton* litigation reinforced the damage caused by the light, glare and noise that Landfill operations generated. The evidence showed that the higher a cell was filled, the more visible was the light and glare, and to an ever increasing audience, the higher the County built a cell the more area homes could see the top of the Landfill. The same held true for noises from Landfill operations. The higher the source of noise, the farther the noise carried. Keeping the Landfill at a height of 788 feet above sea level or lower became a significant and material condition of the *Brighton* settlement discussions. As a result, the *Brighton* Settlement Agreement provides that “[a]t the present time, King County **does not intend to pursue Alternative 3 in the 1998 Final EIS** (maximum development of the Cedar Hills Regional Landfill).” (Emphasis added). It also states that “King County agrees to make a good faith effort to keep the maximum height of Areas 5, 6 and 7 of the Landfill **at or below 788 feet above sea level.**” (Emphasis added). Given that those were the only cells anticipated at the time, and that the County disclaimed any intention to pursue “maximum development,” the Settlement Agreement did not refer to any future cells beyond Area 7. But certainly the County understood that the class action plaintiffs did not want **any** future construction to exceed 788 feet. Thus any effort by the County to exceed 788 feet for Areas 5, 6 and 7 violates the Settlement Agreement and will cause damage to area residents. And any effort to construct additional cells that exceed 788 feet violates the spirit and intent of the Settlement Agreement. Thus the EIS **should not** consider any scenario under which any landfilling occurs above 788 feet above sea level, even for temporary compacting or surcharging.

4. **Vibrations.** During the *Brighton* lawsuit many residents on the west side of the Landfill experienced vibrations that were physically palpable and that resulted in significant property damage. Doors and windows became mis-aligned, sheetrock cracked, and screws and nails popped out. Physically the residents could “feel” the vibrations as a type of sonic waves, even if they could not be heard. While initially denying that there was anything at the Landfill that could cause such vibrations, after the *Brighton* lawsuit the County admitted that it was experiencing “flare stack rumble” at the North Flare Station. Within the last year the same residents on the west side have again experienced vibrations caused by heavy construction activities near the western buffer. These have also been physically palpable and have caused property damage that has been investigated and confirmed by insurance companies. Perhaps the vibrations were caused by the geologic conditions of the western side of the Landfill or the types of equipment used and the manner in which they were used. In any event, the consequences were the same—doors and windows losing alignment, sheetrock separating, screws and nails backing out, and the physical and auditory impacts. Therefore, the EIS must include an analysis of the potential impacts from flare

stack rumble and the compaction and other heavy machinery used in construction, and an analysis of the geology of the western buffer and the western portion of the Landfill where any major construction will occur. The geologic analysis must assess the extent to which the natural environment contributes to vibrations from heavy equipment.

5. The 1,000 Buffer. Since the inception of the Landfill, the 1960 Special Use Permit ("SUP") has required that "[a] 1,000' buffer strip surrounding the entire site will be left in its natural state *for the protection of the surrounding properties*. There will be no *sanitary operations* in this strip other than access." (Emphasis added). The Resolution approving the SUP defined "sanitary landfill" as "refuse disposal." The prohibition on "sanitary operations," however, is a broader phrase than "sanitary landfill," which is limited to "refuse disposal." Thus the SUP precludes *any* operational activities or facilities within the buffer. This is further established by the carve out in the SUP that prohibits "sanitary operations in the [buffer] strip other than access."

The Sanitary Operations Department of King County (the predecessor to the Solid Waste Division) had proposed only a 500 foot buffer, but the County Council rejected it, finding that the 1,000 foot buffer would be "compatible with future development of the surrounding area." In spite of this prohibition, the County proceeded to dump garbage approximately 300 hundred feet into the buffer on the east side of the Landfill. And that waste—which sits in an unlined cell—has caused the migration of leachate and landfill gas even further into the buffer toward area homes. The County's intentional violation of the buffer, and thus the law, has caused the County to incur millions of dollars to acquire private residences on the east side of the Landfill so as to expand the Landfill boundary to the east. And on the west side of the Landfill, landfill gas and leachate has also escaped the lined cells and migrated into the buffer.

Since 1960 the area around the Landfill has developed beyond earlier projections and thousands of people now live within a mile of the Landfill. Given the known adverse impacts of the Landfill that have been imposed on nearby residents on the east and west sides of the Landfill, and the resulting costs in litigation, settlements, and property acquisition, which exceeds \$20 million, it is inconceivable that the County would consider reducing the size of the buffer or constructing and operating Landfill facilities within the buffer. That will have the same result as if you asked all the nearby residents to move their homes hundreds of feet closer to the Landfill. Furthermore, any effort by the County to decrease the size of the buffer simply proves that the County's claim that it tries to be a good neighbor is patently false. A good neighbor does not attempt to move a known nuisance closer to their neighbors. In fact, during the *Brighton* litigation the buffer became a significant issue. The County had encroached into the buffer and failed to keep the buffer in its natural state, as required by its Special Use Permit. Thus, the *Brighton* Settlement

Agreement provides that “King County agrees that garbage shall not be disposed of, nor soil stockpiled, within 1,000 feet of the property line at the Landfill.” The *Brighton* Settlement Agreement also provided that the County was to “retain the services of a qualified landscape architect to evaluate the condition of the trees in the west buffer are previously disturbed, and to develop a plan to replace selected deciduous trees with evergreens as feasible.” So any attempt to reduce the size of the buffer, remove trees from the buffer, or construct “sanitary operations” within the buffer both violates the *Brighton* Settlement Agreement and destroys any notion that the County cares about area residents. This is all about money.

Any analysis of reducing the size of the buffer or installing “sanitary operations” within it must first include an accurate and objective cataloguing of all prior adverse impacts on neighboring residents caused by the Landfill, with a special focus on vibrations and landfill gas. Then it must analyze how much worse those impacts will be on area residents if they occur closer to their residences. Finally, it must analyze all the adverse impacts that will occur from both shrinking the buffer and engaging in construction and operation of “sanitary operations” within the buffer.

6. The EIS Must Include Analysis of the “Indirect” and “Cumulative” Effects of Extending the Life of the BEW Plant. The draft EIS fails to include and analyze the effects from continued—and lengthened—operation of BEW as part of the environmental analysis. This is against the law. WAC 197-11-060(4)(d) requires an EIS to include the “[p]roposal’s effects includ[ing] direct and indirect impacts caused by a proposal.” WAC 197-11-305 requires inclusion of any “series of actions, physically or functionally related to each other.” And WAC 197-11-792 requires an analysis of impacts that are “direct,” “indirect,” or “cumulative.” There is no dispute that the BEW facility and the Landfill have a symbiotic relationship. Whereas the Landfill can exist without BEW, BEW cannot exist without the Landfill. BEW even uses some of the Landfill’s infrastructure, such as stormwater and leachate collection and treatment. The BEW plant is contributing significant amount of arsenic and arsene gas to the ponds. The useful life of the BEW plant is wholly dependent upon the level of production of landfill gas from the Landfill. Extending the life of the Landfill extends the life of the BEW plant. Under the law, the interconnection between these two facilities, and BEW’s total dependence upon the Landfill, means that a “direct, indirect or cumulative” impact of extending the use of the Landfill will be a decade or more of continued operation of the BEW plant and all its attendant impacts. Thus the final EIS **must** consider and evaluate the impacts from the BEW plant that arise because of any extension on the period of time in which the Landfill operates.

7. Landfill Closure and Long Hauling. In the last 30 years owners and operators of landfills in western Washington have realized that the geologic and weather conditions are not conducive to lawful landfill operations. In 1991 there were 45 active landfills in

Washington, 19 of which were west of the Cascades across 15 different counties. By 2013 there were just 14 active landfills in Washington with only three of them—including Cedar Hills—in western Washington. And even municipalities that did not own, but utilized, west of the Cascade's landfills stopped doing so. Most notable of these was the City of Seattle.

The EIS must include a comprehensive analysis of the totality of adverse environmental impacts that can arise from expansion of the Landfill against the totality of adverse environmental impacts that would occur from long-hauling waste to eastern Washington or Oregon. Any objective analysis will show that long hauling poses far fewer adverse environmental impacts than the continued operation of the Landfill.

The County's motivation to expand the Landfill rests on nothing other than money. The County has shown no concern or care for area residents, which is why the Landfill has such a litigious history. The County's announced plans have simply reinforced to area residents that the County does not care about them. If the County had any care or concern for area residents it would not seek to violate the terms of the *Brighton* Settlement Agreement. It would not seek to reduce the size of the buffer or install components of "sanitary operations. It would not seek to dump garbage up to a height of 830 feet, 42 feet higher than authorized by the *Brighton* Settlement Agreement. And it would not seek to operate the Landfill for another twenty years or more, prolonging the adverse social, economic and physical impacts on area residents. Instead it would pursue the option with the least amount of environmental impact, and that is long hauling waste to eastern Washington or Oregon.

Very truly yours,

A handwritten signature in blue ink that reads "Bradley B. Jones". The signature is written in a cursive, flowing style.

Bradley B. Jones
BBJ:sls

SETTLEMENT AGREEMENT

WHEREAS, Representative Plaintiffs James R. Blohowiak, Kay Y. Blohowiak, Wilbert Gering, David I. Hardin, and Mary Perry-Hardin, Marjory A. Langdahl, Wyatt Lofftus, Beverly Lofftus, Curtis Green, Leslie Morgan, David C. Prochazka, Dian H. Prochazka, Randy L. Robinson, Katy D. Robinson, Eugene Jarvi, Kathryn Jarvi, and Carla Wigen have brought suit, individually and on behalf of various classes, and Plaintiffs Nathalie Curry, Roger A. Lemon, Myrel Lemon, and Jeffrey B. Thomas have brought suit individually against King County in the consolidated action presently pending in the Superior Court of Washington, King County, styled Anderson, et al. v. Cedar Grove Composting, Inc., et al., Cause No. 97-2-22820-4 SEA, and Rick I. and Kim M. Brighton, et al. v. Cedar Grove Composting, et al., King County Superior Court No. 97-2-21660-5 SEA (the "Action"), alleging injury and damage to Plaintiffs, Representative Plaintiffs and Members of various classes of persons in the vicinity of King County's Cedar Hills Landfill.

WHEREAS, on or about June 24, 1999, Appellants James R. Blohowiak and Kay Y. Blohowiak, et al., individually and on behalf of the Class of Individuals whom they represent pursuant to the January 22, 1999 Order of the Honorable Robert Alsdorf, Judge of the Superior Court of the State of Washington for King County in the Action, filed a Notice of Appeal and Motion Requesting a Stay before the Pollution Control Hearings Board ("PCHB"), as Docket

No. 99-093, against Respondents, the Seattle-King County Health Department and the King County Solid Waste Division ("PCHB Action 99-093").

WHEREAS, on or about October 13, 1999, Appellants James R. Blohowiak and Kay Y. Blohowiak, et al., individually and on behalf of the Class of Individuals whom they represent pursuant to the January 22, 1999 Order of the Honorable Robert Alsdorf, Judge of the Superior Court of the State of Washington for King County in the Action, filed a Notice of Appeal and Motion Requesting a Stay before the PCHB, as Docket No. 99-160, against Respondents, the Puget Sound Clean Air Agency and the King County Solid Waste Division ("PCHB Action 99-160"). PCHB Action 99-093 and PCHB Action 99-160 shall be referred to collectively as the PCHB Actions.

WHEREAS, King County denies the allegations made against it in the Action and the PCHB Actions;

WHEREAS, the Parties recognize the existence of disputed issues of law and fact regarding those allegations in the Action and the PCHB Actions; and

WHEREAS, the Parties wish to avoid the expense and risk involved in continued litigation over the matters alleged in the Action and the PCHB Actions, and instead wish to compromise and settle the various disputes arising in connection therewith;

WHEREAS, in August 1997, Plaintiffs, Representative Plaintiffs and Class Members on behalf of themselves and others similarly situated, filed a class action complaint against defendant Cedar Grove Composting, Inc. asserting causes of action for nuisance, trespass, negligence, and inverse condemnation as a result of the odors generated by the Cedar Grove Composting facility. Plaintiffs, Representative Plaintiffs and Class Members asserted, among other things, that odors, fumes and gases emanating from the Cedar Grove Composting facility occurred with such frequency and were of such intensity and duration as to interfere with the Plaintiffs', Representative Plaintiffs' and Class Members' use and enjoyment of their property, adversely impacting property values and causing personal discomfort, anxiety, stress, headaches, nausea and other adverse health effects.

WHEREAS, on and before August 1997, certain of the Plaintiffs, Representative Plaintiffs, and Members of the Class, on behalf of themselves and all other members of the class filed claims for damages with King County alleging, inter alia, diminution of property values, impairment of the use and enjoyment of property, personal discomfort, anxiety, stress, headaches, nausea, sinus problems, loss of sleep, cancer, fear of cancer, asthma, allergies, heart problems, dizzy spells, and other adverse health effects, property damage from vibrations, shakings and tremors, water pollution, water contamination, dust, diesel fumes, noise and vibrations from truck traffic.

WHEREAS, in February 1998, Plaintiffs, Representative Plaintiffs and Class Members amended their class action complaint against Cedar Grove Composting Inc. to add defendant

King County. In their amended class action complaint, Plaintiffs and Representative Plaintiffs asserted that odors, noise, birds, and vibrations allegedly arising from King County's maintenance and operation of the Cedar Hills Regional Landfill caused damages to the Plaintiffs, Representative Plaintiffs and Class Members.

WHEREAS, in May 1998, Plaintiffs, Representative Plaintiffs and Class Members filed a second amended class action complaint and added defendant Queen City Farms and alleged that Queen City Farms, as the lessor to Cedar Grove Composting knew or should have known that Cedar Grove Composting's operations on the property would create offensive odors that would adversely affect the Plaintiffs, Representative Plaintiffs and Members of the Class.

WHEREAS in July 1998, Plaintiffs, Representative Plaintiffs and Class Members filed a motion to certify an odor class against Cedar Grove Composting and Queen City Farms and four separate classes against King County, one each for odor, noise, birds, and vibrations. In August 1998, the Court denied Plaintiffs' Motion for class certification finding, inter alia, that "Plaintiffs' counsel suggested no coherent theory as to how to determine each defendant's liability for the distinct subclasses of injury alleged" and that "without an articulable and articulated theory to establish causation in fact and liability and to calculate and award damages . . . this case cannot be certified as a class action."

WHEREAS, in October 1998, Plaintiffs, Representative Plaintiffs and Class Members filed a Motion Regarding Joint and Several Liability asserting that the exception to proportionate

liability in RCW Section 4.22.070(3)(a) applied to all causes of action related to solid waste disposal sites. In that motion Plaintiffs, Representative Plaintiffs and Class Members asked the Court to rule that common law joint and several liability applied to each of the defendants Cedar Grove Composting, Queen City Farms and King County.

WHEREAS, in November 1998, Plaintiffs, Representative Plaintiffs and Class Members filed a Renewed Motion for Class Certification against Cedar Grove Composting, Queen City Farms and King County.

WHEREAS, on December 4, 1998, just prior to the oral argument on Plaintiffs', Representative Plaintiffs' and Class Members' Renewed Motion for Class Certification, the Plaintiffs, Representative Plaintiffs, Class Members, Cedar Grove Composting and Queen City Farms reached a settlement of the class action lawsuit as to defendants Cedar Grove Composting and Queen City Farms. As a result, the Plaintiffs, Representative Plaintiffs and Class Members withdrew their Renewed Motion for Class Certification as to defendants Cedar Grove Composting and Queen City Farms.

WHEREAS, on December 4, 1998, the Superior Court heard oral argument from all parties on Plaintiffs' Motion re: Joint and Several Liability. The Superior Court also heard oral argument on Plaintiffs' Renewed Motion for Class Certification as to defendant King County only.

WHEREAS, on January 4, 1999, the parties attended a status conference at which time the Plaintiffs, Representative Plaintiffs, Class Members, Cedar Grove Composting and Queen City Farms informed the Court of the details of their settlement.

WHEREAS, on January 22, 1999, the Superior Court issued an order granting Plaintiffs', Representative Plaintiffs' and Class Members' Renewed motion for class certification as to King County only, establishing a Cedar Hills Odor Class, a Cedar Hills Noise Subclass, a Cedar Hills Bird Subclass and a Cedar Hills Vibration Subclass.

WHEREAS, on January 22, 1999 the Superior Court issued an order granting Plaintiffs', Representative Plaintiffs' and Class Members' Motion Regarding Joint and Several Liability as to King County only. The Superior Court ruled that the Cedar Hills Landfill fell within the exception of RCW 4.22.070(3)(a) and as a result King County "would remain subject to common law rules which provide for joint and several liability for all injuries of which its actions were a proximate cause."

WHEREAS, on or about March 26, 1999 Plaintiffs, Representative Plaintiffs, Class Members, Cedar Grove Composting and Queen City Farms brought a joint motion for Court approval of two settlement classes, referred to as the Cedar Grove Neighborhood Class and the Cedar Grove Complaint Class. Plaintiffs, Representative Plaintiffs, Class Members, Cedar Grove Composting and Queen City Farms also sought preliminary approval of their proposed settlement.

WHEREAS, on or about April 27, 1999 the Superior Court granted the Plaintiffs', Representative Plaintiffs' and Class Members' motion for approval of two settlement classes with Cedar Grove Composting and Queen City Farms and the Court preliminarily approved the settlement with Cedar Grove Composting and Queen City Farms as fair and adequate.

WHEREAS, on or about May 5, 1999 Plaintiffs, Representative Plaintiffs and Class Members served their Reply to King County's Request for Statement of Damages ("Reply") stating, inter alia that Plaintiffs, Representative Plaintiffs and Class Members would present evidence of approximately \$72.5 million in damages against King County, including at least \$34,100,844 in property damages and at least \$38,462,000 in personal nuisance damages. In their Reply, plaintiffs claimed that total property damages ranged from \$21,838,301.98 to \$103,682,458.90 excluding both area J and the additional damage to the vibration subclass. Plaintiffs, Representative Plaintiffs and Class Members estimated that the additional property damage to the homes in the vibration subclass totaled \$1,280,000.

WHEREAS, on or about _____, the Plaintiffs and Representative Plaintiffs ,mailed and published a notice of pendency of class actions, proposed partial settlement and notice of the fairness hearing to members of the King County classes and the Cedar Grove Composting and Queen City Farms classes.

NOW, THEREFORE, in consideration of the mutual promises and covenants contained herein, the Parties agree as follows:

DEFINITIONS

“Action” means Anderson, et al. v. Cedar Grove Composting, Inc., et al., King County Superior Court Cause No. 97-2-22820-4 SEA and Rick I. and Kim M. Brighton et al. v. Cedar Grove Composting, et al., King County Superior Court Cause No. 97-2-21660-5 SEA.

“Administrative Expenses” means expenses incurred in the administration of this Settlement as provided herein or as otherwise allowed by the Court.

“Claim” means any administrative or tort claim filed with King County, any formal administrative appeal or any lawsuit with regard to actions or failures to act by King County relating to, arising out of, concerning or caused by the Landfill, including, but not limited to, appeals of comprehensive plans for solid waste, governmental permits or permitting decisions under the State Environmental Policy Act (“SEPA”); regulations promulgated by PSCAA; Chapter 70.95 Revised Code of Washington; federal and state Clean Water Acts; federal and state Clean Air Acts; Comprehensive Environmental Response Compensation and Liability Act (CERCLA); Resource Conservation and Recovery Act (RCRA); Model Toxics Control Act (MTCA); the King County Code; the Code of the King County Board of Health; or any other common law, statutory or regulatory cause of action. Plaintiffs, Representative Plaintiffs, and

Class Members agree that, no Claim may be filed in any state, federal or any other court or tribunal prior to the exhaustion of the administrative procedures described in paragraphs 16 and 17 for the periods described therein.

“Class Areas” means the four areas shown on the maps attached hereto as Exhibits A, B, C and D. These areas shall be defined as Plaintiffs’ odor, noise, birds and vibrations classes. These definitions shall be amended to conform to any class areas subsequently certified by the Court in this Action with regard to Cedar Hills, provided that such subsequently certified class areas include substantially all of the four Class Areas identified in the maps attached as Exhibits A-D.

“Class Members” means all persons and entities, including minors, who reside in or own residential property, or who have resided in and/or owned residential property within the Class Areas for odor, noise, birds and vibrations depicted on the attached Exhibit(s) A through D at any time between August 26, 1994 and the date of Preliminary Approval of this settlement; provided, any such person or entity shall not be regarded as a Class Member under this Agreement to the extent that he, she, or it (1) is precluded, by virtue of any prior settlement agreement, judgment, or other legal bar, from asserting the claims described below, or (2) opts out of the Settlement.

“Common Fund” means the fund established pursuant to paragraph 2 of this Agreement.

"Court" means the Superior Court of Washington, King County, or other Court properly acquiring jurisdiction over the Action.

"Environmental Conditions" shall be given the broadest possible interpretation, and shall include, without limiting its generality, any and all irritants of any kind to humans, animals, plants, or the environment, and any and all pollutants, odors, noise, dust, truck traffic, surface water contamination, groundwater contamination, vibrations, shaking, tremors, birds and effects of birds, disease vectors, or causes of any kind of annoyance, discomfort, or adverse effects on body, mind, spirit, health, property, air, water, quality of life, enjoyment of life, or other interests, relating to, arising out of, concerning or caused by the Landfill regardless of whether such Environmental Conditions are tangible or intangible.

"Final Approval" means the date by which all of the following have occurred: (1) the Court has entered a Settlement Order and Order of Dismissal in a form to be agreed upon by the Parties; and (2) the applicable time period for filing appeals or requests for review of said Settlement Order and Order of Dismissal has passed without any appeals or requests for review being filed, or if appeals or requests for review are filed, the entry of orders affirming said Settlement Order and Order of Dismissal or denying review after exhaustion of all appellate remedies.

"Landfill" means the King County Cedar Hills Regional Landfill.

“PCHB Actions” means (1) James R. and Kay Y. Blohowiak, et al. v. Seattle-King County Department of Public Health, et al., Pollution Control Hearings Board Case No. 99-093; and (2) James R. and Kay Y. Blohowiak, et al. v. Puget Sound Clean Air Agency, et al., Pollution Control Hearings Board Case No. 99-160.

“Parties” mean the Representative Plaintiffs, the Plaintiffs, the Class Members, and King County.

“Plaintiffs” mean Plaintiffs in the Action who are not also representative plaintiffs or Class Members, namely Roger Lemon, Myrel Lemon, Jeffrey Thomas and Nathalie Curry.

“Counsel for All the Plaintiffs” means Albert R. Malanca, Kenneth G. Kieffer, Bradley B. Jones, Timothy L. Ashcraft, Joan C. Foley, and the law firm of Gordon, Thomas, Honeywell, Malanca, Peterson & Daheim, P.L.L.C. The Counsel for All the Plaintiffs are sometimes referred to herein as “Plaintiffs’ Counsel.”

“Preliminary Approval” of this Settlement means the Court’s entry of an order preliminarily approving this Settlement and authorizing notice to the classes. The Parties shall use good faith efforts to agree upon the form of the order and of the notice. In the event the Parties cannot agree, they shall both submit their proposed orders and notices to the Court and the Court shall decide the form of the order and notice.

"Released Parties" shall mean King County and each and every one of its departments, divisions, agencies, commissions, boards, subdivisions, officers, directors, employees, attorneys, elected officials, predecessors, successors and assigns. In addition, the term includes any person not previously listed against whom the Plaintiffs, Representative Plaintiffs and Class Members would have a claim as a result of delivery, generation or transportation of waste to the Landfill. It is the intention of the Parties that this term be given the broadest possible interpretation.

"Representative Plaintiffs" means James R. Blohowiak, Kay Y. Blohowiak, Wilbert Gering, David I. Hardin, Mary Perry-Hardin, Marjory A. Langdahl, Wyatt Lofftus, Beverly Lofftus, Curtis Green, Leslie Morgan, David C. Prochazka, Dian H. Prochazka, Randy L. Robinson, Katy D. Robinson, Eugene Jarvi, Kathryn Jarvi, and Carla Wigen.

TERMS AND CONDITIONS OF SETTLEMENT

1. Purpose. This Settlement and Settlement Agreement is intended solely for the purpose of compromising disputed claims and potential claims and avoiding the risk and expense of continued litigation. This Settlement and Settlement Agreement is not, and shall not be construed or characterized as, an admission of wrongdoing of any kind on the part of any party, nor does any party admit or concede the validity of any claim or defense asserted by any other party in the Action or PCIB Actions.

2. Settlement Amount. King County shall pay to the trust account of Gordon, Thomas, Honeywell, Malanca, Peterson & Daheim, P.L.L.C., the sum of Fifty-One Thousand Dollars (\$51,000.00) in trust for the Plaintiffs and the sum of Sixteen Million Four Hundred and Forty-Nine Thousand Dollars (\$16,449,000.00) in trust for the members of the classes certified in the Action ("The Common Fund"), for a total amount of Sixteen Million Five Hundred Thousand Dollars (\$16,500,000.00) as full and final settlement of the Action and the PCHB Actions. One-half of the total settlement amount, Eight Million Two Hundred and Fifty Thousand Dollars (\$8,250,000.00) shall be paid within forty-five (45) days following Final Approval of the settlement. The remaining Eight Million Two Hundred and Fifty Thousand Dollars (\$8,250,000.00) shall be paid on or before November 15, 2000. These amounts shall be paid as described above so long as there is no appeal of the King County Superior Court's decision finally approving the settlement in the Action. In the event of an appeal of the settlement, payment shall be made within thirty (30) days from Final Approval or November 15, 2000, whichever date is later.

3. Administration. All costs or expenses incurred in administering this Settlement, including without limitation the cost of providing notice to the classes and any expenses incurred in connection with the division and distribution of the Common Fund, shall be paid from the Common Fund. King County shall have no obligation whatsoever to pay any sum for such administrative costs and expenses, except that it shall be responsible for its own attorneys' fees, costs, and expenses incurred in defending the Action, negotiating this Agreement, and performing its obligations as set forth in this Agreement. Plaintiffs, Representative Plaintiffs,

Class Members, and Plaintiffs' Counsel shall be solely responsible for complying with any tax laws or other laws relating to administration or distribution of the Common Fund.

4. Court Approval of Settlement. The Parties shall take all reasonable measures necessary to secure Final Approval of this settlement as required by CR 23 and KCLR 23 or other applicable legal authority. Upon execution of this Agreement, Plaintiffs' Counsel shall immediately file with the court a separate Motion for an Amendment of the Class Definitions consistent with Paragraph 9 and a Motion for Preliminary Approval and any necessary supporting papers, in a form approved by King County, asking the Court to enter an order in a form to be agreed upon by the Parties. King County will file with the Court such additional papers in support of the Motion for an Amendment of the Class Definitions and Motion for Preliminary Approval as it deems necessary or appropriate, in its sole discretion. Any pleadings submitted or statements made pursuant to this paragraph are settlement communications subject to Evidence Rule 408. In the event the Court refuses to amend the class definition and Final Approval is not achieved, the Parties agree that nothing contained in this Settlement Agreement, Plaintiffs' Counsel's or King County's pleadings or verbal statements submitted pursuant to this paragraph may be used, quoted, referenced, or admitted in the Action, PCHB Actions or any other litigation. Plaintiffs' Counsel shall, at the appropriate time thereafter, prepare and file with the Court a Motion for Final Approval, and any necessary supporting papers, asking the Court to enter a Settlement Order and Order of Dismissal in a form to be agreed upon by the Parties. King County will file with the Court such additional papers in support of the Motion for Final Approval as it deems necessary or appropriate, in its sole discretion, subject to the provisions set

forth above. In the event Final Approval is not obtained, the Parties shall make all reasonable efforts to negotiate a new settlement agreement that will meet with approval of the Court. In the event this settlement is not approved and the Parties are not able to negotiate a new one, the Parties shall so notify the Court and proceed with the Action and PCHB Actions.

5. Fees and Costs of Plaintiffs' Counsel. Plaintiffs' Counsel shall apply to the Court for an award of fees, expenses and costs, which shall be paid from the Common Fund established under Paragraph 2 above. Aside from its obligations to pay into the Common Fund the Settlement Amount referenced in paragraph 2, King County shall have no obligation whatsoever to pay any sum for attorneys' fees, expenses or costs claimed by Plaintiffs, Representative Plaintiffs, Class Members and/or Plaintiffs' Counsel in connection with the Action and/or PCHB Actions including but not limited to any costs incurred and/or tendered by Plaintiffs, Representative Plaintiffs or Plaintiffs' Counsel to King County for payment. King County shall not oppose the application for award of reasonable fees, expenses or costs, and any future application for reasonable fees, expenses, or costs; provided, however, that this agreement not to oppose such an award does not apply to an application for fees, expenses or costs sought by Plaintiffs, Representative Plaintiffs or Class Members for an alleged breach of this Settlement Agreement.

6. Dismissal of Action and PCHB Actions. In consideration of the payment of the above amount, Plaintiffs, Representative Plaintiffs and Class Members shall dismiss with prejudice as to King County and without costs to any party, the Action and shall dismiss with

prejudice as to all parties, and without costs to any party, the PCHB Actions. Plaintiffs' Counsel shall execute the Stipulation and Orders of Dismissal attached hereto as Exhibits _____ within ten (10) days after Final Approval.

7. Release of All Claims by Plaintiffs, Representative Plaintiffs, and Class Members.

Effective upon Final Approval of this Settlement Agreement, the Plaintiffs, Representative Plaintiffs, Class Members and each of them hereby release, discharge, and forever acquit the Released Parties from any and all claims, demands, damages, actions, causes of action or suits of any kind or nature whatsoever, as alleged or as could have been alleged in the Action, and/or the PCHB Actions whether in law or equity, arising out of or relating in any way to (1) Environmental Conditions; or (2) the fact that Representative Plaintiffs, Plaintiffs and/or Class Members may reside or own property or businesses in the Class Areas, or otherwise have any connection to the Class Areas; or (3) operation of the Cedar Hills Landfill, including, without limiting the generality of the foregoing, any and all claims for personal injuries, bodily injury, illness, nuisance, trespass, disease, impairment, wrongful death, property damages, loss of use and enjoyment, and/or diminution of property values, medical monitoring, odor, irritation, fear of or increased risk of bodily injury, illness, disease, or impairment, pollution or contamination of air or water, attorney fees, remedial action costs under any statutory or regulatory authority relating to Environmental Conditions; penalties or other relief resulting from violations of permits or failure to comply with applicable laws, regardless of whether any such matters are claimed under theories of nuisance, trespass, negligence, strict liability, inverse condemnation, contribution, indemnity, or any other common law, statutory or regulatory cause of action, and

regardless of whether defined as a continuing tort or otherwise. This full and final release is intended to provide the broadest protection possible from future claims and to cover any and all future injuries and/or damages not presently known to the Parties hereto but which may later develop or be discovered as a result of acts, omissions or occurrences on or before the date of this Agreement, or damages to property or person occurring on or before the date of this Agreement, including the effects or consequences thereof and including all causes of action therefor against the Released Parties. This release is specifically intended to cover and include, without limitation, any and all claims, civil or otherwise, past, present, or future, known or unknown, which can or may ever be asserted by the Representative Plaintiffs, Plaintiffs or Class Members, or by their agents, estates, marital communities, dependents, successors, assigns, lien holders, or other entities, against the Released Parties arising out of or relating in any way to the matters described above that are based on acts, omissions or occurrences on or before the date of this Agreement.

8. Future Property Claims. By this settlement, Plaintiffs, Representative Plaintiffs and Class Members are releasing, on behalf of themselves and all subsequent purchasers, any inverse condemnation or "takings" claims concerning diminished property values arising out of or related to all activities, events or occurrences prior to Final Approval and, with the exception of vibration events covered by paragraph 17, all activities, events or occurrences for two years after Final Approval. No subsequent claim for inverse condemnation or takings may be made unless there is additional governmental action by King County relating to the Landfill causing impacts including odor, noise, birds and vibrations, exceeding the degree and level previously

existing, currently existing and currently planned as described in Alternative 1A of the 1998 Final Environmental Impact Statement for Cedar Hills Regional Landfill Site Development Plan, dated March 1998 (hereinafter referred to as "the 1998 Final EIS") which also results in a measurable and provable decline in market value separate and apart from any measurable or provable decline in market value, if any, that has occurred through the date of Final Approval and, except as to vibrations, for two years thereafter.

9. Settlement Conditioned Upon Settlement Class Certification. This Settlement Agreement is conditioned upon the Court's entry of an order granting Plaintiffs' Motion for an Amendment of the Class or Classes Definition. If King County reasonably believes that the class areas ultimately approved by the Court differ materially from the areas described in Exhibits A through D, the Parties shall make all reasonable efforts to negotiate a new settlement agreement that will meet with approval of the Court. In the event that the Parties are unable to negotiate a new settlement agreement, King County shall have the right to terminate all its obligations under this Agreement within thirty (30) business days of the Court's decision certifying the class areas.

10. Settlement Conditioned Upon Extinguishment of Cross-Claims. The Parties intend that this Agreement shall fully release and discharge the Released Parties from all claims as set forth in paragraphs 7 and 8 above. King County may, at its option, institute a Reasonableness Hearing pursuant to Chapter 4.22 Revised Code of Washington and/or other applicable authorities. Plaintiffs, Representative Plaintiffs and Class Members shall not oppose King County's motion. King County, with the support of Plaintiffs, Representative Plaintiffs and

Class Members will seek an order establishing that no claims, cross-claims, or third-party claims seeking indemnity, contribution and/or subrogation which have been, could have been or could be asserted against the Released Parties, shall survive this Settlement. If it elects to institute a Reasonableness Hearing and/or pursue an order extinguishing claims, King County will have the matter heard at or prior to the hearing on Final Approval.

11. Settlement Is Conditioned Upon Council Appropriation. This Settlement Agreement is expressly conditioned upon approval by King County and appropriation of the settlement by the King County Council. King County shall use its best efforts to present the Settlement Agreement and to introduce the appropriation ordinance, as defined below, to the King County Council as soon as practicable for Council action in accordance with the King County Code. Upon execution of this Settlement Agreement, the King County Executive will present to the Metropolitan King County Council and recommend adoption of an ordinance requesting a supplemental appropriation for the funds necessary to fulfill the terms of this Agreement (the "Appropriation Ordinance"). The parties recognize that there is no guarantee the Metropolitan King County Council will enact the Appropriation Ordinance and agree that if the Metropolitan King County Council does not enact the Appropriation Ordinance the terms of this Settlement Agreement shall have no force or effect and this Action and the PCHB Actions shall promptly proceed to trial (after completion of discovery) as determined by the Court and the PCHB.

12. Return of Attorney-Client and Work Product Documents. Plaintiffs, Representative Plaintiffs, Class Members and Plaintiffs' Counsel shall return to the King County Prosecuting Attorney's Office all attorney-client communications and work product documents, including, but not limited to those documents specifically identified on Exhibit ____ hereto.

13. Return of Electronic Data. Plaintiffs, Representative Plaintiffs, Class Members and Plaintiffs' Counsel shall return to the Office of the King County Prosecuting Attorney, all electronic data that was produced through discovery, in accordance with the Stipulated Order Re: Preservation of Electronic Data attached hereto as Exhibit ____.

14. Release of Future Joint and Several Liability. Plaintiffs, Representative Plaintiffs and Class Members hereby release King County from any and all past, current and future joint and several liability under the Washington Tort Reform Act, Chapter 4.22 Revised Code of Washington, as currently existing or as subsequently amended, and/or under the common law, that King County may have, by virtue of its ownership and operation of the Landfill, for damages or injuries caused in whole or in part by the existence or operation of the Cedar Grove Composting Facility.

15. Notice to Future Purchasers and Lessees. Plaintiffs, Representative Plaintiffs and Class Members shall notify all future owners or lessees of their property of the terms and conditions of this Settlement Agreement. This disclosure shall be in writing, shall be executed by the buyer and seller or lessor and lessee, and shall state that: (1) the subject property is located

within 2.4 miles of the Landfill and is in one or more of the classes certified by the Court in the Action; (2) the Plaintiffs, Representative Plaintiffs, Class Members and King County entered into a full settlement of the Action and the PCHB Actions which included a release of all claims for property diminution for themselves and all subsequent purchasers as described in the Settlement Agreement; and (3) the Settlement Agreement provides for an administrative process for future claims against King County related to any impacts from the Landfill. Plaintiffs, Representative Plaintiffs and Class Members shall provide a copy of the Settlement Agreement to the subsequent purchaser or lessee. Plaintiffs, Representative Plaintiffs and Class Members shall provide a copy of the disclosure form, executed by the buyer and seller or the lessor and lessee, to: King County Solid Waste Division, Attn: Engineering Services Manager, 201 South Jackson, Seattle, WA 98104, within thirty (30) days after the closing of the sale or lease.

16. Environmental Claims Easement. Plaintiffs, Representative Plaintiffs and Class Members shall grant to King County an easement for a period of five (5) years from Final Approval to create Environmental Conditions incidental to the operation of the Landfill, except for the vibrations described in paragraph 17, even if those Environmental Conditions are present in the Class Area or on properties owned or occupied by the Representative Plaintiffs, Plaintiffs and Class Members. During the term of the easement the Plaintiffs, Representative Plaintiffs, and Class Members and their successors and assigns agree that they shall not have a Claim against the Released Parties for a period of two (2) years, except as provided in Paragraph 17. For a period of three (3) years thereafter, only individual Claims may be made and only if:

a. Odors. As to odors, those claims relate to odors experienced by the claimant for which the Puget Sound Clean Air Agency ("PSCAA") issues a Notice of Violation for nuisance odors after all of the following: (1) the claimant has telephoned either PSCAA or the King County Solid Waste Division to complain of the odor event within 24 hours of the claimant experiencing the odors; (2) a control officer of PSCAA obtains an affidavit or declaration from a complainant that demonstrates that he/she has experienced odors in sufficient quantities and of such characteristics and duration so as to unreasonably interfere with his or her enjoyment of life and property; (3) the control officer of PSCAA has determined the source of the odors to be originating from the Landfill; and (4) the odor event was avoidable; provided however that if the Notice of Violation is appealed or resolved, Representative Plaintiffs, Plaintiffs and Class Members agree that they shall not have a Claim if the appropriate agency, administrative body or court makes a final adjudicative determination reversing, overturning, or voiding the Notice of Violation issued by PSCAA. Nothing contained in this paragraph shall obviate the need to submit a claim for damages pursuant to the King County Code.

b. Noise. As to noise or claims of noise, the claimant's claims relate to noise experienced by the claimant occurring on dates as to which an authorized officer of the appropriate regulatory authority issues a citation to King County for violation of the applicable noise regulations; provided, however, that if the citation is appealed, Plaintiffs, Representative Plaintiffs, and Class Members agree that they shall not have a Claim if the appropriate agency, administrative body or court makes a final adjudicative determination reversing, overturning, or

voiding the citation. Nothing contained in this paragraph shall obviate the need to submit a claim for damages pursuant to the King County Code.

17. Future Vibration Claims. Plaintiffs, Representative Plaintiffs and Class Members shall provide to King County an easement for a period of five (5) years from Final Approval to create Environmental Conditions incidental to King County's operation of the Landfill relating to vibrations even if those impacts are present in the Class Area or on properties owned or occupied by the Plaintiffs, Representative Plaintiffs, and Class Members. During the term of the easement the Plaintiffs, Representative Plaintiffs and Class Members and their successors and assigns agree that they shall only have individual Claims against the Released Parties and only if the claimant's claim relates to: (1) vibrations for which there is demonstrated physical injury to tangible property (not necessarily claimant's); or (2) frequent tremors and vibrations over a sustained period of time which causes the claimant's house to vibrate. In addition, and as a prerequisite to bringing a Claim, the claimant must notify the Solid Waste Division within 24 hours of the vibration event; allow King County reasonable access to the claimant's property for the purpose of investigating the claim; and submit a claim for damages pursuant to the King County Code. Following the earlier of a decision by King County on the damages claim or a lapse of sixty (60) days from submittal of the claim, the claimant shall mediate the claim before a mutually agreed upon mediator with the costs of the mediation to be divided equally between the parties prior to filing a legal action. In the event the parties are unable to agree on a mediator, they will select a mediator from Judicial Dispute Resolution.

18. Development of Areas 5, 6 and 7 of the Landfill. Plaintiffs, Representative Plaintiffs and Class Members shall not bring any actions, including but not limited, to any administrative claim filed with King County, or any lawsuit or formal administrative appeal with regard to actions or failures to act either by King County or other governmental agencies, including but not limited to appeals of comprehensive plans for solid waste, governmental permits or permitting decisions under the State Environmental Policy Act ("SEPA"); regulations promulgated by PSCAA; Chapter 70.95 RCW; federal and state Clean Water Acts; federal and state Clean Air Acts, CERCLA, RCRA, and MTCA, the King County Code and the Code of the King County Board of Health relating to or concerning the development, landfilling or construction of areas 5, 6 or 7 of the Landfill, including but not limited to the construction of any flares, blowers, piping and/or other equipment or facilities associated therewith. Nothing in this paragraph shall preclude Representative Plaintiffs, Plaintiffs and Class Members from participating fully in any and all public processes or hearings with regard to the permitting or operations of the Cedar Hills Landfill.

19. Additional Consideration. As additional consideration for the settlement, King County agrees to the following:

a. At the present time, King County does not intend to pursue Alternative 3 in the 1998 Final EIS (maximum development of the Cedar Hills Regional Landfill). In the event that King County pursues Alternative 3 in the 1998 Final EIS, Plaintiffs, Representative Plaintiffs and Class Members will be able to bring a Claim as to landfilling in areas 8 and 9.

b. King County agrees that garbage shall not be disposed of, nor soil stockpiled, within 1000 feet of the property line at the Landfill, provided that this buffer zone may be used for operating facilities for the Landfill such as pump stations and monitoring wells, and provided further that King County and its consultants and representatives, shall be allowed to enter the buffer zone to monitor, construct, repair or maintain any new or existing facility or condition, the purpose of which is to mitigate off-site impacts of activities occurring at the Landfill. Notwithstanding this agreement, King County shall have the right to apply for modification of its special use permit to allow for the construction of additional facilities, including, but not limited to a landfill gas utilization project, within this 1000 foot zone, which shall be subject to all required permits, notice, and administrative procedures. In such an event, Plaintiffs, Representative Plaintiffs and Class Members will be able to bring a Claim as to such modification of King County's special use permit.

c. Subject to budget appropriation and availability, and within two (2) years from the date of Final Approval, King County agrees to retain the services of a qualified landscape architect to evaluate the condition of the trees in the west buffer area previously disturbed, and to develop a plan to replace selected deciduous trees with evergreens as feasible in accordance with the recommendations of the landscape architect. King County shall have no obligation to implement such plan if there is a lack of budget or funding or other priorities, but will make a good faith effort to include appropriate amounts in its budget request for such plan.

d. Within two (2) years from the date of Final Approval, King County agrees to initiate reasonable efforts, considering all facts and circumstances, including but not limited to safety concerns, negotiations with unions, state of the art practices and operations, to investigate whether variances or other necessary approvals may be obtained to discontinue backup beepers at the Landfill, but makes no guarantee that backup beepers will be eliminated.

e. King County agrees to make a good faith effort to keep the maximum height of areas 5, 6 and 7 of the Landfill at or below 788 feet above sea level. Plaintiffs, Representative Plaintiffs and Class Members recognize that there may be circumstances when King County may exceed such height.

f. Within two (2) years from the date of Final Approval, King County agrees to use reasonable efforts to reduce impacts on the surrounding neighborhoods from nighttime lighting at the Landfill, consistent with safety and other operational concerns.

g. King County agrees to provide written notification of all applications or requests for permits or other governmental approvals relating to continued Landfill operations to Plaintiffs, Representative Plaintiffs and Class Members who submit a written request for such notification. The written request for notification must be sent to the King County Solid Waste Division, Attn: Engineering Services Manager, 201 South Jackson, Seattle, WA 98104. Failure to provide such notice shall not invalidate or create a basis for challenging such permit or application.

h. King County agrees that Plaintiffs, Representative Plaintiffs and Class Members, at their sole cost and expense, may retain a contractor, selected from a list of at least three qualified contractors, if available, provided and approved by King County, in accordance with King County procurement requirements, to accompany a contractor, selected by King County in accordance with King County procurement requirements, during the testing for facility-wide fugitive landfill gas emissions under the New Source Performance Standard (NSPS), 40 CFR Subpart www Quarterly Surface Emissions Monitoring Protocol, on two separate occasions during the first year of such sampling. The contractor selected by the Plaintiffs, Representative Plaintiffs and Class Members shall be allowed access to all data, information, results or documentation concerning the sampling.

20. Cooperation. As partial consideration for this Settlement, the Parties agree to cooperate in the following manner:

a. King County will support the Plaintiffs', Representative Plaintiffs and Class Members' Motion for Amendment of the Class Definition and the Motion for Preliminary Approval of this Settlement. King County will file with the Court such pleadings and papers in support of said Motions as it deems necessary or appropriate, in its sole discretion. All pleadings submitted and statements made by King County with regard to this provision shall be subject to the terms of paragraph 4.

b. Following Final Approval of this Settlement, Plaintiffs, Representative Plaintiffs, Class Members and Plaintiffs' Counsel will fully cooperate with King County in King County's pursuit of insurance reimbursement of the Settlement. Plaintiffs, Representative Plaintiffs, Class Members and Plaintiffs' Counsel agree to make themselves reasonably available for discovery proceedings and trial in the prosecution of any and all causes of action for insurance reimbursement of the Settlement. Plaintiffs' Counsel shall be entitled to reimbursement for their time at their reasonable hourly rates in the event King County requests significant assistance. Plaintiffs shall also make available all relevant and nonprivileged documents relating to the pursuit of insurance reimbursement of the Settlement.

21. Effect on Claims. Effective upon Final Approval, every Claim of each Plaintiff, Representative Plaintiff and Class Member against the Released Parties shall be conclusively compromised, settled and released and each such Plaintiff, Representative Plaintiff and Class Member shall be barred from initiating, asserting or prosecuting any Claim against the Released Parties, except to the extent permitted by this Settlement Agreement.

The Parties agree that the Notice of Settlement and the Final Approval will contain language, to be agreed on by the Parties, to the effect that the Final Approval of the Settlement will be binding upon all Class Members, who fail to timely opt out, and will extinguish and release all Claims, as set forth in paragraphs 7 and 8 herein.

Without in anyway limiting the foregoing paragraphs, the acceptance by any Plaintiff, Representative Plaintiff or Class Member of a payment from the Common Fund shall also constitute and have the full force and effect of a release of all claims as described in paragraphs 7

and 8 herein. Without in anyway limiting the foregoing paragraphs, any checks issued to the Plaintiffs, Representative Plaintiffs and Class Members must contain language, approved by the Parties, to the effect that negotiation, endorsement or deposit of the check constitutes a release of all claims as described in paragraphs 7 and 8 herein..

22. Reporting Obligations. The Plaintiffs, Representative Plaintiffs, Class Members and Plaintiffs' Counsel shall provide to King County copies of quarterly tax statements and unaudited financial statements, if any, prepared concerning the Common Fund, and a final disbursement statement identifying the names, addresses, class area and amounts disbursed to each plaintiff, representative plaintiff and class member. The Plaintiffs, Representative Plaintiffs, Class Members and Plaintiffs' Counsel shall also provide King County with copies of all claim forms submitted by each class member in connection with this matter. All such reports and claim forms shall be sent to the King County Solid Waste Division, Attn: Engineering Services Manager, 201 South Jackson Street, Seattle, WA 98104. Plaintiffs, Representative Plaintiffs and Class Members shall also preserve all cancelled checks, or at the Plaintiffs' Representative Plaintiffs' and Class Members' option, provide a copy of each such cancelled check to King County at the following address: King County Solid Waste Division, Attn: Engineering Services Manager, 201 South Jackson Street, Seattle, WA 98104.

23. Escape Clause. King County shall have the option, at its sole discretion, to declare the settlement null and void, if: (a) any of the Representative Plaintiffs elects to opt out

of any class certified by the Court; (b) more than three percent (3%) of the parcels or households, whichever is larger, in any of the noise, birds or odors classes shown on Exhibits A, B, C and D attached hereto, elect to opt out of the class(es) or (c) more than two percent (2%) of the property owners in the vibrations sub-class elect to opt out of the vibrations sub-class. Plaintiffs' Counsel shall provide King County with copies of any notification of opt-outs as soon as practicable, upon receipt of such notification. King County shall have ten (10) days after execution of this Agreement by Counsel or twenty-one (21) days after the King County Prosecuting Attorneys Office receives copies of all timely-filed opt-out notices, whichever period is later, to exercise the Escape Clause.

24. Press Announcement. The Parties agree that the initial announcement of the settlement to the news media shall be in the form attached as Exhibit _____.

25. Use of Settlement Agreement. The parties to this Settlement Agreement, including Plaintiffs, Representative Plaintiffs or any Class Member shall not seek to introduce and/or offer the terms of the Settlement Agreement, any statement, transaction or proceeding in connection with the negotiation, execution or implementation of this Settlement Agreement, any statements in the documents appended to this Settlement Agreement, stipulations, agreements, admissions made or entered into in connection with any fairness hearing or any finding of fact or conclusion of law made by the Superior Court or otherwise rely on the terms of this Settlement Agreement, in any judicial or administrative proceeding, except as provided in paragraph 20(b) or insofar as it is necessary to enforce the terms of this Settlement Agreement.

Neither this Settlement Agreement nor any exhibit hereto nor any statement, transaction or proceeding in connection with the negotiation, execution or implementation of this Settlement Agreement is intended to be or shall be construed as or deemed to be evidence of an admission or concession by the Released Parties of any liability or wrongdoing or of the truth of any allegations asserted by any Plaintiff, Representative Plaintiff, or any Class Member against them or as an admission by the Plaintiffs, Representative Plaintiffs, or any Class Member of any lack of merit in their claims and no such statement, transaction or proceeding shall be admissible in evidence for any purpose except for purposes of obtaining approval of this Settlement Agreement in this proceeding.

26. Parties Bound. This Settlement Agreement shall be binding on the Parties hereto and each of their heirs, legal representatives, successors, and assigns and inures to the benefit of the Parties and Released Parties and their heirs, legal representatives, successors and assigns.

27. No Assignment of Claims. Representative Plaintiffs, Plaintiffs and Class Members represent and warrant that they have not assigned their claims, or any portion thereof, to any person or entity.

28. No Third Party Beneficiary. No provision of this Settlement Agreement or any exhibit thereto is intended to create any third-party beneficiary to this Settlement Agreement.

29. Integration. This written agreement contains the entire understanding among the Parties in connection with its subject matter, and supersedes and replaces all prior negotiations, agreements, or representations by or among the parties, whether oral or written. Each Party acknowledges that no other Party, or any agent or attorney of any Party, has made any promise, representation, or warranty whatsoever, express or implied, other than those expressly stated herein, concerning the subject matter hereof to induce the other Party or Parties to execute this document. Each Party acknowledges that in executing this document he, she, or it is not relying on any promise, representation or warranty other than those expressly stated herein.

30. Choice of Law. The interpretation and enforcement of this Settlement Agreement shall be governed by the laws of the State of Washington.


31. Construction of Settlement Agreement. This Settlement Agreement has been drafted by mutual negotiations among the parties. It shall be construed according to the fair intent of the language as a whole, and not for or against any party. The headings of the sections and paragraphs of this Agreement are included for convenience only and shall not be deemed to constitute part of this Agreement or to affect its construction.

32. Attorneys' Fees. In the event any party hereto, or his, her, or its authorized representative, successor, or assign, shall institute suit to enforce this Settlement Agreement or for any breach thereof, the substantially prevailing party in such suit or proceeding shall be

entitled to an award of his, her, or its reasonable costs, expenses and attorneys' fees incurred, both at the trial and appellate court levels, before and after judgment.

DATED this ____ day of _____, ____.

James R. Blohowiak, Representative Plaintiff


Marjorie A. Langdahl, Representative Plaintiff

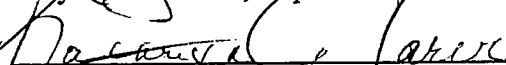

Leslie Morgan, Representative Plaintiff

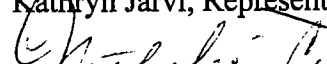
Mary Perry-Hardin, Representative Plaintiff

Beverly Lofftus, Representative Plaintiff

Dian H. Prochazka, Representative Plaintiff

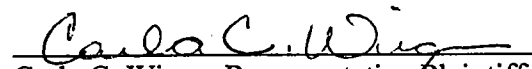

Katy D. Robinson, Representative Plaintiff



Kathryn Jarvi, Representative Plaintiff


Nathalie Curry, Plaintiff

Myrel Lemon, Plaintiff

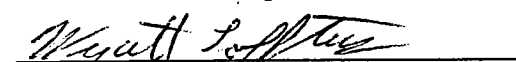

Kay Y. Blohowiak, Representative Plaintiff



Carla C. Wigen, Representative Plaintiff


Wilbert K. Gering, Representative Plaintiff


Curtis Green, Representative Plaintiff

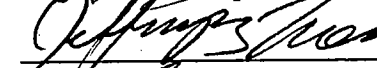
David I. Hardin, Representative Plaintiff


Wyatt Lofftus, Representative Plaintiff


David C. Prochazka, Representative Plaintiff

Randy L. Robinson, Representative Plaintiff


Eugene Jarvi, Representative Plaintiff


Jeffrey B. Thomas, Plaintiff


Roger A. Lemon, Plaintiff

entitled to an award of his, her, or its reasonable costs, expenses and attorneys' fees incurred, both at the trial and appellate court levels, before and after judgment.

DATED this ____ day of _____, ____.

James R. Blohowiak, Representative Plaintiff

Kay Y. Blohowiak, Representative Plaintiff

Marjorie A. Langdahl, Representative Plaintiff

Carla C. Wigen, Representative Plaintiff

Leslie Morgan, Representative Plaintiff

Wilbert Gering, Representative Plaintiff

Mary Perry-Hardin, Representative Plaintiff

Curtis Green, Representative Plaintiff

Beverly Lofftus

Beverly Lofftus, Representative Plaintiff

David I. Hardin, Representative Plaintiff

Dian H. Prochazka, Representative Plaintiff

Wyatt Lofftus, Representative Plaintiff

Kary D. Robinson, Representative Plaintiff

David C. Prochazka, Representative Plaintiff

Kathryn Jarvi, Representative Plaintiff

Randy L. Robinson, Representative Plaintiff

Nathalie Curry, Plaintiff

Eugene Jarvi, Representative Plaintiff

Myrel Lemon, Plaintiff

Jeffrey B. Thomas, Plaintiff

Roger A. Lemon, Plaintiff

entitled to an award of his, her, or its reasonable costs, expenses and attorneys' fees incurred, both at the trial and appellate court levels, before and after judgment.

DATED this ____ day of _____, ____.

James R. Blohowiak, Representative Plaintiff

Kay Y. Blohowiak, Representative Plaintiff

Marjorie A. Langdahl, Representative Plaintiff

Carla C. Wigen, Representative Plaintiff

Leslie Morgan, Representative Plaintiff

Wilbert Gering, Representative Plaintiff

Mary Perry-Hardin, Representative Plaintiff

Curtis Green, Representative Plaintiff

Beverly Lofftus, Representative Plaintiff

David I. Hardin, Representative Plaintiff

Dian H. Prochazka, Representative Plaintiff

Wyatt Lofftus, Representative Plaintiff

Katy D. Robinson, Representative Plaintiff

David C. Prochazka, Representative Plaintiff

Kathryn Jarvi, Representative Plaintiff

Randy L. Robinson, Representative Plaintiff

Nathalie Curry, Plaintiff

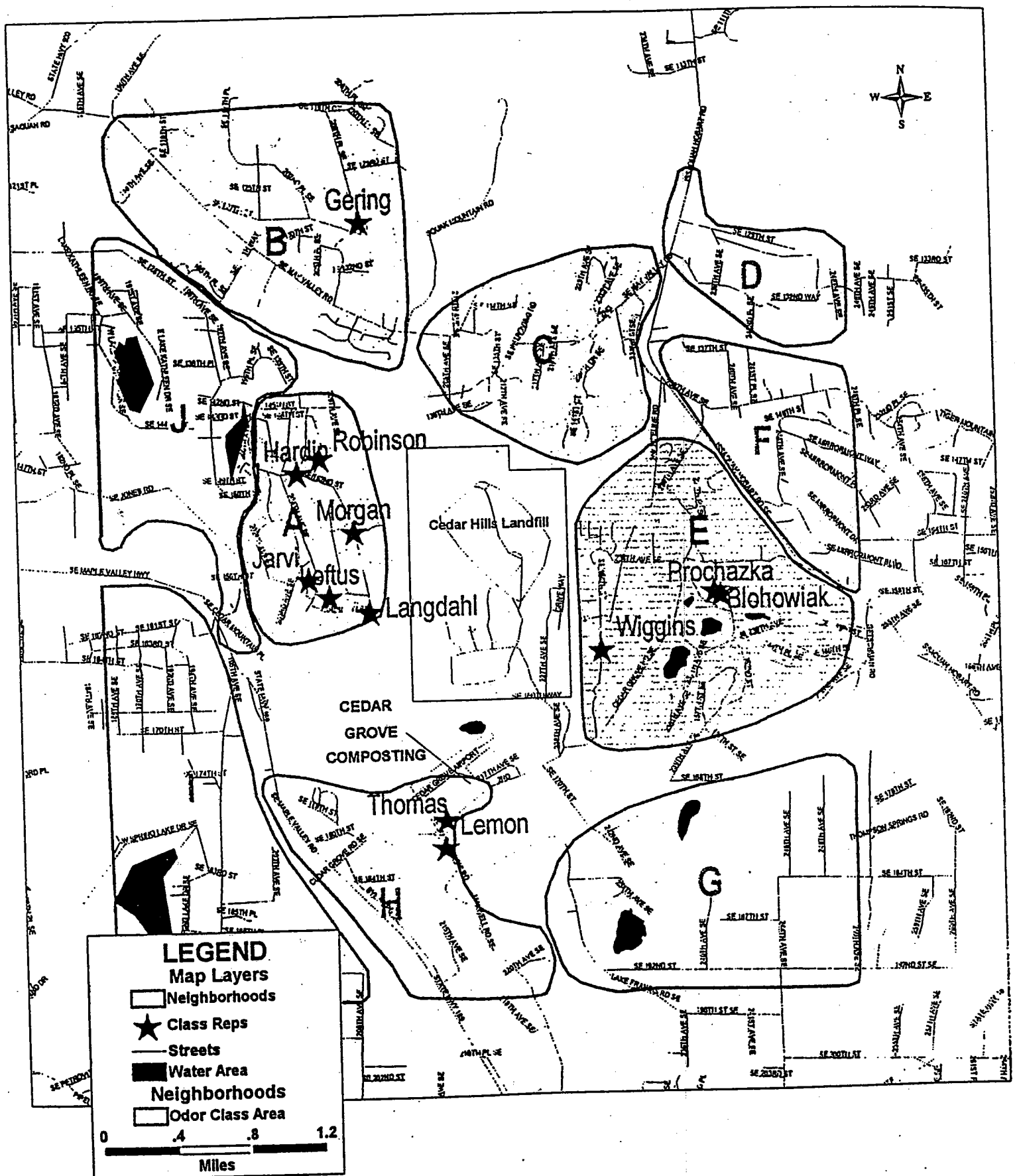
Eugene Jarvi, Representative Plaintiff

Myrel Lemon, Plaintiff

Jeffrey B. Thomas, Plaintiff

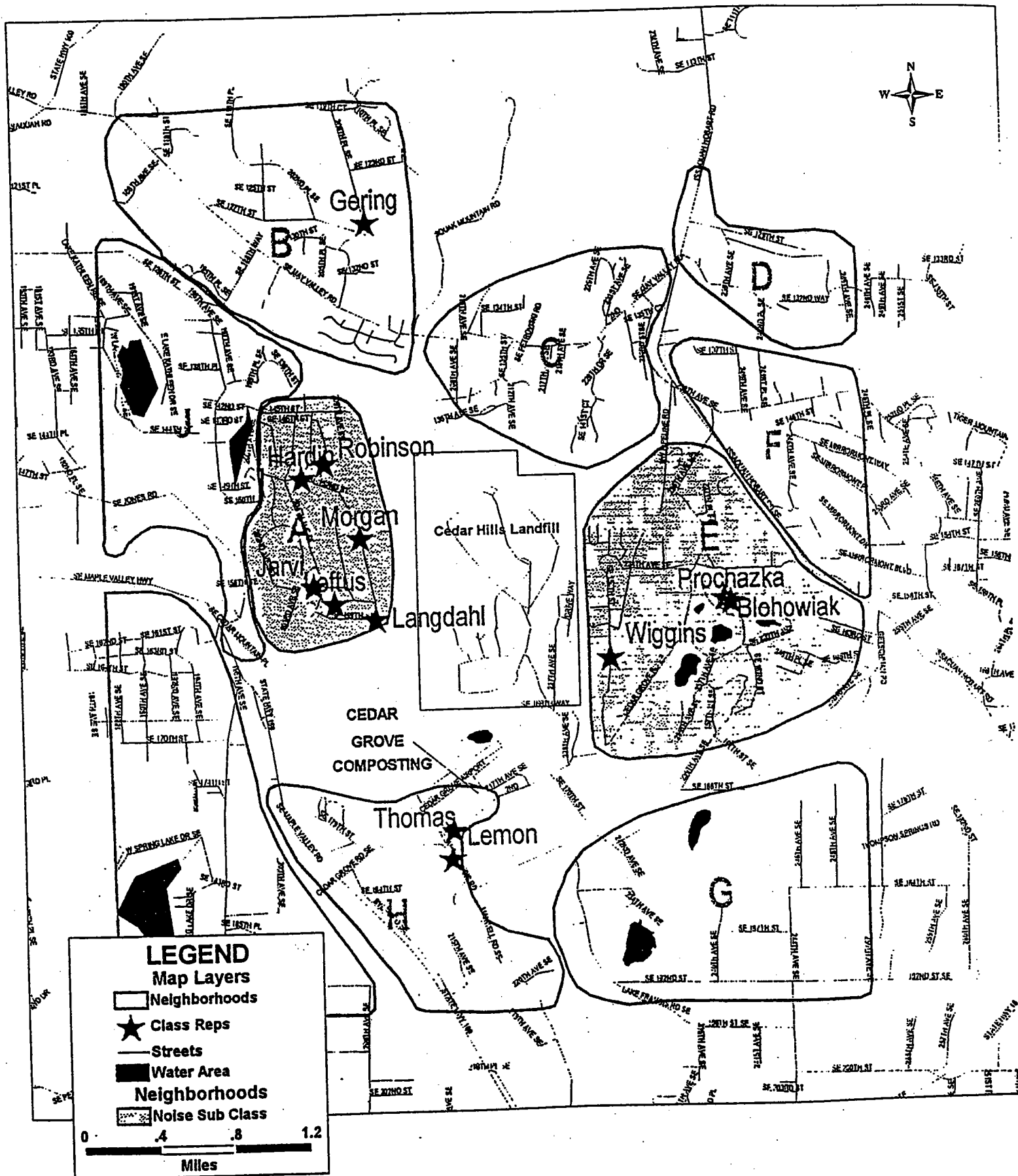
Roger A. Lemon, Plaintiff

CEDAR HILLS ODOR CLASS AREA



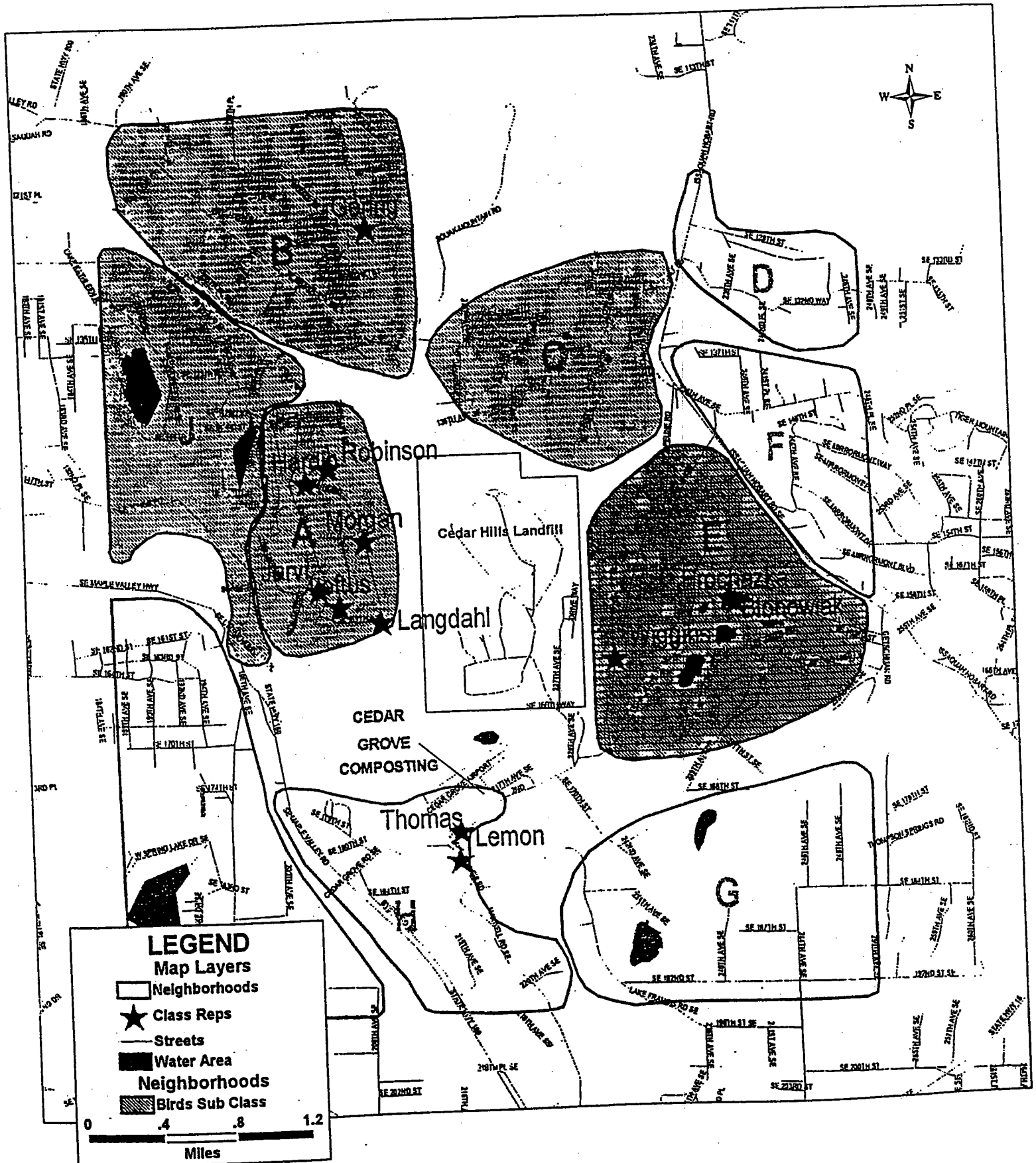
MUN 000051

CEDAR HILLS NOISE SUB CLASS

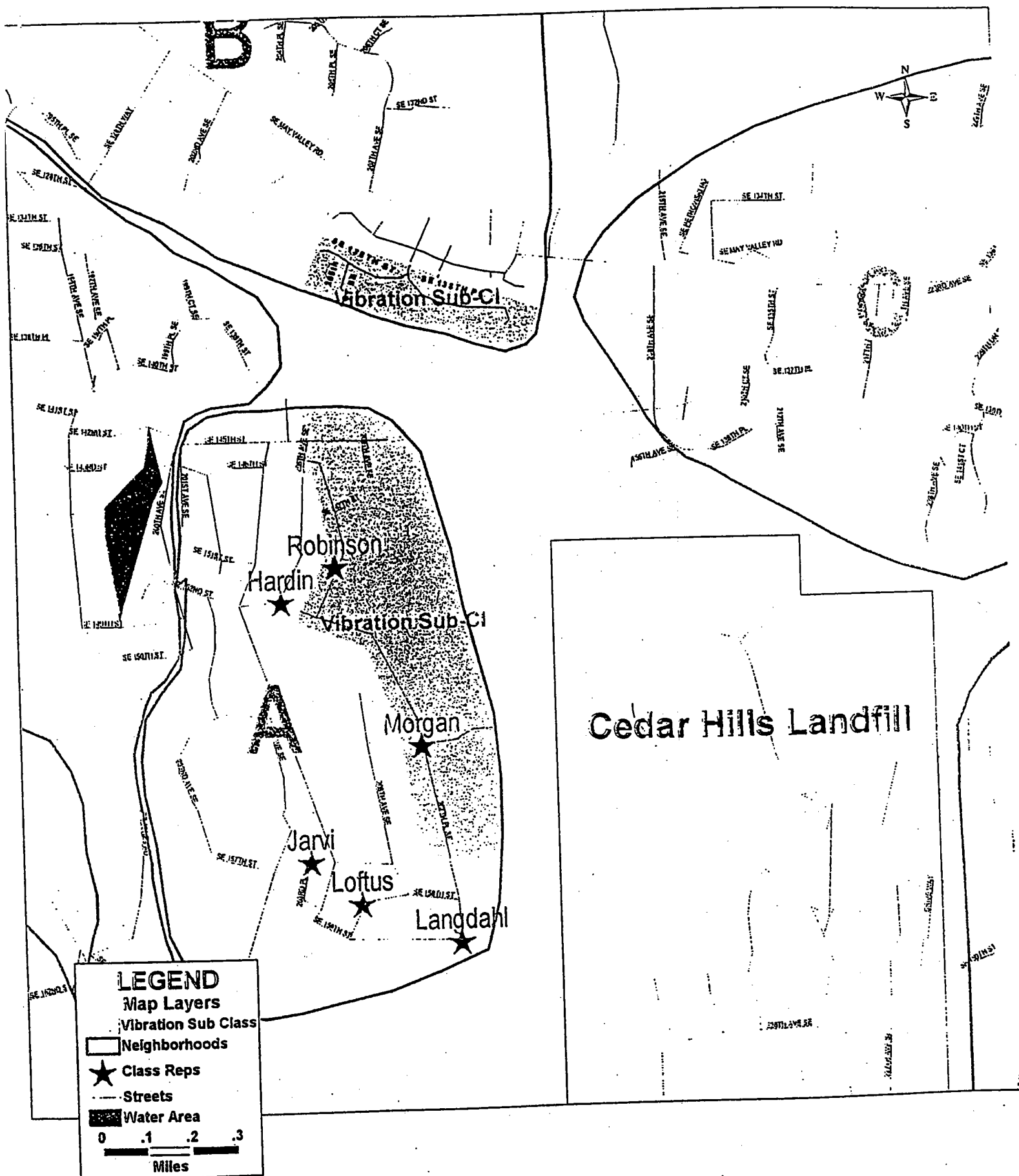


MUN 000052

CEDAR HILLS BIRDS SUB CLASS



CEDAR HILLS VIBRATION SUB CLASS



MUN 000054

FILED
KING COUNTY, WASHINGTON

OCT 16 2017

SUPERIOR COURT CLERK
BY Nicolas Ceja
DEPUTY

SUPERIOR COURT OF WASHINGTON FOR KING COUNTY

SHARON KAY and JIM HOWE, and
THOMAS and MARIE DICKENS,

Plaintiffs,

v.

KING COUNTY, a municipal corporation,

Defendant.

No. 15-2-08235-3 KNT
(CONSOLIDATED WITH NO. 15-2-
08485-2 KNT)

SPECIAL VERDICT FORM

We, the jury, answer the questions submitted by the court as follows:

QUESTION 1:	Was the defendant negligent as to any plaintiff?
-------------	--

(Answer "yes" or "no".)

ANSWER:	Yes	No
Thomas Dickens (write yes or no):	YES	
Marie Dickens (write yes or no):	YES	
Sharon Kay (write yes or no):	YES	
Jim Howe (write yes or no):	YES	

(DIRECTION: If you answered "no" to Question 1 for all plaintiffs, answer Question 3. If you answered "yes" to Question 1 as to any plaintiff, answer Question 2 for that plaintiff or plaintiffs.)

QUESTION 2:	Was such negligence a proximate cause of damage to the plaintiffs?
-------------	--

(Answer "yes" or "no".)

ANSWER:	Yes	No
Thomas Dickens (write yes or no):	YES	
Marie Dickens (write yes or no):	YES	
Sharon Kay (write yes or no):	YES	
Jim Howe (write yes or no):	YES	

(DIRECTION: Answer Question 3.)

QUESTION 3:	Did the actions of the defendant create a nuisance to any plaintiff?
-------------	--

(Answer "yes" or "no".)

ANSWER:	Yes	No
Thomas Dickens (write yes or no):	YES	
Marie Dickens (write yes or no):	YES	
Sharon Kay (write yes or no):	YES	
Jim Howe (write yes or no):	YES	

(DIRECTION: If you answered "yes" for any plaintiff in Questions 2 or 3, answer Question 4. If you answered "no" for all plaintiffs in Questions 2 and 3, skip Question 4 and answer Question 5.)

QUESTION 4:	For each plaintiff you answered Questions 1 and 2 "yes", or for each plaintiff you answered Question 3 "yes", what do you find to be the plaintiffs' amount of damages from any of plaintiffs' claims other than those related to inverse condemnation?
Tom Dickens	ANSWER (economic damages): \$ 17,225 ANSWER (non-economic damages): \$ 50,000
Marie Dickens	ANSWER (non-economic damages): \$ 50,000
Sharon Kay	ANSWER (non-economic damages): \$ 50,000
Jim Howe	ANSWER (non-economic damages): \$ 50,000

(DIRECTION: Answer Question 5.)

QUESTION 5: Did the defendant's actions create an inverse condemnation total taking of any of plaintiffs' properties?

(Answer "yes" or "no".)

Dickens residential property	ANSWER: (write yes or no)	NO
Dickens vacant land	ANSWER (write yes or no)	NO
Kay residential property	ANSWER (write yes or no)	NO

(DIRECTION: If you answered "yes" to Question 5 for any Dickens property, skip Question 6 and answer Question 7. If you answered "yes" to Question 5 for the Kay Property, skip Questions 6 and 7, and answer Question 8. If you answered "no" to Question 5 for any plaintiff, answer Question 6 for those plaintiffs.)

QUESTION 6:	Did the defendant's actions create an inverse condemnation partial taking of any of plaintiffs' properties?
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(Answer "yes" or "no".)

Dickens residential property

ANSWER: (write yes or no) **YES**

Dickens vacant land

ANSWER (write yes or no) **YES**

Kay residential property

ANSWER (write yes or no) **YES**

(DIRECTION: If you have answered "yes" to Question 6 for any Dickens property, answer Question 7. If you answered "yes" to Question 6 for the Kay property, answer Question 8. If you answered "no" to all properties to Question 6, sign the Verdict Form.)

QUESTION 7:	As to the Dickens plaintiffs only, did the Dickens plaintiffs prove a major or substantial aggravation of the impact of the landfill activities on plaintiff Dickens' property which both detrimentally affected the value of this property and was in violation of an applicable federal, state or local regulation?		
ANSWER (circle yes or no):		Yes	No

(DIRECTION: If you answered "no" to Question 7, do not answer Questions 8, 9 and 10 with regard to the Dickens plaintiffs. If you answered "yes" to Question 7, answer Question 8.)

QUESTION 8:	For each property you answered "yes" on Questions 5 or 6, and/or Question 7, what is the fair market value of that property before the taking?
--------------------	--

Dickens residential property	\$
Dickens vacant land	\$
Kay residential property	\$ 650,000

(DIRECTION: Answer Question 9.)

QUESTION 9:	For each property you answered "yes" on Questions 5 or 6, and/or Question 7, what is the diminished fair market value after the taking?
--------------------	---

Dickens residential property	\$
Dickens vacant land	\$
Kay residential property	\$ 585,000

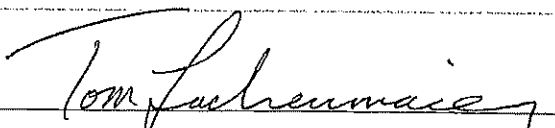
(DIRECTION: Answer Question 10.)

QUESTION 10:	As to any taking, what was the date that taking began?
---------------------	--

ANSWER:

Dickens residential property	Date:
Dickens vacant land	Date:
Kay residential property	Date: DECEMBER 7, 2013

(DIRECTION: Sign the Verdict Form.)

DATE: 10/13/2017	
	Presiding Juror

From: Ghofrani, Toraj
Sent: Monday, March 31, 2014 7:49 AM
To: Neely, James
Cc: Belt, Laura
Subject: Rationale for Monitoring at the Source

Glorious Morning Jim,

Per your request, I am writing this email to present my rationale as to why we must keep our ambient air monitoring focused on Landfill Gas (LFG) at the Cedar Hills Regional Landfill (CHRLF) interior source, rather than its exterior perimeter.

The most remarkable transformation in the CHRLF operation began post 2008 when approximately 13,000,000 cubic feet of Landfill Gas (LFG) was eventually converted to approximately 130 tons of usable energy each day, rather than wasting this natural source of energy to the thermal destruction at the North Flare Station. Unfortunately, the existing infrastructure of the CHRLF LFG control system is not designed to handle the operational vicissitudes of the LFG to energy (LFGTE), thereby complicating the day-to-day operations of the LFG conveyance system at the CHRLF.

Currently, three blowers and 614 horizontal and vertical wells are utilized for the extraction of the above-referenced 130 tons of methane generation each day. Naturally by design, one would expect about 400 pounds of methane extraction from each of the 614 LFG extraction wells. That is not the case. In fact, based on our historical bimonthly monitoring of fixed landfill gases (methane, carbon dioxide, oxygen, and nitrogen) and theoretical estimation of methane generation, more than:

- 40% of the LFG extractions wells are not functional most of the year.
- 5% of the generated methane is not currently captured.
- 40 parts per million of methane seeps out through unsealed surfaces of the CHRLF top deck.

Whether it is generated by refuse decomposition or by equilibrium with the Landfill Leachate system, LFG has been identified as a secondary source of shallow perched groundwater (GW) contamination at CHRLF. While LFG, LFL, and GW issues at the CHRLF are inextricably entwined, the root cause analysis is still incomplete. The vector of blame could point to poor engineering design, poor construction materials, or poor understanding of the complexity of Mother Nature at its biogenic micro-environment, within which the change in temperature, moisture, pH, and pressure is constantly affecting the decomposition rate of the aging refuse.

There are numerous uncertainties hovering over the LFG generation, transmission, and capturing efficiency. For these reasons and other operational problems, on 17 November 2013, a Notice-to-Proceed was issued to AECOM to commence the work on E00286E12 **Environmental Control Systems Modifications (ECSM)** project. The ECSM project is designed specifically to review the existing historical monitoring and investigation data, holistically, and propose modification, design, and implementation of improvements in the LFG, LFL, and GW control systems for a problem free remaining life of the CHRLF. So far under the ECSM project, we have narrowed down the root cause of LFG control systems to several potential factors:

- The impact of refuse density on landfill settlement, decomposition, and porosity due to waste compaction at transfer stations.
- Increased landfill settlement that shifts, separates, bends, or blocks some of the LFG extraction wells over time.
- A poorly designed pipe size selection interlocking horizontal LFG extraction pipes that otherwise should be free to adjust to landfill settlement.
- A poorly selected backfill material used during the installation of the LFG horizontal wells that blocks and biofouls the perforated opening spaces of the pipe.
- A poorly designed and installed perforated pipe that does not allow for LFL release inside the LFG wells.
- Poorly designed and spaced horizontal and vertical LFG wells that are inadequate to capture all of the LFG generated within the landfill.

We are currently working on designing a field test to examine the effectiveness and efficiencies of our new LFG well design and the new materials of choice. Rather than relying on the heuristic knowledge, we are working on establishing our new design criteria based on certitude, using CHRLF-specific field data to size and space LFG extraction wells.

We are sure of Pareto's principal that 80% of all CHRLF operational problems are caused by 20% of the root cause, in this case LFG. Until we address and correct the LFG problems at its source, any short-term solutions to the CHRLF problems may be nugatory in the long run.

If you have any questions regarding this email, or need supporting materials for its content, please let me know. Otherwise, feel free to edit its content to fit your need. Cheers!



Toraj Ghotrani, P.E.
Department of Natural Resources and Parks
Engineering Services Section
P: 206 477 5221 F: 202 296 4473

Cedar Hills Regional Landfill Quarterly Surface Emission Monitoring Plot of GPS Generated Track Lines

DECEMBER 2016

Scale 1"=800'

KING COUNTY DEPARTMENT OF NATURAL RESOURCES
 AND PARKS
 Chris Lee, Director
 SOLID WASTE DIVISION

CEDAR HILLS QUARTERLY
 GAS EMISSIONS MONITORING

APPROVED: _____ DATE: 01-03-17
 DESIGNED: JLM DATE: _____
 SURVEY NO.: _____ SHEET 1 OF 1

DATE	REVISION	BY



KING COUNTY SOLID WASTE
 391 S JACKSON ST. SUITE 701
 SEATTLE, WA 98104-3553

KING COUNTY SOLID WASTE
 391 S JACKSON ST. SUITE 701
 SEATTLE, WA 98104-3553

CEDAR HILLS REGIONAL LANDFILL
 SCALE 1" = 800'
 DATE OF PLOTTING: 12-17-16

Legend
 GPS Track Lines
 Contour Lines
 Property Lines

North Arrow
 Scale Bar
 1" = 800'

From: [Tom](#)
To: [PlanEIS, CedarHills](#)
Cc: tomneider@frontier.com
Subject: Comment: Draft EIS for CHRLF 2020 site development plan
Date: Friday, October 30, 2020 10:56:53 AM

[EXTERNAL Email Notice!] External communication is important to us. Be cautious of phishing attempts. Do not click or open suspicious links or attachments.

We welcome your comments on the Draft Environmental Impact Statement (EIS) for the Cedar Hills Regional Landfill 2020 Site Development Plan Facility and Facilities Relocation Project. Please enter your comments below:

Hi.

Considering readily available information but without a whole of time to delve as deep as needed, I would urge this panel to re focus as quickly as possible to the integrated systems which would be needed to make the use of BAT for municipal solid waste treatment available to King County. Best Available Technology can LNT better, which as a county resident, I adhere to. Waste to energy facilities and infrastructure are a civilized method of helping minimize our harm to our home, this land. Trash burying is really not acceptable in the face of cost neutral established waste to energy technology, BAT.

Obviously, there are existing analyses containing much more detail than possible here, but these outcomes appear favorable for waste to energy compared to use of dollars for expanding landfilling. Volume reduction. Straightforward at over 80%. Plastics' best resolution, incineration. Between existing tipping costs, the capital installation cost along with operating profit/loss ... it has been suggested elsewhere (Kathy Lambert, King County Council) that over fifty years, the waste to energy option would be seven billion dollars more expensive than current practice ... assuming more space could even be permitted for landfilling as would be needed. This level of cost difference is essentially a neutral cost proposition, therefore ... why would we continue this current method? Some energy. Some materials recovery. Good clean look to the plant if designed well. Clean. Cleaner municipal waste handling is so preferable.

I have specified for purchase equipment used in paper recycling processes at commercial scale ... flotation deinking, screening ... waste collection, etc. Which also as it turns out, provided an appreciation for Scandinavian technology (lots of good practice in waste paper recycling) where waste to energy is quite well established. And that is for good public policy reasons there, and could be here.

In fact, I have been told there are willing turnkey vendors who have proposed significant cost sharing in this project ... to the point of providing the capital investment (within a given process boundary) in exchange for the King County Tipping Fees. I surely believe a better economic deal for King County municipal solid waste treatment can be had, and with the choice to go to waste to energy comes a much better treatment of our environment. Re think investing these dollars in the ground ... change paths sooner than later.

Thank You,

Tom Neider
Woodinville, WA

Sent from my iPad

From: [Peter Rimbos](#)
To: [Lui, Kinyan](#)
Cc: [Constantine, Dow](#); [Communications, Comments](#); [McLaughlin, Pat](#); [Taylor, John - Dir](#); [Daw, David](#); [Miller, Ivan](#); [mark.mullet@leg.wa.gov](#); [Lisa.Callan@leg.wa.gov](#); [Bill.Ramos@leg.wa.gov](#); [Eberle \(FCUAC\)](#) [Peter](#); [Miller \(GV/LHA\)](#) [Lynne](#); [O'Brien \(EPCA\)](#) [Tim](#); [Guddat \(SCAR\)](#) [Jeff](#); [Tanksley \(HHA\)](#) [Michael](#); [Stafford \(UBCUAC\)](#) [Nancy](#); [Glover \(FoSV\)](#) [Serena](#)
Subject: PUBLIC COMMENT--DRAFT EIS: CHRLF SITE DEVELOPMENT PLAN
Date: Friday, October 30, 2020 11:21:15 AM
Attachments: [Comments--Draft EIS CHRLF Site Dvmt Plan--Oct "20.pdf](#)
Importance: High

[EXTERNAL Email Notice!] External communication is important to us. Be cautious of phishing attempts. Do not click or open suspicious links or attachments.

Ms. Lui,

Please accept the attached **Public Comments** from the Greater Maple Valley Unincorporated Area Council (GMVUAC) regarding the subject *Draft EIS*. Our formal Cover Letter can be found on p. 2.

Please acknowledge receipt to ensure we have met today's 10/30/20 deadline for Public Comment.

Thank you.

Peter Rimbos
 Corresponding Secretary
 Greater Maple Valley Unincorporated Area Council (GMVUAC)
primbos@comcast.net

"To know and not to do is not to know."-- Chinese proverb

Please consider our shared environment before printing.



Comments

DRAFT ENVIRONMENTAL IMPACT STATEMENT

***Cedar Hills Regional Landfill 2020 Site Development
Plan And Facility Relocation***

October 30, 2020

Submitted to

King County DNRP—Solid Waste Division

GMVUAC Comments—Draft EIS: CHRLF Site Development Plan

October 30, 2020

To: Kinyan Lui, King County (KC) Department of Natural Resources (DNRP) / Solid Waste Division (SWD)
Project Manager, klui@kingcounty.gov

cc: Project, CedarHillsPlanEIS@kingcounty.gov
Dow Constantine, KC Executive, dow.constantine@kingcounty.gov
KC Council, council@kingcounty.gov
Pat McLaughlin, KC SWD Director & SEPA Responsible Official, pat.mclaughlin@kingcounty.gov
John Taylor, KC DLS Director, John-Dir.Taylor@kingcounty.gov
David Daw, KC DLS External Communications Manager, ddaw@kingcounty.gov
Ivan Miller, KC Comprehensive Plan (KCCP) Manager, ivan.miller@kingcounty.gov
District #5 State Legislators (three)
KC Rural Area Unincorporated Area Council (UACs) / Unincorporated Area Associations (UAAs) /
Organizations (seven)
ILA Member Cities—Mayors and Councilmembers (thirty-seven bcc'ed on submittal e-mail)
Tahoma School Board and Issaquah School Board Members (eleven bcc'ed on submittal e-mail)

The Greater Maple Valley Unincorporated Area Council (GMVUAC) provides herein a set of detailed Comments on the *Draft Environmental Impact Statement (EIS) for the Cedar Hills Regional Landfill (CHRLF) Site Development Plan and Facilities Relocation*.

Founded in 1977 the GMVUAC is a community council of volunteer citizens who reside in the unincorporated portion of the greater Maple Valley area. We represent and advocate with King County and State officials for the interests of the citizens of our unincorporated area. Our website, www.gmvuac.org, details our past and ongoing work in a vast variety of areas of interest to the many people of our area.

Our *Vision Statement* is:

“Our community’s Rural Character will be supported by facilitating strong local ties and communication between the public, organizations, and government; promoting locally owned businesses and supporting quality education; protecting the environment and maintaining landowners’ rights and responsibilities; promoting controlled and well-planned growth with appropriate infrastructure; ensuring proper representation for rural interests and needs; and supporting the health and safety and the privacy of our vibrant community.”

Due to the breadth and depth of the *environmental elements* identified, we assigned our three major subject-matter committees—Environment, Growth Management, and Transportation—to review the *Draft EIS* and its many *Appendices A through J*. After a thorough review, we prepared the Comments herein on the *No Action Alternative* and three *Action Alternatives* for most of the *environmental elements* identified. To aid in the preparation of the *Final EIS*, throughout our Comments we provide specific technical recommendations—all shown in **bold**—with supporting rationale.

We called a “*Special Meeting*,” outside of our normal monthly cycle, to discuss and vote on the Comments prepared by our three major subject-matter committees. The GMVUAC member vote was unanimous in support of the Comments and authorized full submittal prior to the October 30, 2020, due date.

We appreciate your deliberate attention to our Comments. You will find they expose the *Draft EIS* to be significantly deficient containing misstatements, misrepresentations and pertinent oversights. In order to build an authentic foundation upon which such enormous decisions regarding the future of the CHRLF is to be made, herculean steps need to be taken to move this *EIS* from “*Draft*” to “*Final*.”

GMVUAC Comments—Draft EIS: CHRLF Site Development Plan

We invite, and strongly encourage, the opportunity for continued broad and active involvement from interested and impacted parties, such as GMVUAC and area residents, in the coming months to fully vet all Public comments for accuracy, completeness, and quality, as you begin to plan and prepare the *Final EIS* for release for Public comment sometime in the near future.

Thank you.

Prepared by:

LarKen Buchanan
imbuch@outlook.com
Chair, Environment Committee
GMVUAC

Peter Rimbos
primbos@comcast.net
Chair, Growth Management Committee
GMVUAC

Susan Harvey
susandharvey@hotmail.com
Chair, Transportation Committee
GMVUAC

Approved by:

Steve Hiester
steve.Hiester@oldcastle.com
Chair
GMVUAC

**GMVUAC Comments—Draft EIS:
CHRLF Site Development Plan**

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GMVUAC Comments—Draft EIS: CHRLF Site Development Plan

I. EXECUTIVE SUMMARY

...Credibility of Assumptions...Critical Foundational and Projected Risks...Essential Perspectives for the Future...Compendium of Specific Concerns...Final EIS

Credibility of Assumptions

The *Draft Environmental Impact Statement (EIS) for the Cedar Hills Regional Landfill (CHRLF) Site Development Plan and Facilities Relocation* prepared by Herrera Environmental Consultants, Inc. for the King County (KC) Department of Natural Resources & Parks (DNRP) Solid Waste Division (SWD) dated September 16, 2020, presents a series of assumptions that serve as the bases to evaluate environmental impacts related to future plans for the CHRLF.

In our review of the Draft EIS we asked ourselves three questions in order to develop the set of Comments herein to help SWD develop its Final EIS in the coming year:

1. Does KC SWD, in its operation and maintenance of the CHRLF's environmental control systems (e.g., disease vector control, landfill gas, leachate, stormwater, and surface water), do an adequate job now? **We ask because if it does not, then some of the Draft EIS's assumptions are flawed—meaning that the impacts identified for the three Action Alternatives could be understated—necessitating the need to re-evaluate same as the Final EIS is prepared.**
2. Since the Draft EIS states all health standards (e.g., laws, regulatory limits, protocols, etc.) currently are being met, are the methods used to monitor impacts of CHRLF's environmental control systems, and the execution thereof, adequate? **We ask because, once again, the impacts identified for the three Action Alternatives could be understated—necessitating the need to re-evaluate same as the Final EIS is prepared.**
3. For the three Action Alternatives, does the Draft EIS adequately account for up to 18 years (beyond 2028) more landfilling operations given the assumptions used in the underlying *CHRLF Site Development Plan* regarding population growth, waste stream volumes, economic swings, etc.? **We ask because such variables will have a direct influence on predicted health impacts due to continuing operations.**

We believe, at a minimum, these questions must be addressed and, where deficiencies are found, they need to be properly identified and addressed in the Final EIS.

Critical Foundational and Projected Risks

There are many, many things that can (and will) happen over 26 years (i.e., 2020 to 2046) and, as such, many assumptions and plans could (and will) get derailed.

Consequently, as KC looks at alternatives out to 2046, environmental impact *risks* continue to increase and, thus, all the Action Alternatives should be viewed with less and less confidence they will be fulfilled and meet expectations.

For example, below is a brief summary of some incidents over the last 24 years at the CHRLF:

1996 – Citizen lawsuit initiated.

2000 – Class-Action Lawsuit settlement against CHRLF (and Cedar Grove Compost).

- o Issues: Odors, Birds, Vibrations, Noise identified.
- o Buffer: Reiterated the 1000-ft buffer was not to receive waste or dirt stockpiles and agreed to have a landscaper, within 2 years, evaluate replacing deciduous trees with evergreens. *[That did not happen and now it is too late, as the County said it would have to clearcut it for any evergreens to survive.]*

GMVUAC Comments—Draft EIS: CHRLF Site Development Plan

- o Alternatives: KC stated it did not intend at that time to pursue Alternative 3 (Areas 8 and 9) [*Not too different from what currently is being studied.*]
- o Heights: Good faith effort to keep heights of Areas 5, 6, & 7 at or below 788 ft. [*Selection of any of the three Action Alternatives would negate that “good faith effort.”*]
- o Monetary: \$16.5 million for all issues paid by King County.

2006 – Leachate pipe breakage, spilling 200,000 gallons of leachate.

2008 – Started using tarps for daily cover, rather than 6 ft of compacted dirt.

2009 – Bio-Energy Washington (BEW) came on-line. Largest ever of its kind and having never been tested. Many problems occurred.

2011 – Explosive level methane migration to western border and possibly beyond. Gas wells 31 & 33 showed high levels. It took almost a year to determine how to mitigate, resulting in installing a line of capture wells near the western border of the refuse areas.

2012 – Change in the Permit to *relocate* Leachate lagoons into the buffer zone to build Area 8.

2013 – Major Gas pipeline breakage which forced 2 families out of their homes. Families sold their homes to KC following a lawsuit. Caused long-lasting health issues.

2017 – Lawsuit settled for gas pipeline breakage.

2019 – Exceedance of chemicals in leachate.

2019 – Fire in Area 8.

2020 – Final Cover was to be placed on Area 7, but has not been installed as of October 2020 due to problems with contractors/bids, and then change in the seasonal weather to Fall rains. Final cover expected in 2021. Pipeline blockage, causing ~200-250 gallons of Leachate to spill, which closed Cedar Grove Rd to through traffic for several days to effect repairs.

Essential Perspectives for the Future

In evaluating all aspects of future management of solid waste in King County we see the following as *overarching issues* that serve as a foundation for any and all decisions. We listed them alphabetically, so as not to imply any presumed priorities:

1. Climate Change: The short-term *difficult* impacts and the long-term *grave* effects of human-accelerated climate change will become a dominant factor in all decisions going forward. Planning must account for the risks associated with an ever-changing climate, especially severe swings in temperature, unusual rain events, strong winds, etc. All planning related to the CHRLF *pre-closure*, *closure*, and *post-closure* scenarios must account for such effects and the potentially large risks involved.
2. Economic Prosperity: The ability and freedom to meet one's family's needs today and into the future are, at a minimum, to cover essential needs sustainably and with dignity. Without sound stewardship, this definition can be disrupted by competing definitions of economic prosperity for businesses and government operations. Although economics do not, and should not, factor into a pure EIS process, the reality is that it has and will factor into all future planning for the CHRLF and the shared management of solid waste by King County and its cities. Such planning must take into account the competing economic effects of the many stakeholders without unfairly burdening the few.
3. Environmental Legacy: The environmental impacts we will leave our children and their children are far from clear. Climate change, already listed above, clearly is the most pronounced and all-consuming threat

GMVUAC Comments—Draft EIS: CHRLF Site Development Plan

we impose on all future generations. However, it is not the only environmental predicament that is caused by our conduct, as our natural resources such as air, water, ecosystems, and wildlife are in peril and will continue to be for some time to come. It is this legacy, with which we must cope, that we leave to future generations and must be thoughtfully considered as CHRLF planning moves forward.

4. Equity and Social Justice: There have been many historical wrongs imposed on minorities of all ilks, people with less voice in decision-making processes, and the downtrodden. The *King County Equity and Social Justice Strategic Plan* seeks to right some of these wrongs through a set of well-thought-out goals and policies. All planning for the future of CHRLF must cause all associated KC departments, such as SWD, etc., to follow-through and conduct themselves accordingly. The *Facility & Systems Improvements* Goal Area has three Goals, one of which is *Goal 3: Activities and responsibilities for pro-equity progress are clear and defined at the Dept., Division, and Section levels*, whose objective calls for: “...*project design program...includes project goals for equity and social justice....*” Such an objective must be met during all CHRLF planning.
5. Quality of Life: This is what all human beings strive for at various times of their lives. It is difficult to define, but essentially is achieving a level of good health, secure comfort, and a modicum of happiness. As a famous philosopher once said, “*You’ll know it, when you see it.*” It entails a whole gamut of needs to be met. Ensuring County citizens can trust in their leadership to make decisions that preserve or improve quality of life is an important consideration throughout all planning for the future of the CHRLF.

Compendium of Specific Concerns

Below we provide a *summary* of specific concerns for each of the following that we address in detail herein in section **IV. Environmental Elements**:

AIR AND ODOR

Odor is an elusive part of nature. The impact of odor on communities and their standard of living is not quantifiable by models or measurement. Odors from the landfill have been an ongoing issue in surrounding communities. The CHRLF has been trying to mitigate these odors for years, yet has failed to keep them under control.

The Draft EIS attempts to determine the impact of toxic air pollutants (TAP) and odors on surrounding communities by modeling the amount of fugitive gas emissions and dispersal of only those emissions. However, all three cases where modeling is used, it is not readily apparent the assumptions used are accurate.

1. The modeling used for gas production, *LandGEM*, has been proven to underestimate the gas. Models need to be validated for there to be confidence in their results. The amount of gas collected is one measurement to determine the validity of the model, which was not done.
2. Collection efficiency accuracy, used to calculate fugitive gas, is another area we question due to the assumptions used in the model. In addition, the results are well above industry averages, which cast doubt on validity.
3. In the dispersion model, variables and locations used for meteorological assessment do not accurately represent the meteorological conditions at and near CHRLF.

Consequently, the results *understate* the amount of TAPs, fugitive gas, and odor generation. Subsequently, this leads to the resulting impacts being *unidentified* and/or *underestimated*.

GMVUAC Comments—Draft EIS: CHRLF Site Development Plan

Analyses do not take into account the combined effect of all the gases taken as a whole. Nearly all the TAPs have an odor. No analysis is done to determine, if combined, if they would have greater odor intensity than just the Hydrogen sulfide (H₂S) used in the model. Experience has shown there definitely is more to the odors from CHRLF than H₂S.

The Final EIS should address such underestimation and seek to re-evaluate impacts using assumptions with which there is more confidence based on experience and data, as well as more accurate models.

SURFACE WATER

Once the CHRLF is closed, post-closure activities will include: compressing each area, installing permanent caps, hydroseeding, etc. These post-closure steps will affect surface water runoff volumes and locations, such that each of the alternatives (with differing closure years) will behave differently over varying periods of time. Impacts should be identified and assessed related to closure and post-closure vs. continuing to expand and operate.

The Final EIS must recognize that Action Alternative 3, because it enlarges the actual landfill footprint, and any Action Alternative that involves relocating the support area on site, will certainly increase the stormwater handling needs and, consequently, discuss necessary mitigation measures, including the form these additional stormwater facilities may take.

The CHRLF has long relied on the downstream Queen City Farms (QCF) to accommodate excess stormwater runoff, so much so that QCF has had to build/maintain some infrastructure for that purpose. As part of the gravel pit reclamation process, QCF currently is planning to *re-engineer* its facilities to handle the stormwater from the northernmost part of the site and the south half of CHRLF. Its new infiltration pond to replace the in-filled Main Gravel Pit Lake will be designed to handle the *current* situation. However, until it's built and functioning, it's unclear whether the replacement pond will succeed in handling the *current* stormwater from CHRLF, let alone any *additional* stormwaters, causing the County to have to design to an unknown target.

The Final EIS must recognize such uncertainties when assessing any option involving relocating the support area in the southern part of the CHRLF property.

GROUNDWATER

We anticipate that KC Water District #90 will submit its own Comments related to groundwater. So, our only comment is that any of the Alternatives involving new or expanded waste areas may lead to decommissioning *existing* monitoring wells.

The Final EIS should explain how any resulting monitoring gaps would be identified and addressed.

PLANTS AND ANIMALS

The Draft EIS does not account for the abundance of specific plants and wildlife present at the CHRLF site. Unfortunately, continuing to do what, over the years, clearly has not worked, in terms of plants and animals, does not make a successful plan. Amazingly, the Draft EIS states that, indeed, is what is planned with a few "*additional measures*," which sound like more "*best management practices*," which are referred to *ad infinitum* as a *panacea* throughout the Draft EIS.

The Final EIS must take the presence of plants and animals at the CHRLF site seriously and identify and evaluate mitigation measures that are needed and will work.

GMVUAC Comments—Draft EIS: CHRLF Site Development Plan

GREENHOUSE GAS EMISSIONS

Fugitive emissions from landfills contain methane. According to the U.S. Environmental Protection Agency (EPA), “Overview of GHG Emissions,” <https://www.epa.gov/ghgemissions/overview-greenhouse-gases> methane is a far more damaging Greenhouse Gas (GHG) to the atmosphere and climate change than CO₂:

“Methane's lifetime in the atmosphere is much shorter than carbon dioxide (CO₂), but CH₄ is more efficient at trapping radiation than CO₂. Pound for pound, the comparative impact of CH₄ is 25 times greater than CO₂ over a 100-year period. Globally, 50-65 percent of total CH₄ emissions come from human activities.”

Yet, the Draft EIS has determined methane emissions are negligible, based on information from CHRLF, in comparison to the total emissions of the U.S. and World, and therefore has not included the fugitive methane in any of the GHG totals. If every individual project did similar comparisons, none would show major contributions of GHGs to the World's totals, even though the project *does* contribute. However, each project's contribution of GHGs *collectively* adds up and must be addressed.

The assumption of *non-significance* is based on models used by CHRLF to estimate the amount of landfill gas produced and their collection efficiency based on the cover system they use. The models CHRLF uses understate the levels of gas production and, therefore, the levels of fugitive methane. King County cannot validate the modeled emissions claims, because it has not done any facility-wide measurements. Research exists, such as that using aerial monitoring, showing actual fugitive emissions from California landfills exceed those modeled by the EPA.

The Final EIS must *include* fugitive methane emissions and take into account that the models used so far for the CHRLF *understate* GHG emissions.

The Draft EIS makes several assumptions regarding the alternatives or activities as being “*similar*” in GHG emissions, but provides no data or supporting rationale. The data tables provided do not contain all the components necessary to evaluate the GHG impact. Data for the Waste-to-Energy (WTE) and Waste Export are misleading, as they do not include the potential credits reducing the GHG emissions. One final summary, that details all components of each alternative—such as post-closure options, transportation, construction, landfilling activities, and relocations—is needed to show comparisons.

It is not clear how Action Alternative 3 would have the same impacts as any of the other alternatives. It has the most waste, largest footprint/surface area, and longest operational time without final sealed covers. Once again, using the misleading premise that GHG emission from all alternatives is *insignificant* compared to total U.S. and World output is unsupportable and certainly not a reason to ignore differences in the alternatives.

The Final EIS must fully populate the tables, include more realistic fugitive GHG emissions, and stop comparing estimates to *total* U.S. and World GHG output, as *all* inputs matter collectively.

HUMAN HEALTH

The Draft EIS assumes there are no adverse impacts to human health from landfill activities at the present time, or even in the past. No data is shown to support such an assumption. No comprehensive studies are cited to assess the frequency of health issues—cancer, asthma, chronic disease, respiratory diseases, etc.—in the communities around the landfill as compared to other rural communities. It cannot be claimed there are little adverse impacts to human health.

The landfill literally is a cesspool of toxic air and water pollutants that have, at any time, the possibility of causing adverse symptoms in humans, as well as animals. Complaints have been submitted to PSCAA over the years document some of the symptoms that have arisen from the odors – burning nose and throats, asthma attacks, respiratory distress. The toxins will continue to be present for *all* alternatives. Unless the

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pathways are *eliminated*, there always will be the possibility, and even continuation, of adverse impacts to human health. The impacts from the operation of the CHRLF over the years have not been fully mitigated.

The Draft EIS does not address each of the health issues, rather it simply refers readers to the respective *environmental elements* elsewhere in the document. Just to be clear, in those respective *environmental elements* there is mention of potential health issues, but not consistent levels of detail provided. Further, as with *environmental elements* elsewhere in the Draft EIS, the underlying assumption is that the CHRLF performs *all* functions and controls with no accidents or incidents, which is clearly not true based on historical data and experience.

The Final EIS cannot simply assume, falsely, that current CHRLF operations produce little health impacts and then project the alternatives will do so as well. Further, the *HUMAN HEALTH* section in the Final EIS must discuss *all* sources and the deleterious health impacts therefrom.

NOISE AND VIBRATION

Noise and vibration from the CHRLF have been a past and current issue in surrounding communities. Noise studies need to include measuring decibel levels for moving vehicle alarms or changes in engine loading or hydraulics loading. The equipment used to manage the landfill operations do not idle 100% of the time, when the machine is put into reverse, it engages the “*backup beeper*” which has been known to emit 120 dBA. When the machine is required to perform an action, it takes more power to complete the action, when the power level is increased, so does the noise that is emitted – that increased level of noise needs to be measured and, if necessary, mitigated. **The Final EIS should address such increased levels of noise.**

Unfortunately, the Draft EIS presents a simplistic table of vibration source levels for construction equipment without providing any discussion. **The Final EIS must assess all known and expected vibration sources and how they reach and affect the Public and wildlife.**

Due to the unique location of CHRLF within the Cedar River Canyon, much of the noise created can be compounded by the sound waves reflecting back from the canyon wall itself. Echoes bounce around in a canyon. Further, for the Action Alternatives, there is no way that an accurate noise study can be performed for any that involve rebuilding the site facilities and/or harvesting the trees from the property, since sound waves bounce off of physical items removal of items that absorb the sound waves is only going to increase the nuisance complaints about noise. **The Final EIS should account for these phenomena and the resulting environmental impacts.**

The Final EIS *also* should evaluate and discuss: (1) The Bio-Energy Washington (BEW) facility, which has demonstrated exceedances and the HVAC (the cell tower that has fans that cause vibrations) in its noise studies, not just use studies from nearly a decade ago in 2012; (2) Harmonic vibrations as the cause from flare-stack rumbles, as identified in the 1999 lawsuit, as well as gas exceedances at the property line; and (3) New harmonic studies including, but not limited to, general operations and existing or potential equipment used at the landfill considering the various heights at which works is performed.

LAND AND SHORELINE USE

Section 11.0 *Land and Shoreline Use* discusses various *King County Comprehensive Plan (KCCP)* policies. Unfortunately, nearly all the policies cited are not met even for the *original* siting of the CHRLF. Further, the continuous operation of the CHRLF violates multiple KCCP policies and, thus, is not “*consistent*” with those policies.

KCCP Policies R-101 and R-201, referred to in **Chapter 3 RURAL AREAS AND NATURAL RESOURCE LANDS, Section III — Rural Densities and Development**, under Policy R-324, do not support “*extending the useful life of the CHRLF,*” nor does Policy R-324 itself.

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KCCP Policies R-401, R-402, and R-403, in **Chapter 3 RURAL AREAS AND NATURAL RESOURCE LANDS, Section IV — Rural Public Facilities and Services**, have nothing to do with “*extending the useful life of the CHRLF.*”

KCCP **Chapter 9 — SERVICES, FACILITIES AND UTILITIES, Section II. Facilities and Services** in subsection **G. Essential Public Facilities** policies F-228 through F-230 and in subsection **J. Solid Waste** policies F-265 through F-271b do not support “*extending the useful life of the CHRLF.*”

Finally, there is nothing that supports or applies to “*extending the useful life of the CHRLF*” in the text itself of any of the KCCP chapters cited above.

The Final EIS needs to address such incorrect assumptions, inconsistencies with existing policies, and specific land-use incompatibilities.

TRANSPORTATION

Section 13.0 *Transportation* is highly deficient, because it omits any discussion of impacts on several roads that are affected directly and indirectly by the traffic generated by all alternatives for the CHRLF site, in three principal ways:

1. Trucks and other site traffic heavily use the entire seven mile corridor along SR-169 from SE Cedar Grove Rd to I-405, but only the intersections at those ends are evaluated, with no consideration of the seven miles in between which receive exactly the same amount of traffic impacts. This highway corridor must be systematically re-evaluated in its entirety.
2. There is silence about future expansion of a known existing phenomenon whereby congestion along SR-169 induces some traffic to find alternative routes to avoid that congestion. As the region around SR-169 grows this phenomenon will only increase, and any expansion of the CHRLF site will further exacerbate that impact.
3. The mitigation plan given for construction traffic impacts directly corroborates the first two issues by stating that consideration would be given to “*not routing all [construction truck traffic] via SR 169 to reduce impacts at the intersection of SR 169/SE Cedar Grove Road.*” The alternate routes should be explicitly identified and those impacts also mitigated.

The Final EIS must address all these issues.

Final EIS

Our detailed Comments herein expose the Draft EIS to be significantly deficient; containing misstatements, misrepresentations and pertinent oversights. In order to build an authentic foundation upon which such enormous decisions regarding the future of the CHRLF are to be made, *herculean* steps need to be taken to move this EIS from “Draft” to “Final.”

We invite, and strongly encourage, the opportunity for continued broad and active involvement from interested and impacted parties, such as GMVUAC and area residents, in the coming months to fully vet all Public comments for accuracy, completeness, and quality as you begin to plan and prepare the Final EIS for release sometime in the near future.

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II. INTRODUCTION

...CHRLF Planning History...Comprehensive Solid Waste Management Plan...Draft EIS Review...King County Equity and Social Justice Strategic Plan...Long-Term Concerns... Public Engagement and Process

CHRLF Planning History

Below we cite the prior planning efforts, of which we are aware, that have led KC SWD to the *2020 Draft Environmental Impact Statement (EIS) for the Cedar Hills Regional Landfill, 2020 Site Development Plan and Facilities Relocation* for which the Comments herein are presented:

2001 Comprehensive Solid Waste Management Plan

2006 Solid Waste Transfer and Waste Management Plan

2010 Cedar Hills Regional Landfill Site Development Plan – Project Program Plan

2017 Site Development Alternatives for Cedar Hills Regional Landfill

2019 Final EIS, Comprehensive Solid Waste Management Plan
2019 Comprehensive Solid Waste Management Plan

2020 Cedar Hills Regional Landfill Site Development Plan

In a November 2, 2001, letter from King County attorney, Norm Maleng, to the citizen class-action lawsuit attorney, Brad Jones, it was stated:

“Consistent with the comprehensive planning process, the County expects that the Cedar Hills Regional Landfill will reach its capacity and be closed some time in 2012.”

“The Cedar Hills Regional Landfill will continue to generate landfill gas for approximately thirty years after its closure. Options in addressing gas generation include either flaring the gas as the county does currently or putting the gas to beneficial use through a Landfill Gas-to-Energy Facility. The County strongly believes that a Landfill Gas-to-Energy project at the Landfill would be beneficial to your clients and the community at large by significantly reducing the flaring of landfill gas over the long term while generating energy for the County. The County has expressed a willingness to address your clients’ concerns in connection with their cooperation with a Landfill Gas-to-Energy project - even though such a project would already benefit your clients.”

Clearly, actual closure of the CHRLF has been, and continues to be a perpetual moving target.

Comprehensive Solid Waste Management Plan

As listed above, in 2019 the KC SWD finalized its *Comprehensive Solid Waste Management Plan*. It relied on models to estimate how much garbage and other materials will come through the regional system in the future. It was based on a steady tonnage growth, which meant facilities would have to be large enough to accommodate the tonnage. It estimated available capacity at CHRLF until 2028. To ensure disposal services could continue to be provided to meet Interlocal Agreements (ILAs) with member cities, three alternatives were identified: build more capacity at CHRLF; export waste via rail to out-of-county landfills; or construct a waste-to-energy (WTE) facility somewhere in King County.

The plan recommended further development of CHRLF, because it was considered to be the lowest cost option evaluated, as well as having the least environmental impacts as measured by Greenhouse Gas (GHG) emissions. There are higher GHG emissions associated with *export* due to transportation emissions, and when you burn garbage in a Waste-to-Energy (WTE) facility you *also* create emissions. With the onsite Bio-Energy Washington

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(BEW) facility, the landfill is able to offset some fossil fuel consumption with the renewable natural gas created from purifying landfill gas.

The intent of the *Draft EIS of the CHRLF Site Development Plan* is to evaluate the environmental impacts of the alternatives under consideration. Once the Final EIS is complete, decisions will have to be made between the No-Action Alternative (CHRLF closure in 2028) and three Action Alternatives with CHRLF closure out to 2046. The Final EIS will enumerate the environmental impacts and potential mitigation measures needed of each. However, it is not clear what the County's decision matrix looks like. The County believes it *already* has determined the most economical alternative per the *2019 Comprehensive Solid Waste Management Plan*. Since the *Final EIS of the CHRLF Site Development Plan* will not look at economics, it is not clear how downstream decisions will be made.

The Final EIS most likely will indicate a series of mitigation measures that need to be taken, which would then have to be costed out and combined with the previous cost estimates of alternatives to determine the most economical pathway to the future.

Draft EIS Review

We have thoroughly reviewed the Draft EIS. It looks at four end dates for closing the CHRLF: No Action Alternative (i.e., do nothing and run out of room by ~2028) and three Action Alternatives that extend life to 2037, 2038, or 2046 (our emphases):

“King County has not yet selected the long-term disposal option that will be used once the CHRLF reaches its capacity under the alternative selected as the result of this EIS process, although the 2019 Comprehensive Solid Waste Management Plan indicates it could be either waste export by rail to a regional landfill or a waste-to-energy (mass burn) facility located somewhere in King County.” (p. 1-22)

The Draft EIS assesses, as stated in **Section 1.7**:

“This Draft EIS discusses direct, indirect, and cumulative impacts associated with the three action alternatives compared to the No Action Alternative.” (p. 1-21)

So, the Draft EIS identifies and assesses these three levels of impacts for each of the three Alternatives compared to keeping things as they are. In doing such an assessment it looks at 12 environmental elements (**Chapters 3.0 to 14.0**) in terms of impacts (our emphases):

“...to the point at which each alternative reaches capacity. However, in order to compare equally the potential impacts from the action alternatives and the No Action Alternative over the same period into the future, this EIS considers potential impacts in the intervening years between the estimated year of capacity for the No Action Alternative and Action Alternatives 1 and 2, and 2046, which is the estimated capacity year for Action Alternative 3. This necessarily involves documenting potential indirect impacts associated with the alternative long-term disposal options under policy consideration.” (p. 1-22)

The Draft EIS is looking at *post-closure* alternatives and associated impacts therefrom for the 18 years between 2028 and 2046 for the *No Action Alternative* and lesser intervals for the three *Action Alternatives*. So, although KC must determine and implement long-term solutions for all alternatives, the *No Action Alternative* forces KC to do that sooner and, thus, has more near-term impacts. That said, the Draft EIS also looks at the impacts associated with the three *Action Alternatives* that extend the life of the landfill up to 18 years beyond 2028.

Our review of the Draft EIS focussed on identifying and quantifying those key issues that will need to be addressed in the Final EIS. We reviewed past CHRLF plans, experience with the operation and expansion of the CHRLF, Public health and quality of life concerns expressed by citizens throughout the years, scientific studies, and technical papers. Our objective was to ensure KC SWD can develop a robust Final EIS that identifies and addresses *all* environmental impacts and associated mitigation measures.

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King County Equity and Social Justice Strategic Plan

The recently released six-year *King County Equity and Social Justice Strategic Plan, 2016-2022*, <https://aqua.kingcounty.gov/dnrp/library/dnrp-directors-office/equity-social-justice/201609-ESJ-SP-FULL.pdf> sets to shift the County away from *"policies and practices that react to problems and crises toward investments that address the root causes of inequities, ultimately leading to better quality of life and greater prosperity in all of our communities."* We expect the County to apply the basic tenets of the *Equity and Social Justice Strategic Plan* to how it looks at the CHRLF today and into the future and ensure all the associated departments, such as SWD, etc., follow-through.

The CHRLF and any possible expansions and extension of operational life are undue burdens on just one part of the King County population. In fact, that burden is further compounded by the adjacent Queen City Farms Superfund Site, Cedar Grove Compost, Stoneway, Pacific Topsoils, and at least two gravel operations: Quality Aggregate and Elk Heights—all in the same vicinity in an Unincorporated Rural Area, not an industrial Urban Area of King County.

The *Equity and Social Justice Strategic Plan* identifies six Goal Areas, one of which is: *Facility & Systems Improvements* with three Goals, one of which is *Goal 3: Activities and responsibilities for pro-equity progress are clear and defined at the Dept., Division, and Section levels*, has an objective of:

"By 2018, the project charter and/or project design program conveys a project scope, schedule and budget that includes project goals for equity and social justice, addressing governance, contracting, siting, development, design characteristics, construction practices, operations, and maintenance."

It contains four *"minimum standards"* (our emphases):

- *All infrastructure and facility master plans describe the intended equity and social justice outcomes for the system (a.k.a. the pro-equity version of the system).*
- *All CIP program and portfolio budgets have evaluated and include a description of how equity and social justice considerations are advanced through project decisions—and provide guidance and/or direction on equity considerations and objectives on a project-by-project basis.*
- *Communication and engagement efforts of all capital development programs and projects are culturally appropriate.*
- *Funding sources (levies, bonds, etc.), siting, design, and construction of capital projects are responsive to the equity interests and priorities of historically disadvantaged communities.*

Please note the community within many miles of the CHRLF, because of the *"sacrifice zone"* that has been created by the siting of all the industries mentioned earlier, is a *"historically disadvantaged community(y)."* and, as such, each of the *"minimum standards"* listed above need to be applied to any decisions regarding the expansion and/or extending the life of the CHRLF.

Long-Term Concerns

The Draft EIS does not address the impacts associated with the fact that the areas to be top lifted will stay *"open"* (i.e., no final covers put in place) until the end. This means areas 5, 6, 7, 8, and 9, potentially, could remain *"open"* until 2046, to allow settling and to maximize air space. This will have direct impacts in terms of emissions and leachate, as well associated indirect impacts.

The Final EIS must recognize the past, current, and future concerns the Public has documented regarding the operation of the CHRLF, as such concerns will have long-term environmental/societal impacts.

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Public Engagement and Process

There have been extensive past and ongoing communications between members of the Public and KC departments, agencies, and personnel including, but not limited to: monitoring, odors, health impacts, noise, safety, right to enjoy life and property, mitigation measures, etc. We cite e-mails in our Comments herein as evidence from authoritative leadership in KC departments and agencies that give us pause as the Public seeks accountability and appropriate mitigation of ongoing impacts. In light of these communications, we again call on the County to apply the basic principles of the *Equity and Social Justice Strategic Plan* discussed earlier.

The GMVUAC has fielded many questions from members of the Public regarding past public comment and public meeting opportunities on the CHRLF. It appears people in affected zip codes (such as 98038) were not notified and, thus, made aware, of the opportunity for public comment via mail. In looking at the mail distribution map, which was last updated in 2011, it is clear it includes some very arbitrary straight lines and, thus, ignores a great many people who are directly or indirectly impacted by the CHRLF operations and expansions. We call on KC SWD to establish a process for determining proper distribution due to growth in the greater Maple Valley area.

Taking a *regional* look, the EIS process is relevant to the residents of all 37 *Interlocal Agreement (ILA)* cities served by the CHRLF, extending far beyond the greater Maple Valley area, as they comprise the entire regional population being served. This is why we have included those cities in distribution of our Comments herein

We look forward to improvements in KC SWD's public process so that it truly vets *all* the issues for *all* the people being served.

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III. MITIGATION AND ADVERSE IMPACTS

...Mitigation...Adverse Impacts

Mitigation

The Draft EIS in many of the *Environmental Element* Chapters 3.0 to 14.0 states the following:

“To avoid potential health impacts from landfill operations, KCSWD has been implementing best management and engineering practices in designing, operating, and maintaining environmental control systems, including disease vector control and the landfill gas, leachate, stormwater, and surface water systems. This EIS discusses these and other potential mitigation measures to limit impacts and avoid potential health impacts.”

While the Draft EIS does discuss some mitigation measures, it falls far short of what constitutes meaningful mitigation to impacts cited. In addition, there are impacts the Draft EIS does not identify, for which mitigation measures need to be enumerated. We detail these in section **IV. ENVIRONMENTAL ELEMENTS** herein for each element. **The Final EIS needs to rectify these omissions.**

Adverse Impacts

The Draft EIS provides no real discussion of *significant unavoidable adverse impacts* and, thus, provides no potential needed mitigation. Each of the *Environmental Element* Chapters 3.0 to 14.0 contains under its concluding subsection, **Signifiant Unavoidable Adverse Impacts**, either of the following simple statements:

“None of the alternatives would result in significant unavoidable adverse impacts to human health.”

OR

“With implementation of mitigation measures described above, xxxxxxxx. However, no significant unavoidable adverse yyyyyy impacts should occur.”

Unfortunately, the Draft EIS assesses *past and current* conditions at and operation of the CHRLF as meeting *all* requirements and, thus, by extension, *all* alternatives would present little impacts. As we have detailed herein in section **IV. ENVIRONMENTAL ELEMENTS**, there are many concerns with *past and current* operations at the CHRLF that have not been properly recognized, nor adequately addressed, which will remain, to varying degrees, for each alternative.

The Final EIS should recognize such *past and current* concerns and address each in terms of impacts they will impose on the Public and the environment. We expect the Final EIS to identify and discuss each concern, provide supporting rationale, list and describe potential impacts, associated potential mitigation measures, significant unavoidable adverse impacts, and provide detailed contrasts among the No-Action Alternative and the three Action Alternatives.

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IV. ENVIRONMENTAL ELEMENTS

***...Air and Odor...Surface Water...Ground Water...Plants and Animals...Greenhouse Gas Emissions...
Human Health...Noise and Vibration...Land and Shoreline Use...Transportation***

Although we reviewed the entire Draft EIS, we provide herein Comments only on the following 9 of 12 *Environmental Element* sections:

4. Air and Odor
5. Surface Water
6. Ground Water
7. Plants and Animals
8. Greenhouse Gas Emissions
9. Human Health
10. Noise and Vibration
11. Land and Shoreline Use
13. Transportation

In all subsections herein we emphasize concerns with assumptions used, depth/breadth of subjects assessed, and/or technical omissions with the objective to aid KC in its preparation of a strong Final EIS.

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Air and Odor

4.0 AIR AND ODOR (pp. 4-1 through 4-13)

The Draft EIS states that:

“This environmental review determined that no significant unavoidable adverse impacts to air quality, including odor, would be anticipated at CHRLF or the Renton site during construction or operation of any of the alternatives, including the facility relocation options.” (p. 4-1)

Unfortunately, such a statement is completely predicated upon the assumption that everything being done today at the CHRLF has worked to keep the air clean and odors under control, but that simply is not the case. **We call on the Final EIS to look at all past incidents of releases of air pollutants and odor emissions that have adversely impacted residents, and mechanisms and pathways that caused these pollutants to be both generally and locally transmitted. This should include: (1) How substances may be locally accumulated to disturbing and/or health-impacting levels; (2) Meteorological effects and the flowing and trapping of air currents into sinks and vortices; and (3) Transmission of gasses and fluids, which can be noxious and/or odorous, through the ground’s fractured and permeable layers into surrounding homes, neighborhoods, and the environment, as each Action Alternative entails increased elevation gain and, thus, increased pressure.**

4.1 AFFECTED ENVIRONMENT (pp. 4-1 through 4-6)

4.1.1 Cedar Hills

The Draft EIS states that:

“The landfill flares ... are an insignificant source of air emissions as the combustion of landfill gas in stack-tested flares destroys more than 99 percent of NMOC, including TAP).” [Note: There is an incorrect addition of end parens in this Draft EIS statement] (p. 4-1)

This statement that landfill flares are stack-tested is misleading. It is not possible to verify air quality on flares that are unable to be stack tested. One example is the NW candlestick migration flare that operates 24/7 and does not destroy by combustion. There is no quality control for public and environmental health on this flare. Per Public Records Request: *Landfill Neighbor Follow Up e-mail, 2/21/20 Scott Barden to Laura Belt, Engineer, Glynda Steiner, etc., KC SWD:*

“We also discussed the NFS candlestick flare (migration flare). I told Mrs. Brighton that I was incorrect in my information to her. I told her that the migration flare was stack tested each year. I was wrong. Due to how the candlestick flares flame is at the top, it cannot be tested like the NFS’s ground flares.”

Compliance testing for combustion, per the PSCAA Permit #10138, is to be done annually on Flares 1, 2, 3 & 4. *The First Quarter 2013 Flare Source Testing at Cedar Hills Regional Landfill* report, submitted by AMEC Environmental & Infrastructure, Inc. (AMEC): *“provides the results of the first quarter 2013 source testing of the four operational landfill gas flares at the North Flare Station of Cedar Hills Regional landfill.”* The tests were performed on Flares 1, 2, 4, and 5. Flare 3 was apparently not operational at the time. It is unclear if or when Flare 3 was tested for this compliance test.

Results of destruction efficiencies for each flare, listed in *Tables 4-5, 4-10, 4-15, and 4-20* for Flares 1, 2, 4, and 5, respectively, show there were two chemicals that had a destruction rate of between 80 & 90%. These chemicals – 1,1-Dichloroethane and 4-Methyl-2-pentanone are considered “irritants” according to the National Institute of Health PubChem website, <https://pubchem.ncbi.nlm.nih.gov/>:

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1,1-Dichloroethane: “ether-like odor,” “Causes serious eye irritation,” “May cause respiratory irritation,” “EPA – Human carcinogenicity Data: None. Animal Carcinogenicity Data: Limited;” Health effects: OSHA: “HE3 - Chronic (Cumulative) Toxicity---Long-term organ toxicity other than nervous, respiratory, hematologic or reproductive; HE16 - Irritation-Eyes, Nose, Throat, Skin---Mild; HE8 - Nervous System Disturbances---Narcosis”

4-Methyl-2-pentanone (Methyl isobutyl ketone): “pleasant odor,” EPA Air Toxics: “Acute (short-term) exposure to methyl isobutyl ketone may irritate the eyes and mucous membranes, and cause weakness, headache, nausea, lightheadedness, vomiting, dizziness, incoordination, narcosis in humans.” Hazardous Substances Data Bank (HSDB): “Confirmed animal carcinogen with unknown relevance to humans.” GHS Hazard Statements: “H319: Causes serious eye irritation; H335: May cause respiratory irritation;” Health effects: OSHA: “HE7 - Nervous System Disturbances---Nervous system effects other than narcosis; HE8 - Nervous System Disturbances---Narcosis; HE16 - Irritation-Eyes, Nose, Throat, Skin---Mild”

Looking at these two chemicals highlights that not all compounds are destroyed, they do have an odor, and there are health hazards associated with them. The statement that “*stack-test flares destroys more than 99 percent of NMOC, including TAP*” is not accurate. In fact, as the 2013 first quarter report made clear, not all the flares were compliance tested at that time.

“periodic monitoring of the surface of the landfill to determine if the requirement is being met that methane concentrations at the landfill surface not equal or exceed 500 parts per million (ppm).” (p. 4-2)

Not all surface areas are monitored for methane concentrations. On p. 206 of the *40 CFR 60 Federal Regulation* regarding quarterly methane **Surface Emission Monitoring** for landfills, it says: “*Areas with steep slopes or other dangerous areas may be excluded from the surface testing.*” The active area and areas they may be working on with machinery are areas that may be considered dangerous and therefore not monitored.

*“Odor at solid waste facilities is regulated by PSCAA Regulation I and the Code of the King County Board of Health Title 10. **These regulations prohibit odor that interferes with health and enjoyment of life or property beyond the facility boundary.** The regulation of odor by these agencies is a **qualitative evaluation and involves investigation of odor complaints.**” (p. 4-2, our **emphases**)*

Qualitative evaluation and investigation are loosely undefined terms. It is assumed PSCAA and the King County Board of Health do the evaluation and investigation of odor complaints at CHRLF. This is inaccurate. PSCAA contacts KC SWD to verify complaints it receives instead of actually doing their own evaluations and investigations. PSCAA does not validate odor, safety, or regulations on the complaints. KC SWD does this for PSCAA using its own self-governed monitoring program. Unfortunately, the self monitoring of odor and air checks are inaccurate, untested, and results in KC SWD providing input to PSCAA and the Public Health—Seattle-King County on complaints, instead of on-site follow-up inspections from the regulatory agencies. Such self-produced assessments are used in KC SWD studies and reports to governing departments. As one example, an Odor Boss machine (<https://bosstek.com/products/odorboss-odor-control-solutions/>) is used with masking agents to cover up leachate odor effluents, combining additional unknown toxins to the mix which is illegal. PSCAA doesn't investigate its use during an onsite permit inspection.

Per an e-mail on Tuesday, Jan 7, 2020 at 7:07 AM Dhillon Darshan wrote in response to a resident:

“Odor Boss is an industry standard is used to mitigate odors at a variety of facilities nationwide. Since CHRLF is RCRA Subtitle D landfill, It has to go through a rigorous internal approval process by KCSWD Health and Safety Office and the Industrial Waste inspectors before using or storing any chemicals at CHRLF. The Odor Boss-5000 (OB-5000) is a plant derived oils as well as plant extracted surfactants and contains no ingredients designated as hazardous or toxic (please see the attached MSDS as well as the supplier information). The OB-5000 natural oil particles latch onto the dust or any malodorous compound in the ambient air and land them to the ground through gravity where the ubiquitous microbes in the soil would then consume the chemical compounds as food or substrate.” “Yes, KCSWD has to report landfill gas concentrations above certain concentration to Public Health. You can find the specific requirements in WAC 173-351-200(4) Explosive gases control.”

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PSCAA inspectors do not respond to submitted air and odor complaints, which, thus, are left unanswered to the Public. WA Department of Ecology (DOE) and Public Health are tagged on toxic pollutant complaints. Public Health contacts KC SWD regarding the complaint to refresh memory and provide operation status. There are no evaluations or inspections from these departments without guidance from the KC SWD. In fact, no governing department or agency in WA State appears to be in charge and, thus, enforce public health and safety regulations regarding the King County owned and self-operated CHRLF.

4.1.1.1 Criteria Pollutants

“Criteria pollutants that are relevant to the CHRLF include the following...” (p. 4-2)

The Draft EIS lists six criteria pollutants that are regulated by PSCAA. Yet, the document only mentions 5 that are *“relevant to the CHRLF,”* omitting ground-level ozone. According to the EPA in a report *Frequently Asked Questions About Landfill Gas and How it Affects Public Health, Safety and the Environment*, June 2008, *“Nonmethane organic compounds consist of certain HAP and VOC, which can react with sunlight to form ground-level ozone (smog) if uncontrolled.”* It goes on to state: *“Ozone is capable of reducing or damaging vegetation growth as well as causing respiratory problems in humans.”* Given the uncertainty in the accuracy of the models for landfill gas generation, the presence of ozone may be higher than believed.

The Draft EIS discusses fugitive emissions and ozone formation (our **emphases**):

*“Hydrocarbons in fugitive emissions of landfill gas could contribute to ozone formation, but ground-level ozone is a **regional** issue and hydrocarbon emission at the landfill would contribute minimally to **regional** ozone levels.” (p. 4-3)*

Since ground-level ozone can cause respiratory problems in humans, it should be considered at the local level as to how it might affect the health and air of residents *locally*, not regionally.

“The CHRLF is located within an area designated by the EPA and PSCAA as an attainment zone for all criteria pollutants. This designation is given to areas within which the ambient standards for criteria pollutants have been met, using a continuous ambient air monitoring program year-round, operated independently by the state or by local agencies.” (p.4-3)

The Final EIS must define what the **“attainment zone”** encompasses, exactly where the **“continuous”** monitoring is being done, if CHRLF, itself, is included in the monitoring, and exactly what agency is doing the monitoring.

The U.S. EPA provides its definition of Ambient Air in: *“New Source Review (NSR) Permitting, “Ambient Air” Guidance”* <https://www.epa.gov/nsr/ambient-air-guidance>:

“The regulatory definition of ambient air, in 40 CFR §50.1(e), remains unchanged as “that portion of the atmosphere, external to buildings, to which the general public has access.”

One would assume the ambient air *around* the landfill would be tested. However, according to a CDC document *“Landfill Gas Primer - An Overview for Environmental Health Professionals: Chapter 4 Continued: Ambient Air Monitoring Agency for Toxic Substances & Disease Registry”* <https://www.atsdr.cdc.gov/HAC/landfill/html/ch4a.html>:

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“Why is ambient air monitored at or near landfills? The main reason ambient air monitoring is performed at or near landfills is to evaluate worker and community exposure concerns regarding releases of toxic chemicals to the air. However, because federal regulations currently do not require ambient air monitoring to be performed in the vicinity of municipal solid waste landfills, no ambient air monitoring data are available for many landfills. This is especially true for smaller landfills and those that have not generated extensive community health concerns.”

When there have been no studies concerning any health impacts of communities surrounding CHRLF, it is not clear how it can be known if there are *“extensive community health concerns.”* People generally do not advertise their health issues – cancer, allergies, asthma, respiratory issues, thyroid dysfunction, and chronic illness. So, it is not clear how the community would know if there were an unusually high rate of these symptoms as compared to other rural areas, as no research has been done. KC SWD should install monitors *outside* its borders to test the *“ambient”* air to secure the health and welfare of the Public.

Particulate Matter (PM2.5 and PM10)

“A study has been conducted of the expected maximum emissions of particulates as a result of landfill construction and operation under the various alternatives, and it includes the results of dispersion modeling used to estimate future concentrations of particulates at off-site locations (see Appendix D, Air Quality and Odor Technical Memos).” (p. 4-3)

The modeling described in *Appendix D*, used elevation to address dispersion, but it does not appear vegetation was included. Raising the landfill height to 830 ft will put the landfill *above* the treeline in the buffer zone. The north buffer zone is on the hillside and is lower than the rest of the landfill. The landfill will loom over the May Valley area and dust and emissions will have a clear path to the communities in the area. The communities to the west also will be impacted because the buffer zone will be rendered useless when the landfill exceeds the tree height.

Other Criteria Pollutants

“Carbon monoxide from CHRLF-related traffic and equipment contributes minimally to regional CO levels.” (p. 4-3)

Local levels also should be considered.

“...with recommended mitigation at the SR 169/SE Renton Maple Valley Highway/Cedar Grove Road SE intersection, CHRLF traffic under any of the alternatives would cause no significant traffic impact, and CO is therefore not considered further in this section.” (p. 4-3)

The Final EIS should consider the impacts if the mitigation doesn't occur or takes longer than expected.

“Similarly, the emissions of sulfur dioxide and nitrogen oxides would minimally contribute to regional levels of these compounds.” (p. 4-3)

The Final EIS should include impacts for *local* areas and its residents.

Gas odor, combined with leachate and landfill odors, produce significantly high levels of toxins, emissions, and effluents (known and unknown) that are not monitored and tested for public health and safety. The regulations are violated and bypassed by KC SWD self-monitoring practices. Such lax regulatory enforcement provides no accountability and direct on site follow up by PSCAA, Public Health, DNRP/SWD/FESS - Environmental/Permit Compliance, and Solid Waste Program Supervisor Health & Environmental Investigator at Public Health.

4.1.1.2 Toxic Air Pollutants

The Draft EIS states the following regarding Toxic Air Pollutant chemicals:

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“Through WAC 173-460 (Controls for New Sources of Toxic Air Pollutants), the State of Washington regulates sources of 389 chemicals that are identified as TAP. PSCAA enforces WAC 173-460 through Regulation III.” (p. 4-4)

Appendix D of the Draft EIS only reports on 58 chemicals from leachate and landfill gas and stack emissions tests by CHRLF only show results for 41 chemicals. One questions whether all 389 chemicals are tested for or only ones that are historically found in landfills? **The Final EIS should explain this discrepancy.**

“A study of the expected emissions of TAP from the landfill under the various alternatives has been conducted, and it includes the results of dispersion modeling used to estimate future concentrations of TAP at off-site locations (see Appendix D, Air Quality and Odor Technical Memos).” (p. 4-4)

Appendix D, states:

“...there are two potential sources of toxic air pollutants:(TAP): landfill gas and leachate.”...In the “Emissions Estimation Methodology” , , the “analysis focused on the fugitive landfill gas and leachate compounds that are classified as TAP by Ecology in the Washington Administrative Code (WAC) 173-460-150”..The quantity and components of landfill gas are a function of the quantity, type and age of the waste disposed in the landfill, and the moisture and temperature of the waste in the landfill at a given time.” (Appendix D, p. 2 of 18)

The Landfill Gas Emissions Model (LandGEM) method of estimating gas production uses models very similar to those used for the Mandatory Reporting Rule (MRR) report, as shown in comments in the **Greenhouse Gas Emissions** section of this document. The MRR modeling uses the HH1 formula and has been shown to be inaccurate for THIS landfill, calculating less gas is produced than is collected. CHRLF receives more rainfall than the model accounts. Because of this discrepancy and knowing the LandGEM model uses similar formulas and variables, Toraj Ghofrani, PE, CHRLF Engineer was asked to run a comparison of the gas generation models for both programs. In the email, dated 10/26/20, Toraj wrote:

“Both LandGEM and eGGRT HH1 model use exponential decay of organic content of refuse as an indirect measurement to estimate how much methane is expected to be generated based on refuse tonnage conservatively. LandGEM model is the earlier version of predictive models designed for estimating how much and how long will take for methane to be generated and depleted each year over time”

“LandGEM and HH1 can be run with similar parameters and inputs to note the difference between the methane generation results. I have done this exercise for you, using 1965 to 2019 refuse throughput and similar parameters (such as k), the LandGEM model resulted in 51,648 metric tons (MT) of methane generation while HH1 resulted in 50,489 (2% less than LandGEM model), please see throughputs below or attached for LandGEM and HH1.”

Of note, the *k* variable used was 0.057 and the methane generation capacity used was 100 – same as the model used in Appendix D modeling. The amount of methane collected in 2019, per the summary MRR report referenced in the GHG chapter, was 51,084 Metric tons. With the LandGEM predicting 51,648 Metric tons, that would imply only 564 Metric tons was fugitive gas. This would result in a 99% capture efficiency rate. In reality, the LandGEM gas generation model understates the amount of gas generated, because a 99% capture rate is technologically impossible.

Given that the formula used in the LandGEM emissions estimates are substantially understated, this would also render estimates of the NMOC and Toxic Air Pollutant compounds understated, since they are directly related to landfill gas production, and, thereby, render the results inaccurate.

“Landfill Gas Collection Efficiency – 92.4 percent (average of the five most recent (2014-2018) available facility annual GHG reports).” (Appendix D, p. 3 of 18)

In addition to the understatement of the landfill gas produced, there is valid concern about the validity of the modeling done to calculate the level of capture efficiency, using the HH6 formula estimates [note: Further discussion on the potential flaws in this capture efficiency can be found in comments herein in the **Greenhouse**

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Gas Emissions section]. Data presented in the *California Methane Survey* [again, see the **Greenhouse Gas Emissions** section] suggests the measured fugitive gas is greater than that modeled by the EPA, in the majority of cases. The use of the “92.4 percent” recovery rate in *Appendix D* may further underestimate the amount of fugitive gas emitted, if indeed the modeling is understating the collection efficiency, and, therefore, the amount of Toxic Air Pollutants emitted.

The Final EIS must consider this understatement of emissions throughout its analysis.

“TAP Evaluation against De Minimis, SQER, and ASIL Thresholds” (Appendix D, pp. 4 thru 8 of 18)

“As discussed above, the increase in the TAP emissions associated with the implementation of Action Alternative 3 consists of the sum of the uncollected fugitive landfill gas emissions, the collected landfill gas that is not destroyed in a flare or engine, and the leachate emissions.” (p. 5 of 18)

As discussed earlier, the value for fugitive landfill gas emissions are understated. **The Final EIS must re-evaluate, the levels of Toxic Air Pollutants against the De Minimis, SQER and ASIL thresholds.**

Table 3, *Appendix D*, page 8 of 18, shows several Toxic Air Pollutants that exceed the *De Minimis* and the *Small Quantity Emissions Rate (SQER)*. Subsequently, in *Table 5*, p 13 of 18, which compares those emissions that exceeded the thresholds to the ASIL, only three were found to exceed the ASIL. The model was further refined in *“Round 2 ASIL modeling Analysis Results”*:

“The average TAP concentration (or detection limit, as applicable) from these analytical results was used in conjunction with the LandGEM calculated maximum annual landfill gas flow rate to recalculate the landfill gas emissions for each of these three TAP. These emission values were added to the leachate emissions for comparison to the TAP evaluation criteria of WAC 173-460-150. The results of the supplemental evaluation indicate that none of the three constituents will exceed their respective ASIL at any receptor at or beyond the property boundary, as shown in the Table 6.” (Appendix D, p 14 of 18)

Here again, the use of the LandGEM *“calculated maximum annual landfill gas flow rate to recalculate the landfill emissions for each of these three TAP,”* could provide results that understate emissions, since the flow rate is directly related to the modeled annual production rate. The analysis may understate the levels of Toxic Air Pollutants and resulting impacts of those compounds. **The Final EIS should re-evaluate this.**

On *“ASIL Dispersion Modeling”*:

“The meteorological data stations were chosen because they were the closest to the project location and best represented site characteristics.” (Appendix D, pp. 9 thru 11 of 18)

Based on the list of locations chosen, it is questionable if those are the *“best represented site characteristics.”* The meteorological modeling for ground values uses areas that are not similar to conditions at and near CHRLF. Wind patterns may be drastically different at the Renton Airport than around the CHRLF, which is located north of the narrow Maple Valley and May Valley, with Squak and Tiger Mountains nearby. These major land features can and so create wind patterns that are nothing close to those present at the Renton Airport.

“Moisture was determined separately for each year based on Seattle area 30 year climate data.” (Appendix D, pp. 9 thru 11 of 18) and “The climatological precipitation data set was from the Western Regional Climate Center for the Seattle Tacoma International Airport.” (Appendix D, p. 10 of 18)

Neither of these locations – Seattle or Seattle-Tacoma International Airport – represents the moisture and rainfall patterns at and near the CHRLF, which is located in an area considered the *“foothills”* and can be raining in this area and sunny at Sea-Tac and in Seattle.

So, several questions need to be resolved:

1. Can the model take into account the temperature inversions that trap the emissions close to the ground?

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2. Can the model take into account the atmospheric conditions in the fall that creates morning and evening “fog” or “heavy air” that traps the emissions?
3. Can the model take into account the low spots in neighborhoods where odors will collect?
4. Does the model consider barometric pressure?
5. Does the model take into account the screening effect of the buffer zone and the effect that will occur when the landfill is *above* the tree line?

The Final EIS must factor in the understatement of these emissions or totally re-evaluate the emissions of Toxic Air Pollutants.

Regarding Landfill gas the NW candlestick flare off-gasses “poor quality” unregulated gas 24/7 into communities and cannot be stack-tested. Health impacts and odors were identified on-site by the members of the Public during April 5, 2019, and June 28, 2019, landfill tours with CHRLF Assistant Operations Manager, Scott Barden, and CHRLF Engineer, Laura Belt (and Glynda Steiner on the June 28, 2019, tour). Candlestick flare off-gassing, leachate odors, and other health complaints exist in community and have been submitted to PSCAA. Such issues were encountered by the CHRLF employees and members of the Public during the two tours. KC SWD was aware of the identified problem during these two tours. No response formal response was ever provide, except that Mr. Barden and Ms. Belt investigated and tightened a leaky joint that was causing a problem, but that did not fix the problems, identified, which still remain to be addressed.

Toxic leachate effluent travels in the wind into homes and properties. Resident, Kim Brighton, verified timed aerators worsened health and safety impacts in and on her property. She made an impromptu visit to CHRLF leachate ponds with Mr. Barden on 2/2/20. Mr. Barden verified leachate odors on Kim Brighton’s property were just as strong and impactful as at the CHRLF leachate ponds themselves. Kim Brighton had requested KC SWD to cover the ponds years ago., yet related health impacts remain to be addressed. Further, KC SWD admitted (*Scott Barden, 2/21/20 e-mail to Laura Belt, Glynda Steiner, etc.*) there were an insufficient number of aerators in each leachate pond and that more were need.

The Final EIS must recognize that Leachate pond effluent has a direct impact to health, air, odor. Significant adverse impacts include: Asthma, difficulty breathing, burning eyes, sinuses, throat, headache, weak/sick, difficulty to function. Much of this is the result of minimal toxic effluent monitoring and testing for public health and safety, as well as near non-existent protection to prevent toxic air contamination.

4.1.1.3 Odor

The Draft EIS states:

“children have a more acute sense of smell than adults” (p. 4-4)

The Final EIS must include the adverse impacts on the children at nearby elementary schools. Maple Hills Elementary school directly west of the landfill in the Issaquah School District is located less than ½ mile from the western border. Children cannot go out to recess on bad odor days, asthma and other breathing issues occur, and general learning atmosphere is diminished. Parents and teachers at Ridgewood Elementary school to the southwest have also mentioned issues with odors. As the Draft EIS has stated, *“children have a more acute sense of smell”* and, as such, are impacted to a greater extent.

“In addition to this variability in the human olfactory system, the number of chemical compounds present and the complexity of chemical processes in the atmosphere can make it difficult to identify and quantify the compounds causing the odor. Due to this variability, defining a specific concentration at which any odorant is detectable or causes an adverse impact is extremely difficult. Therefore, unlike criteria pollutants, there are no ambient air quality standards for odorous compounds,” (p. 4-4)

The Draft EIS admits it is difficult to define a concentration at which any odorant is detectable or causes an adverse impact, so it is not clear how any conclusions can be drawn regarding adverse impacts for the CHRLF, itself, as well as any of its expansion Action Alternatives. It also is not clear how and

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conclusions can be drawn, as there are no ambient air quality standards for odorous compounds. We would expect that the complaint history, experience, and comments from those members of the Public who are impacted would carry more consideration as to whether there are adverse impacts to their lives.

“Although not incorporated into regulatory standards, odor thresholds have been defined, with a level of distinct odor awareness (LOA) taken as the concentration at which it is predicted that half of the exposed population will experience a distinct odor intensity, and about 10 percent of the population will experience a strong odor intensity.” (p. 4-4)

It is not clear if these percentages are determined through surveys or by researchers who will use their judgement as to the intensity. There needs to be consensus within the communities surrounding CHRLF, as well as studies conducted, to assess the odor intensity levels.

“Three sources at the CHRLF have the potential to generate odors: 1) fugitive landfill gas emissions; 2) leachate lagoons; and 3) fresh garbage in the active face area.” (p. 4-4)

CHRLF sources *do* generate odors, they are not just *“potential.”*

The flares are another source of odors. The large flares burn about 15% of the landfill gas captured during the year when BEW is offline for maintenance or other incident, as reflected in the MRR summary report submitted by Toraj Ghofrani. The candlestick flare operates 24/7 burning landfill gas that does not meet the quality standard set by BEW of 50% methane. On landfill tours, when passing the flare stations, there is a distinct odor from the flare, different than the other sources of odor.

The Final EIS must include odors from the flares in their analysis.

“Washington state through WAC 173-400-040(5) regulates odor:”

“Any person who shall cause or allow the generation of any odor from any source or activity which may unreasonably interfere with any other property owner's use and enjoyment of his property must use recognized good practice and procedures to reduce these odors to a reasonable minimum.”

“PSCAA regulates odorous emissions through section 9.11 (Emission of Air Contaminant: Detriment to Person or Property) of Regulation I, which states in part:”

“(a) It shall be unlawful for any person to cause or allow the emission of any air contaminant in sufficient quantities and of such characteristics and duration as is, or is likely to be, injurious to human health, plant or animal life, or property, or which unreasonably interferes with enjoyment of life and property.

(b) With respect to odor, the Agency may take enforcement action under this section if the Control Officer or a duly authorized representative has documented all of the following:” (pp 4-4 thru 4-5)

CHRLF continues to violate the regulations as odors continually interfere with the surrounding *“property owner's use and enjoyment”* and residents *“enjoyment of life and property.”* The definition of *“unreasonably”* may be open to interpretation by the regulators, but it is the property owners whose lives are being affected *not* the regulators. CHRLF has made advances in their odor containment, but in no way have they reduced *“these odors to a reasonable minimum.”*

“After receiving complaints of odor, a PSCAA inspector may visit the area when the odor is present. At the inspector's discretion, a notice of violation can be issued to the owner or operator of the odor source.” (p.4-5)

PSCAA has not been effective in enforcement of the odor regulations, due primarily to being underfunded and understaffed. Currently there is but one inspector for South King County, and it is a rare occurrence to have the inspector come out at all, let alone *during* an event to document the violation, obtain an affidavit, and confirm the source. In all practical respects, the regulations have little value in protecting the Public. Relying on the facility that is being regulated to respond to complaints is unacceptable. It does not validate the claim. Without an inspector's

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validation, the PSCAA cannot take *“enforcement action.”* Without the validation from the PSCAA inspector, residents have no recourse against CHRLF. Since there is another source of odor, Cedar Grove Compost, an inspector’s validation is necessary, otherwise, CHRLF can just claim, and often has, *“it’s the Compost company.”*

Odor History in the Site Vicinity

The Draft EIS states:

“All the gas wells are monitored daily for any gas leakage.” (p. 4-5)

This statement needs clarification. In an email exchange 10/20/2020 with Toraj Ghofrani, PE, CHRLF employee and Janet Dobrowolski, resident:

Janet Dobrowolski: *“In the Draft EIS, page 4-5, it states that “All the gas wells are monitored daily for any gas leakage.” Is that true? What wells and how many are they talking about?”*

Toraj: *“Please ask for clarification. We have 729 wells, with 10 landfill gas operator working on 2 shifts we read each well twice a month. We do read landfill gas composition in 4 main headers at North Flare Station each day, the readings will clue us if there is a leak in a main header and then start investigating the wells that are connected to that header. Maybe that is what they mean by checking wells each day. We also do odor check at the landfill each day, maybe that is what they mean. Also please note that since our landfill gas system is under vacuum, when there is a leak, it will be leaking air into our system which is a fire hazard for us. Landfill gas leaks does not mean landfill gas emitting from wells into the atmosphere. Please ask for clarification.”*

Clearly, the Final EIS must clarify this claim of daily monitoring for gas leaks.

“Odor intensity is measured five times a day using the landfill industry-standards Nasal Ranger®. Odor measurements are made in the landfill buffer zone, around the active face, and around the leachate lagoons.” (p. 4-5)

Employees at PSCAA have criticized the use of the Nasal Ranger, stating that an operator who works at the facility where they are testing for odors, can become *“nose blind”* resulting in the intensity of the odors to be understated. Consequently, PSCAA investigators do not use the Nasal Ranger.

“KCSWD investigates any complaints to determine if there was noncompliance with an applicable requirement of the landfill’s Air Operating Permit and to correct any identified compliance problems as soon as possible.” (pp 4-5 thru 4-6)

Unfortunately, records are not transparent to the citizen who has complained. CHRLF does not give them a written statement as to the findings of their investigation at the time of complaint, nor after it is filed. A Public Records Request must be filed to determine if the complaint has been properly logged.

“PSCAA maintains records of odor complaints from across its jurisdiction but does not generally provide field investigations for complaints received. In 2019, PSCAA received 1,357 odor complaints for the Maple Valley area of which 881 (65 percent) cited Cedar Grove, 193 (14 percent) specified the landfill, and 283 were uncertain as to whether the source was the landfill or Cedar Grove (KCSWD 2020c).” (p. 4-6)

The number of calls is not necessarily indicative of actual occurrences, nor is the number of calls for each facility necessarily accurate. Since PSCAA *“does not generally provide field investigations for complaints received,” the source cannot be confirmed.* Over the many, many years of being assaulted with odors from *both* CHRLF and Cedar Grove Compost, calls have been made with no response from PSCAA, no action by either of the facilities in question, and no end in sight for the cessation of the odors. Residents have developed *“complaint fatigue,”* in that, they become tired of it all and don’t bother to call in. While it continues to impact their lives year round, they no longer know who to deal with it when there is no one on their side fighting for social justice. People become weary and apathetic. That does *not* mean there are *no* odors. That does *not* mean there are *no* health impacts.

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Times of day and year are more impactful than others. Further study on the complaints file to both PSCAA and to CHRLF may reveal a pattern. An analysis of the time of year and time of day of existing complaints should be done. Unfortunately, many odor events occur during the night in the summer and fall, and many don't bother to make the call on file a complaint on line. They just get up and close the windows to reduce the intrusion of the odors at night so they can sleep. These complaints should be incorporated into the dispersion models used to test the validity of the results generated by the model.

The Final EIS should address complaints filed during the second half of 2019, as the odors, especially from the leachate ponds, were more common and more intense. In addition, the Final EIS should include an analysis of the time of day and year.

The Draft EIS describes the *"Complaint Response Plan"*:

"...KCSWD investigates any complaints to determine if there was noncompliance with an applicable requirement of the landfill's Air Operating Permit and to correct any identified compliance problems as soon as possible....A Complaint Response Plan (Odor, Fugitive Dust, and Nuisance) for the CHRLF is in effect and commits KCSWD to the following specific actions:..." (pp. 4-5 through 4-6)

Unfortunately, over the years, this *"Complaint Response Plan"* has proven to be inadequate in instituting effective on-the-ground solutions to a continuous long line of odor events. Below we provide but one communications trail for an odor event to illustrate that current *"normal"* operations at the CHRLF create odor and air impacts that continue to not be resolved:

November 2019

- 11/8: **Cedar Hills Landfill Odor Masking Violation** e-mail, author: Kim Brighton. Questioning 2 PSCAA inspectors that performed 8-29-19 permit inspection at CHRLF without validating a violation for the use of odor masking agent spraying from Odor Boss at leachate pond.
- 11/13: **Cedar Hills Landfill Odor Masking Violation** e-mail, author: Rick Hess. Response to reference #2. You are correct the product cannot be a masking agent. We have no information at this time a masking agent is being used. This will continue to a point of inquiry during inspections and/or complaint response.

April 2020

- 4-4: **PRR-Brighton-Leachate-Odors-01-CRM-Data-04-04-2020.pdf.** Author SWD. Actual SWD CRM data customer call in complaint log from Kim Brighton asking nasal ranger inspector to drive back and meet her at the fence to confirm strong leachate odor. (The inspector drove by when Kim Brighton was filing the air/odor complaint.) Neighbor Leslie Morgan was on speaker phone with Kim as a witness and also to communicate leachate impacts to her and her daughter's health and properties. The inspector documented the odor as compost 1 (minimal) with the nasal ranger on his lap in truck. Kim and Leslie state that is incorrect. There were no compost odors as he wrote driving by our arena the first time and, in fact, strong leachate. He then confirmed he smelled strong leachate the first time when Kim pointed to the front of the horse arena. This proved inaccurate inspection being level 1 compost instead of strong leachate. **No response from SWD.**
- 4-4: **Follow-up on candlestick flare leachate odor 4420.mthl** e-mail. Author Kim Brighton. Documented summary of leachate odor activity and what happened speaking with SWD and Riley Sexton nasal ranger gas technician inspector confirming it was not compost as written and was strong leachate. **No further follow up from SWD.**
- 4-8: **King Co Solid Waste Op Sec Cedar Hills Reg #10138 - Complaint - Strong off-gassing.** Author Scott Barden (KC SWD Operations Supervisor & Interim Assistant Operations Manager). Scott

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forwarding very detailed 4-4-20 complaint investigation request from PSCAA to their next in charge of operations.

- 4-20: **Kim Brighton Impromptu Visit Today** e-mail. Author Scott Barden. Scott's e-mail to management describing Kim Brighton visit to the landfill and request to confirm leachate pond wind odor immediately as it smelled the same in her home and inside her horse arena.

May 2020

- 5-8: **Leachate Pond Covers** e-mail. Author Scott Barden. Kim Brighton called Scott and requested status of covering the leachate ponds again. Went to Glynda Steiner, Laura Belt, and operation managers. Are we considering covering them? **No response from SWD.**
- 5-12: **Odor Complaints - King Co Solid Waste Op Sec Cedar Hills Reg # 10138** e-mail. Author Scott Barden. From PSCAA regarding refuse odors for Scott to investigate and get back on. Correspondence including strong westerly winds, refuse positioning at road height of area 8 has made it challenging. I will speak to our operations staff and ensure our daily cover is accurate and make sure we are doing everything possible to decrease odors if they should happen to come along.

June 2020

- 6-23: **Cedar Hills Landfill (Maple Valley) Reg #10138 - Leachate Odor Complaints**; author: Scott Barden. Scott's response to PSCAA e-mail sent the same day to confirm the leachate odor experienced on 6-20-20. Scott attached their odor logs and operation log with no leachate odor. Odor Boss is used.
- 6-26: **Action Needed for Chemical Trespass: What Happened at Cedar Hills Regional Landfill** e-mail. Author Yolanda Pon Department of Health. To DNRP/SWD/FESS - Environmental/Permit Compliance employees, cc Darshan Dhillon SWD Program Supervisor Health & Environmental Investigator at King County Public Health responding to Kim Brighton's statewide e-mail—including complaint, testimony, photos, and e-mails—asking for them to tell her about any operating issues with leachate ponds the past week, aerators, odor boss, etc.
- 6-26: **What Happened 6-20-20 at Cedar Hills Regional Landfill – URGENT** e-mail. Author Scott Barden. To Glynda Steiner Deputy Director, Operation Managers and DNRP/SWD/FESS - Environmental/Permit Compliance manager/employees. Correspondence included from Yolanda Pon of Department of Health, and Neil Fujii NDRP/SWD/FESS Environmental/Permit Compliance Manager asking for coordination and keeping them posted on the response. Includes SWD logs. Reply immediately. Status included intermittent leachate/gas odor on west haul road, A7 west slope. Engineering is working on a plan to address leachate weeps; CSW (contaminated storm water) pond level mitigating odor. SWD response: *"We did not receive a call on this odor complaint, so we did not have an opportunity to go investigate this complaint at the time it was noted as is our process."* Although the status included intermittent leachate/gas odor on west haul road and working on a plan to address leachate weeps, this odor was not included in the logs and, therefore, did not occur, according to all departments, agencies, authorities. **SWD's inaccurate inspections, lack of follow-up, and inability to address impacts provided no resolution.**
- 6-30: **Sodium Permanganate for Treating Leachate for Odors** e-mail. Author Mark Monteiro, King County SWD Operations Supervisor. Forwarding fyi e-mail to Scott Barden from Darshan Dhillon, Solid Waste Program Supervisor Health & Environmental Investigator at King County Public Health, to see below an article with regards to treating leachate link below for effectively managing landfill leachate odor control. Link contains information stating leachate is acutely toxic when inhaled. Leachate production is a significant concern for municipal solid waste (MSW) landfills and causes substantial odor emissions that have negative health and environmental effects.

August 2020

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- 8-12: **What Happened 6-20-20 at Cedar Hills Regional Landfill** e-mail. Author Glynda Steiner, SWD Deputy Director. Contains two of Glynda's follow-up correspondences with Kim Brighton, including first one on 6-26-20 cc includes King County Executive, Christie True, Pat McLaughlin, SWD position no leachate identified in their odor.

Clearly, this shows a pattern of how complaints are routed, excuses are given, and nothing changes as business as usual goes on. Further, members of the Public have attended numerous meetings with KC SWD, as well as the King County Council. Incredibly, at the latter, on 3-11-19, KC SWD provided false statements regarding PSCAA odor complaints, inaccuracy of nasal ranger inspections, landfill gas, etc. The Public is not being served.

The Final EIS must not only recognize the myriad pertinent and real complaints filed by members of the Public which indicate there continues to be toxic air pollutants and odors released into the general region where the CHRLF resides that directly affect residents, but also assess the impacts therefrom, as well as provide potential mitigation measures.

4.2 ENVIRONMENTAL IMPACTS (pp. 4-6 through 4-11)

4.2.1 Direct and Indirect Impacts

4.2.1.1 Landfill Development

"The various modeling efforts described below used the following assumptions/inputs:" (p. 4-6)

"Landfill gas collection efficiency of 90 percent" (p. 4-7)

The *"90 percent"* conflicts with the *Appendix D* LandGEM assumption of 92.4%. The difference should be reconciled as to which one was really in use. In addition, the validity of this value is in question.

"Flare or engine TAP destruction efficiency of 97.2 percent (the lowest typical efficiency for flares or engines from EPA's AP-42: Compilation of Air Emissions Factors), except as noted below: Toxic Air Pollutants." (p. 4-7)

Use of overall *"destruction efficiency"* is misleading. Examination of the 2013 stack-test compliance testing showed some compounds with less than an 90% destruction rate. In addition, according to the NIH PubChem site, Vinyl Chloride, states that when heated to decomposition, it may emit toxic fumes of carbon dioxide, carbon monoxide, hydrogen chloride and phosgene—classified as *"acute toxic."* Other compounds also could be created when heated to decomposition.

Toxic Air Pollutants

"The evaluation of potential impacts due to the emission of TAP from the landfill involved a multi-step process, the details and results of which are described in Appendix D, Air Quality and Odor Technical Memos." (p.4-8)

As commented on previously, such model results are inaccurate (p.4-8):

"Step 1—The first step involved using historical compositional analyses of landfill gas and leachate to determine which TAP are contained in landfill gas and/or in leachate at CHRLF, and then calculating the amounts of each TAP emitted as fugitive gas and/or as emissions from leachate lagoons."

"Step 2—The second step in the evaluation involved comparing the amounts calculated in the first step against two thresholds contained in WAC 173-460-150. The first threshold is a de minimis value defined as a "trivial" level of emission that does "not pose a threat to human health or the environment". Those TAP that were calculated to exceed the de minimis value were then compared to a greater "small quantity emission rate" (SQER) defined as a level of emission "below which dispersion modeling is not required to

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demonstrate compliance with acceptable source impact levels.” ”

“Step 3—In the third step, dispersion modeling was conducted for those TAP whose calculated emission amounts exceeded their respective SQER, to calculate expected concentrations at 122 residential locations adjacent to the west, north, and east sides of the landfill.”

Step 1: Modeled landfill gas production is understated due to the LandGEM underestimating landfill gas production. Emissions from TAPs also are understated, since they directly are related to the estimated landfill gas produced.

Step 2: Since Step 1 results in understated amounts of TAPs, the comparisons to thresholds are invalid.

Step 3. Dispersion models don't fully incorporate the “micro climate” of the CHRLF located in the Cedar River canyon, as the recording stations do not fully reflect the meteorological conditions at and near the landfill.

“The results of the air toxics evaluation shows that the increase in TAP emissions associated with Alternative 3 are either below the Ecology evaluation thresholds or have modeled impacts less than Ecology ASIL.” (p. 4-8)

The Final EIS must look at such conclusions based on faulty data and re-evaluate same.

Regarding odor:

“To assess the potential for odor generation under the various alternatives, modeling was performed to estimate expected concentrations of hydrogen sulfide (H₂S), the most potent odoriferous constituent associated with landfilling operations.” (p. 4-9)

In analyzing the *all* chemicals listed in *Tables 2 and 3 in Appendix D (pp. 6 and 7 of 18)*, using the National Institute of Health Public Chemistry site <https://pubchem.ncbi.nlm.nih.gov/>, all but a few had an odor associated with it. To only consider “hydrogen sulfide (H₂S), the most potent odoriferous constituent associated with landfilling operations” is negligent and a disservice to those living in areas surrounding the CHRLF. One cannot consider each TAP individually, one must take them as a whole and evaluate the impact of *all* their odors. There are two compounds — 1,4-Dichlorobenzene (*p*-Dichlorobenzene) and Carbon Tetrachloride – whose odors can be detected at very low levels.

Putting these chemicals together is like a chemical cocktail that is being served up to citizens who are impacted by the odors. The odors coming from the leachate, fugitive landfill gas and flares is *not* just *hydrogen sulfide*. As with prescription drugs, a pharmacist will let you know if drugs interact and cause an adverse reaction if mixed. Studies on the mixing of these chemicals and resulting impacts need to be explored, as it smells nothing like the rotten egg smell of *hydrogen sulfide*. Interpretation of results of the models conclude there are no impacts based on acceptable source impact levels (ASILs). According to WAC 173-460-020 (2) “Acceptable source impact level (ASIL) means screening concentration of a toxic pollutant in the ambient air.” Since the ambient air in the communities in the vicinity of CHRLF has not been established by testing, it is not clear how an ASIL can be established. Further, since some of the chemicals have not been evaluated as to their long-term impacts on humans, it is not clear how they can be “acceptable.”

“This includes odors associated with fresh garbage delivery and placement and diesel fumes, as well as the perception of other odorous compounds contained in the landfill gas and leachate.” (p. 4-9)

The implication that it is only a “perception of other odorous compounds contained in the landfill gas and leachate” is insulting. It is a *fact* there are odorous TAPs in fugitive landfill gas and leachate, as an analysis of each chemical is done. As stated above, the combination of *all* chemicals can produce an odor that is *not* *hydrogen sulfide*. The leachate odor alone has been described as “disgusting” and *does* contain odors other than *hydrogen sulfide*. Residents’ “perception” of the characteristics of the odor is not misguided.

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“H₂S was chosen as the odor marker for evaluation because it is one of the most potent of the odorous compounds that also has a very low detection threshold.” (p. 4-9)

As stated earlier, all but a few TAPs have characteristic odors. Taken as a whole, not individually, and not just H₂S should be evaluated as to the potency of the odor.

“Based on the analysis described in this memo, implementation of Action Alternative 3 is not expected to cause a significant increase in odor impacts at or beyond the CHRLF property line. Further, as Action Alternative 3 was selected for this evaluation as being the most conservative, none of the other action alternatives are expected to cause a significant increase in odor impacts at or beyond the property line.” (Appendix D, HDR Technical Memorandum, p. 8)

It appears the Draft EIS admits the current CHRLF operations are causing odor impacts, since *“Action Alternative 3 is not expected to cause a significant increase in odor impacts.”*

“This environmental review determined that no significant unavoidable adverse impacts to air quality, including odor, would be anticipated at CHRLF or the Renton site during construction or operation of any of the alternatives, including the facility relocation options.” (p.4-1)

The Draft EIS has not proven that there have *not* been *“adverse impacts to air quality, including odor”* over the years of this landfill operation. Multiple lawsuits provide evidence of the impacts. Since the Draft EIS earlier indicated that *“unlike criteria pollutants, there are no ambient air quality standards for odorous compounds,”* it is *not clear* how a determination can be made concerning adverse impacts. The models do not necessarily reflect reality. **The Final EIS must reconcile the differences, when results from a model are interpreted as the TAP compounds being within ASIL, while residents continue to report odors other than “rotten egg” smell.**

“Modeling results indicate that, under normal operating conditions, none of the alternatives would result in significant odor impacts or any increase in odor compared to existing conditions.” (p. 4-10)

Again, the Draft EIS admits there is an odor problem when its conclusion is *“compared to existing conditions.”* In the models meteorological conditions for the location of the CHRLF were not used, which are not similar to the meteorological conditions for the locations used. Added waste, leaving more areas *“open”* without final cover, digging up old areas (e.g., Action Alternative 3), and going higher *will* increase odors and the models should show same, otherwise they are not adequately validated.

The Draft EIS describes modeling techniques used to estimate levels of Particulate Matter, Toxic Air Pollutants, and Odor. We have no problem with modeling these phenomena, it is both necessary, and can be informative. However, all models depend on the accuracy of the inputs, the usefulness of underpinning theories and equations, and how results are validated to determine the accuracy and reproducibility of results, as well as the sensitivity of the variables investigated to changes in inputs. **The Final EIS must assess the validity of the inputs used for each “criteria pollutant” model and present results that are reproducible, as well as investigate the many pollutant-release events over the years to determine how well the models predict such behaviors.**

4.2.1.3 Indirect Impacts

“Waste export may require development of an intermodal facility that could have odor impacts, although waste handled at such a facility would be enclosed within shipping containers and the facility is likely to be located in an industrial area where odor-sensitive receptors, such as residences, schools, etc., are unlikely.” (p. 4-11)

The logic in this statement does not make sense, as the CHRLF is *not* located in an *“industrial area,”* yet is located in an area where *“odor-sensitive receptors, such as residences, schools, etc.”* do exist. Then, to compound the illogical nature of the above statement with possible expansion of the CHRLF adds in salt to injury.

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“The County’s siting process to determine a location for a major facility such as an intermodal facility or a WTE would favor sites where sensitive receptors are unlikely to be adversely affected.” (p. 4-11)

Given the County’s history in siting large adverse health-impacting facilities, one cannot put much credence in the above statement.

“For Alternatives 1 and 2, potential air and odor impacts that could occur after closure in 2038 and 2039, respectively, would be similar to those that could occur under the No Action Alternative. A more detailed description of potential impacts associated with the long-term disposal options can be found in the Final EIS for the Solid Waste Comp Plan” (p. 4-11)

Unfortunately, the Draft EIS does not discuss this, but simply provides the link to the March 2019 *Comprehensive Solid Waste Management Plan Final EIS*, which looked at 16 alternatives, so it is not clear to which of these alternatives the Draft EIS refers. Consequently, the reader of the Draft EIS cannot review *“a more detailed description of potential impacts associated with the long-term disposal options.”* Further, if the assumption is that putting final covers on either Alternative 1 and 2 creates similar impacts as closing under the No Action, then why wouldn’t putting final covers on Alternative 3 areas do the same? What is the justification for this conclusion?

Odor from landfill gas and leachate is directly related to how much waste is decaying. Gas will continue to be produced long after areas are closed, and leachate will continue to be pumped from those areas. Impacts from odors from these sources will increase with more waste, even after they close.

The Final EIS needs to address all of these concerns and questions.

4.2.2 Cumulative Impacts

“Historically, adjacent industrial-zoned properties have been the major source of odors in the community surrounding CHRLF, and less frequent odor events from the CHRLF have added to the cumulative odor impacts.” (p. 4-11)

What this statement fails to point out is that odor from the adjacent properties, namely Cedar Grove Compost, does not contain the kinds of TAPs associated with landfilling. As is scientifically well known, composting odors result from aerobic decomposition of biomass, while landfill and leachate emissions contain TAPs.

Such distinctions need to be made clear in the Final EIS.

“Over the past several years, odor complaints related to the CHRLF have declined substantially in frequency.” (p. 4-11)

As discussed earlier, a lack of complaints is not necessarily indicative of a decrease in odors.

The Draft EIS does not cover the following:

- The cumulative effects of odors on school children that have a diminished learning experience because of odors.
- The cumulative effects of stress for people who are concerned about health impacts from the unknown content of the odors – which do contain TAPs – And CHRLF refuses to do any testing of the air outside its boundaries.
- The cumulative effects for those with asthma, respiratory illness, who suffer with headaches, etc. from the odors.

In fact, the Draft EIS does not discuss Air and Odor “cumulative impacts.” Again, it simply states that *“...less frequent odor events from the CHRLF have added to the cumulative odor impacts.”* (p. 4-11) Then, it states: *“activities associated with landfill development and facilities relocation, including those at the CHRLF and the*

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Renton site, would contribute incrementally to the cumulative overall past, present, and likely future impacts on air quality....” (p. 4-11).

Such issues must be rectified in the Final EIS, which must include cumulative impacts related to known and expected air and odor issues.

4.3 MITIGATION MEASURES (p. 4-12)

The Draft EIS simply states:

“...KCSWD has been implementing best management and engineering practices in designing, operating, and maintaining environmental control systems, including the landfill gas and leachate systems.” and “With these controls in place, no additional mitigation measures are necessary.” and “Although modeling indicates that under all alternatives, odor should not be significant, odor history at the landfill indicates that occasional odor events could occur. As discussed earlier in this chapter, the County implements an odor monitoring program and an odor complaint response program that provides rapid identification and resolution of odor issues at the landfill using good landfill industry-standard practices, so that persistent odors should be minimal.” (p. 4-12)

These statements clearly attempt to paint a picture of everything is working perfectly at the CHRLF in terms of limiting air and odor events and, therefore, nothing needs to change as landfill life is extended for the three Action Alternatives out to 2046. Based on such false assumptions, the conclusions are flawed. **At a minimum, the Final EIS must address further mitigation measures—beyond simply extending best management and engineering practices—related to releases of fugitive dusts, toxic air pollutants, and odors.**

“Although modeling indicates that under all alternatives, odor should not be significant, odor history at the landfill indicates that occasional odor events could occur.” (p. 4-12)

The idea that the odor should not be significant is based on faulty modeling, as outlined previously. Actually, to effect reality and experience, the statement should be changed to *“odor events will occur.”* It is not clear how odors would not increase with Alternative 3, when previously closed areas will be opened, there will be more waste to generate landfill gas, and a larger percentage of the landfill will be increased to 830 feet – above the treeline, decreasing the partial mitigation of the buffer zone.

“As discussed earlier in this chapter, the County implements an odor monitoring program and an odor complaint response program that provides rapid identification and resolution of odor issues at the landfill.” (p. 4-12)

The County monitoring program needs substantial improvement. The process is not transparent and difficult to validate complaints. The County needs to implement an online complaint system to allow an independent paper trail and tracking system that can be easily accessed by the public. Making calls in the evening to the Roads Department is not sufficient. Complaints can be lost, mis-communicated, and simply not passed on to the responsible party.

There is non-existent protection to prevent air contamination. Although a scientifically proven air-monitoring system will not stop it, it would alert the Public to silent air contamination as it occurs. Permanent installation of air-monitoring equipment along the fence line—the full length of the CHRLF property—should be part of mitigation measures. Air-sampling equipment must collect a broad spectrum of airborne Toxic Volatile Organic Compounds, plus what may be carried in dust or in aerosols, not to be restricted to any minimum list or contractors and independent of KC SWD and accountable to the Public 24/7.

At a minimum, the Final EIS must address Mitigation Measures related to: (1) Capping, covering, and sealing the various areas and (2) Requiring all gasses, aerosols, and volatiles be captured, processed, and precluded from local release.

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4.4 (misabeled as “4.1”) SIGNIFICANT UNAVOIDABLE ADVERSE IMPACTS (p. 4-13)

The statement, which comprises this entire subsection of the Draft EIS, provides no discussion whatsoever and is completely unacceptable:

“With implementation of ongoing and future mitigation as described above, no significant unavoidable adverse air quality or odor impacts would occur under any of the alternatives.” (p. 4-13)

The Final EIS must discuss significant unavoidable impacts and their ramifications on air and odor.

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Surface Water

5.0 SURFACE WATER (pp. 5-1 through 5-20)

5.1 AFFECTED ENVIRONMENT (pp. 5-1 through 5-14)

No comment.

5.2 ENVIRONMENTAL IMPACTS (pp. 5-14 through 5-20)

5.2.1.1 No-Action Alternative

The Draft EIS states:

“...the landfill would continue to operate as currently permitted, support facilities would remain in their current locations as-is or would be refurbished or re-built in place and could be temporarily located at interim facilities. No impacts to the stormwater system, leachate system, or CSW system would be anticipated and impacts on surface water quality would likely remain low.” (p. 5-14)

This does not address closing the CHRLF in 2028—the definition of the No-Action Alternative. Once the CHRLF is closed, post-closure activities will include: compressing each area, installing permanent caps, hydroseeding, etc. These post-closure steps will affect surface water runoff volumes and locations, such that each of the alternatives (with differing closure years) will behave differently over varying periods of time. **The Final EIS should identify and assess the impacts related closure and post-closure vs. continuing to expand and operate.**

5.2.2 Cumulative Impacts

The CHRLF has long relied on the downstream property (e.g., Queen City Farms) to accommodate its excess stormwater runoff from the southern half and, over the years, Queen City Farms has had to build and maintain a certain amount of infrastructure for that purpose. The County recognizes it may need to construct additional facilities to avoid any increase in flow rates and volumes to Queen City Farms.

As part of the gravel pit reclamation process, Queen City Farms currently is planning to *re-engineer* its facilities to handle the stormwater from the northernmost part of the site and the south half of CHRLF. Its new infiltration pond to replace the in-filled Main Gravel Pit Lake will be designed to handle the current situation. However, until it's built and functioning, it's unclear whether the replacement pond will succeed in handling the *current* stormwater from CHRLF, let alone any *additional* stormwaters (either peak or total volume). As such, the County may have to design to an unknown target.

The Final EIS must recognize these uncertainties when assessing any option involving relocating the support area in the southern part of the CHRLF property or address how the County and Queen City Farms would work together to ensure the design of these facilities is treated as one system.

Moreover, the higher the landfilled elevation, the more rainfall the landfill will “catch” that otherwise would have continued east to the foothills. **The Final EIS must take this into account when evaluating stormwater volumes and handling needs, as well as anticipate a need to add additional stormwater detention capacity over time and assess the associated impacts.**

The Final EIS should include a discussion of how precipitation changes will be monitored and evaluated in regard to stormwater capacity.

5.3 MITIGATION MEASURES (p. 5-20)

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The Draft EIS again simply mentions “*best management and engineering practices*” and states that “*no additional mitigation measures are necessary.*” Unfortunately, this completely ignores climate change, which very likely will cause progressively larger and more frequent “*atmospheric river*” rainfall events in the future. Consequently, systems designed for *current* meteorological conditions may require expansion over time. **The Final EIS should assess such situations, their impacts, and needed mitigation measures.**

The Final EIS must recognize that Action Alternative 3, because it enlarges the actual landfill footprint, and any Action Alternative that involves relocating the support area on site, will certainly increase the stormwater handling needs and, consequently, discuss necessary mitigation measures, including the form these additional stormwater facilities may take.

5.4 SIGNIFICANT UNAVOIDABLE ADVERSE IMPACTS (p. 5-20)

The Draft EIS again simply mentions: “*There would be no significant unavoidable adverse impacts to surface water or surface water quality as a result of implementing any of the alternatives.*” **Based on the concerns we detail above, the Final EIS will have to identify any significant unavoidable adverse impacts.**

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Groundwater

6.0 GROUNDWATER (*pp. 6-1 through 6-13*)

We anticipate the KC Water District #90 will submit its own Comments related to groundwater.

Our only comment here is that any of the *Alternatives* involving new or expanded waste areas may lead to decommissioning existing monitoring wells. **The Final EIS should explain how any resulting monitoring gaps would be identified and addressed.**

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Plants and Animals

7.0 PLANTS AND ANIMALS (pp. 7-1 through 7-15)

7.1 AFFECTED ENVIRONMENT (pp. 7-1 through 7-9)

Does the “*within one half mile of the property line*” statement include property not owned by King County? If so, what is the significance of only looking out one half mile?

7.1.1 Vegetation

7.1.1.1 Cedar Hills

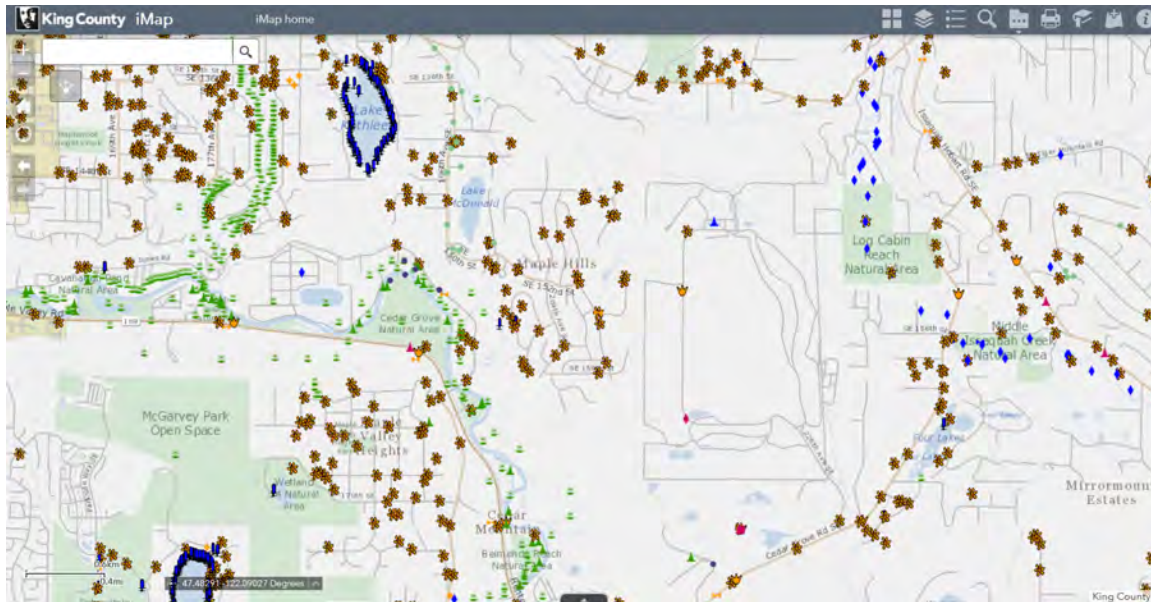
It is not clear that vegetation at CHRLF has been identified. Both the County and the Public have concerns about potential noxious plants such as [knotweed](#), or [Scotch broom](#) (<https://www.kingcounty.gov/services/environment/animals-and-plants/noxious-weeds/laws/list.aspx>)--some poisonous to wildlife and domestic animals such as horses.

7.1.2 Noxious Weeds

7.1.2.1 Cedar Hills

Tansy Ragwort is not typically known to limit its population to one area as indicated in Fig. 7.2. We refer to: <https://www.kingcounty.gov/services/environment/animals-and-plants/noxious-weeds/maps.aspx>.

This map has the *noxious weed layer* added to indicate the abundance of Tansy Ragwort all around the CHRLF.



Tansy Ragwort seeds can remain “active” for up to 10 years and it propagates easily. <https://www.kingcounty.gov/services/environment/animals-and-plants/noxious-weeds/weed-identification/tansy-ragwort.aspx>

To limit the location to a small area in the northwest corner of the CHRLF in the Draft EIS leaves doubt of the accuracy of the map in Fig. 2.

Should there be Yellow Starthistle at the CHRLF, there is 75% chance [purple starthistle](#) (*Centaurea calcitrapa*) also is present, which opens up doubt around accuracy some of the data contained in the Draft EIS.

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It is not clear why is [butterfly bush](#) (*Buddleia davidii*) is not included in the list of noxious weeds. It is well prevalent in the surrounding areas. That also is true for [buttercup](#) (*Ranunculus repens*), which is not included in the list of noxious weeds, as it too is prevalent in the surround areas.

These omissions must be included in the Final EIS and their presence fully evaluated.

7.1.3 Wetlands and Waters of the U.S.

7.1.3.1 Cedar Hills

“Naturally occurring and human-caused wetlands and streams are present in and around CHRLF (see Figure 7-3). Wetlands and streams mapped by King County (King County 2009; King County 2012) include:

- Excavated leachate lagoons in the south buffer. These lagoons were classified as palustrine unconsolidated bottom, artificially flooded excavated wetlands (sewage treatment ponds) during color infrared photo interpretation from 1981. They are not naturally occurring wetlands and have minimal habitat value.*
- Forested, shrub and herbaceous wetlands south and east of the landfill property.*
- Streams in the east and northwest buffers.*

The streams in the east buffer drain to Issaquah Creek and the streams in the northwest buffer drain to McDonald Creek, both of which are perennial fish-bearing streams (WDNR 2020b).” (p. 7-5)

There is significant concern about the Volatile Organic Compounds (VOCs) that are released into Issaquah Creek, McDonald Creek, and the Cedar River (through run-off) on the south side of the landfill. There literally are *hundreds* of VOC's the county does not test for above their normal *nine* that are considered. Of these *hundreds*, many are just as, or more, hazardous than the *nine* that are monitored. **Many of these omitted VOCs should be identified and their impacts assessed in the Final EIS.**

A crucial part of the salmon's life cycle occurs at the fry stage — imprinting. Salmon fry memorize their home stream or lake through factors such as the type of rock and soil in the bed, plant life and other aquatic organisms, all of which contribute to the quality and the unique scent of the water. Salmon learn to recognize this scent as very young fry and can identify it in the water when they return from the ocean. Changes in the stream's environment that occur after the fry leave can confuse the returning salmon, preventing them from finding their home stream and spawning. Imprinting continues as the fry grow and become smolts, so fry raised in an aquarium use these memories, rather than memories of tap water used in aquariums <similar to Issaquah Fish Hatchery>, to find their way home. Almost 90 per cent of all fry die from predators, disease or lack of food. People can help increase fry survival by protecting their environment from pollution, flooding or blockages (see: Seymour Salmonid Society, PO Box 52221, N. Vancouver, BC V7J 3V5; (604) 288-0511).

“A wetland delineation conducted by biologists in the Ecological Services Unit of the King County Department of Natural Resources and Parks, Water and Land Resources Division in 2001 found additional wetlands within the northwest landfill buffers (KCSWD 2005 as cited in King County 2010), however no wetlands are currently mapped within the northwest landfill buffers and no recent wetland mapping has been conducted at the landfill. The County intends to avoid or minimize impacts to wetlands and streams and their buffers. Prior to final design and depending on the alternative selected, a wetland delineation could be conducted in the northwest buffer zone if needed, and project limits would be refined based on the new delineations.” (p. 7-5)

Using data that is 19 years old raises doubt to the county's intent to research any and all current or future potential hazards to the environment around any alternative that is ultimately decided upon. **The Final EIS should be based on more recent data and observations.**

7.1.4 Wildlife

7.1.4.1 Cedar Hills

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While no salmonoid actually reside or spawn on the site, their safety is of concern with potential contaminants from ground or surface water and airborne pollutants from the leachate processing pools settling on nearby foliage, soil, or standing water. There is much known about how aquatic life responds to chemicals: “*Chemicals In Our Waters Are Affecting Humans And Aquatic Life In Unanticipated Ways*” at <https://www.sciencedaily.com/releases/2008/02/080216095740.htm>. Such effects must be identified and addressed in the Final EIS.

Bird Management

It should be noted in the Final EIS that during operation of the CHRLF soil is not always used to cover daily intakes. When CHRLF only used soil to cover the day’s activity there were not as many Bald Eagles using the landfill as a food source.

“Harassment Techniques and Wildlife Management

- *Pyrotechnics to harass birds. Pyrotechnics are noise-making devices that are shot out of a pistol launcher or 12-gauge shotgun. This must be done in compliance with all federal, state and local laws regarding the possession and use of a firearm, and outside of the nesting season. (p. 7-9)*

What sort of studies have been performed on the effects of the air/earth vibrations of repeated use of loud noises? This is of particular concern to nearly homeowners due to the vibroacoustic effects on structures (see: [Advanced Sensing and Structural Health Monitoring](https://www.hindawi.com/journals/js/2017/7214975/) at <https://www.hindawi.com/journals/js/2017/7214975/>).

There is failure to mention that the American Bald Eagle has special protection in the United States under the [Bald and Golden Eagle Protection Act](http://uscode.house.gov/view.xhtml?path=/prelim@title16/chapter5A/subchapter2&edition=prelim) (<http://uscode.house.gov/view.xhtml?path=/prelim@title16/chapter5A/subchapter2&edition=prelim>). The U.S. Fish and Wildlife Service provides eagle management guidelines: (https://www.fws.gov/pacific/eagle/all_about_eagles/Bald_Eagle_Management_Guidelines.html), which recommend:

“Monitor and minimize dispersal contaminants associated with hazardous waste sites (legal or illegal), permitted releases, and runoff from agricultural areas, especially within watersheds where eagles have shown poor reproduction or where bioaccumulating contaminants have been documented. These factors present a risk of contamination to eagles and their food sources.”

7.2 ENVIRONMENTAL IMPACTS (pp. 7-10 through 7-14)

7.2.1 Direct and Indirect Impacts

7.2.1.1 No Action Alternative

“Areas 5 and 6 currently have interim cover in place, while a temporary soil cover has been placed on the top of Area 7. Under the No Action Alternative, the interim covers on Areas 5 and 6 would be removed, waste placed to final grade, and final covers placed at an elevation not to exceed 788 feet (Area 7 has previously reached 788 feet). Resuming active landfilling in areas with interim or temporary covers would impact the wildlife that currently use these areas and would attract scavengers.” (p. 7-10)

It would seem this is the same with all the Action Alternatives.

There is no clear plan shown in the Draft EIS for managing wildlife after the CHRLF closes. Nor is there any discussion of how well the liners will hold up as wildlife forages for food, such as eagle food sources. **These questions must be addressed in the Final EIS.**

7.2.1.2 Impacts Common to All Action Alternatives

“Under all action alternatives, proposed Area 9 would be developed for landfill expansion. The existing buildings and parking areas would be removed and the area would be prepared for landfilling. Before any

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landfilling, the area would be prepared with a liner system and other environmental controls as described in Section 2.3.1.1. During construction, birds and small mammals may disperse to and use adjacent habitats in or near the landfill. This area currently contains minimal wildlife habitat value, therefore no impacts to upland vegetation or wildlife would be anticipated from operation of proposed Area 9.” (p. 7-11)

The Final EIS should address the wildlife habitat value of lands in or near the CHRLF and assess the impacts to wildlife in perpetuity.

“Under all action alternatives leachate and stormwater will be managed to protect salmonid habitat downstream of CHRLF. Leachate and CSW are never discharged to local receiving waters. As described in Section 5.1.4, additional leachate and CSW created by the expansion would flow by gravity or be pumped from the collection system through subsurface piping to the existing leachate aeration lagoons in the southwest corner of the landfill, or the CSW Lagoon, respectively. Following pre-treatment in the leachate lagoons by aeration, the leachate would be discharged to the King County KCWTD sanitary sewer system and POTW. CSW is detained and settled in the CSW Lagoon and then discharged to the leachate lagoons.” (p. 7-11)

As this pipe recently (mid October 2020) sprung another leak causing closure of Cedar Grove Rd. planning for additional leachate needs to be addressed in regard to the aging piping to the Waste Water Treatment plant. **This should be addressed in the Final EIS, especially ensuring any new piping to replace portions of the old is properly evaluated in the Final EIS.**

“Runoff from areas of the landfill with interim or final cover is considered clean stormwater that has not come into contact with waste. This stormwater would be collected in ditches or subsurface piping in and around the landfill cells and transported to storage/treatment facilities, such as the Southwest Siltation Pond or the South Stormwater Lagoon, as described in Section 5.1.3....Stormwater that comes into contact with solid waste is considered CSW and is separated from the clean stormwater via a series of berms and ditches. Under all action alternatives, contaminated stormwater would be collected and conveyed to the existing CSW lagoon as described in Section 5.1.5....These controls would ensure that no untreated stormwater runoff would enter fish-bearing streams. As a result, no impacts to fish are expected.” (p. 7-11)

How the standing water (stormwater) that is open, not covered, is protected from the aeration from the leachate pumps in which the water is dispersed into the air as part of the cleaning process should be evaluated in the Final EIS.

Further, in the Draft EIS there is no discussion on impacts to fish; this must be rectified in the Final EIS.

7.2.1.3 Action Alternative 1

Support Facility Options

“Under Option 1 (facilities relocated primarily to the south), a Special Use Permit would be pursued to place the main landfill support facilities in the south buffer. Approximately 10 to 15 acres of vegetation, primarily deciduous forest, would be cleared. Wildlife would be affected during construction temporarily due to noise and dust from equipment operation.” (pp. 7-11 through 7-12)

There is concern with disturbing the soil in the vegetation on the site due to previous management of neighboring Queen City Farms Federal Superfund site. In the past 50 years Queen City Farms has been known to incinerate the flammable material that floated on top of the water ponds on their site, hence releasing polycarbons into the air that likely landed on surrounding surfaces, and later dropped to the soil. **The Final EIS should account for this history and evaluate impacts accordingly.**

“Operation of the facilities would cause permanent wildlife impacts with the loss of these habitats.” (p. 7-12)

The Draft EIS provides no examples of such *“permanent wildlife impacts.”* **The Final EIS should enumerate these and discuss potential mitigation.**

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“Any wildlife using this area currently coexist with noise and human activity and would likely relocate to other habitats in or near the landfill during construction and return to the remaining buffer areas once construction activity is complete. The overall percentage of vegetation removed would be minor compared to the areas of existing vegetation in the buffers surrounding the landfill.” (p. 7-12)

For Options 1 and 2:

“Forest canopy loss is a common result of urbanization. While many cities and counties have ordinances to reduce tree removal due to development, canopy assessments comparing satellite data between 2001 and 2011 show loss in the Puget Sound Metropolitan Area. Areas of high vegetation and tree canopy declined by 37 percent over that time period. One result of that canopy loss was a 35 percent increase in stormwater runoff. The cost of replacing the equivalent lost tree canopy with pipes and ponds and other engineered systems to manage stormwater (between 1974 and 1996) would be more than \$2.4 billion. It is further estimated that the lost tree canopy would have removed about 35 million pounds of pollutants from the air (American Forests 1998).” (see: 2017 Washington State Forest Action Plan (<https://www.stateforesters.org/wp-content/uploads/2018/07/FINAL-Washington-State-Forest-Action-Plan-2017.pdf>))

7.2.1.4 Alternative 2

Landfill Development

“These areas are currently closed, with final grass cover in place, providing relatively low value for wildlife habitat.” (p. 7-12)

The Final EIS should acknowledge that deer and other herbivore wildlife depend on grasses as a primary source of nutrition/food and, thus, depend on such habitats.

The Final EIS should discuss wildlife scavenging in these re-opened areas, as it has been noted in the past that bald eagle population at the site was greatly reduced when the open/in-use areas when they were covered with dirt each day.

Further, concerns exist around health impacts on landfill scavengers like bald eagles, crows, gulls, etc. by opening previously closed areas. How will the “fermenting” debris affect their digestive tracts and overall being? **The Final EIS should evaluate such impacts.**

7.2.1.5 Alternative 3

“A soil berm would be constructed along the northeast corner of the proposed refuse area. A stream (Figure 7-3) is mapped near the proposed footprint of the Alternative 3 landfill area (King County 2012). Depending on the alternative selected, if necessary during final design, streams, wetlands and waters of the US could be delineated and the design would be modified to avoid impacts to the extent possible. If impacts are unavoidable mitigation may be required to comply with critical areas code (King County Code 21A.24).” (p. 7-13)

How the aerial dispersing of leachate will be prevented from entering the “stream” and other clean water in the area is not discussed the section quoted above. **This should be addressed in the Final EIS.**

7.2.1.6 Indirect Impacts

“As discussed in Section 1.7, in order to compare the potential impacts from the action alternatives and the No Action Alternative over the same period into the future, this EIS must consider potential impacts in the intervening years between the estimated year of capacity for the No Action Alternative and Action Alternatives 1 and 2, and 2046—the estimated year of capacity for Action Alternative 3. The impacts that would occur during these intervening years would not occur but for the proposed action selected and are therefore indirect effects.” (p. 7-13)

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However, the longer that leachate is carried through pipes to wastewater treatment plants, the greater the risk of those pipes breaking and leaking the toxic water into the surrounding area. The most recent break/leak in those pipes occurred in the week of October 12, 2020 and Cedar Grove Rd had to be completely shut down to make the emergency repairs. **Such longer term concerns must be addressed for all the Action Alternatives in the Final EIS.**

“For the No Action Alternative between 2028 and 2046, waste disposal could involve either waste export to a regional landfill or disposal at a WTE facility, which could be at the CHRLF site or another site.” (p. 7-14)

Waste to Energy (WTE) facilities need intense investigation due to the potential deleterious impacts to the County Rural Area where CHRLF is located and the unique aspects present, such as sensitive salmon areas, thermal inversion, and reduced air flow due to a hill and valley terrain. **The Final EIS would recognize this and suitably identify such unique impacts and potential mitigations.**

“For Alternatives 1 and 2, potential impacts to plants and animals that could occur after closure in 2037 and 2038, respectively, would be similar to those that could occur under the No Action Alternative.” (p. 7-14)

Those extra 9 or 10 years must be accounted for in the Final EIS.

7.2.2 Cumulative Impacts

“The loss of vegetation and wildlife habitat from landfill support facilities development at the CHRLF or the Renton site under any of the action alternatives would be limited and relatively minor, but would incrementally add to the cumulative overall past, present, and likely future loss of vegetation and habitat in the region.” (p. 7-14)

The above is all the Draft EIS says about “cumulative impacts.” **The Final EIS must properly identify, discuss, and evaluate “cumulative impacts,” as required by WAC 197-11-060 Content of environmental review.(4) Impacts.:**

“(e) The range of impacts to be analyzed in an EIS (direct, indirect, and cumulative impacts, WAC 197-11-792) may be wider than the impacts for which mitigation measures are required of applicants (WAC 197-11-660). This will depend upon the specific impacts, the extent to which the adverse impacts are attributable to the applicant's proposal, and the capability of applicants or agencies to control the impacts in each situation.”

Further, the County policy is “Reduce, Reuse and Recycle.” Yet, by committing to build additional CHRLF facilities, the County is throwing out perfectly good existing buildings and opting to use more materials and resources to run the existing site for a relatively short amount of time.

7.3 MITIGATION MEASURES (p. 7-14)

Continuing to do what over the years clearly has not worked in terms of plants and animals does not make a successful plan. Unfortunately, the Draft EIS states that indeed is what is planned with a few “additional measures,” which sound like more “best management practices.” **This must be taken seriously in the Final EIS with real mitigation measures identified and assessed.**

In fact, the Draft EIS does not account for the abundance of wildlife present. The following is taken from University of Maryland’s “The Woods in Your Backyard section 2.6 Wildlife Ecology”
<https://umd.instructure.com/courses/1214816/pages/2-dot-6-wildlife-ecology>

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Typical Abundance and Home Range for Common Eastern (Maryland) Wildlife		
Animal	Abundance	Home Range
American robin	1 to 4 nesting pairs per acre	1,320 feet around nest
Black bear	~70 per 100 square miles	Female with cubs: 6–19 square miles Male: 60–100 square miles
Chipmunk	2–4 per acre	0.5 acre
Deer	Up to 100 per square mile	300–400 acres
Downy woodpecker	4 per acre	5–30 acres
Groundhog	Up to 10 per acre	160–320 acres
Rabbit	Varies from 1 per 4 acres to several per acre	10–25 acres
Raccoon	~1 per 10 acres	380–1,150 acres
Red fox	~1 per 100 acres	640–1,280 acres
Ruffed grouse	1 per 25 acres or 2–8 per 100 acres	~10 acres
Skunk	Up to 31 per square mile	160–320 acres
Squirrel	1–5 per acre	Up to 10 acres
Sources: C. Gilleland. Food, Water, Cover, & Space. Essentials In Wildlife Habitat, Part 2. Windstar Wildlife Institute; <i>Peterson Field Guides: A Field Guide To The Mammals</i> . 1980. Houghton Mifflin Co.; Ruffed Grouse Facts. Ruffed Grouse Society. www.ruffedgrousesociety.org/Your-Woodlot#.UQfpt4NEGJc ; Maryland Department of Natural Resources Wildlife And Heritage Service, Personal Communication; Davidson College Herpetology Lab. <i>Picoides Pubescens</i> . http://animaldiversity.org/accounts/Picoides_pubescens/ ; Animal Diversity Web; American Robin. Cornell Lab of Ornithology. www.allaboutbirds.org/guide/American_Robin/id		

The Final EIS must account for the abundance of wildlife present.

7.4 SIGNIFICANT UNAVOIDABLE ADVERSE IMPACTS (p. 7-15)

As is the case throughout the Draft EIS, this subsection simply states:

“No significant unavoidable adverse impacts to upland vegetation, wetlands, and wildlife would be anticipated during construction or operation of any of the alternatives” (p. 7-15)

The Final EIS must take this seriously and offer a full description of such impacts and their ramifications for plants and animals.

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Greenhouse Gas Emissions

8.0 GREENHOUSE GAS EMISSIONS (pp. 8-1 through 8-11)

*"This environmental review determined that given the **relatively small contribution of GHG emissions** from the action alternatives compared to total US output from landfills and construction activities and total global output of GHG, no significant unavoidable adverse GHG-related impacts would be expected to result from these emissions at CHRLF or the Renton site during construction or operation of any of the alternatives, including the facility relocation options." (p. 8-1, our **emphasis**)*

To discount the fugitive emissions from this landfill is negligent. KCSWD believes CHRLF only emits 5%, while 95% is recovered and sent to BEW or flared, even though industry norms and other research say that is not possible. The basis of KCSWD's belief is from the U.S. Environmental Protection Agency's (EPA's) e-GGRT (*EPA Greenhouse Gas Reporting Tool*) report that is submitted by CHRLF to the EPA and WA Department of Ecology on a yearly basis. The conclusion that fugitive emissions are not enough to even be considered is incorrect, because the comparison of the emissions of this landfill to *"total US output from landfills and construction activities and total global output of GHG"* is irrelevant and, as such, is an egregious assumption and renders the comparison of the alternatives in this section suspect. All Greenhouse Gas (GHG) emissions, especially from methane do have an impact on the environment and climate crisis. To discount it is irresponsible. According to the EPA's, *"Overview of GHG Emissions,"* <https://www.epa.gov/ghgemissions/overview-greenhouse-gases>, methane is a far more damaging GHG to the atmosphere and climate change than CO₂:

"Methane's lifetime in the atmosphere is much shorter than carbon dioxide (CO₂), but CH₄ is more efficient at trapping radiation than CO₂. Pound for pound, the comparative impact of CH₄ is 25 times greater than CO₂ over a 100-year period. Globally, 50-65 percent of total CH₄ emissions come from human activities."

The EPA's GHG reporting program for 2018 lists 1,133 landfills across the US reporting their annual GHG EMITTED (not collected) into the atmosphere. Landfills are considered "direct emitters" of GHG. Cedar Hills ranks 446, with 68,087.5 MtCO₂e (Metric tons CO₂ equivalent). While they may account for less than 1% of the overall landfill emissions, 68,000 metric tons is still significant.

We take issue with the statement that: *"no significant unavoidable adverse GHG-related impacts would be expected"*: The GHG emissions are significant, are to some extent avoidable, and are adverse. To believe one's emissions aren't significant is what will keep progress being made in tackling climate change. That attitude is like thinking your 1 vote won't count.

8.1 AFFECTED ENVIRONMENT (pp 8-2 thru 8-3)

8.1.1 Sources of GHG (pp. 8-2 thru 8-3)

8.1.1.1 Cedar Hills

Waste Disposal and Decomposition

*"Some landfill gas is not collected during active waste placement and prior to placement of daily, interim, or final cover systems, and this gas, **called fugitive emissions**, is emitted to the atmosphere. Of the landfill gas that is collected at CHRLF annually, **approximately 5 percent is flared and 95 percent is directed to BEW.**" (p. 8-2, our **emphasis**)*

This statement points to a lack of knowledge either of the reports they are attempting to use or of landfill gas production and capture in general. The statement referencing 95% and 5% is incorrect. By stating it as such, and without careful reading, one might get the impression that virtually no fugitive gas is released. In fact, what should be noted is that according to the *Federal Mandatory Reporting Rule (MRR) under 40 Code of the Federal Regulations, Part 98, Subpart HH*, using e-GGRT **of the landfill gas captured** approximately 80% is sent to the

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BEW plant and ~15% is flared at CHRLF. Using the amount of landfill captured, the HH-6 formula of the e-GGRT, is used to “back into” how much gas they think is produced, using *estimated* cover efficiencies. By doing this, they’ve determined they capture 95% of the gas produced and 5% is fugitive. However, this reported efficiency rate is above industry averages. **All models (and assumptions) must be validated and incrementally improved to ensure they repeatedly produce results that are consistent and agree with against published data. Values that are outside of published ranges, with regard to landfill gas collection efficiency, methane generation potential, etc. should be carefully vetted. The Final EIS should discuss such model validation.**

Validating either the EPA’s e-GGRT or the EPA’s Waste Reduction Model (WARM) for GHG generation presents difficulties, since it is nearly impossible to measure *all* fugitive gas emissions. However, attempts are being made through aerial methane surveys to quantify actual emissions. The County should conduct more thorough assessments on all the GHG emissions from the CHRLF using tools such as surface emission monitoring (SEM), above ground drone emission monitoring (DEM), and downwind plume emission monitoring (DWPEM), or aerial methane surveys. **Below we provide comments on these models, some mentioned in the Draft EIS and some not, as well as monitoring techniques, in order to ensure the Final EIS addresses each.**

EPA’s Greenhouse Gas Reporting Tool — e-GGRT

Models and tools used by CHRLF to calculate GHG fugitive emissions and comparisons to WTE and export both imply various assumptions and variables. They are complex and produce results that are sensitive to those assumptions and variables. Its is good that the Draft EIS recognizes the importance of the assumptions:

“As described above with the No Action Alternative, these estimates for GHG emissions are highly dependent on the assumptions behind the analysis, and on whether the utility and other credits are applied.” (p. 8-9)

Both e-GGRT and WARM (as reported in the MRR table below) use the formula *HH1*. In discussing the deficiency in the HH1 formula between Toraj Ghofrani, PE, CHRLF Engineer and supplier of the MRR report below, and Janet Dobrowolski, resident, in e-mails dated 9/30/20, it was stated:

Toraj Ghofrani:

“The HH-1 model is used by more than 2,600 landfills across the USA so as long as the model accounts for dry, moderate, and wet climates that seems to be good enough for USEPA. What is important is that every municipal landfills uses the same consistent choices for the same parameters.”

Janet:

“I will say that just because everyone uses it, doesn't make it accurate. Consistency is irrelevant if it's 'consistently wrong.’”

Toraj:

*“I understand your sentiments, **accurately!** One day when I have more time in hand I will share the flaws of the MRR in an article for a broader audience so that change can get a tangible momentum. For now, not very many seem to know about the MRR flaws and not very many seem to care, nevertheless it is the law.”*

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Table 1 – Summary MRR (Methane Required Reporting) submitted to the US EPA and Department of Ecology, created by CHRLF Engineer Toraj Ghofrani:

ANNUAL GHG EMISSION TREND AT CHRLF (As reported by eGGRT)										Last Updated 04-Feb-20
	Unit	Using HH6 2012	Using HH6 2013	Using HH6 2014	Using HH6 2015	Using HH8 2016	Using HH8 2017	Using HH8 2018	Using HH8 2019	Baseline 2012 thru 2016
KC Inventory Annual LFG Recovered	SCF	5,349,058,841	5,190,213,737	5,300,894,821	5,375,189,875	5,430,495,178	5,122,224,006	5,278,505,912	5,184,367,054	5,328,130,450
Annual LFG Delivered to BEW	SCF	1,924,408,678	4,368,759,791	4,440,749,409	4,645,143,681	4,707,263,880	4,246,403,840	4,449,293,328	4,479,258,964	4,017,265,048
Annual LFG Delivered to Flares	SCF	3,424,650,163	821,453,946	859,945,412	730,045,994	723,231,496	875,820,166	829,212,584	685,108,091	1,311,865,402
Annual Weighted Average CH4 Concentration	%	49	50.76	51.29	50.87	51.59	51.25	51.45	51.65	50.74
Daily Cover	M ²	4,047	4,047	4,047	4,047	4,047	4,047	4,047	4,047	4,047
Intermediate Cover	M ²	137,593	141,640	149,734	169,968	182,109	178,061	137,593	168,155	158,209
Final Cover	M ²	1,266,866	1,262,619	1,254,525	1,129,073	1,116,932	1,120,980	1,161,448	1,161,448	1,205,983
Total Covered Areas	M ²	1,408,306	1,408,306	1,408,306	1,303,088	1,303,088	1,303,088	1,303,088	1,351,650	1,366,219
CH4 Generation HH1	MT	49,340	49,931	49,333	49,428	49,604	49,945	50,298	50,489	49,527
CH4 Recovered using SCADA	MT	50,584	50,596	52,217	52,502	53,788	50,386	52,132	51,084	51,839
CH4 Recovery HH4	MT	50,594	50,596	52,218	52,501	53,788	50,395	52,132	51,083	51,939
CH4 Emission for Fuel using USEPA C1/C8	MT CO2e	206	220	145	175	229	335	335	321	195
CH4 Emission using USEPA MRR HH6	MT	506	100	96	77	74	85	74	61	170
Total GHG Emission HH6	MT CO2e	10,831	2,718	2,536	2,103	2,071	2,456	2,181	1,846	4,062
CH4 Emission using USEPA MRR HH6 (except post 2015)	MT	506	100	96	77	3,088	2,901	2,723	2,887	775
Total GHG Emission HH6 (except post 2015)	MT CO2e	10,831	2,718	2,536	2,103	77,623	72,848	68,422	72,738	19,162

Row: CH4 Generation HH1: The e-GGRT using the HH1 formula consistently calculates there is less gas produced than collected. This formula also is used in the WARM. It is theorized the formula does not sufficiently account for the amount of rain (~54 in/yr) the landfill gets and doesn't work for THIS landfill (i.e., CHRLF). Water is a major factor in methane production. The more water the more and faster methane is produced. In addition:

"In some cases, the measured CH4 recovery will not agree well with the modeled CH4 generation. The ratio of measured CH4 recovery to modeled CH4 generation is the apparent landfill gas collection efficiency. If the apparent landfill gas collection efficiency exceeds 95% or 100%, this indicates that the modeling assumptions are incorrect." (see: https://www3.epa.gov/ttnchie1/efpac/ghg/GHG_Biogenic_Report_draft_Dec1410.pdf, p. 2-9.)

Table 1 illustrates this discrepancy. The modeled CH4 Generation HH1 does not agree well with the CH4 recovery. In fact, it shows the generated CH4 is *less* than the Recovered CH4 for every year shown in Table 1. In this case the efficiency would exceed 100%, showing the model assumptions for CHRLF are incorrect for the HH1 model.

Row: TOTAL GHG Emissions HH6: Because the *"modeling assumptions are incorrect"* for the HH1 formula, EPA developed a formula to calculate the unknown production amount of CH4, using Recovered gas and estimated cover efficiency percentages. Once the unknown total is modeled, they calculate fugitive emissions. Cover efficiency variables can greatly affect the results, so mis-categorization of covers will impact the result.

Below we discuss potential discrepancies in the e-GGRT:

1. **Cover variables** — Unfortunately, EPA definitions used in the HH6 formula for covers are not very specific, thus allowing wide interpretation. Incorrect area and collection efficiency can dramatically change the emissions results. CHRLF determines the surface area for each cover category. The surface area is two dimensional, not the actual surface area the landfill (i.e., looking down from above – with no contours). In *Table 1* above:
 - a. *Daily cover* is considered the "active" area of 1 acre and never changes. 29% of total area if one calculates it from *Table 1*. Covered with a tarp every night.
 - b. *Intermediate cover* is considered the current cell – Area 7, in this *Table 1*. 11.4% of total area if one calculates it from *Table 1*. Covered with 1 foot of soil, compacted to 6 inches.

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- c. *Final* cover is the rest of the landfill. 88.3% of total area if one calculates it from *Table 1*. Note that Areas 5 and 6 do not have “*final cover*,” but CHRLF feels the cover qualifies for Final Cover classification: “*Soil or exposed geomembrane interim cover is placed on surfaces that will be exposed for one or more wet seasons or areas that will be inactive for extended periods of time and will be covered by future landfilling.*” (p. 2-13). The remaining closed areas have covers sealed to the bottom liners of lined areas as required by WAC 173-351. Unlined areas have closed covers as required by WAC 173-304.

Table HH-3 - Landfill Gas Collection Efficiencies

Description	Landfill gas collection efficiency
A1: Area with no waste in-place	Not applicable; do not use this area in the calculation
A2: Area without active gas collection, regardless of cover type	CE2: 0%
A3: Area with daily soil cover and active gas collection	CE3: 60%
A4: Area with an intermediate soil cover, or a final soil cover not meeting the criteria for A5 below, and active gas collection	CE4: 75%
A5: Area with a final soil cover of 3 feet or thicker of clay and/or geomembrane cover system and active gas collection	CE5: 95%
Area weighted average collection efficiency for landfills	$CE_{ave1} = (A2*CE2 + A3*CE3 + A4*CE4 + A5*CE5) / (A2+A3+A4+A5)$

Note:

- A3: Considered “*Daily Cover*” by CHRLF. The definition doesn’t really define what daily soil cover is.
A4: Considered “*Intermediate Cover*” by CHRLF. The definition doesn’t really define “intermediate soil cover”, other to say it is not Final cover.
A5: Considered “*Final Cover*” by CHRLF. The definition doesn’t specify criteria for a geomembrane cover system – how thick is the geomembrane? are the strip edges sealed or just overlapped, etc.

However, the EPA Efficiency ratings are in question. In an email from Janet Dobrowolski, resident, to Michael Van Brunt, Sr. Director, Sustainability for Covanta, dated April 5, 2019, there was a question posed concerning the difference in cover efficiencies in the WARM model verses the MRR:

“The %’s don’t correspond with the MRR cover efficiency - do you know if there’s a reason?”

Michael Van Brunt response was:

“Yes – the collection efficiencies in the MRR couldn’t be supported by available published science. EPA took the default efficiencies for the MRR from an industry position paper. During the process of establishing reasonable defaults for lifecycle modeling (including both WARM and the MSW-DST), the stakeholder team (which I was involved with) found that the published work didn’t support the MRR’s averages.”

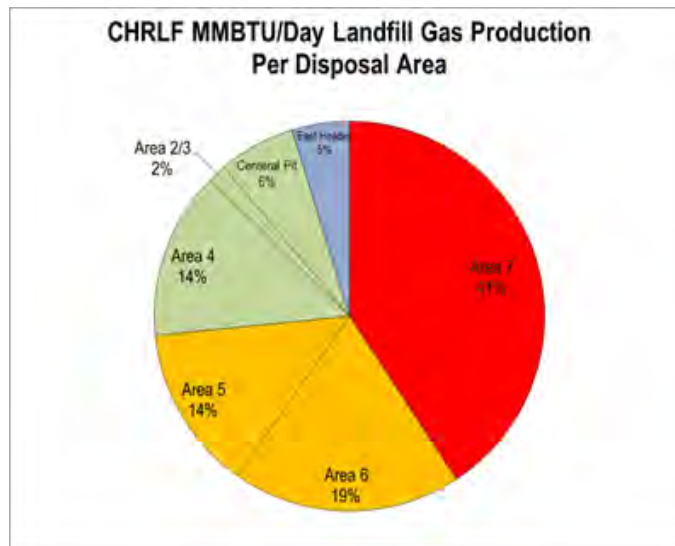
The EPA’s WARM models use cover efficiency ratings of 50%, 75%, 82.5%, and 90%. If CHRLF has classified its covers wrong, then the calculation of fugitive emissions can be off substantially. The efficiency percentages are all *estimates*. In fact, how accurate is CHRLF at defining its covers? How accurate are the EPA estimates of efficiency? How uniform are the covers of dirt in terms of depth? **All of these questions must be addressed in the Final EIS.**

2. CO₂ equivalent calculations — Controversy exists as to the CO₂ equivalency factor for Methane. Although Methane emissions are lower than CO₂ emissions, it is considered a major GHG because each Methane molecule has 25 x the global warming potential of a CO₂ molecule. Therefore, determining this

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equivalency coefficient is important. To calculate the CO₂e, the quantity for Methane is multiplied by the Global Warming Potential (GWP). The EPA uses a 25x factor in the e-GGRT, yet on its website it states: "*Methane (CH₄) is estimated to have a GWP (Global Warming Potential) of 28-36 over 100 years.*" (see: <https://www.epa.gov/ghgemissions/understanding-global-warming-potentials>). The Intergovernmental Panel on Climate Change (IPCC) states the GWP is 34 for 100 years, but 86 for 20 years (2013 IPCC AR5 Fifth Assessment Report, p.714). Because of the uncertainty of the equivalency coefficient, the fugitive gas calculated in the e-GGRT report is understated, given that all other assessments for this factor are higher than 25. **This must be recognized in the Final EIS.**

3. Assumption of uniform production of Landfill Gas (LFG) in all areas — The e-GGRT doesn't take into account *where* the LFG is being generated. The active cells start producing gas after 1 year. Based on calculations, sent in an e-mail dated 9/30/2020 from Toraj Ghofrani, CHRLF Engineer, Area 7 generated 41% of the gas (see Ghofrani-generated chart below), yet when the formula is applied, it doesn't take that into account. If it were, the fugitive gas total would be higher, because the cover isn't as efficient. **There is nothing prohibiting CHRLF to further refine some of the data for their own information and document same in the Final EIS.**
- 4.



5. Accounting for catastrophic events — How was the major pipeline break in 2012 accounted for in the model? The break occurred between the flares and the BEW plant, so the amount captured would be correct and BEW would have record of how much it received. However, there is no place to enter the fact there was a break. Is the amount flared just the difference between the amount collected and the amount BEW received? Based on the numbers, it appears so, given the fugitive emissions calculated for that year were only 10,000 MTCO₂, or about 1% emissions and 99% collection efficiency. The amount of landfill gas (51% Methane) released was 10,000 cf/min for 5 hours.
6. Lateral movements — Methane moving laterally, as in the 2011 methane migration to the western buffer, is not accounted for in the equations, as only gas emitting through the covers considered, applying the capture efficiency.
7. Waste-Characterization variable — Methane is produced by the digestion of organic material by anaerobic bacteria. In order for the models to predict the amount of methane generated by waste, assumptions must be made as to how much of the waste it is believed to be organic. The EPA has determined the default bulk waste characterization for degradable organic carbon (DOC) is 20%. CHRLF has chosen to use this default value. This DOC, used to assume *all* waste for every year the landfill has

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been open, is 20%. Landfills, including CHRLF, will periodically have waste trucks dumped and the content “counted” and categorized to see if they are “close” to the DOC default. However, this is not necessarily representative of *all* years of waste. This is but another variable that, if wrong, can dramatically alter the emissions calculations.

The Draft EIS confirms that estimates are “*highly dependent on the assumptions behind the analysis*” (p 8-9) for the WTE, yet doesn’t look at the assumptions used for modeling other GHG gas emissions. **The Final EIS must consider ALL assumptions for all models as to their validity or accuracy when estimating GHG emissions.**

EPA’s Waste Reduction Model — WARM

As stated earlier, the WARM uses the HH1 formula for calculating GHG emissions and has been proven to be inaccurate and understates the GHG produced. In the Draft EIS the WARM has been used to estimate differences in GHG emissions between WTE, Export, and landfills, yet there are many assumptions that affect the results. No evidence has been presented as to why this particular model is more accurate than another, or why it was chosen. Yet, the County continues to use the WARM in its decision-making process, even knowing it is inaccurate and has flaws, as described in a series of e-mails with KCSWD:

Resident, Janet Dobrowolski, writes to Pat McLaughlin, Director of KCSWD (9/22/2020):

“The one area I do disagree with, rather strongly, is the use of WARM for THIS landfill. While I know it is the method of choice to evaluate landfills, it has its flaws and doesn’t work for Cedar Hills.”

Pat McLaughlin, Director of KCSWD, writes to resident, Janet Dobrowolski (10/2/2020):

“You’re right! WARM has some flaws, however, it is a broadly accepted approach provided by the regulator for comparing disposal alternatives. Using such a standard tool is helpful to inform probable comparative impacts. That being said, it is just one point of input and other data must be considered. The other regulatory prescribed measuring models (HH-1, HH-6, HH-8) also have value, but we are working with national experts to explore models that can provide us with even more accurate insights that are specific to the Cedar Hills operation.”

The EPA knows the formulas aren’t accurate and continues to make improvements. Notes from an US EPA webinar on *Updates to Methodology Improvements for MSW Landfills*, December 13, 2017, (https://www.epa.gov/sites/production/files/2018-10/documents/webinar_4_sumrpt_0.pdf) stated:

“One sector in the annual report is the waste sector, which includes municipal solid waste (MSW) landfills, industrial landfills, composting, and wastewater. With each Inventory report, EPA strives to improve the data inputs and calculations used.”

The flaws and inaccuracies touched on herein should be addressed in the Final EIS and in crude discussion of the ramifications.

EPA Municipal Solid Waste Decision Support Tool (DST) – Alternative to WARM

Article from WASTEDIVE.com, “How utilizing EPA’s Decision Support Tool can greatly improve waste management systems” <https://www.wastedive.com/news/how-utilizing-epas-decision-support-tool-can-greatly-improve-waste-managem/421707/>

“We would love to see it be the standard for communities,” said Susan Thornehoe, a senior chemical engineer with the EPA’s Office of Research and Development. “A lot of times people don’t have a good idea or sense of what their current system is doing or what it costs.”

“Essentially, the DST is meant to take the guesswork out of big decisions for state and local planners by providing a better picture of how their current waste management system is working and what

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effects changes could have. Greenhouse gases, cost, energy consumption, and the potential release of pollutants can all be measured for a wide range of collection and disposal methods.”

“For example, a municipality may be considering the most effective program for increasing its recycling diversion rate. The DST could show the trade-offs between single-stream recycling or targeted programs for specific materials. Or perhaps a company is looking for ways to reduce its emissions and transportation costs. The DST could analyze which parts of that company’s waste stream offer the most opportunity for reduction.”

EPA supports use of the DST for decision making: “EPA Tools Help Local Decision-Makers Deal with Waste Resulting from Major Natural Disasters,” <https://www.epa.gov/sciencematters/epa-tools-help-local-decision-makers-deal-waste-resulting-major-natural-disasters>

“The MSW DST can also be used to calculate diversion from landfill, energy requirements, emissions, and energy recovery from waste and landfill gas combustion. An optimization feature allows the tool to select the best performing management strategy given the specific objectives of a user, accounting for their existing infrastructure, waste composition, and the type of community, whether it is rural, urban, or suburban. For these reasons, the tool is valuable to decision makers to develop more strategic, resilient, and sustainable materials management.”

Over the years, the DST was peer reviewed by top experts and received input from government, academia, industry and other organizations. Those involved included the Environmental Defense Fund, the New York Department of Sanitation, Waste Management, and many more (see: *Municipal Solid Waste Decision Support Tool*, RTI International (formerly Research Triangle Institute), <https://mswdst.rti.org/> for a complete list). EPA scientists use DST when doing published, peer reviewed studies. DST is transparent, and provides for separate reporting of emissions (methane, biogenic CO₂, fossil CO₂), energy credits, and carbon storage.

Consequently, we have two statements – one from a KCSWD knowing the e-GGRT and WARM are flawed, yet continues to use them because they are an “accepted” approach (see e-mail exchange with KCSWD Director pat McLaughlin, cited earlier) and one from the EPA recommending the use of the DST for municipal solid waste decisions.

Given the evidence that the e-GGRT and WARM methods possess flaws, there is insufficient evidence to justify using the DST in this analysis. The Final EIS must justify the use of any of the models presented, as well as explore other suitable and available models including those identified, described, and presented herein.

Monitoring surface concentrations and gas extraction wells

PSCAA Operating Air Permit #10138, **Specific Monitoring, (b) Quarterly Surface Monitoring for Fugitive Landfill Gas** states (p. 36):

“KCSWD shall monitor surface concentrations of methane along the entire perimeter of the gas collection area and along a pattern that traverses the landfill at 30 meter intervals. The background concentration of methane shall be determined by moving the probe inlet upwind and downwind outside the boundary of the landfill at a distance of at least 30 meters from perimeter wells. Surface emission monitoring shall be performed in accordance with Section 4.3.1 of EPA Method 21, except that the probe inlet shall be placed within 5 to 10 centimeters of the ground. Any reading of 500 ppm or more above background at any location shall be recorded as a monitored exceedence.”

Issues with this monitoring, as well as gas-extraction wells are:

- In talking with employees at the CHRLF we were told employees uses something like a golf cart to traverse the landfill and is not required to cover any area that is dangerous to the employee. On p. 206 of the 40 CFR 60 Federal Regulation regarding quarterly methane **Surface Emission Monitoring** for

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landfills, it says: *“Areas with steep slopes or other dangerous areas may be excluded from the surface testing.”* Dangerous areas also include, as related by Laura Belt on a tour, active areas where heavy equipment is being operated, including the active cell. In addition, Areas 5 and 6 were not monitored for a period of time because of the dirt moving equipment.

- Low, undetected levels of emissions are not noted, so the landfill could be emitting landfill gas (LFG) without anyone knowing and this is cumulative.
- Infrequency of monitoring—only four times a year to detect problems and leaks—means a lot of fugitive emissions could be spewing into the atmosphere.
- This monitoring is not enough to prove the collection efficiency (i.e., recovered 95% - emitted 5%) claims of CHRLF.
- Evidence presented in the 2017 lawsuit for the December 2013 pipeline break, *Sharon Kay and Jim Howe vs. King County Solid Waste Division*, included expert witness statements agreed some percentage of landfill gas is not captured. A County consultant, who had conducted a comprehensive analysis of all of the over 600 landfill gas pipes and concluded: *“...57% of the wells had air intrusion and another had 20% air leakage.”* A CHRLF employee described a number of problems that can cause increased gas releases – broken or disconnected flex hose and construction projects and that capture rates were ~ 70% (vs. 95%). County CHRLF experts called the landfill a *“living organism”* – affected by many factors – like barometric pressure and moisture.

An information obtained through Public Records Request discovery for a lawsuit brought by Brad Jones, Attorney at Law, CHRLF employee, *Toraj Ghofrani, PE, e-mail to James Freely with a cc to Laura Belt* (both CHRLF employees), March 31, 2014, stated:

- *“The most remarkable transformation in the CHRLF operation began post 2008 when approximately 13,000,000 cu ft of LFG was eventually converted to approximately 130 tons of usable energy each day, rather than wasting this natural source of energy to the thermal destruction of the north Flare Station. Unfortunately, the existing infrastructure of the CHRLF LFG control system is not designed to handle the operational vicissitudes of the LFG to energy (LFGTE), thereby complicating the day-to-day operations of the LFG conveyance system at CHRLF.”*
- *“Currently, three blowers and 614 horizontal and vertical wells are utilized for the extraction of the above-referenced 130 tons of methane generation each day. Naturally by design, one would expect about 400 pounds of methane extraction from each of the 614 LFG extractions wells. That is not the case. In fact, based on our historical bimonthly monitoring of fixed landfill gases (methane, carbon dioxide, oxygen, and nitrogen) and theoretical estimations of methane generation, **more than:**”*
 - *“40% of the LFG extraction wells are not functional most of the year.”*
 - *“5% of the generated methane is not currently captured.”*
 - *“40 parts per million of methane seeps out through unsealed surfaces of the CHRLF top deck.” (Note: PSCAA regulations only consider measurements above 500 ppm as non-compliant and notable.)*
- *“Whether it is generated by refuse decomposition or by equilibrium with the Landfill Leachate system, LFG has been identified as a secondary source of shallow perched groundwater (GW) contamination at CHRLF. While LFG, LFL and GW issues at the CHRLF are inextricably entwined, the root cause analysis is still incomplete. The vector of blame could point to poor engineering design poor construction materials, or poor understanding of the complexity of Mother Nature at its biogenic micro-environment, within which the change in temperature, moisture, pH, and pressure is constantly affecting the decomposition rate of the aging refuse.”*
- *“There are numerous uncertainties hovering over the LFG generation, transmission, and capturing efficiency.”*

Clearly, both monitoring and extraction are not exact sciences, as they often give conflicting results which are open to interpretation.

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Waste-To Energy and Waste Export by Rail Feasibility Study, Arcadis, 2019, Appendix D, pp. 6-12 thru 6-13 provides calculated average Landfill Gas Collection Efficiency rates based on several scenarios using the WARM version 15 model.

The scenario with a maximum collection efficiency rating for a landfill with gas collection, using the “*California regulatory scenario*” (i.e., landfill management based on California regulatory requirements), was 83.6% - resulting in 16.5% fugitive gas emissions. Please note that the National Average for this scenario is 78.8%. Again, KC SWD claims the CHRLF’s collection efficiency is 95% - resulting in only 5% fugitive gas emissions.

Such discrepancies must be resolved in the Final EIS.

Methane Monitoring Studies

Several studies using aerial detection methods, have found current methods to computer GHG emissions tend to underestimate them.

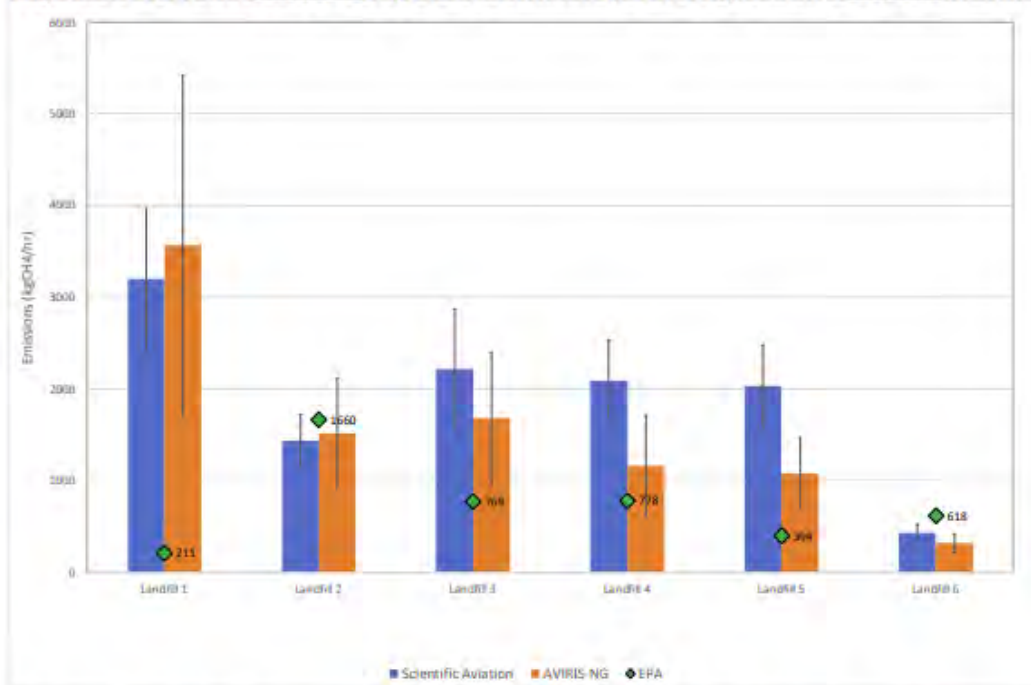
The *California Methane Survey, July 2020, Jet Propulsion Laboratory* (<https://ww2.energy.ca.gov/2020publications/CEC-500-2020-047/CEC-500-2020-047.pdf>): Researchers in California conducted an aerial methane survey to find point-source methane emissions, using an airborne imaging spectrometer capable of rapidly mapping methane plumes. It was determined that the 30 landfills and 2 composting facilities are the highest emitting point-source sectors in California, representing 43% of the total:

“The high-resolution images suggest that some of the strong methane plumes at these landfills may be associated with gaps in intermediate cover, delays in construction projects and/or leaking gas capture wells – all indicating a significant mitigation opportunity.”

California has one of the most stringent regulations in regards to air pollution, so to have landfills leaking is unusual. This points to how difficult it is to control. At the CHRLF leak sources also can include caps being knocked of gas probes, elk hooves poking holes in the liners, the 3 areas that do not have final cover on them, and, of course, the current open lifts. The following two figures are from the report cited immediately above:

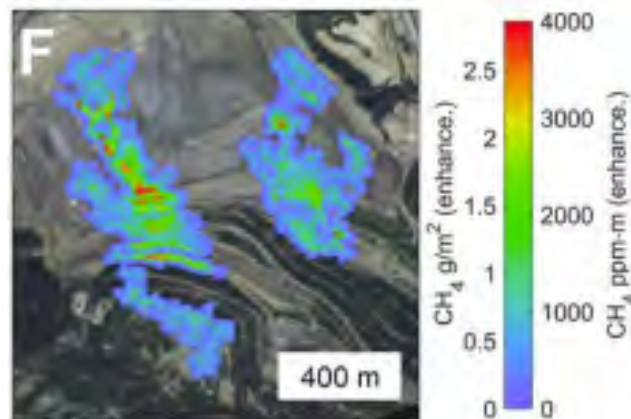
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Figure 26: Measured vs Reported Emission for Representative Landfills



Comparing landfill emissions reported to the EPA for 2017 (EPA 2018) with persistence adjusted average emission estimates from this study and mean values from a series of coordinated Scientific Aviation flights (CARB 2018b) – the last 4 of which were not contemporaneous with AVIRIS-NG flights. Since Scientific Aviation measures the net facility emissions (area + point sources) and AVIRIS-NG only measures point sources, the latter will be lower than the former in many cases

Source: Duren *et al.*, 2019



F. Landfill (Duren *et al.*, 2019)

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Fugitive emissions will continue for all alternatives and should be included in the Final EIS for all alternatives to compare with WTE or Export. Methane will continue to be produced for years *after* each cell is closed. The Main Hill (1960-1980) *still* is producing methane. And fugitive methane will continue to impact the environment for many years to come.

Further, the Draft EIS does not address how each alternative will affect the release of fugitive GHG emissions. The longer the site stays open, the more fugitive gas will occur. Even after a site is closed and no longer accepts waste, it still will produce some GHG emissions. **The Final EIS must address these emissions.**

BOTTOM LINE: **Models, methodology, and Monitoring**

There is plenty of evidence to suggest that the e-GGRT- and the WARM-estimated collection rates for CHRLF are understated. KCSWD has been reluctant to use anything but the “*industry standard*” of WARM, even though it admits it has shortcomings. KCSWD needs to *prove* the accuracy of the 95% efficiency by either using actual measurements or possibly employing a more trusted tool by industry experts such as the EPA's Municipal Solid Waste Decision Support Tool (DST), which is peer reviewed and developed in conjunction with the EPA, US Department of Energy, academic institutions, and research firms. Consequently, emissions continue to be underestimated and, thus, downstream impacts are not fully identified and quantified. **All of this should be discussed in the Final EIS, along with the ramifications therefrom.**

Daily Operations and Construction:

“Similar emissions from construction equipment are created from the construction of regional landfill disposal areas or WTE Facilities.” (p. 8-2)

No data has been presented showing the GHG from construction of Regional landfill disposal or the construction of a WTE facility.

The assumption that operational GHG emissions from a regional landfill vs. Action Alternatives 1, 2 or 3 is flawed when you consider GHG's from construction of landfill cells. Regional landfills are planned from the start to maximize landfilled area and therefore do not require the costly relocation of support facilities and the attendant GHG emissions for that effort.

Regarding *Table 8-7*, given the differences in construction, especially of Action Alternative 3, it is not clear how emissions associated with construction of a WTE plant are similar to *all* alternatives:

- Each alternative requires different construction design.
- No Action – Capacity remaining – 11 mcy².
- Action Alternative 1 – Capacity built – 12 mcy², 34 acres developed.
- Action Alternative 2 – Capacity built – 13 mcy², 34 acres developed.
- Action Alternative 3: Additional capacity, over Action Alternatives 1 and 2 is 14 & 13 mcy², respectively, for a total additional capacity of 26 mcy². 66 acres. In addition, more activity is involved that is not common to the other alternatives, including:
 - Construction of MSE berm on NW corner, 20 ft high soil berm on NE boundary.
 - Excavation of Refuse in the NW corner.
 - Sorting and recovery of soil from the refuse.
 - North Storm Water Lagoon & North Siltation pond retrofit and possible relocation of Siltation pond.

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There is no data to support the *"similar emissions"* statement.

Waste Transport

"For those alternatives with an earlier closure date, waste that would otherwise be disposed of at the CHRLF would be transported to an alternative landfill site and waste would be trucked from the rail unloading facility to the alternate landfill; or waste would be transported to a WTE facility somewhere in King County." (pp. 8-2 through 8-3)

This Draft EIS assumes one WTE facility would be the only option. Fuel, emissions, and truck trips could be saved and thereby reduce the impact from moving waste from transfer stations to CHRLF. The GHG analysis could be greatly affected if truck trips from transfer stations to CHRLF by:

1. Portable WTE at each transfer station: Waste itself can be reduced locally into useful components, such as energy and recyclable materials. Portable (wheel mounted) *"Waste to Energy"* mobile plants would do this and could be located at previously used waste sites, including abandoned ones (King County has over a dozen such sites). Power could be returned to the regional electrical power company and also used on site to run operations. An MIT researcher and his colleagues have developed a system that can make liquid fuels from an abundant, familiar, and troublesome source—trash. It may be possible that units could be made portable and modular for transportability to needed sites (see: *Turning Waste into Clean Fuels*: <https://energy.mit.edu/news/turning-waste-into-clean-fuels/>).
2. Three or four smaller scale, non-portable plants located at central hubs across King County: As an example, KC owns property next to the Redmond transfer station that could site a small WTE plant. This could eliminate trips from Redmond to CHRL. Placing WTE plants in the north end, east side and sound end could greatly reduce the GHG gases by reducing the number of truck trips to CHRL.

The Final EIS should incorporate the impact having WTE plants either at all transfer stations or at multiple (e.g., 3 or 4) hubs throughout the county as part of the GHG transport alternative.

"Any out-of-county regional landfill was assumed to have comparable environmental protection systems and operations as those described for CHRLF and to meet applicable federal and state requirements" (p 8-3)

Fugitive emissions for any *"out-of-county regional landfill"* should also be included in the study, not just the protection systems and operations.

WTE Facility

"Combustion of waste in a WTE facility introduces the potential indirect effects of GHG emissions that are unique to that long-term option, discussed in Section 8.2.1" (p. 8-3)

Section 8.2.1 has very little information concerning this topic.

"Additional information about GHG emissions from WTE facilities can be found in the Final EIS for the Solid Waste Comp Plan,..." (p. 8-3)

The document referenced, *Final EIS for the Solid Waste Comprehensive Plan*, contains an analysis that uses WARM Version 14, which includes *biogenic emissions*. WARM Version 15 was used in the analysis by Arcadis for use in this Draft EIS, which does not include *biogenic emissions*. Consequently, any numbers used from the *Final EIS for the Solid Waste Comprehensive Plan* would be comparing apples to oranges.

8.2 ENVIRONMENTAL IMPACTS

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8.2.1 Direct and Indirect Impacts (pp. 8-3 through 8-10)

“The CO₂ contained in the landfill gas and the CO₂ created by the combustion of methane in the flares or engines is considered biogenic (i.e., part of the natural carbon cycle) and was not included in the direct GHG emissions accounting.” (p 8-4)

The CH₄ fugitive emissions created from the anaerobic digestion should be counted as a GHG gas.
Arcadis Report, p. 6-1:

“CH₄ is counted as an anthropogenic GHG because, even if it is derived from sustainably harvested biogenic sources, degradation would not result in CH₄ emissions if not for deposition in landfills.”

8.2.1.1 No Action Alternative

“A 2019 King County study comparing the feasibility of waste-to-energy and waste export by rail (King County 2019e) evaluated GHG emissions in metric tons of carbon dioxide equivalents per ton of waste (MTCO₂e/ton) disposed by (a) landfilling at an out-of-county landfill using waste export by rail and (b) by combustion in a WTE facility, using the latest version of the EPA’s Waste Reduction Model (WARM).” (p. 8-4)

In referencing the *Waste-to-Energy and Waste Export by Rail Feasibility Study*, Arcadis, September 2019, p. 6-3:

“Based on these conclusions and the broader discussion throughout this Study, the Arcadis Team recommends that the County consider pursuing additional preliminary evaluation, permitting and siting considerations, and other steps necessary to move forward with WTE facility disposal over WEBR.”

Conclusion from the *Waste-to Energy Options and Solid Waste Export Considerations*, Normandeau Associates, Inc., September 28, 2017, (for the King County Solid Waste Division Comprehensive Solid Waste Plan), p. 97:

“Based on the WTE Options and Solid Waste Export Considerations of this Report and previous Memoranda, it is recommended that the County consider WTE in their future plans as an appropriate option to address the County’s long-term solid waste management needs.”

The Final EIS should take into account the assumptions, analyses, and findings contained in both the Arcadis and Normandeau Associates studies quoted above.

Unfortunately, the Draft EIS downplays the Arcadis study and the concept of credits:

“However, because of the uncertainty associated with the applicability or longevity of the utility and other credits, they are not included in the analysis of the alternatives.” (p. 8-5)

The Final EIS should include, such as the “other” credits received for recycling in the WTE calculations. Of note – the credits are for aluminum and steel cans that are diverted (recycled), fly ash, and energy credits. Evaluation of WTE options should assume that operationally they would employ “best practices” to fully optimize the benefits.

Table 8-2 is misleading. The Draft EIS has chosen to display the worst case scenarios for WTE and Export, yet portrays the best case (if not fantasy) scenario for the landfill by claiming there is virtually no GHG emissions. At the least, Table 8-2 should show the range of MTCO₂e that is possible by including the credits. For example, WTE TOTAL for 2028-2046, using tonnage from Table 1-4 (p. 1-20 through 1-21) MTCO₂e for the No Action Alternative utilizing the credits would be **(1,041,200)**. Export by rail totals would be **1,665,900 – 6,038,900**.

For comparison, since the recovered and flared landfill gas is not counted, but the fugitive gas is, one can estimate, using the Table 1 MRR report (shown in comments under 8.1.1.1) how much fugitive gas might be emitted for the 19 years after the landfill closes after 2028. Using the 2018 fugitive gas emissions of 68,422

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MTCO₂e, Total emissions would optimistically be **+1,300,018**. This is done just to show the relative value of WTE to fugitive emissions.

Fugitive emissions should be included in the tables showing GHG emissions for each alternative

“As shown in Table 8-2, waste disposed after closure of the CHRLF in 2028 under the No Action Alternative would produce a large quantity of GHG emissions with either long-term option: about 560,000 MTCO₂e per year for WTE and about 482,000 MTCO₂e per year for waste export.” (p. 8-6)

It is not clear how those numbers were derived, e.g, based on average tonnages for those years OR total from Table 8-2 just divided by number of years OR ??? **The Final EIS should make this clear and provide underlying rationale.**

Any calculations showing GHG emissions from WTE and Export should include figures *with* and *without* credits.

*“The GHG emissions associated with construction of a new landfill disposal area at an alternate disposal site or WTE facility as long-term disposal options would occur after closure of the CHRLF with any of the alternatives and are also considered indirect impacts. **These emissions were not quantified** because the potential difference between them is considered insignificant.” (p. 8-6)*

If *“these emissions were not quantified,”* then how can the statement, from p. 8-2, *“Similar emissions from construction equipment are created from the construction of regional landfill disposal areas or WTE facilities”* be claimed? Either they’ve been calculated or not. **The Final EIS must make this clear.**

8.2.1.2 Impacts Common to All Action Alternatives

“GHG emissions from operation of diesel- and gasoline-powered equipment for disposal operations would be the same for the intervening years at CHRLF or an out-of-county landfill between year of closure and 2046.” (p. 8-7)

Just to be clear --- WTE would have NO diesel or gasoline powered equipment (bulldozers, compactors, tractors, etc.) for disposal operations, so for this impact, WTE is far better than either landfill or export. **The Final EIS should better clarify this fact.**

There appears to be no table or emissions calculations for this particular GHG emissions operation – actual landfilling. Other tables show Off-Site Construction (Table 8-6) and Landfill Construction (Table 8-7), but no specifics for the landfill operations. **The Final EIS must include information/data.**

“GHG emissions from waste decomposition would be the same for all action alternatives and the No Action Alternative through 2028. Thereafter, once CHRLF closes under each action alternative, GHG emissions from waste decomposition and LFG control system operation would be the same for the intervening years at CHRLF or an out-of-county landfill between year of closure and 2046.” (p. 8-6)

Since the Draft EIS assumes fugitive emissions are negligible and all of the recovered and flared gas is biogenic and not counted, then it appears there would basically be zero GHG emissions for all years. **This false assumption must be corrected in the Final EIS.**

The Draft EIS does not indicate time between when waste is no longer taken and when the cells have final covers placed. It does not indicate in the Action Alternatives 1, 2, & 3 – the timeframe for WHEN the areas that are to be top lifted and closed will occur – before or after the new pits (Area 9 or NE Corner) are dug. The longer a final sealed cover is not installed, the more fugitive gas will leak. GHG emissions from landfilling would not be the same for all alternatives.

1. No Action: This would close ALL areas of the landfill and put final covers on all pits by 2028. By putting final covers on, the amount of fugitive gas is reduced.

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2. Alternative 1: Areas 5, 6, 7 & 8 would remain open (no final sealed cover), while area 9 becomes the active area. This allows fugitive gas to be released from all 5 areas, since final sealed covers would probably not be placed until after area 9 is full, around 2037.
 - a. The alternative is not clear as to *when* during the expected life Areas 5, 6, 7, & 8 final cover will be placed.
 - b. CHRL has practiced techniques to increase air space by stockpiling dirt to compress areas or just waiting while the pits naturally settle. To maximize airspace, it could be assumed that top lifting will be performed after Area 9 is complete, leaving these areas open until 2037 and leaking more methane.
3. Alternative 2: Areas 5, 6, 7, & 8 would remain open (no final sealed cover), area 9 would remain open longer than Alternative 1 as a result of the additional height and have more refuse due to the 43 acres (unless this is a typo in the draft and it should be 34) of development vs the 34 acres in Alternative 1, allowing more fugitive gas to be emitted over Alternative 1.
 - a. Top lifting of Area 8 would last longer than Alternative 1 because of the increased height to 830.
 - b. Top lifting would probably occur after Area 9 to allow for additional settling in the other areas. Additional fugitive gas will occur over No Action and Alternative 1.
 - c. Final closure covers would not be placed until at least 2038, leaking more methane.
4. Alternative 3: Since the order of when landfilling and top lifting will occur is unclear, it will be assumed that top lifting for all areas mentioned, will be done after the North east corner is filled and developed. At that point, all other areas have had the maximum time to settle and create more airspace in which to add waste. It has been the practice of CHRL to leave areas open, without final cover so they can go back and top lift the new airspace created from settling. This Alternative is the worst possible one for fugitive gas emissions because all the areas are kept “open” (no final sealed cover) until 2046.

The Final EIS must include details of *when* final covers will be placed with accompanying analyses in order to fully understand the impacts of fugitive GHG emissions. In addition, the Final EIS also must clearly state that the more waste is landfilled and the longer the landfill delays installing final covers, the more fugitive GHG emissions occur, as well as account for the fact that the landfill continues producing fugitive emissions long after the landfill closes.

Alternative 1, 2, & 3: Adding additional waste on top of previously closed waste cells *with* liners could jeopardize the liner’s integrity and cause leaks by adding undue stress, which could lead to lateral migration of methane from those old areas.

In a paper by *Ian D. Peggs, I-CORP International, Inc.* “GEOMEMBRANE LINER DURABILITY: CONTRIBUTING FACTORS AND THE STATUS QUO, 2003, <https://www.geosynthetica.com/Uploads/IDPigsUKpaper.pdf> it states, in regards to the High Density Polyethylene (HDPE) membrane in Municipal Solid Waste (MSW) landfills:

“Ultimate durability will be a function of the stress cracking resistance of the specific HDPE resin used, the effectiveness of its antioxidation additives, the stresses generated in the geomembrane during installation and landfill operation, and the stress relaxation rate.”

“Of the many HDPE geomembrane liners that have “failed” in the past 20 years, all have failed in a very limited number of ways, but none have just “worn-out” or generally degraded to nothing, nor is it expected that they will. However, our practical experience with HDPE geomembranes is limited to about 25 years.”

“HDPE liners in landfills and other applications fail or are made to fail as follows:

- Inadequate welding and attachment to structures*
- Imposed stresses during construction*
- Mechanical damage during construction*
- Stress cracking at stress points*
- Service stresses that separate welds”*

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The paper defines stress cracking as: *"essentially a brittle cracking phenomenon that occurs at a constant stress lower than the short term yield strength or break strength of the material."* Such structural phenomena are difficult to predict, especially when trying to account for ever-changing weather conditions over life of the membrane.

The liners were installed in 1986 for the Central Pit Refuse area, 1988 for Area 2/3, and 1991 for Area 4.

Alternative 3: This alternative proposes adding waste to a previous landfilled area that is unlined. The LOURA system they propose that will be placed on top of the old refuse area does nothing to protect migration of landfill gas laterally due to added pressure. In 2011, explosive levels of methane were found to have migrated to the western property line. It was believed the methane was migrating under areas 6 and 7. A portion of Area 6 overlies a portion of the unlined Main Hill Refuse Area. Potential migration of landfill gas, laterally from the unlined East Pit caused by pressure from Alternative 3 could be another source of fugitive GHG emissions.

8.2.1.3 Action Alternatives

Landfill Development

"Table 8-5 shows net GHG emissions for each action alternative with WTE and Waste Export by Rail compared to the No Action Alternative." (p. 8-8)

Again, using the MTCO₂e *without* the credits for either WTE or Export is misleading and disingenuous. **At the very least the table should have 2 more columns showing the values with credits.** This would show the range of possible GHG emissions. But to show only the absolute *worst* case scenario is to sabotage the process.

Table 8-5 clearly indicates the no action alternative with conversion to waste export vs. WTE results in lower GHG emissions for Alternatives 1 or 2 and identical emissions to Alternative 3 that continues operation of the landfill until 2046. When you add in the increased emissions for construction of new waste cells at the CHRL and relocation of existing facilities the result indicate the No Action alternative with a conversion to waste export is the best decision in terms of controlling GHG emissions and meeting the County's legislated goals. However, if Table 8-5 were to use GHG emissions including *credits*, then the No Action alternative with a conversion to WTE would be the best decision. **Table 8-5 fails to adequately delineate all GHG gases that are included in the table and is not transparent as to the figures used.** It must include credits, even if in a "range". The table must have a column showing GHG for CHRLF landfill activities, including details for fugitive gases, construction, off-site construction trips, & landfill disposal activities. Cumulative totals should clearly be stated. **The Final EIS must clarify this and the estimated Fugitive gas emissions from each alternative must be added to reflect all GHG emissions , as well as include emissions *with* credits.**

*"All action alternatives produce significantly more GHG emissions at CHRLF than the No Action Alternative. However, it is assumed that the GHG emissions associated with construction of a new landfill disposal area at CHRLF would occur similarly at a regional landfill or for development of a WTE facility with any of the alternatives after CHRLF closes." (p. 8-10, our **emphasis**)*

The bases for these assumptions, along with relevant data must be supplied in the Final EIS. For example:

1. For export, no data is provided for another landfill. The assumption is made that the another landfill would be identical in design and operation to the CHRLF. No data is provided for another landfill in terms of climate (e.g., potential export sites such as Eastern WA and Eastern OR are very different than Western WA), transportation services, etc.
2. To claim that a WTE facility would be similar to ANY of the alternatives after it closes only points to inadequacies in the Draft EIS. Given that Alternative 3 GHG emissions are estimated at 30,483 MTCO₂e, which is an additional 11,400 MTCO₂e over Alternative 2, or nearly 57% higher, to claim that WTE would be similar to *"them"* does not make sense.

Support Facilities

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"When support facilities are relocated, there would be a short-term increase in GHG emissions associated with construction equipment. The GHG emissions are expected to increase under action alternatives, including facility relocation options, at a similar level as for the No Action Alternative." (p. 8-10)

No data is shown for the GHG emissions support facilities construction, at a *"similar level as for the No Action Alternative."* What is that *"level"*?

*"The majority of employee and staff vehicles would go to the Renton site rather than to CHLRF. However, these vehicles are coming from various locations around the Seattle metropolitan area and **it is assumed** that the aggregate distance traveled to the Renton site would be similar to the aggregate distance traveled to the CHRLF." (p. 8-10)*

The Final EIS must describe on what are these Support Facilities assumptions based?

8.2.2 Cumulative Impacts

"Production of GHG associated with any of the alternatives, including the facility relocation options, when combined with other past, present, and reasonably foreseeable future global sources, could contribute to an incremental cumulative effect on climate change. Indirect beneficial impacts associated with WTE may reduce the cumulative effects on climate change." (p. 8-11)

In no way has the Draft EIS expressed the full **past** contribution and cumulative effects on this landfill to the environment.

- It has operated for 60 years.
- Only since 2008 has the captured landfill gas been sent to the BEW plant for processing to pipeline gas rather than flaring it. Up until then, it's been flared.
- No mention is made of how much fugitive methane has been released into the atmosphere.
- No mention of the major landfill gas pipeline breakage in 2013 that emitted toxic landfill gas into the atmosphere for 5 hours, at 10,000 cu ft / minute, forcing 2 families from their home. They eventually sold their property to KC. The break forced them to the hospital with severe symptoms from exposure to the gas.
- No mention of the numerous violations of emissions that have occurred over the years have been made.

The Final EIS should consider ALL aspects of past operations to evaluate the potential future impact, including frequency of violations and non-compliance.

The Draft EIS has not considered all impacts of the **future**, either. It assumes a fully compliant, 100% efficiently operated landfill using best practices with no issues. **Such an assumption is not credible and should be reassessed in the Final EIS.**

No consideration is given to the impacts that *could* happen; many of which could be disastrous to the environment.

- Earthquake – comments in this document don't address the impact on:
 - On the extraction wells, gas transport pipes, flares (1 operates 24/7) or the pipeline to BEW (it has ruptured once before in 2013). Breakage of any of these could be disastrous.
 - Integrity of the liners. Liners don't last forever. They can become brittle through chemical oxidation, develop tears, etc. and an earthquake could exasperate and weakness in the liners causing leaks of methane, leachate and garbage.
- Fires.
- Historical violations could be an indicator of future problems if they consistently occur.

The Final EIS should consider best case AND worst case scenarios for future impacts each alternative could impose.

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Landfills are the 3 largest man-made sources of GHG emitters in the United States. The Draft EIS does not mention that this is the largest *active* landfill on the West Coast. Puente Hills in California is larger, but is closed now. Locating or expanding a landfill in our wet climate is not recommended.

Due to faulty assumptions regarding negligible emissions compared to the U.S. and global emissions, the Draft EIS has neglected a set of emissions that are not negligible at all. Those emissions and cumulative impacts need to be included and discussed in detail in the Final EIS.

8.3 MITIGATION MEASURES (p. 8-11)

There is no additional mitigation measures proposed. The items mentioned are part of their ongoing operations and not new. It only mentions KCSWD would *"also seek other ways of achieving further reductions in GHG emissions."* The Draft EIS should be more specific concerning any additional mitigation efforts – Are they talking about landfill gas? Or vehicle emissions?

Also mentioned is *"purchasing carbon neutral offsets for all GHG emissions associated with replacement or upgrades of existing facilities"* (p. 8-11) as mitigation. While purchasing carbon neutral offsets can be a valuable aid to reducing GHG gases, there can be pitfalls if the offset purchased is not properly vetted. According to an article from Vox, <https://www.vox.com/2020/2/27/20994118/carbon-offset-climate-change-net-zero-neutral-emissions>, *"carbon offset projects have a long history of overpromising and underdelivering, threatening fragile progress on climate change."* **Specific offset projects should be identified in the Final EIS.**

"...and installation of interim and final covers with geomembrane liner material. KCSWD would continue these measures under all action alternatives and also seek other ways of achieving further reductions in GHG emissions." (p. 8-11)

CHRLF has not put final covers on areas 4 & 5 in order to create more "air space" by stockpiling dirt on these areas so additional waste can be added. To truly mitigate fugitive emissions from areas like this, they should put final covers on all areas when they are full. In addition, the "active 1 acre" sites should have 6 inches of dirt added as daily cover. Better gas monitoring is needed, above and beyond what PSCAA and other regulations state. Using aerial monitoring, whether from drones or planes should be used over the entire landfill on a regular basis (not just 4 times a year) and any leaks detected should be immediately fixed.

The strict federal and state regulations are not enough to truly mitigate fugitive emissions – frequency of monitoring is a problem. Regulations don't help AFTER the fact when violations, non-compliance, regulatory exceedences, and non-operational extraction wells occur – the damage is done. Monitoring monthly, quarterly, yearly, or even every 5 years in some cases, do not allow timely reactions to problems that could be ongoing until finally detected.

WTE plants are far stricter in regulatory requirements. WTE plants can measure everything that comes out of the stacks, and can measure it on a far more regular basis. Some plants take measurements constantly during the day. There is no question on what a WTE plant is emitting. And because of the constant monitoring, they can react on a timely basis to fix errors. On the other hand, landfills don't know what's coming out of the landfill on any regular basis.

The earlier comments assessing the faulty assumptions as to the efficiency of CHRLF gas collection system should be taken into account when proposing additional mitigation efforts. **Such mitigation measures need to be included and discussed in detail in the Final EIS.**

8.4 SIGNIFICANT UNAVOIDABLE ADVERSE IMPACTS (p. 8-11)

"Given the relatively small contribution of GHG emissions from the action alternatives compared to total US output from landfills and construction activities and total global output of GHG, no significant GHG-related impacts would be expected to result from these emissions. None of the alternatives or long-term disposal

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*options have any bearing on the continued production of waste in King County. Waste disposal will continue under some combination of the alternatives under consideration and the long-term disposal option selected by King County. **While all alternatives produce GHG emissions that are not significant in and of themselves, when combined with other global emissions, they would be anticipated to contribute to climate change.**" (p. 8-11, our **emphasis**)*

Comparisons to total global output are irrelevant. Similar to what was mentioned previously, *all* excess GHG emissions are impactful, especially Methane. To discount the effect is negligent. **The Final EIS must account for all excess GHG emissions.**

The statement we emphasized above seems to be contradictory to other statements made in the Draft EIS. On the one hand, emissions are compared to the global output and said to be insignificant, yet then states they would contribute to climate change when combined with the global emissions.

Any and all GHG emissions have long term adverse impacts on the environment. Landfills can continue producing methane for over 50 years once closed. **The Final EIS must account for this.**

The Final EIS must justify any assumptions made as to equivalency, models, and "similar" as to their use and inclusion in this analysis.

In general, the information presented in this section is inconsistent, vague in some parts, and somewhat misleading. Data tables should be more consistent in terms of units. A summary table should be included to show *all* aspects of the GHG emissions impact, including all alternatives and long term options; all facets including construction, transportation, operations, etc.; and move of facilities so comparisons can be made side by side. Statements such as: *"GHG emissions are similar"* should have data presented to back up this claim. **The Final EIS must address these deficiencies.**

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Human Health

9.0 HUMAN HEALTH (pp. 9-1 through 9-9)

The Draft EIS states:

“This environmental review determined that there would be no significant unavoidable adverse impacts to human health at CHRLF or the Renton site during construction or operation of any of the alternatives, including the facility relocation options.” (p. 9-1)

There have never been studies done to determine if there have been any associated health issues in the communities in the vicinity of CHRLF to justify that there are *“no significant unavoidable adverse impacts to human health.”*

Further, the Draft EIS's **HUMAN HEALTH** section is deficient in that it is *supposed to* bring together *all* the adverse sources that impact human health, such as Air and Odor; Surface Water and Groundwater; Noise and Vibrations; Aesthetics, Light, and Glare; etc.—all the subject of other *Environmental Element* sections of the Draft EIS; however, it does not discuss each of these, both individually and in combination, as they impact human health.

The Final EIS must rectify these omissions.

9.1 AFFECTED ENVIRONMENT (pp. 9-1 through 9-6)

The Draft EIS states:

“Potential exposure pathways relevant to the CHRLF are:” (p. 9-1)

It lists the three pathways to exposure as water, air, and disease vectors. Another vector should be added to the list – acoustical vibrations. During the construction of roadways, a dirt compactor was used that created a low, acoustical vibration that caused severe headaches in some people. Evidence exists that low frequency noise and vibrations can cause health effects. Research reported in the paper *Noise and Health – Effects of Low Frequency Noise and Vibrations: Environmental and Occupational Perspectives*, Kerstin Persson Waye, December 2011, https://www.researchgate.net/publication/258400137_Noise_and_Health_-_Effects_of_Low_Frequency_Noise_and_Vibrations_Environmental_and_Occupational_Perspectives states: *“Low frequency noise annoyance is related to headaches, unusual tiredness, lack of concentration, irritation, and pressure on the eardrum. Data suggest that sleep may be negatively affected.”*

The Final EIS must include additional human health impacts from these types of vibrations.

There is a long history of proven violations, lawsuits, complaints, questionable studies, mis-use of data by self-managed governing departments and agencies which continue to maintain a disregard of public and environmental health standards and enforcement since 1960.

It is clear by the evidence and the history that CHRLF gas and leachate (all are toxic waste) contaminate and pollute the environment and people, air, water, and ground. This combination of known and unknown toxins in the air, water and ground are forever more; impacting past, present, and future public and environmental health. The *cumulative* effects of long-term exposure to low levels of environmental contaminants and pollutants are excluded and, thus, ignored, in the Draft EIS. Chronic diseases are incited by these cumulative effects.

Below is but one example regarding the dangers of leachate and how it is handled by CHRLF:

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On 6/30/20, Darshan Dhillon, Solid Waste Program Supervisor Health & Environmental Investigator at Seattle-King County Public Health, e-mailed the following article: *“Leachate Management: Effectively Managing Landfill Leachate Odor Control with Permanganate,”* WasteAdvantage Magazine website to Jennifer Keune, Environmental Scientist III, Joan Kenton, Environmental Scientist III-TLT and cc'd Mark Monteiro SWD Operations Supervisor II. Mark Monteiro then e-mailed as FYI to Scott Barden, the CHRLF Interim Operations Manager for effectively managing landfill leachate odor control. The article link contained information stating (our *emphases*):

“leachate is acutely toxic when inhaled. Leachate production is a significant concern for municipal solid waste (MSW) landfills and causes substantial odor emissions that have negative health and environmental effects.”

This email verified scientific knowledge of landfill leachate and suggests an odor masking agent that removes the odor, but does NOT remove the toxins presenting adverse health and environmental effects.

Darshan Dhillon works in the Environmental Health Services Division (EHD), which focuses on *“prevention of disease through sanitation, safe food and water, proper disposal of wastes and toxics, and promoting safe and healthy environmental conditions throughout King County for the benefit of all residents and visitors.”*

Jennifer Keune and Joan Kenton work KC DNRP/SWD/FESS - Environmental/Permit Compliance and report to Neil Fuji, Managing Engineer, who, in turn, reports to Glynda Steiner, Deputy Director SWD, which *“Ensures compliance with regulations and permits that impact the environment while promoting environmental responsibility.”*

At a minimum, all these King County government departments/divisions are knowledgeable about the substantial landfill leachate emissions that have created cumulative past, present, and future substantial negative health Public health and environmental effects. As a County-owned, operated, and self-regulated landfill of 60 years, this is a grossly negligent demonstration of the failure to mitigate such impacts; and represents a disregard and lack of accountability for human and environmental life, health and safety, surrounding communities, school, parks, trails, etc.

Further, this contradicts the King County Equity and Social Justice Strategic Plan. <https://www.kingcounty.gov/elected/executive/equity-social-justice/strategic-plan.aspx>

The CHRLF *“normal operations”* continue to generate significant public and environment health impacts. We fear, in fact, that it is an ongoing public and environmental health crisis that can't be undone.

Since the Draft EIS falsely assumes that all existing controls in place preclude any human health impacts, the conclusions it draws—that no additional mitigation is needed for any of the alternatives—are flawed and must be rectified in the Final EIS.

9.1.1 Water Pathways

9.1.1.1 Cedar Hills

“Leachate is contaminated with various biological and chemical contaminants that are either contained in the solid waste or formed during solid waste decomposition. Leachate is captured through a system of pipes and pumps, conveyed to leachate aeration lagoons, and then conveyed to the KCWTD POTW for treatment and eventual discharge. Surface water that runs off the active face of the landfill is handled as contaminated stormwater and is collected in a separate conveyance system and routed through the leachate treatment system and to the wastewater treatment system.” (p. 9-2)

Not only are the emissions full of TAP compounds, the leachate itself should be considered as part of this study as it also contains biological and chemical contaminants. The fact that it is pumped offsite should not eliminate it from study, as it would now become a regional issue.

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“Landfill gas can contain trace amounts of toxic compounds that may be harmful to human health at high enough concentrations” (p. 9-2)

The question becomes what is *“high enough concentrations.”* The accuracy of the numbers used in the models to predict levels of TAPs comes into question. It appears they could have been understated.

9.2 ENVIRONMENTAL IMPACTS (pp. 9-6 through 9-9)

9.2.1 Direct and Indirect Impacts

9.2.1.2 Impacts Common to All Action Alternatives

This subsection essentially states there are no impacts; however, we have detailed many current and potential impacts in sections herein that discuss several, of the *Environmental Elements* addressed in the Draft EIS. Rather than repeating those concerns here, we refer the reviewer to those sections.

There will be human health impacts following CHRLF closure for *all* the alternatives to varying degrees due to closure dates and the length of operational periods. None of these are identified, nor discussed. **These must be addressed in the Final EIS.**

Landfill Development

Water Pathways

“Despite the lack of engineered bottom liners in the oldest areas of the landfill, routine monitoring shows that downgradient groundwater is in compliance for primary drinking water standards (KCSWD 2020) in the regional aquifer.” (p. 9-7)

For Action Alternative 3 it is proposed to add additional waste on top of the Main Hill, an unlined area. The Draft EIS addresses protecting the top line with a LOURA line system, but does not address the impact of adding tons of waste on an unlined area in regards to water drainage and seepage. Since the top liner of the Main Hill is not sealed to a bottom liner, it is not clear if additional pressure would push waste outward from under the protection of the top cover. If that were to occur, water could come in contact with the waste, causing contamination to areas below the waste. There are some homes on the eastern side of the landfill that use wells for their water. Any potential contamination of these wells will cause a health risk.

The Final EIS needs to address impacts on the unlined areas with regards to possible outward migration of the waste and water infiltration, causing any further contamination of the well water, perched or regional aquifer.

Since *“leachate is contaminated with various biological and chemical contaminants,”* it too should be considered another pathway to health impacts. Leachate is conveyed to King County Wastewater Treatment Division (KCWTD) Renton Public-owned treatment works (POTW) plant for *“treatment and eventual discharge.”* At the treatment plant it is treated and separated into treated water and *“LOOP”* (King County’s biosolid fertilizer) that is applied to farms and forest lands across the state.

In an email exchange between Janet Dobrowolski, resident, to Ashley Mihle, Compost Project Manager, Resource Recovery, King County: (our **emphasis**):

Janet Dobrowolski: Friday, June 21, 2019:

“How, exactly, do you remove dissolved chemicals from the water? If you can do that for some, where do the chemicals go, once removed?”

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"How do you extract the chemicals from the bio-solids? I assume you can do some but certainly not all. What do you do with any of the extracted chemicals? Are they trapped in the filters? What do you do with the filters?"

"I know Cedar Hills landfill produces thousands of gallons of toxic leachate each day that ends up at the South Plant. I also am aware that on occasion, there are exceedences for the chemicals. This stuff is highly toxic ----- Are you telling me you can remove the chemicals from this?"

Mihle, Ashley <Ashley.Mihle@kingcounty.gov> Thursday, June 27, 2019 at 5:13 PM

*"Thank you for the clarification around your questions, specifically chemicals in wastewater. The short answer is that nationwide, decades ago, wastewater treatment technology was **not designed to remove chemicals, it was designed to remove pathogens, so we do not specifically "filter" out chemicals. Doing so would require technology advances and costly equipment upgrades.** This is something that is considered in our planning efforts and technology assessments, but it is extremely difficult to do and expensive. Current biosolids regulations include only nine metals, not chemicals."*

*"Loop testing: We test Loop quarterly for **173 chemical compounds, many of which are EPA priority pollutants. We are not required to conduct this testing and we are not required to meet any limits,** but we do it voluntarily because we are committed to high product quality for our customers. EPA has repeatedly conducted biosolids surveys and risk assessments and found that biosolids are beneficial and do not pose negligible risk to human health and the environment. EPA does not require additional biosolids regulations beyond the 9 regulated metals. Out of the 173 compounds we test for, we detect 10-15 and at very low concentrations. In 2018, we detected only 11. As I mentioned below, those data are online."*

*"Cedar Hills Landfill leachate: The King County Industrial Waste Program is a federally delegated pretreatment program. Under this authority, the wastewater is **pretreated to meet our discharge limits,** with the final treatment occurring at the wastewater treatment plant. In the case of the Cedar Hills Landfill, the final treatment occurs at the South treatment plant in Renton. It is true that the Cedar Hills Landfill is encountering challenges getting some discharge parameters into compliance and they are currently under a compliance order from the King County Industrial Waste Program to do just that. The King County Wastewater Treatment Division monitors biosolids quality at our main treatment plants on a monthly basis to observe if there are any trends that could impact biosolids quality. To date we have not seen any trends of metal pollutants that have diminished the biosolids quality at the South plant from the Cedar Hills Landfill."*

"Lastly, Washington State requires beneficial use of biosolids (Chapter 173-308 WAC). This means we are required by state law to use biosolids on land to improve the quality of the soil, as a soil amendment, which we have done for more than 40 years."

Please note that Arsenic levels in the CHRLF leachate were not in compliance. Pretreatment is aeration of the leachate ponds.

Further, King County has admitted they cannot remove chemicals from the sewer sludge. Ms Mihle further explained in her email that any chemicals in the LOOP product was minute and not a problem:

"In 2016, we also tested Loop for pharmaceuticals, personal care products, and PBDEs (flame retardants) at an independent lab that specializes in these test methods, as part of a nationwide survey. At the minute concentrations in biosolids, plants generally do not take up these compounds, especially to the shoot or edible portion of the crop – and many degrade in the soil via microbial activity.

- PBDEs are persistent, but these compounds are present in our couches, carpets, etc. at far higher concentrations than in biosolids. Research shows that sometimes PBDEs stay in soil, and sometimes they are reduced in soil over time. Also that they are found in plant roots but not plant shoots.*

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- You would need to eat two Metro buses full of Loop biosolids to get the same amount of acetaminophen (Tylenol) as you'd get in 2 tablets. And you would not have occasion to eat any Loop at all.
- There is 3000 mg/kg of triclosan (antimicrobial) in toothpaste, which we put directly in our mouths – but only 10.4 mg/kg in Loop biosolids from South Plant. Again, you wouldn't be putting Loop directly in your mouth."

However, Ms. Mihle's comparison to Tylenol is not relevant when talking about highly toxic compounds. In addition, testing for personal care products is not relevant. Tests should have been done for more toxic substances such as Chromium VI, furans, dioxins, PFAs and others. Small amounts of those pollutants can be harmful to humans, as well as salmon, animals and plants. The comment about plants "*not taking up these compounds*" is not true.

According to a NIH (National Institute of Health) report: *Absorption and translocation of polybrominated diphenyl ethers (PBDEs) by plants from contaminated sewage sludge*, 08/03/2010, <https://pubmed.ncbi.nlm.nih.gov/20684973/#:~:text=The%20majority%20of%20PBDEs%20was,the%20ability%20to%20translocate%20PBDEs>:

"Our results suggest that absorption, accumulation and translocation of PBDEs by plants and their transfer to the food chain could represent another possible risk for human exposure."

A more persistent pollutant King County for which does not test is PFAs. Research shows PFA's as another pollutant that is a "forever" chemical found in biosolids. According to a NIH report: *Accumulation of perfluorinated alkyl substances (PFAS) in agricultural plants: A review*, 10/30/2018, <https://pubmed.ncbi.nlm.nih.gov/30502744/> (our **emphasis**):

*"PFASs have been shown to interact with blood proteins and are suspected of causing a number of pathological responses, including cancer. Given this threat to living organisms, we carried out a broad review of possible sources of PFASs and their potential accumulation in agricultural plants, from where they can transfer to humans through the food chain. Analysis of the literature indicates a direct correlation between PFAS concentrations in soil and bioaccumulation in plants. Furthermore, plant uptake largely changes with chain length, functional group, plant species and organ. **Low accumulations of perfluorooctanoic acid (PFOA) and perfluorooctane sulfonic acid (PFOS) have been found in peeled potatoes and cereal seeds, while short-chain compounds can accumulate at high levels in leafy vegetables and fruits.** Significant variations in PFAS buildup in plants according to soil amendment are also found, suggesting a particular interaction with soil organic matter. Here, we identify a series of challenges that PFASs pose to the development of a safe agriculture for future generations."*

The EPA Office of the Inspector General issued a report: *EPA unable to Assess the Impact of Hundreds of Unregulated Pollutants in Land-Applied Biosolids on Human Health and the Environment*, November 15, 2018, [https://www.epa.gov/sites/production/files/2018-11/documents/epaoig_20181115-19-p-0002.pdf?fbclid=IwAR0nOM6wMxQno1THBTGnBQ3A4rYqb9fxR2iOPG0_R_AuyhyXWzFch9wUue4#:~:text=Pollutants%20found%20in%20biosolids%20can%20include%20pharmaceuticals%2C%20steroids%20and%20flame%20retardants.&text=This%20is%20our%20report%20on,Environmental%20Protection%20Agency%20\(EPA\)](https://www.epa.gov/sites/production/files/2018-11/documents/epaoig_20181115-19-p-0002.pdf?fbclid=IwAR0nOM6wMxQno1THBTGnBQ3A4rYqb9fxR2iOPG0_R_AuyhyXWzFch9wUue4#:~:text=Pollutants%20found%20in%20biosolids%20can%20include%20pharmaceuticals%2C%20steroids%20and%20flame%20retardants.&text=This%20is%20our%20report%20on,Environmental%20Protection%20Agency%20(EPA)).

"The EPA's controls over the land application of sewage sludge (biosolids) were incomplete or had weaknesses and may not fully protect human health and the environment. The EPA consistently monitored biosolids for nine regulated pollutants. However, it lacked the data or risk assessment tools needed to make a determination on the safety of 352 pollutants found in biosolids."

The EPA's website mentions 400 pollutants, but still is not regulating any of them. The pollutants that are currently regulated are only metals: <https://www.epa.gov/biosolids/regulatory-determinations-pollutants-biosolids>

Biosolids might otherwise be safe if it were just human waste. However, that is not the case for King County's LOOP product due to CHRLF leachate being mixed into it.

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Biosolids are an unregulated source of pollutants that have not been determined to be safe for the environment and health. Research is finding more and more “forever” chemicals in the biosolids that have been applied as fertilizer and end up in our food chain. Dairy farmers are feeling the pressure as milk from the cows is now testing positive for PFAs because of food eaten that was grown with biosolids applied.

Given the uncertainty of the safety of biosolids produced with the leachate from CHRLF, the Final EIS must include this as a pathway to human health hazard. Furthermore, since the Draft EIS references the impacts to “regional” area throughout, leachate must be included because has wide ranging regional impacts when processed into LOOP.

Air Pathways

Toxic Air Pollutants

“As described in Chapter 4, modeled concentrations of TAP expected to be emitted through CHRLF operations under a worst-case scenario (Alternative 3 in 2047) are all below their respective ASILs.” (p. 9-7)

As discussed in our **Air and Odor** section herein, there is question as to the accuracy of the assumptions used in the models and the validity of the results. The LandGEM models produce concentrations of the TAPs that are likely highly understated.

The Draft EIS looks at *individual* ASILs for the TAPs, when it should be looking at them as a whole. Residents are not breathing in one chemical at a time, but rather they are breathing in up to 85 chemicals that are *individually* tested, but any potential interactions are not evaluated. Further, it is not known how many more chemicals may be in the fugitive emissions from the CHRLF and leachate that citizens are breathing in, because they are not on *any* list for testing.

The Final EIS must take this into account and how it affect human health.

“Based on this, human health impacts from toxic air pollutants generated by the landfill are not anticipated to be significant.” (p. 9-7)

CHRLF cannot definitively say: *“health impacts from toxic air pollutants generated by the landfill are not anticipated to be significant,”* simply because there is no proof of their significance or not. TAPs are labeled toxic for a reason. In researching nearly every chemical listed in *Appendix D* for fugitive gas and leachate emissions, the results are stunning as to the myriad of symptoms these chemicals can cause in humans.

Using the website *PubChem*, from the NIH, National Library of Medicine, chemical compounds information can be found, including the hazard classification, odor, toxicity, symptoms of exposure, carcinogenicity, and many, many more details. Analysis of 84 chemicals, including those listed in *Appendix D, Tables 2 and 3* for both the 24-hr and annual *De Minimis* and additional chemicals found in CHRLF stack test documents revealed:

- 57 were classified as irritants to combinations of eyes, nose, throat, lungs, and skin.
- 32 were classified as environmental hazards.
- 47 were classified as health hazards
- 27 were classified as acute toxic.
- 36 were classified as flammable.

Most had at least 2 classifications. Nearly all had odors associated with them. Thirty-one were either possibly, probably, likely or known human carcinogens, the rest were either not classified as carcinogenic, not evaluated, unknown, or inadequate information. Immediate symptoms associated with **inhalation** of those classified as irritants or health hazards include any or all of these, although this is not an exhaustive list:

Cough, sore throat, burning sensation, labored breathing, shortness of breath, nausea, dizziness, headache, weakness, vomiting, confusion, convulsions, lethargy.

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Other symptoms, such as cancer or chronic disease may not manifest itself for years. The fact that there *only* are 85 chemicals listed is cause for concern, given there are thousands of chemicals in the world, yet the State of Washington *only* regulates a small fraction of them—389.

Exposure, taken individually in a single instance is unlikely to cause any sort of symptoms. However, when exposed to the entire gamut of these chemicals, either in one odor event or over a long period of time, the effects can be quite adverse. Complaints submitted to PSCAA include symptoms such increased asthma issues, burning nose and throat, difficulty breathing, coughing and headaches.

The Final EIS must consider the TAPs as a *whole*, not simply compared to individual ASILs. The Final EIS also must take into account the probable *understatement* of the levels of these TAPs in the fugitive emissions as has been modeled. Lastly, the Final EIS must consider the potential effects of long term exposure – past, present and future.

9.2.1.3 Indirect Impacts

“A regional landfill accepting waste from the County is likely to be an existing facility with measures in place to control human health impacts, so significant human health-related indirect impacts associated with that landfill are unlikely to result from the County’s waste export.” (p. 9-8)

This same basic statement can be found repeated for nearly every *Environmental Element* throughout the Draft EIS. While true, what really matters are the impacts to human health related to keeping the CHRLF operating further out into the future beyond the No-Action Alternative’s 2028 closure. Unfortunately, the Draft EIS does not discuss this, but simply provides the link to the March 2019 *Comprehensive Solid Waste Management Plan Final EIS*, which looked at 16 alternatives, so it is not clear to which of these alternatives the Draft EIS refers. Consequently, the reader of the Draft EIS cannot review *“a more detailed description of potential impacts associated with the long-term disposal options.”*

9.2.2 Cumulative Impacts

The Draft EIS does not discuss human health *“cumulative impacts.”* It surmises that *“Cedar Grove Composting Facility historically has been a major source of odors in the surrounding community.”* Further, it only mentions odor and not any other human health impact. **This must be rectified in the Final EIS, which must include cumulative impacts related to all human health-related issues.**

9.3 MITIGATION MEASURES (p. 9-9)

The Draft EIS simply states:

“...KCSWD has been implementing best management and engineering practices in designing, operating, and maintaining environmental control systems, including disease vector control and the landfill gas, leachate, stormwater, and surface water systems.” and “With these controls in place, no additional mitigation measures are necessary.”

These statements clearly attempt to paint a picture of everything is working perfectly at the CHRLF in terms of limiting health impacts and, therefore, nothing needs to change as landfill life is extended for the three Action Alternatives out to 2046. Based on such false assumptions, the conclusions are flawed. **At a minimum, the Final EIS must address Mitigation Measures related to: (1) Capping, covering, and sealing the various areas and (2) Requiring all gasses, aerosols, and volatiles be captured, processed, and precluded from local release.**

9.4 SIGNIFICANT UNAVOIDABLE ADVERSE IMPACTS (p. 9-9)

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The statement, which comprises this entire subsection of the Draft EIS, provides no discussion whatsoever and is completely unacceptable:

“None of the alternatives would result in significant unavoidable adverse impacts to human health.”

The Final EIS must discuss significant unavoidable impacts and their ramifications for human health.

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Noise And Vibration

10.0 NOISE AND VIBRATION (pp. 10-1 through 10-16)

The Draft EIS does not adequately consider the quiet use of the Cedar River, Trails, and Natural Areas. Many residents use the area (parks, trails and lakes) around and across from CHRLF for getting away, reducing the stress of daily life and appreciating nature in its natural habitat. Noise, light, air and water pollutions can have adverse behavioral effects on wildlife; it affects native birds perching, nesting and feeding. Water pollution affects Salmonoids ability to return to spawn and lay their eggs. Air pollution, as evidenced with the 2020 fire season, adversely affects humans and animals ability to breathe.

The Draft EIS states:

“These studies included measurements of existing noise and vibration levels at locations around the perimeter of and on the landfill property and the Renton site.” (p. 10-1)

This implies the studies do not take into account that sound carries. Noise studies should be performed on local streets within at least a 1 mile radius (or more), because noise acts differently in a canyon environment than it does on a flat landscape. **The Final EIS should include such assessments.**

10.1 AFFECTED ENVIRONMENT (pp. 10-1 through 10-10)

10.1.4 Existing Noise Levels

10.1.4.1 Cedar Hills

The Draft EIS states:

“During the noise study of the North Flare Station conducted in 2013/2014 (King County 2014), the operation of the station’s large flares created low frequency sound that was visible on a spectrum analyzer, but it was not readily noticeable to study personnel who were on site.” (p. 10-8)

This proves that while audible noises may not be in a pitch that the human ear can hear, it does not mean it does not move the surrounding air. It is suspected that much of these sounds that cannot be heard are still recognized by humans and animals alike:

“Noise pollution is one of the most harmful ambiance disturbances. It may cause many deficits in ability and activity of persons in the urban and industrial areas. It also may cause many kinds of psychopathies. Therefore, it is very important to measure the risk of this pollution in different area.” (Iranian Journal of Public Health, Oct 2016 issue <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5149497>)

“In nature, sound frequencies below 200 Hz are signals of thunder, volcano eruptions, earthquakes, or storms – events that are likely to induce arousal or fear.... Human hearing in the low frequency range is, compared to the higher frequencies, less sensitive and has, for many years, led to the misconception that low frequency sounds are also less annoying. Today, it is known that low frequency noise has a great annoyance potential, and that some people seem to react adversely even to levels just above their hearing threshold. Factors inherent in most low frequency noises such as the throbbing characteristics, the intrusion of low frequencies felt when other frequencies in the sound are attenuated, and the vibration sensations sometimes felt contribute probably to annoyance.” (“Effects of Low Frequency Noise and Vibrations: Environmental and Occupational Perspectives,” published by KP Waye, Institute of Community Medicine and Public Health, Sahlgrenska Academy, Go`teborg University, Go`teborg, Sweden in 2011, https://www.researchgate.net/publication/258400137_Noise_and_Health_-_Effects_of_Low_Frequency_Noise_and_Vibrations_Environmental_and_Occupational_Perspectives)

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Noise studies need to include measuring decibel levels for moving vehicle alarms or changes in engine loading or hydraulics loading. The equipment used to manage the landfill operations do not idle 100% of the time, when the machine is put into reverse, it engages the “*backup beeper*” which has been known to emit 120 dBA. When the machine is required to perform an action, it takes more power to complete the action, when the power level is increased, so does the noise that is emitted – that increased level of noise needs to be measured and, if necessary, mitigated. **The Final EIS should address this.**

10.1.5 Existing Vibration Levels

Vibration travels through the air as a pressure wave. It also travels through water, which is about 800 times denser than air. Vibrations also travel through the ground. The ground, which is the lithosphere—the earth’s out plates—has varied materials with different compositions, and each of these have varied densities and react differently to the imposition of vibrations.

Examples of how different materials react can be readily found. One readily demonstrable example may be found in the setting of concrete. One can pour a layer and let it begin to set up, and walk on it. One can then expose it to a regulated vibration, and find the concrete will turn to liquid again. This property is used in laying concrete in large forms while successive batches are being poured in. It allows the mixing of successive batches, the rising out of air bubbles, and also allows the extension of the “*pot life*” of the material before it sets. Another place where this may be easily seen is where wet sand is placed in a large pail and heavy objects set upon it. When the large pail is vibrated, and the sand is vibrated also, the sand becomes “*liquefied*” and the objects then settle into the sand. This phenomenon may be seen in a process called “*liquefaction*,” where a seemingly stable layer of gravel, sand, and soil becomes disturbed by vibrations, it then becomes unstable and causes objects above to move and sink into this. But liquefaction events, due to earthquakes, are seemingly not often seen.

As stated above, serving as a preface, what is seemingly not discussed in the Draft EIS are the effects vibrations have on local geomorphology, e.g., the natural process of rock, clay, gravel, sand, and soils to flow from one place to another, as the earth changes shape over time. There are many questions that need to be addressed. How does “*vibration*” affect how water moves through rock, gravel, sand, and soils of this region? Can it affect the load bearing qualities of soils (etc.), and cause an increased rate of “*settling*.” Can vibrations affect certain kinds of soils, sands, etc. in a way that may cause an uneven movement within those features? Can it cause uneven settling in buildings, and thus cause a distorting or twisting in foundations and other support structures? How does this rate of distortion (or rate of change) differ from a state or condition where these vibration(s) may not be present?

While the Draft EIS provides some indication as to what a projected vibration velocity (in vibration dBs) may be at “*26 feet*,” it does not relate to the spectral frequency for the vibration created and how it relates to the natural frequencies and material strength, plasticity, and other “*cold flow*” movements over time within the lithosphere directly below and surrounding the CHRLF. **The Final EIS must assess these phenomena and the resulting impacts to vibration-caused noise levels both in the air and the grounds.**

Under the various alternatives assessed for the CHRLF in the Draft EIS, it is not clear what the effect will be of placing millions of tons per year of additional weight piled high on the geologic features of this canyon rim. Every material has a yield point, and an ultimate strength. Material properties change with the introduction of intrusions, with the addition of other materials (such as water, or lack of it). Material properties also change with “*cycling*,” and with the introduction of other factors (such as vibrations). Other factors may affect it as well, including such factors as stress concentration and point loading, stretch, and age.

Unfortunately, the Draft EIS does not address these phenomena, but rather presents a simplistic table of vibration source levels for construction equipment without providing any discussion. **The Final EIS must assess all known and expected vibration sources and how they reach and affect the Public and wildlife.**

Further, the Draft EIS clearly misses one important contributor to vibrations: Loud noise. As noise travels through the air, it is moving air, air movement that hits a physical thing, then can cause that thing to be continually hit with the moving air, hence creating a *vibration*. This can also happen through the much denser lithosphere. Vibrations move through the various layers and structures of different densities at different rates, and also bend and reflect.

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There are “*standing wave*” effects of vibrations on structures and the lithosphere. With regard to the impact of water concentration and movements, and its affects on density, strength, yield properties, elongation, etc., there is extensive literature on the phenomena such as liquefaction, “*settling*,” strength of stone, and stability of structures (e.g., mine shafts, caves, etc.). **The Final EIS should evaluate such varying sources of vibrations and their possible deleterious effects on nearby structures.**

10.2 ENVIRONMENTAL IMPACTS (pp. 10-10 through 10-14)

Due to the unique location of CHRLF within the Cedar River Canyon, much of the noise created can be compounded by the sound waves reflecting back from the canyon wall itself. Echoes bounce around in a canyon. Further, for the Action Alternatives, there is no way that an accurate noise study can be performed for any that involve rebuilding the site facilities and/or harvesting the trees from the property, since sound waves bounce off of physical items removal of items that absorb the sound waves is only going to increase the nuisance complaints about noise. **The Final EIS should account for these phenomena and the resulting environmental impacts.**

Further, the Final EIS also seriously must address the concept of “nuisance,” as described in: RCW 7.48.120 – Nuisance defined. (our emphases below):

“Nuisance consists in unlawfully doing an act, or omitting to perform a duty, which act or omission either annoys, injures or endangers the comfort, repose, health or safety of others, offends decency, or unlawfully interferes with, obstructs or tends to obstruct, or render dangerous for passage, any lake or navigable river, bay, stream, canal or basin, or any public park, square, street or highway; or in any way renders other persons insecure in life, or in the use of property.”

10.3 MITIGATION MEASURES (pp. 10-10 through 10-16)

10.3.1 Cedar Hills

Several mitigations are listed in the Draft EIS intended “*to bring noise levels within regulatory requirements.*” (p. 10-14). However, it is not clear each were technically assessed to determine if they can indeed do what is intended.

None of the mitigations proposed acknowledge the Cedar River canyon and undulating character of the grounds and the surrounding land features, and that many of the emission sources will be only partially effected (if at all) during their mobile operations. Similarly, no proposal has been made to “*residential package*” any of the vibration and noise emissions sources, and essentially isolate them from affecting their surroundings. Though the technology to almost completely isolate and quiet this equipment has existed and been in practical use for many decades, in many industries, the Draft EIS makes no reference to such technologies.

The Final EIS must assess each of the potential mitigation measures listed in the Draft EIS and determine their usefulness in meeting regulatory requirements, as well as explore other potential mitigation measures to address a myriad of Public common concerns.

The Final EIS a/so should evaluate and discuss:

- 1. The BEW, which has demonstrated exceedances and the HVAC (i.e., the cell tower that has fans that cause vibrations) in its noise studies, not only in near-decade-old studies from 2012.**
- 2. Harmonic vibrations as the cause from flare-stack rumbles, as identified in the 1999 lawsuit, as well as gas exceedances at the property line.**
- 3. New harmonic studies including, but not limited to, general operations and existing or potential equipment used at the landfill considering the various heights at which works is performed.**

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10.4 SIGNIFICANT UNAVOIDABLE ADVERSE IMPACTS (p. 10-16)

The statement below, which comprises this entire subsection of the Draft EIS, provides no discussion whatsoever and is completely unacceptable. In fact, it goes so far as to say that CHRLF noise will continue, yet theorizes that no impacts would occur.

“With implementation of mitigation measures described above, the communities surrounding the landfill would experience landfill noise for a longer period in the future under any of the action alternatives. However, no significant unavoidable adverse noise impacts should occur.”

This seemingly disregards the past history of complaints by surrounding neighborhoods and schools districts over health issues, etc., who have had to endure the community and wildlife degenerating slow expansion of an almost two square-mile parcel of land.

The Final EIS should not include such empty statements as quoted above, but must discuss significant unavoidable noise impacts and their ramifications.

As an example of just *one* instance of significant adverse impacts that should have been avoided, but were not:

Acoustical vibration-induced damage to two homes and resulting health impacts began 4/23/18 as a direct result of equipment used at the landfill for a construction project by Scarcella. Nearby residents suffered intense pressure in head, ears, ear pain, and headaches. These exceedances affected residents and animals, devastating to their homes and property. One homeowner took video (showed to Scott Barden, Interim Operations Manager, and Pat McLaughlin). The homeowner was present at the time of testing at the property line. The County’s sound consultant confirmed it would be a lot louder in their homes and buildings, bouncing off of them. The consultant stated sound travels in air molecules, called acoustical resonance.

Vibrations experienced became worse when KC SWD changed the compaction mode to a lower frequency/level. This was reported to Scott Barden and Tom Creegan. Vibrations continued off and on throughout the construction project. KC Ombudsman Elizabeth Hill became involved with Glynda Steiner, KC SWD Deputy Director, as KC SWD was not being responsive in effectively mitigating the substantial impacts. Glynda visited one home to see the damage and said she could see there were impacts and could smell the odor on the road. Unfortunately, Ms. Hill ceased assistance.

Damages were denied homeowners due to KC SWD’s claims that seismic motions could have caused problems, not any of its work. However, the damages were not caused by natural seismic motions, with which homeowners are familiar in this area and have experienced in the past. No mitigation measures were taken and KC SWD chose not do any studies to better understand the phenomena.

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Land and Shoreline Use

11.0 LAND & SHORELINE USE (pp. 11-1 thru 11-22)

11.1 AFFECTED ENVIRONMENT (pp. 11-1 thru 11-17)

11.1.1 Land Uses

11.1.1.1 Cedar Hills

Surrounding Land Uses

As the draft EIS states, the area immediately surrounding the CHRLF is predominantly single-family residences, with >1,200 homes within 1 mi of the property line. The impacts to these residences over the years has been large and continual. Such impacts will continue far into the future with the selection of any of the three Action Alternatives.

11.1.2 Land Use Plans, Policies, and Regulations

11.1.2.1 Cedar Hills

King County Comprehensive Plan Policies

Essential Public Facilities

The draft EIS cites *King County Comprehensive Plan (KCCP)* Policy:

“F-226 Proposed new or expansions to existing essential public facilities should be sited consistent with the King County Comprehensive Plan. Listed existing essential public facilities should be preserved and maintained until alternatives or replacements for such facilities can be provided.”

As discussed below under “*Rural Areas and Natural Resource Lands*,” this policy is not met in that the original siting and the continuous operation of the CHRLF violates multiple KCCP policies and, thus, is not “consistent” with said policies.

Management of Solid Waste

The draft EIS cites several KCCP Facilities Policies (**F-265** through **F-271**) that deal with the County striving towards zero waste by 2030 through waste reduction, recycling, reuse, etc. All are admirable goals and can only be achieved through the first step of selecting the *No Action Alternative* of closing the CHRLF by 2028.

Rural Areas and Natural Resource Lands

There is nothing in this subsection that applies to “*extending the useful life of the CHRLF*” either under the King County Comprehensive Plan’s (KCCP’s) **Chapter 3 Section III, Rural Densities and Development** or **IV, Rural Public Facilities and Services** that pertain to the CHRLF.

KCCP **Section III, Subsection D, Nonresidential Uses**, states (with our emphases):

“Although low-density residential development, farming and forestry are the primary uses in the Rural Area, some compatible public and private uses are appropriate and contribute to rural character. Compatible uses might include small, neighborhood churches, feed and grain stores, produce stands, forest product sales and home occupations such as woodcrafters, small day care facilities or veterinary services. In addition, it may be necessary to locate some public facilities in the Rural Area, such as utility installations that serve rural homes.”

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Any allowed nonresidential uses should be designed to blend with rural residential development and resource uses.”

The CHRLF is not “some public facilit(y),” it is a massive industrial operation sited in the middle of the Rural Area. It is not like “*utility installations that serve rural homes.*”

KCCP Policy **R-324** is not relevant to the CHRLF:

*“**R-324** Nonresidential uses in the Rural Area shall be limited to those that:*

- a. Provide convenient local products and services for nearby residents; [not the case here]*
- b. Require location in a Rural Area; [not the case here]*
- c. Support natural resource-based industries; [not the case here]*
- d. Provide adaptive reuse of significant historic resources [not the case here]; or*
- e. Provide recreational and tourism opportunities that are compatible with the surrounding Rural Area. [not the case here]*

*These uses shall be sited, sized and landscaped to complement rural character as defined in policy **R-101** and **R-201**, prevent impacts to the environment and function with rural services including on-site wastewater disposal.”*

KCCP Policies **R-101** and **R-201**, referred to in Policy **R-324**, do not support “extending the useful life of the CHRLF”.

*“**R-101** King County will continue to preserve and sustain its rural legacy and communities through programs and partnerships that support, preserve, and sustain its historic, cultural, ecological, agricultural, forestry, and mining heritage through collaboration with local and regional preservation and heritage programs, community groups, rural residents and business owners including forest and farm owners, rural communities, towns, and cities, and other interested stakeholders.”*

KCCP Policy **R-101** has nothing to do with “extending the useful life of the CHRLF.”

*“**R-201** It is a fundamental objective of the King County Comprehensive Plan to maintain the character of its designated Rural Area. The Growth Management Act specifies the rural element of comprehensive plans include measures that apply to rural development and protect the rural character of the area (Revised Code of Washington 36.70A.070 (5)). The Growth Management Act defines rural character as it relates to land use and development patterns (Revised Code of Washington 36.70A.030 (15)). This definition can be found in the Glossary of this Plan. Rural development can consist of a variety of uses that are consistent with the preservation of rural character and the requirements of the rural element. In order to implement Growth Management Act, it is necessary to define the development patterns that are considered rural, historical or traditional and do not encourage urban growth or create pressure for urban facilities and service.*

Therefore, King County’s land use regulations and development standards shall protect and enhance the following attributes associated with rural character and the Rural Area:

- a. The natural environment, particularly as evidenced by the health of wildlife and fisheries (especially salmon and trout), aquifers used for potable water, surface water bodies including Puget Sound and natural drainage systems and their riparian corridors;*
- b. Commercial and noncommercial farming, forestry, fisheries, mining, home-occupations and home industries;*
- c. Historic resources, historical character and continuity important to local communities, as well as archaeological and cultural sites important to tribes;*
- d. Community small-town atmosphere, safety, and locally owned small businesses;*
- e. Economically and fiscally healthy Rural Towns and Rural Neighborhood Commercial Centers with clearly defined identities compatible with adjacent rural, agricultural, forestry and mining uses;*
- f. Regionally significant parks, trails and open space;*
- g. A variety of low-density housing choices compatible with adjacent farming, forestry and mining and not needing urban facilities and services;*
- h. Traditional rural land uses of a size and scale that blend with historic rural development; and*

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i. Rural uses that do not include primarily urban-serving facilities.”

KCCP Policy **R-201** has nothing to do with “extending the useful life of the CHRLF” and, in fact, explicitly states “King County’s land use regulations and development standards shall protect and enhance the following attributes associated with rural character and the Rural Area: i. Rural uses that do not include primarily urban-serving facilities.” The CHRLF is a “primarily urban-serving facilit(y).”

Section IV, Rural Public Facilities and Services, states this section: “sets forth King County’s general approach to providing services and setting facility standards for the Rural Area and provides guidance for siting facilities that require Rural Area locations.” Policies **R-401**, **R-402**, and **R-403** are cited

“R-401 King County shall work with cities and other agencies providing services to the Rural Area and Natural Resource Lands to adopt standards for facilities and services in the Rural Area and Natural Resource Lands that protect basic public health and safety and the environment, but are financially supportable at appropriate densities and do not encourage urban development.”

KCCP Policy **R-401** has nothing to do with “extending the useful life of the CHRLF.”

“R-402 Public spending priorities for facilities and services within the Rural Area and Natural Resource Lands should be as follows:

- a. First, to maintain existing facilities and services that protect public health and safety;*
- b. Second, to upgrade facilities and services when needed to correct level of service deficiencies without unnecessarily creating additional capacity for new growth; and*
- c. Third, to support sustainable economic development that is sized and scaled at levels appropriate for Rural Areas and Natural Resource Lands and does not foster urbanization.”*

KCCP Policy **R-402** has nothing to do with “extending the useful life of the CHRLF” and, in fact, *paragraph c.* makes it clear that it was written for those facilities and services that actually support the Rural Area economy, which the CHRLF does not.

“R-403 In the Rural Area and Natural Resource Lands, standards and plans for utility service should be consistent with long-term, low-density development and resource industries. Utility facilities that serve the Urban Growth Area but must be located in the Rural Area or on Natural Resource Lands (for example, a pipeline from a municipal watershed) should be designed and scaled to serve primarily the Urban Growth Area. Sewers needed to serve previously established urban “islands,” Cities in the Rural Area, Rural Towns, or new or existing schools pursuant to R-327 and F-264 shall be tight-lined and have access restrictions precluding service to other lands in the Rural Area and Natural Resource Lands.”

KCCP Policy **R-403** has nothing to do with “extending the useful life of the CHRLF” and, in fact, simply discusses “utility service” or “utility facilities that serve the Urban Growth Area but must be located in the Rural Area.” The CHRLF primarily serves the Urban Growth Area and does not need to be located in the Rural Area.

Clearly, all the above KCCP Policies cited in the draft EIS as applying to “extending the useful life of the CHRLF” do not in any way do so. **The Final EIS must address these inconsistencies with the KCCP Policies.**

11.1.3 Zoning

11.1.3.1 Cedar Hills

Land Use Permitting

The *September 12, 1960, Special Permit* allowed development and operation of the CHRLF subject to four conditions:

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“1. A 1,000-foot buffer strip surrounding the entire site will be left in its natural state for the protection of the surrounding properties. There will be no sanitary operations in this strip other than access.

2. Access will be from Cedar Grove Road over a new right of way entering the property from approximately the Southeast corner.

3. The operation is to be a true sanitary landfill. Not an open garbage dump.

4. There will be no burning of garbage.”

Clearly, all the *Action Alternatives* would require Special Permit changes (or a new Special Permit). As the draft EIS points out, the applicable King County Code (**Title 21A.44.050**) that sets out criteria to be followed for Special Use Permits states the following:

“A special use permit shall be granted by the county, only if the applicant demonstrates that:

*A. The characteristics of the special use will not be unreasonably incompatible with the types of uses permitted in surrounding areas; **This criterion is not met by any of the three Action Alternatives.***

*B. The special use will not materially endanger the health, safety and welfare of the community; **This criterion is not met by any of the three Action Alternatives.***

C. The special use is such that pedestrian and vehicular traffic associated with the use will not be hazardous or conflict with existing and anticipated traffic in the neighborhood;

D. The special use will be supported by adequate public facilities or services and will not adversely affect public services to the surrounding area or conditions can be established to mitigate adverse impacts;

*E. The location, size and height of buildings, structures, walls and fences, and screening vegetation for the special use shall not hinder or discourage the appropriate development or use of neighboring properties; and **This criterion is not met by any of the three Action Alternatives, especially Action Alternatives 2 and 3, both of which would landfill some areas up to 830 ft.***

*F. The special use is not in conflict with the policies of the Comprehensive Plan or the basic purposes of this title. (Ord. 10870 § 626, 1993).” **This criterion is not met by any of the three Action Alternatives, as detailed under 11.1.2 above.***

The Final EIS must address these inconsistencies with the King County Code.

11.2 ENVIRONMENTAL IMPACTS (pp. 11-18 thru 11-22)

11.2.1 Direct and Indirect Impacts

11.2.1.2 Action Alternatives

Landfill Development

Consistency with Land Use Plans, Policies, and Regulations

King County Land Use Comprehensive Plan

The Draft EIS states that under KCCP **CHAPTER 9 — SERVICES, FACILITIES AND UTILITIES, II. Facilities and Services** in subsection **G. Essential Public Facilities** policies **F-228 through F-230** and in subsection **J. Solid Waste** policies **F-265 through F-271b** support CHRLF expansion *“...has been assured through the development and implementation of the Solid Waste Comp Plan.”* (p. 11-18) Simply preparing and approving the

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2019 Solid Waste Management Plan does not constitute “consistency” with the KCCP policies cited above. **The Final EIS must review each of these KCCP facilities policies one-by-one to assess such consistency and whether to not each are met, especially KCCP policies F-230 (required siting analyses), F-270 (environmental constraints), and F-271b (King County Equity Impact Review Tool).**

The Draft EIS states:

“King Comp Plan policies relating to Rural Areas focus on preserving the character of rural areas by discouraging the development of urban infrastructure and urban types and levels of development in rural areas. At the same time, the KC Comp Plan acknowledges that some non-residential uses require location in the Rural Area (Policy R-324), either because they directly serve rural residents or because of their intrinsic nature. The CHRLF, because it is intrinsically a land-extensive use, requires location in the Rural Area designation of King County. Sufficiently large parcels of land are not available in non-rural areas of the County.” (p. 11-19)

Once again, KCCP Policy **R-324** is not relevant to the CHRLF:

*“**R-324** Nonresidential uses in the Rural Area shall be limited to those that:*

- a. Provide convenient local products and services for nearby residents; [not the case here]*
- b. Require location in a Rural Area; [not the case here]*
- c. Support natural resource-based industries; [not the case here]*
- d. Provide adaptive reuse of significant historic resources [not the case here]; or*
- e. Provide recreational and tourism opportunities that are compatible with the surrounding Rural Area. [not the case here]*

*These uses shall be sited, sized and landscaped to complement rural character as defined in policy **R-101** and **R-201**, prevent impacts to the environment and function with rural services including on-site wastewater disposal.”*

All five limitations of KCCP Policy **R-324** on “(n)on-residential uses in the Rural Area” are not met. The Draft EIS states that “*the KC Comp Plan acknowledges that some non-residential uses require location in the Rural Area... because of their intrinsic nature*” However, **R-324** clearly does not state that, as it gives five limitations—all of which are not met by the CHRLF itself, nor its expansion. **The Final EIS must correct this error and re-evaluate KCCP policies.**

King County Zoning

The Draft EIS states:

“The characteristics of the special use will not be unreasonably incompatible with the types of uses permitted in surrounding areas.” and “The special use will not materially endanger the health, safety and welfare of the community.” (p. 11-19)

Yet, neither are being met for any proposed expansion of the CHRLF. **The Final EIS needs to seriously address these incorrect assumptions and land-use incompatibilities.**

11.2.1.3 Indirect Impacts

The Draft EIS states (our emphases):

“A WTE facility, located at a site in the county, could result in land use impacts, although the extent of any impacts would be highly dependent on the specific facility location and design. The County’s siting process to determine a location for a major facility such as an intermodal facility or a WTE would favor land use compatibility and consistency with applicable land use policies and regulations.” (p. 11-21)

It would be nice if all this were true, but there is no evidence it is. **The Final EIS needs to address exactly each of these statements emphasized above.**

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11.2.2 Cumulative Impacts

The Draft EIS states:

“Other foreseeable actions in the area of the landfill, such as additional residential development, would be expected to be compatible with surrounding land uses and consistent with applicable land use policies and regulations.” (p. 11-22)

It is not clear what the bases are for such “compatible” and “consistent” assumptions.

Although “cumulative impact” is not specifically defined in the SEPA rules, it is defined under Federal rules implementing the National Environmental Policy Act (NEPA). “Cumulative impact” is defined in the Council on Environmental Quality (CEQ) Regulations as the *“impact on the environment that results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions”* (40 CFR Part 1508). Washington courts have limited the requirement for cumulative impact analysis under SEPA, stating that an analysis of the cumulative impacts of a proposed project is not required under SEPA unless: (1) there is some evidence that the project will facilitate future action that will result in additional impacts, or (2) the project is dependent on subsequent proposed development. A project's cumulative impacts that are merely speculative need not be considered (*Boehm v. City of Vancouver*, 111 Wn. App. 711(2002) – Cumulative impacts).

The above applies to the CHRLF expansion. **The Final EIS must seriously address cumulative impacts as required by WAC 197-11-060 Content of environmental review.(4) Impacts (e).**

11.3 MITIGATION MEASURES (p. 11-22)

This section states:

“No measures are necessary to address potential CHRLF impacts on land use compatibility or land use policy and regulatory consistency other than those described in other chapters for potential impacts related to traffic, noise, air quality and odor, surface and ground water, and visual quality and light and glare. Impacts at the CHRLF site on housing, recreation, and historic and cultural resources are unlikely to occur, and no mitigation measures are needed.”

Actually, there are *“potential CHRLF impacts on land use compatibility or land use policy and regulatory consistency.”* As we point out above there is much inconsistency with KCCP Policies **R-101** (Rural Area heritage and preservation), **R-201** (Rural Area character), **R-324** (non-residential uses in the Rural Area), and **R-401**, **R-402**, and **R-403** (all dealing with Rural Area Public Facilities and Services).

The only mitigation available to rectify the inconsistencies of siting the CHRLF in the Rural Area with KCCP Policies is to close it as soon as possible. The draft EIS's “No-Action Alternative” is the only option identified that comes closest to doing so.

The Final EIS must address these inconsistencies with the KCCP Policies.

11.4 SIGNIFICANT UNAVOIDABLE ADVERSE IMPACTS (p. 11-22)

This section states:

“With implementation of mitigation for potential impacts related to traffic, noise, air quality and odor, surface and ground water, and visual quality and light and glare, further development of the CHRLF under any of the alternatives would be consistent with King County land use policies and zoning regulations. All of the alternatives are unlikely to result in significant unavoidable adverse impacts to land use or cultural resources.”

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We discuss such “*mitigations*” in each of the other **Environmental Element** sections herein. **Again, herein we have documented many inconsistencies with KCCP policies that need to be recognized and addressed in the Final EIS.**

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Transportation

13.0 TRANSPORTATION (pp. 13-1 through 13-42)

13.1 AFFECTED ENVIRONMENT

The affected environment is *inadequately* described for traffic purposes in three significant ways:

SR 169 Corridor between I-405 and SE Cedar Grove Rd is not fully discussed

For traffic purposes, the affected environment described includes only three signalized intersections on SR 169, at I-405 and at SE Cedar Grove Rd (*Table 13-1, p. 13-3*). It fails to account for four other signalized intersections on SR 169 between those termini:

- 140th Ave SE,
- 149th Ave SE,
- 154th PI SE, and
- 196th Av SE.

Every vehicle traveling to/from the site and I-405 uses that entire length and impacts these intermediate intersections. **Absent any attention on these intersections, the discussion of background conditions, cumulative impacts, indirect impacts, and unavoidable adverse impacts is plainly incomplete. This would need to be rectified in the Final EIS.**

13.1.3 Traffic Operations

Background traffic growth on SR-169 and other affected roads is inadequately discussed

The analysis of future traffic conditions understates future travel demand for SR-169 due to the methodology chosen (details below), and, thereby, understates the adverse traffic consequences of unavoidable future growth for that highway. The methodology used allocates the remainder of future demand for that highway to other arterials without revealing those impacts. Adjustments are needed to show the true state of total future travel demand on SR-169 and alternative routes serving the surrounding region. This is necessary to provide a fair description of cumulative impacts, indirect impacts, and unavoidable adverse impacts beginning with the No Action Alternative. **This would need to be rectified in the Final EIS.**

13.1.5 Construction

Construction impacts are inadequately treated

The discussion of traffic impacts of construction similarly relies on the wider arterial network surrounding SR-169 without revealing the impacts thereof. The text states (p. 13-42) that mitigation for construction truck traffic impacts would consider *“not routing all [construction truck traffic] via SR 169 to reduce impacts at the intersection of SR 169/SE Cedar Grove Road.”* In the Final EIS the potential routes to be used as substitutes for SR-169 must be identified and evaluated for the impacts of construction traffic on those alternate routes as well.

13.2 ENVIRONMENTAL IMPACTS

The transportation impacts of all alternatives have been *inadequately* accounted for as follows.

SR-169 Corridor between I-405 and SE Cedar Grove Rd

The site trip distribution maps in *Appendix J - Transportation* show 80% of King County hauls (Fig. 4-1) and 60% of commercial hauls (Fig. 4-2) travel on SR-169 between the site and I-405. But the traffic analysis fails to consider conditions at four signalized intersections between those termini – intersections which are known to

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experience high congestion at present and for which further increases in traffic volumes are expected as the surrounding region is growing.

Moreover, the traffic operations on SR-169 road segments between intersections are not discussed – most notably the highly congested two-lane portion from SE Cedar Grove Rd to the beginning of the four lane section slightly north of 196th Ave SE. Existing traffic counts were included in *Appendix J - Transportation* for two of these four intersections, but inexplicably they were not evaluated for level of service (LOS), nor for traffic accident histories. These four additional SR 169 intersections must be accounted for in the EIS in order to fully account for existing conditions and cumulative and indirect impacts due to background growth as well as direct site impacts and potential mitigation for any of those impacts.

Both of the above omissions must be addressed in the Final EIS.

Background traffic growth on SR 169 and other affected roads

All future-year traffic analysis is based on traffic volume forecasts produced by traffic forecasting models. Traffic models in turn rely on various technical and policy assumptions. Some of the undocumented underlying assumptions must be *reconsidered* because the forecasts of future traffic volumes are unreasonably low. The result is the description of future traffic flows on SR-169 falling within acceptable boundaries per adopted LOS standards, whereas both the public perception and actual traffic data of that highway show high congestion already existing, which will surely degrade to worse in the future since the surrounding region is growing.

The underlying assumptions of the traffic forecasting models and methodology described in *Appendix J - Transportation* must therefore be described in detail so as to support the forecast conditions that result, or revise the forecasts if the assumptions cannot be justified (see next paragraph). At p. 13-42 the assumptions are refuted by stating the I-405 ramp intersections will unavoidably operate in the future with unacceptable delays as depicted by LOS E or LOS F with all Action Alternatives and the No-Action Alternative, but **turns a blind eye to any other issues in the entire SR-169 corridor from I-405 to SE Cedar Grove Rd and, as such, must be rectified in the Final EIS.**

More evidence of questionable assumptions is found in *Appendix J - Transportation*. Adding up the directional turn volume data in *Appendix J - Transportation* Figs. 4-7, 4-9, and 4-23 produced the following results. The Existing volumes were compared to the *Design Year (2040)* volumes on SR-169 just north of the Cedar Grove Rd intersection. Total two-way future volumes rise by just 13% in the AM Peak Hour (1340 existing, 1520 future) and 24% in the PM Peak Hour (1605 existing, 1994 future). These growth factors are low compared to PSRC land use forecasts for the cities of Maple Valley, Covington, and Black Diamond (source: *VISION 2040* Land Use, FAZ's 3310 and 3320). These PSRC population and employment growth trends imply roughly 40% growth of trip generation in those cities by 2040. Still worse, Black Diamond has an adopted growth plan that adds about 6,000 more homes to that PSRC vision, grossly exceeding its prescribed Growth Targets. **The Black Diamond plan is likely not included in the background growth forecasts of the traffic model, but should be, as the Final EIS is prepared.**

It is, therefore, not credible that future demand on SR -169 would not fall in a range closer to the 40% level beyond existing volumes. That in turn suggests future delays and LOS much worse than described. **The Final EIS must address that concern and explain where the amount of future demand has been allocated by the traffic model, and also to discuss a future scenario wherein all the “latent demand” for travel via SR-169 is assigned to that highway instead of other alternative routes.** That future situation is of course attributable to the No-Action Alternative, not the three Action Alternatives, but that future situation needs to be assessed to provide the right foundation for evaluation of the latter.

The behind-the-scenes allocation of excess demand to alternative corridors is a well-known aspect of traffic forecasting models. Traffic forecasting models use the power and speed of computers to apply a procedure known as “*capacity restrained assignment*” to assign all trips through a road network via multiple competing routes. This method tends to spread total traffic demand across all available routes in rough proportion to their capacities, aiming to produce an equilibrium of travel times between competing routes. Since no new lanes have been assumed for SR-169 (nor are they planned for), its capacity does not change between Renton and Maple Valley for the duration of the study period. But future demand for that corridor is ever increasing – at least the 24%

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that the analyses state for the PM Peak Hour and, more likely, something akin to the 40% traffic growth that is implied by the PSRC land-use vision for the three cities named above. Due to that set of input assumptions, the traffic assignment model is apparently allocating some of the future demand for SR-169 to other less congested roads. A simple glance at a road map will confirm that the most likely alternative routes (depending on which trip origins and destinations are considered) are Issaquah-Hobart Road and 196th Ave SE. To a lesser degree, diversions from SR-169 could make use of SR-516 (Kent-Kangley Rd), SR-18, and 140th Ave SE as well. **All these routes must be accounted for in the Final EIS.**

This is no idle speculation. Residents of southeast KC are well aware traffic volumes are increasing on local arterials, even where no local land use changes have occurred. **This is direct evidence of an existing pattern of steady traffic diversions away from SR-169, due to the serious existing congestion problems in the SR-169 corridor. In the future, such diversions will surely increase, since SR-169 is not assumed to be expanded within the time period addressed—this must be recognized in the Final EIS.**

The diversion effect of capacity restrained assignments is generally thought by traffic modelers to depict how drivers would act in consideration of relative congestion levels on alternative routes. It also corresponds inversely to the phenomenon known to the public as “if you build it they will come.” This is called “latent demand” by transportation engineers. It describes the common situation that arises when a given road is expanded, such as by adding lanes for more capacity. Immediately after the road is opened, traffic volumes will suddenly jump up seemingly from nowhere. Traffic modelers familiar with capacity restrained assignments understand that the “latent demand” for the improved road is not new trips arising from nowhere, but existing trips that were using other alternative routes until the day the road was opened with higher capacity. Clearly, this well known phenomenon presents a problem of logical interpretation for environmental analysis.

The policy choice not to raise capacity on SR-169 before the Design Year 2040 is implied in the description of the No-Action Alternative, but the consequences with respect to “latent demand” and impacts on alternative routes is not disclosed, nor evaluated. Therefore the Draft EIS is deficient for not showing how surrounding area growth creates demand for use of SR-169 that cannot be served in the No-Action Alternative nor for all future Action Alternatives. There is no presentation of the end result — that adjacent arterials are being put into service as substitutes for that highway — to the detriment of the quality of life of those living along or near such roads. SR-169 is in fact classified as a *Highway of Statewide Significance*, and should carry all the intercity traffic that would want to use it rather than divert some of that traffic to other routes for lack of capacity on SR-169 itself. This can be viewed as an issue of social justice as well, whereby rural area residents are made to bear the traffic impacts of growing amounts of through travel between cities via local arterials rather than on the primary regional routes. **These concerns , along with their ramifications, must be addressed in the Final EIS.**

The description of the No-Action Alternative should assign all the “latent demand” to SR-169 and show the no action future for that highway as operating with more congestion and lower LOS ratings than have been presented in this Draft EIS, and then describe the diversion of excess demand to other corridors as the *de facto* policy mitigation for that adverse future. **This would greatly modify the discussion of cumulative impacts and unavoidable adverse impacts, which must be done in preparation of the Final EIS.**

It follows logically that if the No-Action Alternative is a scenario with insufficient capacity on SR-169 to serve all demand on SR-169, then the addition of the traffic associated with any of the Action Alternatives will cause a further diversion of SR-169 demand onto other already congested routes. **The Final EIS will need to identify this impact and measure it using the ordinary measure of traffic delay found in every level of service analysis – but apply it systematically to all the affected road network, not just selected portions cherry-picked from the whole.**

Construction impacts

The Draft EIS discussion of mitigation for construction impacts directly confirms that congestion on SR-169 is indeed a current problem known to WA State Department of Transportation (WSDOT) and to KC. That text states “...consideration would be given to not routing all traffic via SR 169 to reduce the impact at the SR 169/SE Renton Maple Valley Highway/Cedar Grove Road SE intersection.” (emphasis added)

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In the Final EIS all site-related traffic - whether for construction or for ongoing operations - must be described for all alternatives as an additional impact on an already overburdened highway.

13.3 MITIGATION MEASURES

SR-169 Corridor between I-405 and SE Cedar Grove Rd

The Final EIS should address mitigation of impacts for the entire corridor along SR 169 between SE Cedar Grove Rd and I-405, and not, as the Draft EIS has done, disregard the four additional intersections identified previously. Since some or all of the intersections in that corridor are or will be operating at or below level of service standards in the future, it is not acceptable to simply calculate a percentage of impact and dismiss the impacts at each intersection on a case by case basis, and declare that none are significant. Some form of mitigation is appropriate to account for the corridor-long increase in delay that results from the impact of the Action Alternatives. One such possibility is to provide an improvement at any one intersection in the corridor (such as right turn lane, left turn lane, etc) to reduce aggregate delay throughout the corridor to the level of the No-Action alternative. **These issues must be addressed in the Final EIS.**

Background traffic growth on SR-169 and other affected roads

The Final EIS will have to carefully separate the direct and indirect impacts of the Action Alternatives on the SR-169 corridor and on alternative roads, so that the adverse impact on other roads as well as SR-169 is included and quantified, not by volumes or LOS brackets, but by aggregate delay accumulated across all affected roads. **The Final EIS should identify mitigation consisting of one or more improvements, such as adding turn pockets at key intersections, to reduce aggregate delay to the level of the No-Action Alternative.**

Construction impacts

The Draft EIS discussion of mitigation for construction truck traffic impacts (p 13-42) includes consideration of *“not routing all [construction truck traffic] via SR 169 to reduce impacts at the intersection of SR 169/SE Cedar Grove Road.”* A simple map inspection will reveal that the available alternative routes to/from the CHRLF site are exactly two: SE Cedar Grove Rd to/from the east and Lake Francis Rd SE to/from the south. Both of these routes could potentially connect with areas south of the landfill site, via Issaquah-Hobart Rd or SR-18. But any truck traffic going north on Issaquah Hobart Rd would be forced to follow May Valley Rd to SR-900, since Issaquah does not allow trucks to enter the city from Issaquah-Hobart Rd.

Neither Lake Francis Rd nor May Valley Rd is classified for such purposes, nor constructed to a standard for serving large numbers of trucks. The Draft EIS is remiss for not identifying that these routes are in consideration to be used as *substitutes* for SR-169, and for failing to address the traffic impacts on those routes of adding construction traffic to alleviate SR-169.

The Draft EIS mitigation statement about seeking ways to avoid SR-169 is itself clear evidence that the congestion problems on that highway are in fact well known to WSDOT and KC. This gives further credibility to the concerns expressed previously about **properly describing the full future demand on SR 169 and its alternative routes, as must be done in the Final EIS.**

13.4 SIGNIFICANT UNAVOIDABLE ADVERSE IMPACTS

The Draft EIS contends there remain no significant and unavoidable impacts to traffic for any of the Action Alternatives compared to the No-Action Alternative, after assuming the provision of a right-turn lane at the intersection of SR-169 and SE Cedar Grove Rd. But the Draft EIS has failed to account for many of the other impacts in the SR-169 corridor from that intersection to I-405, and failed to even document conditions on any of several alternative routes which carry some of the regional traffic that SR-169 cannot for lack of capacity. It is not acceptable to simply ignore the pervasive addition of such impacts to a number of locations in the surrounding area. Failing to discuss those situations does not support a conclusion that there are no impacts nor that they are unavoidable. **This must be recognized and rectified in the Final EIS.**

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If those situations are identified, documented, and evaluated systematically, it will become clear that there is a systematic increase in delay throughout the road network due to the addition of the proposed action's traffic onto an already heavily loaded and sometimes overloaded road network. Delay information is available in the technical documentation for every intersection and road segment between intersections. It is only necessary to expand the scope of analysis to account for the entire affected road network, add up the incremental contributions at each and every location, and then devise a suitable mitigation project to inject a delay savings of comparable magnitude into the system, such as intersection upgrades at any of several intersections in the SR 169 corridor itself. **The Final EIS should address this.**

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V. OPTIONS

...Common Landfill Development Activities...Post-Closure Options

Common Landfill Development Activities

The Draft EIS's Section 2.3.1 states the following (our emphases):

"All action alternatives assume that existing landfill disposal Areas 5, 6, and 7 will be filled to a height not to exceed 788 feet above mean sea level and permanently closed, and Area 8 will be filled to a height of 788 feet above mean sea level. These activities constitute landfill development components of the No Action Alternative discussed in Section 2.4.1. The action alternatives are designed to expand the capacity of the landfill beyond that of the No Action Alternative by developing new or expanded disposal areas, leading to increased years of life.

The following landfill development would occur under all action alternatives:

- **Development of a new refuse area:** For all action alternatives, construction of a new landfill disposal area would occur in the southeastern corner of the landfill (proposed Area 9) that contains the existing landfill support facilities and would extend east to the Southeast Pit, north to Area 6, west to Area 8, and south to the BPA easement. Before any landfilling, the area would be prepared with a liner system and other environmental controls as described in Section 2.3.1.1. All action alternatives would develop additional landfill capacity to at least 800 feet above mean sea level in Areas 8 and 9.

- **Excavation/relocation of soil and solid waste, and soil surcharging:** Each action alternative would involve the excavation and relocation of a substantial amount of soil. The clean soil (i.e., soil free of solid waste) would be stockpiled and used for landfill cover material – either as daily cover on the active face of the landfill or interim/final cover on areas being prepared for closure. This soil would be stored for use on site by stockpiling it over previously filled areas as a soil surcharge.

Soil surcharging involves placing soil in stockpiles 20 to 30 feet high over previously landfilled areas to increase and accelerate the rate of settlement. After surcharging, the soil stockpile and interim cover would be removed, and additional solid waste could be placed in the disposal area, before the placement of final cover. The surcharge soil would then be used as daily or final landfill cover material. Soil stored on closed areas would be removed and used as daily or final landfill cover material.

At no time during stockpiling or surcharging would the maximum elevation of those areas exceed 830 feet above mean sea level; soil surcharging or stockpiling would not exceed 788 feet above mean sea level in Areas 5, 6, and 7. Soil that is mixed with solid waste will be sorted on-site to separate the materials and recover any clean soil that can be reused at the landfill. Material not recovered for reuse, and any unsorted materials, would be disposed of in the active area of the landfill each day." (pp. 2-10 through 2-11)

It is clear that *prior* to closure under any of the Action Alternatives there will be major activities continually underway at the CHRLF far beyond the "soil surcharging or stockpiling" described above, which alone is called "substantial."

These *pre-closure* major activities include creation of additional areas for refuse, which will result in larger footprints for more surface water runoff; continual operations creating noise/vibrations, odors, GHG emissions, and, thus, additional impacts to human health; extension of traffic impacts along major roads and at several key intersections; and ongoing impacts to plants and animals. Yet, none of those continuing impacts *prior* to closure for each of the Action Alternatives are discussed in the Draft EIS.

The Final EIS must identify and address all of these impacts for up to 18 years all the way up to the planned closure of Action Alternative 3 in 2046.

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Post-Closure Options

The *post-closure* options presented in the Draft EIS and provided by the 2019 Comprehensive Solid Waste Management Plan are described as:

"Waste export by rail to a regional landfill"

or

"Waste-to-energy (mass burn) facility located somewhere in King County."

The Draft EIS states under subsection 1.7 **How This EIS Analyzes Impacts** the following (our *emphases*):

"For each element of the environment (Chapters 3 through 14), the potential direct, indirect, and cumulative impacts for each alternative are evaluated and compared to the No Action Alternative to the point at which each alternative reaches capacity. However, in order to compare equally the potential impacts from the action alternatives and the No Action Alternative over the same period into the future, this EIS considers potential impacts in the intervening years between the estimated year of capacity for the No Action Alternative and Action Alternatives 1 and 2, and 2046, which is the estimated capacity year for Action Alternative 3. This necessarily involves documenting potential indirect impacts associated with the alternative long-term disposal options under policy consideration. For each element, a qualitative summary of these indirect impacts is provided for ease of comparison, with more detailed discussion of potential impacts located and incorporated by reference herein, in the Final EIS for the 2019 King County Comprehensive Solid Waste Management Plan...." (p. 1-22)

In section **IV. ENVIRONMENTAL ELEMENTS** herein we have detailed many omissions in the Draft EIS—which we do not repeat here, including *"impacts associated with the alternative long-term disposal options under policy consideration."* **Such omissions should be rectified in the Final EIS.**

Also, as highlighted above, the Draft EIS simply provides the link to the March 2019 *Comprehensive Solid Waste Management Plan Final EIS*, which evaluated 16 alternatives, so it is not clear to which of these alternatives the Draft EIS refers. Consequently, the reader of the Draft EIS is at a disadvantage because he or she cannot review *"a more detailed description of potential impacts associated with the long-term disposal options."*

Further, we see flaws in the post-closure options—Waste-to-Energy (WTE) and Waste-Export-By-Rail (WEBR)—under consideration. According to the *Waste-To Energy and Waste Export by Rail Feasibility Study*, Arcadis, 2019 (our *emphases*):

WTE:

"Modelling lifecycle GHG emissions for a WTE facility is complex and depends heavily on the assumptions utilized for offsets due to recovered materials and energy generation. However, with or without offsets, WTE has known anthropogenic (fossil fuel-based) GHG emissions for every ton of MSW combusted. Even with offsets for recovered materials, WTE will likely require carbon capture and sequestration technology installed in order to remain viable past deadlines in 2030 and 2045 for carbon neutral and non-emitting utility sources mandated by the Washington State legislature. These GHG capture systems are on the cusp of commercial viability, but would be the first of its kind installed in a commercial fashion on a WTE facility in the US. If complications arise with installation or operation of the system, it could have associated long-term risk of non-compliance with State law, if the law remains unchanged. Those risks are complex and are discussed further in Section 3.9 and 3.11. However, if carbon capture was completely non-functional, the County would be required to purchase off-set credits off the open market (this market does not yet exist in a sophisticated manner), lobby Washington regulators to provide a carve-out similar to the one that exists for the Spokane facility, or show that the facility's offset credits (as shown in the WARM model analysis section) make the facility GHG neutral in order to continue selling electricity in the Washington market after 2030. After 2045, all utility retail electricity is mandated to be from non-emitting and renewable resources. It is possible that this

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could be ameliorated by lobbying to include MSW as a renewable source and the commercial market perfecting flue gas capture prior to 2045, and as the legislation currently only applies to regulated utilities, it is possible that the County could self-wheel power to its own facilities and/or buildings in the future and save enterprise costs rather than sell on the open market.” (pp. ix-x)

It is clear from the above that much depends on the viability of technology for carbon capture, which is near non-existent today, thus increasing implementation and costs risks substantially. Added to these risks are the near non-existent carbon offset credit market, which, unfortunately, is very much dependent often on political whims, not on science. The conclusions reached in the above study rely on some very shaky assumptions and political maneuvering and do not constitute a comprehensive set of engineering technical conclusions on which to base further recommendations for action.

WEBR:

“WEBR costs have a high potential for future escalation due to the limitations in existing rail capacity and the potential monopoly effect if an IMF served by both rail lines cannot be found, reducing competition during future re-negotiation of the initial contract. These risks are not built-in to the current pricing comparison and represent a large unknown for future disposal cost and solid waste rate impacts....GHG estimates of WEBR depend on the waste composition used in the analysis and whether or not carbon sequestration credits for landfilling non-degradable biogenic wastes are included in the analysis. Carbon sequestration credits applied to a landfill is a controversial topic and there is no clear consensus on this issue,...”

It is clear from the above that significant costs risks also are associated with WEBR including *“(c)arbon sequestration credits.”*

Due to the above conclusions from Arcadis it is not clear the County has viable *post-closure* options to implement and would seriously need to look at *additional* options, possibly including *multiple* small WTE facilities located throughout the area, as well as *multiple* destinations for WEBR.

For example, modular WTE conversion plants could be built and located at each of the County’s 8 transfer stations and 2 rural drop boxes. Whatever residuals that remain then could be transferred to an arid location (e.g., eastern Washington State) for final processing. While existing waste pick-up and hauling from businesses and homes to the transfer stations and rural drop boxes may remain the same, the waste stream volume flowing from the subject drop boxes and transfer stations may be *reduced* to a fraction, which may reduce the truck trip miles (and resulting GHG emissions) by a large factor.

The site waste at these two major types of hubs (8 transfer stations and two rural drop boxes result in 10 locations for refuse consolidation, “*recycling*” separation, and residuals processing and forwarding) may only then require trucking residuals to a Seattle-based freight yard a few times a week or month, which, for many stations, would be a shorter trip length than driving to the CHRLF. Further, a diesel locomotive gets about 400 ton miles per gallon of diesel fuel, and a truck’s mileage is ~90% less. The residuals would emit no GHGs, and, depending on the type of waste-to-energy process used (such as the one pioneered by MIT over a decade ago: “*Turning Waste into Clean Fuels*,” Nancy W. Stauffer, July 1, 2009 - MIT, <https://energy.mit.edu/news/turning-waste-into-clean-fuels/>), the residuals themselves have a market as a glass-infused stone or gravel-like material than can be used as a road building material, leaving little, if any, residual material remains for wasteful transport to someplace else. The *dispersed* WTE conversion sites would distribute their stack emissions over a large area rather than a single, large, focused discharge WTE sited at the CHRLF, which possesses an adverse geography (e.g., canyon location flanked by two salmon bearing waterways) with a fickle meteorology (e.g., frequently cloaked in low lying temperature-inversion cloud layering).

Embracing containerized and compartmentalized distributed WTE technology, sooner rather than later, could result in the lowest impact and most far-reaching solution.

The Final EIS should evaluate system-wide alternatives and impacts to not only the immediate neighborhoods and community, but also impacts to *all* stakeholders along the waste processing course. The alternatives under analysis should *not* be limited to the CHRLF being a sole-source location in terms

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of being a WTE conversion site that locks in potentially wasteful transportation ton-mile trips from 8 transfer stations and 2 rural drop boxes to the current CHRLF site.

The Final EIS could explore these concepts, which could show significant ton-mile savings and GHG emission reductions resulting from a distributed network of WTE plants. The Final EIS should evaluate the associated environmental impacts which, we expect, will be reduced, especially for the neighborhoods surrounding the CHRLF site, as well as ecosystems and wildlife.

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Toraj Ghofrani.

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GMVUAC Comments—Draft EIS: CHRLF Site Development Plan

LAND AND SHORELINE USE

2016 King County Comprehensive Plan (as updated in 2018).

King County Code Title 21A.44.050 Special use permit.

Council on Environmental Quality (CEQ) Regulations, 40 CFR Part 1508

Boehm v. City of Vancouver, 111 Wn. App. 711(2002) – Cumulative impacts

TRANSPORTATION

VISION 2040, PSRC.

From: [Eric Hudson](#)
To: [Constantine, Dow](#); [Balducci, Claudia](#); [Dembowski, Rod](#); [Zahilay, Girmay](#); [Kohl-Welles, Jeanne](#); [Lambert, Kathy](#); [McDermott, Joe](#); [Dunn, Reagan](#); [Upthegrove, Dave](#); [von Reichbauer, Pete](#); [Dhillon, Darshan](#); [Pon, Yolanda](#); [Mullet, Sen. Mark](#); [Ramos, Bill](#); [Callan, Lisa](#); [Christiansen, Peter \(ECY\)](#); [PlanEIS, CedarHills](#); [Lui, Kinyan](#)
Subject: Cedar Hills Landfill EIS comment: "Bird Management" isn't enough
Date: Friday, October 30, 2020 11:28:58 AM

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King County representatives,

Please, King County must STOP disposing of biomedical disease waste at Cedar Hills landfill **immediately - the risk is too great!**

King County has recently begun a "bird management" program at Cedar Hills Landfill to address incidents of birds dropping Class 4 biohazard waste (disease waste) on nearby residential properties (examples below).

However "management" is inadequate, Landfill Operators are required to **Prevent and Control**, not merely "manage" disease vectors.

If eagles become carriers of disease viruses, they could easily transmit them to other wildlife and humans.

Disease waste is required to be rendered inert by heat treatment, and buried immediately upon disposal. Neither of these requirements are being met. If the birds are still attracted to the waste, clearly it is not inert and has not been treated sufficiently. And the waste is not being buried immediately as required.

King County oversees itself in landfill operations, and as such, has issued no penalties against itself for violations. The Department of Ecology has delegated authority to King County .

Lake Youngs reservoir, water supply for 2/3 of King County, is only about 3 miles away from Cedar Hills Landfill. Eagles have been sighted by hikers in the Lake Youngs vicinity, and are likely spreading contaminated waste to the reservoir, threatening our water supply.

This is another reason why landfills should be in remote areas. There are more than 70,000 people living within 5 miles of Cedar Hills, including parts of Issaquah, Maple Valley, Kent and Renton. At Columbia Ridge landfill east of the cascades, there are less than 200 people within 5 miles.

Why do we wait for a disaster to occur before taking action to prevent it?

Please cease acceptance of Biomedical waste and make reforms at Cedar Hills Landfill, before another human and environmental catastrophe occurs.

Please don't let Cedar Hills Landfill become the next Wuhan Seafood Market, source of disease for the next Pandemic.

Please address this concern in the landfill expansion EIS

Thank you

Eric and Cedar Hills Residents

Neighbors demand stop to landfill expansion



Nearly a hundred south King County residents made it clear, they do not want a nearby landfill to get any bigger. KING 5 Environmental Reporter Allison Morrow was in Renton, as they told King County Council Members how they really feel.

Published: 5:55 PM PDT March 20, 2019
Updated: 5:54 PM PDT March 20, 2019

Neighbors demand stop to landfill expansion



Nearly a hundred south King County residents made it clear, they do not want a nearby landfill to get any bigger. KING 5 Environmental Reporter Alison Morrow was in Renton, as they told King County Council Members how they really feel.

From: [Eric Weber](#)
To: [PlanEIS, CedarHills](#)
Cc: [Steve Banchero](#); [Katie Saltanovitz](#)
Subject: Comments on the CHRL 2020 Site Development Plan and Facility Relocation Draft EIS
Date: Friday, October 30, 2020 12:09:53 PM
Attachments: [Comments on KCSWD draft EIS 10-30-2020 complete.pdf](#)

[EXTERNAL Email Notice!] External communication is important to us. Be cautious of phishing attempts. Do not click or open suspicious links or attachments.

To: King County Solid Waste Division
Attn: Kinyan Lui, Project Manager.

Please accept the attached comments on the Cedar Hills Regional Landfill, 2020 Site Development Plan and Facility Relocation Draft Environmental Impact Statement. Landau Associates is submitting these comments on behalf of Queen City Farms, Inc.

Regards - Eric

Eric Weber, LHG, CWRE
Principal Hydrogeologist
Landau Associates

Direct: (253) 284-4878
Mobile: (206) 940-2406
2107 South C Street, Tacoma, WA 98402
www.landauinc.com

Landau Associates is proudly CARBON NEUTRAL through our sustainable practices and financial support of US-based carbon-reduction projects.

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October 30, 2020

King County Solid Waste Division
201 S Jackson Street
Seattle, WA 98104-3855

Attn: Kinyan Lui, Project Manager

Transmitted via email to: CedarHillsPlanEIS@kingcounty.gov

**Re: Comments on the Cedar Hills Regional Landfill, 2020 Site Development Plan and Facility Relocation DRAFT Environmental Impact Statement
LAI Project No. 0992001.020**

Dear Kinyan;

This letter is provided on behalf of Queen City Farms, Inc. (QCF). QCF owns the 315-acre parcel (#282306-9009) that abuts the entire south property boundary of the Cedar Hills Regional Landfill (CHRL). As a direct neighbor, QCF has two primary concerns regarding the DRAFT Environmental Impact Statement (EIS).

Easements

QCF owns three separate easements on the south end of CHRL that were granted to QCF in exchange for QCF granting an easement to King County for a "Refuse Site Access Road." The three QCF easements and the King County easement are described in a recorded deed that is included in Attachment A. The deed was dated and recorded roughly at the same time as the original 1960 CHRL Special Use Permit. In fact, the King County easement recorded in the deed is specifically called out in the Special Use Permit as a "new easement" for access to the landfill. Figure 1 in Attachment A shows the location of the three QCF easements on the landfill. Figure 2 in Attachment A shows the location of the King County easement on QCF property. Construction of relocated facilities in the southern buffer would conflict with these easements.

Section 2.1.6 of the EIS states that in "*November 2019, KCSWD was presented with a recorded deed that purports to grant a roadway access running east-west within the buffer zone near the southern property. KCSWD is currently researching this potential roadway easement.*" This statement is incorrect. There are three roadway easements. QCF brought these easements to KCSWD's attention, however never heard back from KCSWD after November 14, 2019. We maintain the EIS is not complete since it does not fully describe these easements and the restrictions associated with them.

Stormwater

Stormwater flow off the southern portion of the CHLF discharges onto QCF property. In the late 1980s and early 1990s, excessive flows discharged from CHRL onto QCF and caused erosion and property damage. These high flows occurred about when the liner was being installed on the South Solid Waste Area that extended into the buffer (in violation of the Special Use Permit). Recently, in 2019, we noted what appeared to be excessive stormwater flow from CHRL onto QCF property. In 2006, QCF got a commitment from KCSWD to return stormwater flow to 1979 conditions by 2015. 1979 flow conditions are documented in the *CHRL Stormwater Management Facility Assessment and Buffer Enhancement Report* (KCSWD February 24, 2005). We have not received documentation from KCSWD that the 1979 flow target has been met.

We also note that compliance with the KCSWD manual requires flow and water quality monitoring. We have requested this data from KCSWD to verify stormwater flow from CHRL onto QCF property meets the 1979 target. Unfortunately, these data have not been produced.

Closing

QCF has worked cooperatively with KCSWD since the original easement swap in 1960. A lot has happened since that time. While CHRL has continued to expand, the QCF site has undergone remedial actions and reclamation. While we realize the CHRL is an important facility, we request that KCSWD honor existing commitments made in the spirit of cooperation that will allow QCF to continue to utilize its property.

Thank you for your consideration of this matter.

LANDAU ASSOCIATES, INC.



Eric Weber, LHG, CWRE
Principal

EFW/KJG

Y:\992 QCF\001.020\C\King County\LAI Comments on Draft EIS 10-29-20

cc: Steve Banchemo, QCF

Attachment A: Deed and Easement Figures

Easement Deed and Figures

5261600

R/W. 380

D E E D

JOSIE RAZORE, ALFONSO M. MORELLI, and JOHN S. BANCHERO, copartners, doing business as QUEEN CITY FARMS and SEATTLE DISPOSAL COMPANY, and JOAN RAZORE, DOMINICA MORELLI, and ELIZABETH M. BANCHERO, their respective wives, hereinafter referred to as Grantors, for and in consideration of Ten Dollars (\$10.00) and also of the rights and benefits to accrue to them by reason of laying out and establishing a road through their property and adjoining property which is hereinafter described, convey, release and quit claim to the County of King, State of Washington, the following described property situated in King County, Washington:

All that portion of the East 1/2 of the S.E. 1/4 of Sec. 28, Twp. 23 N. R. 6 E.W.M., less County Road included within a strip of land 60 ft. in width, having 30 ft. of such width on each side of the following described centerline:

Beginning at a point on the centerline of the Cedar Grove Rd., said point being on the East line of Sec. 28, Twp. 23 N.R. 6 E.W.M., a distance of 1351.13 ft. southerly of the East quarter corner of said Sec. 28 to the true point of beginning, thence N. 0°27'08" E., a distance of 306.71 ft., thence along the arc of a curve to the right having a radius of 409.26 ft., a distance of 173.57 ft., thence N. 24°45'08" E., a distance of 86.92 ft., thence along the arc of a curve to the left having a radius of 409.26 ft., a distance of 345.71 ft., thence N. 23°38'52" W. a distance of 122.85 ft., thence along the arc of a curve to the left having a radius of 716.20 ft., a distance of 246.67 ft., thence N. 43°22'52" W., a distance of 207.47 ft. more or less to an intersection with the East-West centerline of said Sec. 28. Containing 0.83 Acres more or less,

said property to be used for the purpose of construction and maintenance of a right-of-way road known as the "Refuse Site Access Road" together with the right to make all necessary slopes for cuts and fills upon the abutting property and on each side of said described right-of-way, in conformity with standard plans and specifications for Road purposes, and to

5261600

the same extent and purposes as if the rights herein granted had been acquired by condemnation proceedings under Eminent Domain statutes of the State of Washington.

As consideration for execution and delivery of this deed, Grantors reserve the rights and privileges and by acceptance of this deed Grantee confirms such reservations and gives and grants unto the Grantors, their heirs, assigns and grantees, the following rights:

The right to use all or any portion of the roadway to be constructed by Grantee (of which the right-of-way granted forms a part) for purpose of ingress and egress to and from all or any part of Grantors' property described as the south half of Section 28, Township 23 North, Range 6, East Willamette Meridian, King County, Washington, or any part thereof as now existing and as it may be hereafter changed, improved, laid-out or sub-divided including, but not by way of limitation, the right to operate over said roadway or any part thereof automobiles, trucks, tractor-trailers and vehicles of every kind and description for the purpose of hauling persons or property of every description including but not in limitation sand, gravel, earth, garbage, refuse and trade waste.

Easement 1

An easement over and across a portion of the north half of Section 28, Township 23 North, Range 6, East Willamette Meridian, King County, Washington, beginning at Station 16 of said roadway and extending southerly to the property line of Grantors' property which roadway shall be constructed and maintained by Grantee for use by Grantors, their heirs, assigns or grantees in the manner and for the same or similar uses and purposes as in the preceding paragraph provided.

Easement 2

An easement over and across a portion of the north half of Section 28, Township 23 North, Range 6, East Willamette

Easement 2

Meridian, King County, Washington, from a point which will be mutually agreed upon, between Station 16 of said roadway and Station 40 of said roadway and running from such point in a southerly direction to Grantors' property such easement to be improved by roadway constructed by Grantors and to be used in the manner and for the same or similar uses and purposes as in the second paragraph preceding this paragraph provided.

Easement 3

An easement over, along and across the southerly portion of the north half of Section 28, Township 23 North, Range 6, East Willamette Meridian, King County, Washington, beginning at Station 16 of said roadway and running in a Westerly direction parallel to the East-West centerline of said Section 28, such easement to be improved by a roadway constructed by Grantors to be used in the manner and for the same or similar uses and purposes as in the third paragraph preceding this paragraph provided.

This deed is given up on the understanding that the Grantee is constructing and will construct and maintain at Grantee's expense, a roadway beginning at the southeast corner of the northeast quarter of the southeast quarter of said Section 28, Township 23 North, Range 6, East Willamette Meridian, King County, Washington, running thence in a general northerly direction and thence across the southwest corner of the northeast quarter of said southeast quarter and running thence northwesterly across the north half of said Section 28, Township 23 north, Range 6, East Willamette Meridian, King County, Washington.

DATED this 10th day of December, 1960.

JOSIE RAZORE

and

JOAN RAZORE

ALFONSO M. MORELLI

and

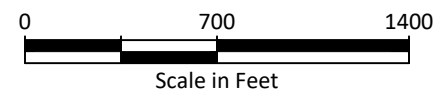
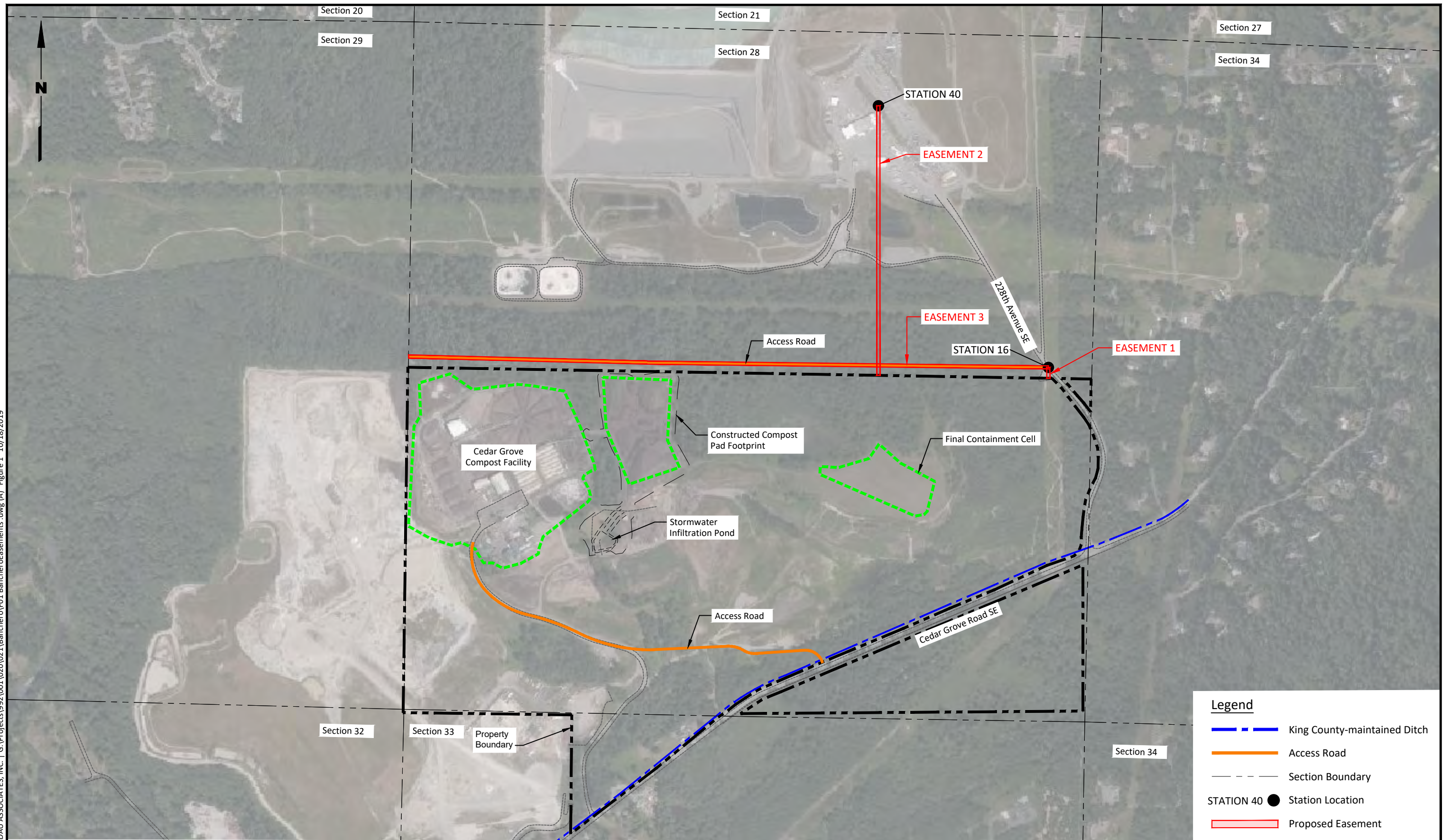
DOMINICA MORELLI

JOHN S. BANCHERO

and

ELIZABETH M. BANCHERO

LANDAU ASSOCIATES, INC. | G:\Projects\992\001\020\021\Banchero\F01 BancheroEasements.dwg (A) "Figure 1" 10/18/2019



Queen City Farms
King County, Washington

Banchero Easements

Figure
1



Queen City Farms
King County, Washington

Figure
2

From: [Dave and Lisa Peterson](#)
To: [PlanEIS, CedarHills](#)
Subject: Comment: Draft EIS for CHRLF 2020 site development plan
Date: Friday, October 30, 2020 12:30:27 PM

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We welcome your comments on the Draft Environmental Impact Statement (EIS) for the Cedar Hills Regional Landfill 2020 Site Development Plan Facility and Facilities Relocation Project. Please enter your comments below:

Thanks for asking for public comment,

I've been a Renton resident since 1969. I feel our infrastructure can't take more truck traffic for a facility like the landfill. I've seen so much building without road improvement or expansion. The traffic is a real frustration.

Thanks, Lisa Peterson

Sent from [Mail](#) for Windows 10

From: [Valerie O'Halloran](#)
To: [PlanEIS, CedarHills](#)
Subject: Comment: Draft EIS for CHRLF 2020 site development plan
Date: Friday, October 30, 2020 1:58:23 PM

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We welcome your comments on the Draft Environmental Impact Statement (EIS) for the Cedar Hills Regional Landfill 2020 Site Development Plan Facility and Facilities Relocation Project. Please enter your comments below:

King County Solid Waste Division (KCSWD) owns 15.21 acres adjacent to the Factoria Transfer Station at 13800 SE 32nd Street, Bellevue, WA 98005.

It is wholly owned by KCSWD.

It is centrally located.

It enjoys easy access to both I-90 east and west and I-405 north and south.

It is relatively flat and doesn't involve a 280 foot elevation gain.

It is not within 100 feet of residential communities.

It does not pose a safety hazard to pedestrians accessing the Renton Technical College campus.

Please explain why this site was not considered an option in Cedar Hills Facilities Relocation plan.

Thank you,
Valerie O'Halloran
Renton City Council

From: [Eric Hudson](#)
To: [PlanEIS, CedarHills](#)
Cc: [Lui, Kinyan](#); [Mullet, Sen. Mark](#); [Ramos, Bill](#); [Callan, Lisa](#)
Subject: EIS Comment: Landfill Liner failure analysis and landslide risk
Date: Friday, October 30, 2020 1:59:20 PM

[EXTERNAL Email Notice!] External communication is important to us. Be cautious of phishing attempts. Do not click or open suspicious links or attachments.

Hello,

I have the following comment/question about the landfill expansion EIS

Landslides have occurred at landfills around the world where the liner system was implicated as part of the failure. In the EIS please add an analysis of how this potential failure mode is addressed.

In the Shenzhen landslide in 2015 (see link below), it is thought that water buildup in the waste cell following heavy rains in the area contributed or caused the weight of the cell to increase weight to the point where the lining system could no longer hold and the landslide occurred along the liner-soil interface.

Cedar Hills, with its high annual rainfall of 52 inches per year is susceptible to this same kind of failure. In addition Climate change will bring an increase of heavy rain events, increasing the risk of such a failure.

We ask that the EIS include or point to information that supports that this failure mode has been analyzed and the risk will be mitigated.

Since this is a technical question, we request that Herrera consultants respond to this question in addition to any King County response.

Thank you,

Eric and Cedar Hills residents

Shenzhen landslide article:

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4730517/>

From: [Eric Hudson](#)
To: [PlanEIS, CedarHills](#)
Cc: [Lui, Kinyan](#); [Mullet, Sen. Mark](#); [Ramos, Bill](#); [Callan, Lisa](#)
Subject: Landfill Expansion EIS comment - Lack of Oversight in Operations
Date: Friday, October 30, 2020 2:16:48 PM

[EXTERNAL Email Notice!] External communication is important to us. Be cautious of phishing attempts. Do not click or open suspicious links or attachments.

Hello,

I have the following question/comment on the landfill expansion EIS:

King County oversees itself in most landfill operations, as it has been delegated by the Dept of Ecology. If the landfill were privately operated, this would never be permitted due to potential conflicts of interest. King County is unlikely to penalize itself for a violation. This lack of independence in oversight breeds mistrust and suspicion among the public, and makes failures more likely to occur due to lack of independence in inspection and oversight of operations.

The consequences of a landfill failure are so high that it is incredible that such a lack of independent oversight is permitted.

We request that the EIS include acknowledgement that this self-oversight relationship causes mistrust, and provide information on how King County will assure the public and provide transparency in its operations to reduce the risk of failure occurring.

Thank you,

Eric and Cedar Hills residents

From: [Janet Dobrowolski](#)
To: [PlanEIS, CedarHills](#)
Subject: Comment: Draft EIS for CHRLF 2020 site development plan
Date: Friday, October 30, 2020 3:14:43 PM

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We welcome your comments on the Draft Environmental Impact Statement (EIS) for the Cedar Hills Regional Landfill 2020 Site Development Plan Facility and Facilities Relocation Project. Please enter your comments below:

Please send an email acknowledgement of receipt. Thank you.

Public Comment on the Draft Environmental Impact Statement
 Cedar Hills Regional Landfill 2020 Site Development Plan and Facility Relocation
 October 30, 2020

Submitted to King County DNRP - Solid Waste Division

Respectfully submitted by:
 Janet Dobrowolski
 21003 SE 155th Pl
 Renton, WA 98059
jkdobrowolski@gmail.com

The idea that the Draft EIS has found “no significant unavoidable adverse impacts” for ANY of the alternatives for ANY affected environment is, frankly, unbelievable. Comparisons also drawn to “existing conditions” as a way of justifying any new impacts assumes the “existing conditions” are acceptable.

The FINAL EIS must NOT evaluate any impacts against the “current conditions” as that is not a valid measure of additional impacts, especially if the existing impacts ARE adverse already.

The conclusion that “none of the alternatives would result in significant unavoidable adverse impacts to **human health**” cannot be substantiated by any model. CHRLF has no proof, whatsoever; that there haven’t been adverse impacts already. No health studies have been done. No comparisons of health issues in surrounding communities with other rural communities have been done. In studying ALL the chemicals that have been listed in the draft EIS and additional ones from the stack test – there’s a reason they are considered toxic. Nearly all have health impacts. The odor that CHRLF staff claim is “safe” has not been proven by CHRLF. TAPs are contained in leachate odors, landfill gas odors and flare odors. All but a few of the TAPs have odors. Mixed together they make up the smell. Communities are breathing in that “odor”. Children are breathing in that “odor”.

The Final EIS must take into account the TAPs as a whole, not individually.

NOISE

The conclusion that “ *Initiating new activity in the East Main Hill, Areas 2/3, and 4 would increase sounds to the NE and NW of the landfill beyond what is currently observed, but would likely be similar in nature to the sound levels observed when those areas of the landfill were **originally filled.***” is unacceptable.

Comparison to noise levels from 40 years ago is unacceptable.

What proof is there that the levels when “originally filled” were at an acceptable level?

The noise levels will NOT be the same as when those areas were originally filled, AND it isn't relevant now. When those areas were filled, the western border hadn't been clear-cut yet.

The additional height alone will increase the level and range of the noise, since it is above the tree line.

*“According to the King County Code, Chapter 12.86.520, **“[n]ormal and usual sounds created by construction”** are exempt from the limits set forth in Chapter 12.86, except that construction noise is restricted to certain hours.*

These sounds created by construction have been and will be going on for YEARS. Landfill operations are NOT normal construction. Any “normal” construction has a reasonable start and end DATE, not unlimited years.

This is a rural designated area and shouldn't be have to deal with “construction” noise day in and day out for 20 more years. We've had to deal with it for 50+ already.

Models are only effective if their results can be validated.

Alternative 3 construction of a berm will increase noise substantially for the communities to the west and north.

The FINAL EIS must provide real life data that can prove the results of their model

BUFFER ZONE – Facilities move

The original Special Permit (1965) stated that a 1000' buffer was to remain in its natural state ***“to protect the surrounding neighborhoods.”***

Obtaining a special use permit to move the facilities into the north buffer would require cutting of trees to build, thereby reducing the buffer mitigation purpose. It also goes against the original permit for the buffer to remain in its natural state. Over the years, CHRLF has violated both the east and south buffer zones several times by putting waste within the buffer zone. Waste is still located in the south buffer zone around the power towers, as it was unsafe to remove it when they moved the south pit to build the leachate ponds. During the mid 1980's, the west buffer zone was clear cut and it was never restored. As part of the 2000 settlement agreement was for an arborist, within 2 years of the settlement, was to survey the area and provide recommendations on reforesting the area with evergreens, rather than the deciduous alders, maples, and cottonwoods. This never happened until recently and the result was they would have to clear cut yet again in order for any evergreens planted to survive.

The Final EIS should address the past violations of the buffer zone that have already reduced the protective nature of the buffer zone and evaluate whether further encroachment should be allowed.

The 1960 Special Use permit states that “there will be no sanitary operations in this strip other than access”.

Moderate Risk Waste storage area – used for temporary storage of hazardous materials improperly disposed at the facility and spill cleanup residues (pg 2-19)

The proposal to move the facilities into either the north or south buffer includes a provision for a “Moderate Risk Waste storage area”. This should not be allowed, as per the special use permit. The permit doesn't distinguish between temporary and permanent. Any waste storage area located within the buffer zone should not be allowed, regardless if it is deemed temporary.

The Final EIS should address waste stored in the buffer zone.

LANDFILL HEIGHT

In 2000 King County entered into a Settlement Agreement for several consolidated class action cases (hereinafter referred to as the "Settlement Agreement") that requires King County to make a good faith effort to keep the maximum height of Areas 5, 6, and 7 of the landfill at or below 788 feet above sea level, while affirming that garbage shall not be disposed of, nor soils stockpiled, within 1,000 feet of the property line at the landfill.(p. 1-2)

No part of the landfill should not be allowed to extend beyond 788 ft..

At the time of the lawsuit, it was determined that 788 ft would better protect the citizens from odors, noise, dust, and vibrations. Additional, King County had indicated there would be no more expansions beyond area 7. King County had also put final covers and "closed" all previous cells – Main Hill, SE Pit, Central Pit, Area 2/3 and Area 4 was closed in 2000. According to the 1999-2004 KC Health Permit for the Cedar Hills Regional Landfill, ALL closed areas indicated "No Additional Waste Authorized". Because of the claims of closure from KC and closed areas there was no reason to believe that King County would not honor its commitment to the citizens and close when area 7 was full. The restrictive height should extend to all areas of the landfill.

The intent of the 788 ft was to reduce and help mitigate the impacts on the surrounding communities. Going beyond the 788 foot limitation for the rest of the landfill will obviously not achieve that intent.

The FINAL EIS should take into account the original intent of the 788 ft.

Impacts to surrounding communities and environment

The buffer zone is supposed to provide mitigation for the odors, noise, visibility and dust. However, the current buffer zone doesn't adequately mitigate all of the impacts now. Allowing the landfill to be built up to 830 ft. will be above the tree line and render the buffer zone ineffective in protecting the surrounding communities.

Visual – The Appendix I states that there are minimal variations between elevations. Adding 59, 62 & 80 feet to the northern portion of the landfill is not insignificant. "The surrounding landscape would retain its integrity because the open sky," and constant stream of trucks, bulldozers, compactors etc. on top of the hills. It is not an aesthetic sight.

Locations were noted from roads. "Fleeting view from May Valley" doesn't account for people's home views. Often times you can't see the landfill from the road, but step into someone's home from the same road and the CHRLF is front and center. Theirs are not fleeting. Homes to the north with views would have a beautiful view of Mt. Rainier were it not for the landfill at its. There are wonderful views of Mt. Rainier from Squak and Tiger Mountain, however any pictures that would normally be beautiful of the mountain are ruined by the inclusion of the CHRLF scar on the landscape. It is not just the site of the landfill. It will be the site of all the construction equipment running all day long and on the pits they are working on – the garbage. Currently the north side is a grassy meadow. It won't look like that once construction begins.

The FINAL EIS must account for people's home views, not street views.

ODOR

Modeling was conducted under Alternative 3 as the worst-case situation because that alternative would have the largest quantity of waste disposed. (p.4-9)

There has been no evidence given as to the accuracy of the results of the models used. There are, however, questions on the validity of the locations used to draw the meteorological data from as they are NOT similar in characteristics to the CHRLF and vicinity location. Validation of any model needs to be done in order to have confidence in the results.

The Draft EIS has not given any consideration to public complaints, except to cite how many there were during 2018 and part of 2019. Rather, the Draft EIS is depending on dispersion models to predict whether sensor points would exhibit an odor.

Models to predict odor dispersion should be validated as to the accuracy of the results. A compilation of the odor complaints sent into PSCAA against Cedar Hills, Cedar Grove, and those that are not sure which is the source, showing date, time and location would help to validate the dispersion model. According to Appendix D, p 9 of 18, "The meteorological data used for this analysis consisted of the most recent currently available five years, 2015-2019, of surface (including 1-minute data) and upper air meteorological data. " It should be possible to run a dispersion model and validate the findings with the time, date, and location of the odor complaints. This would offer some sort of validation as to whether the dispersion model predicted odor events properly. If the model did not predict that there would be an odor event, or the LOA was not shown to be high and there WAS evidence, through public complaints that odors were present, then the model is not reliable.

Modeling results indicate that, under normal operating conditions, none of the alternatives would result in significant odor impacts or any increase in odor compared to existing conditions.

The FINAL EIS should incorporate odor complaints into their study and validate their model.

Adding Waste to old areas

The Draft EIS did not address the potential for the integrity of the bottom liners, gas pipes and leachate pipes of the old areas if waste is added on top. The LOURA liners do nothing to protect the integrity of what's below it. How do the alternatives guarantee the integrity of the areas underlying the added waste?

1. WAC 173-351 - Criteria For Municipal Solid Waste Landfills

- a. Environmental covenant
 - i. Prohibit uses and activities that may:
 - ii. Threaten integrity of the landfill cover and other waste containment elements, engineered controls for storm water, gas, or leachate, public access controls, or environmental monitoring systems**
 - iii. Interfere with the operation and maintenance, monitoring, or other measures necessary to assure the integrity of the landfill unit and continued protection of human health and the environment
 - iv. Result in the release of solid waste constituents or otherwise exacerbate exposures**

In addition, it must address the potential of gas migration from the unlined areas. In 2011, explosive level methane was found to have migrated to the western border, from under Areas 6 and 7. Area 6 was built leaning on one of the old areas. It took a year for CHRLF to find a solution to mitigate this migration.

The FINAL EIS MUST address this WAC and the potential impacts.

The Draft EIS assumes CHRLF is using best available practices to operate the landfill. However, these practices don't always anticipate emergencies and accidents. The ruptured gas pipe in December 2013

was evidence of this. There were no monitoring systems in place to let either the BEW plant or CHRLF know of the break. It vented gas at 10,000 cuft/min for 5 hours before it was stopped. It cost 2 families trips to the emergency and possibly lifelong health issues from exposure to the toxins in that gas. They had to sell their homes to the County because realtors said they would never be able to sell the property after that.

The Draft EIS lists mitigations for possible impacts, but they are more akin to actions they take now and nothing new. The Draft EIS assumes nothing major event or accident will occur. However, that is far from the truth. A look at past accidents, mechanical failures, human error, etc. will shed light on the ability of CHRLF to control their environment.

The FINAL EIS must look at potential future disasters, not just earthquakes, and how it will impact the environment and communities surrounding it. The landfill is an accident waiting to happen – the question will be – can the environment and surrounding communities recover from a major accident.

From: [Bob Shaw](#)
To: [PlanEIS, CedarHills](#)
Subject: Cedar Hills Landfill EIS Comment
Date: Friday, October 30, 2020 3:30:29 PM

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The plan to relocate the Cedar Hills Support facility to the Renton Hoghlands does not take into account the noise, petroleum and chemical byproducts and increased photosensitive hydrocarbon pollution resulting from increased vehicular traffic and mechanical activity.

This is a high density, multi family/residential and business area already affected by the existing waste collection facility.

I oppose this proposal.

Robert O. Shaw
425 351 9693

Sent from iPhone Xr

From: [Stevens, Savanna](#)
To: [PlanEIS, CedarHills](#)
Cc: [Jones, Brad](#)
Subject: Comments of the Draft Cedar Hills 2020 Site Development Plan EIS
Date: Friday, October 30, 2020 3:32:21 PM
Attachments: [Ltr to King County Solid Waste Division 10302020.docx](#)
[Exhibit 1-Ltr 10302020.pdf](#)
[Exhibit 2-Ltr 10302020.pdf](#)
[Exhibit 3 - Ltr 10302020.pdf](#)
[Exhibit 4 -Ltr 10302020.pptx](#)

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Please find attached correspondence and exhibits from Brad Jones regarding the above referenced matter.

A hard copy of these documents will be mailed to you today.

Thank you.

Savanna Stevens

Legal Assistant



PLEASE NOTE OUR NEW ADDRESS BELOW:

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GTH attorneys and staff are working remotely during the current COVID-19 emergency. While our offices are not currently open to the public, we remain ready and able to assist you by phone and email. There may be a brief delay in our response time.

From: [Rick and Kim Brighton](#)
To: [PlanEIS, CedarHills](#)
Cc: [Lui, Kinyan](#)
Subject: Comment: Draft EIS for CHRLF 2020 site development plan
Date: Friday, October 30, 2020 4:21:07 PM
Attachments: [2020 Draft EIS scoping comments Kim Brighton 10-30-20.pdf](#)

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We welcome your comments on the Draft Environmental Impact Statement (EIS) for the Cedar Hills Regional Landfill 2020 Site Development Plan Facility and Facilities Relocation Project.

Please enter your comments below:

Please see Kim Brighton's attached "2020 Draft EIS scoping comments Kim Brighton 10-30-20.pdf" document. This contains my public comment.

Please confirm that you have received this email and attachment.

Thank you,

Kim Brighton
rnkbrighton@gmail.com

2020 Draft EIS scoping comments – Kim Brighton - submitted 10-30-2020

My name is Kim Brighton and I have lived adjacent to the Cedar Hills Regional Landfill (the “Landfill”) since April 1989. Our home abuts a northwest portion of the Landfill’s existing 1,000 foot buffer.

My family and I have suffered debilitating consequences from King County’s continued operation and expansion of the Landfill. In the late 1990s the King County Superior Court appointed me as one of the class representatives for a class action lawsuit against the County concerning the Landfill. That lawsuit established that the County was negligent in the operation of the Landfill and as a result it was inflicting damages on thousands of area residents. The damages were caused by odors, birds, and noise, but for my family the most significant impact has been property damage resulting from vibrations caused by the County’s operation of the Landfill. The causes of the vibrations are many, including flare stack rumble and the operation of heavy equipment. Ultimately the County agreed to pay \$16.5 million to the class of individuals damaged by the County’s continued operation of the Landfill.

Noise and Vibration

Acoustical vibrations damaged my home and Leslie Morgan’s home (beginning /continuing at the same time), and caused health impacts beginning 4/23/18 as a direct result of equipment used at the landfill for a construction project by Scarcella. We suffered intense pressure in our head, ears, ear pain, and headaches. I could not leave my home. This was an inhumane experience to endure. These exceedances affected us, our dog and horses, devastating to our homes and property. Our horses and dog are dependent on us to protect them. They have more acute hearing and sense of smell than humans. I took video (showed to Scott Barden, Interim Operations Manager, and Pat McLaughlin). I was present at the time of testing at the property line*. The County’s sound consultant confirmed it would be a lot louder in my home and buildings, bouncing off of them**. The consultant stated sound travels in air molecules, called acoustical resonance. Vibrations experienced became worse when KC SWD changed the compaction mode to a lower frequency/level. This was reported to Scott Barden and Tom Creegan. Vibrations continued off and on throughout the construction project. KC Ombudsman Elizabeth Hill became involved with Glynda Steiner, KC SWD Deputy Director, as KC SWD was not being responsive in effectively mitigating the substantial impacts. Glynda visited my home to see the damage and said she could see there were impacts and could smell the odor on the road. Unfortunately, Ms. Hill ceased assistance. Damages were denied to me and my home due to KC SWD’s claims that seismic motions could have caused problems, not any of its work. However, the damages were not caused by natural seismic motions, with which we are familiar in this area and have experienced in the past. No mitigation measures were taken and KC SWD chose not to do any studies to better understand the phenomena.

The Final EIS must include additional human health impacts from these types of vibrations.

The Final EIS must assess all known and expected vibration sources and how they reach and affect the Public and wildlife.

The Final EIS must evaluate and discuss new harmonic studies including, but not limited to, general operations and existing or potential future equipment used at the landfill considering the various

heights at which work is/will be performed; and harmonic vibrations as the cause from flare-stack rumbles, as identified in the 1999 lawsuit.

The statement below, provides no discussion whatsoever and is completely unacceptable. It goes so far as to say that CHRLF noise will continue yet theorizes that no impacts would occur.

“With implementation of mitigation measures described above, the communities surrounding the landfill would experience landfill noise for a longer period in the future under any of the action alternatives. However, no significant unavoidable adverse noise impacts should occur.”

This disregards the past history of complaints by surrounding neighborhoods and schools districts over health issues, etc., who have had to endure the community and wildlife degenerating slow expansion of an almost two square-mile parcel of land.

The Final EIS should not include such empty statements as quoted above, but must discuss significant unavoidable noise impacts and their ramifications (for current and future operations). Further, the Final EIS must seriously address the concept of “nuisance,” as described in: RCW 7.48.120 – Nuisance defined.

“Nuisance consists in unlawfully doing an act, or omitting to perform a duty, which act or omission either annoys, injures or endangers the comfort, repose, health or safety of others, offends decency, or unlawfully interferes with, obstructs or tends to obstruct, or render dangerous for passage, any lake or navigable river, bay, stream, canal or basin, or any public park, square, street or highway; or in any way renders other persons insecure in life, or in the use of property.”

Human Health

In addition to the health impacts incurred from the long term acoustical vibrations, we also suffer from being consumed inside and outside our home with leachate and flare toxic air effluents from the landfill. I identified and experienced health impacts and odors during April 5, 2019, and June 28, 2019, landfill tours with CHRLF Assistant Operations Manager, Scott Barden, and CHRLF Engineer, Laura Belt (and Glynda Steiner on the June 28, 2019, tour). Not only are the landfill refuse effluents bad, the NW Candlestick 24/7 migration flare off-gasses “poor quality” unregulated gas 24/7 into communities and cannot be stack-tested. The leachate pond effluents also travel into communities and were horrid. Breathing these significantly impacted my health. KC SWD was aware of the identified problems during these two tours. No formal response provided. Toxic leachate effluent travels in the wind into homes and properties. I verified timed aerators worsened health and safety impacts in and on my property. I made an impromptu visit to CHRLF leachate ponds with Scott Barden on 2/2/20. Scott Barden verified leachate odors on my property were just as strong and impactful as at the CHRLF leachate ponds themselves. I requested KC SWD to cover the ponds years ago, yet related health impacts remain to be addressed. The leachate toxins linger in our home and covered horse arena. Burning eyes, sinuses, throat, asthma, chest tightness, weakness/sickness, difficulty functioning, headaches are common systems experienced. These inhumane toxic odor events have significantly increased in severity and intensity. Puget Sound Clean Air Agency never responds to these complaints. SWD fails to log these odors or admit they exist. I notified county and state government/department/agencies/offices of

another significant health impact on 6-20-20. Only response was from Glynda Steiner, Deputy Director SWD that no leachate odor was present. PRR's identified the Department of Natural Resources & Parks, Department of Permitting & Environmental Review, Public Health - Seattle & King County, and Puget Sound Clean Air Agency were all aware, yet did nothing but support Glynda Steiner's response to me. At a minimum, all these organizations are knowledgeable about the substantial landfill leachate emissions that have created cumulative past, present, and future substantial negative health Public health and environmental effects. As a County-owned, operated, and self-regulated landfill of 60 years, this is a grossly negligent demonstration of the failure to mitigate such impacts; and represents a disregard and lack of accountability for human and environmental life, health and safety, surrounding communities, school, parks, trails, animals, etc. They are grossly negligent to Dr. Martin Luther King Jr.'s social justice dream, this county, environment, and all county residents. "All county residents should have equitable access to clean air..." "should assess and address disproportionate environmental burdens..." "address the root causes of inequities, ultimately leading to better quality of life and greater prosperity in all of our communities." One would assume termination of jobs for compounded failures to adhere and comply with not only their department descriptions, but also severe repercussions for creating a forever more toxic public and environmental health crisis.

The Final EIS must recognize that Leachate pond effluent has a direct impact to health, air, odor. Significant adverse impacts include: Asthma, difficulty breathing, burning eyes, sinuses, throat, headache, weak/sick, and difficulty to function. Much of this is the result of minimal toxic effluent monitoring and testing for public health and safety, as well as near non-existent protection to prevent toxic air contamination.

The Final EIS must not only recognize the myriad pertinent and real complaints filed by members of the Public which indicate there continues to be toxic air pollutants and odors released into the general region where the CHRLF resides that directly affect residents, but also assess the impacts therefrom, include cumulative health impacts as well as provide mitigation measures.

At a minimum, the Final EIS must address Mitigation Measures related to: (1) Capping, covering, and sealing the various areas and (2) Requiring all gasses, aerosols, and volatiles be captured, processed, and precluded from local release.

*Reference 1: Picture of the sound consultant's equipment at the property line.



**Reference 2: Picture of the sound consultant checking he captured the loud sound vibrations happening in our home and bouncing off the structures.



From: [JEFFREY DINEEN](#)
To: [PlanEIS, CedarHills](#)
Subject: Cedar Hills Landfill EIS Comment
Date: Friday, October 30, 2020 6:33:45 PM

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I would like to express my concern about the proposed King County Solid Waste Division Support Facilities Relocation Option 3. As a Renton Resident I strongly object to this option for the following reason.

1. The little buffering to residential areas and the Renton Technical College. Other proposed sites allow for more acceptable buffering between the Support Facility and existing residential areas.
2. Impact on the Renton Technical College. The Renton Technical College is a nationally recognized college providing much needed technical training to the Puget Sound area. The college is a growing facility and it is essential that surrounding area be made available for its expansion. The congestion, noise and restriction for growth associated with the proposed facility would impose an unacceptable burden to this nationally recognized college.
3. The City of Renton already hosts more than our share of King County essential facilities and it is time that there is greater equality in the positioning of county facilities. The City of Renton already hosts,
 - Two Transfer Stations
 - Waste Water Treatment Center
 - One of the county's largest sewer lines
 - One of the county's major electrical line
 - King County's largest De-Intensification Center
 - City of Seattle water pipe lines

This option opens a social justice and equity question. The Renton Highlands neighborhood has 12% of its population living at or below the poverty line. Additionally, 41% of the residents are non-English speaking, 16% are Supplemental Nutritional Assistance Program (SNAP) funding recipients, and 10% are both over age 65 and at or below the poverty line.

Why do less affluent areas always get targeted by King County for facilities like this?

Sincerely

Jeff Dineen

320nSmithers Ave S

Renton WA

425-255-5652

tredineen@msn.com

From: [Jacquelyn Green](#)
To: [Lui, Kinyan](#); [PlanEIS, CedarHills](#)
Subject: CHRLF Draft EIS - Public Comment - Jacquelyn Green
Date: Friday, October 30, 2020 7:15:55 PM
Attachments: [Draft EIS Feedback - Jacquelyn Green.pdf](#)

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Hi Kinyan & EIS Team

Please see my attached comments for the CHRLF Draft EIS.

Please confirm receipt.

Have a nice weekend,
Jacque

EIS Project Management Team,

Please see my comments below regarding the Draft Cedar Hills 2020 Site Development Plan. I've included excerpts from EIS and feedback.

Introductions and Background

1-2 – Background – *“Since 1965, the CHRLF has provided for the safe and efficient disposal of the county’s solid waste. Solid waste disposal at the CHRLF is allowed under a Special Permit, approved by the King County Board of County Commissioners in 1960 (Appendix A). The permit allows the operation of a sanitary landfill and specifies that a 1,000-foot-wide buffer be maintained around the perimeter of the site for the protection of the surrounding properties. The Special Permit stipulates that “no sanitary operations” should be allowed within the buffer. As the property owner, King County, not KCSWD, may authorize other uses within the buffer. Historically, this has included construction and operation of a residential alcohol treatment center (now converted to transitional housing center - Passage Point), and a greenhouse operation run by the King County Parks Division in the east buffer. KCSWD is responsible for the maintenance of the buffer, as it pertains to landfill-related activities. See Section 2.1.4 for more information on land uses allowed in the buffer. Aerial photographs taken in the 1970s and 1980s indicate that some solid waste disposal occurred in the east buffer (specifically the SE Pit Refuse Area and portions of the Main Hill Refuse Area). In addition to the 920-acre parcel that constitutes the landfill property, the County owns a 20-acre parcel northeast of the landfill property line (Parcel 2123069001) (Figure 1-2). In 2000 King County entered into a Settlement Agreement for several consolidated class action cases (hereinafter referred to as the “Settlement Agreement”) that requires King County to make a good faith effort to keep the maximum height of Areas 5, 6, and 7 of the landfill at or below 788 feet above sea level, while affirming that garbage shall not be disposed of, nor soils stockpiled, within 1,000 feet of the property line at the landfill.”*

Comments:

- Other historical lawsuits that have added additional operational restrictions that may affect landfill expansion should also be included in this section, specifically 1980’s.
- AA2 and 3 seek to pursue an alternative to relocate landfiling operations into the buffer. This is not allowed under the special use permit and does not align with county development plans based on the 1960 special use permit that allowed residential zoning in the surrounding areas.
- Legal Counsel feedback on the buffer: The SUP defines a “sanitary land fill” as an area of “refuse disposal.” Arguably this phrase alone would not preclude construction of related facilities that did not include the disposal of waste within the 1,000 foot buffer. But the prohibition in the conditions imposed by the SUP is “no sanitary operations,” which is arguably a broader phrase that would preclude **any** operational activities or facilities. This broader interpretation is also consistent with the carve out in the SUP that prohibits “sanitary operations in this strip other than access.” If the SUP meant to only prohibit land filling (or landfiling), it would have said so, consistent with the preamble to the Resolution that defines what the SUP is for (“sanitary land fill (refuse disposal)”). So my interpretation is that the SUP would allow an access road, but nothing more. No equipment storage, parking lot, construction staging, etc. And the EIS regulations require that an EIS consider and discuss any statutory, regulatory or permitting

restrictions to its proposed action and how those would be addressed to achieve compliance with them

1.3.1 – Buffer Zone - *“The north and west buffer areas are heavily wooded and maintained in a natural state, and there are no disturbances to critical areas.”*

Comments:

- This is inaccurate. The western buffer is not in its natural state. It was illegally cleared sometime between 1977-1981. Aerial photos available via King County, images also available below. This must be corrected to accurately reflect previous violations and buffer condition.

1977 aerial photo



1981 aerial photo



1.3.5 – Landfill Gas Processing Facility – *“The Landfill Gas Processing Facility has been in operation since October 2010 and is owned and operated by Bio Energy Washington, (BEW). It processes LFG into pipeline-quality biogas and electric power by separating methane gas from the landfill gas. Carbon dioxide and all other contaminant gases are removed and disposed by burning at the BEW thermal oxidizing unit. When the plant cannot conform to the pipeline gas quality requirements or during any processing problem, landfill gas is flared in the BEW high temperature flare, which is regularly tested to ensure that air emissions do not exceed applicable environmental regulatory levels. BEW emits flue gas from the engine generators that is dispersed through stacks to comply with Puget Sound Clean Air Agency (PSCAA) permit requirements. It also produces a limited quantity of liquid effluent (mainly landfill gas condensate) that is discharged into the CHRLF leachate collection system”*

Comments:

- To adequately inform the reader this section should mention:
 - o BEW operates within the CHRLF boundary
 - o List the additional bi-products produced by BEW (not just gas and liquid), but also biomaterial and/or solids, where those materials have historically, and are currently being disposed, and what potentially harmful elements may be present (i.e. heavy metals or compounds, including but not limited to lead, arsenic, chromium, zinc, ect) .

1.3.6 – North Flare Station – *“Since October 2010, the operation of the BEW gas-to-energy plant has substantially decreased the use of the North Flare Station and it now flares approximately twice per month.”*

Comments:

- Consider the accuracy of flaring only twice a month by reviewing operation and facility maintenance logs. I believe this is inaccurate, based on discussions with landfill and BEW personnel.

- The number of years looked at for this average flare usage should also be notated. Is this the average based on flaring since 2010?

2.0 Alternatives

2.1 - Regulatory and Compliance Requirements

Comments:

- Clearly include CHRLF being deemed a MTCA cleanup site in unlined areas, as well as an additional cleanup site designation, as to not mislead readers. Also include applicable state regulation based on these status', if not already included.

2.2 – Alternatives Considered but Rejected – “A wide range of techniques and alternatives were originally identified that would expand capacity at the CHRLF. KCSWD identified various site development techniques based on information gained through professional experience and through extensive research of site development techniques used by different municipal solid waste landfills throughout North America and Europe. Many of these techniques were incorporated into the development of 12 alternatives that were evaluated with selection criteria focused on:

- *landfill capacity created*
- *engineering and operational factors*
- *environmental and local area considerations, including equity/social justice consistent with King County's Equity and Social Justice Strategic Plan*
- *cost*

All of the selection criteria contained within the four categories listed above were conceived and applied to identify project alternatives that meet the purpose and need of the project, and to satisfy the objectives of the proposal (see Section 1.4). Based on application of the evaluation criteria, the four highest scoring alternatives were brought forward for design refinement and costing. Further discussion by KCSWD resulted in the inclusion of a maximum capacity alternative and an alternative with an altered southeast area configuration into the group of alternatives for preliminary design and costing. Additional information about the analysis of alternatives can be found in KCSWD's 2017 Site Development Alternatives for Cedar Hills Regional Landfill–Final Report (KCSWD 2017b).”

Comments:

- One of four selection criteria included, “environmental and local area considerations, including equity/social justice consistent with King County's Equity and Social Justice Strategic Plan.” Reviewing the Draft EIS, I see little, if any consideration given to equity and social justice for the rural communities who have been environmentally disparaged, lack political power and voice, are directly impacted by non-compliant landfill operations, permit violations, and proposed expansion. The proposed alternatives in the Draft EIS should be reconsidered for equity and social justice.

2.3.1.1 - 2-16 – Soil surcharging - “KCSWD has previously placed soil surcharge on landfilled areas without any negative impacts to the environmental systems. Thus, it is not anticipated that the application of soil surcharge over other landfilled areas would impact the cover system, leachate collection systems, or bottom liners. In addition, the soil surcharge should have no impact on vertical

landfill gas collection wells, and only negligible impacts from settlement on horizontal landfill gas collectors—likely only to the landfill gas collectors in the uppermost layer below the thickest portion of the soil surcharge stockpile. (HDR 2008).”

Comments:

- The above statement is inaccurate and needs to be corrected to include past negative impacts and failures caused by soil surcharging, including:
 - o The 1996 Draft EIS for CHRL discusses a serious malfunction of the gas control system which resulted in odors that were detectable at offsite locations in late 1995 and early 1996. One of the two major causes for this malfunction was settlement from soil charging of the landfill that caused breakage of buried pipes and manifolds. Increased odor complaints were also present during the mid-late 2010's when large stockpiles were placed on areas.
 - o During soil surcharging activities in the past few years there has been offsite odors and exceedances in Hydrogen Sulfide and Methane. These known exceedances and offsite odors may be related to soil charging and/or be a contributing factor.
- Soil surcharging is designed to put increased weight on old areas of the landfill, with compromised gas pipelines, to increase the rate and degree of settlement. It is impossible to retrofit all pipes, which have been proven to break under additional pressure. These activities will increase the likelihood for offsite odors, pipeline failure, and human health consequences. Soil surcharging risk and usage should be reconsidered.

2.3.1.1 – Common Elements of Landfill Design and Construction – “A final landfill cover is required on completed slopes in accordance with the design criteria specified in WAC 173-351-300, requiring a composite liner consisting of an upper and lower component. Soil or exposed geomembrane interim cover is placed on surfaces that will be exposed for one or more wet seasons or areas that will be inactive for extended periods of time and will be covered by future landfilling. Interim and final cover systems are installed during closure of each refuse area, and can include interim top deck, interim side slope, and final cover. Closure of refuse areas at CHRLF is typically phased in order to minimize leachate and CSW, optimize LFG collection, and eliminate the potential for leachate seeps. The phased closure is reviewed yearly and updated based on changes in landfilling operation and waste tonnage projections. Interim final or final cover is installed annually in consecutive summer construction seasons. The primary objectives for interim covers include:

- *Improve soil stability and erosion control*
- *Provide effective separation of “clean” stormwater and CSW*
- *Provide active and passive landfill gas emission controls*
- *Control leachate seeps*

Interim top deck and interim side slope covers are quite similar to one another, in that they typically incorporate a 12-inch select fill layer which is overlain by topsoil that supports a hydro-seeded grass mix, a gas collection system that utilizes trenches, and have a shorter term design life.

The primary design objectives for final cover system are included in the regulations and considered in the evaluation of alternatives:

- *Restrict infiltration*
- *Provide cover system stability and erosion control*

- Accommodate settlement
- Provide landfill gas control
- Provide drainage control Additional considerations provide supplemental design requirements, such as vector controls, operations and maintenance, life expectancy, etc.

Final cover systems typically include three 12-inch soil layers; a vegetative soil, a sand drain layer, and a select fill layer. Strip drains, an HDPE geomembrane, and a geosynthetic clay layer (GCL) are placed between the drain sand and select fill. Gas collectors are installed in collection trenches near the top of refuse. Since the final cover is a permanent component, its design life should meet and exceed the closure period requirements of 30 years."

Comments:

- Final cover is intended to limit fugitive landfill gas, minimize leachate, optimize landfill gas collection, and eliminate the potential for leachate seeps. Interim cover does not accomplish this task. Interim cover must be studied as part of the EIS to determine if it's acceptable in it's current state and if it should be allowed on future areas. It should also be studied to understand additional mitigation requirements that may be needed.
- Interim cover is not acceptable for use at Cedar Hills due to the high risk of the overproduction of leachate, the bath tub effect, the quicker contamination of ground water, surface water, ponding, issues with proper gas collection, and fragility of the liner when wildlife comes in contact with the liner. Regarding the Cedar Hills Landfill, interim cover is not appropriate due to a few factors, including:
 1. Interim cover is not suitable for wet climates.
 2. Interim cover is typically more permeable than the bottom liner, creating a bathtub effect. This is especially concerning for landfills located in wet climates that are close to easily contaminated water sources, including creeks, rivers, and aquifers.
 3. "Under RCRA Subtitle D (40 CFR 258.60), the minimum design requirements for final cover systems at municipal solid waste landfills (MSWLF) depend on the bottom liner system or the natural subsoils, if no liner system is present. The final cover system must have a permeability less than or equal to that of the bottom liner system (or natural subsoils) or a permeability no greater than 1×10^{-5} cm/s, whichever is less. This design requirement was established to minimize the "bathtub effect," which occurs when the landfill fills with liquid because the cover system is more permeable than the bottom liner system. This bathtub effect greatly increases the potential for generation of leachate...The rate of leachate generation (and potential impact on groundwater) can be minimized by keeping liquids out of a landfill or contaminated source area of a remediation site. As a result, the function of minimizing percolation typically becomes a key performance criterion for a final cover system (EPA 1991)." (<https://clu-in.org/download/remed/epa542f11001.pdf>)
 4. The Cedar Hills landfill has been dealing with fluid buildup in area 7 in recent years. This is especially concerning during dry months. Imagine the issues during our typical wet seasons. Emails from landfill consultants discussing the two buildup issues provided during EIS scoping process.
 5. It's been shown that interim cover easily gets damaged by wildlife including birds and the elk herd that regularly frequent CHRLF. Vegetation can also more easily damage interim cover compared to final cover. Damage to the cover effects water entering the cell, speeding up decomposition, off-gassing, and issues with gas collection.

6. Interim cover is typically not addressed in regulatory requirements. Often escaping key oversight and regulatory requirements that final cover is subject to. Excluding these areas from oversight and monitoring contributes to false assumptions regarding gas collection, odors, harm to human health, and the environment.

2.3.1.2 – Summary of Landfill Operations – *“One or more techniques would be used under all of the action alternatives to create additional capacity in landfill disposal areas. The capacity would be used for disposal of additional solid waste, while remaining within the permitted footprint and design elevation of the landfill. Soil surcharging is one technique (discussed earlier); other methods currently in use include the following:*

- *Recycling and reusing landfill materials such as soil cover, road rock, and tipping area rock.*
- *Using alternative daily cover materials – This involves using non-soil materials as daily cover on the active landfill area to decrease the volume of soil needed daily and increase the amount of space available in the landfill. For example, tarps or synthetic cover systems are often used as alternative daily cover at landfills.*
- *Operational practices for improvements in landfill compaction, including leachate (moisture) addition, standardizing lift thickness, increasing compactor passes, increasing the weight of the compactor, frequent replacement of compactor wheels and feet, and final cover strategies to promote waste stabilization and settlement or for the use of exposed geomembrane cover systems. All of these practices would require approval from Public Health.*

Comments:

- One of the root causes of bird nuisance and scavenging is due to improper daily cover. The EIS should further explore past failures related to alternative daily cover.
 - o Alternative Daily Cover: Seattle and King County approved alternative tarpomatic daily cover to be used on a daily basis. Tarpomatic cover is removed on a daily basis to deposit additional waste. Soil cover is installed after completing a 30-foot lift. Tarpomatic daily cover is being used outside of federal and state regulation.
 - Federal regulations state that “owners or operators of all MSWLF units must cover disposed solid waste with six inches of earthen material at the end of each operating day, or at more frequent intervals if necessary, to control disease vectors, fires, odors, blowing litter, and scavenging.” (<https://www.govinfo.gov/content/pkg/CFR-2012-title40-vol26/xml/CFR-2012-title40-vol26-part258.xml#seqnum258.21>).
 - State regulation, requiring units must cover disposed solid waste with six inches (fifteen centimeters) of earthen material, i.e., soils, at the end of each operating day, or at more frequent intervals if necessary, to control disease vectors, fires, odors, blowing litter, and scavenging. WAC 173-351-200 (<https://apps.leg.wa.gov/wac/default.aspx?cite=173-351-200>)
 - There are some exceptions to alternative daily cover, but the CHRLF has not effectively demonstrated this, due to the amended daily cover not effectively controlling for disease vectors, fires, odors, blowing litter, and scavenging without presenting a threat to human health and the environment.
- Leachate usage for compaction should also be analyzed in the EIS in regard to increased risk of offsite leachate odors. Currently, the community is subject to strong leachate odors that burn nasal passages and cause asthmatic reactions. This odor has been verified by onsite tours and

SWD staff when the community members have called directly to identify odor source. Leachate usage for soil compaction should be discontinued as a known issue contributing to offsite odors and impacts.

2.3.2 – Common support facilities relocation activities – *“All action alternatives assume that existing landfill support facilities would be moved from existing locations to other locations on the landfill property or to a site in Renton (Figures 2-1 and 2-2) to allow for construction and landfilling of proposed Area 9.”*

Comments:

- The off-site Renton location is the only option that does not violate the 1,000ft buffer and maintains King County’s obligation to maintain the 1,000ft buffer.

2.4 – Features Distinguishing the Alternatives – *“Use of liner over unlined refuse areas (LOURA)”*

Comments:

- The EIS must analyze the potential significant impacts of LOURA. Including the possible increased contamination rate of the sole source aquifer from the unlined areas that are a known issue, with portions of CHRLF being deemed a MTCA cleanup site in unlined areas (file:///C:/Users/jgreen/Downloads/CleanupSiteDetails_7027.pdf) , as well as an additional cleanup site designation (file:///C:/Users/jgreen/Downloads/CleanupSiteDetails_7173.pdf).
- According to a report contracted by the SWD, aquifer contamination is expected. “As the Main Hill first began operation in 1965, this model predicts, even with the conservative assumptions, fluid migration through the unsaturated zone into the Regional Aquifer to occur in 2058.” Groundwater contamination is an issue not only for our communities, but for many cities, lakes (Sammamish & Washington), Puget Sound, and the region. It's also worth noting that contamination of the aquifer would likely require that the landfill be deemed a federal superfund site.

2.4.1.4, 2.4.2.4, and 2.4.3.4 – Soil Management (all Alternatives) – *“The soil has been stockpiled on site for various operational uses, including daily and final landfill cover...”*

Comments:

- Possible correction or clarification needed. Is soil used for *daily* cover? “Seattle and King County approved alternative tarpomatic daily cover to be used on a daily basis. Tarpomatic cover is removed on a daily basis to deposit additional waste. Soil cover is installed after completing a 30-foot lift.”

2.4.4.1 – Action Alternative 3 Landfill Development – *“The existing refuse areas slope to a low point at the northwest corner of the area and would require the implementation of a mechanically stabilized earthen (MSE) berm to optimize capacity in this area. An MSE berm consists of sacrificial steel wire mesh at the berm face and geogrid reinforcement backfilled with selected structural fill material. The face of the berm is more vertical (i.e., 2H:1V) than typical landfill slopes (i.e., 3H:1V), thereby reducing the amount of soil backfill and minimizing lateral encroachment. The berm face is often vegetated to prevent erosion and UV exposure (see Section 3.2.1.5.1 for additional details). Excavation of refuse would be required to tie the new liner into the existing bottom liner. Preliminary estimates indicate that*

approximately 2,435,000 cubic yards of material are located within the area, a combination of solid waste and soil. It is estimated that approximately one-half of that soil could be sorted and recovered for on-site uses with the remainder relandfilled."

Comments:

- This section includes notes about *minimizing* lateral encroachment. If any buffer encroachment will happen due to berm construction, this option cannot be pursued. If potential lateral encroachment may happen, the EIS must clearly state the planned or potential encroachment.
- Sorted/reclaimed soil has a high likelihood for contaminating wetlands, water ways, and adjacent properties. All water that touches potentially contaminated reused landfill soil should be directed for industrial stormwater processing, as to not impact water and wetlands.
- What studies have been conducted to demonstrate the impacts of opening closed areas, for air, odor, noise, and wetland contamination and combined operation impacts?

2.4.2.3, 2.4.3.3, and 2.4.4.3 – Land Use – *"Special Use Permit to place the new facilities within the existing southern or northern buffer zones."*

Comments:

- No landfilling related or support activities can take place in the 1,000ft buffer, without violation of special permit and settlement agreement. The EIS must address this.

2.5 - Summary of Alternatives – *"Each of the action alternatives would be designed and operated in compliance with all applicable federal, state, and local laws and regulations."*

Comments:

- This is an incorrect and flawed assumption, based on decades of historical non-compliance. Documented in previous lawsuits, EIS's, permit applications, issued violations, maintenance logs, SWD internal communications, and community complaints. The EIS must take historical non-compliance and operational issues into consideration for design, testing, modeling, and potential impacts associated with action alternatives.

3.0 Earth

3.1.3.1 – Coal Mine Hazards – *"King County iMap identifies potential coal mine hazard areas in the Maple Valley Heights area and on the north side of Cedar Mountain (i.e., the Cedar Mountain Mine), approximately one-quarter mile to the southeast of CHRLF, and approximately one-half mile southeast of the Renton site, south of the Cedar River (King County 2019a). The Washington Geologic Information Portal similarly identifies the same historical coal mines in the vicinity of CHRLF and the Renton site (WDNR 2020a). A 1984 study of Geology and Coal Resources of Central King County similarly identifies coal reserves and historical mining at Grand Ridge and Cedar Mountain, and the areas described and mapped closely resemble those mapped in King County iMap (Walsh 1984). No coal mine hazard areas are identified adjacent to or beneath CHRLF or the Renton site (King County 2019a; Walsh 1984; WDNR 2020a)."*

3.1.2.1 – Cedar Hills – *"Previous explorations at the CHRLF identified four primary soils and geologic units at the site. These units, from youngest (nearest the surface) to oldest (deepest below the surface), are*

the following: 1) surface deposits and constructed fill, 2) Vashon glacial till, 3) advance outwash, and 4) pre-Vashon sediments (e.g., silts and clays). It is likely that recessional outwash materials (sand and gravel) deposited on top of the till as the icesheet retreated were mined prior to development of the landfill.”

Comments:

- These statements are inaccurate and/or misleading to the reader.
- Coal mines have been discovered on adjacent properties (large plat owned by same parent company) and the EIS states previous explorations suggest CHRLF may have been mined prior to development. These statements should be corrected and additional studies need to be conducted as part of the EIS, to define mining activities at both Cedar Mountain and within the CHRLF boundary, and their affects on stability, gas, aquifer, and water flows that may affect key waterways and surrounding communities.
- The previous exploration studies should also be clearly identified in section 3.1.2.1. It is not clear who these explorations were conducted by and what report they’re available in.
- A mine entrance within ¼ mile to the SE of CHRLF, is highly likely to have affected adjacent properties or the CHRLF property.

3.1.3.2 – Landslides and Landslide Hazards – “No historical landslides or landslide hazard areas are identified adjacent to or at CHRLF or the Renton site (King County 2019a; WDNR 2020a).”

- This is incorrect. In February 2020 major landslides occurred and were documented at the adjacent property.



3.1.3.4 – Liquefaction Hazards

Comments:

- In recent years there has been issues with leachate accumulation in cells, resulting in bubbling and tears in the side liner. Were these known issues taken into consideration when examining liquefaction hazards? If not, additional studies must be conducted that incorporate water/leachate buildup may increase the potential for liquefaction.

3.1.3.5 – Seismic Hazards

“King County’s inventory of environmentally sensitive areas does not map any specific seismic hazard areas on or adjacent to CHRLF or the Renton site (King County 2019a).”

“The geological structure of the areas surrounding the CHRLF and the Renton site have been investigated by geologists and geophysicists from US Geological Survey (USGS), WDNR, and academic institutions (e.g., University of Washington). A major zone of faulting that these investigations have identified in central Puget Sound is the Seattle Fault Zone (SFZ), which consists of a series of closely spaced east-west faults. The exact location of the SFZ faults has various interpretations because there are few clear surface features to readily mark their locations. In particular, the locations of individual faults of the SFZ at its eastern end near the CHRLF and Renton sites are not well defined. Mapping by the USGS, research papers, and WDNR show the closest location of the SFZ to the CHRLF from about 1 mile (WDNR 2020a) to 4 miles (USGS 2014). For the assessment of fault rupture hazard for this EIS, the closer WDNR location is adopted, while for the calculation of earthquake ground motions, the USGS location is used.”

Comments:

- The Draft EIS should provide additional clarity for the reader. *“King County’s inventory of environmentally sensitive areas does not map any specific seismic hazard areas on or adjacent to CHRLF or the Renton site (King County 2019a).”* It should be clearly stated that it is located within a Seismic Impact Zone, not misleading the reader to believe there are no “hazards” and excluding the seismic zoning.
- What tests have been conducted on older, less stable cells? What tests have been conducted with increased height and weight in old areas and if the overall landfill grows to the max size recommended in AA3? These are basic questions the EIS must address to understand seismic impacts.
- It’s concerning that different fault line estimates were used for different hazards. The EIS should adopt and use the fault line estimate that is closest to the landfill (~1mi), since that is the only way to appropriately analyze the greatest potential environmental impacts from seismic activity. New studies must be conducted using the fault line estimate located at ~1mi (WDNR 2020a) to adequately address all seismic and liquefaction impacts of all alternatives.

3.2.1.3, 3.2.1.4, - Steep Slope Hazards and Liquefaction Hazards

Comments:

- All action alternatives only touch on seismic risk associated with stability, but not inherent seismic risks related to gas pipeline rupture, pipeline gas movement to flares or BEW, gas migration into community, and BEW risks.
- All action alternatives lack the study of seismic risk to the sole source aquifer located under the landfill. The EIS only includes a simple note on the geosynthetic clay liner.

3.2.1.5 – Action Alternative 3 – Landfill Development & Figure 3-3

“Impacts under Action Alternative 3 would be similar to Alternatives 1 and 2, except that landfilling would also occur in the northwest portions of Areas 2/3, and 4 to a height of 830 feet, and in the northeast portions of the Main Hill and Central Pit to a height up to 830 feet. In addition, an MSE wall

would be built at the northwest corner of the landfill and wrap around the base of Areas 2/3 and 4 to provide structural support and seismic protection for the additional refuse that would be placed there. The approximate dimensions and configuration of the MSE wall are shown in Figure 3-1. A soil berm built at the base of the northeast corner would provide similar support. As under Alternatives 1 and 2, future landfill development in these areas would adhere to stringent federal and state design standards and would be unlikely to pose significant risks due to seismic hazards.”

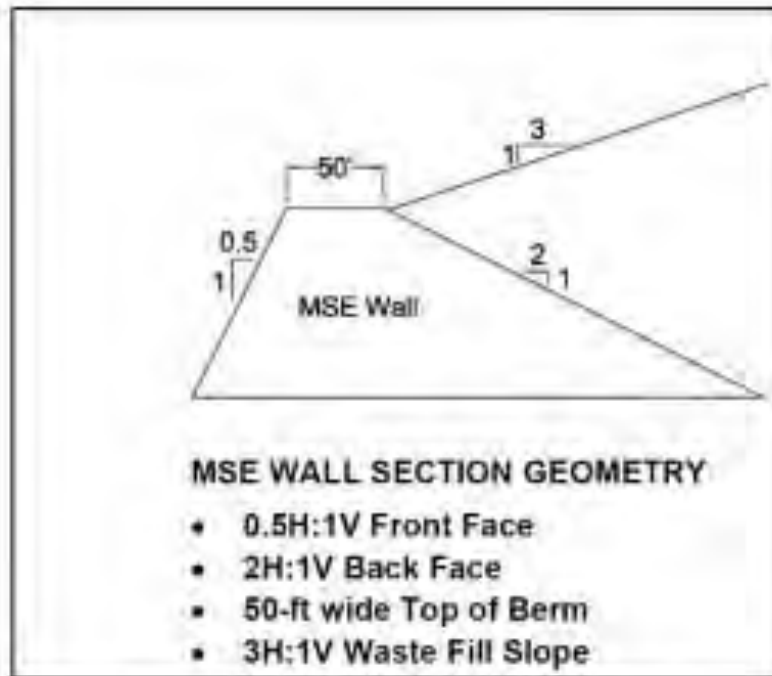


Figure 3-3. MSE Cross Section.

Comments:

- The dimensions of the northwest wall should be clearly marked on all slides for review. An aerial photo with berm dimensions should also be provided, as to prove that the wall will not encroach upon the buffer and ensure legal obligations are met. Approximate dimensions for an EIS of this magnitude are insufficient and don't meet the EIS objectives.
- Building a berm of this size, based on approximate dimension will require massive amounts of construction, noise, vibrations, harmonics, and unearthing large portions of closed cells with substantial impacts.

3.2.2 – Cumulative Impacts – “Activities associated with landfill development and facilities relocation, including those at the CHRLF and the Renton site, would contribute incrementally to overall past, present, and likely future impacts on earth in the region due to ongoing development, but are not likely to be significant.”

Comments:

- Potential impacts for locale/communities are significant. It is misleading and inappropriate to only consider “regional” significance, which is also poorly defined and arbitrary in word choice.

3.3 – Mitigation Measures – *“Because no significant impacts to earth would be anticipated as a result of implementing any of the alternatives, mitigation measures would not be necessary, beyond implementation of established design standards and BMPs during construction and during post-construction operation and maintenance.”*

Comments:

- Significant impacts will be experienced and have been experienced by surrounding locale/communities for decades. To suggest no mitigation measures completely disregards well documented issues, with issues growing substantially with further site development. Without mitigation efforts, surrounding communities will be further environmentally disparaged. Mitigation measures are necessary.

3.4 – Significant Unavoidable Adverse Impacts – *“Based upon the analysis performed for this EIS, there would be no significant unavoidable adverse impacts to earth as a result of implementing any of the alternatives.”*

Comments:

- As stated above there are significant avoidable impacts related to Action Alternatives in varying levels, depending on the level of development discussed in each Action alternative. Avoidable impacts include potential for increased sole source aquifer contamination, landslides, pipeline rupture, vibrations/harmonics, and buffer infringement.

4.0 Air and Odor

4.1.1 – *“The landfill flares are now operated infrequently (during site-wide power outages or planned routine operation and maintenance) and are an insignificant source of air emissions as the combustion of landfill gas in stack-tested flares destroys more than 99 percent of NMOC, including TAP).”*

Comments:

- Are BEW flare emissions included in the EIS? If not, they need to be included in the analysis, since they are an integral part of landfill operations, exist because of landfill operations, and are on the CHRLF property.
- When was the stack test performed? In recent years, PSCAA found violations related to the North Flares and emissions.
- Please check accuracy for how often the landfill flares are used, reviewing operation and maintenance logs. I believe this may be false.
- Flares at the landfill and BEW are used for purposes beyond stated in the EIS. For instance, when landfill and BEW operational systems don’t work in conjunction with one another. Another example is when landfill gas cannot conform to pipeline gas requirements, which happens often. One contributing factor to poor quality gas is water infiltrating cells, which is an issue in cells with interim cover. As mentioned earlier, flares are used more frequently than reported.

4.2.1.1 – Landfill Development

Comments:

- Landfill gas collection efficiency of 90% or higher was found to be inaccurate by previous EIS contractors and is not in alignment with modeling standards. If 90%+ gas collection efficiency was possible, that means that 10% of landfill gas is released into surrounding neighborhoods and the nearby school.
- Flares – Historical issues with flares being outside of the PSCAA operating permit, being used more often than stated, and not burning at proper rate should be factored into emission calculations and impacts. This section should use historical data from the actual flare. Historical data was used on Tap modeling and should also be used on flare modeling.
- Dust – Action Alternatives that include heights above 788ft have an increased risk for fugitive dust. Action Alternatives that utilize contaminated soil and berms also increase fugitive dust impacts.

Particulate Matter (PM10 and PM2.5) – *“To determine potential impacts associated with particulate emissions, estimated levels of particulates generated by landfill construction and operations were added to estimated background particulate levels. The highest resulting total levels at any receptor location were then compared to air quality standards. Background levels were based on data from an EPA monitor on Beacon Hill, Seattle. Because the Beacon Hill monitor is located within an urban area, the use of that monitor’s data is likely to yield conservatively high estimated background levels for the area around the landfill. The results for The No Action Alternative and Alternative 3 are shown in Table 4-2 below.”*

Comments:

- Monitoring at Beacon Hill with vastly different particulate emissions and industrial operations compared to CHRLF is insufficient for the EIS. Beacon Hill is urban and with no waste related operations. Areas surrounding Cedar Hill include various waste operations, including Cedar Hills Landfill, Cedar Grove Compost, and Queen City Farms superfund site. These types of operations, with their unique chemical emissions and use of large amount of earthen material and refuse are not present at the Beacon Hill monitor. Monitoring must be conducted at Cedar Hills to accurately gauge maximum expected particulate levels.

Toxic Air Pollutants – *“The results of the air toxics evaluation shows that the increase in TAP emissions associated with Alternative 3 are either below the Ecology evaluation thresholds or have modeled impacts less than Ecology ASIL.”*

Comments:

All action Alternatives pose significant risk to nearby residents and nearby schools, particularly Maple Hills Elementary. Based on current and past operational practices and well documented failures, CHRLF cannot adequately control for dangerous gases in its current state, let alone with expansion activities detailed in Action Alternatives. Mitigation efforts have failed in the past and will fail to a greater degree under Action Alternatives. Examples of massive mitigation failures include:

1. Chemical exceedances:
 - a. Methane has exceeded regulatory levels many times throughout the years, including but not limited to the western and eastern buffers.

- b. In 2000 Brighton vs. King County lawsuit found that the landfill exceeded the Acceptable Source Impact Levels of Vinyl Chloride, Acrylonitrile, Methylene Chloride, and Hydrogen Sulfide, some by more than 30 times. Exposing communities to known carcinogens.
 - c. Past year exceedances of Hydrogen Sulfide should require more refined air modeling, in accordance with WAC 173-460 and be included in the 2020 EIS.
 - d. Arsine gas has also been found in landfill gas from CHRLF and is a known issue by BEW.
- 2. Pipeline rupture:
 - a. In 2014, there was a massive pipeline rupture at CHRLF, that caused evacuation of some local residents, and hospitalizations due to chemical poisoning. This was taken to court and King County was found negligent. The SWD refused to answer doctor's questions while treating patients at the hospital for poisoning. SWD also told alarmed neighbors that called there was no issue, wouldn't respond to questions, and didn't send out a notice to residents until ~1 month later. CHRLF has historically exposed the community and Maple Hills Elementary to odors and known carcinogens, with no regard for human health.
- 3. Health effects have also been present in the community, with children at Maple Hills experiencing more sick days compared to other children in the district. Teachers at this school have also had increased rates of cancer, as documented in various reports. Residents have experienced asthma attacks, nausea, vomiting, burning sinuses and eyes, when exposed to strong ammonia, rotten egg, and leachate smells (leachate smell unique in nature and verified via staff exploration to complaints). Emergency calls have been placed to 911 in the past few years, due to concerning physical responses when exposed to landfill gas.

Appendix D – Sources – *“As discussed previously, all sources that could emit TAP generated by implementation of Action Alternative 3 were modeled. This includes both the uncollected (i.e., fugitive) and the nondestructed portion of the collected landfill gas, as well as the leachate ponds. To be conservative, 100% of the collected landfill gas was modeled as being simultaneously routed to these on-site control devices: CHRLF flare, Bio Energy Washington (BEW) flare, and BEW reciprocating engine. Although such simultaneous routing is not physically possible (as landfill gas quantity is limited), this conservative approach was adopted to reflect the fact that there are no permit limitations on how much gas can be routed to each control device.”*

Tables 5 -

Table 5. Modeling Results for TAPs with Annual Averaging Period

TAP	CAS #	Model ID	Landfill Gas Emissions ¹				Leachate Pond Emissions	Leachate Pond Emissions (per pond)	Modeled Facility Impact	173-460 ASIL ²				
			Fugitive	LFG Collected, Not Destroyed ²										
			EXPAND	CHRLF Flare	BEW Flare	BEW Engine				(g/s)	(g/s)	(µg/m³)	(µg/m³)	Exceeded?
			(g/s)	(g/s)	(g/s)	(g/s)				(g/s)	(g/s)	(µg/m³)	(µg/m³)	Exceeded?
1,1,2,2-Tetrachloroethane	79-34-5	ANNA	2.54E-03	8.64E-04	8.64E-04	8.64E-04	1.26E-07	6.29E-08	3.7E-02	1.7E-02	YES			
1,1-Dichloroethane	75-34-3	ANNB	3.27E-03	1.11E-03	1.11E-03	1.11E-03	3.82E-06	1.91E-06	4.8E-02	6.3E-01	NO			
1,2-Dichloroethane (Ethylene dichloride)	107-06-2	ANND	5.58E-04	1.90E-04	1.90E-04	1.90E-04	3.38E-06	1.69E-06	8.2E-03	3.8E-02	NO			
1,2-Dichloropropane	78-87-5	ANNE	2.80E-04	9.52E-05	9.52E-05	9.52E-05	1.26E-07	6.29E-08	4.1E-03	1.0E-01	NO			
1,4-Dichlorobenzene	106-46-7	ANNF	4.25E-04	1.45E-04	1.45E-04	1.45E-04	1.77E-06	8.83E-07	6.2E-03	9.1E-02	NO			
Acrylonitrile	107-13-1	ANNG	4.60E-03	1.56E-03	1.56E-03	1.56E-03	7.99E-07	4.00E-07	6.7E-02	3.4E-03	YES			
Benzene	71-43-2	ANNH	2.04E-03	6.95E-04	6.95E-04	6.95E-04	3.98E-06	1.99E-06	3.0E-02	1.3E-01	NO			
Bromodichloromethane	75-27-4	ANNI	6.98E-03	2.38E-03	2.38E-03	2.38E-03	1.26E-07	6.29E-08	1.0E-01	2.7E-02	YES			
Chloropene	126-99-8	ANNJ					1.26E-05	6.29E-06	1.2E-03	2.0E-03	NO			
Ethylbenzene	100-41-4	ANNK	6.72E-03	2.29E-03	2.29E-03	2.29E-03	3.23E-06	1.62E-06	9.8E-02	4.0E-01	NO			
Perchloroethylene (Tetrachloroethene)	127-18-4	ANNL	8.44E-03	2.87E-03	2.87E-03	2.87E-03	5.27E-06	2.63E-06	1.2E-01	1.6E-01	NO			
Trichloroethylene (Trichloroethene)	79-01-6	ANNM	5.06E-03	1.72E-03	1.72E-03	1.72E-03	1.45E-05	7.24E-06	7.4E-02	2.1E-01	NO			
Vinyl Chloride	75-01-4	ANNN	6.27E-03	2.14E-03	2.14E-03	2.14E-03	1.38E-06	6.90E-07	9.2E-02	1.1E-01	NO			

¹ Occurs in 2047, the year with the highest emission rate.

² The collected landfill gas can be sent to the CHRLF flares, BEW flare, BEW engines, or processed into pipeline quality natural gas. This analysis conservatively assumed that all of the landfill gas that was collected is routed to all devices.

³ Reflects the rule revision that became effective December 23, 2019.

Round 2 ASIL Modeling Analysis Results – “The modeling results summarized in Table 5 indicate that the following three TAP have modeled impacts above their respective ASIL:

- 1,1,2,2-Tetrachloroethane
- Acrylonitrile
- Bromodichloromethane

Evaluation of the modeling results for each of the TAP indicated that the landfill gas emissions were the main contributors to the modeled impacts and the leachate emissions contributions were minor. To demonstrate compliance with the ASIL, the landfill gas emission calculations for these three TAP were refined using historic analytical results of landfill gas testing performed at CHRLF flare inlets in 2007, 2009, and 2013. The average TAP concentration (or detection limit, as applicable) from these analytical results was used in conjunction with the LandGEM calculated maximum annual landfill gas flow rate to recalculate the landfill gas emissions for each of these three TAP. These emission values were added to the leachate emissions for comparison to the TAP evaluation criteria of WAC 173-460-150. The results of the supplemental evaluation indicate that none of the three constituents will exceed their respective ASIL at any receptor at or beyond the property boundary, as shown in the Table 6.”

Comments:

- It is historically inaccurate and not plausible for the CHRLF flare, BEW flare, BEW reciprocating engine, and BEW gas processing to all be managing landfill gas at the same time. The use and assumption that all will be used underestimates the fugitive gas that is currently present and will be in the future under Action Alternatives. The EIS should consider reviewing operation logs to determine a baseline for how landfill gas is routed to various operations, determine a percentage for each landfill gas processing operation, review historical emissions of each operation, and then calculate TAPs. It should also be taken into consideration, over the past 10 years, how often no gas processing operation was online (at BEW or landfill). Based on previous

EIS findings, lack of monitoring on interim covered areas, and increased water in interim covered cells, the EIS should update their gas capture rate, since an assumption of 90-92% is inaccurate based on historical findings and operations in interim areas.

- Despite issues with TAP Modeling, Table 5 from Appendix D should be included in the body of the EIS. It's misleading to policy makers and readers to only highlight tables in the EIS with no expected issues (e.g Table 4-4 Modeled Hydrogen Sulfide Concentrations) and omit tables that show exceedances for toxics, including Tetrachloroethane, Acrylonitrile, and Bromodichloromethane.
- Using historical testing from 2007, 2009, and 2013 is insufficient for the EIS. These avoid many recent fugitive gas violations in the 2010's and are outdate by 7-13 years. The EIS should include new monitoring and explore historical years in the 2010's with violations.

Odor – “To assess the potential for odor generation under the various alternatives, modeling was performed to estimate expected concentrations of hydrogen sulfide (H₂S), the most potent odoriferous constituent associated with landfilling operations. The odor threshold for H₂S is estimated to be between eight and 130 parts per billion, based on the predicted concentration above which more than 50 percent of an exposed population would experience a distinct odor intensity and about 10 percent of that population would experience a strong odor intensity (National Academy of Sciences, 2010). It is noted that other sources of odors may be associated with operation at the landfill. This includes odors associated with fresh garbage delivery and placement and diesel fumes, as well as the perception of other odorous compounds contained in the landfill gas and leachate. H₂S was chosen as the odor marker for evaluation because it is one of the most potent of the odorous compounds that also has a very low detection threshold. Modeling was conducted under Alternative 3 as the worst-case situation because that alternative would have the largest quantity of waste disposed. Hydrogen sulfide emissions from landfill operations was calculated using EPA's Landfill Gas Emissions Model. The calculated H₂S emissions (adjusted for the observed oxidation of H₂S as it passes through the waste and daily cover as it migrates to the surface) were then input into an air dispersion model to calculate expected concentrations of H₂S at locations along the CHRLF property boundary and at nearby residences. The highest modeled concentrations are shown in Table 4-4 below.”

Comments:

- Historical exceedances of Hydrogen Sulfide, including in the past year at CHRLF, should be applied to modeling and inform predictions. In the modeling, the lack of daily soil cover should also be taken into consideration, since the tarp does not oxidize, provide anaerobic digestion of fugitive landfill gas, or seal in gas (strong gas odors in morning when tarp is removed).

4.2.2 Cumulative Impacts – “Historically, adjacent industrial-zoned properties have been the major source of odors in the community surrounding CHRLF, and less frequent odor events from the CHRLF have added to the cumulative odor impacts. Over the past several years, odor complaints related to the CHRLF have declined substantially in frequency. Odor control programs in place and under evaluation as described below should further limit the frequency of odor events at the CHRLF so that odor impacts resulting from CHRLF operation under any of the alternatives should be minimal. Under all of the alternatives, activities associated with landfill development and facilities relocation, including those at the CHRLF and the Renton site, would contribute incrementally to the cumulative overall past, present, and likely future impacts on air quality in the region due to ongoing development.”

Comments:

- Historically, adjacent properties were not the primary source of odor in the community, please reference 2000 lawsuit. CHRLF was primary source. In recent years, Cedar Grove Composting has grown operations and receives more complaints than CHRLF. However, CHRLF now receives more odor complaints than what constituted the 2000 lawsuit.
- Any offsite odor from CHRLF is a violation of their permit. All possible mitigation measures must be explored, in order to be in compliance with operational permits.

4.3 – Mitigation Measures – *“In addition, the County is conducting an evaluation of potential options, including covers and chemical treatments, to reduce the likelihood of odoriferous compounds dispersing from the leachate lagoons. Implementation of the eventual selected control option would occur under any of the alternatives, so that the likelihood of odors generated from the leachate lagoons in the future should be reduced.”*

Comments:

- Chemical treatment of leachate is primarily being explored for arsenic mass loading violations. There are concerns about chemical treatment for arsenic affecting air quality if leachate lagoons are uncovered. Please strongly consider covers for leachate lagoon mitigation measures. Leachate fumes have intense physical effects on residents and children at Maple Hills Elementary.

4.1 Significant unavoidable adverse impacts

Comments:

- Current and historical air quality and odor impacts have been present and well documented in the locale/communities affected by CHRLF. These impacts and risks will grow, to varying degrees, if any Action Alternative is selected.

5.0 Surface Water

5.1.4.1 – Cedar Hills – *“Landfill leachate discharged to the KCWTD sanitary sewer system and POTW must meet effluent limitations and self-monitoring requirements specified in Wastewater Discharge Permit No. 7842-03 for CHRLF administered by the King County Industrial Waste (KCIW) Discharge Program (See Appendix E).. Self-monitoring is conducted at the Leachate Effluent Pump Station (LEPS), which is located downstream of the leachate aeration lagoons (see Figure 5-4). Treated effluent samples from the leachate lagoons are collected from the effluent pump station every month for characterization. A weekly permit sample is also taken for metals only. A composite sampler is used to collect 32 grab samples at 15-minute intervals over an 8-hour period. Analytical parameters required by the Wastewater Discharge Permit and frequency of monitoring for the LEPS wet well are included in Table 5-1. Discharge volume is also monitored, as well as inflow to the leachate lagoons.”.....*

“Under the Wastewater Discharge Permit, the KCIW Discharge Program must be notified within 24 hours of any exceedance of the standard(s), which has happened infrequently. When monitoring of stormwater and/or leachate indicates a violation of the Wastewater Discharge Permit, the following actions must be completed:

- *Take immediate action to stop the violation and notify KCIW within 24 hours of learning about the violation;*
- *Collect an additional sample and submit it to KCIW within 14 days of learning about the violation; and*
- *Submit a written report to KCIW explaining the cause of the response and the corrective actions taken to respond to the violation and ensure ongoing compliance.”*

Comments:

- This section is misleading to readers. Wastewater violations are not properly reported or addressed for non-compliance. This section should include the recent example of mass loading of pollutants to the wastewater treatment facility. 56 exceedances for arsenic and 4 for chromium, over 5 years. The SWD did not report the violations to the Wastewater Treatment Division (WTD) or Industrial Waste Program (IWP), instead it was discovered during the permit renewal process. Thus, violations were not addressed and corrected during non-compliance, instead KCSWD was fined after five years of non-compliance. A general notice of violation was posted in the Seattle Times by the WTD.
- Stormwater run off from closed areas are directed to wetlands, stream, and rivers. When closed area are opened to accept additional refuse, stormwater from these areas will no longer be redirected. How will that affect water flows to wetlands, key waterways, and water rights, including tribal?

6.0 Groundwater

6.1.2.1 – Cedar Hills – *“Groundwater quality in the regional aquifer in the vicinity of the CHRLF has been and is affected by land uses at the adjacent privately-owned Queen City Farms property. This property was listed on the EPA National Priorities List in 1984, and remedial actions have been implemented to address soil and groundwater contamination caused by hazardous waste disposal (EPA 1992; EPA 1994; EPA 2018). The Queen City Farms site occupies approximately 340 acres directly south of the landfill. Over the last 50 years, the Queen City Farms site uses have included a pig farming operation that used municipal solid waste as feed, an animal rendering plant, unlined pits for disposal of liquid hazardous waste, unlined areas for disposal of solid waste including drummed waste, a general aviation airport, a solvent recovery operation, and gravel mining (EPA 1992; KCSWD 2004; EPA 2018). A commercial composting facility (Cedar Grove Composting) currently operates compost piles immediately south of the CHRLF property line. Groundwater flows north from the Queen City Farms site beneath the CHRLF property (see Figure 6-1).”*

6.1.5.1 – Water Quality in Perched Groundwater Zones – *“Groundwater monitoring and site investigations indicate that groundwater quality in two localized perched groundwater zones (the East Main Hill Perched Zone and South Solid Waste Area Perched Zone) has been impacted by past landfilling practices (Aspect 2010a; Aspect 2010b). Because these perched zones are of limited extent and cannot provide sufficient water quantities for area uses, they pose no risk to water supplies in the vicinity of the CHRLF. Groundwater quality impacts within the East Main Hill Perched Zone are being managed under the Model Toxics Control Act (KCSWD 2016c). Site improvements and engineered facilities have generally resulted in stable or decreasing contaminant concentrations in perched saturated zone groundwater (KCSWD 2020).”*

Comments:

- This section omits known and expected groundwater contamination related to CHRLF. According to a report contracted by the SWD, aquifer contamination is expected. "As the Main Hill first began operation in 1965, this model predicts, even with the conservative assumptions, fluid migration through the unsaturated zone into the Regional Aquifer to occur in 2058." Groundwater contamination is an issue not only for the surrounding communities/locale, but for many cities, lakes (Sammamish & Washington), Puget Sound, and the region.

6.2.2, 6.3, 6.4 – Cumulative Impacts, Mitigation Measures, and Significant Unavoidable Adverse Impacts – "6.2.2 Cumulative Impacts Activities associated with landfill development and facilities relocation, including those at the CHRLF and the Renton site, would not be expected to contribute to the cumulative overall past, present, and likely future impacts on groundwater in the region due to other ongoing development.

6.3 Mitigation Measures With implementation of BMPs, there are no anticipated impacts to groundwater as a result of implementing any of the alternatives; therefore, no mitigation measures would be necessary.

6.4 Significant Unavoidable Adverse Impacts There would be no significant unavoidable adverse impacts to groundwater as a result of implementing any of the alternatives."

Comments:

- Action Alternatives that top fill or surcharge soil on areas adjacent and on top of the main hill increase the likelihood and rate at which the sole source aquifer under CHRLF will be contaminated.
- Top filling closed areas that currently discharge stormwater into local areas will have an impact on wetlands, waterways, and water rights, including tribal water rights.

8.0 Plants and Animals

7.1.4.1 – Bird Management – *"To prevent birds and other wildlife from feeding, removing, or breeding in waste, and to help control odors and blowing debris, exposed waste in active landfill areas is covered with 6 inches of compacted soil placed at the end of each day. Alternatively, at the end of each working day, landfill personnel use a semiautomated tarping system to cover as much of the leading face of the landfill as possible. The top and side of the daily cell and any portion of the leading face not covered by the tarp are covered with a compacted 6- inch soil layer"*

Comments:

Is 6 inches of daily cover accurate? Seattle and King County approved alternative tarpomatic daily cover to be used on a daily basis. Tarpomatic cover is removed on a daily basis to deposit additional waste. Soil cover is installed after completing a 30-foot lift. Tarpomatic daily cover is being used outside of federal and state regulation. Considering clarifying.

9.0 Human Health

9.1.2.1 Cedar Hills – *“As discussed in the chapter on air quality, CHRLF operations could impact air quality through toxic or odorous compounds contained in landfill gas, or from landfill operations such as aeration of leachate lagoons. Populations potentially affected by air contamination are on-site workers, visitors, and nearby residents.”*

Comments:

- This section should also include the nearby school, Maple Hills Elementary, due to close proximity to CHRLF and being in the same vicinity as “nearby residents.”
- Please see comments above from the Air and Odor section.

9.2.1.2 – Air pathways –

“Toxic Air Pollutants

The study of air toxics conducted to assess potential impacts from the alternatives under consideration is contained in Appendix D, Air and Odor Technical Memos. That study’s evaluation of potential impacts involved a multi-step process as described in Chapter 4, Air and Odor. As described in Chapter 4, modeled concentrations of TAP expected to be emitted through CHRLF operations under a worst-case scenario (Alternative 3 in 2047) are all below their respective ASILs. Expected concentrations of TAP under Alternative 3 in other years or under other alternatives would be lower than the worst-case scenario. Based on this, human health impacts from toxic air pollutants generated by the landfill are not anticipated to be significant.

Odor

To assess the potential for odor generation under the various alternatives, modeling was performed to estimate expected concentrations of hydrogen sulfide (H₂S), the most potent odoriferous constituent associated with landfilling operations. Modeling was conducted under Alternative 3 as the worst-case situation because that alternative would have the largest quantity of waste disposed. Modeling indicated that, under normal operating conditions, none of the alternatives would result in significant odor impacts. Therefore, health impacts due to odor under normal operating conditions are not anticipated to be significant.

Disease Vector Pathways

To date, there have been no significant rodent, fly, or mosquito problems at CHRLF due to control measures, such as daily cover and compaction of solid waste, and monitoring for and elimination or treatment of standing water. Impacts associated with birds as disease vector pathways include possible exposure to waste when it is removed from the active landfill refuse area. According to the World Health Organization, exposure to hazardous health-care waste can result in disease or injury, although those risks are generally limited to waste facility workers and individuals who scavenge on waste disposal sites (WHO 1999), which is prohibited at CHRLF. Bird control and mitigation of potential impacts from birds are discussed in Section 7.3. These updated control measures would continue under all alternatives, so no significant health risk from these pathways would be anticipated.”

Comments:

- Misleading and inaccurate. This section completely disregards finding from previous lawsuits, EIS's, community testimony, PSCAA complaints, and recorded exceedances/violations. Public EIS scoping comments asked that these items be addresses and provided context/documentation.

9.2.2, 9.3 and 9.4 – Cumulative Impacts, Mitigation Measures, and Significant Unavoidable Impacts –

“9.2.2 Cumulative Impacts

The history of odor complaints in the Cedar Hills area, indicates that the Cedar Grove Composting Facility historically has been a major source of odors in the surrounding community. Occasional odor from the CHRLF has added to the cumulative odor impacts experienced by the surrounding community. Odor control programs in place and under evaluation as described below and in Chapter 4, Air and Odor should limit the frequency of odor events at the CHRLF so that the landfill's contribution to cumulative odor impacts in the Cedar Hills area under any of the alternative should be minimal.

9.3 Mitigation Measures

To avoid potential health impacts from landfill operations, KCSWD has been implementing best management and engineering practices in designing, operating, and maintaining environmental control systems, including disease vector control and the landfill gas, leachate, stormwater, and surface water systems. This EIS discusses these and other potential mitigation measures to limit impacts and avoid potential health impacts. Although under normal operating conditions odor should not result in any significant health impacts, odor history at the landfill indicates that occasional odor events could occur. As discussed in Chapter 4, Air and Odor of this EIS, the County implements an odor monitoring program and an odor complaint response program that provides rapid identification and resolution of odor issues at the landfill, so that persistent odors should be minimal. In addition, the County is conducting an evaluation of options to improve the performance of the leachate lagoons. With implementation of the eventual selected option, the likelihood of odors generated from the leachate lagoons, which is already limited, may be further minimized. With these controls in place, no additional mitigation measures are necessary.

9.4 Significant Unavoidable Adverse

Impacts

None of the alternatives would result in significant unavoidable adverse impacts to human health.”

Comments:

- Current impacts are currently significant, including:
 - o PSCAA odor complaint levels above those that resulted in 2000 lawsuit. Inaccurate to state “occasional odors.”
 - o Current normal operations result in:
 - Permit exceedances
 - Methane above the explosive limit for years on the western buffer, without notifying community
 - Recorded health impacts at Maple Hills Elementary
 - Strong physical health reactions to landfill gas and leachate emissions

- Eagles dropping garbage and medical waste in yards in the surrounding community. Many dogs have gotten sick or died in the community after eating trash dropped by eagles. Increase in eagle population linked to use of the tarpomatic cover.
- It is false to say that none of the alternatives would result in significant unavoidable adverse impacts, when current operations already have a significant impact. Increasing the size of the landfill will only increase the impacts. To not adequately address and mitigate current and future impacts will harm the community/locale and open the county up to litigation.

10.0 Noise and Vibration

10.2.1 – Direct and Indirect Impacts – *“Noise was evaluated for day and night operations. Daytime and early morning (considered nighttime under regulations) noise was evaluated for typical landfilling and facilities operations for the No Action and Action Alternatives (additional detail regarding the conditions evaluated is found in Appendix F – Noise Technical Memo). BEW operates under its own Conditional Use Permit and EIS and is responsible for its nighttime noise emissions; therefore, it was not included as part of the nighttime noise assessment. The noise study used traffic volumes for the month of June, which has the highest average daily volumes of any month. Preliminary data for the traffic analysis indicated that the maximum hour for waste volume occurs in the 10-11 a.m. time period. This was used for the daytime noise analysis. Similarly, the 6-7 a.m. period had the most trips in the early morning period, and this period was used for the nighttime noise analysis. The study evaluated truck noise by treating trucks (or other mobile sources) as point sources spread along the applicable route. Projected noise levels were calculated using atmospheric conditions that are favorable to noise propagation and thus lead to higher than typical noise levels. Temperature inversions and downwind noise propagation paths lead to downward bending noise paths leading to higher noise levels. Noise attenuation provided by trees and vegetation was calculated per the International Standards Organization ISO-9613-2 (ISO 1996). For the No Action Alternative, noise levels were evaluated using the highest “normal” condition that would be expected – that is, the final few feet of elevation gained building the sloped “roof top” of the landfill is not considered. Further, a flattened section in the southeast corner was used when modeling noise in that quadrant. The terrain elevation used for noise evaluation in Areas 4, 5, and 6 was 770 ft above mean sea level. For Action Alternatives 1 through 3, the noise study contained in Appendix F evaluated noise generated from seven locations when activity occurred in each. The study also analyzed four additional locations in the northern portion of the landfill where filling would occur under Action Alternative 3.”*

Comments:

- The EIS must include noise and vibration emissions from BEW, since the noise and vibrations that come from the facility are a direct result of the county’s landfill operation. The EIS must be revised to include BEW noise and vibrations for both daytime and nighttime.
- The EIS must include noise analysis when the primarily deciduous trees located in the western buffer, lack leaves to mitigate sound. This affects surrounding communities for ~50% of the year.

10.1.5 – Existing Vibration Levels – *“Vibration sources expected to be operating at the landfill are bulldozers (large and small), loaded trucks, and, potentially, vibratory rollers that may be used in road construction near the edges of the buffer zone. The wheeled trash compactors used at the site do not employ vibration to pack refuse. When moving, excavators on site would create maximum vibration*

levels similar to those generated by the large or small bulldozer. Table 10-7 shows approximate vibration levels for typical equipment.”

Comments:

- The word choice “potentially, vibratory rollers that may be used in road construction near the edges of the buffer zone” is misleading. Vibratory rollers have historically been used for road construction, including a road build on refuse in 2018/2019. It should be clarified if this equipment will be used, yes or no, on what areas, and to what degree. The vibratory compactor caused tens of thousands of damage to nearby homes, headaches, ringing of ears for days, and required residents to leave their homes and take sick time. Communication with SWD documented in the EIS scoping comments. Vibratory rollers will cause a significant impact.

10.2.1.2 - Vibratory Impacts – *“Worst-case vibration levels were calculated by using the highest vibration causing source, the vibratory roller, and by assuming that it was operating on the landfill buffer line or at the extents of the proposed facilities developments, whichever was closer to the property boundary. Table 10-8 shows projected vibration levels of typical equipment at two likely distances. Additional detail is provided in Appendix G.”*

Table 10-8. Projected Vibration Levels of Equipment.		
Equipment	Projected Vibration Levels (VdB)	
	Receiver Distance = 1,000 feet	Receiver Distance = 500 feet
Vibratory roller	45.9	55.0
Large bulldozer	38.9	48.0
Small bulldozer	9.9	19.0
Loaded truck	37.9	47.0

VdB – vibration decibels

For each type of equipment, the projected vibration level is:

- Below the threshold for Category III building damage
- Below the 72 VdB threshold for human annoyance
- Below the 65 VdB threshold for human perception

A 2014 study describes the results of a noise and vibration study performed for the CHRLF North Flare Station (King County 2014). The results of the study are still applicable because the same basic equipment is still in use. The results indicate that the vibration levels near the flare station with a single flare lit were well below the FTA criteria for human annoyance. With three flares lit (full capacity) the vibration levels would be a maximum of about 9.5 VdB greater, but levels would still be well below the FTA criteria. At property line locations, there was no significant difference between the measured vibration levels with the three flares on or off. The study concludes that at the landfill property lines the vibration level had diminished to the point that it was not distinguishable from the background level. Projected vibration levels at the property line would remain below the threshold for noticeability for all action alternatives. Because they would not be noticeable, there would be no change compared to the No Action Alternative.”

Comments:

- Vibrations studies must be conducted with vibratory rollers being operated on top of refuse. This is a known issue by the SWD. Vibrations travel differently on refuse and at ~788-830ft, as proposed in road construction in the EIS. Vibratory rollers used near the buffer on soil or in pits behave much differently than on refuse and at higher elevations.
- Flare harmonics were part of the 2000 lawsuit, causing damage to homes. Harmonics must be studied as part of the EIS, this is the only way to adequately study vibration impacts.

10.2.2 and 10.3.1 – Cumulative Impacts and Cedar Hills

Comments:

- Mitigation measure should include not allowing or severely limiting vibratory rollers and instead utilize road building techniques like Controlled Density Fill.
- Significant impacts are already felt by the locale/community related to noise and vibrations. This is well documented in lawsuit settlements and complaints. The EIS should adjust their assessment as significant impacts expected and offer further mitigation. If not, the county opens themselves up to additional litigation.

12.0 Aesthetics, Light and Glare

12.2.2 Action Alternatives – *“The visual analyses contained in Appendices J and K assessed visual effects at specific viewpoints. Appendices J and K. contain figures showing visual simulations at the various viewpoints and also contain detailed discussion of visual impacts that would be experienced under the action alternatives. Table 12.3 below summarizes those visual impacts.”*

Table 12-3 –

Table 12-3. Visual Effects at Viewpoints Surrounding Landfill by Alternative.

Viewpoint	Visual Effects
#1	The visual changes would be limited to the visible northwestern face and summit of the landfill. The proposed additional vertical fill in Area 4 in Alternatives 1 and 2 and in Area 2/3 in Alternative 3 would be slightly more obvious when compared with surrounding landforms because of the flat-topped, manufactured shape of the landfill. The proposed additional vertical fill may block some of the distant horizon. This is considered a less than significant impact due to the relatively minor decrease in the available viewshed, which is already obstructed by existing vegetation and the current landfill. The existing view of Mount Rainier, 50 miles to the south, will be unobstructed by the proposed vertical addition to the landfill. The North Landfill Support Facilities in Option 2 would not be visible from this viewpoint and it is unlikely that the support facilities would be visible to other residents on the southwest side of Squak Mountain due to obstruction by existing vegetation in the intervening 2.5 miles.
#2	Distant views of landfill operations from Viewpoint #2 are generally obscured by existing landforms and vegetation. Residents and motorists have a partial view of the landfill's northwestern face and summit. Viewers may see some soil surcharging activity and an increase in landfill bulk in Areas 2/3, 4, and 5 under Alternatives 2 and 3. The proposed additional vertical fill in these alternatives would be obvious because of the flat-topped, manufactured shape of the landfill. The proposed additional vertical fill may block some of the distant horizon. This is considered a less than significant impact due to the relatively minor decrease in the available viewshed, which is already obstructed by existing vegetation and the current landfill. The existing view of Mount Rainier, 50 miles to the south, will be unobstructed by the proposed vertical addition to the landfill. The North Landfill Support Facilities in Option 2 would not be visible from this viewpoint.
#3	When the landfill is visible from individual residences in the Mirrmont community, they may be able to see landfill operations in portions of the landfill where the projected elevation would rise to 830 feet in Alternatives 2 and 3. At 2.0 miles away, these visual changes would be softened by distance and atmospheric conditions. The access roads and active landfill areas would be less prominent and equipment would be difficult to discern.
#4	There will be no changes in views of the landfill under Alternative 1. Under Alternative 2 the top of the southern end of the landfill would rise from its current elevation to a projected elevation of 830 feet. Under Alternative 3, the ridgeline would rise from its current elevation of 765 feet to a projected elevation of 830 feet. From this viewpoint, this would appear as a barely visible grass-covered ridgeline and would still be largely camouflaged by the perimeter buffer. Existing vegetation in the foreground and landforms in the middle ground would continue to obstruct views of the landfill from this viewpoint.
#5	Landfilling operations and earth-moving equipment would be visible in Areas 6 and 7, where proposed elevations would reach 788' under the action alternatives. None of the alternatives would substantially degrade the existing visual character and the impact is less than significant due to the relatively minor decrease in the available viewshed, which is already obstructed by existing vegetation and the current landfill. While the landfill operations and earth-moving equipment would be visible, they would be softened by distance and atmospheric conditions. Upon completion of the landfill operations, a grass vegetative cover would dominate the view. In Option 1 under each alternative, the buffer would allow new landfill facilities. Existing vegetation and landforms in the middle ground completely obscure views of the South Landfill Facilities.

Table 12-3 (continued). Visual Effects at Viewpoints Surrounding Landfill by Alternative.	
Viewpoint	Visual Effects
#6	The perimeter buffer existing vegetation in the foreground effectively obstructs all views to the landfill. None of the action alternatives would substantially degrade the existing visual character.
#7	The perimeter buffer existing vegetation in the foreground effectively obstructs all views to the landfill. None of the action alternatives would substantially degrade the existing visual character.
#8	The perimeter buffer vegetation in the foreground effectively obstructs all views to the landfill. None of the action alternatives would substantially degrade the visual character.
#10	Filling activity and possible increase in landfill bulk in Areas 2/3 and 4 in Alternative 3 may be apparent along May Valley Road. Because of the middle ground vegetation, the landfill would continue to appear as a grass-vegetated ridgeline in the distance. The increase in height would largely be obscured by the perimeter buffer. The proposed North Landfill Support Facilities in Option 2 would not be visible from this viewpoint.
#11	Unless the roadside vegetation is removed along 195th Place SE, motorists would likely be unaware of any visual changes at the landfill under any of the alternatives. None of the alternatives would substantially degrade the existing visual character.
#12	Residents are the primary viewers and while the view to the landfill would be dominated by landfill operations, including visible earth-moving equipment, it would not be substantially different from what is currently viewed. The appearance of these activities is softened by distance (greater than 2 miles) and atmospheric conditions. Because the landfill is an existing facility, it has become an established part of the landscape. None of the alternatives would substantially degrade the existing visual character and the impact is less than significant due to the relatively minor decrease in the available viewshed, which is already obstructed by topographic effects, neighborhood features, and the current landfill.
#13	Under Alternative 3, landfill development in the extreme northeast corner would both encroach on the existing perimeter buffer and increase the apparent bulk of the landfill. Under Alternative 3, the grass-covered ridgeline would be more visible above the visual tree line comprising the perimeter buffer. During landfill operations, construction of the increased landfill capacity in the Northeast corner, soil surcharging activity, soil-covered ridgeline, and earth-moving equipment would be visible. Their appearance would be temporary and softened by distance and atmospheric conditions. The fill area contrasts with the surrounding area because of the current soil cover and grass vegetative cover. It is also identifiable by the horizontal line of the flat top of the landfill. The proposed vertical and horizontal expansion would encroach on the horizon line; however, this is considered a less than significant impact due to the relatively minor decrease in the available viewshed, which is already obstructed by the vegetation and the current landfill.
#14	The visual effects from this viewpoint are the same as described for Viewpoint #13, with the exception that the cone of vision along the sightline is broader and affords a more expansive view of the landfill from north to south.

Comments:

- An additional evaluation regarding visual affects must be conducted during month where deciduous trees are without leaves for ~50% of the year. Without a study during these months the analysis is incomplete.
- These evaluations seem to have a personal interpretation vs. a scientific consideration. Please provide scale and rating system used for evaluation of visualization degradation.
- Are infringed upon buffers and reduced tree cover taken into consideration? This needs to be clearly stated. If it isn't taken into consideration, buffer infringements must be modeled for visuals and included in the EIS.
- This analysis does not consider home valuations and social/emotional factors of nearby communities. All residents would agree that being able to see a landfill that wasn't previously visible in their community to be significant. This is one of the reasons why 788ft was a condition in the 2000 lawsuit. To disregard that and the effect on the community, it's rural culture,

psychological health, and home values is unacceptable. Additional analysis must be included for the EIS to address environment equity and justice and impacts.

12.3 Mitigation Measures and 12.4 Significant Unavoidable Adverse Impacts

Comments:

- If Action Alternatives are pursued that increase the landfill height to 830ft, it's likely these will be significant impacts to the locale/surrounding communities. These impacts are stated above and include, home valuation, changing the locale/community's unique rural culture, affecting views, and negative effects on psychological health.

14.0 Public Services and Utilities

14.1.5.1 - Police, Fire, and Emergency Medical Services, Cedar Hills – *“Eastside Fire & Rescue, part of King County Fire District 10, serves the landfill. Fire District 10 provides technical rescue, hazardous material, and wild land services for deployment at CHRLF (KCFD 2019). Precinct 3 of the King County Sheriff's department supplies police service to the landfill, and Bellevue Medic One/EMS Services provides advanced life support services in the area including the CHRLF.”*

14.1.6.1 – Schools, Cedar Hills – *“The CHRLF is entirely within the Issaquah School District #411. The closest school to the landfill is the Maple Hills Elementary School, approximately 0.33 miles to the west of the west property boundary. Several other schools are located between about 2.5 and three miles away, including Briarwood Elementary, Lincoln Senior High School, and Maywood Middle School to the west and northwest (Issaquah School District); Ridgewood Elementary and Northwood Middle School to the south west (Kent School District); and Tahoma Elementary, Shadow Lake Elementary, and Cedar River Elementary to the south (Tahoma School District).”*

14.3 Mitigations Measures and 14.4 Significant Unavoidable Adverse Impacts

Comments:

- Mitigation measures should include:
 - o First responders:
 - Provide Fire and Emergency Service workers who would be responsible for responding to potential CHRLF emergencies a toxics report and mitigation measures for toxics. This would help ensure that these first responders are protected. Emergencies may include fire, pipeline ruptures, flooding, or other potentially hazardous situations.
 - Provide testing equipment for key toxics that may affect first responder's health or residents who they are assisting.
 - o Maple Hills Elementary:
 - Provide Maple Hills Elementary with an emergency plan in case of fire, pipeline rupture, or other potentially hazardous situations.
 - Install testing equipment at Maple Hills Elementary that constantly monitors key toxics, that alerts Issaquah School District Staff and SWD in case of exceedances, so children and teachers can be properly protected.

- Action Alternatives will have an impact on the communities surrounding CHRLF, as noted earlier in the EIS. These same impacts will affect Maple Hills Elementary that is located in the community. Eastside Fire and Rescue is also located in the affected communities previously discussed. Emergency staff will be also be impacted when responding to emergencies. This section should be updated to include impacts.
- Enrollment at Maple Hills Elementary has been affected by odors, with parents withdrawing students, due to odors and poor learning environment. This should also be noted and addressed.

Sincerely,

Jacquelyn Green

From: [Sean Kronberg](#)
To: [PlanEIS, CedarHills](#)
Cc: [Dunn, Reagan](#); [Steiner, Glynda](#); [McLaughlin, Pat](#); [Belt, Laura](#); [Tracey Kronberg](#); [Tom Carpenter](#); [Edie Jorgensen](#); [PETER EBERLE](#); [Pon, Yolanda](#)
Subject: Comments - CHRLF-Draft-EIS
Date: Friday, October 30, 2020 11:02:03 PM
Attachments: [S.Kronberg Comments - CHRLF-Draft-EIS.pdf](#)

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CedarHillsPlanEIS@kingcounty.gov: Please acknowledge receipt of this email.

To whom it may concern,

The attached PDF contain my partial comments related to the Cedar Hills Regional Landfill 2020 Site Development Plan and Facilities relocation Draft Environmental Impact Statement outlined at <https://kingcounty.gov/depts/dnrp/solid-waste/facilities/landfills/cedar-hills-development.aspx>

Due to the <https://your.kingcounty.gov> website being down for much of the afternoon and evening of October 30th as I first described in the email below, I was not able to comment on the Alternatives within the EIS. **Due to this technical failure of the King County website, I would formally ask that the deadline be extended for all.** I'm certain that I was not the only person who was impacted, and others may not have taken the time to respond at all, which is terribly unfortunate. If you extend the deadline, I will amend my comments and include feedback on the Alternatives proposed in the Draft EIS. Please let me know.

Best Regards,
Sean Kronberg

On Fri, Oct 30, 2020 at 6:38 PM Sean Kronberg <sean.k.kronberg@gmail.com> wrote:

I'm attempting to return to:

<https://kingcounty.gov/depts/dnrp/solid-waste/facilities/landfills/cedar-hills-development.aspx>

to access the Draft EIS PDFs this afternoon, however none of the links to the documents are working.

Mainly this PDF is needed:

<https://your.kingcounty.gov/dnrp/library/solid-waste/facilities/CHRLF-plan-2020-draft-EIS.pdf>

but it will not load.

I've tried multiple computers, both at home and at work, multiple browsers all with the same result - just spins and never loads any other PDFs there.

I've searched, and I do not have local copies of these PDS, so can not complete my

comments today before the deadline, October 30, 2020.
Are these documents still available?

While writing this email, I now see the problem - the PDFs are located on a site called "<https://your.kingcounty.gov>" this site is DOWN.

After a few minutes, I was redirected to <https://503.kingcounty.gov/>.

Please advise - I need access to the PDFs to finish my comments! Can you please extend the deadline for the comments on the draft EIS given the site is down?

Thank you,
Sean
206-619-1794

October 30, 2020

TO:

King County Solid Waste Division
201 S. Jackson Street, Suite 701
Seattle, Washington 98104
ATTN: Kinyan Lui, Project Manager

FROM:

Sean Kronberg
15607 230th Ave SE
Issaquah, WA 98027
Sean.K.Kronberg@gmail.com
206-619-1794

Public Comments: Cedar Hills Regional Landfill 2020 Site Development Plan and Facilities relocation Draft Environmental Impact Statement

Intent of Landfill's Original Conditional Use Permit: "Protection of the Surrounding Properties"

Solid waste disposal at the CHRLF is allowed under a Special Permit approved by the King County Board of Commissioners on September 12, 1960, some 60 year ago. Let me start by quoting the 1960 permit under which the Cedar Hills Regional Landfill still operates today, and of which King County has been in violation for some 35+ years:

A 1,000' buffer strip surrounding the entire site will be left in its natural state for the protection of the surrounding properties. There will be no sanitary operations in this strip other than access.

These two conditions exist under the original permit: A 1,000 ft buffer, and no sanitary operations in this 1,000 ft strip other than access.

By explicitly stating the purpose of maintaining a 1,000-foot natural buffer within the Special Permit, it is clear the original intention of King County's permitting body was to protect the landfill's surrounding properties. The permitting body plainly demonstrated its concerns for the safety of the existing surrounding community and, for the safety of the future community that would eventually surround the landfill.

Long-standing Violations of Original Landfill Permit: Public Endangerment

The original permit clearly prohibits any addition to, alteration of, addition of waste, removal of soil from, and any construction in the 1,000' buffer, yet here we are today, with garbage in the Eastern buffer, contamination along the Eastern side of the Main Hill and inside the Eastern buffer, leachate lagoons in the Southern buffer, and residential buildings in the Eastern buffer. How did we go from "A 1,000' buffer strip surrounding the entire site will be left in its natural state for the protection of the surrounding properties" to where we are today? Let's not continue chipping away at the protections which the buffer still provides the neighboring communities.

Most landfill neighbors do not realize how truly vulnerable they are living in proximity to the landfill -- even if the intended 1,000-foot buffer were still fully intact. But for those of us who have more in-depth knowledge about and first-hand experience with the landfill's activities over the years, the prospect of more changes to these thousand feet of protection is a scary and a dangerous proposition.

Newly Proposed Development Alternatives: Further Reduction of Public Safety

How will the Alternatives within the Draft EIS impact the safety of those living near the landfill?

Landfill staff undergo training and regular refresher courses to ensure that they remain safe in the event of an accident at the landfill. Citizens who live beside and near the landfill, however, are not provided any such training, and must rely solely on the landfill's systems, infrastructure, human processes, and built-in engineering safeguards to protect us from more failures and exposures.

What secondary safeguards are in place to protect your neighbors?

The 1,000-foot buffer is a protection to those who surround the landfill, and any erosion of this buffer is unsafe, and will lead to more incidents in the future that negatively impact the health and wellbeing of the landfill's neighbors. **Public safety must be your top priority**, and many of these Alternatives and Options do not have any effective methods or backups to those systems for protecting my safety, my family's safety, or the safety of the communities surrounding the landfill. Continuing to propose construction of new refuse areas, continuing to place new refuse on older areas, which were not designed to continue to accept new waste after years of settlement, and continuing to use the buffer for any landfill-related use, including the buried garbage in the buffer and other environmental and facilities uses, reduces public safety leading to a more dangerous landfill.

I'd further submit that the decisions that face you today, including decisions that may seem completely unrelated to public safety now, remain inextricably connected to future events, and I would therefore

urge you to consider the proposed alternatives and options in the Draft EIS – and **make your final selection with real consideration for -- if not an outright bias toward – public safety.**

One example: When garbage was placed in the Eastern buffer in the 1980's, there was no landfill gas-to-energy plant on the drawing board. However, some years later, the gas pipeline that carried landfill gas from the North Flare station to the Gas-to-Energy plant, was placed on or near the ridge line of the Main Hill. If the Main Hill had never crossed into the 1,000-foot buffer, that ridge line and the pipeline built upon it would have been laid father to the West, further away from the properties on the Eastern side of the landfill. This distance could have made a big difference for those who were hurt and suffered after the gas pipeline break in December 2013. Mistakes and seemingly unintended consequences are avoidable with careful planning, engineering, mitigation, and forethought. These critical, early planning decisions face you today within this Draft EIS. Please make public safety your priority.

Please utilize the existing buffer for the **“protection of the surrounding properties”** just as the original permit stated: **“A 1,000-foot buffer strip surrounding the entire site will be left in its natural state for the protection of the surrounding properties. There will be no sanitary operations in this strip other than access.”**

The Draft Environmental Impact Statement (Draft EIS) for the King County Cedar Hills Regional Landfill 2020 Site Development Plan and Facility Relocation Project documents the many “sanitary operations” which are already in the 1,000-foot-wide buffer zone. Here are some:

1. Two leachate pretreatment lagoons were constructed in the southwest corner of the buffer in violation of the 1960 permit
2. Siltation pond, a CSW lagoon, and a stormwater lagoon exist in the South buffer in violation of the 1960 permit
3. Siltation pond and a stormwater lagoon exist in the Norther buffer in violation of the 1960 permit
4. A non-potable water tank is located in the eastern buffer zone in violation of the 1960 permit
5. Many other environmental control systems, including landfill gas monitoring wells have been located within the buffer surrounding the landfill in violation of the 1960 permit
6. Landfilling (dumping of garbage) was done in the Main Hill and Southeast Pit areas in violation of the 1960 permit

For the last 60 years, “sanitary operations” were never supposed to be placed in the 1,000-foot buffer, yet now, the Solid Waste Division is proposing to alter the existing or get a new Special Use Permit to allow for support facilities to be relocated into the buffer. These alternatives are unacceptable.

The permitting body plainly demonstrated its concerns for the safety of the existing surrounding community within the 1960 permit conditions and, for the safety of the future community that would eventually surround the landfill. Given the more populous neighboring communities which surround the

landfill, I urge you to stop using the buffer, and proposing new sanitary operations for the buffer, including placing support facilities within the existing buffer zones.

No Landfill Support Facilities in the Buffer

While I am happy to see that the King County Solid Waste Division (SWD) is no longer proposing to alter the existing 1,000-foot-wide buffer down to 500-feet or other distances at various locations around the landfill, I am extremely disappointed there are now two Options in the Draft EIS to place support facilities in the existing 1,000-foot buffer. I find these Options unacceptable and disingenuous to those landfill neighbors who purchased properties in the last 60 years and live today near the landfill based on the existing 1960 Special Permit, which states that a 1,000-foot-wide buffer zone be maintained in its natural state around the perimeter of the site for the protection of the surrounding properties. The permit also states, “there will be no sanitary operations in this strip other than access.”

A plain reading of the 1960 Special Permit can result in only one conclusion: any landfill-related, or sanitary-operations of any kind are not allowed within the 1,000-foot buffer. Attempting to revise or replace the existing 60-year-old permit, and the assurances it provides the landfill neighbors, is not an option for the SWD, and the Draft EIS Options which propose use of the 1,000-foot buffer should not be considered.

Option 1

Option 1 would pursue a Special Use Permit to relocate and build landfill support facilities within the existing southern buffer zone. Using the buffer is simply unacceptable. As stated previously, any erosion of this buffer is unsafe, and will lead to more incidents in the future that negatively impact the health and wellbeing of the landfill’s neighbors. **Public safety must be your top priority.**

Option 2

Option 2 would pursue a Special Use Permit to relocate and build landfill support facilities within the existing northern buffer zone, including, but not limited to the truck maintenance building, parking, office space, and laboratory space. Using the buffer is simply unacceptable. Again, any erosion of this buffer is unsafe, and will lead to more incidents in the future that negatively impact the health and wellbeing of the landfill’s neighbors. **Public safety must be your top priority.**

Option 3

Option 3 would relocate and build landfill support facilities at an off-site location at 3005 NE 4th Street in Renton, adjacent to King County’s Renton Recycling and Transfer Station. **This is the only viable option** the Solid Waste Division has presented in the Draft EIS. Since placing facilities inside the existing buffers is not safe, nor would it be in the spirit of the original intention of King County’s permitting body, Option 3 is the only option that should be evaluated further and ultimately chosen.

The original permit's intent was to protect the landfill's surrounding properties. Option 3 does this by not expanding use of the buffer. This option demonstrates the Solid Waste Divisions concerns for the safety of the existing surrounding community and shows a commitment to protecting the surrounding properties, as required by your current permit. Options 1 and 2 simply do not show any respect for past commitments nor any regard for the community's safety.

To that end, please remove Options 1 and 2 from consideration.

Often times an early document or decision, rendered many years ago, contains great foresight and provides protections – our United States Constitution comes to mind. The existing 1960 permit does just this for the neighboring communities. It is now that we must adhere to the original intent of the 1960 Special Permit, and not try and replace or alter its contents in order to use the 1,000-foot buffer for support facilities.

Health and Safety of the Surrounding Community

Page 11-19 within the Draft EIS states:

“The special use will not materially endanger the health, safety and welfare of the community.”

This statement is not true. If the County designs, constructs, and operates the CHRLF as proposed in the Draft EIS, impacts associated with noise, air and odor, surface and ground water, visual quality, and traffic would all be impacted significantly. I'll address a few of these topics here.

Noise

Page 10-14 states, “Mitigation should include the following measures to bring noise levels within regulatory requirements.” This means mean that the SWD is already out of compliance with the King County Code noise regulations even before beginning to expand and construct the proposed Alternatives in the Draft EIS. Before doing anything else, the SWD needs to address the noise it generates and comply with County code. While the Draft EIS suggests some mitigations to the noise problems and further problems the Alternatives will create, the SWD has an obligation, especially now that its own documents prove it is not in compliance, to fix and mitigate further violations immediately. Additionally, I have a hard time believing the new developments and mitigations will comply with the noise requirements if the current operations are not in compliance today.

On page 10-11, the Draft EIS states: “For all action alternatives that include support facilities in the north, nighttime noise limits are exceeded on land adjacent to the NW, SW, and north portions of the

landfill.” This isn’t acceptable – placing support facilities within the 1,000-foot buffer is not an acceptable option due to the increase in noise.

Air and Odor

The gas pipeline break in December 2013 is still fresh in our memories. I walk by my neighbors’ properties where their houses once stood, where their children once played, and where they carved out a life for themselves here in rural Issaquah, but now only dirt exists, houses torn down and families ripped apart from the life they knew and loved because of a pipeline break that poisoned the air we breathe.

This tragic and costly event could have been prevented. Engineering failures, a disregard for public safety, lack of oversight during installation, a failure to test pipe welds, and a culture which does not value the safe operation of the landfill all contributed to a complete failure and break of this critical piece of landfill infrastructure. Even worse, consultant warnings during the design phase of the pipeline cautioned the SWD of the potential for failure in the pipeline due to the lack of ability of the pipeline to flex/expand/contract. Options of installing the pipeline in a serpentine manner to allow for expansion and contraction could have prevented the failure, yet King County SWD declined these improvements recommended by consulting engineers. Other mistakes throughout the design, build, commissioning, and maintenance of the gas pipeline led to this disaster.

It is often the case that not one decision in time leads to a major engineering failure, rather many decisions over years, with many opportunities for correction, leads to a catastrophic failure. It is the missed opportunities for correction which scares me the most here, as it shows institutional disregard for safety, one of the most difficult and costly problems to address by an organization. The lack of mention of this major failure in the Draft EIS is yet another example of the continuation of this disregard for public safety.

The 2013 pipeline break leads me to only one conclusion since the public has been provide no details of the corrective actions taken at an organizational level to address the underlying root causes of the failure: it can only be assumed that the attitudes, engineering decision making criteria, and lack of regard for safe operations is still missing from the King County Solid Waste Division. This is tough to write down, but it needs to be written down over and over again and directly addressed by the SWD publicly, including substantial improvements to its processes, procedures, and training to ensure it never happens again. Statements such as, *“The special use will not materially endanger the health, safety and welfare of the community”* in the Draft EIS only furthers my belief that the SWD hasn’t improved these underlying institutional problems since the 2013 pipeline break.

In regard to odor, the Draft EIS alternatives describe additional areas, new waste, the uses of the buffer for more landfilling operations, and continued operations at Cedar Hills Landfill for years to come. All of this will contribute to more odor being detected offsite. We already deal with near-daily exposure to

unknown toxins which produce putrid odors from the landfill. Unfortunately, after years of a 'do-nothing' attitude by the SWD, and a blame game with the neighboring Cedar Hills Composting has resulted in me and my family giving up reporting on these daily odors from the Landfill. Unfortunately, the SWD probably thinks they are 'doing great' given that I have stopped reporting, but in fact it is the opposite. The odors coming from the landfill are a daily reminder of the poor management and operational process the SWD perpetuates.

Much of this lack of communications is due to the direct health impact the landfill and dealing with the persons in the SWD. My health has been suffering because of all of the stress the SWD has caused me, which has left me no other choice other than the cease my communications.

Traffic

Placing any landfill support facilities in the Northern portion of the landfill will cause new vehicle traffic to travel from South (where the entrance is) to the North, and in reverse. This will cause additional noise from the driving of cars and trucks with trailers to and from the Northern buffer location, leading to additional pollution, new vibration from the trucks, additional noise, and pollution impacts to the neighbors. These impacts will depend greatly on the location of the access roads to this new facility in the North and the route in which the vehicles will travel them, what time of day they are used, etc. Any support facilities in the Northern buffer does not make any sense due to the impacts on the surrounding communities.

Also, May Valley Rd was not discussed at all in the traffic section even though a lot of SWD trucks use this road regularly.

Needed Corrections

In section 9.3, on page 9-9, the Draft EIS states:

“To avoid potential health impacts from landfill operations, KCSWD has been implementing best management and engineering practices in designing, operating, and maintaining environmental control systems, including disease vector control and the landfill gas, leachate, stormwater, and surface water systems.”

Please read again the previous section about the pipeline failure if you need reminding of the lack of 'best management and engineering practices' occurring in the past. Any suggestion that KCSWD “has been implementing best management and engineering practices” is simply false and a lie.

On page 13-3, the Draft EIS states:

“All KCSWD trucks hauling solid waste travel to the landfill along Cedar Grove Road from SR 169...”

What about May Valley Road and the roads leading to/from it, such as SR900? I found it odd not to mention May Valley Road at all when discussing traffic, yet a lot of trips take this route. I’ve been told in the past that SWD trucks only take this at peak traffic times, when it is difficult to manage the trip from the Renton Transfer station to the landfill. This isn’t true. I’ve tracked and documented many trips to and from the Renton Transfer station when no significant traffic existed, it was a slow time of day, or even during the early months of the Covid situation when there was little to no traffic on the road. Trucks still took SR900 to May Valley Rd, then to Cedar Grove Rd to access the landfill. None of the traffic studies or the Draft EIS in any way addresses the impacts along May Creek or through the May Valley neighborhoods. Please address these shortcomings in the final EIS.

Starting on page 13-3 of the Draft EIS, traffic is addressed in detail, however no studies or impacts were discussed of the SWD truck and trailer trips which would be needed if the support facilities were located in the Northern 1,000-foot buffer. Trucks would need to travel much more frequency from the North to the South, and in reverse to access the support facilities there. Pollution from the trucks, added noise that may be heard by neighboring properties, lights from the trucks during the October – May months when it is darker in the AM and PM hours, etc. All of these impacts are not addressed, and no mitigations proposed for these impacts. Please address these shortcomings in the final EIS.

Page 12-2 of the Draft EIS states:

“...and the vegetated 1,000-foot-wide buffer surrounding the landfill.”

Please remove this untrue statement. The SWD made this untrue claim over and over again since the time I began living near the landfill in 2003. After years of hiding the fact that refuse had been placed in the 1,000-foot buffer on the Eastern side of the landfill, the SWD admitted to this mistake, yet has often continued to claim the 1,000-foot buffer is “vegetated.” Not only is the buffer barren and un-vegetated in many locations at the landfill, it has been built in for landfill operations, residential uses, leachate ponds, a water tower, stormwater lagoon, among many other landfill/sanitary related uses. Please revise this untrue statement about “the vegetated 1,000-foot-wide buffer.” Unfortunately, it isn’t 1,000-feet wide for large sections of the buffer, and it isn’t vegetated in many locations.

Conclusion

In summary, it is my hope that through these comments the Final EIS is improved and the only Option that is truly viable is chosen, Option 3, where support facilities are built offsite and not within the existing 1,000-foot buffers.

Due to the <https://your.kingcounty.gov> website being down for much of the afternoon and evening of October 30th, I was not able to comment on the Alternatives within the EIS. Due to this technical failure of the King County website, I would formally ask that the deadline be extended for all. I'm certain that I was not the only person who was impacted, and others may not have taken the time to respond at all, which is terribly unfortunate. If you extend the deadline, I will amend my comments and include feedback on the Alternatives proposed in the Draft EIS. Please let me know.

From: [Richard Honour](#)
To: [PlanEIS, CedarHills](#)
Subject: Draft Environmental Impact Statement Issued; Comment deadline extended: Nov. 6, 2020
Date: Tuesday, November 3, 2020 10:13:54 PM
Attachments: [Cedar Hills Regional Landfill 2020 site development plan and facilities relocation.pdf](#)

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Kinyan Lui, Project Manager, King County Solid Waste Division

Dear MS Lui, please receive the attached response to request for comments on the Draft EIS, for the extended deadline, November 6, 2020.

Sincerely, Richard C. Honour, PhD

Kenmore, WA

Cedar Hills Regional Landfill 2020 site development plan and facilities relocation
Draft Environmental Impact Statement Issued; Comment deadline extended: Nov. 6, 2020
Cedar Hills Regional Landfill - Deadline Extended until Nov. 6, 2020, for public comments on Draft
Environmental Impact Statement

Date: November 3, 2020

To: Kinyan Lui, Project Manager, King County Solid Waste Division, Seattle, WA 98104-3855

From: Richard C. Honour, PhD (19211 64th Place NE, Kenmore, WA 98028, 4255.772.1473, rhono@precautionarygroup.org)

RE: Comments on the Draft Cedar Hills 2020 Site Development Plan EIS

Via Email: CedarHillsPlanEIS@kingcounty.gov

Dear Ms. Lui:

I am an environmental scientist and a specialist in infectious diseases and cancer. I have investigated environmental and public health issues associated with Landfills, Toxic Landfill Leachates, Toxic Wastewater Effluents and Toxic Sewage Sludges privately and for Federal Agencies since the mid-1960s, to the present.

To the point, landfilling of domestic and industrial garbage, aka, Solid Waste, is an outdated method of managing or disposing of wastes, and therefore, all that I have read and observed with regard to King County's practices and behaviors represent no more than primitive forms of waste dumping, discharge or disposal into our living environment, with little consideration of the adverse consequences, of which there are many.

King County must enter the modern world, no matter the costs, if for no reason other than to protect the health of our citizens and of our living environment.

Land-Disposed Toxic Garbage (Solid Waste, or, Landfilling of Garbage) represents a danger to society at large, and to our citizens and environment, near and far, past, present and future.

To be clear, King County and the Washington State Departments of Ecology and Health must shift rapidly from trying to monitor and regulate Toxic Waste Dumping, to a practice of managing our historical and current wastes, with the aim of rendering such wastes as becoming less toxic or inert, not simply pushed aside, buried or hidden from view, while their toxicity continues. Regardless of statements made by King County staff, it does not, "Just go away." Toxics in our environment cause or incite Infectious Disease and Cancer, simply by immune suppression and/or by mutation.

Land-Filled Garbage is Toxic Waste, far beyond the knowledge or understanding of any Washington State or King County employee's claims.

- We cannot, "... seek to ensure that there is adequate capacity in the Cedar Hills Regional Landfill to continue accepting garbage beyond 2028." This action will only add to the toxic burden in our ground and surface waters, as well as in our air, soils and foods.
- We cannot, "... identify a recommended or preferred alternative for maximizing landfill capacity at Cedar Hills Regional Landfill." Landfilling of Garbage/Solid Waste must end, stat!

- We cannot, "... Expand upon the No Action Alternative with the development of additional capacity, with different sequencing in landfilling, leading to increased years of life." Immediate termination of landfilling is the only civilized solution.

The statement, *"In 2019, the King County Council approved the 2019 Comprehensive Solid Waste Management Plan (Solid Waste Comp Plan), which provides policy direction for the County's management of its solid waste. The Solid Waste Comp Plan calls for the County to "further develop the Cedar Hills regional landfill to maximize disposal capacity.""*

This approval and statement assure us that the King County Council has no interest at all in the health of its citizens or of the security of our living environment. As evidence, I will proffer that no member of the King County Council has any experience at all in matters of Public Health or Environmental Health, which should be prerequisite to holding a position of responsibility.

The statement, "The purpose of this project is to maximize the capacity and lifespan of the Cedar Hills Regional Landfill in accordance with the King County Council approved 2019 Comprehensive Solid Waste Management Plan (Solid Waste Comp Plan)," reveals that the Council intends by plan and intent to compromise the health of our citizens and of our environment.

Clearly, any and all Toxic Landfill Leachates and Runoff are highly toxic and do have "significant and measurable adverse environmental impacts" ("SEPA Scoping (WAC 197-11-408)"). The landfill and its volatiles, aerosols, leachates and runoff do not have, "... impacts that are not significant." All toxic wastes have significant impacts, end of story!

"Since 1965, the CHRLF has provided for the safe and efficient disposal of the county's solid waste." This statement is blatantly untrue, and reveals the County's plan and intent to mislead the public into believing that CHRL had a pure history. Discussions with previous employees of CHRL, dating back decades, reveal that truckloads of barrels of then-newly restricted toxic chemicals were unloaded and buried within CHRL. And further, for decades, Toxic Sewage Sludge and WWTP 'Grit' from our many regional WWTPs/POTWs were dumped anywhere at random within CHRL, all of which continue to leak their toxic contents into all surrounding ground and surface waters to this day, and for countless decades to come.

Some estimates tell us that leachates and seepages from Legacy Landfills, of which we have so many right here, may contribute to environmental toxicity for hundreds or for even a thousand years. I continue to seek and find yet new Legacy Landfills within and surrounding King County, much to the chagrin of King County WWTD, SWD and State DOE staff. Such Legacy Landfills seem to be endless here, so what is your expectation for CHRL? Will it too seep and leak for hundreds, or for perhaps even thousands, of years? This question goes unanswered. And further, is there a program within King County that works to at least monitor the long list of Legacy Landfills?

A key reason why King County refuses to perform comprehensive chemical analysis of the leachates and surface runoffs and streams emanating from CHRL is simply because their dereliction of duty as stewards or the toxic landfill would be revealed. Much less, the maps included in the Draft Environmental Impact Statement reveal further that the preparer of those maps failed to include several historical listed and extant streams that convey toxic waters directly into the Cedar River.

Please note that while billions of gallons of rainwater pour into CHRL during the common rainy times in the region, only a few million gallons are captured for discharge to South Plant Renton for combining with the extremely toxic raw sewage inflows. And when considering that South Plant Renton does not

'treat' any inflows, but simply separates the solids from the water, with some decomposition of organic matter, all of the brew of toxic industrial and medical chemicals are transported to our forests and farms for disposal on our food crops and around our wetlands, streams and rivers.

"1.4 Objectives of the Proposal"

The design of action alternatives for the CHRLF is intended to be consistent with the following policies contained in the Solid Waste Comp Plan, approved by the King County Council in April 2019:

- "D-1 Operate and maintain the Cedar Hills Regional Landfill to meet or exceed the highest federal, state, and local standards for protection of public health and the environment." Impossible!
- "D-2 Maximize the capacity and lifespan of the Cedar Hills Regional Landfill." A Death Wish!!

CHRL does not now and never has intended to, "... meet or exceed the highest federal, state, and local standards for protection of public health and the environment." Such action would be impossible, considering the extreme toxic nature of the leachates and other flows from CHRL.

Any attempt to "Maximize the capacity and lifespan of the Cedar Hills Regional Landfill," simply seeks to Maximize the Toxicity to the local environment and to its citizens, as a fact.

The obvious conclusion that may be drawn from the toxic history of CHRL and its mismanagement is that King County is not capable of operating any landfill in compliance with any law, code, regulation or guideline, and that they have no intent to do so, now or in the future; it is clear that the County will not comply with any Environmental Regulations. *Lowest-cost, most-convenient disposal is the objective!*

Furthermore, King County's inability or lack of interest in complying with any applicable laws states the case clearly that the western Washington Cascades do not represent an environmentally safe location for any landfill operation. The rainfall each year at CHRL far exceeds the County's ability to treat such waters, and the aerosols and volatiles add more to the toxic profile, historically and to the present.

Leachates and the massive lost toxic waters aside, King County should at least consider the toxic fate of those who come after us. I have been investigating "Legacy Landfills" in King County for years, and believe me, there are many, far beyond what King County reveals, and they continue to leak, seep and leach their toxic loads into all surrounding environments.

King County and its Legacy and Active Landfills are directly responsible for the demise of our Salmon and Orcas, as just one quick example, and to make matters worse, the University of Washington and Washington State University support their behavior.

The greatest insult, however, is represented by King County employees who pretend to be Doctors or Scientists, proclaiming that, "It's safe," while they are not Physicians or Toxicologists and do not have degrees in medicine or science. In my conversation with EPA Officials, they report that no one can make such statements, absent sophisticated analytical chemistry and toxicology studies. My understanding is that these behaviors by King County SWD and WWTd staff are ordered, taught and required by their managers, such as and including the Department Director, Department of Natural Resources and Parks, as well as by their University of Washington Advisors.

Most sincerely, Richard C. Honour, PhD



From: [Steven Bergman](#)
To: [PlanEIS, CedarHills](#)
Subject: Comment: Draft EIS for CHRLF 2020 site development plan
Date: Thursday, November 5, 2020 11:01:19 AM

[EXTERNAL Email Notice!] External communication is important to us. Be cautious of phishing attempts. Do not click or open suspicious links or attachments.

We welcome your comments on the Draft Environmental Impact Statement (EIS) for the Cedar Hills Regional Landfill 2020 Site Development Plan Facility and Facilities Relocation Project. Please enter your comments below:

I have reviewed the report and would like to make some comments and a question regarding the basic assumptions underlying the plan. The projected future solid waste disposal volumes show a constant 1.1% *growth* for the next 30 years (Table 1.4). I would hope that KCSW could institute new diversion programs that could potentially result in a *decline* in the future waste stream volumes to the Cedar Hills Landfill, thereby extending the life and/or reducing future development costs. I am very disappointed that future waste volume alternatives were not incorporated in the analysis in which diversion of up to 20-50% of the waste stream could easily be achieved by implementing new organics, construction materials, styrofoam, and other recycling programs, as described in F-267, F-269, and F-271 of the 2018 KC Comprehensive Plan. Citizens expect this of our County leadership and it would have huge impacts on the plan. Could you please explain why only one growth model was considered?

Thank you for your consideration and efforts.

Sincerely,

Steve

Steven C. Bergman
20625 Chautauqua Beach Rd. SW
Vashon, WA 98070

From: [Janet Dobrowolski](#)
To: [PlanEIS, CedarHills](#); [Lui, Kinyan](#)
Subject: Comments for the 2020 Draft EIS
Date: Thursday, November 5, 2020 3:04:57 PM
Attachments: [CHRLF Draft EIS Comments - Dobrowolski - Nov 5 2020.pdf](#)

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Attached are my comments for the 2020 Draft EIS.

I had submitted comments on October 30, but did not receive any confirmation.

I have added additional comments from the October 30th submission, so if you actually did receive those comments, please know this attachment supersedes those comments.

Thank you.

Janet Dobrowolski

Public Comment on the Draft Environmental Impact Statement
Cedar Hills Regional Landfill 2020 Site Development Plan and Facility Relocation
October 30, 2020

Submitted to King County DNRP - Solid Waste Division

Respectfully submitted by:
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The idea that the Draft EIS has found “no significant unavoidable adverse impacts” for ANY of the alternatives for ANY affected environment is, frankly, unbelievable. Comparisons also drawn to “existing conditions” as a way of justifying any new impacts assumes the “existing conditions” are acceptable.

The FINAL EIS must NOT evaluate any impacts against the “current conditions” as that is not a valid measure of additional impacts, especially if the existing impacts ARE adverse already.

“Since 1965, the CHRLF has provided for the safe and efficient disposal of the county’s solid waste.” (p. 1-2)

This statement doesn’t even come close to being true. It is indicative of how the rest of the draft EIS views the activities of CHRLF when it concludes no significant adverse impacts because those doing the draft EIS believes all operations are performed without incident. Before making such a blatantly wrong statement, some research needs to be done. To that point, below is a history of their “safe and efficient” disposal activities, note – not a complete list:

- ca 1967 – Buffer zone violation – South border
 - South Solid Waste Area
 - ca 2015 - Waste was removed when building Area 8 and moving leachate ponds and placed in Area 7
- ca 1970 – Buffer zone violation – East border
 - SE Pit Refuse Area
- 1972 – November violation (**Lawsuit ensued**)
 - Cedar Hills was found, by the Washington Department of Ecology (DOE) to be causing **degradation of Mason Creek by leachate contamination** in violation of state water quality standards
- 1974 – April violation
 - **CHL was found by DOE to be continuing its violation of state water quality standards**
- 1980 – June violation
 - CH was found by the Seattle-King County health department to be **allowing leachate to escape in violation of King County Board of Health rules and regulations**
- 1981 – April violation
 - CH was found by the health department to still be in violation of King County Board of Health rules and regulations
- 1981 – July violation
 - **CH was found by the DOE to be continuing to contaminate groundwater and other surface water in violation of Chapter 173-301 WAC, and to be violating state and federal requirements with regard to daily cover of the waste**
- 1981 – September

- **CH was found by DOE to be an open dump, in violation of the US Resource Conservation and Recovery act**
- 1981 – November
 - **CH was found by the health department to be continuing to violate daily cover and access requirements of local, state and federal law**
- ca 1981 – Buffer zone violation – West border
 - Clear cut a portion of the West boundary/buffer zone
- 1986 – Lawsuit – Violation of various “Resources Conservation and Recovery Act (RCRA) groundwater regulations
 - Court found the landfill is NOT in violation of the regulations with respect to a deep aquifer.
 - **Court found the landfill IS in violation of the regulations with respect to the shallow aquifers underlying the landfill.**
- ca 1970-1981 – Buffer zone violation – East Border – in multiple places
 - East Main Hill
- 1996 – Lawsuit initiated
- 2000 – **Class action lawsuit settlement against Cedar Hills** (and Cedar Grove).
 - Issues:
 - Odors
 - Birds
 - Vibrations
 - Noise
 - Buffer zone:
 - Reiterated the 1000’ buffer was not to receive waste or dirt stockpiles
 - **Settled for \$16.5 million**
- 2006 - **Leachate pipe breakage, spilling 200,000 gallons of leachate.**
 - Note – the date of the article is 2006, but that may not be the date of the actual spill
- 2009 – BEW came on line
 - Lots of problems
 - Largest ever of its kind, never been tested
- **2011 – Explosive level methane migration to western border** and possibly beyond. Gas wells 31 & 33 tested high
 - Took almost a year to figure out how to mitigate. They ended up putting in a line of capture wells near the western border of the refuse areas. But, it was migrating for at least a year.
- 2013 – **Major Gas pipeline breakage**
 - Forced 2 families out of their homes
 - Sold their homes to KC, after lawsuit
 - Caused long lasting health issues
 - **2017 – settled lawsuit** for gas pipeline breakage
- 2019 – **Exceedence of chemicals in leachate.**
- 2019 – **Fire in Area 8**

The Final EIS must take into account the history of deficiencies, accidents and negligence that have occurred in this landfill that put people’s health and the environment at risk. The Final EIS must include all lawsuits and resulting settlements and all major events for the life of the landfill.

HEALTH

The conclusion that “none of the alternatives would result in significant unavoidable adverse impacts to **human health**” cannot be substantiated by any model. CHRLF has no proof, whatsoever; that there haven’t been adverse impacts already. No health studies have been done. No comparisons of health issues in surrounding communities with other rural communities have been done. In studying ALL the chemicals that have been listed in the draft EIS and additional ones from the stack test – there’s a reason they are considered toxic. Nearly all have health impacts. The odor that CHRLF staff claim is “safe” has not been proven by CHRLF. TAPs are contained in leachate odors, landfill gas odors and flare odors. All but a few of the TAPs have odors. Mixed together they make up the smell. Communities are breathing in that “odor”. Children are breathing in that “odor”.

The Final EIS must take into account the TAPs as a whole, not individually.

*“Soil that is mixed with solid waste will be sorted on-site to separate the materials and recover any **clean soil** that can be reused at the landfill.” (p.2-10)*

While separating waste from the soil, how will CHRLF ensure that the “clean soil” does not contain dissolved chemicals, oil, or other toxic material? Will they do chemical analysis of it? If their definition of clean soil is that free of physical waste, then they need to change the definition. How will they guarantee the soil is free of toxins?

The Final EIS must include conditions on what is “clean soil” and require CHRLF to test the soil.

NOISE

The conclusion that “ *Initiating new activity in the East Main Hill, Areas 2/3, and 4 would increase sounds to the NE and NW of the landfill beyond what is currently observed, but would likely be similar in nature to the sound levels observed when those areas of the landfill were **originally filled**.*” is unacceptable. Comparison to noise levels from 40 years ago is unacceptable.

What proof is there that the levels when “originally filled” were at an acceptable level?

The noise levels will NOT be the same as when those areas were originally filled, AND it isn’t relevant now. When those areas were filled, the western border hadn’t been clear-cut yet.

The additional height alone will increase the level and range of the noise, since it is above the tree line.

“According to the King County Code, Chapter 12.86.520, “[n]ormal and usual sounds created by construction” are exempt from the limits set forth in Chapter 12.86, except that construction noise is restricted to certain hours.

These sounds created by construction have been and will be going on for YEARS. Landfill operations are NOT normal construction. Any “normal” construction has a reasonable start and end DATE, not unlimited years.

This is a rural designated area and shouldn’t be have to deal with “construction” noise day in and day out for 20 more years. We’ve had to deal with it for 50+ already.

Models are only effective if their results can be validated.

Alternative 3 construction of a berm will increase noise substantially for the communities to the west and north.

The FINAL EIS must provide real life data that can prove the results of their model.

The Draft EIS does not mention acoustical vibrations. There have been instances of these types of vibrations from equipment used at CHRLF that cause headaches and discomfort. Personal experience related a sound like feedback from a subwoofer. This kind of vibration can have debilitating effects on a person’s health

The Final EIS must address the acoustical vibrations.

BUFFER ZONE

Facilities move

The original Special Permit (1965) stated that a 1000' buffer was to remain in its natural state ***“to protect the surrounding neighborhoods.”***

Obtaining a special use permit to move the facilities into the north buffer would require cutting of trees to build, thereby reducing the buffer mitigation purpose. It also goes against the original permit for the buffer to remain in its natural state. Over the years, CHRLF has violated both the east and south buffer zones several times by putting waste within the buffer zone. Waste is still located in the south buffer zone around the power towers, as it was unsafe to remove it when they moved the south pit to build the leachate ponds. During the mid 1980's, the west buffer zone was clear cut and it was never restored. As part of the 2000 settlement agreement was for an arborist, within 2 years of the settlement, was to survey the area and provide recommendations on reforesting the area with evergreens, rather than the deciduous alders, maples, and cottonwoods. This never happened until recently and the result was they would have to clear cut yet again in order for any evergreens planted to survive.

The Final EIS should address the past violations of the buffer zone that have already reduced the protective nature of the buffer zone and evaluate whether further encroachment should be allowed.

Moderate Risk Waste

The 1960 *“Special Use permit stipulates that “no sanitary operations” should be allowed in the buffer”*. (p. 1-2)

Moderate Risk Waste storage area – used for temporary storage of hazardous materials improperly disposed at the facility and spill cleanup residues (pg 2-19)

The proposal to move the facilities into either the north or south buffer includes a provision for a “Moderate Risk Waste storage area”. This should not be allowed, as per the special use permit. The permit doesn't distinguish between temporary and permanent. Any waste storage area located within the buffer zone should not be allowed, regardless if it is deemed temporary.

The Final EIS should address waste stored in the buffer zone.

LANDFILL HEIGHT

“In 2000 King County entered into a Settlement Agreement for several consolidated class action cases (hereinafter referred to as the “Settlement Agreement”) that requires King County to make a good faith effort to keep the maximum height of Areas 5, 6, and 7 of the landfill at or below 788 feet above sea level, while affirming that garbage shall not be disposed of, nor soils stockpiled, within 1,000 feet of the property line at the landfill.”(p. 1-2)

No part of the landfill should not be allowed to extend beyond 788 ft..

At the time of the lawsuit, it was determined that 788 ft would better protect the citizens from odors, noise, dust, and vibrations. Additional, King County had indicated there would be no more expansions beyond area 7. King County had also put final covers and “closed” all previous cells – Main Hill, SE Pit, Central Pit, Area 2/3 and Area 4 was closed in 2000. According to the 1999-2004 KC Health Permit for the Cedar Hills Regional Landfill, ALL closed areas indicated “No Additional Waste Authorized”. Because of the claims of closure from KC and closed areas there was no reason to believe that King County would not

honor its commitment to the citizens and close when area 7 was full. The restrictive height should extend to all areas of the landfill.

The intent of the 788 ft was to reduce and help mitigate the impacts on the surrounding communities. Going beyond the 788 foot limitation for the rest of the landfill will obviously not achieve that intent.

The FINAL EIS should take into account the original intent of the 788 ft.

Impacts to surrounding communities and environment

The buffer zone is supposed to provide mitigation for the odors, noise, visibility and dust. However, the current buffer zone doesn't adequately mitigate all of the impacts now. Allowing the landfill to be built up to 830 ft. will be above the tree line and render the buffer zone ineffective in protecting the surrounding communities.

Visual – The Appendix I states that there are minimal variations between elevations. Adding 59, 62 & 80 feet to the northern portion of the landfill is not insignificant. “The surrounding landscape would retain its integrity because the open sky,” and constant stream of trucks, bulldozers, compactors etc. on top of the hills. It is not an aesthetic sight.

Locations were noted from roads. “Fleeting view from May Valley” doesn't account for people's home views. Often times you can't see the landfill from the road, but step into someone's home from the same road and the CHRLF is front and center. Theirs are not fleeting. Homes to the north with views would have a beautiful view of Mt. Rainier were it not for the landfill at its base. There are wonderful views of Mt. Rainier from Squak and Tiger Mountain, however any pictures that would normally be beautiful of the mountain are ruined by the inclusion of the CHRLF scar on the landscape. It is not just the sight of the landfill. It will be the sight of all the construction equipment running all day long and on the pits they are working on – the garbage. Currently the north side is a grassy meadow. It won't look like that once construction begins.

This is a view from PooPoo Pt on Tiger Mountain, north east of the landfill. As you can see, the surrounding area is rural and wooded. The sight of CHRLF is a stark contrast to the beauty of the area. In the visual characteristics of viewpoints, it defines Unity: The degree of visual coherence and compositional harmony of the landscape view considered as a whole. There is NO unity to this view



. As a reminder, it is not just residents who like to enjoy the views. Hiking on Squak and Tiger Mountains is extremely popular and viewpoints like this take away from the experience.

The Draft EIS only looks at viewpoints only from the surrounding area with the furthest viewpoint being 2.5 miles from the landfill center. It does not take into consideration any locations further. However, this landfill can be seen from much further away. The picture below is from a housing development in Maple Valley – Northpoint at Maple Centre – and this is at the CURRENT height.



This landfill is huge and is a distinct scar in the area. It can even be seen from space.

The FINAL EIS must account for people's home views, not street views and it must consider locations from greater distances.

ODOR

“Modeling was conducted under Alternative 3 as the worst-case situation because that alternative would have the largest quantity of waste disposed.” (p.4-9)

There has been no evidence given as to the accuracy of the results of the models used. There are, however, questions on the validity of the locations used to draw the meteorological data from as they are NOT similar in characteristics to the CHRLF and vicinity location. Validation of any model needs to be done in order to have confidence in the results.

The Draft EIS has not given any consideration to public complaints, except to cite how many there were during 2018 and part of 2019. Rather, the Draft EIS is depending on dispersion models to predict whether sensor points would exhibit an odor.

Models to predict odor dispersion should be validated as to the accuracy of the results. A compilation of the odor complaints sent into PSCAA against Cedar Hills, Cedar Grove, and those that are not sure which is the source, showing date, time and location would help to validate the dispersion model. According to Appendix D, p 9 of 18, "The meteorological data used for this analysis consisted of the most recent currently available five years, 2015-2019, of surface (including 1-minute data) and upper air meteorological data. " It should be possible to run a dispersion model and validate the findings with the time, date, and location of the odor complaints. This would offer some sort of validation as to whether the dispersion model predicted odor events properly. If the model did not predict that there would be an odor event, or the LOA was not shown to be high and there WAS evidence, through public complaints that odors were present, then the model is not reliable.

Modeling results indicate that, under normal operating conditions, none of the alternatives would result in significant odor impacts or any increase in odor compared to existing conditions.

The FINAL EIS should incorporate odor complaints into their study and validate their model.

Adding Waste to old areas

"When a new compliant refuse area is to be constructed over an existing refuse area (or any part thereof) that was constructed without a bottom liner, a WAC 173-351-300-compliant bottom liner is placed over the unlined refuse area before placement of waste in the new cell. KCSWD has constructed a small LOURA at CHRLF as part of its existing Area 6. Such a liner provides a compliant liner system allowing expansion over old waste areas." (p. 2-12)

The Draft EIS did not address the potential for the integrity of the bottom liners, gas pipes and leachate pipes of the old areas if waste is added on top. The LOURA liners do nothing to protect the integrity of what's below it. How do the alternatives guarantee the integrity of the areas underlying the added waste?

1. WAC 173-351 - Criteria For Municipal Solid Waste Landfills

- a. Environmental covenant
 - i. Prohibit uses and activities that may:
 - ii. **Threaten integrity of the landfill cover and other waste containment elements, engineered controls for storm water, gas, or leachate, public access controls, or environmental monitoring systems**
 - iii. Interfere with the operation and maintenance, monitoring, or other measures necessary to assure the integrity of the landfill unit and continued protection of human health and the environment
 - iv. **Result in the release of solid waste constituents or otherwise exacerbate exposures**

The FINAL EIS MUST address this WAC and the potential impacts.

From the KCSWD report *Cedar Hills Regional Landfill West Side Landfill Gas Recovery Well Installation and Influence Testing Report*, December 2013, it states *"when reviewing quarterly perimeter LFG probe data from GP-33C in September 2011, KCSWD noted that methane concentrations in three monthly readings from GP-33C exceeded the lower explosive limit (LEL) of 5 percent methane, with readings ranging from 6.6 to 20.5 percent."*

The source of the methane was not clear except that it is likely to have come from “2 hydraulic control systems or “underdrains” constructed UNDER the bottom liners of area 6 and 7 to allow collection of perched groundwater. However, LFG was recovered from this underdrain since early November 2011.” Area 6 had a LOURA system for its construction over an older, closed refuse area. Area 6 was closed in 2010. It is not clear WHERE the methane gas was migrating from at the time. If Area 6 and 7 had liners, it probably didn’t come from those areas, unless there was a breach in the liners. It may have come from the old area with the added pressure and possible liner breach?

The mitigation for this explosive level gas to the western buffer took over a year to complete. This is unacceptable.

The Final EIS must evaluate this gas migration and the potential of additional migration from older waste areas that will have LOURA liners and additional waste added.

The Draft EIS assumes CHRLF is using best available practices to operate the landfill. However, these practices don’t always anticipate emergencies and accidents. The ruptured gas pipe in December 2013 was evidence of this. There were no monitoring systems in place to let either the BEW plant or CHRLF know of the break. It vented gas at 10,000 cuft/min for 5 hours before it was stopped. It cost 2 families trips to the emergency and possibly lifelong health issues from exposure to the toxins in that gas. They had to sell their homes to the County because realtors said they would never be able to sell the property after that.

The Draft EIS lists mitigations for possible impacts, but they are more akin to actions they take now and nothing new. The Draft EIS assumes nothing major event or accident will occur. However, that is far from the truth. A look at past accidents, mechanical failures, human error, etc. will shed light on the ability of CHRLF to control their environment.

The FINAL EIS must look at potential future disasters, not just earthquakes, and how it will impact the environment and communities surrounding it. The landfill is an accident waiting to happen – the question will be – can the environment and surrounding communities recover from a major accident.

Alternative 3 is the most impactful option in all areas.

From: [Rick and Kim Brighton](#)
To: [Lui, Kinyan](#); [PlanEIS, CedarHills](#)
Subject: 2020 Draft Environmental Impact Statement; Public Comment deadline extended: Nov. 6, 2020
Date: Friday, November 6, 2020 11:44:38 AM
Attachments: [2020 Draft EIS CHRL scoping comments Kim Brighton 11-6-20.pdf](#)

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Kinyan Lui, Project Manager, King County Solid Waste Division

Dear Ms. Lui, please receive the attached response to request for comments on the Draft EIS, for the extended deadline, November 6, 2020.

Sincerely,

Kim Brighton

Public Comment - Draft Environmental Impact Statement
Cedar Hills Regional Landfill 2020 Site Development Plan and Facilities Relocation
Deadline extended to 11-6-20

Date: November 6, 2020

To: Kinyan Lui, Project Manager klui@kingcounty.gov

King County DNRP—Solid Waste Division CedarHillsPlanEIS@kingcounty.gov

From: Kim Brighton, rnkbrighton@gmail.com (Maple Hills resident)

I have lived adjacent to the Cedar Hills Regional Landfill (the “Landfill”) since April 1989. Our home abuts a northwest portion of the Landfill’s existing 1,000 foot buffer.

My family and I have suffered debilitating consequences from King County’s continued operation and expansion of the Landfill. In the late 1990s the King County Superior Court appointed me as one of the class representatives for a class action lawsuit against the County concerning the Landfill. That lawsuit established that the County was negligent in the operation of the Landfill and as a result it was inflicting damages on thousands of area residents. The damages were caused by odors, birds, and noise, but for my family the most significant impact has been property damage resulting from vibrations caused by the County’s operation of the Landfill. The causes of the vibrations are many, including flare stack rumble and the operation of heavy equipment. Ultimately the County agreed to pay \$16.5 million to the class of individuals damaged by the County’s continued operation of the Landfill.

Noise and Vibration

Acoustical vibrations damaged my home and a neighbor’s home (beginning /continuing at the same time), and caused health impacts beginning 4/23/18 as a direct result of equipment used at the landfill for a construction project by Scarcella. We suffered intense pressure in our head, ears, ear pain, and headaches. I could not leave my home. This was an inhumane experience to endure. These exceedances affected us, our dog and horses, devastating to our homes and property. Our horses and dog are dependent on us to protect them. They have more acute hearing and sense of smell than humans. I took video (showed to Scott Barden, Interim Operations Manager, and Pat McLaughlin). I was present at the time of testing at the property line*. The County’s sound consultant confirmed it would be a lot louder in my home and buildings, bouncing off of them**. The consultant stated sound travels in air molecules, called acoustical resonance. Vibrations experienced became worse when KC SWD changed the compaction mode to a lower frequency/level. This was reported to Scott Barden and Tom Creegan. Vibrations continued off and on throughout the construction project. KC Ombudsman Elizabeth Hill became involved with Glynda Steiner, KC SWD Deputy Director, as KC SWD was not being responsive in effectively mitigating the substantial impacts. Glynda visited my home to see the damage and said she could see there were impacts and could smell the odor on the road. Unfortunately, Ms. Hill ceased assistance. Damages were denied to me and my home due to KC SWD’s claims that seismic motions could have caused problems, not any of its work. However, the damages were not caused by natural seismic motions, with which we are familiar in this area and have experienced in the past. No mitigation measures were taken and KC SWD chose not to do any studies to better understand the phenomena.

The Final EIS must include additional human health impacts from these types of vibrations.

The Final EIS must assess all known and expected vibration sources and how they reach and affect the public and wildlife.

The Final EIS must evaluate and discuss new harmonic studies including, but not limited to, general operations and existing or potential future equipment used at the landfill considering the various heights at which work is/will be performed; and harmonic vibrations as the cause from flare-stack rumbles, as identified in the 1999 lawsuit.

The statement below, provides no discussion whatsoever and is completely unacceptable. It goes so far as to say that CHRLF noise will continue yet theorizes that no impacts would occur.

“With implementation of mitigation measures described above, the communities surrounding the landfill would experience landfill noise for a longer period in the future under any of the action alternatives. However, no significant unavoidable adverse noise impacts should occur.”

This disregards the past history of complaints by surrounding neighborhoods and school districts over noise, vibrations, health issues, etc., who have had to endure the community and wildlife degenerating slow expansion of an almost two square-mile parcel of land.

The Final EIS should not include such empty statements as quoted above, but must discuss significant unavoidable noise impacts and their ramifications (for current and future operations). Further, the Final EIS must seriously address the concept of “nuisance,” as described in: RCW 7.48.120 – Nuisance defined.

“Nuisance consists in unlawfully doing an act, or omitting to perform a duty, which act or omission either annoys, injures or endangers the comfort, repose, health or safety of others, offends decency, or unlawfully interferes with, obstructs or tends to obstruct, or render dangerous for passage, any lake or navigable river, bay, stream, canal or basin, or any public park, square, street or highway; or in any way renders other persons insecure in life, or in the use of property.”

Human Health

In addition to the health impacts incurred from the long term acoustical vibrations, we also suffer from being consumed inside and outside our home with leachate and flare toxic air effluents from the landfill. I identified and experienced health impacts and odors during April 5, 2019, and June 28, 2019, landfill tours with CHRLF Assistant Operations Manager, Scott Barden, and CHRLF Engineer, Laura Belt (and Glynda Steiner, SWD Deputy Director, on the June 28, 2019, tour). Not only are the landfill refuse effluents bad, the NW Candlestick 24/7 migration flare off-gasses “poor quality” unregulated gas 24/7 into communities and cannot be stack-tested. The leachate pond effluents also travel into communities and are horrid. Breathing these significantly impacted my health. KC SWD was aware of the identified problems during these two tours. No formal response provided. Toxic leachate effluent travels in the wind into homes and properties. I verified timed aerators worsened health and safety impacts in and on my property. I made an impromptu visit to CHRLF leachate ponds with Scott Barden on 2/2/20. Scott

Barden verified leachate odors on my property were just as strong and impactful as at the CHRLF leachate ponds themselves. I requested KC SWD to cover the ponds years ago, yet related health impacts remain to be addressed. The leachate toxins linger in our home, cars, and covered horse arena. Burning eyes, sinuses, throat, asthma, chest tightness, weakness/sickness, difficulty functioning, headaches are common systems experienced. These inhumane toxic odor events have significantly increased in severity and intensity. Puget Sound Clean Air Agency never responds to these complaints. SWD fails to log these odors or admit they exist. I notified county and state government/department/agencies/offices of another significant health impact of leachate odor on 6-20-20. Only response was from Glynda Steiner, Deputy Director SWD, that no leachate odor was present. Public Record Requests identified the Department of Natural Resources & Parks, Department of Permitting & Environmental Review, Public Health - Seattle & King County, and Puget Sound Clean Air Agency were all aware, yet did nothing but support Glynda Steiner's response to me.

It is clear by the evidence and the history that CHRLF gas and leachate (all are toxic waste) contaminate and pollute the environment and people, air, water, and ground. This combination of known and unknown toxins in the air, water and ground are forever more; impacting past, present, and future public and environmental health. The *cumulative* effects of long-term exposure to low levels of environmental contaminants and pollutants are excluded and, thus, ignored, in the Draft EIS. Chronic diseases are incited by these cumulative effects. Below is one example regarding the dangers of leachate and how it is handled by CHRLF:

On 6/30/20, Darshan Dhillon, Solid Waste Program Supervisor Health & Environmental Investigator at Seattle-King County Public Health, e-mailed the following article: *"Leachate Management: Effectively Managing Landfill Leachate Odor Control with Permanganate," WasteAdvantage Magazine website* to Jennifer Keune, Environmental Scientist III, Joan Kenton, Environmental Scientist III-TLT and cc'd Mark Monteiro SWD Operations Supervisor II. Mark Monteiro then e-mailed as FYI to Scott Barden, the CHRLF Interim Operations Manager for effectively managing landfill leachate odor control. The article link contained information stating:

"leachate is acutely toxic when inhaled. Leachate production is a significant concern for municipal solid waste (MSW) landfills and causes substantial odor emissions that have negative health and environmental effects."

This email verified scientific knowledge of landfill leachate and suggests an odor masking agent that removes the odor, but does NOT remove the toxins presenting adverse health and environmental effects.

Darshan Dhillon works in the Environmental Health Services Division (EHD), which focuses on *"prevention of disease through sanitation, safe food and water, proper disposal of wastes and toxics, and promoting safe and healthy environmental conditions throughout King County for the benefit of all residents and visitors."* Jennifer Keune and Joan Kenton work KC DNRP/SWD/FESS - Environmental/Permit Compliance and report to Neil Fuji, Managing Engineer, who, in turn, reports to Glynda Steiner, Deputy Director SWD, which *"Ensures compliance with regulations and permits that impact the environment while promoting environmental responsibility."*

At a minimum, all these King County government departments/divisions are knowledgeable about the substantial landfill leachate emissions that have created cumulative past, present, and future substantial negative health Public health and environmental effects. As a County-owned, operated, and self-regulated landfill of 60 years, this is a grossly negligent demonstration of the failure to mitigate such impacts; and represents a disregard and lack of accountability for human and environmental life, health and safety, surrounding communities, school, parks, trails, animals, etc. This contradicts the King County Equity and Social Justice Strategic Plan. <https://www.kingcounty.gov/elected/executive/equity-social-justice/strategic-plan.aspxkingcounty.gov/elected/executive/equity-socialjustice>

They are grossly negligent to Dr. Martin Luther King Jr.'s social justice dream, this county, environment, and all county residents. "All county residents should have equitable access to clean air..."; "should assess and address disproportionate environmental burdens..."; and "address the root causes of inequities, ultimately leading to better quality of life and greater prosperity in all of our communities." This landfill under "normal operations" continues to create significant public and environmental health impacts. It has become a forever more toxic public and environmental health crisis.

The Final EIS must recognize that Leachate pond effluent has a direct impact to health, air, odor. Significant adverse impacts include: Asthma, difficulty breathing, burning eyes, sinuses, throat, headache, weak/sick, and difficulty to function. Much of this is the result of minimal toxic effluent monitoring and testing for public health and safety, as well as near non-existent protection to prevent toxic air contamination.

The Final EIS must not only recognize the myriad pertinent and real complaints filed by members of the Public which indicate there continues to be toxic air pollutants and odors released into the general region where the CHRLF resides that directly affect residents, but also assess the impacts therefrom, include cumulative health impacts as well as provide mitigation measures.

At a minimum, the Final EIS must address Mitigation Measures related to: (1) Capping, covering, and sealing the various areas and (2) Requiring all gasses, aerosols, and volatiles be captured, processed, and precluded from local release.

*Reference 1: Picture of the sound consultant's equipment at the property line.



**Reference 2: Picture of the sound consultant checking he captured the loud sound vibrations happening in our home and bouncing off the structures.



Sincerely, Kim Brighton

From: [Eric Hudson](#)
To: [Lui, Kinyan](#); [PlanEIS, CedarHills](#)
Cc: [mayor@algonawa.gov](#); [nbackus@auburnwa.gov](#); [townhall@beauxarts-wa.gov](#); [council@bellevuewa.gov](#); [Carol Benson](#); [citycouncil@bothellwa.gov](#); [council@burienwa.gov](#); [kim.lisk@carnationwa.gov](#); [citycouncil@covingtonwa.gov](#); [mayor@clydehill.org](#); [citycouncil@desmoineswa.gov](#); [amy.ockerlander@duvallwa.gov](#); [council@cityoffederalway.com](#); [clerk@huntspoint-wa.gov](#); [mayor@issaquahwa.gov](#); [dbaker@kenmorewa.gov](#); [CityCouncil@kentwa.gov](#); [psweet@kirklandwa.gov](#); [citycouncil@ci.lake-forest-park.wa.us](#); [council@maplevalleywa.gov](#); [msauerwein@medina-wa.gov](#); [council@mercergov.org](#); [lindan@newcastlewa.gov](#); [council.members@normandyparkwa.gov](#); [council@northbendwa.gov](#); [lguier@ci.pacific.wa.us](#); [MayorCouncil@redmond.gov](#); [council@rentonwa.gov](#); [kmoran@sammamish.us](#); [CityCouncil@seatacwa.gov](#); [council@shorelinewa.gov](#); [hsladek@skykomishwa.gov](#); [mayor@ci.snoqualmie.wa.us](#); [Mayor@tukwilawa.gov](#); [citycouncil@ci.woodinville.wa.us](#); [mayor@yarrowpointwa.gov](#); [jmolinaro@ci.enumclaw.wa.gov](#); [Mullet, Sen. Mark](#); [Ramos, Bill](#); [Callan, Lisa](#); [Anderson Campaign](#)
Subject: Landfill Expansion EIS Comment - Fwd: YES - Cedar Hills Landfill IS in a Seismic Impact Zone - KC FAQ doc Factually Incorrect
Date: Friday, November 6, 2020 3:25:35 PM
Attachments: [image015.png](#)
[image016.png](#)
[image017.png](#)
[Kirkland Council Packet Incl Comp Plan Seismic Misinfo 10c Business.pdf](#)

[EXTERNAL Email Notice!] External communication is important to us. Be cautious of phishing attempts. Do not click or open suspicious links or attachments.

I would like to add the following comment to the EIS comments

Prior to the interlocal agreement vote, incorrect information was provided by KC to the city councils which stated that Cedar Hills Landfill is not in a Seismic Impact Zone.

I pointed out the error in the email below and it appears the FAQ document in question was corrected on 11/4/2019, however this was after most of the City Councils had already voted on the interlocal agreement.

As an example, attached is the Kirkland City Council packet from 7/16/2019 which had the FAQ document that incorrectly stated Cedar Hills was not in a Seismic Impact Zone. (copy of packet obtained from the internet)

Cedar Hills being in a Seismic Impact Zone is a major regional risk and expansion of the landfill increases the risk. A major earthquake and subsequent landfill damage is a health risk to Solid Waste Workers first of all, but also the local water supply and surrounding environment including many residences, the Cedar River and Issaquah Creek.

While the error was likely an oversight, it isn't trivial, and the City Councils should have been aware of it prior to their vote.

City Councils need to be aware of the region-wide risk that is being incurred by the continued expansion of the landfill, which is already beyond initially permitted capacity.

I had requested there be a revote of the city councils which I don't think was done although I'm not 100% certain.

Therefore I request the EIS include a reference to the incorrect Seismic Impact Zone information and also information that describes how the correct information was communicated to the City Councils and it was ensured they were aware of the error.

In addition I request that the EIS document provide references to all the requirements of landfills which are in a Seismic Impact Zone, and a summary of how compliance with all the Seismic Impact Zone requirements is shown.

Thank you

Eric

From: Eric Hudson <kje479@gmail.com>

Sent: Thursday, October 31, 2019 8:25 PM

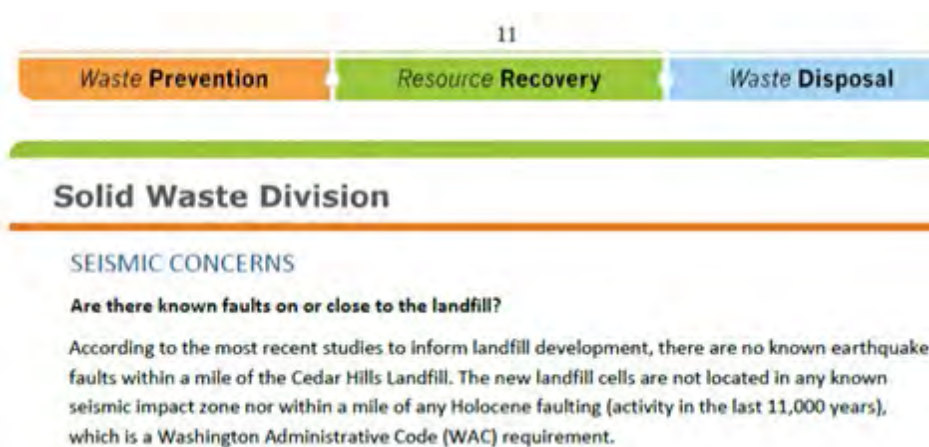
To: cmalchow@sammamish.us; kmoran@sammamish.us; jritchie@sammamish.us; RValderrama-Aramayo@sammamish.us; thornish@sammamish.us; pstuart@sammamish.us; citycouncil@sammamish.us; citycouncil@issaquahwa.gov; mayor@issaquahwa.gov; council@rentonwa.gov; dlaw@rentonwa.gov; Sean.Kelly@maplevalleywa.gov; council@maplevalleywa.gov; mayor@algonawa.gov; nbackus@auburnwa.gov; bpeloza@auburnwa.gov; jgillem@beauxarts-wa.gov; townhall@beauxarts-wa.gov; jchelmiak@bellevuewa.gov; citymanager@bellevuewa.gov; council@bellevuewa.gov; cbenson@blackdiamondwa.gov; tdeady@blackdiamondwa.gov; citycouncil@bothellwa.gov; jimmym@burienwa.gov; council@burienwa.gov; amy.arrington@carnationwa.gov; dustin.green@carnationwa.gov; councilmembers@ci.enumclaw.wa.us; jjohnson@ci.lake-forest-park.wa.us; citycouncil@ci.lake-forest-park.wa.us; lguier@ci.pacific.wa.us; kgarberding@ci.pacific.wa.us; jwarren@ci.snoqualmie.wa.us; mlarson@ci.snoqualmie.wa.us; citycouncil@ci.woodinville.wa.us; council@cityoffederalway.com; jeri-lynn.clark@cityoffederalway.com; cityhall@clydehill.org; mayor@clydehill.org; citycouncil@covingtonwa.gov; jwagner@covingtonwa.gov; citycouncil@desmoineswa.gov; mpina@desmoineswa.gov; amy.ockerlander@duvallwa.gov; jodi.wycoff@duvallwa.gov; clerk@huntspoint-wa.gov; rkarlinsey@kenmorewa.gov; dbaker@kenmorewa.gov; CityCouncil@kentwa.gov; Mayor@kentwa.gov; ktriplett@kirklandwa.gov; abolen@kirklandwa.gov; psweet@kirklandwa.gov; dnations@medina-wa.gov; msauerwein@medina-wa.gov; council@mercergov.org; debbie.bertlin@mercergov.org; allend@newcastlewa.gov; lindan@newcastlewa.gov; council.members@normandyparkwa.gov; jonathan.chicquette@normandyparkwa.gov; council@northbendwa.gov; mrigos@northbendwa.gov; MayorCouncil <MayorCouncil@redmond.gov>; Council <Council@redmond.gov>; CityCouncil@seatacwa.gov; ccole@seatacwa.gov; council@shorelinewa.gov; croberts@shorelinewa.gov; clerk@skykomishwa.gov; citycouncil@tukwilawa.gov; mayor@yarrowpointwa.gov; cscandella@yarrowpointwa.gov; cityclerk@bothellwa.gov; agrider@skykomishwa.gov; Mayor@tukwilawa.gov; tami.ramsey@ecy.wa.gov; diana.wadley@ecy.wa.gov; daniel.weston@ecy.wa.gov; teno461@ecy.wa.gov; maia.bellon@ecy.wa.gov; polly.zehm@ecy.wa.gov; jason.norberg@ecy.wa.gov; tom.laurie@ecy.wa.gov; sharlett.mena@ecy.wa.gov; denise.clifford@ecy.wa.gov; sandi.peck@ecy.wa.gov; hugh.shipman@ecy.wa.gov; bobbak.talebi@ecy.wa.gov; brietta.carter@doh.wa.gov; richard.rodriguez@doh.wa.gov; mike.means@doh.wa.gov; hladick.christopher@epa.gov; jenny.durkan@seattle.gov; council@seattle.gov; barb.graff@seattle.gov; drbobmorris@gmail.com; darian.davis@seattle.gov; james.rufohill@seattle.gov; Peter.Holmes@seattle.gov; alex.chen@seattle.gov;

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Cc: council@kingcounty.gov; kcexec@kingcounty.gov; Pon, Yolanda
<Yolanda.Pon@kingcounty.gov>; Dhillon, Darshan <Darshan.Dhillon@kingcounty.gov>;
Mullet, Sen. Mark <mark.mullet@leg.wa.gov>; bill.amos@leg.wa.gov;
Lisa.Callan@leg.wa.gov; eporter@kIRO7.com; hbernton@seattletimes.com;
nmorton@seattletimes.com
Subject: YES - Cedar Hills Landfill IS in a Seismic Impact Zone - KC FAQ doc Factually
Incorrect

Council representatives and officials,

While you likely have already voted on the KC comprehensive plan, I would like to provide references which show that the KC FAQ document on the 2019 Comprehensive Plan (see snip and link below) is factually incorrect with regard to its statement that Cedar Hills Landfill is not in a Seismic Impact Zone nor are there nearby faults. As I understand it the KC FAQ document was provided to councils prior to their vote on the plan.

As shown below, Cedar Hills is in a Seismic Impact Zone per WA DNR and USGS maps, and there is a Holocene fault within a mile of the landfill per other WA DNR maps. Explanation below .



full document:

<https://your.kingcounty.gov/dnrp/library/solid-waste/about/planning/2019-comp-plan-FAQ.pdf>

Explanation:

Other landfills in the region which have equal or less seismic risk have analyzed and concluded that they are in a Seismic Impact Zone and stepped up to meet the higher design regulations for the protection of their workers and the surrounding community.

These 3 landfills in the region all have public documents that confirm they are in a Seismic Impact Zone:

Sudbury Road Landfill in Walla Walla declared themselves in a Seismic Impact Zone in this report: <https://fortress.wa.gov/ecy/gsp/DocViewer.ashx?did=52852>

Cowlitz County Headquarters Landfill confirmed they were in a Seismic Impact Zone: <http://www.co.cowlitz.wa.us/DocumentCenter/View/1011>

Riverbend Landfill in Oregon declared to be in a Seismic Impact Zone <http://www.oregon.gov/deq/FilterDocs/RRFinalGradingPlanMod.pdf>

These landfills had documents available on the internet, but other landfills likely comply with the Seismic Requirements also.

Much of Washington State meets the definition of a Seismic Impact Zone. This USGS publication at the link below shows King County in the orange and red zones, with a 2% probability in 50 years of a Peak Ground Acceleration (PGA) ranging from 32 to 64 %g (percentage of gravity acceleration). This is much higher than the minimum of 10% g for a Seismic Impact Zone per WAC 173-351. https://pubs.usgs.gov/fs/2008/3017/pdf/FS08-3017_508.pdf

This Map picture from WA DNR shows similar levels to the USGS document:

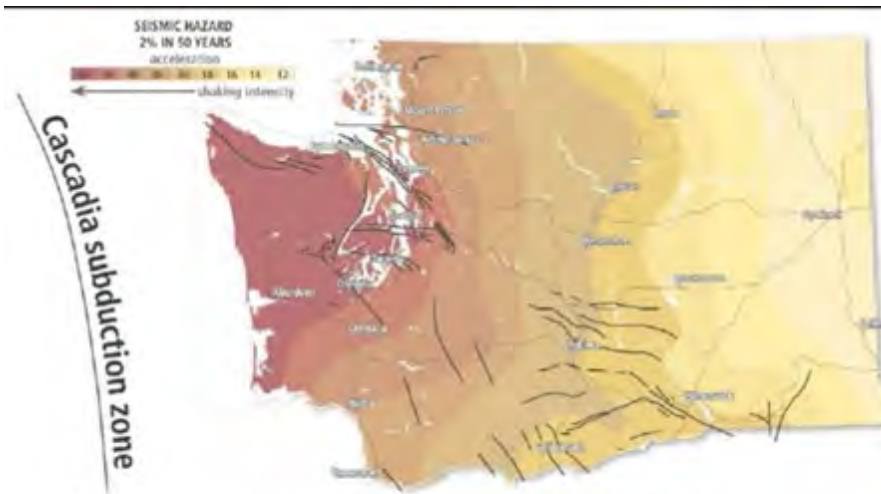


Figure 2. Map of the seismic hazard, expressed as contours of peak ground acceleration as a fraction of standard gravity, in Washington state. These values are from the USGS two-percent probability of exceedance in 50 years map of peak ground acceleration which is a proxy for seismic hazard (Peterson and others, 2015). Warmer colors indicate higher hazard areas. Major active faults are shown as black lines.

Also attached to this email are snips from the map "Faults and Earthquakes in Washington State" which show that there is a fault (red lines) that is part of the Seattle Fault Zone, which is a Holocene fault, within 1 mile of the landfill. So the KC FAQ statement that there is no fault within a mile of the landfill is also incorrect. The full map is at the WA DNR website at this link:

<https://www.dnr.wa.gov/programs-and-services/geology/publications-and-data/publications-and-maps#.8>

King County is proceeding with its risky expansion project, but the safest and most environmentally friendly choice is the Waste Export Option to an east cascades landfill. East cascades landfills have 2-3 times less seismic risk than here on the west side. Cedar Hills is high risk, with 50+ years of unstable landfill material which poses additional risk when the predicted seismic event happens. In addition east cascades landfills have 80% less rainfall, meaning less leachate that can spread contamination from the landfill to the surrounding community.

The major risk for Cedar Hills though is the growing surrounding population. More than 70,000 people live within 5 miles of Cedar Hills. There are less than 200 people within 5 miles of Columbia Ridge landfill.

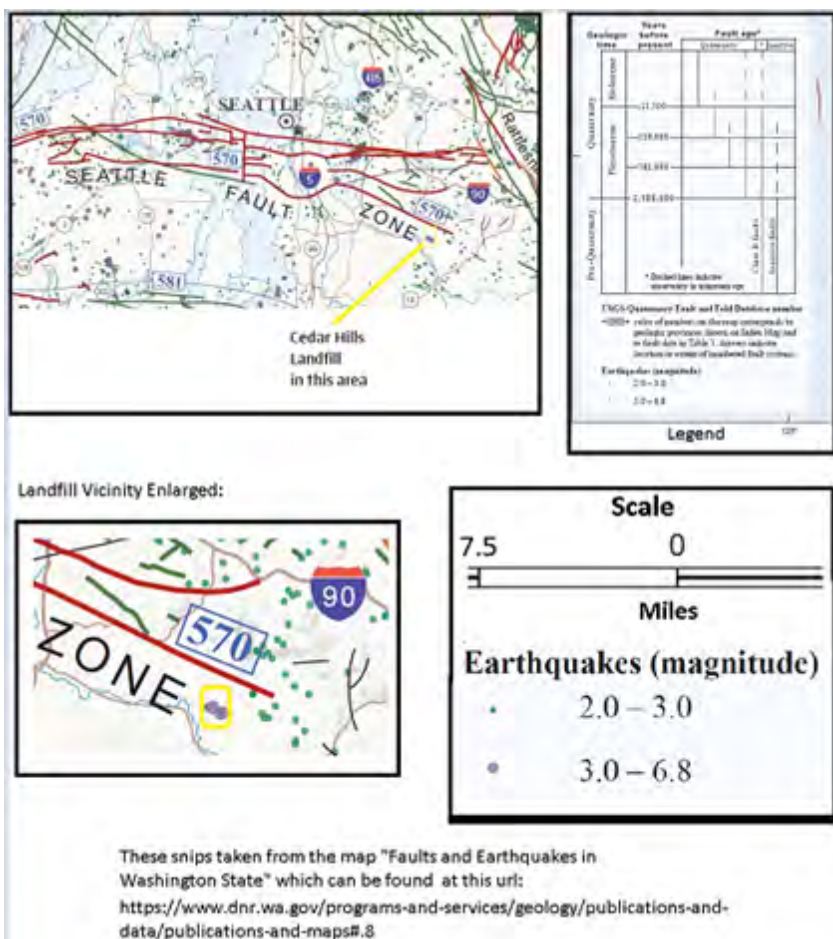
Based on the FAQ document, King County does not intend to upgrade Cedar Hills to withstand the predicted seismic hazards. The KC workers at the landfill will be most at risk. Hopefully KC representatives will recognize the error and correct it quickly and confirm that they are going to comply with the applicable regulations.

Please communicate with the King County leaders and ask they comply with the seismic requirements for their Cedar Hills expansion project, for the safety of the landfill workers and the surrounding neighborhood. This information is late and I'm sorry but I was not aware of the FAQ document until just recently.

Thank you

Eric Hudson

Landfill neighbor





CITY OF KIRKLAND
Department of Public Works
123 Fifth Avenue, Kirkland, WA 98033 425.587.3800
www.kirklandwa.gov

MEMORANDUM

To: Kurt Triplett, City Manager

From: John MacGillivray, Solid Waste Programs Supervisor
Kathy Brown, Public Works Director

Date: July 3, 2019

Subject: 2019 COMPREHENSIVE SOLID WASTE MANAGEMENT PLAN

STAFF RECOMMENDATION:

That the City Council:

- Approves the attached Resolution adopting the *2019 Comprehensive Solid Waste Management Plan*; and
- Approves the attached Ordinance and revisions to Title 16, "Refuse and Garbage," in the *Kirkland Municipal Code*.

Kirkland Solid Waste Program staff and a representative from the King County Solid Waste Division (KCSWD) will present an overview of the Plan and answer questions at the July 16, 2019 City Council meeting.

INTRODUCTION:

This staff report was written to serve as an aide to reviewing the Comprehensive Solid Waste Management Plan (Plan), and was organized to focus attention on the chapters, policies, goals, and actions that could be the most impactful to Kirkland's waste prevention, waste reduction, and recycling programs; local and regional services; and utility rates offered to residents and businesses over the next several years. The Plan was presented to the Public Works, Parks, and Human Services Committee on June 21, 2019.

The following attachments accompany this memorandum:

- A. [FAQ on the 2019 Comprehensive Solid Waste Management Plan](#)
- B. Policies, Goals, and Actions Matrix
- C. Northeast Recycling and Transfer Station Siting Process Timeline
- D. Transfer Station Siting Criteria Example

COMPREHENSIVE PLAN ORGANIZATION:

The Plan is a lengthy 403-page document organized into eight chapters and six appendices. The six most important chapters are noted below. While all chapters are worthy of review, Chapters 4, 5, and 6 are of the most importance and relevance to Kirkland and the region and are highlighted in boxes below. Those chapters include recommendations to:

- Site and construct a new transfer station in the northeast County service area and close the Houghton Transfer Station;
- Further develop the Cedar Hills Regional Landfill (Cedar Hills) through 2040; and
- Establish waste generation and disposal targets and a recycling diversion goal.

These three chapters will be discussed in greater detail later in this staff report.

Chapter Summaries

Chapter 2: The Existing Solid Waste System. This chapter provides an overview of the garbage and recycling collection systems and facilities in King County and how those systems are integrated to provide safe, affordable, and reliable solid waste collection to the County's residents and businesses.

Chapter 3: Forecasting and Data. The focus of this chapter is on solid waste data and how the recycling and disposal data received from the various sectors (single family, multifamily, commercial, and self-haul) influence—over the short and long term—the overall combined and sector-specific operational, programmatic, and educational planning decisions made the County and cities.

Chapter 4: Sustainable Materials Management. This chapter is where the rubber meets the road. The overarching goal is to achieve zero waste of resources that have economic value by 2030 through achieving an interim 70% recycling diversion rate, waste generation and disposal targets, and implementing dozens of actions. All goals, targets, and actions are geared ultimately toward extending the life of the Cedar Hill Regional Landfill through 2040. Attachment B to this memorandum shows the various policies, goals and actions in the Plan and the specific actions Kirkland has taken to achieve them.

Chapter 5: Solid Waste Transfer and Processing. This chapter provides details about the transfer and disposal network in King County and discusses the three transfer station options that were considered to replace the Houghton Transfer Station. The chapter makes a recommendation to site and build a new Northeast Recycling and Transfer Station somewhere in the northeast County service area.

Chapter 6: Landfill Management and Solid Waste Disposal. The current and future methods of disposing of the County's waste is discussed in this chapter. Of the three options considered, the Plan recommends further development of an additional area on the landfill property to provide landfill capacity through 2040.

Chapter 7: Solid Waste System Finance. This chapter discusses how the various revenues received by the County are used to operate the County's transfer and disposal system and how those revenues are distributed among the County's various cost centers. The policies and actions in this chapter provide the framework to ensure that there is accountability and transparency in the County's financial operations.

Plan Organization

Each chapter in the [2019 Comprehensive Solid Waste Management Plan](#) is prefaced by a series of policies, goals, and/or actions. There are 27 policies, 70 actions, but just one goal—albeit an important one—concerning zero waste of resources and the need to achieve a 70% recycling diversion rate. The Plan also designates the party or parties primarily and secondarily responsible for implementing the policies, goals, and actions, which can include cities, King County, collection companies, the Washington State Department of Ecology, or a combination thereof. As discussed on page 1-2 of the Plan:

Policies provide broad direction and authorization for services and system priorities. Policies should not change through the life of the Plan.

Goals reflect the long-term outcomes and aspirations for the regional system. Goals should not change through the life of the Plan.

Actions are targeted, specific, and time-based to implement policies and could include: programs, studies, infrastructure improvements, and regulations. Actions are built on a foundation of daily service delivery by the county, cities, and other stakeholders. This Plan does not attempt to describe every solid waste task in the regional system. It lists only those that are particularly important to initiate or continue. Actions may be updated outside of the formal Plan update process to adapt to changing conditions.

Attachment B to this staff report, "Policies, Goals, and Actions Matrix," provides a list and description of the individual policies, goals, and actions divided by chapter. The party with primary responsibility for implementing a specific policy, goal, or action is listed first or alone. The "Kirkland Activities" column provides a brief description of the actions Kirkland has taken to achieve and comply with each policy, goal, or action, where applicable.

CONTEXT AND BACKGROUND:

The following section introduces and discusses several pertinent aspects of the complex, cooperative solid waste management system in King County.

The Solid Waste Interlocal Agreement

The City of Kirkland, along with 36 other cities in King County, is a signatory to a solid waste interlocal agreement (ILA) with King County through 2040. The ILA was renegotiated in 2010-2012, and Kirkland, along with most other cities, signed their extended ILAs in early 2013.

The primary function of the ILA is to delineate the responsibilities of each party as they pertain to the collection, transport, and disposal of solid waste in King County. All cities with ILAs are required to direct their waste in the King County system and pay a per-ton disposal fee. This provides King County with a reliable source of revenue to own, operate, and maintain the

transfer system and the Cedar Hills Regional Landfill (Landfill) on behalf of cities and the County itself. One of the other key requirements of the ILA is the designation of King County as the planning authority with a responsibility to draft a Plan at least every five years on behalf of cities, pursuant to [RCW 70.95.080](#) and [RCW 70.95.110](#). The current version of the Plan was last updated 18 years ago in 2001. Updates to the Plan were nearly completed in 2009 and 2013 but were derailed for two major reasons.

The first derailment was because in order to pay for the transfer system renovation, the County asked cities: 1) if they would prefer the County issue longer term bonds through 2040 with a higher debt service but lower disposal rates; or 2) issue shorter term bonds through 2028 that would result in higher disposal rates but lower overall debt service. Cities, including Kirkland, chose longer term bond option, which necessitated the negotiation of a new ILA whose term was through 2040 so that the County had revenue to back the long term bonds. ILA negotiations were first delayed due to a disagreement over how to deal with joint and several environmental liability concerning current landfill and closed landfills.

Second, after successfully completing the extended ILA negotiation, the City of Bellevue stated that it would not sign the new ILA and would leave the cooperative system upon the expiration of its ILA in 2028, taking with it about 10% of the system-wide tonnage and the associated revenue. This caused the County to take pause and reconsider the need for a new Northeast Recycling and Transfer Station (NERTS) because of the projected decrease in tonnage and revenues, even though the replacement and closure of the Houghton Transfer Station was identified and approved in the [2006 Waste Export and Transfer System Plan](#). Bellevue eventually reversed course and decided to sign the extended ILA in 2018. This action restored the County's long held plan to site and construct a new NERTS and eventually close the old Houghton Transfer Station.

Plan Approval Process

The ILA prescribes the process by which the Plan is adopted. Once the Plan is approved by the Regional Policy Committee and the Metropolitan King County Council (MKCC), it's the cities' turn to act to approve or disapprove the Plan. Approval of the Plan requires approval by cities representing three-quarters of the total population of the cities that act to approve or disapprove the Plan. Cities may also choose to take no action to approve or disapprove of the Plan. The ILA prescribes that, "In calculating the three-quarters of the population, the calculation shall consider only those incorporated jurisdictions taking formal action to approve or disapprove the Comprehensive Plan within 120 days of receipt of the Plan." The 120-day approval period begins once a city takes receipt of the Plan.

The Plan was received by the City of Kirkland on May 20, 2019. Pursuant to the ILA, if the City Council intends to act to approve or disapprove of the Plan, it must do so within 120 days of receipt which requires action by September 16, 2019. To meet this deadline, action would need to be taken on or before the September 3, 2019 City Council meeting.

If the Plan is adopted by Kirkland, the City is committing to making a reasonable, good faith effort to implement or abide by each policy, goal, and action in the Plan, where applicable. However, there are no specific legal ramifications or other penalties if Kirkland or any other city is unable or unwilling to adopt or achieve, in full or in part, any or all the policies, goals, and actions.

The Solid Waste System in King County

King County owns, operates, and maintains eight urban and two rural transfer station hubs where garbage that is received from garbage collection companies such as Waste Management and from residential self-haulers is consolidated for bulk transport on 53-foot container trailers to Cedar Hills in the unincorporated Maple Valley area.

The Houghton Transfer Station, located adjacent to the closed Houghton landfill, has been in operation since 1967. Per the ILA, cities are required to direct all their garbage to the King County system and must pay a per ton disposal fee ("tipping fee") that is used to pay for administration; bonded debt for capital improvements projects; recycling programs; and the operation and maintenance of the transfer stations, Cedar Hills, and several closed landfills

Map 1: Transfer Station



Source: 2019 Comprehensive Solid Waste Management Plan

through the County. King County is responsible for proposing the disposal fee, which is subject to review by cities and approval by the MKCC. The City of Seattle is not part of the King County

system. Seattle owns and operates its own transfer stations and rails its waste to out-of-county landfills.

CHAPTER DISCUSSIONS:

The following discussion focuses upon the three major elements of the Plan that are of most importance to Kirkland, including the transfer system, disposal, and sustainable materials management.

Chapter 5: Solid Waste Transfer and Processing System

The Houghton Transfer Station has a long and storied history. King County has been contemplating the closure of the station for over 25 years. The majority of Houghton property was first an open landfill between the 1940's and 1960's. In 1965, King County closed the landfill and opened the station. In its 1992 Plan, King County proposed replacing the station with a new station at a different location. Unfortunately, in 1995, the rate proposal submitted by the KCSWD that included funds for the replacement of Houghton was rejected and the KCSWD was directed to continue to operate Houghton as-is at its current location. The closure and replacement of Houghton was recommended again—but this time approved—in the [2006 Solid Waste Transfer and Waste Management Plan](#) (Transfer Plan), which served as the road map for the renovation of all station in the King County transfer system. In the 2006 Transfer Plan, Houghton failed to meet several key service-level criteria and was slated for replacement as a part of the County's transfer station capital improvement program.

While the Shoreline, Bow Lake, and Factoria stations were rebuilt and the siting process for Algona started, the process to replace Houghton was halted because of Bellevue's aforementioned indication it would not sign the extended ILA. Once Bellevue signed on to the extended ILA, work began anew on the Plan, which now recommends the construction of the new transfer station in the northeast King County service area and the closure of Houghton once the new station comes online. If the Plan is approved by cities, King County will begin a siting process for a new station as required in the following policy and action:

Policy T-3 – Engage cities and communities in the siting and development of facilities, and in developing mitigation measures for impacts related to the construction, operation, and maintenance of transfer facilities, as allowed by applicable local, State, and federal laws.

Action 1-T – Continue to implement transfer station modernization as set forth in the Solid Waste Transfer and Waste Management Plan and approved by the Metropolitan King County Council in 2007, including siting and building a new Northeast recycling and transfer station and closing the Houghton station when the new station is complete. Adapt the siting process included in the Solid Waste Transfer and Waste Management Plan to meet community needs in the Northeast service area.

Transfer Station Options for the Northeast County

The Plan considers three transfer station options for the northeast County but recommends siting and construction a new station in the northeast service area. The options considered include:

- 1. Keep Existing Houghton Station Open.** The “as-is” option is the most inexpensive option whereby the station would be retained in its current state and with little prospect for new services and operational upgrades or renovation. It would add \$2.39 to the disposal fee and offer little in the way of emissions reductions.
- 2. New Northeast Transfer Station (*Recommended*).** The most expensive option, estimated to add an additional \$13.11/ton to the disposal fee, is a new modern station that would offer reliable service, equity, and recycling services to residents and businesses in the northeast County service area. This option would add about \$1.10 per month or \$13 per year to the average customer’s bill. A new station also would meet all six of the key urban transfer station service level criteria in the Plan—none of which are currently met by the aged Houghton facility. Key criteria include time on site, vehicle capacity, recycling services, handling capacity, waste storage space, and waste compaction. This option also offers the highest reduction in GHG emissions, largely because of the addition of recycling services.
- 3. Combination of Facilities.** This hybrid option proposed to keep Houghton open to self-haul customers only and would have built a smaller station in the service area open only to commercial waste haulers. The cost per ton would have increased by about \$10 with a GHG emission reduction second to the recommended option.

Comparative Attribute	Houghton “As Is”	Northeast Recycling and Transfer Station	Combination of Facilities
Total cost per Ton (2029)¹	\$2.39	\$13.11	\$9.79
GHG Reductions from Transfer Station Recycling (2029)²	(2,165 MTCO2e)	(32,098 MTCO2e)	(28,802 MTCO2e)
Level of Service³	Will not meet any of the 6 key level of service criteria.	Will meet all 6 key level of service criteria.	Will not meet all 6 key level of service criteria.
Recycling	Curbside mix, textiles, and cardboard.	Curbside mix, textiles, cardboard, clean wood, scrap metal, yard waste, appliances, and other recyclables TBD.	Curbside mix, textiles, cardboard, clean wood, scrap metal, and yard waste.
Risks	<ul style="list-style-type: none"> Limited recycling and flexibility for the system in the future, and Host city opposition. 	<ul style="list-style-type: none"> Siting a new station may take time and be costly, and Potential host city opposition. 	<ul style="list-style-type: none"> Limited recycling and flexibility for the system in the future, Siting a new station, and Potential host city opposition.

Source: 2019 Comprehensive Solid Waste Management Plan

Important Northeast Transfer Station Siting Considerations

- **Site Identification.** King County is obligated to cast a wide net and consider all possible parcels in the service area that meet a basic level of siting criteria. Even if a given city indicated a strong interest in hosting a new station and offered up a parcel, King County would still be required to identify and evaluate all available parcels in other cities and unincorporated areas in the service area. However, if a city did express an interest in hosting and a parcel substantially met the established siting criteria, that would not preclude King County from beginning a SEPA/EIS process to determine the viability of that site. For an example of the criteria used to select sites for the South County Recycling and Transfer Station, please see Attachment D, "Transfer Siting Criteria Example."
- **Rebuilt transfer station locations.** Historically, King County has built new stations on the site of their old stations. In Shoreline, Bow Lake, and Factoria, the old station was torn down and a new station constructed in its place or adjacent to the old station on the same parcel. The only exception to date is the new Algona transfer station, which will be built on a nearby parcel.
- **Potential sites in Kirkland.** It is highly likely that the Houghton property will be one of the sites that will be considered as a site for a new station. This is an important nuance to recognize. King County's intent to close the old Houghton station does not necessarily mean that a new station could not be built at its current location on the same parcel. One other potential site that has been identified is the Houghton Park-and-Ride property.
- **Siting Timeline.** The transfer station siting processes can take up to two years to complete. Kirkland has suggested that King County look for opportunities to expedite the siting process.
- **Modern transfer stations.** Modern transfer stations built over the past several years in King County and Seattle are far safer, dependable, and more efficient at managing waste, traffic, odors, and noise. New stations often offer public amenities for residents and transportation infrastructure improvements to host cities. Modern stations, such as the [North Transfer Station](#) in Seattle which opened in 2017, have been constructed adjacent to or within neighborhoods with minimal impacts to surrounding residents.

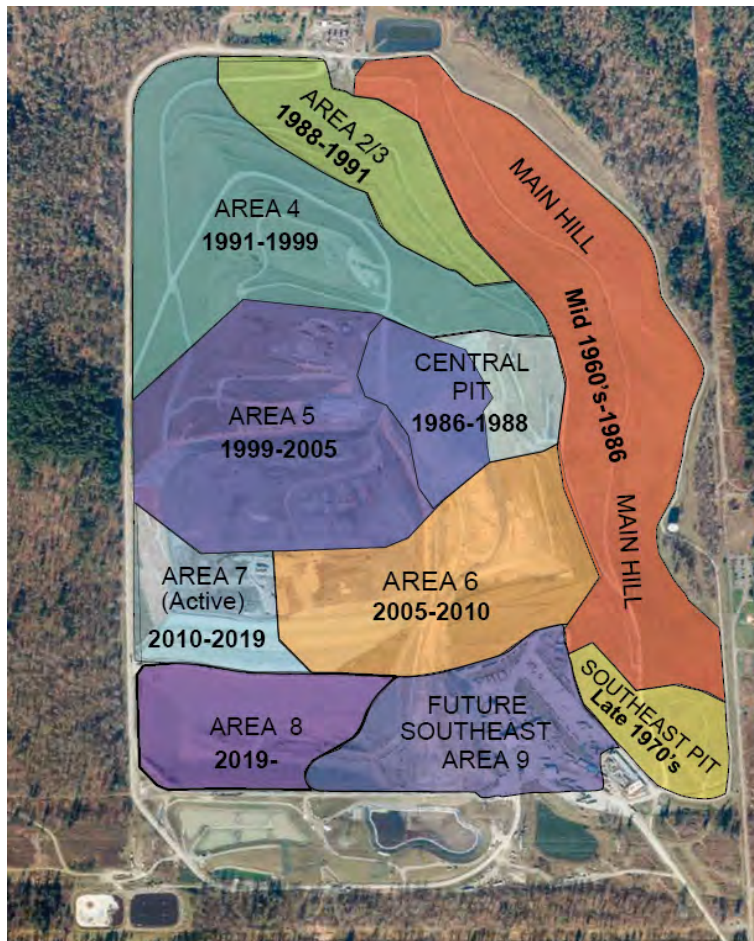
NERTS Siting Process

With the approval of the Plan by the MKCC in April 2019, funding to support the siting of a NERTS was released to the KCSWD. The draft timeline for the siting of the station is included as Attachment C to this staff report. If the Plan is approved by cities, King County anticipates hiring a siting consultant to assist with the siting process no later than September 2019. Kirkland leadership recently met with representatives from King County on May 29, 2019 to exchange interests and discuss the timeline. Early on, Kirkland will be entering into a dialogue with its city partners in the northeast County service area and expects a robust public engagement process with members of the community as the siting process progresses.

Chapter 6: Landfill Management and Solid Waste Disposal

The [Cedar Hills Regional Landfill](#) began accepting waste in the 1965 and is depicted in Map 2, below. Located on a 920-acre parcel, the facility is closed to public access and accepts waste only from King County transfer vehicles, local garbage haulers, and those with an approved special waste disposal permit. King County maintains administrative offices and operations facilities on the southeastern portion of the property adjacent to a landfill gas-to-energy processing facility operated by a private interest, Bio Energy Washington. The landfill is surrounded by a wooded 1,000-foot buffer intended to separate neighbors from noise, odors, and litter. King County provides ongoing monitoring of ground water, stormwater, air quality, and leachate, and strives to keep bird activity and litter to a minimum. Active landfill areas are covered overnight to prevent the abundance of wildlife that reside around the landfill from gaining access to trash.

Map 2: Cedar Hills



Source: 2019 Comprehensive Solid Waste Management Plan

Cedar Hills is divided into several distinct areas that are permitted to be filled up to an elevation of about 800 feet. Areas 1-7 are closed at this time and no longer are receiving waste, but may receive additional waste in the future as the areas settle over time below 800 feet elevation. Area 8 is the currently active disposal cell and has enough capacity to carry the region through roughly 2028. As recently as a dozen years ago, the landfill was scheduled to close as early as

2016. However, due to an increase in actions taken by cities and their residents and businesses to divert more materials from the landfill to recycling, coupled with the County's creativity in maximizing the available disposal space at the facility, the estimated closure date has been extended until at least 2028 when Area 8 is projected to be filled up. To delay the closure of the landfill until at least 2040, the Plan recommends further development of one final area, Area 9. Assuming Area 9 is constructed and opened, it will supplant the administrative offices, scale house, and equipment maintenance facilities to an off-site location.

The most important disposal policies and action in the Plan include the following:

***Policy D-1** – Operate and maintain the Cedar Hills Regional Landfill to meet or exceed the highest federal, State, and local standards for protection of public health and the environment.*

***Policy D-2** – Maximize the capacity and lifespan of the Cedar Hills Regional Landfill.*

***Action 1-d** – Further develop the Cedar Hills Regional Landfill to maximize disposal capacity. To account for technological advances, do not specify the next disposal method after ultimate Cedar Hills closure in this Plan. Conduct analysis of post Cedar Hills disposal options prior to the next Plan update to ensure adequate lead time for selecting, planning for, and implementing the next disposal method.*

Future Disposal Options

The Plan considered three different future disposal options beyond 2028.

Option 1: Further Develop Cedar Hills (*Recommended*). If Area 9 is developed it will add landfill capacity at least through 2040.

Option 2: Waste Export. Waste would be exported via rail to landfills with capacity in Washington and/or Oregon. The City of Seattle is an example of a waste exporter in the region. A key risk with this option is the availability of reliable rail capacity and the loss of control. It also would require existing transfer stations to be modified for rail-ready transport and have higher GHG emissions than Option 1.

Option 3: Mass Burn Incinerator. King County's waste would be burned in a mass burn incinerator with a portion of the energy produced converted and distributed into the power grid. The potential sites for an incinerator are limited because of environmental concerns and emissions, and logically would include a site at the landfill.

Comparative Attribute	Further Develop Cedar Hills	Waste Export To An Out-of-County Landfill	Waste To Energy Facility
<i>Cost per Ton¹</i>	\$41	\$55	\$136
<i>Life Cycle Greenhouse Gas Emissions (EPA's WARM Model)</i>	(134,000) ² MTCO ₂ e	(78,000) ² MTCO ₂ e	12,000 to 80,000 ³ MTCO ₂ e
<i>Annual Greenhouse Gas Emissions (EPA's eGGRT)</i>	91,000 ⁴ MTCO ₂ e/year	91,000 ⁴ MTCO ₂ e/year	1,200,000 MTCO ₂ e/year
<i>Recycling Rate</i>	No change	No change	2% increase
<i>Risks</i>	SEPA, Permitting	Rail Capacity, Control	Siting, Sizing

Source: 2019 Comprehensive Solid Waste Management Plan

Of the three future disposal options considered, maximizing the capacity of the landfill was clearly the preferred option and is recommended. Relative to the other two options, further landfill development is less expensive and less detrimental to the environment. A mass burn incinerator could cost upwards of \$1.2 billion or more adding about \$136/ton to the tipping fee versus \$41/ton for further landfill capacity development. Further, the anticipated annual GHG emissions from an incinerator (1,200,000 MTCO₂e/year), according to the model EPA's GHG emission model used in the Plan, would be up to 12 times as much the annual emissions from landfilling (91,000 MTCO₂e/year).

Important Disposal Considerations

Development versus expansion. Further development of the landfill will not increase the footprint of the parcel on which the Cedar Hills is located. Cedar Hills is not expanding; rather, the County is maximizing the available capacity of the landfill through the further development of a new cell. The future development of Area 9 will occur within the existing boundaries of the property and will not encroach upon the 1,000-foot buffer.

Neighbors' resistance to further landfill development. The KCSWD has been consistent in operating the landfill to the highest standards and in its intent to be a good neighbor. However, some neighbors have been periodically impacted by litter and odors from the landfill as well as from the Cedar Grove Composting facility located next door. Upon its approval of the Plan, the MKCC included several mitigation provisions intended to reinforce and improve upon the County's commitment to mitigate impacts to neighboring residents. These provisions include improving its bird management program to control litter, compliance with the height restrictions of Areas 5, 6, 7, a requirement that no waste be landfilled in the 1,000-foot buffer, a post landfill closure plan, and exploration of County road repair mitigation.

Landfilling offers the most benefits. There are no plans to develop any more landfills in King County once Cedar Hills is full. Landfilling will provide the most affordable disposal rates to King County cities through 2040 relative to other disposal options. Other benefits include lower greenhouse gas emissions, the ability to manage

our waste locally, and time for the County and cities to plan for the next disposal option after the landfill is full.

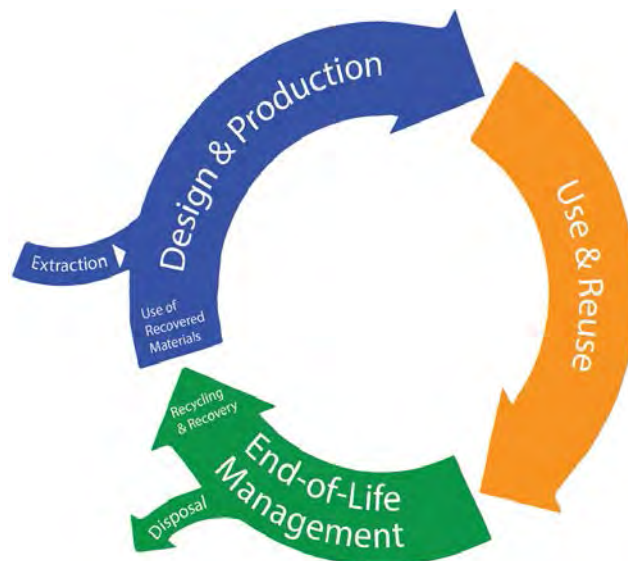
Chapter 4: Sustainable Materials Management

There are 33 actions included in this chapter, 21 of which cities have a primary or secondary responsibility for implementing. A list of the actions and a summary of Kirkland's past, current, and/or future activities related to each activity can be found in Attachment B, "Policies, Goals, and Actions Matrix."

The sustainable materials management chapter of the Plan represents a fundamental shift in how we as a city, the County, and the region should view solid waste management and sustainability. Sustainable materials management is foundational to the Washington State Department of Ecology's solid waste and hazardous waste management plan, [Moving Washington Beyond Waste and Toxics \(2015\)](#). Sustainable materials management is a systemic approach to using and reusing materials more productively over their entire life cycles. Sustainable materials management takes a cradle-to-grave approach that considers opportunities to make products more durable, recyclable, and less resource-use intensive over a complete lifecycle beginning at material extraction to design, production and distribution, through use and reuse, and at the end-of-life through recovery, recycling, and disposal. It is a shift to viewing our waste holistically with an eye toward how each stage in a product's life are intertwined and complementary.

In a sense, it's a departure from recycling diversion to reuse, waste prevention, and waste reduction.

Sustainable Materials Management Life Cycle



Source: Moving Washington Beyond Waste and Toxic – Washington State Department of Ecology

The recycling diversion rate has been a key metric used to gauge the success of Kirkland's recycling programs for many years. Kirkland's single-family recycling diversion rate ranks amongst the highest in King County and the region each year, hovering around 65%. The

multifamily diversion rate has improved significantly in the past five years, peaking now at a respectable 30%. While the Plan still considers recycling diversion an important indicator to gauge the success of our individual and collective recycling programs, sustainable materials management embraces the waste hierarchy by focusing our attention first on reuse, waste prevention, and waste reduction before recycling diversion. The goal is for us to not produce as much “stuff” and to elevate waste prevention/reduction over recycling diversion as the key metrics of individual and collective success.

To prolong the life of the Cedar Hills Landfill through 2040 and achieve the goal of zero waste of resources, cities must work individually and collectively to implement a variety of structural, educational, incentive-based, legislative, and enforcement actions to achieve the 70% recycling diversion goal and the waste generation and waste disposal targets in the Plan. Failure to substantially achieve these goals and targets may shrink the critical decision-making window available to the County and cities to choose a future, long-term and more expensive method of garbage disposal.

Waste Prevention Targets

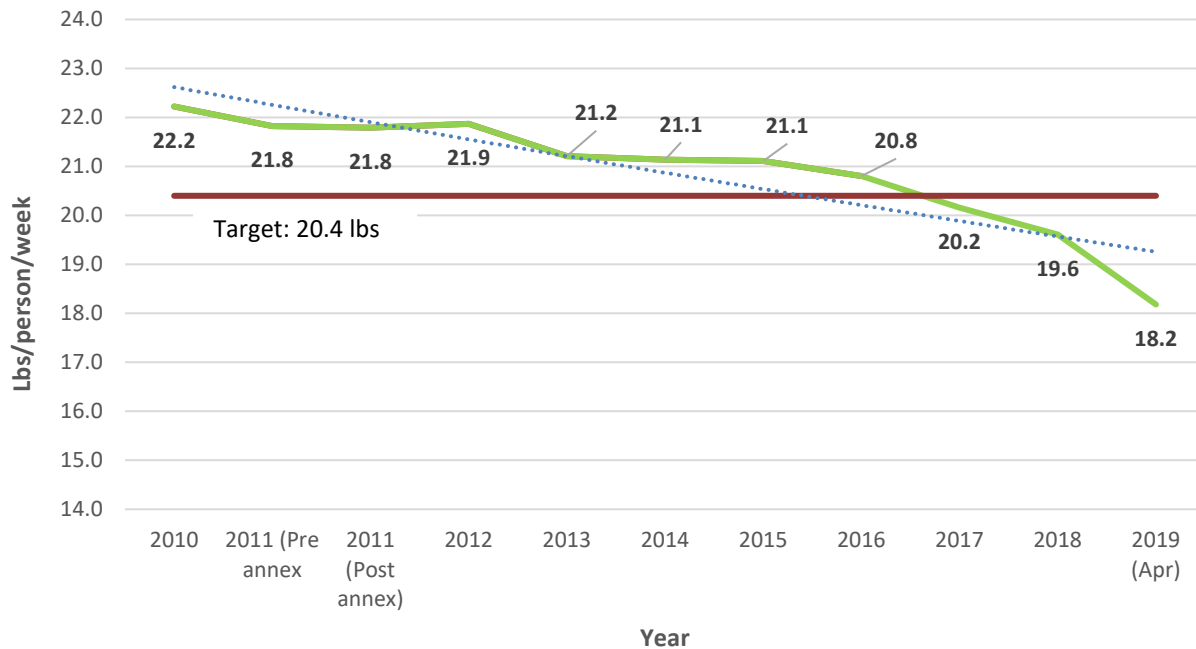
The Plan includes two new sustainability targets—waste generation and waste disposal—which both are indicators of waste prevention and reduction.

- 1. Waste generation** is the total amount of waste (“stuff”) we produce per capita and per employee, which includes a combination of garbage, recyclables, and yard and food waste. Per capita refers to all single-family and multifamily residents. Per employee also includes waste disposed by customers at a place of business. A decrease in waste generation means that the total amount of materials disposed and/or recycled has been reduced. The per capita waste disposal target is 20.4 pounds/week and the per employee target is 42.2 pounds/week.

Kirkland Per Capita Waste Generation

Kirkland's per capita waste generation performance through April 2019 is shown below in Graph 1. Kirkland's residential waste generation has progressively declined over time and is now 2.2 pounds below the Plan's target.

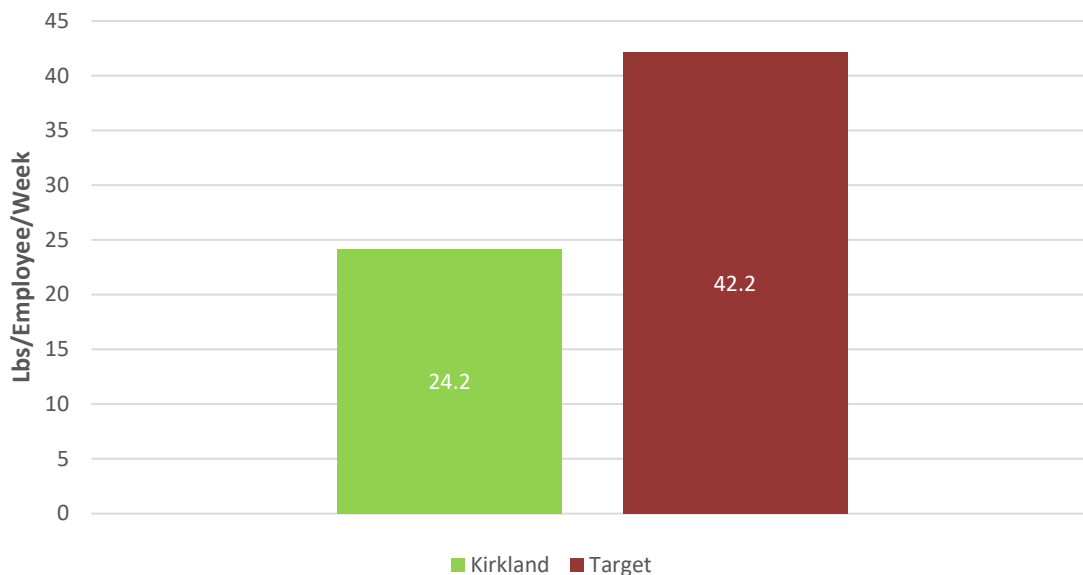
Graph 1: Waste Generation (Per Capita)



Kirkland's Per Employee Waste Generation

Through May 2019 as shown in Graph 2, Kirkland's commercial sector is producing only 24.2 pounds of garbage, recycling, and organics per employee, 18 pound lower than the per employee target. The most recent estimate of the number of employees working in Kirkland is 48,077.

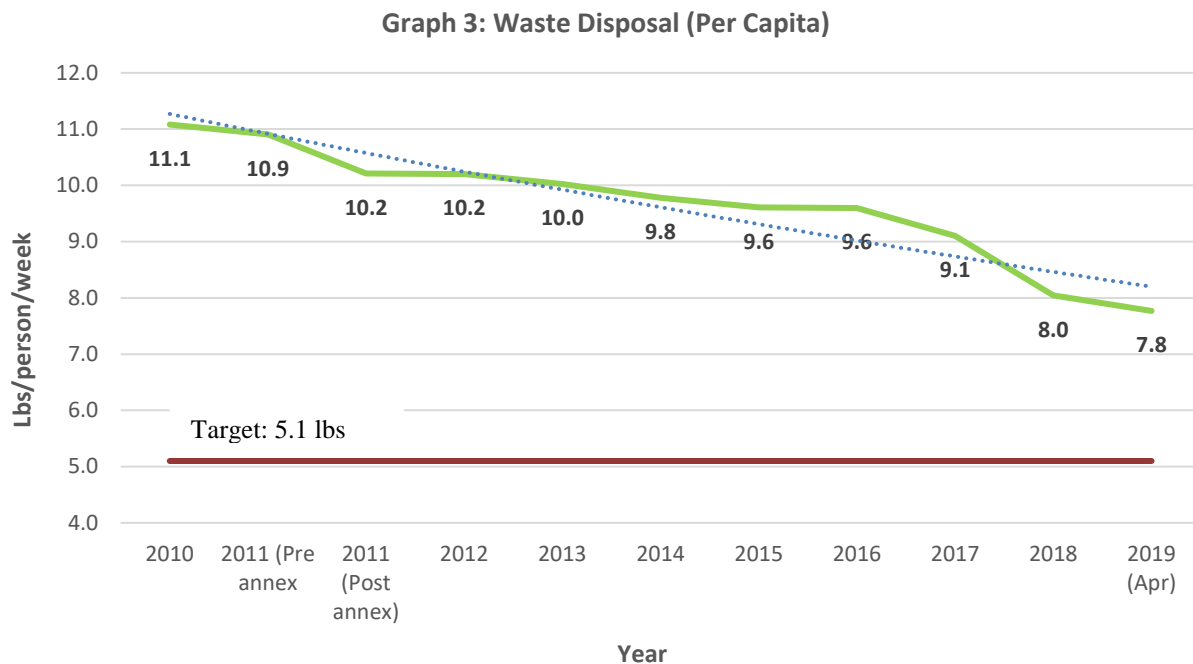
Graph 2: Waste Generation (Per Employee)



2. **Waste Disposal** focuses only on the amount of trash produced and landfilled per capita and per employee. It is an indicator of an increase in waste prevention and/or recycling diversion. The Plan's per capita waste disposal target is 5.1 pounds per week. The per employee target is 4.1 pounds per week.

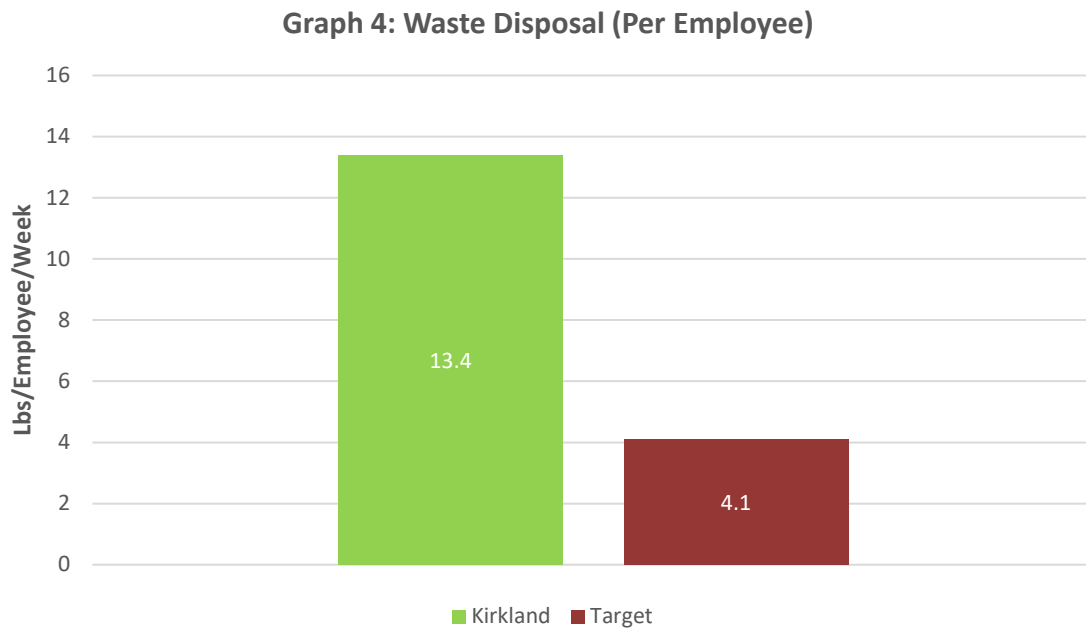
Kirkland's Per Capita Waste Disposal

As shown below in Graph 3, Kirkland's per capita waste disposal is trending downward but is still 2.7 pounds per week from reaching the target.



Kirkland's Per Employee Waste Disposal

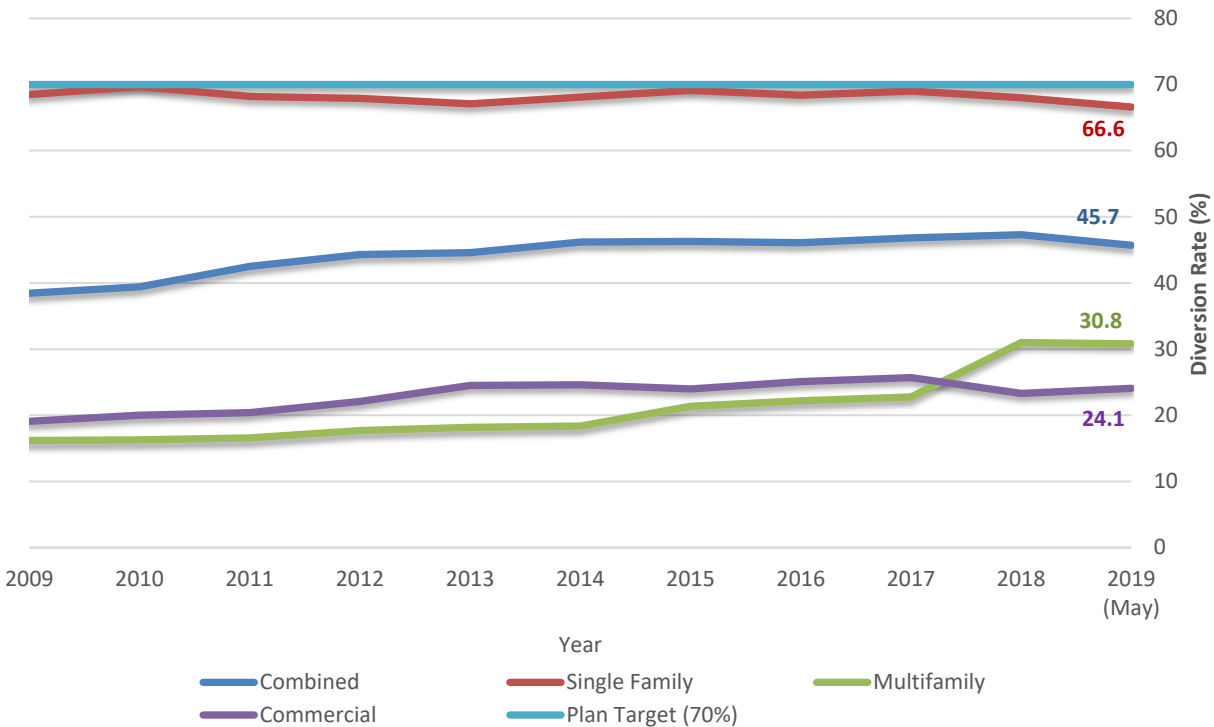
Kirkland's commercial sector now produces 13.4 pounds per employee, per week or 9.3 pounds higher than the target. When compared to the Waste Generation target, Kirkland's commercial sector is disposing of a relatively high amount of garbage. This shows there are opportunities to encourage businesses to implement more waste prevention and reduction measures and divert more disposed materials for recycling in their front and back of house operations by taking advantage of Kirkland's business recycling program and through joining the EnviroStars Green Business Program.



3. **Recycling Diversion** is the percentage of the total waste stream that is diverted from disposal for recycling or composting. The Plan's aspirational Achieve Zero Waste of Resources Goal strives to eliminate the disposal of materials with economic value by 2030 with an interim goal to achieve a combined 70 percent recycling diversion rate that includes waste produced in both the residential and commercial sectors.

Graph 5, below, shows Kirkland performance relative to the 70% interim goal. The single-family sector is hovering close to the goal at 67%. Recycling diversion in the multifamily sector has improved significantly over the past three years, now at 31%. The commercial sector is lagging at 24%. The multifamily and commercial sectors offer the most opportunity to get closer the 70% recycling diversion rate goal. Kirkland's overall combined recycling diversion rate is 45.7% through May 2019.

Graph 5: Recycling Diversion Rate by Sector (2009-2019)



KIRKLAND MUNICIPAL CODE UPDATE:

The following section discusses potential updates to the *Kirkland Municipal Code* (KMC) Title 16. If the City Council approves the Plan, the following KMC code revision will memorialize the commitments made in code.

Background

There are three sections of KMC Title 16, "Refuse and Garbage," that are pertinent to the Plan update. Save for a 2016 addition to 16.08.012 in Section G pertaining to Multifamily Residential Recycling, there have not been any substantial updates to the following KMC sections since 2002, with most of the language drafted in the early 1990's. If the City Council acts to approve the Plan, staff proposes the following code revisions, discussed below, to modernize the solid waste code and recognize the commitment made to try to achieve the goals and actions in the Plan.

Discussion of Proposed Revisions to KMC 16.08

16.08.001 Legislative findings and policy.

The language in this section has been revised to reflect the applicable and appropriate references to RCW Title 70.95. References to the current solid waste interlocal agreement and the City's participation in the Metropolitan Solid Waste Advisory Committee and the Solid Waste Advisory Committee have been added.

16.08.002 Plan – Adopted.

Replaced text with new reference to 2019 Comprehensive Solid Waste Management Plan.

16.08.012 Waste stream reduction plan.

- **Section (1) Goal** has been amended to add reference to the waste generation and waste disposal goals in the Plan.
- **Subsection 2 (A): Program Elements** updated to clarify that the collection and processing of hazardous waste is managed through the King County Hazardous Waste Management Program, not a separate local Kirkland operated program.
- **Section 2 (D)** is proposed for deletion.
- **Section 2 (E) Recyclable Materials** has been updated to reference the list of accepted in Kirkland solid waste contract instead of listing each commodity separately.
- **Section 2 (F) Penalty for Excessive Waste Generation** is proposed for deletion. Kirkland has not actively enforced this section of the code in the past. The provision may be excessive and duplicative. KMC 16.08.040 requires residents to have enough garbage capacity to accommodate their production of waste and residents are free to subscribe and pay for as much garbage collection capacity and service as is required to meet this provision. Kirkland's linear "pay as you throw" rate structure does not provide a "bulk discount" for customers with larger cart sizes and results in larger producers paying more. Linear rates with embedded recycling service also encourage residents and businesses to reduce their waste.
- **NEW SECTION: Section 2 (X) Commercial Recycling** is proposed to require that all commercial properties have an equal weekly volume of garbage and recycling service. This is proposed as an important step to aid the commercial sector in meeting the Plan's waste disposal goal. For properties that do not have enough recycling capacity, a significant portion of their recyclables are being disposed of in the garbage leading to a higher than ideal disposal rate. This proposed code revision would not result in any cost increases to businesses. Commercial recycling service up to 150% the size of their garbage service at no additional cost to businesses through the City's contract with Waste Management. In Washington State, commercial recycling service is free market, so businesses also may elect to subscribe to service with a recycling service provider of their own choosing where the service may or may not be provided for free.

Improving waste reduction and recycling diversion in the commercial sector is an ongoing challenge for local solid waste management jurisdictions. Just like multifamily properties, commercial properties need a variety of tools to be successful at recycling. According to Waste Management data, the commercial sector in Kirkland produces 32.7% of the total waste generated in the City. As of May 2019, the commercial sector diverted only about 24% of the total waste for recycling or composting. Kirkland's current failure to meet the Plan's Waste Disposal goal highlights the need to reduce waste and divert more materials from the landfill.

In 2015, Kirkland City Council adopted a revision to the KMC that requires all multifamily properties to offer recycling service to its residents and have at least a 1:1 ratio of recycling capacity to garbage capacity. The multifamily requirement has been a useful tool to encourage recycling and has supported the growth of the multifamily diversion rate to over 30%. Staff now is proposing a similar requirement for commercial properties.

Kirkland's Commercial Recycling Program

Kirkland's contract with Waste Management provides commercial properties with up to 150% of their garbage capacity in recycling service at no additional cost. Per State law, commercial customers may forego Waste Management's recycling service and contract directly with any other recycling service provider. A recent audit revealed that over 100 businesses either contract with a separate recycling hauler or do not have any recycling at all. Further, about 40% of Kirkland businesses with recycling service do not meet the proposed 1:1 ratio standard. According to the [2015 King County Waste Characterization Study](#), about 70.5% of the waste disposed by non-residential customers in King County could be recycled or composted instead. The major components of this 70.5% include food (24.7%), paper (23.1%), and plastic (14.3%). Kirkland commercial properties also have large amounts of recyclables in their trash.

Outreach to these commercial properties informing them of the availability of recycling service at no additional cost can be effective but does not always yield results. It can be challenging to reach the right person at a commercial property, or some may be resistant to participating. Kirkland currently supports businesses in increasing and improving recycling in variety of ways. Existing commercial recycling resources include:

- Free deskside recycling bins
- Free posters and signage
- Outreach in connection with the EnviroStars Green Business Program
- Education and outreach from Waste Management Recycle Corps Interns
- Free technical assistance on site
- Assistance with starting a free food waste composting service

A requirement that businesses have recycling service on site, and that they have enough, will help Kirkland businesses divert more items for recycling and reduce waste.

NEXT STEPS:

The Plan is expected to reach the approval threshold by King County cities on or before the September 16, 2019 deadline. Once approved by cities, the final step in the approval process is a 45-day review period by the Washington State Department of Ecology. Once the Plan is approved by cities, staff expects the County to begin the competitive procurement of a siting consultant and begin the siting process for a new NERTS to be located somewhere in the NE County service area by forming a Core Northeast City Working Group and a Siting Advisory Committee, both of which will have City of Kirkland elected and staff representation.

Attachment A: Frequently Asked Questions on the Plan

Attachment B: Policies, Goals, and Action Matrix

Attachment C: Northeast Recycling and Transfer Station Siting Process Timeline

Attachment D: Transfer Station Siting Criteria Example

Planning for the Future of Regional Waste Management

Frequently Asked Questions on the 2019 Comprehensive Solid Waste Management Plan

Responsible waste management is a top priority as we plan for the economic and environmental future of our region.

The *2019 Comprehensive Solid Waste Management Plan* (Comp Plan) adopted by the King County Council on April 24, 2019, was developed in close cooperation with local jurisdictions, private sector waste management experts, and the input of numerous stakeholders and community members. While it addresses many topics, the plan zeroes in on three key priorities:

- Increasing the regional recycling rate from the present 54 percent to 70 percent so these materials can be made into new products.
- Expanding and modernizing services at current garbage and recycling transfer stations, and adding new facilities in underserved areas such as northeast and south King County.
- Identifying how to dispose of garbage after 2028 when the currently built areas at the Cedar Hills Regional Landfill are expected to be full.

This document outlines responses to common issues and questions about the Comp Plan and landfill management.

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BIRD and WILDLIFE MANAGEMENT

What steps are taken to keep animals, especially large birds like eagles, out of the garbage at the Cedar Hills Regional Landfill?

Operations staff work closely with biologists from the consulting firm Innovative Wildlife Solutions to ensure bird and wildlife protection, and to deter scavenging by the animals. Active areas of the landfill are covered daily to keep animals and birds out of the garbage. Bird control techniques include trapping and culling, and deterrents such as scarecrows and drones. Pyrotechnics are also used from time to time.

Eagles' dietary preferences are spawning trout and salmon, followed by other animals and carrion. They are mainly attracted to the landfill because of warmth and absence of human activity.

Eagles are protected under the Federal Bald and Golden Eagle Protection Act, so while our operations cannot harass or harm the birds, they can and do take steps approved by wildlife biologists to make the landfill a less desirable habitat option.

Who determines if wildlife control progress is satisfactory?

The Comp Plan requires the Solid Waste Division to track and report on its bird management practices.

I suspect animals or birds are carrying landfill garbage onto my property. What do I do?

Landfill neighbors can call the division at 206-477-4466 to request assistance with removal of refuse deposited by wildlife. Operations will also investigate ways to reduce future incidents.

BUFFERS/PROPERTY ACQUISITION/FORESTRY

How much buffer separates the landfill from nearby properties?

When the Cedar Hills Regional Landfill was originally permitted in the early 1960s, County Commissioners decided it should have a 1,000 foot buffer instead of the 250 foot buffer required by state laws in place at the time.

Was there ever encroachment on the buffer?

Aerial photos from 1966 show that garbage was improperly buried within the 1,000-foot-buffer on the eastern border near 22 homes. There is no county record to indicate why that was done.

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Is King County acquiring homes from property owners near the area where the buffer was reduced?

King County has already worked with four willing sellers to purchase their homes, and our offer remains open to the other property owners in that particular area who would be interested in selling.

Are there any efforts to improve the buffer zone?

Yes. Long term efforts to improve the quality of the buffer include working with a landscape architect from King County Roads to add more trees to the western buffer, and maintaining/restoring the size of the east buffer by acquiring properties from willing sellers along the east buffer.

COMMUNITY ENGAGEMENT

What does King County do to understand landfill neighbor concerns?

Staying connected with the public, and especially our facility neighbors, is core to our commitment to customer service excellence. Examples of our community engagement since the beginning of 2018 include a 60-day public comment period on the Comp Plan that coincided with a well-advertised online open house and three in-person open houses including one for landfill neighbors.

Over the past year, there was one public landfill tour; two semi-annual landfill neighbor meetings; participation in a councilmember's open house last October 2019 for landfill neighbors; public notification plus a two-week comment period on a proposal to temporarily extend hours at Cedar Hills during the Viaduct closure; nine e-newsletters to 590 neighbor subscribers and two mailed letters to about 900 neighbors; and multiple correspondence, phone calls, and face-to-face conversations with neighbors. There is another semi-annual landfill neighbor community meeting scheduled on June 20, 2019.

How do the public or cities give feedback to the division?

The division has two advisory committees – the Metropolitan Solid Waste Advisory Committee ([MSWAC](#)) and the Solid Waste Advisory Committee ([SWAC](#)). MSWAC comprises staff and elected officials from the cities that participate in the county's regional solid waste system. MSWAC members are appointed by their respective cities. SWAC members are appointed by the Executive and confirmed by the King County Council. SWAC members represent the diverse interests of residents, waste management companies, the recycling industry, public interest groups, labor, local elected officials, recyclable markets, and manufacturers located in King County. SWAC would be the committee landfill neighbors could serve on.

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Are community members invited to serve on the committees or attend the meetings?

MSWAC and SWAC monthly meetings are open to the public, and agendas are typically published a week in advance. Minutes are taken at every meeting to summarize presented material, document deliberative discussion of committee business, and to record motions approved by the committee. Meeting minutes from the prior month are presented to committee members for review, and members have the opportunity to request amendments and corrections before minutes are approved by the chair.

Landfill neighbors have served on SWAC in the past and we are currently recruiting for a specific committee vacancy to be filled by a landfill neighbor. Serving on the committee does require a commitment – meetings are held each month, usually in downtown Seattle at King Street Center. Although no landfill neighbors have yet expressed an interest, we are hopeful that we will soon benefit from their additional perspective on this important advisory committee.

I've heard there has been legal action against the landfill in the past. What's the history there?

Cedar Hills was originally permitted at a time when there were few regulations in place to govern the design and operation of landfills. There were also very few neighbors around the facility when it first opened in 1965. Since then, environmental regulations have become increasingly rigorous. As the community around the landfill grew, expectations for how essential public facilities should operate were also raised substantially.

Our regulators and elected officials today hold Cedar Hills Landfill accountable for meeting stringent environmental and operational requirements, and for taking all reasonable measures to reduce impacts to the community.

Regrettably, problems with landfill operations in years past prompted legal action by people who lived nearby. We've taken a number of corrective actions to address the issues that led to legal settlements, and we are committed to honoring the terms of these agreements moving forward.

We have and will continue to honor our settlement agreements.

COMP PLAN ADOPTION and UPDATES

What is the current situation with regard to capacity at the Cedar Hills Regional Landfill?

According to population and economic projections, and current recycling rates, the existing cells at the Cedar Hills Regional Landfill will be full around 2028. The Comp Plan directs King County to extend

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the life of the landfill and gives us the needed time to identify and evaluate the best future disposal alternatives.

How is King County planning to further develop the landfill?

King County will not expand the landfill beyond its current boundaries. Our long-term plan centers on extending the life of the landfill by maximizing capacity on the existing footprint. This would entail building a new cell, relocating support facilities to a different location on the landfill property, and using that space for solid waste disposal. This could extend the landfill's operational life nearly two decades, and provide enough of a planning window to have a new alternative in place when the landfill closes.

What long-term waste disposal alternatives were considered in the Comp Plan?

The Comp Plan presented Waste-to-Energy and waste export by rail as alternatives to further landfill development. These alternatives are workable options that come with tradeoffs around cost, environmental impact, community impact and risk.

A Waste-to-Energy (mass burn) facility, which would incinerate garbage to generate electricity, offers opportunities to explore advanced technologies for waste disposal. It is the most technically and financially complex option outlined.

Rail transport to an out-of-county landfill is a viable alternative. The City of Seattle transports its collected waste to landfills in eastern Washington and Oregon. But rail capacity has limitations, and the increasing demand for rail transport among both public and private entities as our region keeps growing adds uncertainty to the cost and feasibility of this option.

After considering the alternatives, the Comp Plan recommends that the Cedar Hills Landfill be further developed, maximizing its capacity as we continue working with public and private partnerships to increase the volume and value of recycling. Further development of the landfill is the most cost-effective and feasible option to serve our region's need for responsible waste disposal at this point in time.

The Cedar Hills Regional Landfill will eventually fill up. Future Comp Plan updates will explore alternatives for when local landfill capacity is no longer available.

Will the Cedar Hills Regional Landfill ever be allowed to build above its current permitted height?

It's important to emphasize that the landfill currently has permitted height requirements, and that King County would not violate the terms of permits or settlement agreements around landfill

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development, including height limitations. Any future development at the landfill would be subject to a project planning and permitting process that would involve public notification as well as the opportunity to provide comment or input that would inform design guidelines.

How can I get more information on the Solid Waste Comp Plan, or make my views known?

People can read the Comp Plan online at www.kingcounty.gov/SWDCompPlan. The Comp Plan is currently undergoing review and approval by the 37 cities that contract with King County for regional waste disposal services. Also, many projects featured in the Comp Plan will have their own unique public processes related to siting, design, permitting and construction. People will continue to have opportunities to be informed and involved in the implementation of projects and programs outlined in the Comp Plan.

COST and FINANCES (Comp Plan Alternatives)

What is the cost difference between the three disposal options identified in the comp plan?

The financial and environmental costs of the viable disposal alternatives were evaluated in the Comp Plan, which is outlined in Table 6-1 on Page 162.

Table 6-1. Comparison of key disposal option characteristics (planning level estimates)

Comparative Attribute	Further Develop Cedar Hills	Waste Export To An Out-of-County Landfill	Waste To Energy Facility
Cost per Ton¹	\$41	\$55	\$136
Life Cycle Greenhouse Gas Emissions (EPA's WARM Model)	(134,000) ² MTCO ₂ e	(78,000) ² MTCO ₂ e	12,000 to 80,000 ³ MTCO ₂ e
Annual Greenhouse Gas Emissions (EPA's eGGRT)	91,000 ⁴ MTCO ₂ e/year	91,000 ⁴ MTCO ₂ e/year	1,200,000 MTCO ₂ e/year
Recycling Rate	No change	No change	2% increase
Risks	SEPA, Permitting	Rail Capacity, Control	Siting, Sizing

¹ Estimated cost per ton in 2029.

² WARM model calculation for 2029. (King County SWD). For more information, see Appendix D.

³ WARM model calculation. (Normandeau 2017).

⁴ Landfill options show estimated emissions in 2029.

Extending the life of the landfill is the most cost-effective and has the lowest climate impact while we plan for the future of regional waste management after the landfill is full.

Solid Waste Division

ENVIRONMENTAL HEALTH

What about the health and safety of neighbors?

The Cedar Hills Regional Landfill is staffed 24/7 with skilled professionals who are trained and certified in the best management practices established by the Solid Waste Association of North America, or SWANA. By far the most commonly reported issue is odor.

Protecting our workers and the public is a top priority. Our landfill operations are subject to permit conditions and regulations by Public Health – Seattle & King County, the US Environmental Protection Agency (EPA), Puget Sound Clean Air Agency (PSCAA) and the Washington State Department of Ecology to safeguard public health, the environment, and the nearby community. SWD Operations is responsible for ensuring compliance for 33 groundwater monitoring wells near an aquifer, seven stormwater monitoring points, and over 700 gas wells.

We regularly monitor and report on the quality of the air, groundwater, leachate (landfill wastewater) and stormwater, and we restrict or prohibit the disposal of many types of waste that could be harmful or toxic.

Greater detail about our environmental monitoring is available in the Cedar Hills Landfill 2018 Annual Report, which is online at <https://your.kingcounty.gov/dnrp/library/solid-waste/facilities/CHRLF-annual-report-2018.pdf>. People can also call us at 206-477-4466 to request an emailed or paper copy.

What does King County do to reduce impacts of the landfill to nearby communities?

To control odors and reduce potential for wildlife to get into and carry away garbage, the active areas at the landfill are covered before the end of each working day. Staff also monitor for odors, and specially trained Nasal Rangers on staff do around-the-clock odor checks five times a day. People who notice odors, or any other issue they feel is related to the landfill operations, can call the Solid Waste Division at 206-477-4466 to get a response right away. People should always call 911 first if they believe there is a potential emergency, or a risk to public safety, health or property.

Are there unlined areas at the landfill?

Environmental controls have been in place at Cedar Hills since the 1980s, and that includes installation of protective bottom linings, as well as covering refuse areas daily to reduce impacts like odors and birds. There are two unlined areas of the landfill – the Main Hill and the Southeast Pit. Both are located on the east side of the landfill and were developed before regulations requiring bottom liners were established. Those two areas are equipped with environmental controls, including having a cap on top to prevent infiltration, as well as leachate and landfill gas collection.

Solid Waste Division

LANDFILL COVER MATERIAL

What type of cover material is used at the landfill?

King County takes daily action to prevent odors, control wildlife, and deter rodents and pests by covering active areas of the landfill daily. The cover also improves gas collection, which works on a vacuum system.

Active area side slopes are covered with soil, and a thick, durable cloth tarp is placed on the top at the end of each working day. When the tarp is covering the area, the landfill gas collection pipes are operating on a vacuum to capture landfill gas and send it to Bio Energy Washington for processing.

The type of cover the division is allowed to use is decided by regulators. The Comp Plan directs King County to implement best practices around landfill cover, which is consistent with our current practices, but includes additional reporting requirements.

LANDFILL GAS MANAGEMENT

What is the status of energy recovery at the landfill now?

It's important to point out that innovation is already happening at our current facilities. Through partnerships with Puget Sound Energy and Bio Energy Washington, landfill gas collected at Cedar Hills produces enough renewable energy to heat 19,000 homes annually, which reduces greenhouse gas emissions and supports broader County goals to address climate change. Some of the gas produced is converted to electricity, some gas is cleaned of impurities and returned to the regional pipeline.

Revenue from the landfill gas-to-energy partnership brought in \$8 million in 2017 which helps offset solid waste disposal operational costs.

How is landfill gas managed?

High-tech equipment is used to monitor, control, and measure the landfill gas characteristics and volume as it is captured within the vacuum-based system. King County performs quarterly surface scans of the landfill to seek out potential fugitive emissions and address them as appropriate. It is the frequent re-evaluation of the system performance and maintenance that ensures the system is well-managed and functions optimally.

Once collected, landfill gas is conveyed via pipeline to Bio Energy Washington for processing. Some of the gas is converted to electricity for use on site by Bio Energy Washington, however most is cleaned of impurities and made into compressed natural gas and sold to Puget Sound Energy.

Solid Waste Division

While international standards for measuring landfill gas vary from country to country, in the U.S., the EPA serves as the chief regulator and establishes the measurement models. To inform the most accurate data points for input to the EPA models, King County conducts periodic waste characterization studies.

What about landfill gas odors?

At Cedar Hills, all supervisors, leads and landfill gas operators have been trained to recognize odors and evaluate the source and concentration levels of reported and detected odors. The training also features tools and techniques specifically designed to counteract desensitization to certain odors. The landfill gas staff has developed a site-wide monitoring program to include daily site-wide odor observations five times a day, day and night. These observations are recorded on paper as well as in an electronic database.

Anyone who detects the smell of natural gas, or believes there is a gas leak or any other emergency related to landfill operation should call 911.

ODOR MANAGEMENT/AIR QUALITY

How is air quality managed around the landfill, especially controlling odors?

The Cedar Hills Regional Landfill is staffed 24/7 with skilled professionals who are trained and certified in the best management practices established by the Solid Waste Association of North America, or SWANA. Around-the-clock odor checks are conducted five times a day on and offsite on weekdays and three times a day on weekends by operations experts trained in odor detection. In addition to these regularly scheduled checks, specially trained staff monitor areas commonly associated with prior odor complaints.

What tools or monitoring devices are used to detect and control odors?

The division uses Nasal Ranger training and technology to monitor and detect odors. The Nasal Ranger system is used across many sectors including state and local governments, wastewater treatment operations, landfill operations, environmental health agencies, and even police departments to determine presence and strength of odors. Use of the equipment takes the subjectivity out of odor measurement and provides a consistent standard for field staff to document odor strength. The Nasal Ranger training data is even used as a guide for regulatory enforcement in some jurisdictions.

Solid Waste Division

Prevention is our most effective strategy. To control odors, and reduce potential for wildlife to get into and carry away garbage, the active areas at the landfill are covered before the end of each working day.

Who permits air quality for the Cedar Hills Regional Landfill?

Puget Sound Clean Air Agency (PSCAA) serves as the regulator over SWD's operations for all matters relating to air quality. People can call PSCAA to report complaints, but we also ask that they call our 24/7 hotline at 206-477-4466 so we can diagnose and correct any issues that might be related to landfill operation.

How many odor complaints were reported in the past year?

Puget Sound Clean Air Agency reported 160 complaints called in in 2018. By contrast, in 2018 the division received 14 complaints to SWD's odor hotline. An analysis of the 2018 neighborhood odor checks confirms that refuse accounts for less than five percent of the odors detected.

Though neighbors always have the option to contact PSCAA, we encourage them to contact us as well because if there is a problem related to our operation, we can take corrective action right away.

I live near the landfill. If I detect odors of garbage or natural gas, who do I call?

Anyone who detects the smell of natural gas, or believes there is a gas leak or any other landfill-related emergency should call 911.

Neighbors are encouraged to report a non-emergency problem by calling our 24/7 hotline at 206-477-4466. Complaints to the issue-reporting hotline receive immediate response.

RECYCLING RATES

How does the Comp Plan address recycling?

The Comp Plan identifies strategies for how the County will manage recycling for the next six to 20 years. Developed with the division's partnering cities and two advisory committees, a main priority of the 2019 Plan is how to achieve a 70 percent recycling rate.

The current recycling rate in King County is 54 percent, far exceeding the national average of 34 percent. But we can do more. We estimate as much as 70 percent of what goes to the landfill every day – about 95 semi-truckloads – is recyclable or reusable material.

What are some specific examples of recycling actions outlined in the Comp Plan?

Solid Waste Division

The 2019 Plan provides a menu of recycling actions cities and the county can take to enhance recycling in their jurisdictions.

For example, about a third of the material that goes to the landfill is food waste that could be composted and used to nourish crops and return nutrients to the soil. King County convened an Organics Summit earlier this spring comprised of cities, haulers, waste management experts and academics to identify strategies to develop markets for this material.

Construction and demolition waste (C&D) makes up one-third of the solid waste generated in the county. King County requires that readily recyclable C&D materials (metal, cardboard, wood, concrete, asphalt, brick and drywall) be recycled, which furthers the division's Zero Waste and carbon emissions reduction efforts. In 2018, the division added an additional C&D recycling facility to the privately managed locations that manage C&D, bringing the total number of approved facilities to fourteen.

Education is also part of our strategy. A record 245 King County schools (more than 151,000 students) are currently participating in the Green Schools program that helps teach students important lessons on recycling and conservation. New features of the program include a food rescue initiative that diverts unopened and uneaten food from being wasted. In 2018, nearly 13,000 of food and drinks were rescued and redistributed to communities in need.

Finally, we're making our services more accessible and affordable as part of our commitment to equity and social justice. The new Cleanup LIFT program, modeled after Metro Transit's Orca LIFT, provides a \$12 discount to low-income self-haul customers who recycle yard waste, clean wood and refrigerant-type appliances at a County recycling and transfer station.

Which areas have the highest recycling rates?

Recycling rates vary among our regional communities. Single family recycling rates range from a high of 65 percent in some areas to as low as 34 percent. For multi-family housing, rates range from 61 percent to as low as 5 percent.

Education is an important part of recycling, as is ongoing coordination with haulers and cities. People can make the biggest environmental impact by recycling right. That means making sure recyclable materials are empty, clean and dry before being put in the bin.

SEISMIC CONCERNS

Are there known faults on or close to the landfill?

Solid Waste Division

According to the most recent studies to inform landfill development, there are no known earthquake faults within a mile of the Cedar Hills Landfill. The new landfill cells are not located in any known seismic impact zone nor within a mile of any Holocene faulting (activity in the last 11,000 years), which is a Washington Administrative Code (WAC) requirement.

WASTE-TO-ENERGY

Is King County considering a Waste-to-Energy facility?

King County is open to the possibility of new technologies for regional waste management, and future comprehensive plan updates could further explore new alternatives, including a Waste-to-Energy option. But without further development, the landfill is currently slated to reach capacity by 2028 and a nine-year time frame to site, permit, build, finance and commission a complex facility is not realistic. A Waste-to-Energy facility still requires landfill disposal capacity.

What about the possibility of a waste-to-energy facility in the future after Cedar Hills is full?

The Comp Plan directs King County's Performance, Strategy, and Budget (PSB) office to work with the Solid Waste Division to prepare a progress report by December 31, 2021 on long-term disposal options.

Concurrently, PSB is managing a consultant contract for a waste-to-energy study that is scheduled for completion by October 2019. The study will help inform future work.

In consultation with our city partners, it is anticipated that the post-Cedar Hills disposal method will be selected as part of the next Comp Plan update.

King County is open to the possibility of new technologies for regional waste management, and future comprehensive plan updates could further explore new alternatives, including a Waste-to-Energy option.

We recognize many in our region are supporters of this option, and invite them to engage in with other stakeholders and community members in regional discussions around future planning efforts.

WATER QUALITY/AQUIFER

What steps does King County take to protect water quality?

The division is responsible for routine water quality monitoring and reporting on 68 groundwater wells onsite and around the site perimeter.

Solid Waste Division

A regional aquifer flows beneath portions of the Cedar Hills Regional Landfill from the South to the Eastern border. SWD monitors the regional aquifer at 19 wells on a quarterly basis and monitors an additional 14 wells semi-annually. Incoming water quality is impacted by the former Queen City Farm, a Superfund site Boeing is responsible to clean up, which is located just to the south of Cedar Hills. Our monitoring shows that groundwater leaving the landfill site is in compliance with federal drinking water standards.

I heard that an aquifer near the landfill is at risk of contamination by 2058. Is that true?

No. The aquifer beneath the landfill is not at risk of contamination in 2058 because action is underway now to address legacy contamination that originated at a Boeing-managed Superfund site south of the landfill. A remediation study is being developed to identify the most appropriate cleanup actions of the historic contamination and to ensure it doesn't leave the site. Portions of the study have already been approved by Ecology while exploration of additional efforts is pursued.

The former Queen City Farm, now a Superfund site Boeing is responsible to clean up, was found to have contributed to historic contamination discovered at Cedar Hills in the 1980s that was confined to areas of the landfill that continue to be closely monitored. King County continues to send our quarterly groundwater reports and annual reports to the EPA and Boeing.

Alternate formats available: 206-477-4466, TTY Relay: 711

2019 Comprehensive Solid Waste Management Plan Policies, Actions, and Goals Matrix

Chapter	#	Resp	Kirkland Activities	Text of Policy / Recommended Action
2 – The Existing Solid Waste System	Policy ES-1	County		Maintain a public and private mix of solid waste transfer and processing facilities.
	Policy ES-2	County		Work with the division's advisory committees, the cities, and the Solid Waste Interlocal Forum on solid waste management planning and decisions.
	Policy ES-3	County		Incorporate principles of equity and social justice into solid waste system planning.
	Policy ES-4	County		Consider climate change impacts and sustainability when planning for facilities, operations, and programs.
3 – Forecasting and Data	Policy FD-1	County		Monitor and report the amount, composition, and source of solid waste entering the transfer and disposal system.
	Policy FD-2	County		Update the solid waste tonnage forecast to support short- and long-term planning and budgeting for facilities and operations.
	Policy FD-3	County		Monitor and report waste prevention and recycling activity, including the amount of materials recycled, programmatic achievements, and the strength of commodity markets.
	Policy FD-4	County		Continue to monitor new and emerging technologies to identify opportunities for their use in managing solid waste and recyclables.
	Action 1-fd	Cities County Hauler	No activity	Standardize the sampling methodology and frequency in tonnage reports submitted to the division and the cities by the collection companies to improve data accuracy.
	Action 2-fd	County		Perform solid waste, recycling, organics, and construction and demolition characterization studies at regular intervals to support goal development and tracking.
	Action 3-fd	County		Monitor forecast data and update as needed.
	Action 4-fd	County Cities Ecology	No activity	Develop voluntary agreements with recycling companies that will improve data reporting and resolve data inconsistencies.

2019 Comprehensive Solid Waste Management Plan Policies, Actions, and Goals Matrix

Chapter	#	Resp	Kirkland Activities	Text of Policy / Recommended Action
4 – Sustainable Materials Management	Goal	County Cities	Kirkland supports the zero waste of resources hierarchy and the 70% recycling diversion goal. Kirkland recycling diversion rates for 2018: Single family: 64% Multifamily: 28% Commercial: 23% Combined: 47%	Achieve Zero Waste of Resources – to eliminate the disposal of materials with economic value – by 2030, with an interim goal of 70 percent recycling through a combination of efforts in the following order of priority: a. Waste prevention and reuse, b. Product stewardship, c. Recycling and composting, and d. Beneficial use.
	Policy S-1	County		Set achievable targets for reducing waste generation and disposal and increasing recycling and reuse.
	Policy S-2	County		Enhance, develop, and implement waste prevention and recycling programs that will increase waste diversion from disposal using a combination of tools: a. Infrastructure, b. Education and promotion, c. Incentives, d. Mandates, e. Enforcement, and f. Partnerships.
	Policy S-3	County		Advocate for product stewardship in the design and management of manufactured products and greater responsibility for manufacturers to divert these products from the waste stream.
	Policy S-4	County		Prevent waste generation by focusing on upstream activities, including encouraging sustainable consumption behaviors, such as buying only what one needs, buying durable, buying secondhand, sharing, reusing, repairing, and repurposing.
	Policy S-5	County		Work with regional partners to find the highest value end uses for recycled and composted materials, support market development, and develop circular supply loops to serve production needs.
4 – Sustainable Materials Management (cont.)	Policy S-6	County		Strive to ensure that materials diverted from the King County waste stream for recycling, composting, and reuse are handled and processed using methods that are protective of human health and the environment.
	Policy S-7	County		Provide for efficient collection of solid waste, recyclables, and organics, while protecting public health and the environment, promoting equitable service, and maximizing the diversion of recyclables and organics from disposal.
	Policy S-8	County		Promote efficient collection and processing systems that work together to minimize contamination and residual waste, maximize diversion from disposal, and provide adequate capacity.
	Action 1-s	Cities County	The City of Kirkland is actively working on improving internal waste reduction and recycling. Improvements include paper towel composting in facility restrooms, recycling bins and signs in conference room bins and work stations, and battery and CFL recycling. Future policies will include	Lead by example by improving waste prevention and recycling in public-sector operations, facilities, and at sponsored events, as well as through the purchase of sustainable products.

2019 Comprehensive Solid Waste Management Plan Policies, Actions, and Goals Matrix

Chapter	#	Resp	Kirkland Activities	Text of Policy / Recommended Action
			consideration of internal food service ware, disposable plastic water bottle, and environmentally-responsible purchasing policies.	
	Action 2-s	County Cities Haulers	Kirkland actively participates in regional partnership activities, like the Organics Contamination Reduction Workgroup and the Responsible Recycling Task Force.	Form a regional responsible recycling forum to work with public and private partners to address production, use, and end-of-life management of goods. The forum will identify ways to strengthen recyclables markets, reduce contamination, and improve the quality and quantity of recyclable materials through more uniform city/county recycling approaches, education and outreach, and other means.
	Action 3-s	County Cities	In partnership with other Eastside cities, Kirkland has drafted a regional waste prevention and reduction campaign that remains unfunded due to a reduction in the availability of Ecology grant funding.	Provide regional education outreach support and incentive programs to overcome barriers for residents and businesses to effectively prevent waste. Emphasize the primary importance of purchase and product use decisions that prevent waste, and secondary importance of recycling items/materials that couldn't be prevented. Work in partnership with other governments, non-governmental organizations, and the private sector to maximize the effectiveness of these efforts.
	Action 4-s	County	Kirkland supports and works with King County Green Schools. Kirkland partnered with the LWSD to implement a School Food Share program.	Provide waste prevention and recycling education programs in schools throughout the county, and help schools and school districts establish, maintain, and improve the programs.
4 – Sustainable Materials Management (cont.)	Action 5-s	Cities County Haulers	Kirkland is a leader in contamination reduction efforts, partnering with Waste Management to implement comprehensive contamination tagging in both recycling and organics carts.	Continue to educate customers on proper recycling techniques to reduce contamination of recyclables and organic feedstocks going to the materials recovery facilities and compost facilities.
	Action 6-s	Cities County	Kirkland actively works on outreach programs to all sectors.	Increase educational outreach and promotion to single-family, multi-family, and non-residential customers to encourage recycling and reduce waste.
	Action 7-s	County Cities	In 2018, Kirkland promoted food composting to single family residents via a "Keep food out of the trash" cart tag.	Increase single-family food scrap recycling through a three-year educational cart tagging program.
	Action 8-s	Cities County	Kirkland incentivizes and promotes food scrap recycling through its multifamily and commercial organics programs which are offered at no additional cost.	Continue to develop infrastructure and increase regional and local educational outreach, incentives and promotion to increase recycling of food scraps and food-soiled paper. These efforts should target single-family and multi-family residential developments, as well as nonresidential buildings such as schools, institutions, and businesses.
	Action 9-s	County	Kirkland is currently beginning a review of City purchasing policies for potential inclusion in the Sustainability Master Plan	Provide information and technical assistance to external agencies, such as local governments, schools, colleges, and other public and private organizations to increase their purchase of sustainable products. Support implementation of the county's Sustainable Purchasing Policy through waste reduction, recycling, use of recyclable products, and green building.

**2019 Comprehensive Solid Waste Management Plan
Policies, Actions, and Goals Matrix**

Chapter	#	Resp	Kirkland Activities	Text of Policy / Recommended Action
	Action 10-s	County		Work with public and private partners to support the development of reuse and recycling value chains, including markets, for target products and materials. Employ incentives and material-specific projects that reduce or eliminate barriers to reuse and recycling.
	Action 11-s	County	The Kirkland Solid Waste Division is supportive extended product stewardship programs and legislation and is an active member on the Northwest Product Stewardship Council Steering Committee.	Pursue product stewardship strategies through a combination of voluntary and mandatory programs for products that contain toxic materials, are difficult and expensive to manage, and/or need sustainable financing, including, but not limited to, paint, carpet, fluorescent bulbs and tubes, mercury thermostats, batteries, unwanted medicine, mattresses, e-waste, paper and packaging, plastic bags and film, and sharps. Strategies may include Right to Repair legislation and framework legislation for addressing producer responsibility.
4 – Sustainable Materials Management (cont.)	Action 12-s	County		Explore options to increase recycling and resource recovery through innovative methods and technologies.
	Action 13-s	County Cities	Kirkland is constantly reviewing options to increase recycling diversion and implementing those options where reasonable and practicable.	Assess and develop options if selected actions are not enough to achieve an overall 70 percent recycling rate.
	Action 14-s	Cities County	Kirkland implemented its single use plastic bag reduction policy in 2016.	Reduce consumer use of common single-use items – for example, promote reusable shopping and produce bags.
	Action 15-s	County Cities	In 2019, Kirkland partnered with King County Green Schools, Triangle Associates, and LWSD to pilot food share in four Kirkland schools where unused edible food is offered to students and/or non-profits.	Work with food producers, grocers, restaurants, and schools to prevent food waste and to increase food recovery through donation of surplus meals and staple food items to local food banks.
	Action 16-s	County Cities	Kirkland participates in the Responsible Recycling Task Force and has collaborated with other Waste Management-served cities on amending the accepted recyclables list.	Develop a process and criteria to amend the designated recyclables list if conditions warrant adding or removing recyclables.

2019 Comprehensive Solid Waste Management Plan Policies, Actions, and Goals Matrix

Chapter	#	Resp	Kirkland Activities	Text of Policy / Recommended Action
	Action 17-s	County	Kirkland recognizes these goals and intends to include them in the Sustainability Master Plan. Kirkland's progress towards the targets through May 2019: Generation (per capita): 18.2 lbs/wk Generation (per employee): 24.5 lbs/wk Disposal (per capita): 7.8 lbs/wk Disposal (per employee): 13.9 lbs/wk	Use the following targets to measure the progress toward the goal of zero waste of resources: 1. Generation rate target: <ul style="list-style-type: none"> Per capita: 20.4 pounds/week by 2030, and Per employee: 42.2 pounds/week by 2030. 2. Recycling rate target: Interim goal of 70 percent. 3. Disposal rate target: <ul style="list-style-type: none"> Per capita: 5.1 pounds/week by 2030, and Per employee: 4.1 pounds/week by 2030. These targets should be evaluated at least every three years when data becomes available from the waste monitoring studies.
	Action 18-s	County		Develop a target for reducing greenhouse gas emissions from disposed waste by 2030, with 2007 emissions used as a baseline for comparison.
4 – Sustainable Materials Management (cont.)	Action 19-s	County		Continue to support the cities' implementation of the Plan through the county waste reduction and recycling grant program and allocation of Local Solid Waste Financial Assistance funds from the Washington State Department of Ecology. The county should strive to maintain the level of funding to cities, increasing waste reduction and recycling grant amounts as Local Solid Waste Financial Assistance funding decreases; and should revise or amend grant criteria to reflect priority Comprehensive Plan actions.
	Action 20-s	County		Work collaboratively with cities and other stakeholders to develop a new competitive grant program funded from the tip fee that would be available to private entities, non-profits, and cities to support innovative programs that help meet plan goals.
	Action 21-s	Cities County	Kirkland has offered residential recycling collection events for several years. The list of accepted items is reviewed each year based upon public demand and recyclability.	Evaluate options to transition away from recycling collection events as enhanced recycling services are provided at renovated transfer stations, improved bulky item collection becomes available and cost-effective curbside, and product stewardship programs emerge.
	Action 22-s	County Cities	Kirkland has implemented several waste reduction and recycling grant projects and welcomes the opportunity to collaborate with regional partners in developing a list of projects.	Develop a list of effective waste prevention and recycling efforts that can be implemented using existing and new grant funds.
	Action 23-s	Cities County	Kirkland has a green building program that includes priority permit review and green building consultation. Further work may come out of the Sustainability Master Plan.	Adopt green building policies and regulations that support the design of buildings and structures that are carbon neutral, are energy efficient, and use recycled materials.
	Action 24-s	County		Assist cities in developing green building policies and practices; encourage green building through Leadership in Energy and Environmental Design™ (LEED®), Built Green™, Living Building Challenge, and other certification programs.

2019 Comprehensive Solid Waste Management Plan Policies, Actions, and Goals Matrix

Chapter	#	Resp	Kirkland Activities	Text of Policy / Recommended Action
	Action 25-s	County		Provide technical assistance and promote proper deconstruction, building reuse, and reuse of building materials.
	Action 26-s	County Cities	Kirkland has reviewed and supports King County's C&D policies.	Work collaboratively with cities to implement building codes that require compliance with construction and demolition debris recycling and handling requirements contained in county code. The county will provide outreach/promotion for city permitting and enforcement staff.
4 – Sustainable Materials Management (cont.)	Action 27-s	County		Continue to explore options to increase the diversion of construction and demolition debris from disposal in the landfill, particularly for wood, metal, cardboard, asphalt shingles, carpet, and gypsum wallboard.
	Action 28-s	County		Increase regional recycling of construction and demolition materials through education and enforcement of construction and demolition debris recycling requirements.
	Action 29-s	County		Ensure that construction and demolition debris is managed in an environmentally sound manner by privately owned landfills via enforcement of construction and demolition debris handling requirements contained in county code.
	Action 30-s	County UTC		Involve the Vashon/Maury Island community and service providers to develop the appropriate type of recycling services provided curbside and at the transfer station. Include Vashon in the county's collection service standards for curbside services.
	Action 31-s	Cities County	In 2019, Kirkland lowered the cost of bulky waste collection for single family and multifamily properties. Kirkland is currently considering options to enhance the bulky waste offerings to multifamily properties.	Explore options to increase the efficiency and reduce the price of curbside and multi-family collection of bulky items, while diverting as many items as possible for reuse or recycling.
	Action 32-s	Cities County	Kirkland has adopted the minimum collection standards.	Adopt the single and multi-family minimum collection standards.
	Action 33-s	County UTC		Consider improvements to single-family collection services in the unincorporated area to increase the recycling rate.
	Action 34-s	Cities	Recycling services are offered to Kirkland businesses at no additional cost.	Include non-residential recycling services in city contracts (consistent with state law).
	Action 35-s	Cities	Commercial recycling is embedded in Kirkland's rate structure and is provided at no additional cost.	Consider implementing an incentive-based rate structure for nonresidential garbage customers to encourage recycling.
	Action 36-s	County Cities	Kirkland has codified requirements for multifamily recycling and has pre-approved enclosure plans for new multifamily and commercial	Update and enforce building code requirements to ensure adequate and conveniently located space for garbage, recycling, and organics collection containers in multi-family, commercial, and mixed-use buildings.

**2019 Comprehensive Solid Waste Management Plan
Policies, Actions, and Goals Matrix**

Chapter	#	Resp	Kirkland Activities	Text of Policy / Recommended Action
			development. Staff intends to pursue a policy that makes recycling service mandatory for commercial customers in 2019.	
	Action 37-s	County Cities	Kirkland has a comprehensive multifamily recycling program. Significant staff and budgetary resources are devoted to assisting MF properties through personalized technical assistance, recycling supplies, and education which has resulted in an increase in a drastic increase in recycling diversion.	Make recycling at multi-family complexes convenient by implementing best practices.
5 – Solid Waste Transfer and Processing System	Policy T-1	County		Provide solid waste services to commercial collection companies and self-haul customers at transfer stations, and to self-haul customers at drop boxes.
	Policy T-2	County		Provide solid waste transfer services in the urban and rural areas of the county that may be tailored to local and facility conditions and interlocal agreements with King County cities.
	Policy T-3	County		Engage cities and communities in the siting and development of facilities, and in developing mitigation measures for impacts related to the construction, operation, and maintenance of transfer facilities, as allowed by applicable local, state, and federal laws.
	Policy T-4	County		Build, maintain, and operate Solid Waste Division facilities with the highest green building and sustainable development practices.
	Policy T-5	County		Provide for collection of recyclable materials at all transfer facilities – recognizing resource limitations, availability of markets, and service area needs – focusing on maximum diversion of recyclables from the waste stream and on materials that are not easily recycled at the curb or through a readily available producer or retailer provided program.
	Action 1-t	County	Kirkland is actively engaged with the County and its regional partners in the Northeast Recycling and Transfer Station siting process.	Except as noted in action 2-t, continue to implement transfer station modernization as set forth in the <i>Solid Waste Transfer and Waste Management Plan</i> and approved by the Metropolitan King County Council in 2007, including siting and building a new Northeast recycling and transfer station and closing the Houghton station when the new station is complete. Adapt the siting process included in the <i>Solid Waste Transfer and Waste Management Plan</i> to meet community needs in the Northeast service area.
	Action 2-t	County		Although approved for closure under the Solid Waste Transfer and Waste Management Plan, reserve the option to retain the Renton station until the new urban transfer facilities have been completed and the impact of closure has been fully evaluated.

2019 Comprehensive Solid Waste Management Plan Policies, Actions, and Goals Matrix

Chapter	#	Resp	Kirkland Activities	Text of Policy / Recommended Action
5 – Solid Waste Transfer and Processing System (cont.)	Action 3-t	County		Evaluate adding a second scale and an additional collection container at the Cedar Falls Drop Box to improve capacity.
	Action 4-t	County		After the new recycling and transfer stations (including the new South station) are sited, if service level assessments indicate the need for additional capacity in the rural areas, consider siting drop box facilities.
	Action 5-t	County Cities		Periodically evaluate the level of service criteria to ensure that the criteria remain relevant.
	Action 6-t	County		Explore prospects for the transfer of commercial loads of organics through county transfer stations.
	Action 7-t	County		Continue to implement a resource recovery program at new recycling and transfer facilities to remove targeted materials from the waste stream.
	Action 8-t	MRFs		Encourage recycling processors to continue to improve facility sorting and processing equipment and practices to remove contaminants and separate recyclables into marketable commodity grades.
	Action 9-t	County Cities PH MRFs		In collaboration with stakeholders, pursue and identify new technologies and expanded processing capacity to serve the region, and more sustainably manage organic waste.
	Action 10-t	County		Continue to evaluate and assess the feasibility of advanced materials recovery and anaerobic digestion at division facilities.
	Action 11-t	County Cities		In the event of an emergency, reserve the transfer system for municipal solid waste and make the recycling of related debris a priority.
	Action 12-t	Cities County		Identify potential temporary debris management sites where emergency debris can be stored until it is sorted for recycling or proper disposal.
	Action 13-t	Cities County	Kirkland provides education and outreach on proper sharp disposal.	Provide education and outreach on the proper management of home generated sharps.
6 – Landfill Management and Solid Waste Disposal	Policy D-1	County		Operate and maintain the Cedar Hills Regional Landfill to meet or exceed the highest federal, state, and local standards for protection of public health and the environment.
	Policy D-2	County		Maximize the capacity and lifespan of the Cedar Hills Regional Landfill.

**2019 Comprehensive Solid Waste Management Plan
Policies, Actions, and Goals Matrix**

Chapter	#	Resp	Kirkland Activities	Text of Policy / Recommended Action
	Policy D-3	County		Monitor and maintain closed landfills to meet or exceed the highest federal, state, and local standards for protection of public health and the environment.
	Policy D-4	County		Plan for future disposal when Cedar Hills Regional Landfill closes to ensure no gap in service. Siting a replacement landfill located in King County will not be considered.
	Policy D-5	County		Garbage shall not be disposed of, nor shall soils be stockpiled, within 1,000 feet of the property line at the landfill, in accordance with the Settlement Agreement. The solid waste division shall reserve sufficient funds to acquire any parcels from willing sellers as necessary to establish or maintain the buffer.
	Action 1-d	County Cities ACs		Further develop the Cedar Hills regional landfill to maximize disposal capacity. To account for technological advances, do not specify the next disposal method after ultimate Cedar Hills closure in this Plan. Conduct analysis of post Cedar Hills disposal options prior to the next Plan update to ensure adequate lead time for selecting, planning for, and implementing the next disposal method.
	Action 2-d	County		Continue to track, evaluate, and test other disposal and conversion technologies for their potential to handle all or a portion of the county's future waste. Provide updates on findings to division advisory committees on a regular basis.
	Action 3-d	County Cities ACs	Kirkland has engaged with regional partners on a Debris Management Plan.	To prepare for potential emergencies, work with state and regional authorities to coordinate an updated Debris Management Plan for King County.
	Action 4-d	County		Investigate beneficial reuse options for closed landfills, designing monitoring and environmental systems that will facilitate reuse of the properties, provide potential revenue, and provide continued benefit to the surrounding communities.
	Action 5-d	County		Implement a bird management plan for Cedar Hills Regional Landfill.
7 – Solid Waste System Finance	Policy F-1	County		Keep tipping fees as low as reasonable, while covering the costs of effectively managing the system, protecting the environment, encouraging recycling and providing service to customers.

**2019 Comprehensive Solid Waste Management Plan
Policies, Actions, and Goals Matrix**

Chapter	#	Resp	Kirkland Activities	Text of Policy / Recommended Action
7 – Solid Waste System Finance (cont.)	Action 1-f	County		<p>Adopt the following as division policies:</p> <ul style="list-style-type: none"> (A) Assess fees for use of the solid waste transfer and disposal system at the point of service. (B) The fee charged to customer classes will be the same at all facilities, unless the Metropolitan King County Council determines a change in the rate structure is necessary to maintain service levels, comply with regulations and permits, and to address low income needs. (C) Utilize the assets of the King County Solid Waste Division consistent with the conditions established in the Amended and Restated Solid Waste Interlocal Agreement with the cities. (D) The County General Fund will not charge use fees or receive other consideration from the Solid Waste Division for use of any transfer facility property in use as of November 6, 2013. The division's use of assets acquired by other separate County funds is subject to use fees. If the division ceases to use a property, all proceeds from the sale or other use of such property are due to the owner of record. (E) Maintain reserve funds and routinely evaluate the funds for long-term adequacy and set contributions to maintain reasonable rate stability. (F) Finance capital projects using an appropriate combination of cash and debt depending upon the life of the asset, financial benefits such as rate stability, and interest rates. (G) Use solid waste fees to fund mitigation payments to cities for impacts directly attributable to solid waste facilities per Revised Code of Washington 36.58.080 and the Amended and Restated Solid Waste Interlocal Agreement. (H) Use solid waste fees to fund required mitigation for solid waste facilities, including mitigation mandated by federal, state, and local regulations and permits. (I) Continue to evaluate and implement fiscally responsible operational changes to support a sustainable business model and maintain the assets of the solid waste facilities. (J) Include a target fund balance in the Solid Waste Division financial plan equal to at least 30 days of operating expenses. (K) Establish a minimum balance in the Rate Stabilization Reserve to mitigate the risks associated with a moderate-level economic recession. (L) Maintain the Landfill Post-Closure Maintenance Fund at a level to ensure that environmental monitoring and maintenance of the closed landfills will be fully funded through the end of their regulated post-closure maintenance periods, as defined by applicable law.

**2019 Comprehensive Solid Waste Management Plan
Policies, Actions, and Goals Matrix**

Chapter	#	Resp	Kirkland Activities	Text of Policy / Recommended Action
7 – Solid Waste System Finance (cont.)	Action 2-f	County		Maintain a Solid Waste Division financial forecast and cash-flow projection of four years or more.
	Action 3-f	County		Subject to approval from the Metropolitan King County Council, define customer classes and establish equitable fees for each customer class based on services provided, benefits received, use of the system, and the costs, incurred or avoided, of providing those services.
	Action 4-f	County		Consider alternatives to the current rate methodology, such as incorporating a transaction fee into the rate structure.
	Action 5-f	County		Study the cost of providing services to self-haul customers, and to other customer classes if needed.
	Action 6-f	County		Consider discounts for low-income customers consistent with RCW 81.77.195.
	Action 7-f	County Cities		Continue to explore new revenue sources to help finance the solid waste system.
	Action 8-f	County Cities	Staff will monitor any proposed solid waste fee contributions to an Environmental Reserve Fund and any benefits accrued to the City.	The Executive may establish an Environmental Reserve Fund with revenue from solid waste fees for the benefit of the signatories to the Amended and Restated Interlocal Agreement.
	Action 9-f	County		Develop the procedures to establish and maintain the Rate Stabilization Reserve.
	Action 10-f	County		Maintain the following solid waste funds: <ul style="list-style-type: none"> • Landfill Reserve, • Landfill Post-Closure Maintenance, • Capital Equipment Recovery Program, and • Construction Fund.
	Action 11-f	County		When possible, manage solid waste rates through smaller, more frequent increases, which in combination with the rate stabilization reserve, smooths rate increases over time.

Northeast Recycling and Transfer Station Siting Process





South County Recycling and Transfer Station Siting **Pass/Fail Criteria**

Developed by the King County Solid Waste Division, August 2012

Pass/Fail Criteria: Based on the mission, vision, and values of King County, these Pass/Fail criteria establish minimum standards that must be met to qualify for further consideration.

1.1	Site is within the service area.
1.2	Site is within the contiguous Urban Growth Area.
1.3	Site is located outside of a FEMA defined 100-year flood plain.
1.4	Site is free of historical, archeological, or cultural designations.
1.5	Site is not designated as farmland preservation, park, or open space.

Functional Criteria: These criteria provide guidance on optimal engineering, operating, and transportation conditions. It is unlikely that any one site will meet all functional criteria. Rather, each criterion’s relative importance must be considered in order to identify the best site.	
2.1	Site is appropriately zoned and consistent with local area land use plans.
2.2	Surrounding land uses and zoning designations are compatible.
2.3	Active area would be approximately 100 feet or more from the nearest residence.
2.4	Site is located approximately 1,000 feet or more from parks and schools.
2.5	Site maintains an equitable distribution of County Solid Waste facilities (i.e. less than 30 minutes travel time for 90% of all users)
2.6	Site provides equitable distribution of environmental impacts so that no racial, cultural, or socio- economic group is unduly impacted.
2.7	Site can be developed without impact to identified critical wildlife habitat.
2.8	Site contains a manageable amount of critical areas.
2.9	Potential traffic impacts of facility operation can be minimized and/or mitigated.
2.10	Roadways near the site have the capacity to handle increased truck traffic; quality and nature of the access route is compatible.
2.11	Site is within approximately ½-mile of a major arterial or freeway/state highway (I-5, State Routes: 161,164, 167, or 18)
2.12	Site has potential access to a rail line.
2.13	Shape of site is conducive to the typical layout of a transfer station.
2.14	Site is approximately 15 – 20 acres (not necessarily a single parcel).
2.15	Topography on the developable area of the site is flat or gently sloping.
2.16	Utilities are readily accessible.
2.17	Water table beneath the site is conducive to the use (i.e. deeper as opposed to shallow).
2.18	Site would not require extensive/ expensive effort related to current tenant and/or business relocation.
2.19	Site is not a key component of a city’s or community’s economic development plan(s).
2.20	Site cost is within budget.

From: [Eric Hudson](#)
To: [PlanEIS, CedarHills](#)
Subject: Comment on Landfill Expansion EIS
Date: Tuesday, October 27, 2020 11:38:01 PM

[EXTERNAL Email Notice!] External communication is important to us. Be cautious of phishing attempts. Do not click or open suspicious links or attachments.

Hello,

Residents living around the Cedar Hills landfill have this comment (among others):

Climate change will add to the environmental risk of the landfill. Wildfire events have been moving closer and closer to the landfill area every year.

Even without climate change, fires at landfills are already a major risk and there are numerous news stories from around the world describing incidents that have occurred.

Another predicted effect of Climate Change is an increase in "Heavy Rain Events". Heavy rain events have been increasing in recent years and contributed to the Oso landslide disaster.

There is little or no discussion in the EIS of whether Cedar Hills can handle the high leachate volume in a short time. There is also little or no discussion of how the greater mudslide risk will be addressed.

Please add something to the EIS about how Cedar Hills facilities will be modified and plans created to prepare for and mitigate the higher wildfire and higher "heavy rain event" risk.

Thank you

Eric and Cedar Hills residents

From: [J](#)
To: [PlanEIS, CedarHills](#)
Cc: mayor@rentonwa.gov <mayor@rentonwa.gov>
Subject: Cedar Hills Landfill EIS Comment
Date: Monday, September 28, 2020 11:46:28 AM

[EXTERNAL Email Notice!] External communication is important to us. Be cautious of phishing attempts. Do not click or open suspicious links or attachments.

To Whom it may concern,

The City of Renton has been actively working to improve the quality of life of Renton residents. They have invested in the East hill of Renton to update low cost housing, create open space, add a park with a playfield. King County has invested to build a new library. The city has attracted business such as the Seahawks, created the Landing in hopes of creating a vibrant economy for small business. Renton schools are working with local industry to create technical career paths as well as professional career paths for students that attend schools in the area. Renton Vocational Technical College located adjacent to the Option three proposed facility plays a key role in that effort. The City of Renton has been working hard to make Renton a city for hard working families to thrive in. They have been pushing businesses to include both sidewalks and landscaping in any development. It seems option three to expand an industrial parking lot in the middle of these accomplishments moves in the absolute opposite direction. The only reason I could imagine King County would consider this is their own sub-optimization of operating costs or to placate the complaints of people located next to the existing landfill. It is not clear that option three would do that. I would rather see King County invest in landscaping to improve the existing auction yard so they are not detracting from the Renton neighborhood and keep the existing Cedar Hills effort consolidated in one area.

My vote is NO for option 3. Option one and two better fit the area and are less impact to the vision and efforts already invested. Renton is a vibrant cross ethnic community where hard working people should be able to be proud of the neighborhood they live in.

Thanks,
Ken and Heidi Johnston

10-21-2020

King Co. Solid Waste Div.

201 S. Jackson St., MS KSC-NR0701

Seattle, WA. 98104-3855

Attn: Kinyan Lui, Project Manager and Pat McLaughlin

Dear Solid Waste Division:

The Community of 4-Lakes, representing 79 households, are very much opposed to your plan to increase the length of time to accept garbage at the Cedar Hills landfill. This action will continue to leach toxins into the soil, water table and adjacent streams; have medical waste products deposited into adjacent home properties by the birds, and depress our land values.

About every 5 years, over the last 30-40 years you have given us end dates to the use of the land fill, only to be rescinded when those end dates are coming due. We, along with over 100 other concerned residents who live near the landfill, gave testimony and examples in 2019 of the negative impacts the landfill has had on our properties. You didn't listen to us then and didn't offer any other alternatives, except expansion of the existing landfill. Transporting the garbage to another area or building a burn-plant, which might cost you more than the expansion, wasn't an alternative.

The use of this landfill is no longer appropriate due to its location in a suburban environment. When this landfill location was first conceived, it was very small and the surrounding area was rural but zoned residential. Now, that is not the case. The landfill is now one of the largest in the world and hundreds of properties and people's quality of life are being negatively affected.

In summary, we ask you to NOT expand the landfill, and close it by 2028. Give us a cost analysis that would affect each residential waste customer, for alternatives to relocate the future garbage or build a burn-plant, so we can decide if this makes sense.

Cordially,

4-Lakes Community Board of Directors

Robert L. Linn
 Dave Prochapski
 Rocky Lase
 Ann Ayers
 Jerry E. Henkenes
 B. H. Linn
 Mark H. Adams