LOWER GREEN RIVER CORRIDOR FLOOD HAZARD MANAGEMENT PLAN

FINAL SCOPING SUMMARY REPORT

King County Flood Control District

June 2019

Lower Green River Corridor Flood Hazard Management Plan
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TABLE OF CONTENTS

FIGURES

APPENDICES

ACRONYMS AND ABBREVIATIONS

District	King County Flood Control District
Ecology	Washington State Department of Ecology
EIS	environmental impact statement
FEMA	Federal Emergency Management Agency
NAIOP	National Association of Industrial and Office Properties
NGO	nongovernmental organization
PEIS	programmatic environmental impact statement
Plan	Lower Green River Corridor Flood Hazard Management Plan
RCW	Revised Code of Washington
SEPA	State Environmental Policy Act
WAC	Washington Administrative Code
DNR	Washington State Department of Natural Resources
WDFW	Washington State Department of Fish and Wildlife
WEC	Washington Environmental Council
WRIA	Water Resource Inventory Area

1 INTRODUCTION

1.1 Purpose of this Report

The King County Flood Control District (District) is developing the Lower Green River Corridor Flood Hazard Management Plan (Plan), referred to in King County Flood Control District Motion No. FCD18-01.2 as the Lower Green River Corridor Plan. The District is preparing a non-project, or programmatic, environmental impact statement and requested public comments as part of scoping for the Plan's environmental impact statement (EIS). This report describes the scoping process and summarizes the public comments received. **Appendices A through F** provide supplementary information on the project and comments received during the scoping process.

1.2 Description of Project

The District proposes to implement the Plan to provide an integrated and reasonable long-term approach to reduce flood risk within the Lower Green River corridor while balancing multiple objectives within the study area. This integrated approach is also intended to reduce flood risks while supporting the economic prosperity of the region and improving fish habitat. The study area encompasses the Lower Green River, extending from river mile 11 to river mile 32, as well as its associated floodplain, as shown in **Figure 1-1**.

The Plan will include a number of actions to increase the level of protection from flooding, which would be accomplished by constructing new or improved flood protection facilities to meet current engineering standards. New facilities will include flood protection facilities in locations where no flood facilities currently exist, as well as replacements for existing facilities that would be removed. Improved facilities will include improvements to existing flood protection facilities, such as increasing facility height or adding toe protection. Facility types were categorized as follows:

- Type A – Riverward embankment side slope of 2.5:1 or less; footprint of 100 feet or less
- Type B – Riverward embankment of 2.5:1 or more; footprint of 100 to 150 feet
- Type C – Levee setback or floodwall; riverward slope of 3:1 and footprint of 150 feet or more
- Type D – Non-structural improvements such as home elevations, basement removal with utility addition projects, flood-proofing, berms, ring levees, farm pads, and drainage improvements.

For the purpose of beginning environmental review, two programmatic alternatives and one no action alternative were developed, which included various combinations of flood protection facilities.

- Alternative 1 – No Action Alternative
- Alternative 2 – Moderate Geographic Extent of Increased Level of Protection Alternative

- Alternative 3 – Greater Geographic Extent with Increased Level of Protection, Integrated Habitat and Recreation, Agricultural Protection Facilities, and Habitat Restoration Project Partnerships Alternative

Additional information on the alternatives and types of flood protection facilities is included in **Appendix A**.

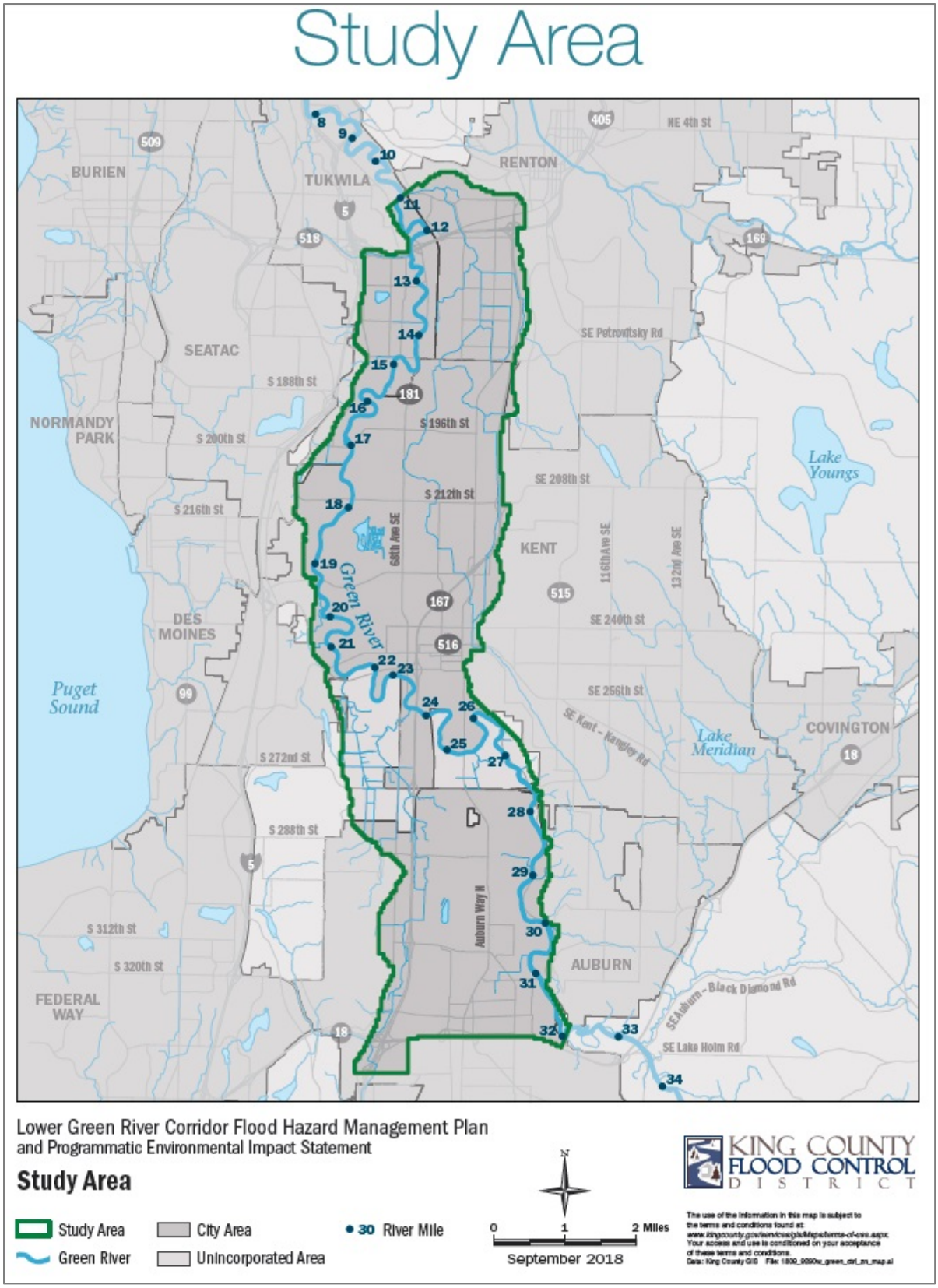


Figure 1-1 Study Area Map

2 THE SCOPING PROCESS

2.1 Purpose of Scoping

Scoping provides members of the public an opportunity to comment on the potential alternatives, areas of study, and probable significant adverse impacts for a proposal as it advances through the environmental review process.

An EIS is required when the lead agency determines that a proposal or project could result in potentially significant adverse impacts to the environment. The Lower Green River Corridor Flood Hazard Management Plan is considered a non-project proposal because it does not propose a project action; rather, it is a program that is a culmination of several potential project actions and therefore requires a programmatic EIS (PEIS).

The District, which is the lead agency for this proposal, has determined that the Plan is likely to have significant adverse impacts on the environment and is preparing a PEIS, as required by the Washington State Environmental Policy Act (SEPA), in accordance with the Revised Code of Washington (RCW) 43.21C.030 (2)(c). Scoping for the PEIS was conducted under SEPA according to Washington Administrative Code (WAC) 197-11-410, and a scoping notice for the PEIS was published in the SEPA register (**Appendix A**). A legal notice of the Determination of Significance and scoping was published in the Daily Journal of Commerce on November 28, 2018.

2.2 Opportunities to Comment

Agencies, affected tribes, and members of the public were invited to comment on the scope of the PEIS including, but not limited to, alternatives, probable significant adverse impacts, mitigation measures, and required permits or other approvals.

During the scoping process, participants were able to provide comments in the following ways:

- Online: *https://www.lowergreensepa.org/provide-comment*
- By email: *lowergreensepa@kingcounty.gov*
- In writing:

  King County Flood Control District
  Attn: Michelle Clark, SEPA Responsible Official
  516 Third Avenue, Room 1200, Seattle, WA 98104

- In person:

  Public Scoping Meeting, January 9, 2019, 5:00-8:00 pm
  Green River College Kent Campus
  417 Ramsay Way, Room 283, Kent, WA 98032

3 SCOPING MEETINGS AND OUTREACH

The District conducted broad, inclusive, and diverse outreach and engagement during the scoping period for the PEIS for the Lower Green River Corridor Flood Hazard Management Plan. The outreach strategy met notification and outreach requirements required by SEPA.

Many different types of people, organizations, and groups—cities, tribes, landowners, groups/organizations, businesses, non-profits, schools, hospitals, residents, farmers, environmentalists, and under-represented populations—are part of the affected and interested community. The District's public engagement goals were to:

- Inform and seek input about priorities, concerns, and needs from the public and the diverse stakeholders in the Lower Green River corridor
- Promote inclusiveness and include a range of diverse perspectives
- Implement broad-based outreach strategies (postcard mailing, public meetings, presentations, etc.) as well as more personal approaches (roundtable discussions, stakeholder calls, door knocking, etc.)
- Provide information and opportunities for input and education in user-friendly, convenient ways
- Leverage existing outreach efforts of the Flood District, King County, and Lower Green River jurisdictions efficiently to maximize outreach
- Position the Flood District as a credible and trusted source for information
- Meet SEPA notification and outreach requirements

The scoping period was initially from November 28, 2018 to January 29, 2019. The District extended the deadline to April 1, 2019 and then again to May 1, 2019 to expand opportunities for public input. The following sections provide a high-level overview of the outreach conducted during this phase of the process.

3.1 Engagement Activities

The District developed and executed a comprehensive plan to reach affected communities in the Lower Green River corridor. Because no one outreach method works for all these constituencies, the District relied on a variety of methods to inform and gain input throughout the process.

Outreach Tools

- Project-specific website
- Legal notice
- Paid advertising
- News media releases
- Postcard mailing
- Materials
- Scoping meeting
- Roundtable discussions
- Presentations
- Emails
- Telephone calls
- Comment forms
- Public testimony

The summary below describes planning activities, materials developed, and outreach strategies employed. Scoping materials are available in **Appendix B**.

Planning Activities

- Developed a public involvement plan to guide outreach activities. This included the identification of strategies to overcome outreach challenges and maximize public engagement
- Prepared a community profile to better understand affected and interested stakeholders
- Identified key contacts within the study area and developed databases with stakeholder information

Materials

- Website: lowergreensepa.org
- Scoping and hearing notices
- Fact sheet (translated into Spanish, with opportunity for additional translation by request)
- Meeting boards, maps, and handouts (three alternatives, Purpose and Need, PEIS process, how to comment)
- Comment form (online and hard copies)
- Postcard mailer
- PowerPoint presentation and talking points (for public meetings and presentations)

News Media Outreach

- Published print advertisements in the following weekly outlets: The Facts Northwest, La Raza Northwest, Northwest Asian Weekly, and Seattle Medium
- Distributed media release regarding scoping period and scoping meeting to relevant outlets (regional, local, and business)
- Promoted information and activities via existing social media channels (Facebook, Nextdoor, and Twitter, etc.)
- Provided opinion editorials/Mayor’s message (e.g., Auburn)

Public Meetings

- Held scoping meeting on January 9, 2019
- Format: open house and public testimony and comment with court reporter and translator available as well
- Publicized via media (releases/advertisements) and distribution through listservs
- Hosted roundtable discussions on April 16-18, 2019 in the four jurisdictions (Tukwila, Renton, Kent, and Auburn) to gain input on priorities
- Provided presentations to community organizations as requested

Direct Outreach

- Distributed a postcard mailer to all residents and business addresses in the study area (approximately 27,300 addresses)
- Disseminated scoping and other information via distribution list (approximately 255 contacts)
- Visited with individual businesses, agricultural interests, residential neighborhoods, mobile home parks, apartment complexes, community centers, senior centers, and educational institutions, etc.
- Emailed and called a broad base of diverse stakeholders, providing information and requesting that they help distribute information via social media, listservs, E-newsletters, websites, etc. and/or attend a roundtable discussion

3.2 Jurisdictional Highlights

To provide a deeper understanding of how outreach was conducted in specific jurisdictions, the summary below highlights key activities and outcomes. In addition to direct reach of individuals, building relationships for the longer-term planning process was invaluable.

Auburn

- Nexus Youth and Families posted via social media and provided information to their executive leadership
- Auburn Mayor Nancy Backus included information in her weekly message (30,000 subscribers) and posted on the City's Facebook page
- The City of Auburn Parks leadership actively engaged in outreach due to numerous park properties adjacent to the river
- Chamber of Commerce participation included project mention at Chamber lunch (60 members) and information distribution via all existing communication channels (2,000 reached)
- Auburn Community Roundtable distributed information to their approximately 100 community leaders
- Information was distributed via the City's emergency management sites and channels
- Auburn Examiner posted article in community section (April 5, 2019)

Kent

- Distributed information to major neighborhood councils and homeowner associations (approximately 5,140)
- Provided substantial outreach to agricultural businesses
- School District posted information on their electronic flyer system (19,000 parents)
- Presented to the Kent Cultural Communities Board (15 members from diverse socio-economic, ethnic, and cultural backgrounds appointed by the Mayor and City Council)
- Kent Chamber distributed information (1,000 subscribers; 450 members)

- Kent Downtown Partnership disseminated information via eblast
- Presented to Kent Ministerial Association (25 members representing various faith communities in Kent (and a few in Auburn); included information in E-newsletters, on social media and at sermons
- Provided outreach to diverse cultural organizations

Renton

- Renton Chamber posted information (8,000-member listserv)
- Information was shared at Renton Rotary meeting
- Mayor's Inclusion Task Force distributed information via email (26 members representing different ethnicities and senior communities)
- Renton Area non-profits circulated project materials

Tukwila

- Partnered with the Seattle Southside Chamber of Commerce to outreach to businesses, distribute information (8,000 subscribers), and hosted roundtable discussions
- Seattle Southside Regional Tourism included information in their “At a Glance” newsletter (2,000 contacts)
- Major property owners, Starfire Sports Complex, and key manufacturing companies directly engaged
- Vietnamese Catholic Church (3,000 members; directly adjacent to river) actively participated

4 SUMMARY OF COMMENTS RECEIVED

This section summarizes the comments the District received during the scoping process. A total of 632 comment items were received during the scoping period. Of the 632 items, 581 items were substantively identical emails that all used the same template. The remaining 51 items were comprised of 24 letters, 3 emails, 21 comment forms (including online), 1 written comment, and 2 oral testimonies. Of these 51 items, 24 items were received from the public and 27 items were received from agencies, jurisdictions, affected tribes, businesses, and nongovernmental organizations (NGOs).

- Agencies: Federal Emergency Management Agency (FEMA) Region X, National Marine Fisheries Service, Urban Waters Federal Partnership, Washington State Department of Ecology (Ecology), Washington State Department of Fish and Wildlife (WDFW), Washington State Department of Natural Resources (DNR), Washington State Recreation and Conservation Office, Puget Sound Partnership, Water Resource Inventory Area (WRIA) 9 Watershed Ecosystem Forum, Puget Sound Salmon Recovery Council
- Jurisdictions: King County, City of Kent, City of Renton, City of Seattle, City of Tukwila
- Affected Tribes: Lummi Indian Business Council, Muckleshoot Indian Tribe, Snoqualmie Tribe, Suquamish Tribe
- NGOs: American Rivers, Forterra, Green River Coalition, King-Pierce County Farm Bureau, National Association of Industrial and Office Properties (NAIOP), Mid Sound Fisheries Enhancement Group, Kent Chamber of Commerce, Seattle Southside Chamber of Commerce, Washington Environmental Council (WEC)
- Businesses: Carpinito Brothers

Of the 581 substantively identical emails, 50 originated from King County, 75 originated from elsewhere in Washington State, and 456 originated from out of state. Of the remaining 51 items, 43 originated from King County, 7 originated from elsewhere in Washington State, and 1 originated from out of state.

A complete list of items received during the scoping period is available in **Appendix C**.

4.1 Comment Cataloging

Each comment item could include more than one individual comment. A total of 192 individual comments were cataloged by topic using the EIS "Elements of the Environment" (WAC 197-11-444) as a guide. The "Elements of the Environment" included detailed areas of study for both the natural and built environment and are required to be evaluated for significant impacts in an EIS. In addition to the elements in WAC 197-11-444, a category for equity and social justice was added based on the King County Equity and Social Justice Strategic Plan's Pro-Equity Policy Agenda[1]. Thus, the following categories were used to catalog comments:

[1] King County. 2016. Equity and Social Justice Strategic Plan 2016-2022.

Natural Environment

- Earth: geology; soils; topography; unique physical features; erosion or enlargement of land area
- Air: air quality; odor; climate change
- Water: surface water movement, quantity, and quality; runoff and absorption; floods; groundwater movement, quantity, and quality; public water supplies
- Plants and animals: habitat, numbers, and diversity of plants and animals; unique species; migration routes
- Energy and natural resources: amount and efficiency; source and availability; non-renewable resources; conservation and renewable resources; scenic resources

Built Environment

- Environmental health: noise; risk of explosion; toxic releases and hazardous materials
- Land and shoreline use: land use plans; housing and businesses; light and glare; aesthetics; recreation; historic and cultural preservation; agricultural crops
- Transportation: transportation systems; vehicle traffic; water, rail, and air traffic; parking; movement and circulation of people and goods; traffic hazards
- Public services and utilities: fire; police; schools; parks and recreational facilities; maintenance; communications; water and stormwater; sewage and solid waste; other governmental services and utilities
- Equity and social justice: child and youth development; economic development and jobs; environment and climate; health and human services; housing; information and technology; justice system; transportation and mobility

4.2 Summary of Topics

The 192 individual comments submitted during the scoping period included approximately 85 comments regarding impacts, 65 comments regarding alternatives, 18 comments regarding policy, 5 comments regarding mitigation, and 19 additional comments. Comments were further categorized using elements of the built and natural environment, as described above. There were approximately 13 comments that were not categorized according to the “Elements of the Environment”, including those which were administrative in nature or expressed preferences for certain alternatives.

The comment catalog is available in **Appendix D** and a summary is available in **Appendix E**. Copies of the items received are provided in **Appendix F**.

4.2.1 Natural Environment

There were approximately 85 comments whose subject was related to the natural environment. Of these comments, there were approximately 2 about air (climate change), 19 about water (surface water and floods), 63 about plants and animals (habitat, unique species, and fish passage), and 1 about the general natural environment. Within these totals, three of four items in the substantively identical emails were focused on the natural environment.

4.2.2 Built Environment

There were approximately 94 comments whose subject was related to the built environment. Of these comments, there was approximately 1 about environmental health, 40 about land and shoreline use (land use plans, housing and businesses, recreation, historic/cultural preservation, agriculture), 1 about transportation, 45 about public services and utilities (parks and recreational facilities, maintenance, water and stormwater, sewage and solid waste, other), and 7 about equity and social justice. Within these totals, one of the four items in the substantively identical emails was focused on land use.

4.2.3 Alternatives

There were several comments which expressed support for or opposition to specific alternatives, including suggestions for an additional alternative to be studied in the PEIS. Most comments that proposed a fourth alternative recommended that the additional alternative have a more multi-objective approach including more robust salmon habitat protection and enhancement than the three scoping alternatives.

5 NEXT STEPS

The District will consider the comments and information collected during scoping as it prepares the Draft PEIS. Many comments make requests regarding the alternatives being considered and potential impacts from flood control facilities and measures. Other comments express preferences for how flood hazards should be managed. These will all be taken into account as the Draft PEIS is developed. Specific responses to scoping comments are not required under SEPA (WAC 197-11-408).

An overview of the PEIS process for the Plan as it advances through environmental review is shown in **Figure 5-1**.

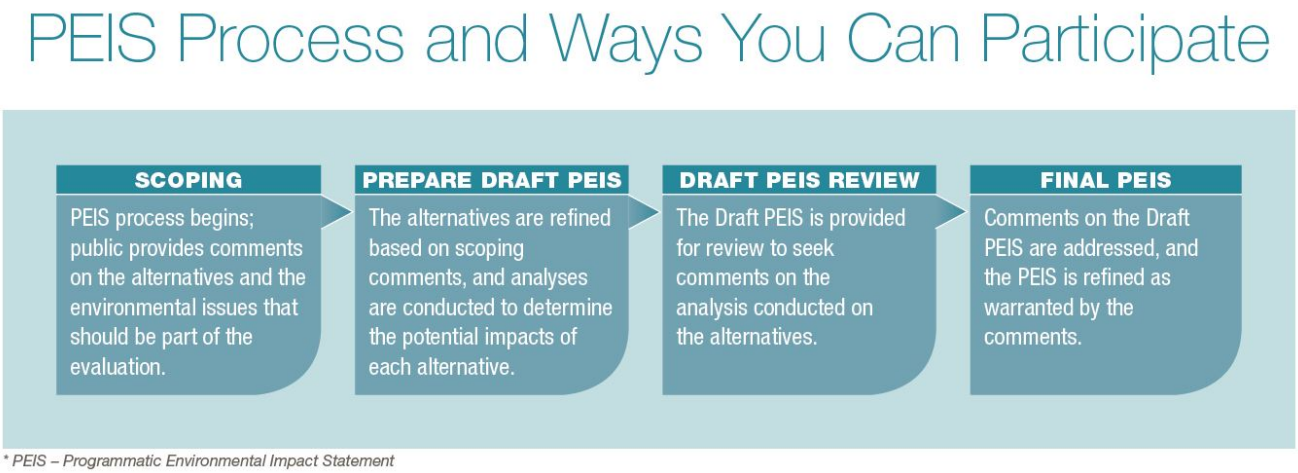


Figure 5-1 PEIS Process

APPENDIX A

SEPA Scoping Notice

The Programmatic Environmental Impact Statement scoping comment period has been extended to MAY 1, 2019 5:00 PM PDT.

KING COUNTY FLOOD CONTROL DISTRICT
516 Third Avenue • Room 1200 • Seattle, WA 98104
206.296.1020 • info@kingcountyfloodcontrol.org
www.kingcountyfloodcontrol.org

State Environmental Policy Act
Determination of Significance (DS)
And Request for Comments on Scope of Programmatic Environmental Impact Statement (PEIS)

Lead agency: King County Flood Control District

Date of Issuance: November 28, 2018

Agency Contact and SEPA Responsible Official: Michelle Clark, Executive Director, 206-263-0602, michelle.clark@kingcounty.gov

Description of the Proposal: The King County Flood Control District proposes to implement the Lower Green River Corridor Flood Hazard Management Plan (Plan) *(referred to in King County Flood Control District Motion No. FCD18-01.2 as the Lower Green River Corridor Plan)* to provide an integrated and reasonable long-term approach to reduce flood risk within the Lower Green River Corridor while balancing multiple objectives within the study area. This integrated approach is also intended to reduce flood risks while supporting the economic prosperity of the region and improving fish habitat. The Plan will include a number of actions to increase the level of protection from flooding. This would be accomplished by constructing new or improved flood protection facilities to meet current engineering standards. Information on the types of flood protection facilities and on alternatives is included in Attachment A.

Location of the proposal: The Lower Green River extending from River Mile 11 to River Mile 32 and its floodplain, as shown in the Study Area figure.

Proponent/applicant: King County Flood Control District, 206-263-0602, lowergreensepa@kingcounty.gov

EIS Required: The King County Flood Control District, as lead agency, has determined that this non-project proposal is likely to have significant adverse impacts on the environment and is preparing a programmatic environmental impact statement (PEIS) as required by the State Environmental Policy Act under RCW 43.21C.030 (2)(c). The lead agency has identified the following areas for discussion in the PEIS: Agriculture, Aquatic Resources, Climate Change, Cultural and Historic Resources, Equity and Social Justice, Geology and Geomorphology, Land and Shoreline Use, Public Health and Safety, Recreation and Public Access, Riparian and Terrestrial Resources, Socioeconomics, Transportation, Tribal Treaty Resources, Utilities and Public Services, Water Resources, and Wetlands.

Scoping: Agencies, affected tribes and members of the public are invited to comment on the scope of the PEIS. You may comment on alternatives, probable significant adverse impacts, mitigation measures, and required permits or other approvals. A public scoping meeting is

The Programmatic Environmental Impact Statement scoping comment period has been extended to April 1, 2019 5:00 PM PDT.

scheduled for January 9, 2019, from 5:00 to 8:00 pm at the Green River College Kent Campus, 417 Ramsay Way, Room 283, Kent, WA 98032. Scoping meeting materials will be available at www.lowergreensepa.org during the scoping period. The method and deadline for giving us your comments is provided below.

Alternatives: For purposes of programmatic environmental review, two programmatic alternatives and one no-action alternative will be analyzed. Information on the three alternatives is available at www.lowergreensepa.org.

Public and Agency Comment: Agencies, affected tribes, and members of the public are invited to comment on the scope of the PEIS. Comments on alternatives, mitigation measures, probable significant adverse impacts, and required permits or other approvals are welcome.

1. Electronic written comments may be submitted by email at *lowergreensepa@kingcounty.gov*

   Or on-line at www.lowergreensepa.org

2. Written comments may be delivered via US Mail or hand delivered to the following address:
   King County Flood Control District
   Attn: Michelle Clark, SEPA Responsible Official
   516 Third Avenue
   Room 1200
   Seattle, WA 98104

3. Comments may be submitted at the public scoping meeting on January 9, 2019, 5:00-8:00 pm:
   Green River College Kent Campus
   417 Ramsay Way, Room 283
   Kent, WA 98032
   A Spanish interpreter will be available at the meeting. *Habrá un intérprete de español disponible en la reunión*. If you would like to request an interpreter for another language, please call 206-775-8778.

All comments must be received by January 29, 2019, 5:00 PM (PST) for consideration in the proposed scope of the PEIS. Written comments should be addressed to the responsible official below.

Appeal Process:
You may appeal this determination of significance
to Melani Pedroza, Clerk of the Board
at 516 Third Avenue, Room 1200, Seattle, WA 98104
no later than January 29, 2019, at 5:00 PM PST
by US mail

You should be prepared to make specific factual objections.

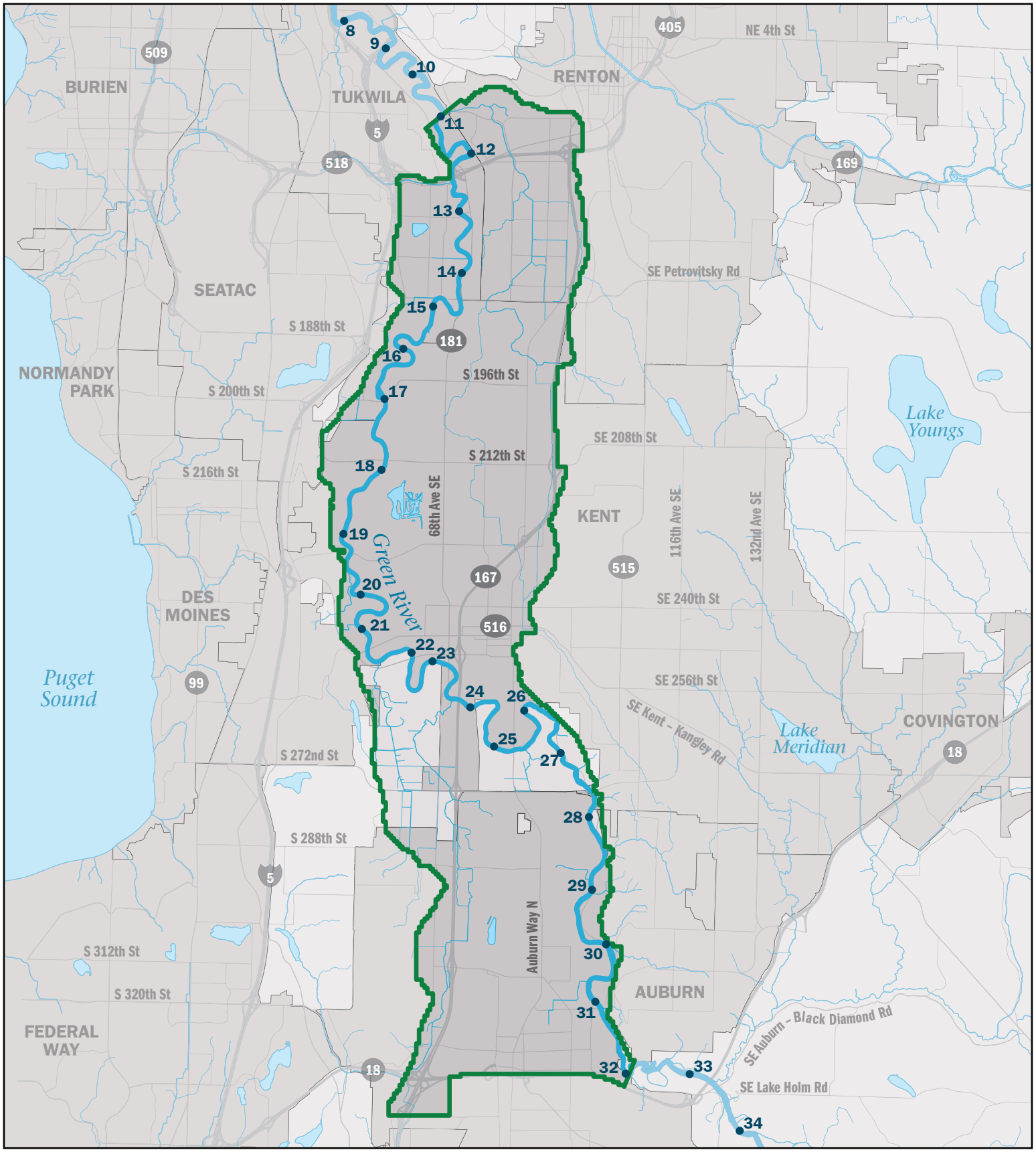
The Programmatic Environmental Impact Statement scoping comment period has been extended to April 1, 2019 5:00 PM PDT.

Contact Melani.Pedroza@kingcounty.gov, 206-477-1020 to read or ask about the procedures for SEPA appeals.

Translations: This document has been provided in English and Spanish. *Este documento se facilitó en inglés y en español*. If you require a translation in a different language, please call 206-775-8778.

Signature Michelle Clark **Date** November 28, 2018

(electronic signature or name of signor is sufficient)



Lower Green River Corridor Flood Hazard Management Plan
and Programmatic Environmental Impact Statement

Study Area

Study Area
Green River
City Area
Unincorporated Area
30 River Mile

N

0 1 2 Miles

September 2018

KING COUNTY FLOOD CONTROL DISTRICT

Data: King County GIS File: 1809_9290w_green_ctrl_zn_map.ai

Attachment A: Facility Types and Alternatives

Description of Facility Types

The Lower Green River Corridor Flood Hazard Management Plan will include a number of actions to increase the level of protection from flooding to the provisional level of protection established by the Board: 18,800 cubic feet per second (cfs), plus 3 feet of freeboard. *(The Federal Emergency Management Agency defines freeboard as a factor of safety usually expressed in feet above a flood level.)* This would be accomplished by constructing new or improved flood protection facilities. The following four types of facilities are being considered in the plan and various combinations of the facility types are included in each of the action alternatives. New facilities include new facilities in locations where no flood facilities currently exist as well as new facilities in locations that currently have existing facilities (which would be removed). Improved facilities would include improvements such as increasing facility height or adding toe protection for existing facilities.

Type A – Most Constrained, Riverward Embankment Side Slope of 2.5 to 1 or Less, Footprint of 100 feet or Less

Type A flood facility projects are levees or floodwalls with riverward side slopes of less than 2.5 to 1. Project footprints would be designed to limit property acquisition while still meeting engineering standards for certification. This facility type would be constructed in the most constrained locations where a Type B or Type C facility would impact existing agricultural land, buildings, parking, or traveled roadways. The approximate footprint of this facility type would be no greater than 100 feet, measured from the ordinary high water mark (OHWM) to the extent of maintenance access.

Type B – Somewhat Flatter Stable Riverward Embankment Side Slope of 2.5 to 1 or More, Footprint of 100 to 150 Feet

Type B flood facility projects are levees or floodwalls with riverward side slopes of 2.5 to 1 or more that can be planted with vegetation and/or have a bench including large woody debris, scour protection, and enhanced vegetation. This facility type would be constructed in locations where a wider footprint would not impact existing agricultural lands, buildings, parking, or traveled roadways. Existing recreational facilities would be maintained, and limited recreational enhancements would be included if feasible. The approximate footprint of this facility type would be 100 to 150 feet, measured from the OHWM to the extent of maintenance access. The District anticipates that Facility Type B would likely require more land acquisition or easements than Facility Type A.

Type C – Levee Setback

Type C flood facility projects are levee setbacks or floodwalls with benches, including possible acquisition and relocations, enhanced shade, and greater opportunity for riparian and aquatic enhancement. Riverward side slopes would be 3 to 1. This facility type would be constructed in locations where a levee setback would not impact existing agricultural land, buildings, parking, or traveled roadways. The footprint of this facility type would be 150 feet or more, measured from the OHWM to the extent of maintenance access. Some Type C flood facility projects would

involve modifying existing setback levees to provide the 500-year level of protection. The District anticipates that Facility Type C would likely require more land acquisition or easements than Facility Type A or Facility Type B.

Type D – Non-Structural Improvements

Type D flood facility projects are physical non-structural measures such as home elevations, basement removal with utility addition projects, flood-proofing, berms, ring levees, farm pads, and drainage improvements. The United States Army Corps of Engineers (Corps) defines these measures as physical non-structural measures applied to a structure or its contents that prevent or provide resistance to damage from flooding. Physical non-structural measures differ from structural measures in that they focus on reducing the consequences of flooding instead of focusing on reducing the probability of flooding.

Alternative 1 – No Action Alternative

In an EIS, SEPA requires analysis of the "No Action Alternative," against which the effects of the action alternatives can be evaluated and compared. Under the No Action Alternative, the District would maintain the current level of protection for the existing PL 84-99 Program levees and other levees and revetments. The No Action Alternative assumes that the District will complete the projects in the adopted 2018–2023 Capital Improvement Program (CIP) (Resolution FCD2018-06.2), including those Interim SWIF Capital Projects listed in the CIP. The No Action Alternative also assumes that the District will continue to make repairs to facilities, including to the PL 84-99 Program levees as needed, in accordance with the Interim SWIF Vegetation Management Plan. Under the No Action Alternative, there would be no system-wide increase in the level of protection. However, approximately 2 miles of new facilities included in the CIP would be designed at the higher level of protection to contain a flow of 18,800 cfs plus 3 feet of freeboard. The No Action Alternative would also include maintenance of the existing 17 miles of PL 84-99 levees and 11 miles of other levees and revetments.

The No Action Alternative would include the construction of the following new facilities:

- **Type A facility**: approximately 0.6 mile (30 percent of the new facilities).
- **Type B facility:** approximately 0.57 mile (28 percent of the new facilities).
- **Type C facility:** approximately 0.86 mile (42 percent of the new facilities).

The No Action Alternative would not include any Type D facility projects.

Exhibit 1 shows the potential locations of facility types under Alternative 1.

Alternative 2 – Moderate Geographic Extent of Increased Level of Protection Alternative

Under Alternative 2, the District would build approximately 20 miles of new or improved facilities to meet the 500-year level of protection. This would include 17 miles of existing PL 84-99 Program levees and approximately 3 miles of new levees. Under Alternative 2, the District

would also implement all of the Interim SWIF-identified capital projects. Agricultural areas would be provided the same level of protection as they currently have. Some agricultural drainage improvements and flood-proofing may be required to maintain the current level of protection. Under Alternative 2, the District would implement all of the Interim SWIF identified capital projects, those included in the No Action Alternative as well as those currently unfunded. Alternative 2 would include maintenance on other non-PL 84-99 levees and revetments. The District anticipates that this alternative would require limited real estate easements and relocations.

New levees would be constructed in the following areas:

- Shoreline gaps on the right bank of the Lower Green River between PL 84-99 Program levees in Kent and Tukwila (approximately 2 miles).
- The left bank of the Lower Green River in Tukwila (approximately 0.6 mile).
- The left bank of the Lower Green River in Auburn (approximately 0.5 mile).

Alternative 2 would include the construction of the following new or improved facilities:

- **Type A facility**: approximately 10.17 miles (50 percent of the facilities).
- **Type B facility:** approximately 4.68 miles (23 percent of the facilities).
- **Type C facility:** approximately 5.41 miles (27 percent of the facilities).

Alternative 2 would not include any Type D facility projects, except where needed to maintain the current level of protection.

Exhibit 2 shows the potential locations of facility types under Alternative 2.

Alternative 3 – Greater Geographic Extent with Increased Level of Protection, Integrated Habitat and Recreation, Agricultural Protection Facilities, and Habitat Restoration Project Partnerships Alternative

Under Alternative 3, the District would build approximately 30 miles of new or improved facilities to meet the 500-year level of protection. This would include 17 miles of existing PL 84-99 Program levees and approximately 13 miles of new levees (3 miles in the same locations as under Alternative 2 and 10 miles of new levees). This alternative also includes 2 miles of non-structural improvements. Under Alternative 3, the District would also implement all of the Interim SWIF-identified capital projects. Agricultural land would receive drainage improvements, and agricultural structures would be flood-proofed to achieve the same level of protection as they currently have. Under this alternative, the District could also provide incentives for partnership funding to create habitat restoration opportunities within Water Resource Inventory Area 9. The District anticipates that this alternative would include more real estate acquisitions than Alternative 2.

New levees would be constructed in the following areas:

- Shoreline gaps on the right bank of the Lower Green River between PL 84-99 Program levees in Kent and Tukwila (approximately 2 miles).
- The left bank of the Lower Green River in Tukwila (approximately 0.6 mile).
- The left bank of the Lower Green River in Auburn (approximately 0.5 mile).
- Further expansion of the levee system by 10 miles.

Alternative 3 would include the construction of the following new or improved facilities:

- **Type A facility:** approximately 15.43 miles (49 percent of the facilities).
- **Type B facility:** approximately 5.39 miles (17 percent of the facilities).
- **Type C facility:** approximately 9.08 miles (29 percent of the facilities).
- **Type D facility:** approximately 1.91 miles (6 percent of the facilities).

Exhibit 3 shows potential locations of facility types under Alternative 3.

Alternatives Comparison Table

Components of the three alternatives are summarized and compared in the table below.*

Facility Type	Alternative 1	Alternative 2	Alternative 3
Facility Type A	0.6 mile (30%)	10.17 miles (50%)	15.43 miles (49%)
Facility Type B	0.57 mile (28%)	4.68 miles (23%)	5.39 miles (17%)
Facility Type C	0.86 mile (42%)	5.41 miles (27%)	9.08 miles (29%)
Facility Type D	0	0	1.91 miles (6%)
Total Miles of New or Upgraded Facilities	2.03 miles	20.26 miles	31.9 miles

*Percent totals may not add to 100 due to rounding.

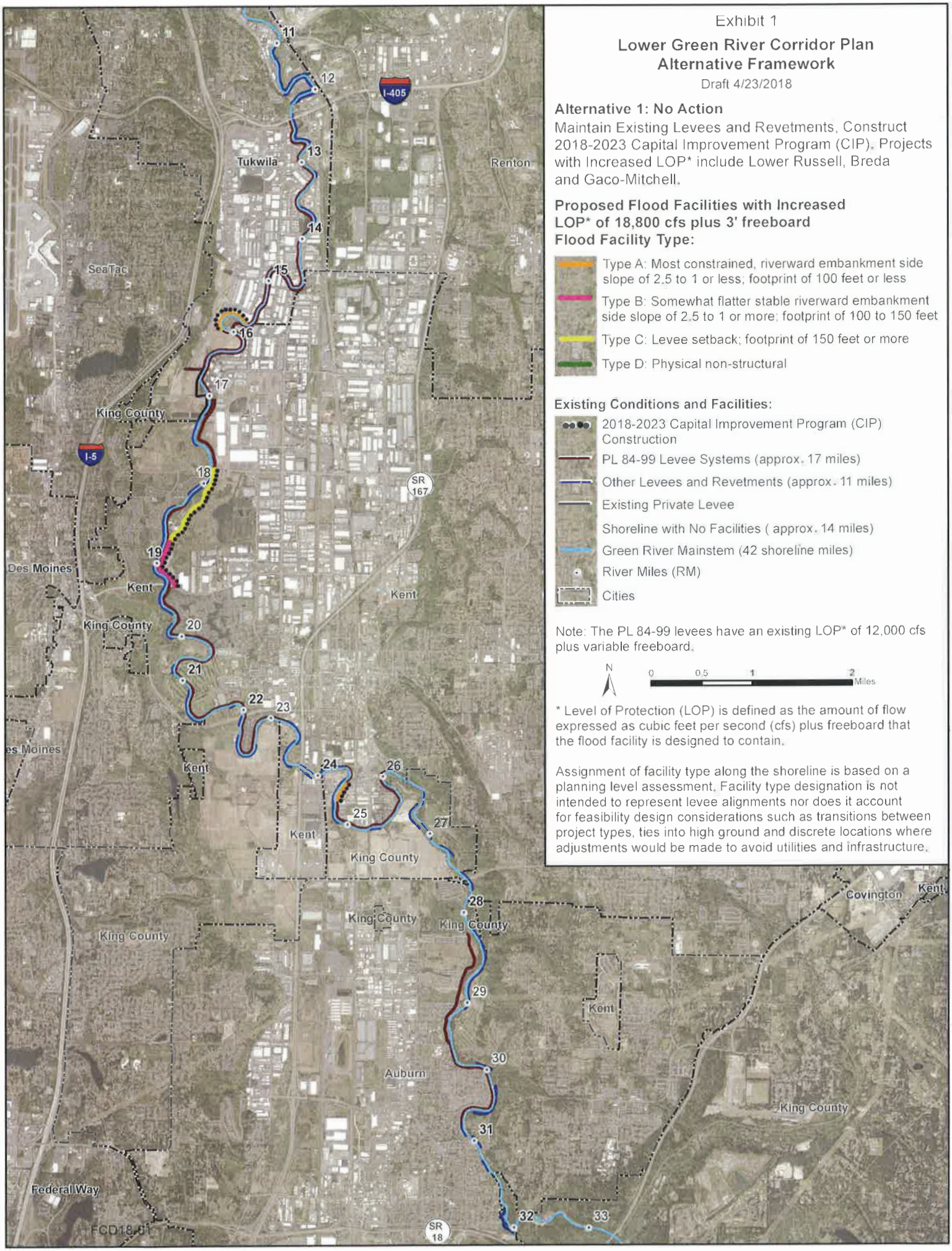


Exhibit 1

Lower Green River Corridor Plan Alternative Framework

Draft 4/23/2018

Alternative 1: No Action

Maintain Existing Levees and Revetments, Construct 2018-2023 Capital Improvement Program (CIP). Projects with Increased LOP* include Lower Russell, Breda and Gaco-Mitchell.

Proposed Flood Facilities with Increased LOP* of 18,800 cfs plus 3' freeboard Flood Facility Type:

- Type A: Most constrained, riverward embankment side slope of 2.5 to 1 or less; footprint of 100 feet or less
- Type B: Somewhat flatter stable riverward embankment side slope of 2.5 to 1 or more; footprint of 100 to 150 feet
- Type C: Levee setback; footprint of 150 feet or more
- Type D: Physical non-structural

Existing Conditions and Facilities:

- 2018-2023 Capital Improvement Program (CIP) Construction
- PL 84-99 Levee Systems (approx. 17 miles)
- Other Levees and Revetments (approx. 11 miles)
- Existing Private Levee
- Shoreline with No Facilities (approx. 14 miles)
- Green River Mainstem (42 shoreline miles)
- River Miles (RM)
- Cities

Note: The PL 84-99 levees have an existing LOP* of 12,000 cfs plus variable freeboard.

N

0 0.5 1 2 Miles

* Level of Protection (LOP) is defined as the amount of flow expressed as cubic feet per second (cfs) plus freeboard that the flood facility is designed to contain.

Assignment of facility type along the shoreline is based on a planning level assessment. Facility type designation is not intended to represent levee alignments nor does it account for feasibility design considerations such as transitions between project types, ties into high ground and discrete locations where adjustments would be made to avoid utilities and infrastructure.

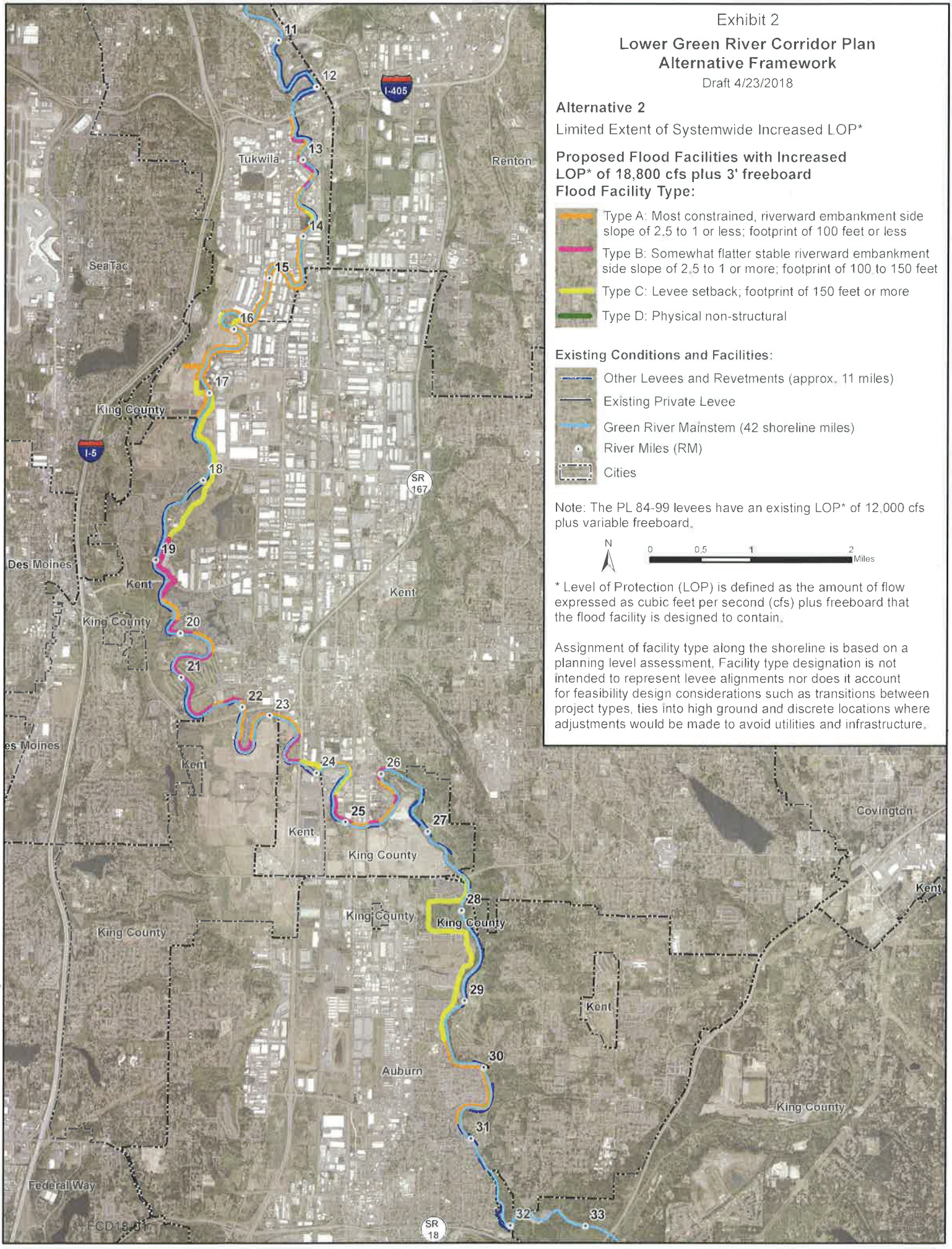


Exhibit 2

Lower Green River Corridor Plan Alternative Framework

Draft 4/23/2018

Alternative 2

Limited Extent of Systemwide Increased LOP*

Proposed Flood Facilities with Increased LOP* of 18,800 cfs plus 3' freeboard
Flood Facility Type:

- Type A: Most constrained, riverward embankment side slope of 2.5 to 1 or less; footprint of 100 feet or less
- Type B: Somewhat flatter stable riverward embankment side slope of 2.5 to 1 or more; footprint of 100 to 150 feet
- Type C: Levee setback; footprint of 150 feet or more
- Type D: Physical non-structural

Existing Conditions and Facilities:

- Other Levees and Revetments (approx. 11 miles)
- Existing Private Levee
- Green River Mainstem (42 shoreline miles)
- River Miles (RM)
- Cities

Note: The PL 84-99 levees have an existing LOP* of 12,000 cfs plus variable freeboard.

N

0 0.5 1 2 Miles

* Level of Protection (LOP) is defined as the amount of flow expressed as cubic feet per second (cfs) plus freeboard that the flood facility is designed to contain.

Assignment of facility type along the shoreline is based on a planning level assessment. Facility type designation is not intended to represent levee alignments nor does it account for feasibility design considerations such as transitions between project types, ties into high ground and discrete locations where adjustments would be made to avoid utilities and infrastructure.

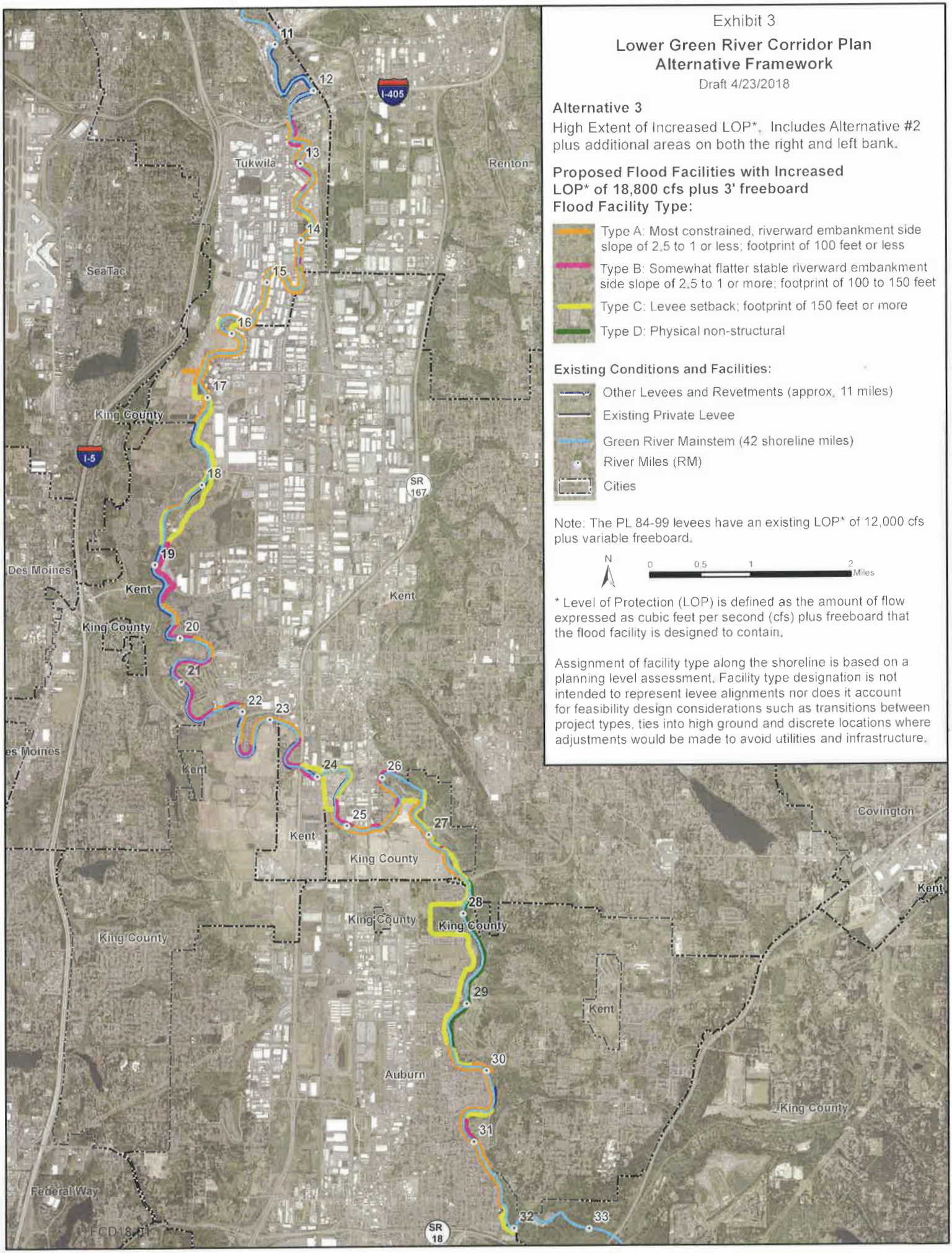


Exhibit 3

Lower Green River Corridor Plan Alternative Framework

Draft 4/23/2018

Alternative 3

High Extent of Increased LOP*. Includes Alternative #2 plus additional areas on both the right and left bank.

Proposed Flood Facilities with Increased LOP* of 18,800 cfs plus 3' freeboard
Flood Facility Type:

- Type A: Most constrained, riverward embankment side slope of 2.5 to 1 or less; footprint of 100 feet or less
- Type B: Somewhat flatter stable riverward embankment side slope of 2.5 to 1 or more; footprint of 100 to 150 feet
- Type C: Levee setback; footprint of 150 feet or more
- Type D: Physical non-structural

Existing Conditions and Facilities:

- Other Levees and Revetments (approx. 11 miles)
- Existing Private Levee
- Green River Mainstem (42 shoreline miles)
- River Miles (RM)
- Cities

Note: The PL 84-99 levees have an existing LOP* of 12,000 cfs plus variable freeboard.

N

0 0.5 1 2 Miles

* Level of Protection (LOP) is defined as the amount of flow expressed as cubic feet per second (cfs) plus freeboard that the flood facility is designed to contain.

Assignment of facility type along the shoreline is based on a planning level assessment. Facility type designation is not intended to represent levee alignments nor does it account for feasibility design considerations such as transitions between project types, ties into high ground and discrete locations where adjustments would be made to avoid utilities and infrastructure.

APPENDIX B

Scoping Materials

FOR IMMEDIATE RELEASE

Contact:	King County Flood Control District
Name:	Michelle Clark, Executive Director
Organization/Company:	King County Flood Control District
Phone number:	206-263-0602
Email Address:	michelle.clark@kingcounty.gov

King County Flood Control District to Evaluate Alternatives for Flood Hazard Management in the Lower Green River Corridor

Seattle, December 18, 2018 – The King County Flood Control District (District) is preparing a Programmatic Environmental Impact Statement (PEIS) to evaluate alternatives for the Lower Green River Corridor Flood Hazard Management Plan (Plan). This Plan will provide an integrated and reasonable long-term approach to reduce flood risk within the Lower Green River Corridor while balancing multiple objectives within the study area. This integrated approach is intended to reduce flood risks while supporting the economic prosperity of the region and improving fish habitat. The Plan will include actions to increase the level of protection from flooding, which would be accomplished by constructing new or improved flood protection facilities to meet current engineering standards.

The District is in the scoping period for the PEIS, and will hold a **public scoping meeting on Wednesday, January 9, 2019, from 5:00 p.m. to 8:00 p.m. at the Green River College Kent Campus**, 417 Ramsay Way, Room 283, Kent, WA 98032. The meeting will include a presentation at 5:45 p.m. A Spanish interpreter will be available at the meeting. For those requesting an interpreter in another language, please call 206-775-8778. Agencies, affected tribes, and members of the public are invited to comment on the scope of the PEIS. For purposes of programmatic environmental review, two programmatic alternatives and one no action alternative will be analyzed. Information on the three alternatives is available at www.lowergreensepa.org, along with additional scoping meeting materials and instructions about how to comment. Scoping comments can be submitted until January 29, 2019 at 5:00 p.m.

About the King County Flood Control District

The King County Flood Control District was established in April 2007 by Ordinance 15728 of the Metropolitan King County Council to protect public health and safety, regional economic centers, public and private properties, and transportation corridors. The District is a special purpose government entity created to provide funding and policy oversight for flood protection projects and programs in King County. The District's Board is composed of the members of the King County Council. The Water and Land Division of the King County Department of Natural Resources and Parks carries out the approved flood protection projects and programs under an interlocal agreement.

# # #

KING COUNTY FLOOD CONTROL DISTRICT
516 Third Avenue • Room 1200 • Seattle, WA 98104
206.296.1020 • info@kingcountyfloodcontrol.org
www.kingcountyfloodcontrol.org

Lower Green River Corridor Flood Hazard Management Plan
Programmatic Environmental Impact Statement
Scoping Comment Form

Submit a comment on the PEIS by filling out this form and leaving it in the comment box at today's meeting or by mailing it to the following address by May 1, 2019:

King County Flood Control District
Attn: Michelle Clark, SEPA Responsible Official
516 Third Avenue
Room 1200
Seattle, WA 98104

You can also email comments to LowerGreenSEPA@kingcounty.gov or submit them online at www.lowergreensepa.org.

Name:	**Address:**
Email Address:	
Comment:	

(please feel free to use the back of this form if you need more space)

Teufel Nursery and
Lakeside Community, 1996.

KNOW YOUR FLOOD RISK

PROTECT YOURSELF, YOUR FAMILY, AND YOUR PROPERTY

Floods are one of the most common natural disasters in the world and the Lower Green River is at risk of severe flooding.

Floods are dangerous and destructive, threatening our safety, blocking the movement of people and goods, and causing significant damages.

KING COUNTY
FLOOD CONTROL
DISTRICT

FLOOD RISK MAP

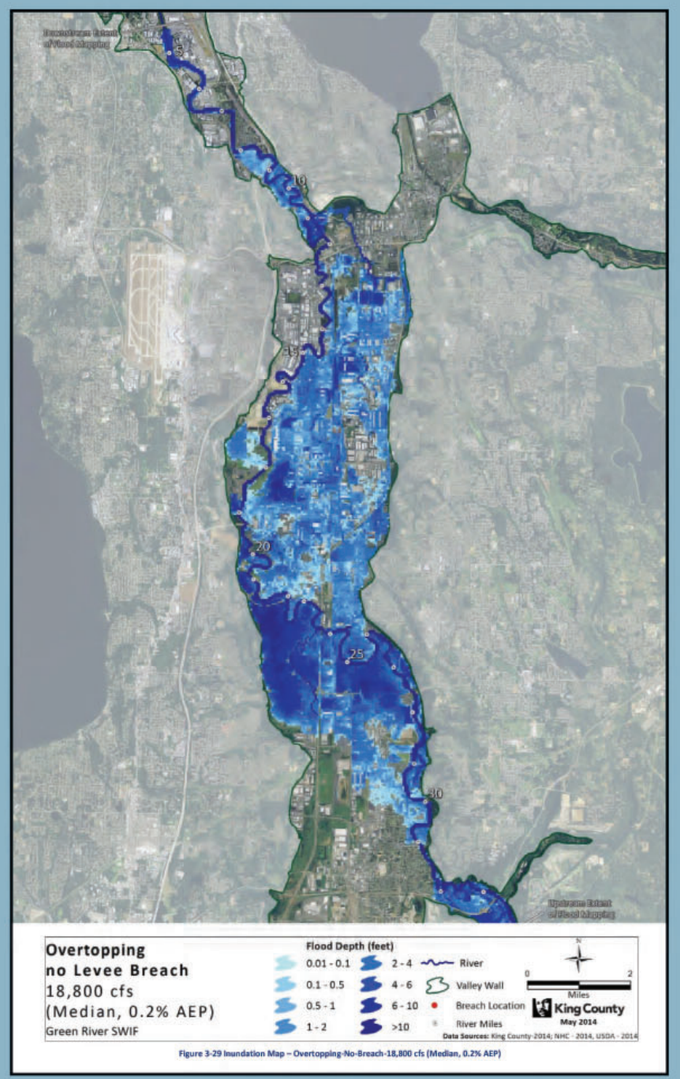


Figure 3-29 Inundation Map – Overtopping-No-Breach-18,800 cfs (Median, 0.2% AEP)

Map depicts flooding expected to occur in the Lower Green River Valley during a 500-year flood. *(A 500-year flood is a flood event that has a 1 in 500 chance, a 0.2% probability, of occurring in any given year.)*

The King County Flood Control District is preparing a Flood Hazard Management Plan. The plan will provide a long-term approach to reducing flood risk and improving fish habitat while supporting the economic prosperity of the region. Currently, a Programmatic Environmental Impact Statement (PEIS) is underway to analyze alternatives that could be included in the plan.

AT RISK

- 22,000 residents living in the valley and floodplain
- 100,000+ jobs
- $37 million in gross business income
- 2nd largest warehouse and distribution center on west coast
- Agricultural resources

TELL US WHAT YOU WANT IN FLOOD PROTECTION

Community input will shape this plan. We need to hear from you about the future of your flood protection.

- Go to **LowerGreenSEPA.org**
- Submit comments by May 1, 2019

Email: lowergreensepa@kingcounty.gov
Online: LowerGreenSEPA.org
Mail: King County Flood Control District
Michelle Clark, SEPA Responsible Official
516 Third Avenue, Room 1200
Seattle, WA 98104

Informacion disponible en espanol;
por favor llame al 206.442.4390.

KING COUNTY
FLOOD CONTROL
DISTRICT
516 Third Ave. Room 1200 • Seattle WA 98104

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KING COUNTY FLOOD CONTROL DISTRICT

516 Third Avenue, Room 1200, Seattle, WA 98104

Lower Green River Corridor

FLOOD HAZARD MANAGEMENT PLAN

AND PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT (PEIS)

Learn about the alternatives being studied and share your input!

The scoping comment period is from November 28, 2018, to January 29, 2019.

Learn more about the PEIS, the alternatives being studied and how to provide your comments at www.lowergreensepa.org or call 206-263-0602.

Scoping Meeting

Wednesday, January 9, 2019

5:00–5:45 p.m. *Open House*
5:45–7:30 p.m. *Presentation and Public Testimony*
7:30–8:00 p.m. *Open House*

Green River College Kent Campus
417 Ramsay Way, Room 283, Kent, WA 98032

A Spanish interpreter will be available at the meeting. If you would like to request an interpreter for another language, please call 206-775-8778.

KING COUNTY FLOOD CONTROL DISTRICT

516 Third Avenue, Room 1200, Seattle, WA 98104

Lower Green River Corridor

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KING COUNTY FLOOD CONTROL DISTRICT

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KING COUNTY FLOOD CONTROL DISTRICT

Lower Green River Corridor Scoping Meeting

FLOOD HAZARD MANAGEMENT PLAN AND PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

PEIS Process and Ways You Can Participate

SCOPING

PEIS process begins; public provides comments on the alternatives and the environmental issues that should be part of the evaluation.

PREPARE DRAFT PEIS

The alternatives are refined based on scoping comments, and analyses are conducted to determine the potential impacts of each alternative.

DRAFT PEIS REVIEW

The Draft PEIS is provided for review to seek comments on the analysis conducted on the alternatives.

FINAL PEIS

Comments on the Draft PEIS are addressed, and the PEIS is refined as warranted by the comments.

** PEIS – Programmatic Environmental Impact Statement*

Stay Involved!

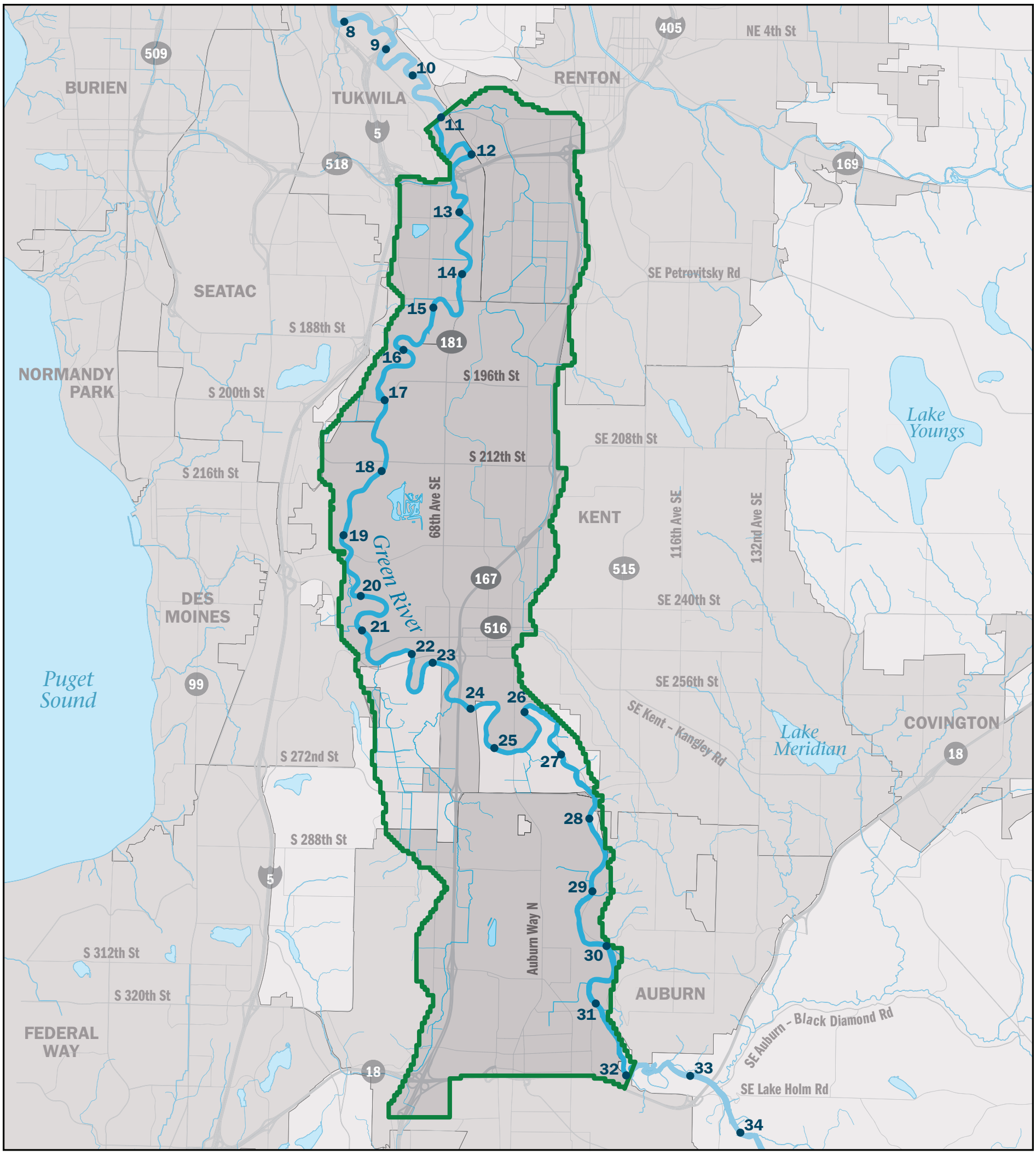
Sign up for our email list at today's meeting.

KING COUNTY FLOOD CONTROL DISTRICT

Lower Green River Corridor Scoping Meeting

FLOOD HAZARD MANAGEMENT PLAN AND PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

Study Area



Lower Green River Corridor Flood Hazard Management Plan
and Programmatic Environmental Impact Statement

Study Area

Study Area
Green River
City Area
Unincorporated Area
30 River Mile

N

0 1 2 Miles

September 2018

KING COUNTY FLOOD CONTROL DISTRICT

Data: King County GIS File: 1809_9290w_green_ctrl_zn_map.ai

KING COUNTY FLOOD CONTROL DISTRICT

Lower Green River Corridor Scoping Meeting

FLOOD HAZARD MANAGEMENT PLAN AND PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

Purpose and Need

- The Lower Green River is susceptible to flooding and flood damage because of its relatively flat geography and the concentration of people and commercial, industrial, and agricultural properties along its banks.

- The King County Flood Control District is preparing a Lower Green River Corridor Flood Hazard Management Plan (Plan) for approximately 21 river miles of the Lower Green River that travel through the cities of Auburn, Kent, Tukwila, Renton, and unincorporated King County.

- The goal of the Plan is to provide a long-term approach to reduce flooding and improve fish habitat while supporting the economic prosperity of the region.

- A consultant team is developing the PEIS to provide neutral third-party evaluation of the alternatives proposed by the King County Flood Control District.

** PEIS – Programmatic Environmental Impact Statement*

KING COUNTY FLOOD CONTROL DISTRICT

Lower Green River Corridor Scoping Meeting

FLOOD HAZARD MANAGEMENT PLAN AND PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

Elements of the Environment

The following elements of the natural and built environment have been preliminarily determined to be considered in the PEIS:

- Agriculture
- Aquatic Resources
- Climate Change
- Cultural and Historic Resources
- Cumulative Impacts
- Equity and Social Justice
- Geology and Geomorphology
- Land and Shoreline Use
- Public Health and Safety
- Recreation and Public Access
- Socioeconomics
- Terrestrial and Riparian Resources
- Transportation
- Tribal Treaty Resources
- Utilities and Public Services
- Water Resources
- Wetlands

KING COUNTY FLOOD CONTROL DISTRICT

Lower Green River Corridor Scoping Meeting

FLOOD HAZARD MANAGEMENT PLAN AND PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

Alternative 1

No Action

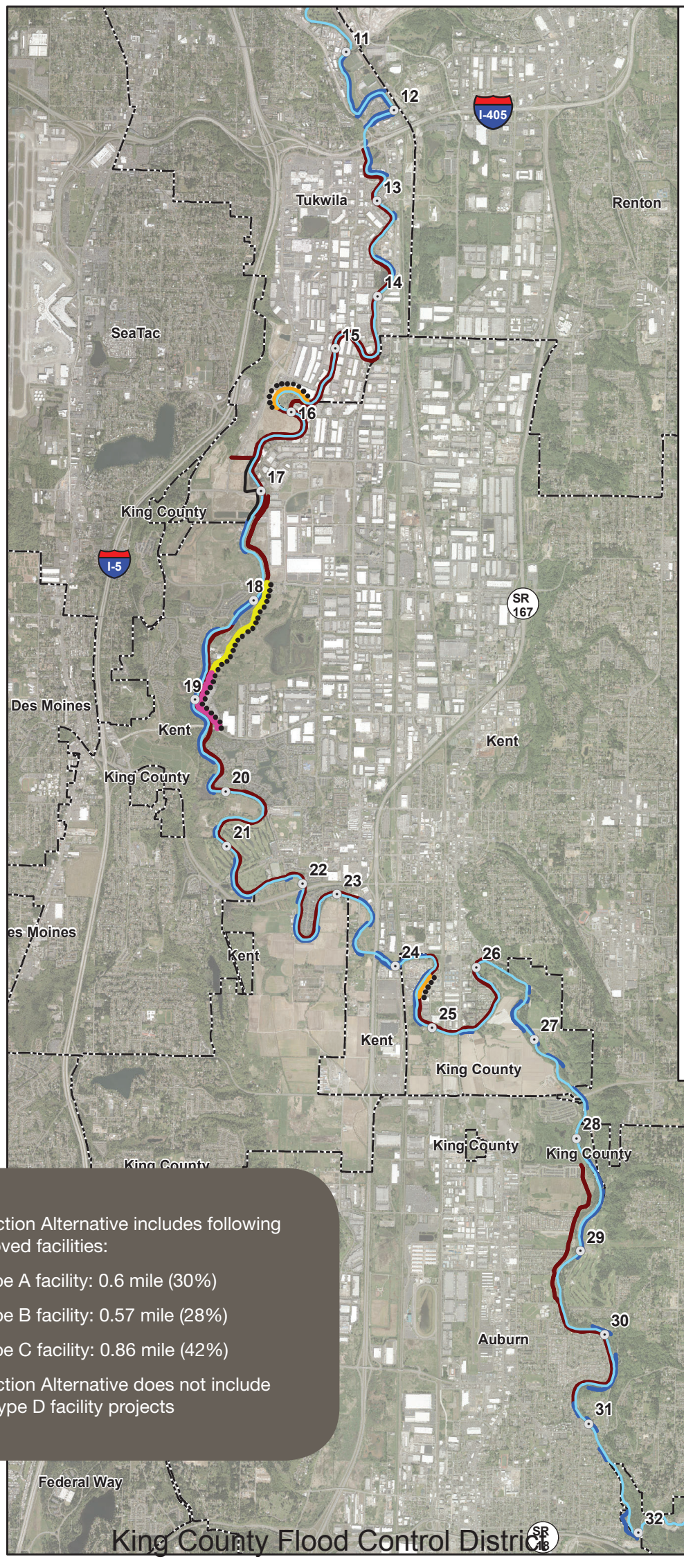


Exhibit 1

Lower Green River Corridor Plan Alternative Framework

Draft 10/8/2018

Alternative 1: No Action
Maintain Existing Levees and Revetments, Construct 2018-2023 Capital Improvement Program (CIP). Projects with Increased LOP* include Lower Russell, Breda and Gaco-Mitchell.

Proposed Flood Facilities with Increased LOP* of 18,800 cfs plus 3' freeboard
Flood Facility Type:

- Type A: Most constrained, riverward embankment side slope of 2.5 to 1 or less; footprint of 100 feet or less
- Type B: Somewhat flatter stable riverward embankment side slope of 2.5 to 1 or more; footprint of 100 to 150 feet
- Type C: Levee setback; footprint of 150 feet or more
- Type D: Physical non-structural

Existing Conditions and Facilities:

- 2018-2023 Capital Improvement Program (CIP) Construction
- PL 84-99 Levee Systems (approx. 17 miles)
- Other Levees and Revetments (approx. 11 miles)
- Existing Private Levee
- Shoreline with No Facilities (approx. 14 miles)
- Green River Mainstem (42 shoreline miles)
- River Miles (RM)
- Cities

Note: The PL 84-99 levees have an existing LOP* of 12,000 cfs plus variable freeboard.

N

0 0.5 1 2 Miles

* Level of Protection (LOP) is defined as the amount of flow expressed as cubic feet per second (cfs) plus freeboard that the flood facility is designed to contain.

Assignment of facility type along the shoreline is based on a planning level assessment. Facility type designation is not intended to represent levee alignments nor does it account for feasibility design considerations such as transitions between project types, ties into high ground and discrete locations where adjustments would be made to avoid utilities and infrastructure.

No Action Alternative includes following improved facilities:

- Type A facility: 0.6 mile (30%)
- Type B facility: 0.57 mile (28%)
- Type C facility: 0.86 mile (42%)

No Action Alternative does not include any Type D facility projects

- Complete projects in adopted 2018-2023 CIP (Resolution FCD2018-06.2), including Interim SWIF Capital Projects
- No system-wide increase in the Level of Protection
- Approximately 2 miles of new facilities in CIP designed to 500-year Level of Protection (18,800 cfs plus 3 feet of freeboard)
- Continued maintenance of existing 17 miles of PL 84-99 levees and 11 miles of other levees and revetments

(Three alternatives are being studied)

KING COUNTY FLOOD CONTROL DISTRICT

Lower Green River Corridor Scoping Meeting

FLOOD HAZARD MANAGEMENT PLAN AND PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

Alternative 2

Moderate Geographic Extent of Increased Level of Protection

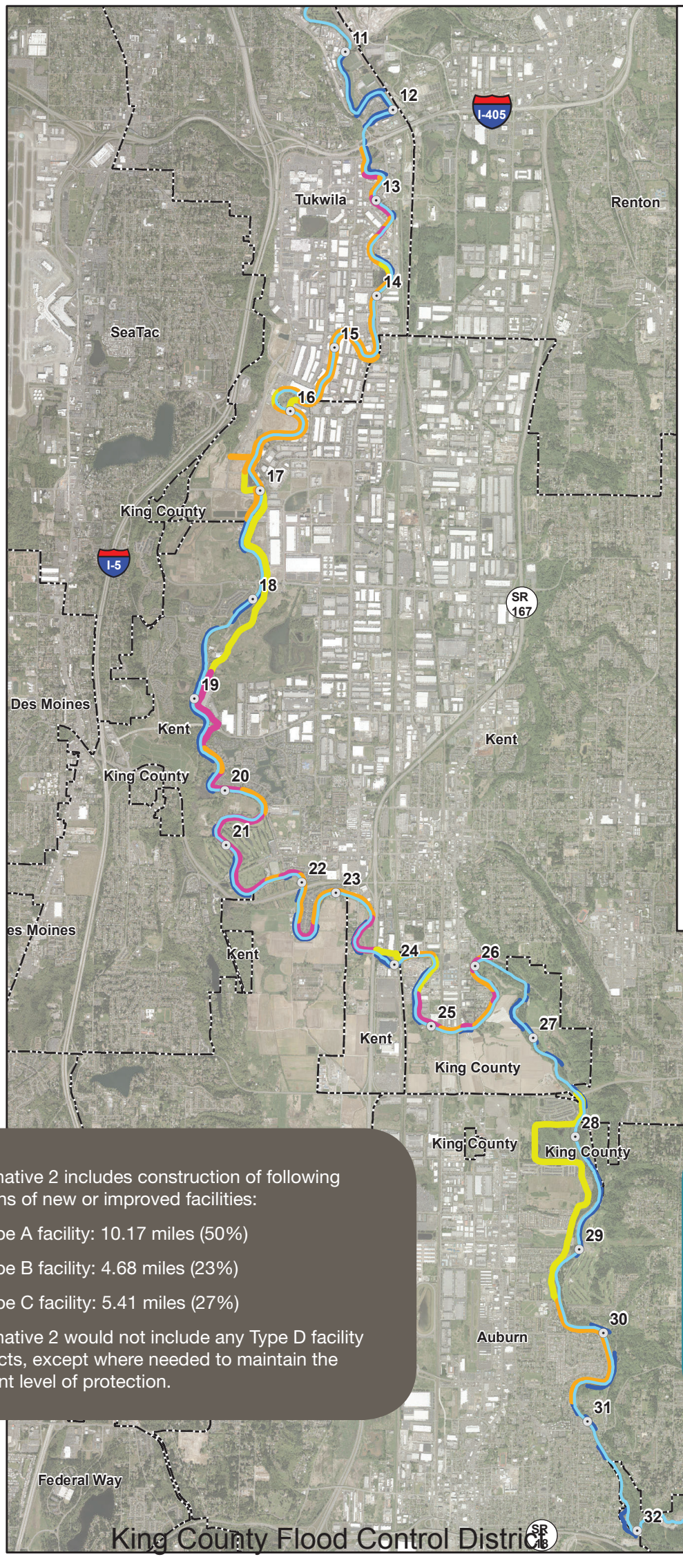


Exhibit 2

Lower Green River Corridor Plan Alternative Framework

Draft 10/8/2018

Alternative 2

Moderate Geographic Extent of Increased LOP*

Proposed Flood Facilities with Increased LOP* of 18,800 cfs plus 3' freeboard
Flood Facility Type:

- Type A: Most constrained, riverward embankment side slope of 2.5 to 1 or less; footprint of 100 feet or less
- Type B: Somewhat flatter stable riverward embankment side slope of 2.5 to 1 or more; footprint of 100 to 150 feet
- Type C: Levee setback; footprint of 150 feet or more
- Type D: Physical non-structural

Existing Conditions and Facilities:

- Other Levees and Revetments (approx. 11 miles)
- Existing Private Levee
- Green River Mainstem (42 shoreline miles)
- River Miles (RM)
- Cities

Note: The PL 84-99 levees have an existing LOP* of 12,000 cfs plus variable freeboard.

N

0 0.5 1 2 Miles

* Level of Protection (LOP) is defined as the amount of flow expressed as cubic feet per second (cfs) plus freeboard that the flood facility is designed to contain.

Assignment of facility type along the shoreline is based on a planning level assessment. Facility type designation is not intended to represent levee alignments nor does it account for feasibility design considerations such as transitions between project types, ties into high ground and discrete locations where adjustments would be made to avoid utilities and infrastructure.

Alternative 2 includes construction of following lengths of new or improved facilities:

- Type A facility: 10.17 miles (50%)
- Type B facility: 4.68 miles (23%)
- Type C facility: 5.41 miles (27%)

Alternative 2 would not include any Type D facility projects, except where needed to maintain the current level of protection.

- 20 miles of new or improved facilities designed to 500-year Level of Protection
- Agricultural areas provided same level of protection as they currently have
- Implement all Interim SWIF CIPs included in No Action Alternative, and those currently unfunded
- Continued maintenance of existing levees and revetments

(Three alternatives are being studied)

KING COUNTY FLOOD CONTROL DISTRICT

Lower Green River Corridor Scoping Meeting

FLOOD HAZARD MANAGEMENT PLAN AND PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

Alternative 3

Greater Geographic Extent with Increased Level of Protection, Integrated Habitat and Recreation, Agricultural Protection Facilities, and Habitat Restoration Project Partnerships

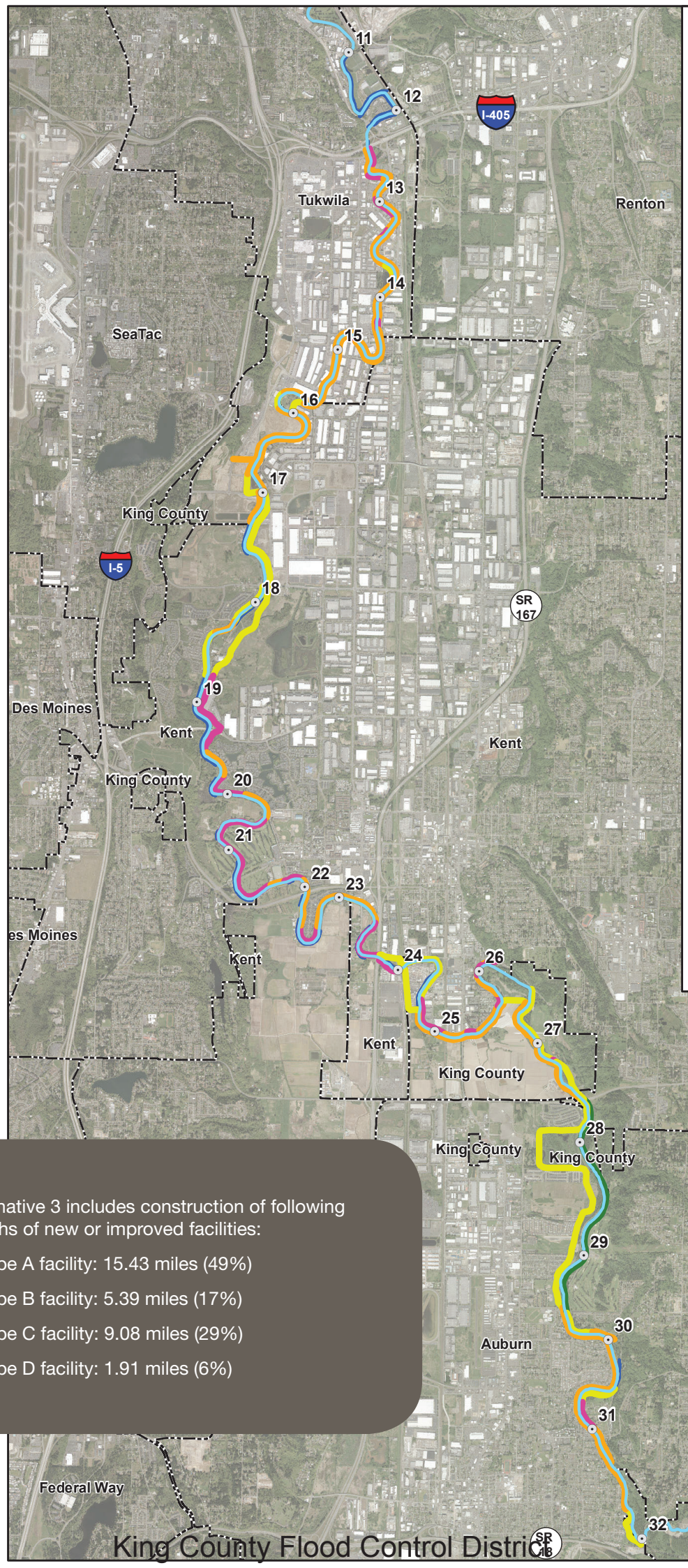


Exhibit 3

Lower Green River Corridor Plan Alternative Framework

Draft 10/8/2018

Alternative 3

Greater Geographic Extent with Increased LOTP*. Integrated Habitat and Recreation. Agricultural Protection Facilities and Habitat Restoration Project Partnerships. Includes Alternative #2 plus additional areas on both the right and left bank.

Proposed Flood Facilities with Increased LOP* of 18,800 cfs plus 3' freeboard
Flood Facility Type:

- Type A: Most constrained, riverward embankment side slope of 2.5 to 1 or less; footprint of 100 feet or less
- Type B: Somewhat flatter stable riverward embankment side slope of 2.5 to 1 or more; footprint of 100 to 150 feet
- Type C: Levee setback; footprint of 150 feet or more
- Type D: Physical non-structural

Existing Conditions and Facilities:

- Other Levees and Revetments (approx. 11 miles)
- Existing Private Levee
- Green River Mainstem (42 shoreline miles)
- River Miles (RM)
- Cities

Note: The PL 84-99 levees have an existing LOP* of 12,000 cfs plus variable freeboard.

N

0 0.5 1 2 Miles

* Level of Protection (LOP) is defined as the amount of flow expressed as cubic feet per second (cfs) plus freeboard that the flood facility is designed to contain.

Assignment of facility type along the shoreline is based on a planning level assessment. Facility type designation is not intended to represent levee alignments nor does it account for feasibility design considerations such as transitions between project types, ties into high ground and discrete locations where adjustments would be made to avoid utilities and infrastructure.

Alternative 3 includes construction of following lengths of new or improved facilities:

- Type A facility: 15.43 miles (49%)
- Type B facility: 5.39 miles (17%)
- Type C facility: 9.08 miles (29%)
- Type D facility: 1.91 miles (6%)

- 30 miles of new or improved facilities designed to 500-year Level of Protection and 2 miles of non-structural improvements
- Implement all of the Interim SWIF capital projects
- Drainage improvements in agricultural areas; agricultural structures flood proofed to achieve same Level of Protection as current
- Continued maintenance of existing levees and revetments
- Identify partnership funding to create habitat restoration opportunities within WRIA 9

(Three alternatives are being studied)

KING COUNTY FLOOD CONTROL DISTRICT

Lower Green River Corridor Scoping Meeting

FLOOD HAZARD MANAGEMENT PLAN AND PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

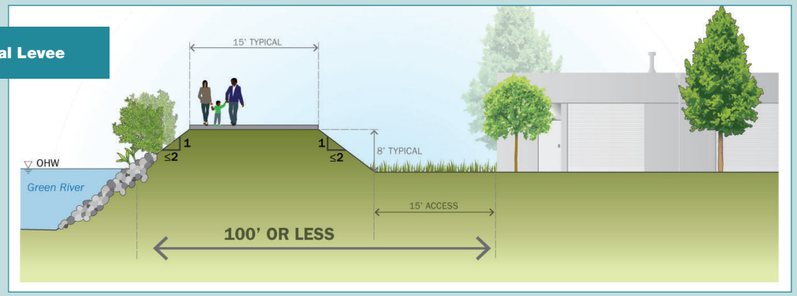
Flood Facility Project Types

Flood Facility
Project Type A

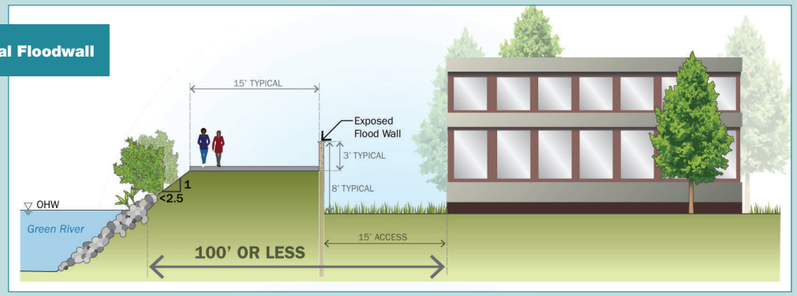
Riverward
side slope: < 2.5:1

Footprint: 100' or less

Typical Levee



Typical Floodwall

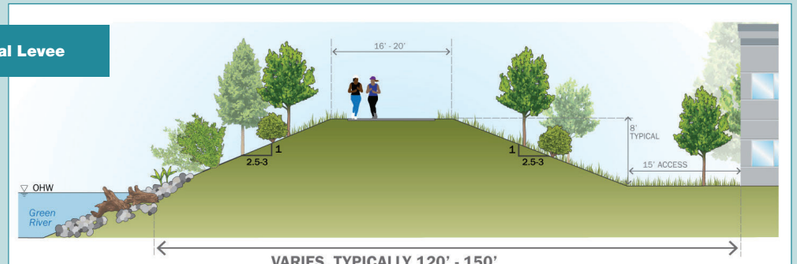


Flood Facility
Project Type B

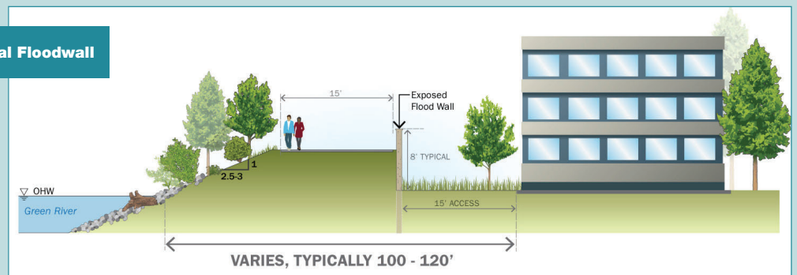
Riverward
side slope: < 2.5:1

Footprint: 100' –150'

Typical Levee



Typical Floodwall

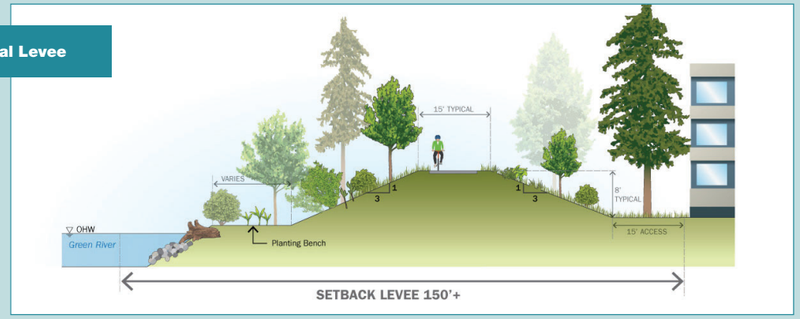


Flood Facility
Project Type C

Riverward
side slope: 3:1

Footprint: 150' or more

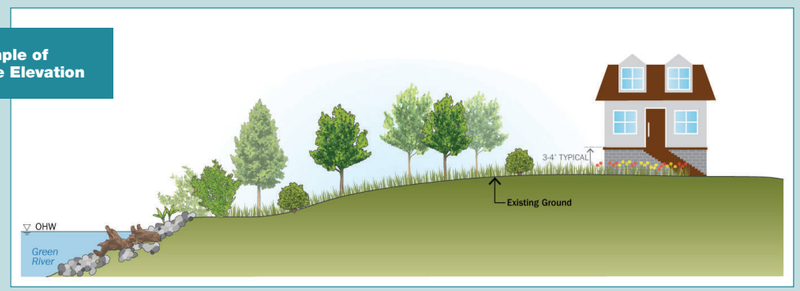
Typical Levee



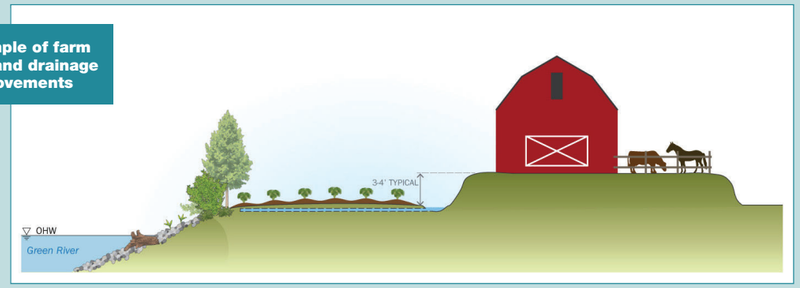
Flood Facility
Project Type D

Physical Non-Structural

Example of Home Elevation

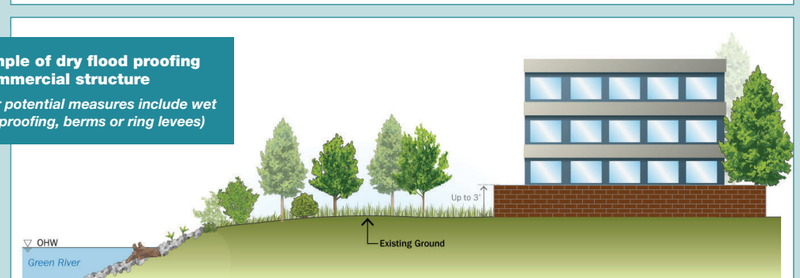


Example of farm pad and drainage improvements



Example of dry flood proofing a commercial structure

(other potential measures include wet flood proofing, berms or ring levees)



Facility diagrams are not to scale.
Facility diagrams are for illustrative purposes only.

KING COUNTY FLOOD CONTROL DISTRICT

Lower Green River Corridor Scoping Meeting

FLOOD HAZARD MANAGEMENT PLAN AND PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

How to Comment on the Alternatives During Scoping

There are multiple ways to submit your comments on the PEIS by January 29, 2019:

Fill out a comment form today

When complete, leave it in one of the comment boxes located around the room.

Provide your oral comments today

There are two ways to do so:

1. **Public oral testimony.** Sign up to provide your testimony in front of others during the public hearing portion of the meeting.
2. **One-on-one oral testimony.** A court reporter is available if you would like to provide your testimony in private during the open house portions of the meeting. Please check in at the sign-in table about how to sign up.

All testimony is limited to 2 minutes per person and will be recorded by a court reporter.

Email

Email your comments to: lowergreensepa@kingcounty.gov

Mail

Mail your comments to:

King County Flood Control District
Attn: Michelle Clark, SEPA Responsible Official
516 Third Avenue, Room 1200
Seattle, WA 98104

Online

Review scoping materials and submit your comment online at www.lowergreensepa.org

KING COUNTY FLOOD CONTROL DISTRICT

Protecting the Lower Green River Corridor

FLOOD HAZARD MANAGEMENT PLAN

AND PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

What is at risk?

The Lower Green River Valley is home to 22,000 diverse residents and supports over 100,000 jobs. It is an economic engine for the entire state, housing the second largest warehouse and distribution center on the west coast and boasting approximately $37 million in gross business income. Major employers such as Boeing, Starbucks, and IKEA are located here, thriving alongside valuable agricultural land, hospitals and medical facilities, schools, parks and community centers, and major transportation routes that move people and goods.

The Lower Green River is susceptible to flooding and flood damage. Floods are dangerous and destructive, threatening the safety of people and property, and causing costly damages. A severe flood could have enormous impact on the safety, livelihood, and viability of the community.

Protection takes planning

In the interest of protecting people, property, and the environment, the King County Flood Control District is developing a Flood Hazard Management Plan (Plan) to guide future flood reduction investments. The Plan addresses approximately 21 river miles that flow through the cities of Auburn, Kent, Renton, Tukwila and unincorporated King County.

Currently, a Programmatic Environmental Impact Statement (PEIS) is underway to analyze alternatives for flood protection that could be included in the Plan. The PEIS describes the potential environmental impacts and measures to reduce or eliminate them.

What are the alternatives?

1: The ***"No Action Alternative"*** is required to objectively evaluate and compare the other two alternatives. It would include completing existing projects adopted in the 2018–23 Capital Improvement Program (Resolution FCD2018-06.2).

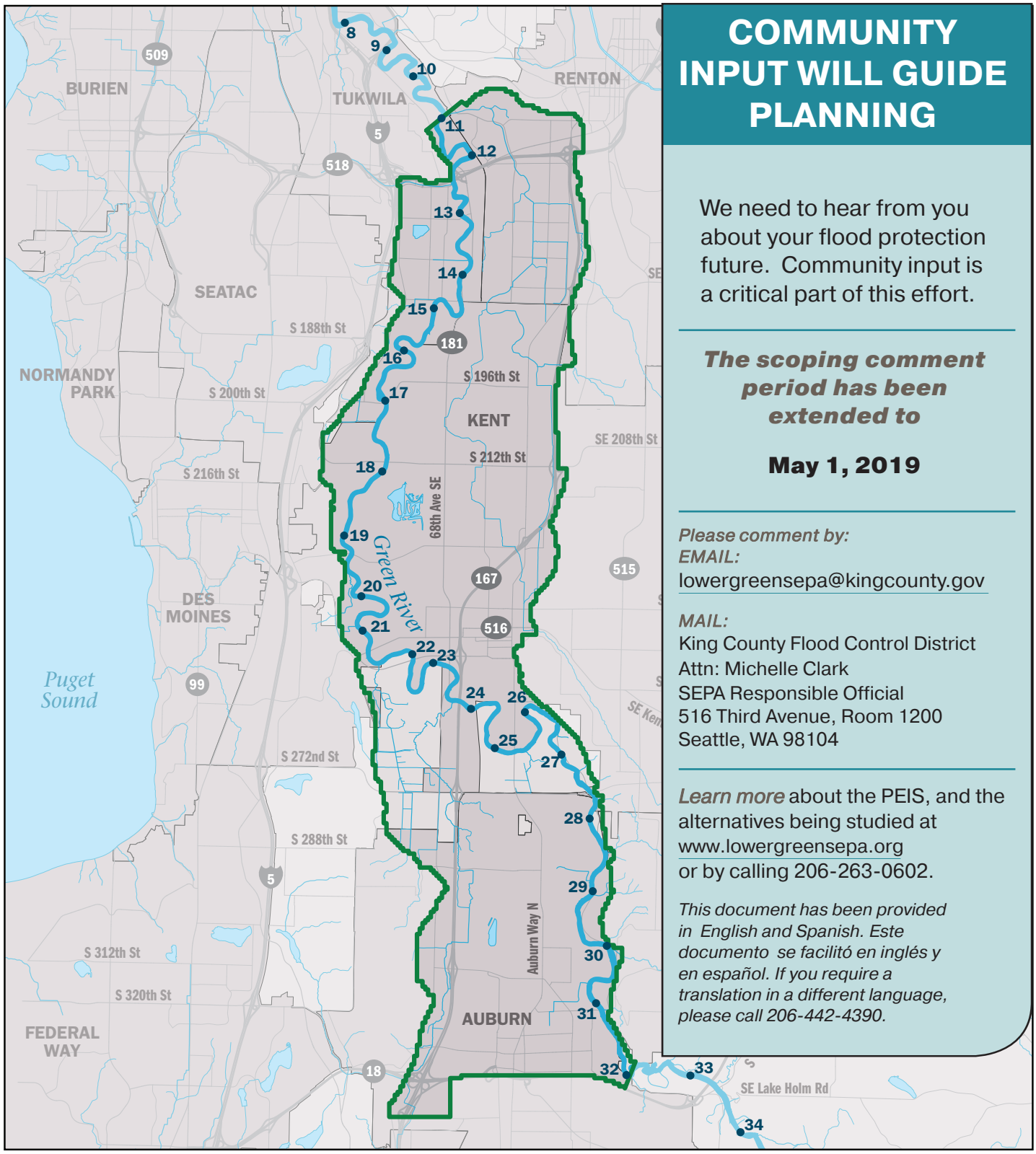
2: The ***"Moderate Geographic Extent of Increased Level of Protection Alternative"*** would include 3 miles of new levees and improvements to 17 miles of existing levees.

3: The ***"Greater Geographic Extent with Increased Level of Protection, Integrated Habitat and Recreation, Agricultural Protection Facilities, and Habitat Restoration Project Partnerships Alternative"*** is the same as Alternative 2 with the addition of 10 miles of new levees and 2 miles of non-structural improvements. Incentives to provide habitat restoration could also be provided.

Each of the alternatives includes continued maintenance of existing flood facilities. Alternatives 2 and 3 would also include some drainage improvements to agricultural lands and flood-proofing of agricultural structures. More detailed descriptions of the alternatives can be found online at: www.lowergreensepa.org.

Process The PEIS will take about two years to complete. Comment periods during scoping and during review of the Draft PEIS will provide opportunities for the public to provide input.

SCOPING	PREPARE DRAFT PEIS	DRAFT PEIS REVIEW	FINAL PEIS
PEIS process begins; public provides comments on the alternatives and the environmental issues that should be part of the evaluation.	The alternatives are refined based on scoping comments, and analyses are conducted to determine the potential impacts of each alternative.	The Draft PEIS is provided for review to seek comments on the analysis conducted on the alternatives.	Comments on the Draft PEIS are addressed, and the PEIS is refined as warranted by the comments.



COMMUNITY INPUT WILL GUIDE PLANNING

We need to hear from you about your flood protection future. Community input is a critical part of this effort.

The scoping comment period has been extended to

May 1, 2019

Please comment by:
EMAIL:
lowergreensepa@kingcounty.gov

MAIL:
King County Flood Control District
Attn: Michelle Clark
SEPA Responsible Official
516 Third Avenue, Room 1200
Seattle, WA 98104

Learn more about the PEIS, and the alternatives being studied at www.lowergreensepa.org or by calling 206-263-0602.

This document has been provided in English and Spanish. Este documento se facilitó en inglés y en español. If you require a translation in a different language, please call 206-442-4390.

Lower Green River Corridor Flood Hazard Management Plan
and Programmatic Environmental Impact Statement

Study Area

Study Area
Green River
30 River Mile
City Area

N
0 1 2 Miles

April 2019

KING COUNTY FLOOD CONTROL DISTRICT

KING COUNTY FLOOD CONTROL DISTRICT

Protegiendo el corredor inferior del río Green

PLAN DE MANEJO DE PELIGRO DE INUNDACIÓN

Y DECLARACIÓN PROGRAMÁTICA DE IMPACTO AMBIENTAL

¿Qué está en riesgo?

El valle inferior del río Green es hogar de 22,000 residentes de diferentes culturas y respalda más de 100,000 empleos. Es un motor económico para todo el estado, aloja el segundo almacén y centro de distribución más grande de la costa oeste y cuenta con aproximadamente $37 millones en ingresos de negocios brutos. Empleadores importantes como Boeing, Starbucks e IKEA, están ubicados aquí, prosperando junto a tierras agrícolas valiosas, hospitales y centros médicos, escuelas, parques y centros comunitarios, y las principales rutas de transporte que movilizan personas y bienes.

El corredor inferior del río Green es vulnerable a inundaciones y daños por inundaciones. Las inundaciones son peligrosas y destructivas, amenazan la seguridad de las personas y las propiedades y causan daños costosos. Una gran inundación podría tener un impacto enorme en la seguridad, el sustento y la viabilidad de la comunidad.

La protección requiere planificación

Con el fin de proteger a las personas, las propiedades y el medio ambiente, el Distrito de Control de Inundaciones del Condado de King está desarrollando un Plan de Gestión de Riesgos de Inundación (Plan) para guiar futuras inversiones en reducción de inundaciones. El Plan abarca aproximadamente 21 millas fluviales que circulan a través de las ciudades de Auburn, Kent, Renton, Tukwila y la zona del condado de King no incorporada.

Actualmente, se está realizando una Declaración Programática de Impacto Ambiental (Programmatic Environmental Impact Statement, PEIS) a fin de analizar alternativas para la protección contra inundaciones que podrían incluirse en el Plan. La PEIS describe los posibles impactos ambientales y las medidas para reducirlos o eliminarlos.

¿Cuáles son las alternativas?

1: Se requiere la ***"Alternativa de No Acción"*** para evaluar y comparar objetivamente las otras dos alternativas. Debe incluir culminar los proyectos existentes adoptados en el Programa de Mejora Capital 2018–23 (Resolución FCD2018-06.2).

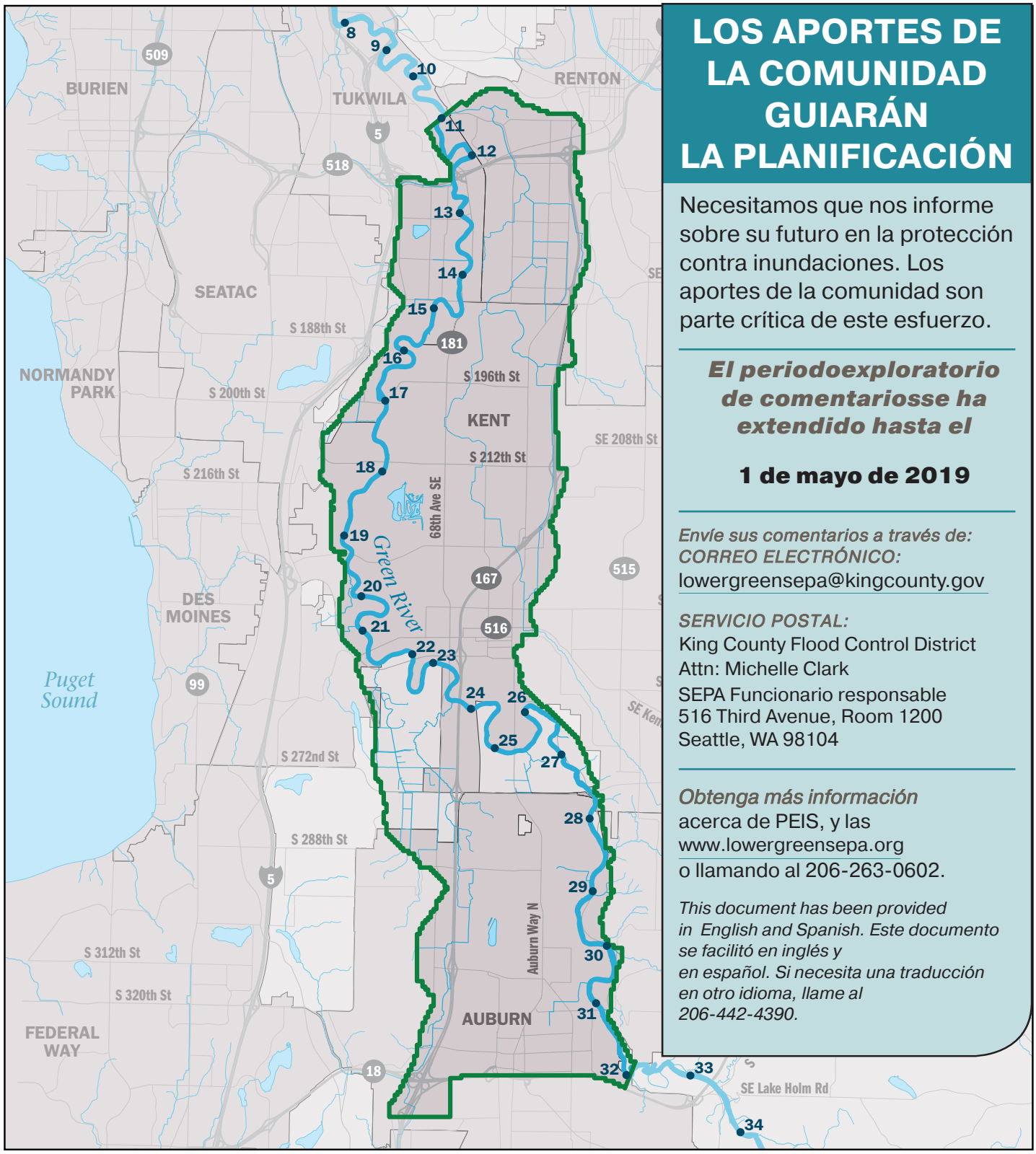
2: La ***"Alternativa de Extensión Geográfica Moderada del Incremento del Nivel de Protección"*** debe incluir 3 millas de nuevos diques y mejoras a 17 millas de diques existentes.

3: La ***"Alternativa de Mayor Extensión Geográfica del Incremento del Nivel de Protección, Integración del Hábitat y Recreación, Instalaciones de Protección Agrícola y Asociaciones de Proyectos de Restauración de Hábitat"*** es la misma que la Alternativa 2 con la adición de 10 millas de diques nuevos y 2 millas de mejoras no estructurales. También se podrían proveer incentivos para proporcionar la restauración del hábitat.

Cada una de las alternativas incluye el mantenimiento continuo de las instalaciones de inundación existentes. Las alternativas 2 y 3 también incluirían algunas mejoras en el drenaje de las tierras agrícolas y la resistencia a las inundaciones de las estructuras agrícolas. Se pueden encontrar descripciones más detalladas de las alternativas en línea en: www.lowergreensepa.org.

Proceso La PEIS tardará unos dos años en completarse. Los periodos de comentarios durante el alcance y durante la revisión del Borrador de PEIS brindarán oportunidades para que el público contribuya.

ALCANCE	PREPARAR EL BORRADOR DE PEIS	REVISIÓN DEL BORRADOR DE PEIS	PEIS FINAL
Comienza el proceso PEIS, el público ofrece comentarios sobre las alternativas y los problemas ambientales que deben formar parte de la evaluación.	Las alternativas se ajustan en función de los comentarios y se realizan análisis para determinar los impactos potenciales de cada alternativa.	El Borrador de PEIS se proporciona para revisión con el fin de buscar comentarios sobre el análisis realizado a las alternativas.	Los comentarios sobre el Borrador de PEIS se analizan y se hacen ajustes a la PEIS según lo justifiquen los comentarios.



LOS APORTES DE LA COMUNIDAD GUIARÁN LA PLANIFICACIÓN

Necesitamos que nos informe sobre su futuro en la protección contra inundaciones. Los aportes de la comunidad son parte crítica de este esfuerzo.

El periodoexploratorio de comentariosse ha extendido hasta el

1 de mayo de 2019

Envíe sus comentarios a través de:
CORREO ELECTRÓNICO:
lowergreensepa@kingcounty.gov

SERVICIO POSTAL:
King County Flood Control District
Attn: Michelle Clark
SEPA Funcionario responsable
516 Third Avenue, Room 1200
Seattle, WA 98104

Obtenga más información
acerca de PEIS, y las
www.lowergreensepa.org
o llamando al 206-263-0602.

This document has been provided in English and Spanish. Este documento se facilitó en inglés y en español. Si necesita una traducción en otro idioma, llame al 206-442-4390.

Plan de Gestión de Riesgos de Inundación en el Corredor del Río Green
y Declaración Programática de Impacto Ambiental

Área de estudio

- Área de estudio
- Río Green
- 30 Milla de vía fluvial
- Área de la ciudad

N

0 1 2 Millas

Abril de 2019

KING COUNTY FLOOD CONTROL DISTRICT

Public Scoping Meeting
Lower Green River Corridor Flood Hazard Management Plan & Programmatic EIS

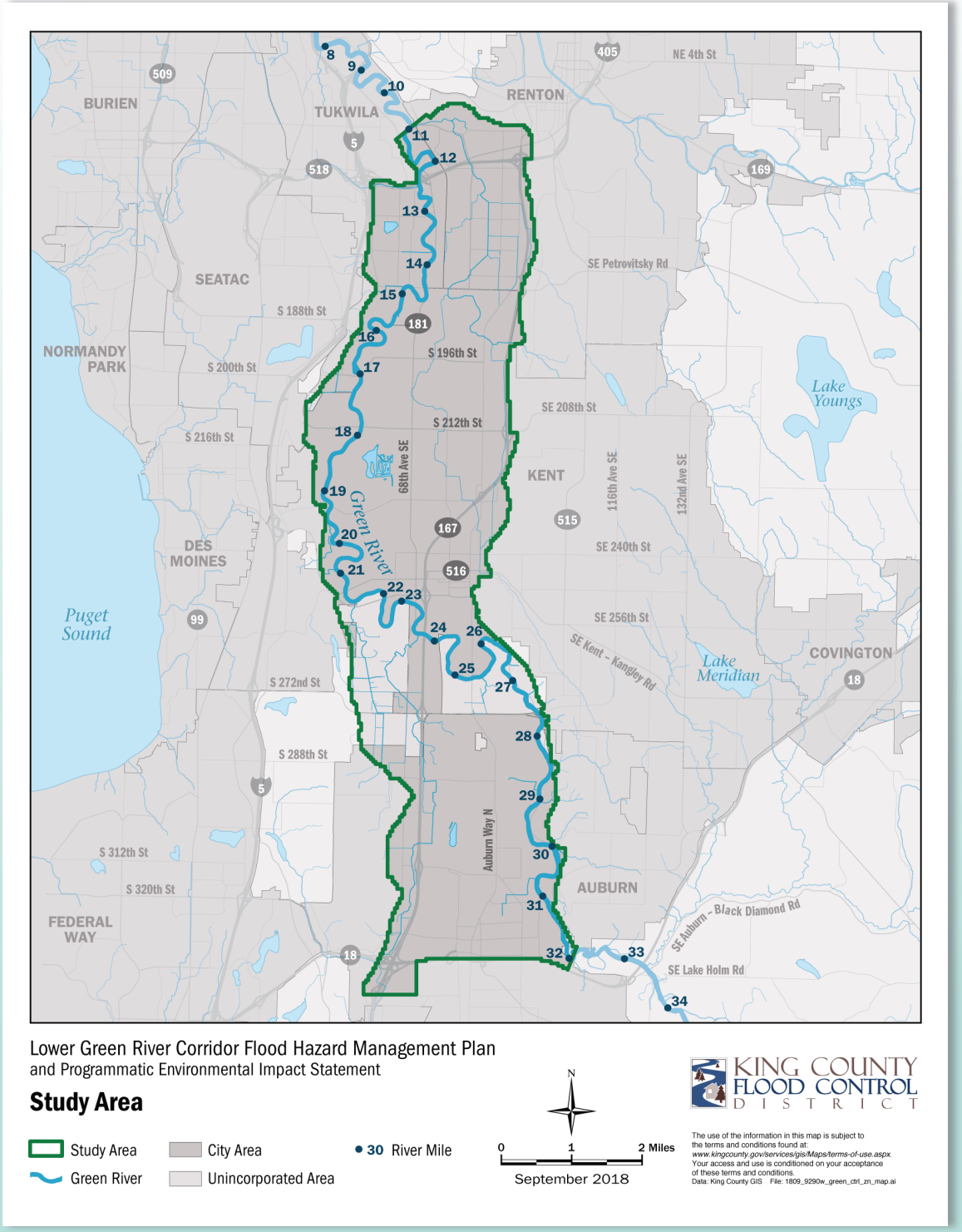
Lorin Reinelt, Managing Engineer
King County River and Floodplain Management Section

January 9, 2019

KING COUNTY FLOOD CONTROL DISTRICT

Study Area

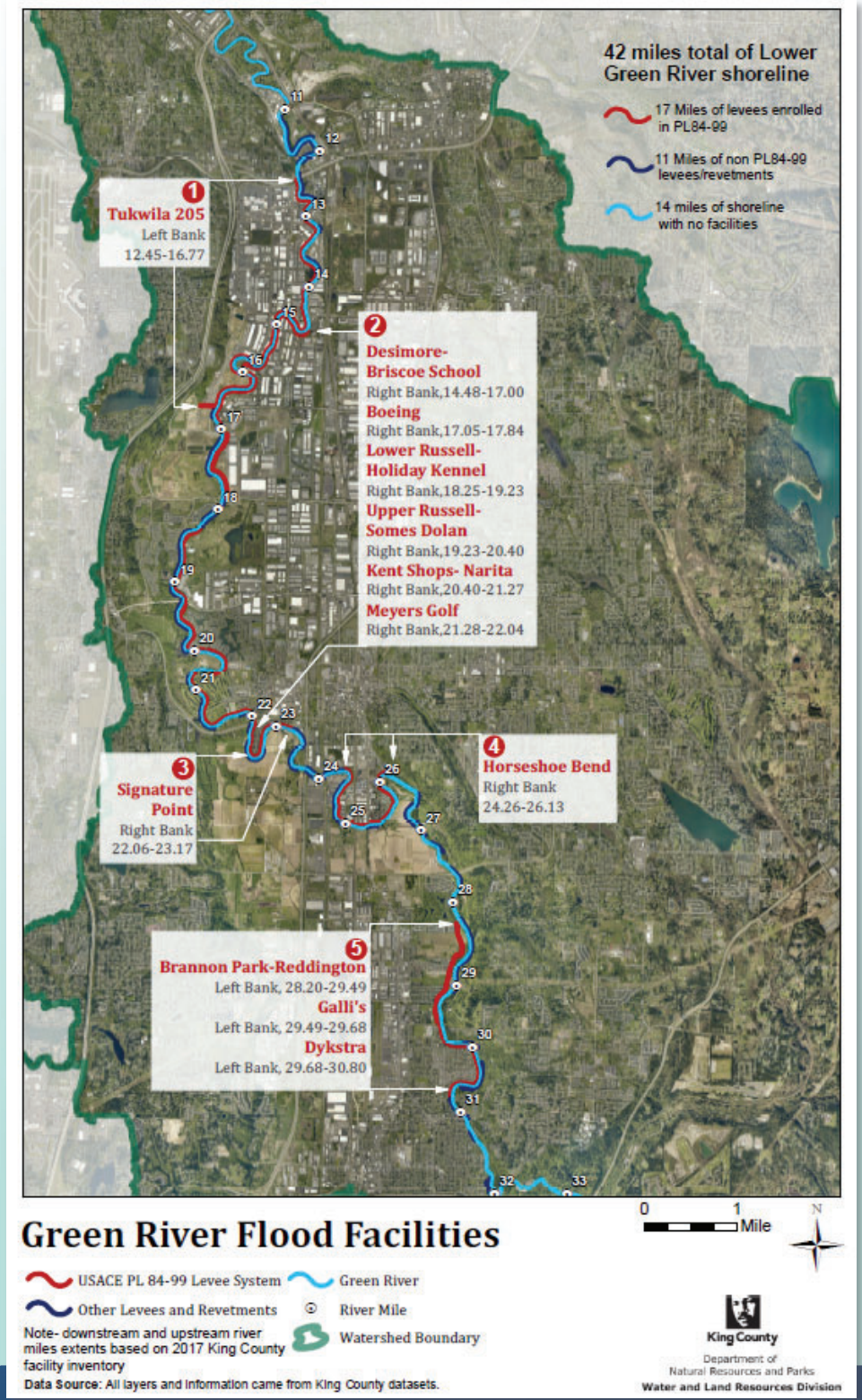
Lower Green River Corridor Flood Hazard Management Plan & Programmatic EIS



Study Area

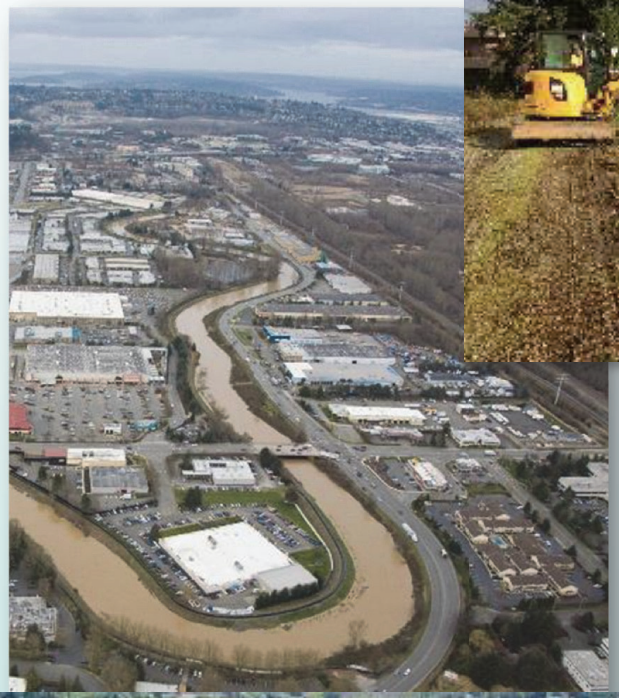
Lower Green River and Floodplain from River Mile 11 to 32

- 42 Miles of Shoreline
  - 17 Miles of PL 84-99 Levees
  - 11 Miles of other Levees and Revetments
  - 14 Miles of shoreline with no flood facilities



Development of Alternatives

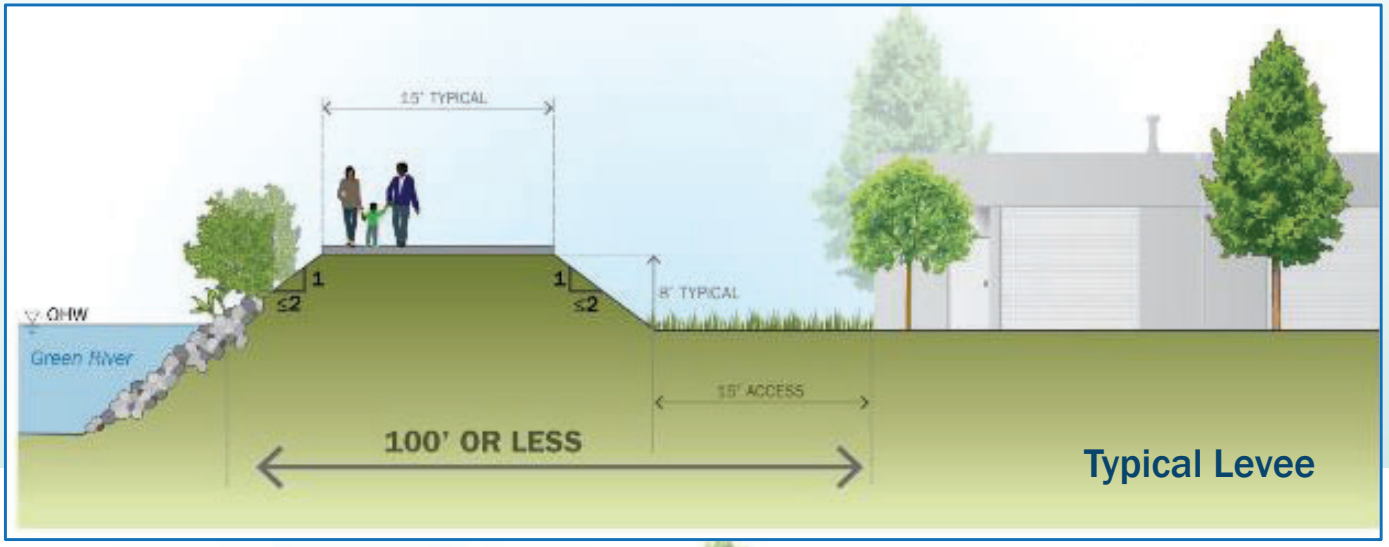
- Provisional Level of Protection (500-year)
- Factors affecting Flood Facility Project Types
  - Real Estate Constraints
  - Design Considerations (e.g., slope)
  - Vegetation
- Geographic Extent of Increased Protection

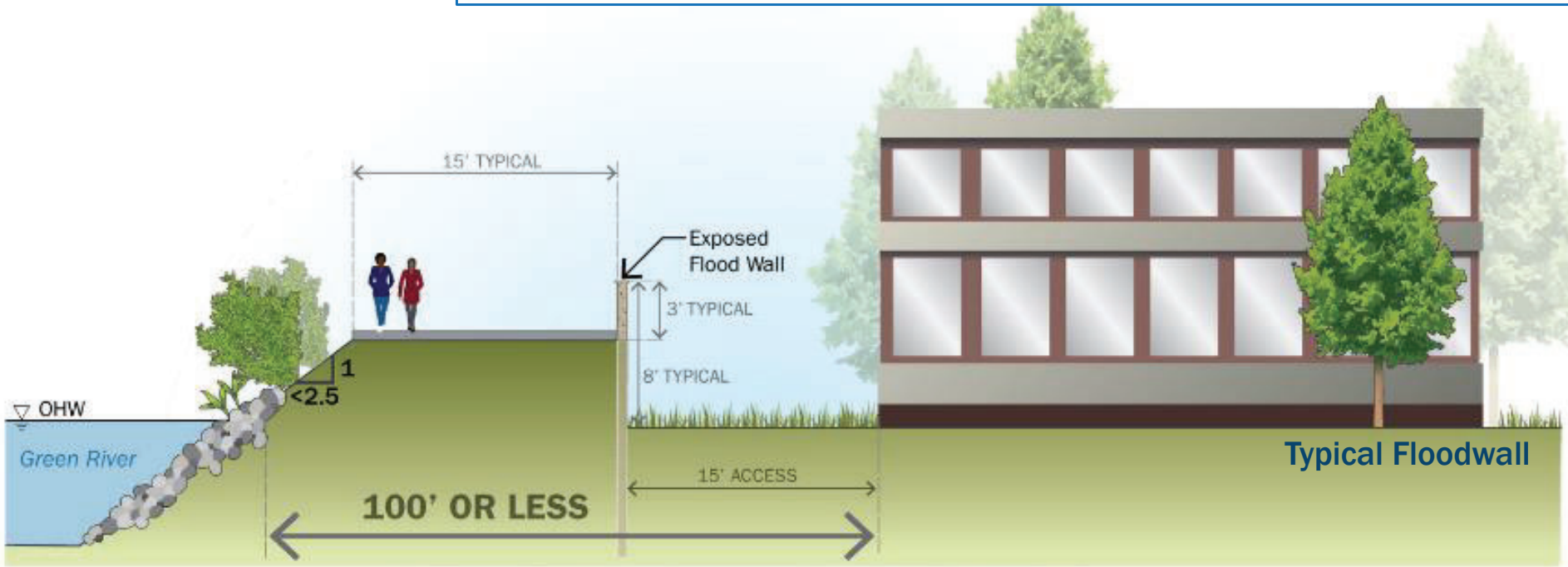


Flood Facility Project Types

Flood Facility Project Type A

- Riverward side slope < 2.5:1
- Footprint 100’ or less





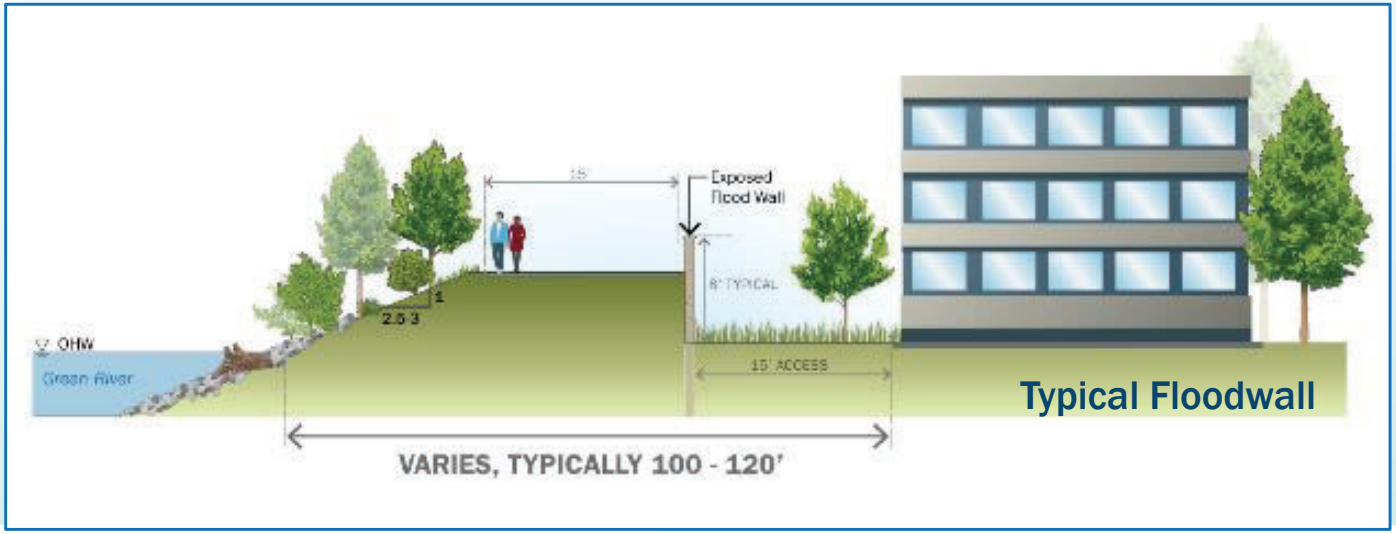
OHW= ordinary high water

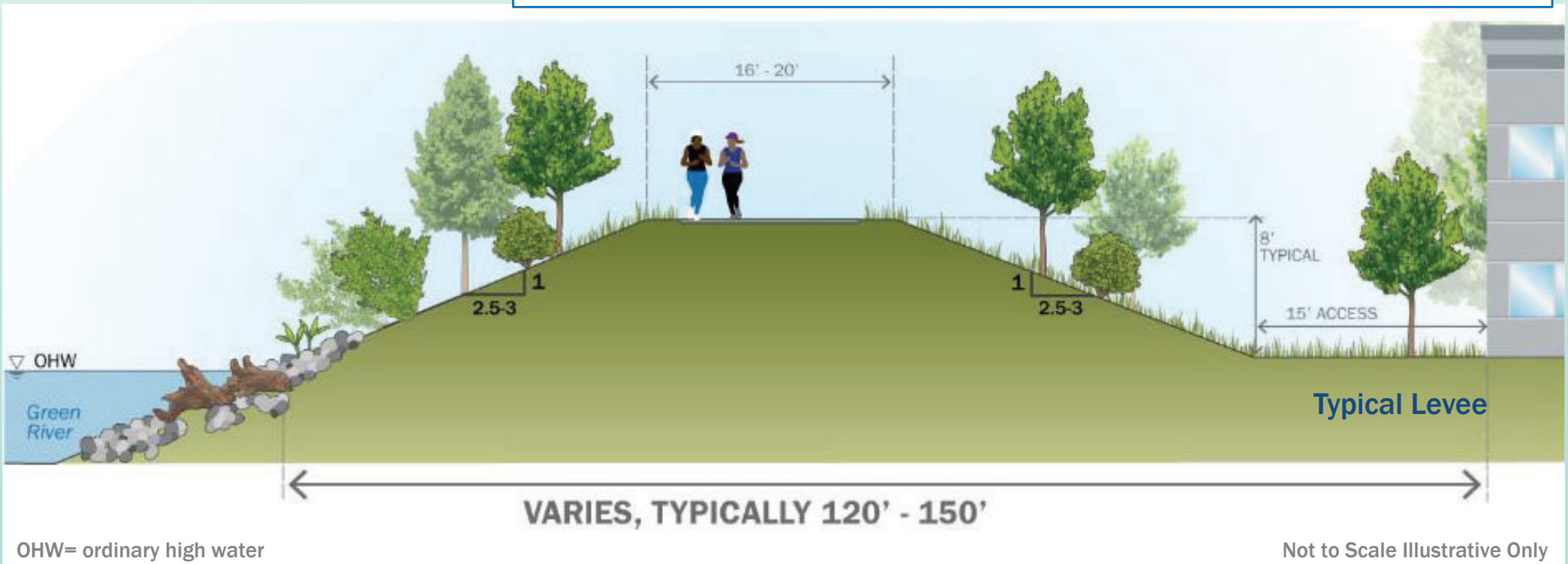
Not to Scale Illustrative Only

Flood Facility Project Types

Flood Facility Project Type B

- Riverward side slope >2.5:1
- Footprint 100'-150'





OHW= ordinary high water

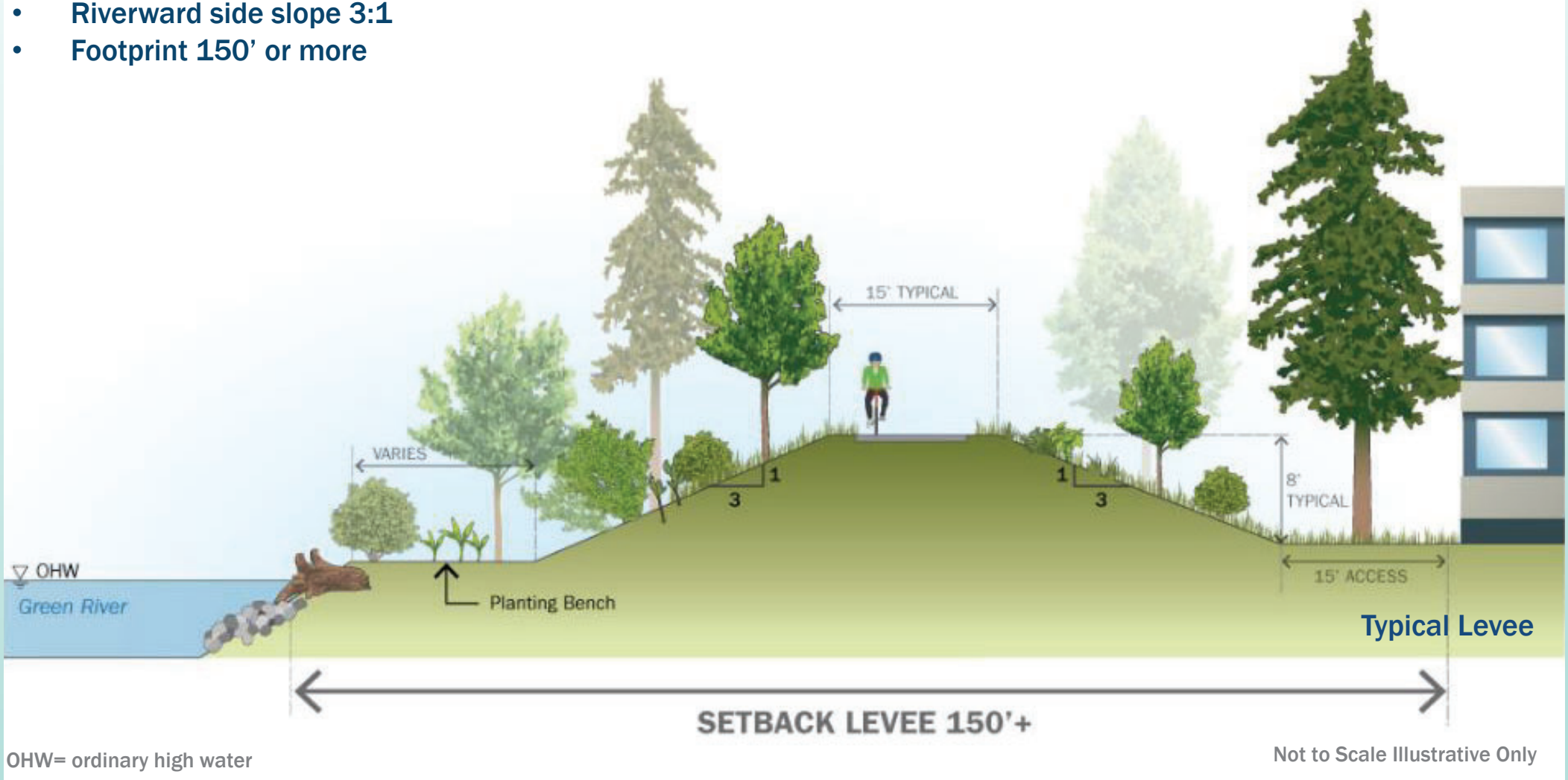
Not to Scale Illustrative Only

Flood Facility Project Types

Flood Facility

Project Type C

- Riverward side slope 3:1
- Footprint 150’ or more



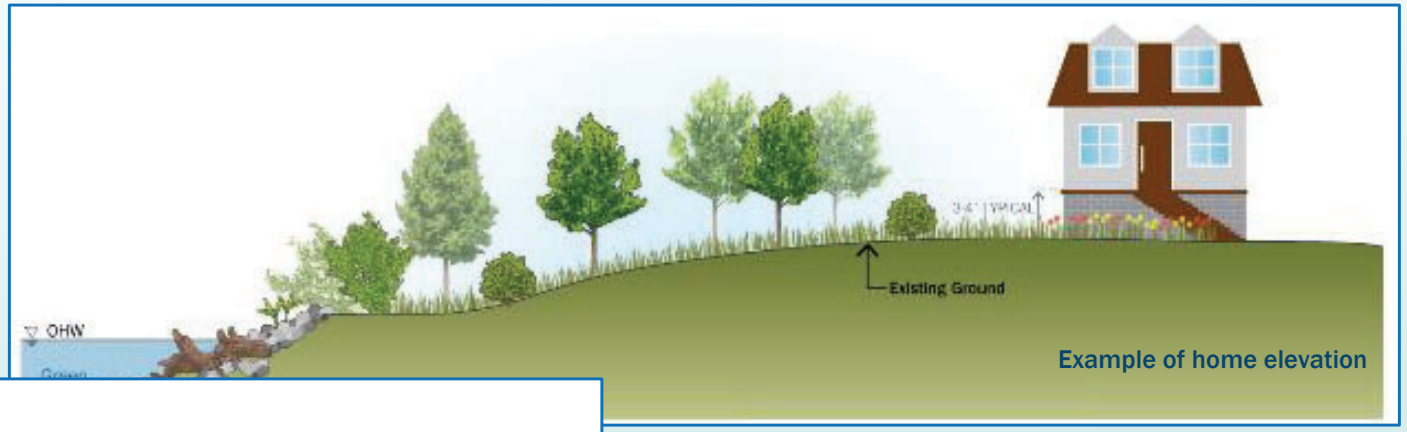
OHW= ordinary high water

Not to Scale Illustrative Only

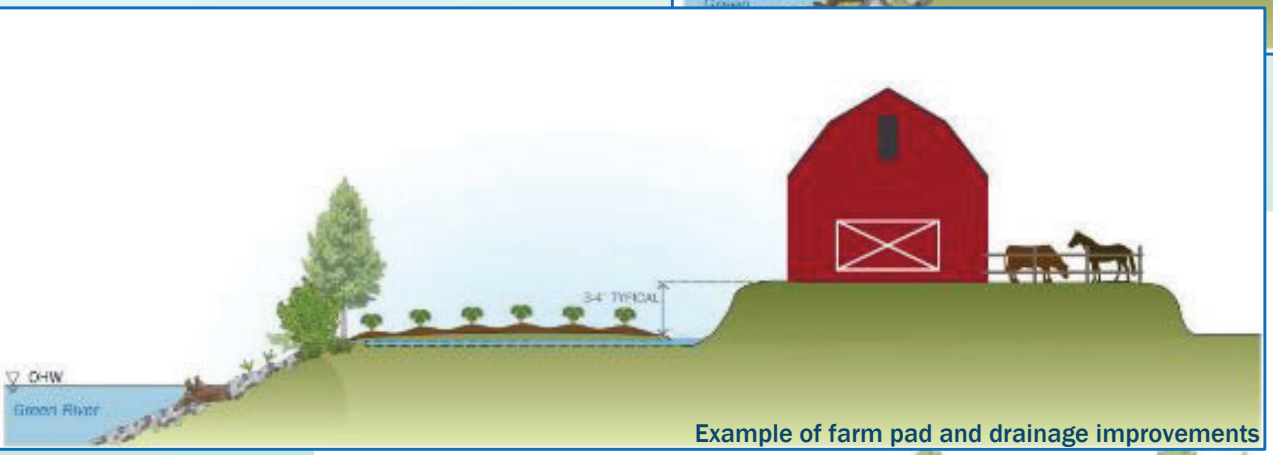
Flood Facility Project Types

Flood Facility Project Type D

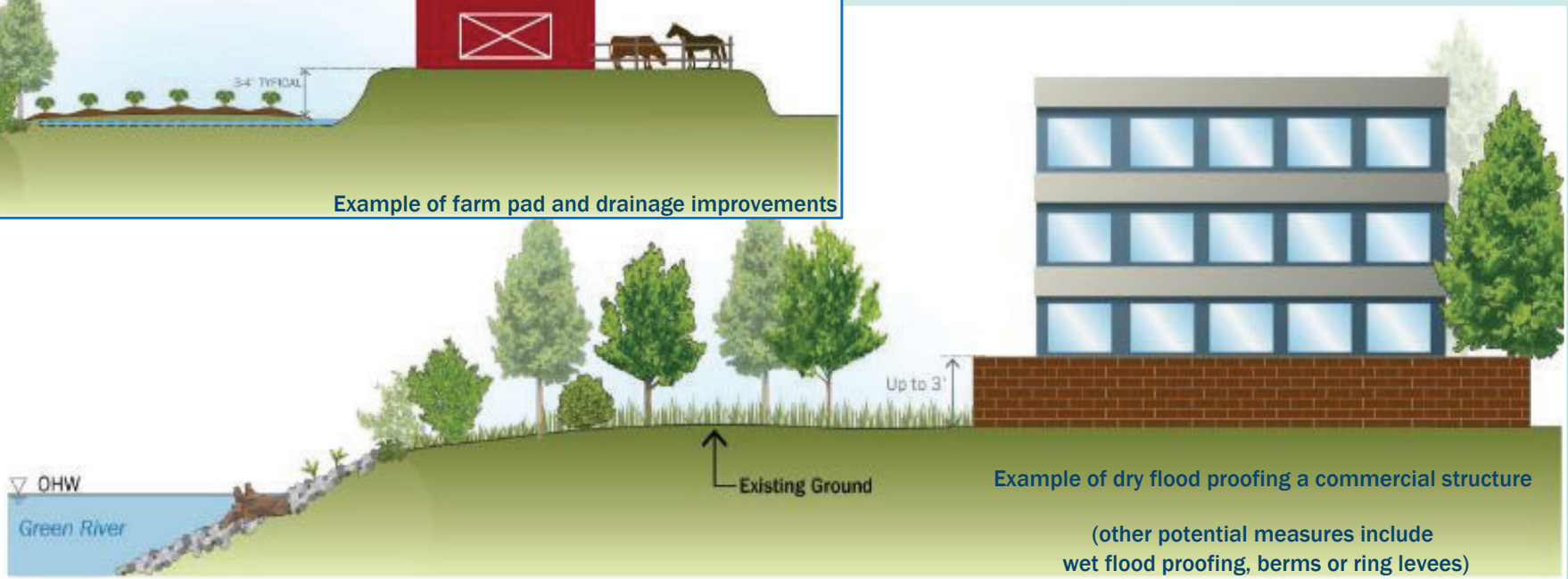
- Physical Non-Structural



Example of home elevation



Example of farm pad and drainage improvements



Example of dry flood proofing a commercial structure

(other potential measures include
wet flood proofing, berms or ring levees)

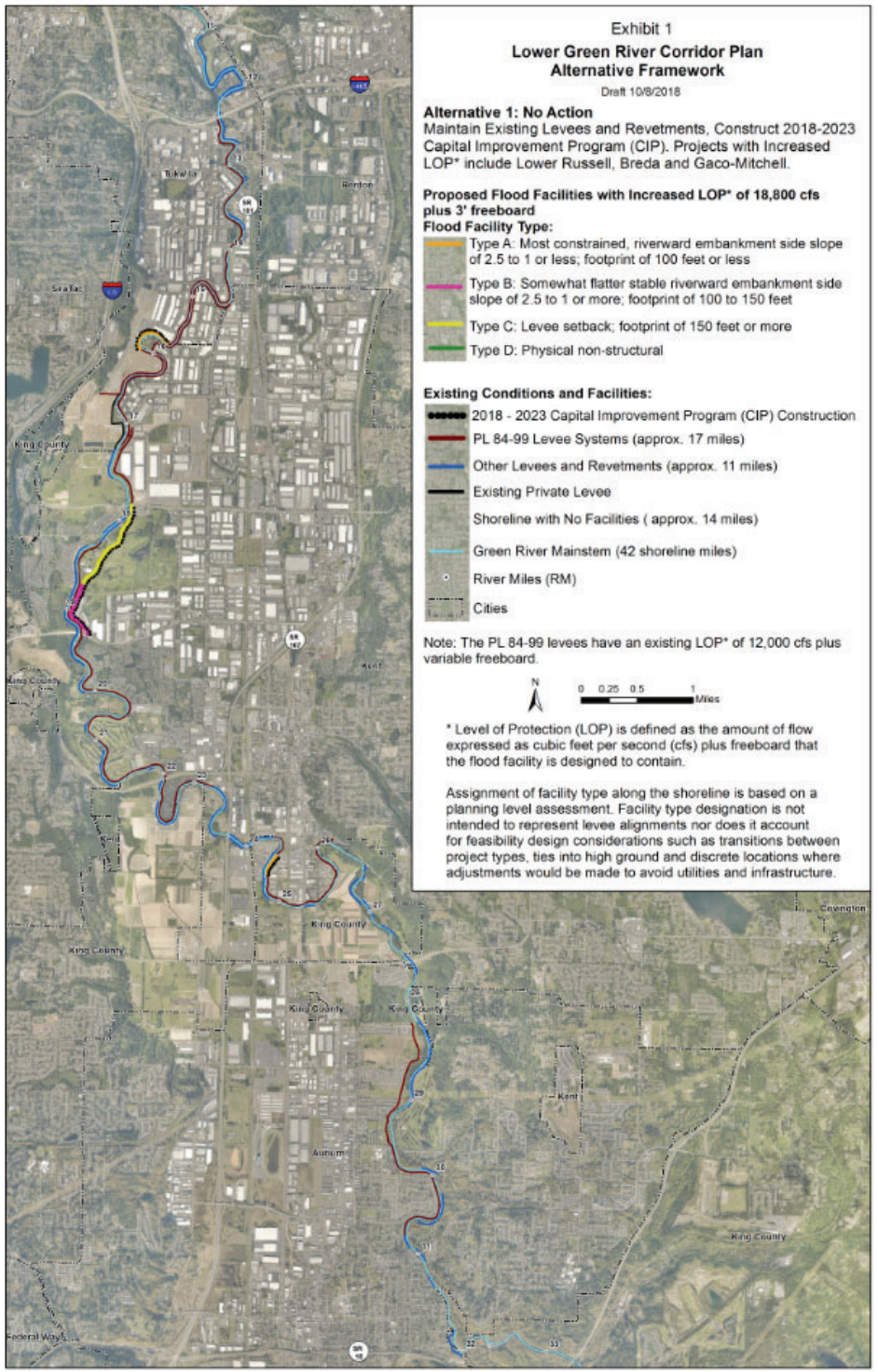
OHW= ordinary high water

Not to Scale Illustrative Only

Alternative 1

No Action

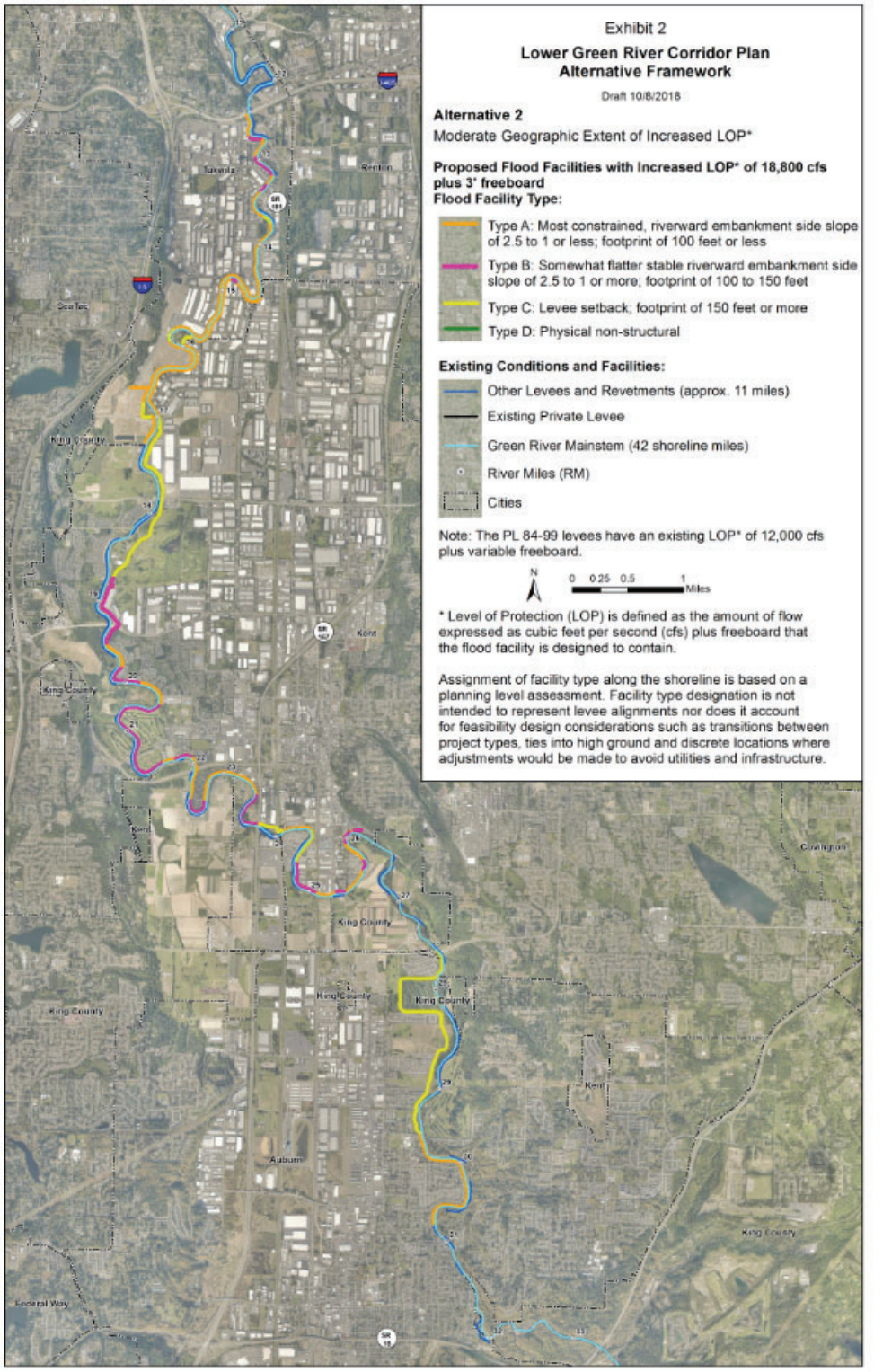
- Complete projects in adopted 2018–2023 CIP, including Interim SWIF Capital Projects
  - Type A facility: 0.6 miles (30%)
  - Type B facility: 0.57miles (28%)
  - Type C facility: 0.86 miles (42%)
  - Type D facility: None
- No system-wide increase in the Level of Protection
- Approximately 2 miles of new facilities in CIP designed to 500-year Level of Protection (18,800 cfs plus 3 feet of freeboard)
- Continued maintenance of existing 17 miles of PL 84-99 levees and 11 miles of other levees and revetments



Alternative 2

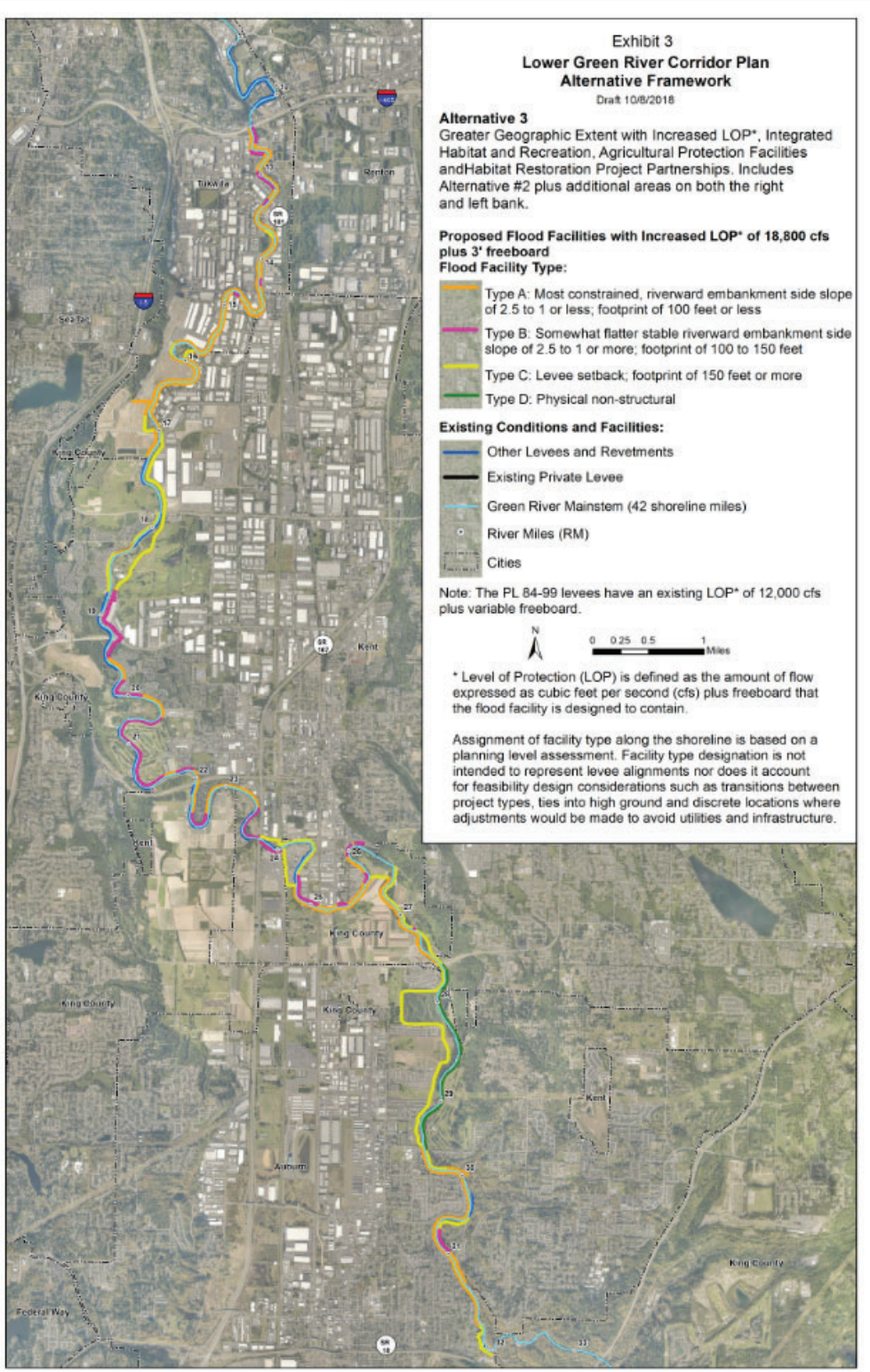
Moderate Geographic Extent of Increased Level of Protection

- 20 miles of new or improved facilities designed to 500-year Level of Protection:
  - Type A facility: 10.17 miles (50%)
  - Type B facility: 4.68 miles (23%)
  - Type C facility: 5.41 miles (27%)
  - Type D facility: None
- Agricultural areas provided same level of protection as they currently have
- Implement all Interim SWIF CIPs included in No Action Alternative, and those currently unfunded
- Continued maintenance of existing levees and revetments



Alternative 3

- 30 miles of new or improved facilities designed to 500-year Level of Protection and 2 miles of non-structural improvements
  - Type A: 15.43 miles (49%)
  - Type B: 5.39 miles (17%)
  - Type C: 9.08 miles (29%)
  - Type D: 1.91 miles (6%)
- Implement all of the Interim SWIF capital projects
- Drainage improvements in agricultural areas; agricultural structures flood proofed to achieve same Level of Protection as current
- Continued maintenance of existing levees and revetments
- Partnership funding to create habitat restoration opportunities within WRIA 9



Alternatives Comparison

	Alternative 1	Alternative 2	Alternative 3
Facility Type A	0.6 mile (30%)	10.17 miles (50%)	15.43 miles (49%)
Facility Type B	0.57 mile (28%)	4.68 miles (23%)	5.39 miles (17%)
Facility Type C	0.86 mile (42%)	5.41 miles (27%)	9.08 miles (29%)
Facility Type D	0	0	1.91 miles (6%)
Total Miles (New or Upgraded Facilities)	2.03 miles	20.26 miles	31.9 miles

APPENDIX C

List of Comment Items

List of Comment Items

Item No.	Date Received	Commentor	Organization	Type	Format	Note
1	1/9/2019	Carol Six		I	E	
2	1/25/2019	Matt Baerwalde	Snoqualmie Tribe	T	L	
3	1/29/2019	David Troutt	Puget Sound Salmon Recovery Council	S	L	
4	1/29/2019	State Agencies	Puget Sound Partnership, WA Ecology, WDFW, WDNR	S	L	
5	2/14/2019	Andrea H. Reay	Seattle Southside Chamber of Commerce	N	L	
6	2/21/2019	Marlla Mhoon, Bill Peloza	WRIA 9 Watershed Ecosystem Forum	L	L	
7	2/22/2019	April Sta. Rosa	Kent Chamber of Commerce	N	L	
8	2/25/2019	Rosella Mosby	King-Pierce County Farm Bureau	N	L	
9	3/13/2019	Michael Carpinito	Carpinito Brothers	B	L	
10	3/26/2019	Myra Barker	WA Receration and Conservation Office	S	E	
11	3/29/2019	Weston Brinkley	Urban Waters Federal Partnership	F	L	
12	4/3/2019	Erin Cooper	FEMA Region X	F	L	
13	4/5/2019	Dow Constantine	King County	L	L	Attachments
14	4/5/2019	Lisa Herbold	City of Seattle Councilmember	L	L	Attachments
15	4/6/2019	Rick Minutoli	98032 (Kent, WA)	I	F	
16	4/9/2019	Karen Spencer	98032 (Kent, WA)	I	F	
17	4/15/2019	Peggi Lewis Fu	NAIOP	N	L	
18	4/18/2019	Allan Ekberg	City of Tukwila	L	L	
19	4/19/2019	Roxy Hill	98032 (Kent, WA)	I	F	
20	4/20/2019	Christine Marshall	98032 (Kent, WA)	I	F	
21	4/20/2019	Peter Tenerelli	98035 (Kent, WA)	I	F	
22	4/21/2019	Joan Crawford	98032 (Kent, WA)	I	F	
23	4/22/2019	Deborah A. Miller	98032 (Kent, WA)	I	O	
24	4/22/2019	John Oliver	98042 (Kent, WA)	I	F	
25	4/22/2019	Josh Walker	98030 (Kent, WA)	I	F	
26	4/22/2018	Marla Ballentine	98002 (Auburn, WA)	I	F	
27	4/22/2019	Shannon Snyder	98002 (Auburn, WA)	I	F	
28	4/23/2019	Chad Lester	98002 (Auburn, WA)	I	F	
29	4/23/2019	Keven Bechen	98032 (Kent, WA)	I	F	
30	4/23/2019	Kristie Duggan	98030 (Kent, WA)	I	F	
31	4/25/2019	Christine Fairchild	98055 (Renton, WA)	I	F	
32	4/25/2019	Jennifer Quan	National Marine Fisheries Service	F	L	
33	4/27/2019	Stephanie Thurston	98002 (Auburn, WA)	I	F	
34	4/29/2019	Michael Kosa	98032 (Kent, WA)	I	F	
35	4/29/2019	Russell Betteridge	98002 (Auburn, WA)	I	F	
36	4/29/2019	Samuel Green	98092 (Auburn, WA)	I	F	
37	4/30/2019	Chris Varo	98032 (Kent, WA)	I	F	
38	4/30/2019	Jeanette Dorner	Mid Sound Fisheries Enhancement Group	N	L	
39	5/1/2019	Dana Ralph	City of Kent	L	L	
40	5/1/2019	Denis Law	City of Renton	L	L	
41	5/1/2019	Glen St. Amant	Muckleshoot Indian Tribe	T	L	
42	5/1/2019	Judy Blanco	Forterra	N	L	
43	5/1/2019	Lawrence Solomon	Lummi Indian Business Council	T	L	
44	5/1/2019	Mindy Roberts	Washington Environmental Council	N	L	
45	5/1/2019	Wendy McDermott	American Rivers	N	L	
46	5/1/2019	Brandon Patoc	98032 (Kent Valley)	I	F	
47	4/30/2019	Joyce Weir	99156 (Newport, WA)	I	E	
48	1/9/2019	Jeanette Dorner	Mid Sound Fisheries Enhancement Group	N	O	
49	1/9/2019	Greg Wingard	Green River Coalition	N	O	
50		James Laitila	98092 (Auburn, WA)	I	F	
51	3/25/2019	Rob Purser	Suquamish Tribe	T	L	
52 - 632	varies	Multiple		IT	ET	Email template

Type: T = Tribal; F = Federal; S = State; L = Local/Regional; N = NGO; B = Business; I = Individual
Format: E = Email; F = Form; L = Letter; O = Other

APPENDIX D

Comment Catalog

Comment Catalog

Item No.	Comment No.	Page No.	Commenter	Organization	Subject	Concern	Notes	Alternative	Comment Summary	Comment Text
X1	1	1	Email Template	**Common content from 595 individuals**	1 c i	A	Email template		Integrated goals	I am writing to urge you and the King County Flood Control District to strengthen the Lower Green River Corridor Flood Hazard Management Plan by taking the following action: 1. Define integrated goals that support the needs of both people and fish;
X2	2	1	Email Template	**Common content from 595 individuals**	1 c iii	I	Email template		Flood control	2. Maximize the number of levee setbacks to increase flood storage capacity and salmon habitat and more effectively manage floods; and
X3	3	1	Email Template	**Common content from 595 individuals**	1 d i	I	Email template		Salmon habitat	3. Offer clear habitat restoration actions that address the critical needs of salmon rearing habitat and riparian shade in the Lower Green River.
X4	4	1	Email Template	**Common content from 595 individuals**	2 b i	P	Email template		Policy objectives (SWIF)	Strengthening the Lower Green River Corridor Flood Hazard Management Plan to effectively manage floods in a way that reflects the original multi-objective vision developed during the System-Wide Improvement Framework (SWIF) process will ensure the district's commitment to balance flood risk reduction with salmon recovery.
1	1	1	Carol Six		2 b ii	I		I	Property impacts (housing)	I am wonder if there is more details as to what these proposal will do to my property and the property value. It sounds like the intent is to put a public walkway along the river. Since I have water front property this is a concern. When we purchased the property, there was an easement for sports fishermen/women only. This seems to have changed without notice. You moved my fence (which was on the easement line and constructed by Fish and Game because of issue will the public trashing the area) back eight feet to install sandbags and refused to move it back when the sandbags were removed. Will these proposals cause me to lose more of property and will I still have access to the water from my property? I am definitely against having public access to my property and my family not have access to the water from our property.
2	1	1	Matt Baerwalde	Snoqualmie Tribe	1 d i	A		New	Salmon; Orcas	The Tribe is very concerned with the narrow scope of the alternatives proposed so far by the District for the Lower Green River Corridor PEIS. The proposed actions within those alternatives are similar in type to past human actions that have degraded salmon habitat of the Salish Sea's tributary streams and estuaries. Our concerns are not just about the risks the alternatives present for the Lower Green River and Salish Sea marine ecosystem, including Chinook salmon, other salmon species, and orca, but in particular we are concerned by the potential implications for the Snoqualmie River and other rivers in King County. We urge the District to revise its existing action alternatives and develop one or more additional action alternatives, so that all action alternatives incorporate a multi-benefit approach to the management of river and floodplain habitats. The Corridor Plan presents the District with an extraordinary opportunity to apply its upcoming substantial investments in the Lower Green River to simultaneously achieve flood hazard reduction and environmental resiliency in a way that will be to the mutual benefit of people, salmon, and orca. Given the habitat and salmon recovery investments in the Green River basin that have occurred so far, and are slated to occur in the future, which are funded through public, tribal, and private dollars, the District has a responsibility to work with local and regional partners to make sure those ecosystem recovery investments have the opportunity to pay dividends, and that these dividends will not be negated by the current narrow focus of the Lower Green River Corridor PEIS.
2	2	2	Matt Baerwalde	Snoqualmie Tribe	2 d vii	A		All	Flood control	The Tribe requests revision of the existing action alternatives and addition of one or more action alternatives that include more projects that incorporate features included in the District's online materials as Project Type D, although it may be that even the amount of armoring that is shown in the conceptual drawings is not actually needed everywhere to prevent lateral migration, and that other more deformable alternatives exist.
2	3	2	Matt Baerwalde	Snoqualmie Tribe	2 b i	P			KC Flood Hazard Management Plan policies	This would be consistent with existing District policies in the 2006 and 2013 King County Flood Hazard Management Plan, including: • Policy G-3 - Comprehensive River & Flood Hazard Management: King County should provide comprehensive river and flood hazard management through the implementation of projects and programs that result in multiple benefits, including those created by meeting any or all of the following non-prioritized objectives, including (e) protect and, where possible, enhance aquatic and riparian habitat in a manner consistent with adopted salmon habitat recovery plans. • Policy G-4 – River and Flood Hazard Management Services: King County should provide river and flood hazard management services to reduce the risk of flood and channel migration hazards by preserving open space in flood hazard areas and channel migration zones. • Policy G-10 - Protecting Natural Functions & Values: King County shall protect flood storage, conveyance, and ecological values of floodplains, wetlands, and riparian corridors and, when feasible, should enhance or restore these ecological functions and values. Flood risk reduction strategies and projects should be coordinated on a river-reach scale with the salmon habitat recovery plans. • Policy G-6 – Inter-Government Coordination and Cooperation: King County flood hazard management activities should be planned and implemented in close cooperation with cities, counties, tribes, salmon habitat recovery planning partners and other agencies sharing jurisdiction in each basin. • Policy PROJ-6 - Flood Protection Facility Design & Maintenance Objectives: King County should construct new flood protection facilities and maintain, repair or replace existing flood protection facilities in such a way as to: (a) require minimal maintenance over the long term; (b) ensure that flood or channel migration risks are not transferred to other sites; (c) protect or enhance aquatic, riparian and other critical habitats; and (d) protect or enhance multiple beneficial uses of flood hazard areas. • Policy PROJ-7 - Flood Protection Facilities within Critical Areas Ordinance Aquatic Areas and Aquatic Area Buffers: Wherever possible, King County should relocate existing flood protection facilities farther from the river edge and associated buffers to increase flood conveyance and allow natural river processes to occur.
2	4	3	Matt Baerwalde	Snoqualmie Tribe	2 d v	I			Economics	Please assess the costs and benefits associated with more property acquisitions, including levee setback and levee removal projects. These types of multi-objective projects address the most critical habitat needs in many of our Salish Sea rivers, including the Lower Green and the Snoqualmie River, but they also serve the District's and the ratepayers' needs by being fiscally responsible over the long term, because a one-time investment relieves the District of untold future liability in maintaining facilities in the face of a changing climate.
2	5	3	Matt Baerwalde	Snoqualmie Tribe	1 d i	A		Alt 1	Salmon habitat	Alternative 1 – No Action What are the implications of maintaining existing facilities on aquatic habitat, including ongoing impacts to ESA-listed species through lack of edge complexity or access to off-channel habitat, lack of flood refuge, lack of flood storage, lack of vegetation and this affects water temperatures?
2	6	3	Matt Baerwalde	Snoqualmie Tribe	1 d i	A		Alt 2	Salmon habitat	Alternative 2 – Moderate Geographic Extent of Increased Level of Protection What impacts will existing and new facilities cause to aquatic habitat, including ongoing impacts to ESA-listed species through lack of edge complexity or access to off-channel habitat, lack of flood refuge, lack of vegetation, and how will this affect water temperatures?
2	7	3	Matt Baerwalde	Snoqualmie Tribe	1 d i	A		Alt 3	Salmon habitat	Alternative 3 – Greater Geographic Extent with Increased Level of Protection, Integrated Habitat and Recreation, Agricultural Protection Facilities, and Habitat Restoration Project Partnerships Alternative Unfortunately, the name of this alternative is somewhat misleading, since the increased level of protection to the 500 year level of protection would preclude meaningful habitat improvements in many areas and instead would build walls along the river. Under this alternative, what impacts will existing and new facilities cause to aquatic habitat, including ongoing impacts to ESA-listed species through lack of edge complexity or access to off-channel habitat, lack of flood refuge, lack of flood storage, lack of vegetation, and how will this affect water temperatures?
3	1	1	David Troutt	Puget Sound Salmon Recovery Council	1 d ii	A		All	Salmon; Orcas	Continued decline in the Green River Chinook salmon population is of regional and statewide concern as its recovery is essential to de-listing Puget Sound Chinook as Threatened and, moreover, to avoid losing the Southern Resident orca population. The three alternatives identified in the November 26, 2018 DPEIS scoping notice will not advance Puget Sound Chinook salmon recovery.
3	2	1	David Troutt	Puget Sound Salmon Recovery Council	1 d i	A		New	Salmon habitat	The PSSRC requests that the King County Flood Control District evaluate and quantify the ability to recover Puget Sound Chinook salmon by the ability to recover the Green River Chinook population. The SEPA environmental evaluation and analysis must identify an additional alternative for flood management of the Lower Green River that is consistent with the Puget Sound Salmon Recovery Plan. Ideally, the Corridor Plan should approach flood management in a manner that considers and integrates Chinook salmon and steelhead recovery, economic development, recreational opportunities, and environmental justice. Specifically, rather than widening existing levee structures and planting trees on the levee shoulders, we recommend the addition of a fourth alternative that leads to the creation of more floodplain habitat. A multi-pronged alternative to reduce flood risk and increase floodplain habitat is consistent with the approach outlined in the Green River Chinook recovery plan, which reflects habitat restoration concepts for the Lower Green River that are supported by jurisdictions in the watershed and that will lead to achievement of the habitat goals established for the Lower Green River.
4	1	2	State Agencies	Puget Sound Partnership, WA Ecology, WDFW, WDNR	1 d i	P			Policy objectives (WRIA 9)	WRIA 9, in collaboration with a diverse set of stakeholders, has partnered with King County and neighboring cities to develop a salmon recovery plan identifying specific recovery objectives at both a 10- and 50-year interval. Many of the proposed flood control measures listed in the PEIS appear to contradict with the WRIA recovery goals related to riparian habitat enhancements, reduction of bank armor, and establishment of off channel habitat. Therefore, to ensure alignment with state and regional recovery efforts, it is imperative the Flood District work collaboratively with the leaders of WRIA 9 in development of PEIS alternatives that support ongoing work to recover salmon in the watershed.

Comment Catalog

Item No.	Comment No.	Page No.	Commenter	Organization	Subject	Concern	Notes	Alternative	Comment Summary	Comment Text
4	2	2	State Agencies	Puget Sound Partnership, WA Ecology, WDFW, WDNR	1 d ii	I			Salmon; Orcas	Moderate to long-term Orca Task Force actions call for an increase in salmon recovery investments with additional funding for restoration project brought forward through groups like the Salmon Recovery Funding Board. Therefore, the Flood District's commitment to a multi- benefit approach identifying habitat improvements and restoration opportunities could align the flood hazard planning effort with this funding opportunity, while also confirming the County's commitment to threatened salmon and orca recovery.
4	3	3	State Agencies	Puget Sound Partnership, WA Ecology, WDFW, WDNR	1 d i	P			Interim SWIF	As established in Resolution FCD 2016-05, the Flood District's adoption of the "Interim SWIF" in 2016 only incorporated some elements of the original SWIF vision. However, as stated in the Flood District's 2016 transmittal of the interim SWIF, the Board of Supervisors committed to integrate habitat and recreation objectives left out of the interim SWIF into a future corridor plan, such as the proposed PEIS. "Pursuing an Interim SWIF is a short-term solution to retain eligibility under the P.L. 84-99 rehabilitation assistance program, and does not meet all of the goals and objectives of the stakeholders for a Green River vision that includes flood protection, levee certification, habitat, and recreation. The Flood District is committed to achieving these additional goals in a long-range Lower Green River Corridor Plan that will integrate elements of the Interim SWIF and which we plan to scope in conjunction with a programmatic environmental impact statement under SEPA." 2016 Interim SWIF Transmittal (emphasis added). Therefore, the Flood District needs to follow through on this commitment and incorporate habitat-related elements into the proposed LGR Corridor Plan, which unfortunately do not appear to be reflected in the current PEIS.
4	4	3	State Agencies	Puget Sound Partnership, WA Ecology, WDFW, WDNR	1 c i	I			Water quality; Salmon habitat	Multi-Objective Goal Not Reflected in Proposed Alternatives The proposed LGR Corridor Plan is broadly described within the PEIS scoping documents as intended to "…provide an integrated and reasonable long-term approach to reduce flood risk within the Lower Green River Corridor while balancing multiple objectives within the study area…while supporting the economic prosperity of the region and improving fish habitat." Inconsistent with this description, the PEIS alternatives focus on a singular objective to reduce flood hazards, with little reference or commitment to other objectives, such as habitat or water quality improvements. As conveyed by State Agencies through the SWIF process, we recognize the importance of maintaining economic vitality within the Green River Valley and continue to support elevation of flood protection to a 500-year level at certain locations. However, inherent in this support is the understanding that commensurate levels of habitat and water quality improvements will also be included. Therefore, all of the PEIS alternatives need to include habitat and water quality enhancements in alignment with regulatory requirements and regional interests. Incorporation of these elements is not only necessary for transparency in PEIS development but also will be required as compensatory mitigation as flood protection projects are implemented.
4	5	4	State Agencies	Puget Sound Partnership, WA Ecology, WDFW, WDNR	2 b i	P			Policy objectives (SWIF)	Recommend Clear Project Purpose and Corresponding Objectives An integrated flood hazard corridor plan for the Lower Green River must clearly articulate the complete suite of objectives into the project purpose statement, goals, and corridor plan objectives. Therefore, the PEIS should be amended to integrate specific goals and objectives related to habitat enhancements and salmon recovery, or a new fourth alternative, as requested by WRIA 9, needs to be developed. The 2016 Vision, Goal and Objective statement developed for the SWIF process serves as a good example. At a minimum, the following SWIF goals should be carried forward in the PEIS: Integrated river and floodplain management - Reach agreement on an integrated list of multi-objective, prioritized projects and non-regulatory, programmatic actions that achieve the Green River SWIF's agreed to goals for level of protection from flooding. This integrated set of flood protection strategies and actions shall: (a) improve water temperature; (b) advance progress towards meeting salmon protection and recovery goals; (c) enhance open space, recreation, treaty fishing, and public access; (d) support farmland protection, resiliency and productivity; and (e) reduce long-term facility maintenance costs. Vegetation management - Develop shoreline and levee vegetation management recommendations to further the goals of the ESA, CWA, and Corps PL84-99 standards. Ecological resilience - Improve the ecological resilience of the Lower Green River's aquatic and terrestrial habitats through implementation of the Green River SWIF's priority projects and non-regulatory, programmatic recommendations.
4	6	4	State Agencies	Puget Sound Partnership, WA Ecology, WDFW, WDNR	2 b ii	A		All	Economics; Property impacts (future)	Narrow Consideration of Facility Types and Constraints The PEIS is characterized as a long-term, non-project environmental review. However, the section describing the four facility types provides very specific flood protection perimeters and site-level constraints that fundamentally limit the feasibility of habitat improvements. We recognize certain segments of the corridor are constrained due to existing development. However, long-term, multi-benefit aspects of the environmental review should not foreclose potential opportunities to work through these challenges. For example, currently, many of the urban physical constraints are single-story commercial buildings or parking areas that contribute significant economic benefits to the regional economy but also limit opportunities to restore floodplain functions through a setback levee or similar treatment. Even though the economic value of these buildings today is tied to a single-story warehouse use, we should not foreclose the possibility that future land-use demand will change over the next 25 or 50 years. A local jurisdiction could potentially incentivize redevelopment of existing single-story (large footprint) structures into smaller-footprint, higher structures that maintain (or increase) local tax base, while also creating opportunities to restore or reconnect the floodplain over the long term.
4	7	5	State Agencies	Puget Sound Partnership, WA Ecology, WDFW, WDNR	2 b i	M			Permitting; Mitigation	Uncertain Regulatory Alignment, Permit Appeal Risk The PEIS lacks necessary analysis considering if the proposed alternatives are consistent with applicable regulatory programs. According to Ecology's SEPA Handbook, in defining a "proposal" it is necessary to determine what permits or approvals will be needed from state, local, and federal agencies. The Flood District should identify permits or approvals that will be required under each alternative, along with consideration of the degree of regulatory alignment between the proposed alternatives. Similarly, SEPA requires identification of mitigation that will be required by applicable development regulations under WAC 197-11-158 and 330(1)(c). However, the PEIS does not identify mitigation required under each alternative. Further, with a high likelihood of third-party appeal of decisions issued by local governments or state agencies for flood control structures, it is important for the Flood District to propose self-mitigating projects tied to a comprehensive flood hazard management plan, providing a sound basis for future regulatory decisions. In light of these factors, it is imperative the Flood District include multi-benefit projects that consider floodplain storage, salmon recovery goals including temperature TMDL implementation, treaty rights, facility lifecycle costs, and resilience to climate change in scoping the PEIS. The following section provides a brief synopsis of questions or concerns regarding potential inconsistencies between the PEIS alternatives and applicable regulatory authorities, including local/state/federal floodplain management requirements, the state Shoreline Management Act, the federal Clean Water Act and the Washington Water Pollution Control Act, and the State Environmental Policy Act.
5	1	1	Andrea H. Reay	Seattle Southside Chamber of Commerce	1 d i	A		New	Salmon habitat	In reviewing the proposed alternatives and actions proposed on the project website, we would like to encourage the District to not adopt a "one-size fits all" project plan but to use a balanced and pragmatic approach to ensure that flood protection is achieved while balancing environmental, economic and safety interests. Specifically, this would include a combination of all three alternatives, utilizing the best alternative for achieving the primary goal of flood protection, but also taking the opportunity to improve fish habitat within the corridor where those opportunities are cost feasible. We know that in partnership and through community collaboration we will be able to find the best protection for life and safety, as well as improve our environment for fish and wild life and eliminate any potential negative impacts to economic development and business growth.

Comment Catalog

Item No.	Comment No.	Page No.	Commenter	Organization	Subject	Concern	Notes	Alternative	Comment Summary	Comment Text
6	1	1	Marlla Mhoon, Bill Peloza	WRIA 9 Watershed Ecosystem Forum	2 b i	P		All	Salmon recovery goals	As the Puget Sound region weighs the "bold actions" necessary to reverse salmon and Orca declines, it must capitalize on this once in a generation opportunity to think and act comprehensively about the Lower Green River landscape, solve multiple challenges and leverage hundreds of millions of dollars in investments. WRIA 9 recommends the Corridor Plan holistically approach flood management in a way that integrates Chinook salmon recovery, economic development, recreation, and environmental justice. As the state and federally identified organization responsible for protecting and restoring salmon habitat in the watershed, WRIA 9 has analyzed the three alternatives identified in the November 26, 2018 PEIS scoping notice. The alternatives do not advance the multi-objective salmon recovery strategies supported by the WRIA 9 Salmon Habitat Plan, or committed to in the 2013 King County Flood Hazard Management Plan and 2014 Lower Green System-Wide Improvement Framework (SWIF) process.
6	2	1	Marlla Mhoon, Bill Peloza	WRIA 9 Watershed Ecosystem Forum	1 d i	A		New	Salmon habitat	WRIA 9 embraces the importance of the Lower Green levee system and supports making significant regional investments in flood risk reduction. WRIA 9 recommends the District integrate flood control and salmon recovery by evaluating a fourth alternative that reflects the multi-objective vision adopted by the District Executive Committee during the original SWIF. When the District decided to submit the pared-down Interim SWIF to ensure it retained temporary eligibility for PL-84-99 assistance, it stressed that the "broader objectives" of the SWIF stakeholders would be better achieved through a corridor planning process (FCS2016-05.2). WRIA 9 continues to support the District's commitment to a corridor planning process based on broader, multi-benefit objectives. The WRIA recommends the District-led PEIS review process consider a "fourth alternative" that embraces a multi-benefit framework. The attached draft Alternative 4 Map and Narrative, together with our written comments are intended to help inform development of an alternative that: • Integrates flood risk reduction and salmon habitat restoration consistent with established goals and policies; • Reflects salmon habitat restoration concepts for the Lower Green River that are supported by the cities and King County; • Makes substantive contribution towards achieving the salmon habitat goals established for the Lower Green Subwatershed; and • Ensures vegetation management and facility alignment support healthy riparian vegetation in high priority areas identified by the 2013 Muckleshoot Riparian Aspect Mapping.
6	3	3	Marlla Mhoon, Bill Peloza	WRIA 9 Watershed Ecosystem Forum	1 d i	P		All	Salmon recovery goals	The PEIS should comprehensively analyze the cumulative impacts of all proposed alternatives to meet the needs of the Green River Summer/Fall Chinook salmon population. Alternatives must be evaluated for their ability to achieve strategies and goals necessary for Chinook salmon recovery. The evaluation should include how alternatives will contribute toward and not preclude progress to achieve the following goals for the Lower Green River: • Off channel habitat: 5,039 acres of connected floodplain • Riparian habitat: 75% of the river bank vegetated to 165 feet • Woody debris: 1,705 pieces per mile • Bank armor: no new armor and decreasing total
6	4	3	Marlla Mhoon, Bill Peloza	WRIA 9 Watershed Ecosystem Forum	1 d i	A		New	Facility types (map)	To provide assistance for integrating salmon recovery, recreation, and water quality into alternatives, WRIA 9 developed and herein submits a "4th Alternative" (Attachments A and B) for PEIS evaluation. The intent of the Map and Narratives is to inform development of integrated alternatives for the Lower Green River that achieve flood protection, while also advancing salmon habitat restoration consistent with the WRIA 9 Salmon Habitat Plan. The Map uses the flood facility type language of the scoping notice. The Narratives on potential areas where multiple-benefit levee setback projects may be feasible.
6	5	B5	Marlla Mhoon, Bill Peloza	WRIA 9 Watershed Ecosystem Forum	1 d i	A	Attachment B	New	Salmon habitat	WRIA 9 urges the Flood District to consider an integrated flood protection and salmon habitat vision. The attached map and associated reach based narratives should help inform the Flood District's work to develop and analyze integrated alternatives that achieve flood protection, while also significantly advancing salmon habitat, recreation, and water quality. The map uses the flood facility type language (Type A facility, Type B facility, etc.) of the environmental review scoping notice, and the narrative focuses on potential areas where multiple-benefit levee setback projects may be feasible. We do not offer any recommendations related to level of flood protection, simply possibilities for optimizing habitat and other multi-benefit objectives waterward of potential flood facilities. The map and narrative are broken into reaches, with the narratives further broken out into right and left banks describing the potential multi-benefit project actions. Multi-benefit objectives include: - Increased channel and flood capacity, and associated decrease in water surface elevations - Creation of off-channel juvenile salmon habitat - Enhanced riparian function and improved water temperature/quality - Trail and recreation improvements Alternative 4 Map and Narratives are not a plan and do not identify specific projects. The setback ranges are conceptual estimates and will require analysis at the time of project development to determine feasibility. The lines on the map identify potential actions that, if taken over the next 50 years, would require full support of landowners, jurisdictions, and all other relevant authorities. The narratives describe the actions that, if taken, would meet multiple objectives for flood protection, salmon recovery, water quality, and recreation. We recommend that at the time of any individual project's development, the Flood District study the possibilities around optimizing a levee setback in terms of the objectives listed above and in conjunction with local shoreline master programs, irrespective of today's land use and adjacent property ownership. Setbacks could necessitate changes to the existing trail corridor as well as create new recreational opportunities. In locations where levee alignment proposals would impact existing recreational trails, implementation would be contingent on addressing recreational needs during project planning.
7	1	1	April Sta. Rosa	Kent Chamber of Commerce	2 b ii	I			Property impacts (businesses, housing)	As a business located near the Green River corridor, we provide the following comments regarding the PEIS for the Lower Green River Corridor Flood Hazard Management Plan. It is of highest importance that any alternative reflects the priority of protecting property - both commercial and residential - from the negative impacts of flood events. The Lower Green River has significant industrial and commercial facilities, including over 100 million square feet of warehouse and distribution space. It serves as the economic powerhouse of King County hosting numerous companies - including REI's corporate offices, Boeing, an Amazon Fulfillment Center, Blue Origin's corporate, engineering, manufacturing offices and a Starbuck's Roasting plant- in which over 100,000 employees work. Many of these employees live in highly-dense residential housing that would be impacted in the event of flooding.
7	2	1	April Sta. Rosa	Kent Chamber of Commerce	2 c v	A		All	Transportation impacts	Any alternative must also prioritize the protection of roads, bridges and other means of transport so that businesses can remain operational and ensure continuity of the supply chain where possible.
7	3	1	April Sta. Rosa	Kent Chamber of Commerce	2 b ii	I			Property impacts (businesses)	We support the construction of new and/or improved facilities that meet the 500-year level of protection along the greatest geographical extent of the river so that the potential impact to our business and our employees is minimized.
8	1	1	Rosella Mosby	King-Pierce County Farm Bureau	2 b vii	I			Agriculture impacts	Actions like the Farmland Preservation Program (FPP) and the designation of the Agricultural Production Districts (APDs) created continuous areas of land protected for farming. The work of the Agriculture Commission, program staff, and non-governmental organizations and residents continue to provide support that encourages farmers to farm and keeps farmland in production. Earlier alternatives for the flood hazard management plan sacrificed farms, such as Carpinito Farms, in the event of a flood. Using valuable farmland as flood storage, and the subsequent loss of the valuable topsoil when the flood receded, negates the purpose of the FPP, the APDs, and the Executive's Local Food Initiative, not to mention the County's residents' desire for local, fresh food. We support considering alternatives, as they preserve valuable farmland for future King County residents.
9	1	1	Michael Carpinito	Carpinito Brothers	2 b vii	I			Agriculture impacts	I have seen a flood management proposal that used our farm as flood storage, with setback levees placed around the outside of our farm. Such a proposal would subject our farm to irreparable damage. We would lose everything; topsoil, buildings, and the land left after the floods receded would no longer be arable or productive for farming. That proposal served to ensure a total loss of agriculture in the Lower Green River APD. I am pleased the PEIS alternatives properly account for agricultural interests and King County's resources. I appreciate the work you have put in to form a reasonable approach to reduce flood risk within the Lower Green River Corridor. I support Alternative No. 3, which provides the most protection of agricultural resources. I greatly appreciate that all three alternatives avoid sacrificing valuable farmland to designated flood storage. I would like to see some added protections in the Lower Green River Corridor, namely flood protections along Mill Creek and Mullen Creek.

Comment Catalog

Item No.	Comment No.	Page No.	Commenter	Organization	Subject	Concern	Notes	Alternative	Comment Summary	Comment Text
10	1	1	Myra Barker	WA Receration and Conservation Office	2 d iv	I			Recreation	There are numerous funded sites throughout King County and within Lower Green River Corridor. In the event the final proposal impacts any of these funded sites, please contact me so that we may determine if the proposed action will create a compliance issue. The RCO projects that may be impacted by the Lower Green River Corridor Flood Hazard Management Plan are listed below along with the respective project sponsor, grant project name and number, and a link to the grant project information.
11	1	1	Weston Brinkley	Urban Waters Federal Partnership		A		All	UWFP goals	After reviewing the materials provided we recommended that you please do not move forward with any of the Alternatives 1-3 as drafted. Each of the alternatives provided fail to work towards any of the five central goals of the UWFP: • Connect watershed recovery with local needs and priorities. • Promote cross-agency partnerships. • Reconnect people to their waterways. • Advance social equity, environmental justice, local economic development benefits. • Promote the multi-benefit opportunities generated by green infrastructure investments especially those framed by the health/nature nexus.
11	2	1	Weston Brinkley	Urban Waters Federal Partnership	2 b i	P			Policy objectives (WRIA 9, KCFHMP, SWIF)	The scope and scale of the Lower Green is too vast to be so heavily dictated by one particular use. In addition to failing to meet the UWPF goals, the alternatives provided do not advance the multi-objective salmon recovery strategies supported by the WRIA 9 Salmon Habitat Plan, or committed to in the 2013 King County Flood Hazard Management Plan and 2014 Lower Green System-Wide Improvement Framework (SWIF) process. As stated in the Flood Controls District's 2016 transmittal of the interim SWIF, the Board of Supervisors committed to integrate habitat and recreation objectives left out of the interim SWIF into a future corridor plan. This proposed PEIS is that future corridor plan, and yet these integrated objects are still absent in the alternatives.
11	3	2	Weston Brinkley	Urban Waters Federal Partnership	1 d i	A		New	Salmon habitat	Therefore, the PEIS should be amended to integrate specific goals and objectives related to habitat enhancements and salmon recovery; or a new fourth alternative, as requested by WRIA 9, State agencies, NGOs and others needs to be developed. When the District decided to submit the pared-down Interim SWIF to ensure it retained temporary eligibility for PL-84-99 assistance, it stipulated that the broader objectives of the SWIF stakeholders would be better achieved through a corridor planning process (FCS2016-05.2). Please strive to meet those broader objectives in a new alternative that: • Integrates flood risk reduction and salmon habitat restoration consistent with established goals and policies; • Maximize the number of levee setbacks to increase flood storage capacity and salmon habitat and more effectively manage floods; • Reflects salmon habitat restoration concepts for the Lower Green River that are supported by the cities and King County; • Makes substantive contribution towards achieving the salmon habitat goals established for the Lower Green Subwatershed; and • Ensures vegetation management and facility alignment support healthy riparian vegetation in high priority areas identified by the 2013 Muckleshoot Riparian Aspect Mapping.
11	4	2	Weston Brinkley	Urban Waters Federal Partnership		O	Administrative		PEIS process	Additionally, when a revised "Alternative 4" is delivered and as part of future processes, we strongly encourage the FCD to target specific outreach and genuine engagement of the many federal agencies that are key actors in the Lower Green River. Many relevant federal departments are unable to provide comment without explicit, official engagement. These alternatives lack input from critical stakeholders without this federal input.
12	1	1	Erin Cooper	FEMA Region X	1 d ii	O			ESA permitting	I have reviewed the Programmatic EIS documentation online for the Lower Green River project being led by the District and would like to ask for some clarification separate from providing official comment. We would like to know whether the District is seeking compliance with the Endangered Species Act (ESA) Biological Opinion through Army Corps of Engineers or through FEMA's National Flood Insurance Program. Given the nature of this project, ESA compliance will be required.
13	1	A1	Dow Constantine	King County	1 d i	O	Attachment A		Salmon habitat	King County and partners are making significant habitat investments upstream and downstream of the Lower Green Basin and a multiple-benefit plan is critical to realizing these investments. With an anticipated 50-year implementation period for the Corridor Plan, the Flood District's investment of potentially $500 million in the Lower Green River basin is an opportunity to establish a more resilient and environmentally productive approach to flood hazard reduction. Recent studies funded by WRIA 9 make clear that available rearing habitat is the limiting factor for Chinook salmon productivity in the watershed. Reestablishing off-channel rearing habitat in the Lower Green River Valley is critical to addressing the population bottleneck and ensuring that the benefits of other salmon recovery investments are realized. King County believes a multi-objective approach to floodplain management will reverse the negative long-term trend for salmon and shift towards measurable recovery.
13	2	A2	Dow Constantine	King County	2 b i	P	Attachment A		Policy objectives (KCFCD)	Both King County and the Flood District have broad flood hazard reduction responsibilities that call for a multi-benefit approach to flood protection. Multi-benefit objectives are specifically supported by the policies in the 2006 and 2013 King County Flood Hazard Management Plan. The policies included in the plan guide a PEIS process that results in multiple benefits including, but not limited to: flood hazard management, enhancing aquatic and riparian habitat in a manner consistent with adopted salmon habitat recovery plans, preserving open space in channel migration zones, protecting ecological value of floodplain and riparian corridors, and when feasible, enhancing or restoring ecological function and values. The policies are intended to "…provide general guidance for all of its floodplain management activities" and "…define the standard that is binding on cities, towns and special Flood Districts in King County." Policies applicable to the Corridor Plan include: •Policy G-3 - Comprehensive River & Flood Hazard Management: King County should provide comprehensive river and flood hazard management through the implementation of projects and programs that result in multiple benefits, including those created by meeting any or all of the following non-prioritized objectives, including (e) protect and, where possible, enhance aquatic and riparian habitat in a manner consistent with adopted salmon habitat recovery plans. •Policy G-4 – River and Flood Hazard Management Services: King County should provide river and flood hazard management services to reduce the risk of flood and channel migration hazards by preserving open space in flood hazard areas and channel migration zones. •Policy G-10 - Protecting Natural Functions & Values: King County shall protect flood storage, conveyance, and ecological values of floodplains, wetlands, and riparian corridors and, when feasible, should enhance or restore these ecological functions and values. Flood risk reduction strategies and projects should be coordinated on a river-reach scale with the salmon habitat recovery plans. •Policy G-6 – Inter-Government Coordination and Cooperation: King County flood hazard management activities should be planned and implemented in close cooperation with cities, counties, tribes, salmon habitat recovery planning partners and other agencies sharing jurisdiction in each basin. •Policy PROJ-6 - Flood Protection Facility Design & Maintenance Objectives: King County should construct new flood protection facilities and maintain, repair or replace existing flood protection facilities in such a way as to: (a) require minimal maintenance over the long term; (b) ensure that flood or channel migration risks are not transferred to other sites; (c) protect or enhance aquatic, riparian and other critical habitats; and (d) protect or enhance multiple beneficial uses of flood hazard areas. •Policy PROJ-7 - Flood Protection Facilities within Critical Areas Ordinance Aquatic Areas and Aquatic Area Buffers: Wherever possible, King County should relocate existing flood protection facilities farther from the river edge and associated buffers to increase flood conveyance and allow natural river processes to occur.

Item No.	Comment No.	Page No.	Commenter	Organization	Subject	Concern	Notes	Alternative	Comment Summary	Comment Text
13	3	A2	Dow Constantine	King County	2 b i	P	Attachment A		Policy objectives (SWIF)	King County supports the Flood District's vision for an integrated Lower Green River Corridor Plan that accomplishes multiple objectives as outlined in the July 12, 2016 and April 20, 2018 motions. While the November 28, 2018 scoping notice renamed the effort to a "Flood Hazard Management Plan," we recommend the Corridor Plan remain an integrated multi-objective plan as previously described. As a reach-wide flood hazard reduction planning effort, the Corridor Plan can apply a multi-benefit lens in evaluating alternatives for the Lower Green River as originally intended in the Green River System Wide Improvement Framework (SWIF). Maintaining these objectives in this process will enable a broad base of support for implementation and ultimately contribute to more permittable flood hazard reduction projects. In addition, these goals reflected the interests of diverse watershed partners and specifically called for integrating and making progress on issues such as water temperature and salmon recovery. SWIF goals we recommend be carried forward in the Corridor Plan include: •Integrated river and floodplain management - Reach agreement on an integrated list of multi-objective, prioritized projects and non-regulatory, programmatic actions that achieve the Green River SWIF's agreed to goals for level of protection from flooding. This integrated set of flood protection strategies and actions shall: (a) improve water temperature; (b) advance progress towards meeting salmon protection and recovery goals; (c) enhance open space, recreation, Treaty fishing, and public access; (d) support farmland protection, resiliency and productivity; and (e) reduce long-term facility maintenance costs. •Vegetation management - Develop shoreline and levee vegetation management recommendations to further the goals of the ESA, CWA, and Corps PL84-99 standards. •Ecological resiliency - Improve the ecological resiliency of the Lower Green River's aquatic and terrestrial habitats through implementation of the Green River SWIF's priority projects and non-regulatory, programmatic recommendations.
13	4	A4	Dow Constantine	King County	2 b i	I	Attachment A		Property impacts; Economics	Strategic land acquisition is essential to implementing a multi-objective approach to flood hazard reduction in the Lower Green Valley. Although there are considerable constraints to levee setbacks throughout the Lower Green, the Flood District can consider strategic property acquisitions on a case-by-case basis where such setbacks would advance multi-benefit objectives. The Flood District's October 8th Milwaukee #2 staff report acknowledges the importance of pursuing larger setbacks and states, "While Alternative 1 [alternative with largest setback] is the most expensive alternative, the substantial benefits seem to outweigh the cost. These benefits include: •Lower long term maintenance costs to the District. •Levee toe will require far less stabilization than a flood wall. •Provides habitat or ecological lift that can be used as off-site mitigation." The Corridor Plan would benefit from including policy language that supports voluntary land acquisition as a strategic approach to implementing multi-benefit projects. Similarly, the PEIS can analyze opportunities to acquire land to support increased levee setbacks. Given the anticipated 50-year planning horizon, the PEIS should assess the costs and benefits of a long-term acquisition strategy that would position the Flood District to acquire key parcels of land if/as willing sellers become known.
13	5	A4	Dow Constantine	King County	1 d i	A	Attachment A	All	Salmon habitat	We recommend the Flood District integrate aquatic habitat design features into its facility type cross-sections to better facilitate a multi-objective approach. The Type C levee setback facility cross-section is intended to portray a multi-benefit approach to floodplain management and should accurately reflect the types of salmon habitat features critically needed in the Lower Green River. The Flood District's Type C cross-section depicts bench habitat, but does not demonstrate how to maximize floodplain habitat riverward of the levee, including incorporating off-channel habitat. The Type C graphic also includes rock armoring at the toe, which is inconsistent with allowing lateral channel migration that supports increased aquatic habitat formation. We recommend additional Type C cross-sections that demonstrate the range of habitat opportunities, including incorporating a wall with a setback to further increase the area for habitat features. Provided for consideration in the PEIS are several examples in Attachment D. Constrained levee alignments (Type A and Type B facilities) preclude habitat opportunities for up to 50 to 100 years and cumulatively impact the watershed's ability to meet salmon habitat and water quality goals, including off-channel rearing habitat and riparian tree cover. The following comments reflect concerns with the scoping language used to describe these facility types: •The scoping language implies that Type B facilities are self-mitigating because of a larger footprint and opportunity to incorporate habitat features. Given that most proposed facilities would increase the level of protection (LOP) from 100-yr to 500-yr, they may not be considered self-mitigating by regulatory agencies and tribal governments. •Scoping language appears to provide unequal treatment of integrated objectives. The scoping language state that Type B shorelines could include funding for enhancing recreational facilities, however explicitly states that the Flood District will not undertake habitat enhancements that are not required as mitigation. As a multi-objective plan, we recommend the Flood District assess the benefits of exceeding minimum state and federal regulatory requirements. •The Flood District's cross-sections use walls for the protection of buildings and infrastructure in highly constrained locations, however flood walls could be used in less constrained areas to increase habitat area waterward of the flood facility. All alternatives should evaluate the potential to increase the space riverward of the facility for enhanced habitat features using flood walls. Attachment D offers a cross-section example.
13	6	A5	Dow Constantine	King County	1 d i	A	Attachment A	All	Salmon habitat	To meaningfully advance salmon habitat recovery in the Lower Green River, we recommend the Flood District update its three alternatives to better integrate multi-benefit approaches to flood hazard reduction management. The Flood District's three alternatives include up to 30 miles of new or improved facilities providing 500-year LOP with no substantive information on how these alternatives align with or advance salmon recovery and other multi-benefit objectives, such as improving water quality. The three alternatives need additional detail to facilitate meaningful evaluation/quantification of potential environmental impacts and/or habitat improvements. For example, in areas identified as a levee setback, it is unclear whether there is an associated salmon habitat benefit. The lack of detail makes it difficult to assess whether any of the three alternatives are likely to be permittable. We recommend evaluation of how the proposed alternatives align with the National Marine Fisheries Service approved Puget Sound Recovery Plan and delisting criteria. We also recommend the alternatives identify the mitigation necessary to offset unavoidable impacts to salmon habitat that would result from new facility construction, repairs, or ongoing maintenance.
13	7	A6	Dow Constantine	King County	1 c i	A	Attachment A	Alt 1	Water quality	Alternative 1 – No Action •What are the impacts associated with implementation of the Interim SWIF Vegetation Management Plan on salmon habitat, specifically as it relates to in-stream water temperatures? •The PEIS should analyze ongoing impacts of existing facility maintenance through the lens of ESA-listed fish species habitat, including water velocity, edge habitat complexity, off-channel habitat preclusion, and in-stream temperatures. •What are the implications of this alternative not satisfying the September 8, 2014 LOP goals agreed upon during SWIF or any system wide increase in LOP?
13	8	A6	Dow Constantine	King County	1 c i	A	Attachment A	Alt 2	Water quality	Alternative 2 – Moderate Geographic Extent of Increased Level of Protection •To what extent will the proposed 10.17 miles of Type A facilities limit riparian vegetation potential and associated shade in critical/high need locations identified on the Muckleshoot Indian Tribe's Riparian Sun Map and work underway through the Re-Green the Green program? •How will the alternatives affect agricultural drainage necessary to maintain current levels for agricultural operations? Additionally, the PEIS should assess how proposed drainage improvements can be implemented to provide parallel benefits to in-stream temperatures and salmon habitat.

Item No.	Comment No.	Page No.	Commenter	Organization	Subject	Concern	Notes	Alternative	Comment Summary	Comment Text
13	9	A6	Dow Constantine	King County	2 d vii	A	Attachment A	Alt 3	Facility types	Alternative 3 – Greater Geographic Extent with Increased Level of Protection, Integrated Habitat and Recreation, Agricultural Protection Facilities, and Habitat Restoration Project Partnerships Alternative •This alternative precludes many different multi-benefit projects in key locations by suggesting flood walls along the river (see Attachment C for potential levee setback locations). The PEIS should assess the lost opportunities associated with these floodwall locations. •The LOP exceeds the goals agreed upon during SWIF. One implication of changing LOP from 100 year to 500 year flood protection without providing significant setbacks is reducing the ability of juvenile salmon to reside/shelter in the Lower Green during periodic floods. What are the implications of this habitat reduction? •Although Alternative 3 includes more Type C setback facilities than Alternative 2, a concomitant increase in Type A and B facilities appears to offsets benefits of the proposed increase in setbacks. The PEIS should assess the implications of these tradeoffs for salmon recovery and water quality. •The PEIS should assess how the alternatives eliminate connectivity to existing floodplain areas, increases water surface elevations and impacts other connected floodplain areas (e.g. farms), potentially increasing flood risks. •Providing increased LOP throughout the corridor could alter long-term land use patterns and result in more people and infrastructure in high risk areas (e.g. Lower Green Agricultural Production District). The PEIS should assess the long-term implications of these patterns to salmon recovery, water quality, costs of infrastructure maintenance, etc. – particularly in the context of changing flow patterns projected from climate change. •The PEIS should evaluate whether the alternatives are permittable given the extent of new levees and floodwalls proposed.
13	10	A7	Dow Constantine	King County	2 d vii	A	Attachment A	Alts 2, 3	Flood control	Questions and Comments specific to both Alternatives 2 and 3: •Omits Downey Farmstead salmon recovery project, which provides both salmon and flood risk reduction benefits. •Counting existing 500-year LOP setback levees and floodwalls as future Type C setbacks (i.e., Reddington levee setback in Auburn and the Briscoe walls in Tukwila) overstates potential habitat benefits of proposed alternatives setbacks. •It is unclear if the alternatives are suggesting additional setbacks in locations that were previously setback (e.g. Segale mitigation, Boeing, Milwaukee #1). If there is no intent to set the current facility further back as part of increasing LOP, then it is unclear why such facilities should be described as new setbacks that imply increased habitat potential. •The PEIS should describe why a new Type B flood facility is proposed along Riverview Park and not a Type C facility along the road, which is more than 150 feet from the river. What is the proposed facility protecting? As shown, it appears a facility is being proposed for one bank of an island and that the facility might cut-off an existing side channel. •Language indicates that agricultural drainage improvements may be undertaken to maintain existing LOP. It should be noted that juvenile Chinook salmon have been found throughout the Lower Green Agricultural Production District (APD) and that typical agricultural drainage projects require mitigation due to impacts on salmon habitat. We recommend assessing a multi-benefit approach to drainage improvements and flood proofing that benefits both agricultural landowners and fish habitat, similar to projects described in the 2000 Army Corps of Engineers' Ecosystem Restoration Project (ERP).
13	11	A7	Dow Constantine	King County	1 d i	A	Attachment A	New	Salmon habitat	We recommend the Flood District develop and analyze at least one additional alternative that integrates flood protection with salmon habitat restoration, public safety, water quality, and recreation. The potential 50-year planning horizon for the Corridor Plan will alter the salmon recovery landscape in the Lower Green for generations. The PEIS would benefit from analyzing multi-objective alternatives that protect local communities while advancing the Green/Duwamish Salmon Habitat Plan. Such analysis would reflect the critical importance of the Lower Green for salmon recovery, and its potential to make a substantive contribution towards achieving the WRIA-approved habitat goals established for the Lower Green. Regional efforts are underway to accelerate coordination of investments to solve diverse floodplain challenges, increase community and ecological resiliency in the face of climate change, and serve a broad range of stakeholder interests. Nearly all of the salmon habitat projects envisioned in the Lower Green (e.g., Downey Farmstead in Kent) reduce floods risk through increased flood storage, reduced water surface elevations, and reduced height and costs of adjacent flood facilities. Furthermore, habitat projects that increase flood conveyance provide an additional factor of safety than just relying on flood facilities that are built to 3 feet above base flood elevation. Through the SWIF process, WRIA 9 identified approximately 80 potential locations suitable for an integrated approach to flood risk reduction and salmon recovery. Although not all of these locations are likely feasible, they provided information on the range of possibilities available in the highly constrained Lower Green River Valley. Since SWIF, additional locations for integrated projects have been identified (see maps and narratives in Attachments B and C). Alternative 2 and 3 propose the greatest length of Type A and Type B facilities, providing minimal opportunity to enhance salmon habitat. Additional alternatives should present a vision that increases the frequency of levee laybacks and setbacks, which provide opportunity to increase riparian vegetation and off-channel rearing habitat. We believe this is an important opportunity to create a comprehensive long-term vision, but recognize that individual project development and implementation can be rife with challenges. The Corridor Plan and associated PEIS should not preclude an integrated approach to flood risk reduction, but rather position the Flood District to capitalize on multi-benefit opportunities as land use shifts over the next 50 years.
13	12	A8	Dow Constantine	King County		I	Attachment A		Cumulative impacts	The PEIS should comprehensively analyze the discrete and cumulative impacts of all proposed alternatives. As the Flood District prepares its PEIS, we recommend the Flood District take this opportunity to comprehensively review the cumulative impacts of the Corridor Plan alternatives, as outlined it its April 20, 2018 motion. We further recommend the Flood District analyze each alternative with respect to the themes highlighted below. We provide questions and recommendations by theme for the analysis.
13	13	A8	Dow Constantine	King County	2 b i	M	Attachment A		Permitting; Mitigation	Permitting feasibility and regulatory alignment •Are the Flood District's alternatives and facility types permittable? Can this be assessed with the limited information provided? •How much mitigation will be required for each of the Flood District's alternatives and facility types? •For actions that require "off-site mitigation" (e.g. facility Type A), where will this mitigation be implemented? The PEIS should consider where within the historic floodplain these mitigation actions would take place. •Is habitat enhancement implicit within the Type C levee setback facility? If not, how will the Flood District assess the cumulative environmental impacts of proposed alternatives? •How are the alternatives permittable under the National Flood Insurance Program (NFIP) Biological Opinion with FEMA, especially for the areas covered under King County's response to the Biological Opinion? •How does increasing LOP meet the "no net loss of shoreline ecological function" standard in each jurisdiction's Shoreline Master Plan? •How does the Interim SWIF Vegetation Management Plan (2016) meet the "no net loss of shoreline ecological function" standard in each jurisdiction's Shoreline Master Plan relative to implementation of all the alternatives being assessed? •How do the alternatives impact the Green River as a "shoreline of statewide significance"? The PEIS should assess the consistency of the various Shoreline Master Programs, both individually and cumulatively, with state/county law and code, including protection of statewide interests over local interests and preservation of the natural character of the shoreline and the shoreline environment.2 •Can the alternatives meet zero rise and compensatory storage requirements? •Are the alternatives consistent with the mapped Channel Migration Zones and associated regulations? How will these hazards change over time relative to climate projections?

Comment Catalog

Item No.	Comment No.	Page No.	Commenter	Organization	Subject	Concern	Notes	Alternative	Comment Summary	Comment Text
13	14	A9	Dow Constantine	King County	1 d i	I	Attachment A		Salmon habitat	The November 28, 2018 scoping notice omitted "salmon recovery" from its list of "areas for discussion in the PEIS." We recommend that this topic be included in the analysis of all alternatives. •The Salmon Habitat Plan provides a blueprint for salmon recovery and outlines reach-specific strategies and goals necessary for advancing recovery. The PEIS should evaluate to what extent all the alternatives, including at least one additional multi-benefit approach, are consistent with the federally recognized Chinook Recovery Plan and the past, present and future regional investments in habitat improvements. •The Salmon Habitat Plan outlines specific long-term habitat goals for the Lower Green River. The PEIS should evaluate to what extent the proposed all the alternatives contribute towards (or detract) achieving the following 50-yr. habitat goals: o Off channel habitat: 5,039 acres of connected floodplain o Riparian habitat: 75 percent of the river bank vegetated to 165 feet o Woody debris: 1,705 pieces per mile o Bank armor: no new armor and decreasing total Given the magnitude of projected investment, it is expected that all viable Corridor Plan alternatives will make substantive contribution to advancing – and equally important – not preclude future progress towards these goals. •Recent studies conducted by the Washington Department of Fish and Wildlife (WDFW) find that juvenile rearing habitat capacity is a bottleneck for Chinook salmon productivity in the Green/Duwamish. To what extent do the proposed alternatives alter rearing habitat capacity and how is this projected to impact salmon productivity moving forward? •Water temperature is a key aspect of water quality for salmonids, and high water temperature is a limiting factor for the distribution, migration, health and performance of salmon. Summertime in-stream temperatures in the Lower Green River regularly exceed water quality standards established for Core Summer Salmonid Habitat. In recent years, temperatures have periodically exceeded the threshold for acute lethal impacts. The PEIS should evaluate how proposed facility alignment and ongoing maintenance (i.e., vegetation management) will impact in-stream temperatures and thermal stress levels experienced by salmon. •The Salmon Habitat Plan and the 2000 Ecosystem Restoration Project outline specific priority habitat projects in the Lower Green River sub-watershed. We recommend the PEIS identify those projects that would be advanced and those that would be precluded by the proposed alternatives. •Additional salmon recovery questions to be addressed include: o How the proposed alternatives affect the ESA delisting criteria for the Central/South Sound biogeographical region. o How Corridor Plan implementation of each alternative will impact increases and/or decreases in habitat quantity and quality. o Whether flood refuge area for juvenile Chinook salmon will be lost between existing LOP and proposed 500-year LOP, and if so, by how much? o How the impacts of new facilities will be mitigated, specifically the Type A facilities that will require off-site mitigation. The PEIS should evaluate both the availability of suitable mitigation sites and feasibility of meeting mitigation requirements within the Lower Green River basin.
13	15	A10	Dow Constantine	King County	1 d iii	I	Attachment A		Fish passage	Fish passage Recent research funded by WRIA 9 documented that non-natal tributaries in the Lower Green River subbasin provide important rearing habitat for juvenile Chinook salmon and that juvenile fish passage is an important consideration in flood facility design.3 Consequently, we recommend: •The PEIS assess fish passage constraints associated with existing flood protection facilities and the amount of floodplain tributary habitat that is precluded by barriers. More specifically, how do the alternatives impact juvenile fish passage/access to non-natal tributaries? We recommend the Corridor Plan address fish passage constraints associated with flapgates and culverts contained within flood facilities.
13	16	A11	Dow Constantine	King County	1 d ii	I	Attachment A		Salmon; orcas	Orca recovery NOAA and WDFW have identified the Green River Chinook salmon stock as among the most important stocks for Southern Resident killer whales.4 In addition, NOAA recently released a draft supplemental PEIS that examines an increased hatchery production alternative that would release an additional 2 million sub-yearling fish into the Green River. Given the existing juvenile rearing habitat bottleneck, we recommend the PEIS assess: •How the proposed alternatives and facility alignments impact efforts to increase Chinook salmon hatchery production and prey abundance for Southern Resident killer whales. •How the alternatives align with the Governor's Orca Taskforce Recommendations, specifically recommendation #1 to increase investment in the restoration and acquisition of Chinook salmon habitat areas that would provide the most benefit to Southern Resident Orcas.
13	17	A11	Dow Constantine	King County	1 c i	I	Attachment A		Water quality	Water temperature The Lower Green River corridor has limited existing canopy coverage—more than 50 percent of the river banks are devoid of trees within shading distance of the river. Current water temperatures in the Lower Green River regularly exceed water quality standards. Water temperatures in excess of these standards have been shown to delay adult salmon migration, increase disease exposure, reduce juvenile growth and survival, and result in mortality.
13	18	A11	Dow Constantine	King County	1 c i	P	Attachment A		Policy objectives (SWIF); Water quality	The 2011 Green River Temperature Total Maximum Daily Load (TMDL) Water Quality Improvement Report specifically states that the Lower Green River will not meet state standards and that ESA-listed species are likely to experience lethal temperatures if levees are required to be cleared of vegetation.6 The TMDL report also finds that until vegetation standards are changed, the Green River will not meet water quality standards. While standards were changed as part of the interim SWIF Vegetation Management Plan, those standards have many of the same shortcomings as the previous PL84-99 guidance from the ACOE. Consequently, we recommend: •The Interim SWIF Vegetation Management Plan be revisited to ensure the Corridor Plan supports a healthy riparian corridor that addresses elevated in-stream temperatures in the Lower Green. •The PEIS assess to what extent the proposed alternatives and facility types impact implementation of the TMDL. What are the projected impacts of the proposed facility types and the Interim SWIF Vegetation Management Plan (2016) standards on in-stream water temperatures? We recommend the PEIS analyze how much of the shoreline length will provide 150 feet of tree cover, as recommended by the 2011 Green River Temperature TMDL. •That all proposed levee alignments be assessed with respect to the Riparian Aspect Mapping effort conducted by the Muckleshoot Indian Tribe in 2013. The PEIS should reevaluate flood facility types and placement so as to not preclude the reestablishment of functional riparian habitat where they may be feasible – especially when proposed levee alignments intersect with "critical" or "high" potential shade areas. •Analysis of how all the proposed alternatives and facility types align the 2016 WRIA 9 Re-Green the Green Revegetation Strategy. •That Corridor Plan advance policies for facility design and vegetation that will lead to increased shade and habitat benefits over time in a manner consistent with goals in the TMDL. The first preference should be to maximize vegetation on site as part of capital project design, particularly in critical or high priority shade zones mapped by the Muckleshoot Indian Tribe, before seeking mitigation offsite.
13	19	A12	Dow Constantine	King County	1 c iii	I	Attachment A		Flooding	Flood risk reduction •By increasing flood protection to 500-year LOP, how do the risks to human safety and infrastructure change if there is a subsequent levee failure/breach? •We recommend the PEIS analyze potential impacts to adjacent lands that are not identified to receive an increased LOP. •Per earlier comment, evaluation should also detail whether increased LOP in areas without existing flood protection facilities will contribute to land use change that result in additional floodplain development and flood risks.
13	20	A12	Dow Constantine	King County	2 e iii	I	Attachment A		Tribal	Indian Treaty rights •How are the anticipated responsibilities related to the recent Supreme Court ruling regarding culverts being considered in this PEIS analysis?7 •How is government to government consultation with Indian Tribal governments for the purpose of integrating their treaty-guarantees being addressed in this process? •We recommend assessing the cumulative impacts to Treaty fishing rights and Treaty-protected fish habitat from co-implementation of the Flood Control District's flood hazard reduction program and FEMA's flood insurance program be assessed for all alternatives.
13	21	A13	Dow Constantine	King County	2 e iii	I	Attachment A		Tribal; Environmental justice	Environmental & social justice •What are the impacts of the alternatives on equity and social justice, specifically to low income residents and underserved communities along the river? •What are the impacts on Duwamish and other indigenous people, who do not have treaty rights through a federally-recognized Indian tribal government, but who nonetheless utilize the Green River floodplain for their traditional cultural practices (e.g. subsistence uses, ceremonial uses, etc.)?

Comment Catalog

Item No.	Comment No.	Page No.	Commenter	Organization	Subject	Concern	Notes	Alternative	Comment Summary	Comment Text
13	22	A13	Dow Constantine	King County	1 b iii	I	Attachment A		Climate change	Climate change resiliency Based on work done by the University of Washington's Climate Impacts Group, it is predicted that precipitation patterns in the Pacific Northwest will change, bringing warmer, wetter falls, winters, and springs. This will lead to more intense and frequent floods in the Green River.8 Meanwhile, hotter, drier summers will lead to slower flows and higher water temperatures in the river. •How will the alternatives in the PEIS account for anticipated future conditions as a result of climate change, considering 2018 IPCC projections and changes to flow patterns and temperature? •More specifically, we recommend the PEIS analyze alternatives based on their resiliency to climate change, considering expected increased summer temperatures, decreased summer low flow, increased winter floods, and loss of spring snowmelt.
13	23	A13	Dow Constantine	King County	2 b ii	I	Attachment A		Economics	Economics •The PEIS should evaluate the economic costs and benefits of the alternatives, including the impacts to economic development, property values, fisheries resources, and flood damage. •Evaluate the life cycle costs of the three proposed facility types, specifically ongoing repair and maintenance costs of the different facilities (e.g., flood walls versus setback levees). A levee setback will likely require less stabilization than a flood wall, requiring significantly less maintenance. •Evaluate the life cycle costs of all the alternatives, including the costs of acquisition, construction, and ongoing and future maintenance needs. •Evaluate the economic benefit/cost savings of undertaking integrated salmon recovery and flood risk reduction projects, versus the alternative of each interest investing separately.
13	24	A13	Dow Constantine	King County	2 b v	I	Attachment A		Recreation	Recreation •What are the impacts to recreation, including to the Green River Trail and natural lands along the Green River corridor, as a result of implementing the various alternatives? •We recommend the PEIS assess alternatives for opportunities to include a dual purpose flood hazard reduction project with a regional trail designed to meet the functional requirements, while also meeting shared-use path design standards regarding paved width, shoulders, clear zones, etc. The goal is that these projects optimize maximum public benefit by leveraging every opportunity to extend the Regional Trails Network. •How will the various alternatives (and their unique suite of proposed projects) integrate with existing and future segments of the Green River Trail? Early and frequent engagement with partner agencies (e.g., King County Parks, etc.) during the development of these alternatives will best ensure this integration. •King County Parks is currently pursuing a feasibility study to identify a preferred alignment for extending the Green River Trail south from its terminus in Kent, just past river mile 26, to Auburn and looks forward to working with the Flood Control District to integrate this effort with any proposed projects in this area.
13	25	A14	Dow Constantine	King County	2 b vii	I	Attachment A		Agriculture impacts	Agriculture •What is the impact to the Lower Green APD from increased LOP? Evaluate whether additional protection will increase likelihood of future development and reduction of total agricultural acres in the APD. •We recommend a multi-benefit approach to agricultural drainage improvements in the Lower Green APD to reduce flood risks associated with the proposed alternatives and at the same time, provide benefits to both agricultural landowners and fish habitat. •How would drainage improvements in the APD impact juvenile salmonids that have been found in the creeks and drainages throughout the APD? •Analyze the permittability and cost-benefits of flood proofing agricultural infrastructure versus protecting with a new levee facility. •We recommend working collaboratively with agricultural landowners to assess and implement flood proofing and drainage projects in the APD that help protect and preserve King County's farmland.
13	26	B1	Dow Constantine	King County	2 d vii	A	Attachment B	New	Flood control; Salmon habitat	Attachment B is a map with alternative flood facility types, with the same facility types used by the Flood District in alternatives 1-3. For clarity and completeness, we added one additional category, "No flood action," denoted by a dotted pink line. This is proposed in locations where existing facilities already meet 500-year LOP and in locations where we do not recommend a new or improved facility. The map is broken into numbered reaches, which correspond to the narratives in Attachment C. The map offers potential locations where setbacks could be considered; we do not offer any recommendations related to LOP, simply possibilities for optimizing habitat and other multi-benefit objectives riverward of the facility.
13	27	C1	Dow Constantine	King County	2 d vii	A	Attachment C	New	Salmon habitat; Recreation	[illegible] a levee setback, to optimize space for habitat and recreation. Maps and narratives were developed in coordination with WRIA 9 and in consultation with city staff and elected leaders in the Lower Green valley. The reach-by-reach narratives identify potential right and left bank actions that could achieve multiple benefits, including: •Increased channel and flood capacity, and associated decrease in water surface elevation; •Creation of off-channel juvenile salmon habitat; •Enhanced riparian function (e.g. shade, prey production) and improved water temperature/quality; and •Trail and recreation improvements. Any setbacks noted in the map and associated narratives are considered "potential" actions and require a willing landowner and local land use approval. We recommend that at the time of any individual project's development, the Flood District study the possibility of optimizing the levee setback for all of the objectives listed above, irrespective of today's land use and adjacent property ownership. With a 50+ year planning horizon, land use and ownership along the Lower Green River corridor will not remain static. We encourage the Flood District to consider adopting a policy that provides flexibility in the future to adapt to changing economies and land uses to take advantage of multi-benefit project opportunities as they arise. Such a policy would ensure that choices made today do not foreclose future habitat restoration opportunities.
13	28	D1	Dow Constantine	King County	2 d vii	A	Attachment D	All	Flood control; Salmon habitat	Attachment D includes two alternative cross-sections for Type C levee setbacks that demonstrate ways to maximize floodplain habitat riverward of the levee, including incorporating off-channel habitat (see Levee Setback with Aquatic Habitat). We have removed the rock armoring at the toe, as shown in the Flood District's Type C cross-section, to allow for lateral channel migration that supports habitat formation. The second cross-section demonstrates how flood walls (either one or two) could be incorporated into a levee setback to maximize the space riverward of the facility for enhanced habitat features (see Flood Walls to Maximize Habitat Riverward of Levee).
14	1	1	Lisa Herbold	City of Seattle Councilmember	1 d i	A		All	Salmon habitat	However, after careful review, we have determined none of the three proposed alternatives meets the balanced goal of addressing flood risk while also improving habitat for juvenile Chinook salmon in the Lower Green river.
14	2	1	Lisa Herbold	City of Seattle Councilmember	2 b i	P			Policy objectives	All three proposed alternatives are inconsistent with: a. goals and policies of the 2005 WRIA 9 Salmon Habitat Plan "Making Our Watershed Fit for a King," b. Governor Inslee's 2018 Southern Resident Orea Task Force Recommendations; and c. stated multiple benefit objectives contained in District documents.
14	3	1	Lisa Herbold	City of Seattle Councilmember	1 d i	A		New	Salmon habitat	The scope needs to evaluate the full range of alternatives, including a fourth alternative with a higher percentage of floodplain restoration as a priority flood management technique. We request that the District develop a fourth alternative using the information provided in the WRIA 9 Salmon Habitat Plan, as well as the information contained in the technical comments and map sent with the WRIA 9 Watershed Ecosystem Forum's comment letter of February 21, 2019.
14	4	2	Lisa Herbold	City of Seattle Councilmember	2 e iii	I			Community impacts	Seattle supports protection of infrastructure and communities, and strongly believes this can be done while helping to meet the multi-benefit goals. We are also very concerned about the potential impacts of these three proposals that could result in increased flooding down river, in the diverse and lowerincome Duwamish communities of South Park and Georgetown; the former being a community in the Seattle City Council District that I represent. I know that you agree that solutions must be mindful of impacts on the environment and all our communities. Failure to take this approach would result in potential cost beyond infrastructure loss, lost opportunity for our communities and region, lost treaty rights, and lost salmon production and protection of our Orea population.

Comment Catalog

Item No.	Comment No.	Page No.	Commenter	Organization	Subject	Concern	Notes	Alternative	Comment Summary	Comment Text
14	5	A1	Lisa Herbold	City of Seattle Councilmember	1 d i	P	Attachment		Policy objectives; Salmon habitat	1. The Flood Control District recognized the value of including habitat restoration among other public benefits in FCD Motion FCD18-01 Section 1, which states the goals and purposes of the Lower Green River Corridor Plan are to provide an "integrated and long-term approach to reduce flood risks" while balancing multiple objectives including environmental protection. It also states the intent of this integrated approach includes habitat restoration, salmon recovery, water quality and equity and social justice. Improving fish habitat is specifically mentioned in the last sentence of this section. Furthermore, the fourth WHEREAS line 22 references Resolution FCD2016-05, which stated a future SEPA EIS should include analysis of reasonable alternatives to accomplish multiple objectives including salmon recovery, water quality, habitat restoration and equity and social justice. The current proposal falls short of these goals.
14	6	A1	Lisa Herbold	City of Seattle Councilmember	1 d i	I	Attachment		Salmon habitat; Fish passage	2.The Green/Duwamish River is already one of the most challenging river systems for bull trout, chinook salmon and steelhead due to existing flood protection structures, bank hardening, passage/migration barriers, and land use types within the basin. The proposed alternatives for adding additional flood walls would put further stresses in place that will impact the entire watershed system.
14	7	A1	Lisa Herbold	City of Seattle Councilmember	1 d ii	A	Attachment	All	Salmon; Orcas	3.The EIS analysis needs to show how the alternatives meet the stated purpose of "an integrated and reasonable long-term approach to reduce flood risk ……while balancing multiple objectives within the study area" including "improving fish habitat." (https://www.lowergreensepa.org/). Furthermore, the analysis must show how the alternatives are consistent or inconsistent with the ongoing Endangered Species Act (ESA) aquatic species restoration programs at the federal, state and local levels including Chinook salmon and the Southern Resident Puget Sound Orca recovery efforts. 4.The PEIS must analyze the full impact on all ESA-listed species, and specifically how the alternatives may alter in-stream habitats, water temperature, water quality and current floodplain connections. To assist in getting a complete understanding of the potential impacts from the PEIS alternatives, the analysis should extend well upstream and downstream of the Lower Green River in order to determine the full extent of the impacts the proposed alternatives will have on the hydraulics, water quality (e.g., water temperature, sediment transport, dissolved oxygen, etc.), and geomorphology with an emphasis on Chinook and steelhead habitat (e.g., rearing, spawning, migration, holding, etc.).
14	8	A1	Lisa Herbold	City of Seattle Councilmember	2 d vii	A	Attachment	Alt 1	Facility types	5.There is a significant issue with the proposed alternatives in the PEIS - there is not a full range of alternatives in this proposal. First, the No Action Alternative 1 is not a true "no action" since it includes adding an additional 2 miles of flood facilities. Therefore it cannot be used as a baseline because it may have significant negative impacts on the aquatic resources (biological, chemical, physical). The No Action alternative should be replaced with a true no action (no additional levees, revetments, or hardened banks, etc.) to provide a baseline to compare the other alternatives against.
14	9	A1	Lisa Herbold	City of Seattle Councilmember	1 d i	A	Attachment	New		We also recommend creating a 4th Alternative as based on the WRIA 9 Watershed Ecosystem Comment letter, technical comments and maps of February 21, 2019, to include a true multi-objective approach of adding a variety of setbacks and additional floodplain to serve as places for the river to expand and also create salmon habitat. There have been many successful such floodplain restoration projects throughout Puget Sound that address flood management, habitat restoration and public access.
14	10	A2	Lisa Herbold	City of Seattle Councilmember	1 c i	I	Attachment	All	Water quality; Salmon habitat	6.The analysis of the PEIS should clearly show how the alternatives are or are not meeting the requirements under the Clean Water Act and Washington State Water Quality standards (e.g., 303 d list, dissolved oxygen, water temperature, bacteria, etc.). The possible impacts to water temperature both within the project area and downstream should be evaluated to determine the impacts on ESA-listed salmon rearing/holding habitat and migration (smolt and spawning). The analysis needs to determine if there are any impacts on timing of smolt outmigration and adult spawning migration due to changes in water temperature. The secondary impacts from stormwater drainage on water quality and quantity impacts on ESA species also should be analyzed. 7.The Lower Green River is a migration corridor for ESA-listed species. The PEIS needs to include a hydraulic analysis (e.g., HEC-RAS, FLO-2D, etc.) to determine the water velocities and depths to compare with rearing, spawning and migration habitat requirements and swimming criteria for ESA-listed species. Predation on ESA species can cause a significant loss in the population. The PEIS needs to look at how the alternatives change the amount of predator (e.g., native sculpin) habitat (rock-hardened banks) for each alternative. The analysis also needs to look at changes in predation avoidance by ESA species for each alternative.
14	11	A2	Lisa Herbold	City of Seattle Councilmember	1 d i	I	Attachment		Flood control; Salmon habitat	8.Due to the possible downstream impacts of the floodwalls proposed in each alternative and the high importance of the upper end of the tidal zone between mile 11 and 12 to chinook and steelhead, it is important to analyze how each alternative will impact the chinook salmon and steelhead within river mile 11 and 12.
14	12	A2	Lisa Herbold	City of Seattle Councilmember	1 d iii	I	Attachment		Fish passage	9.The PEIS must include discussion of any possible impacts on fish passage to tributary channels for each alternative. The analysis must look at fish passage seasonally, including summer flows (access rearing habitat), winter flows, and flood flows (refugia), to determine any changes in access.
14	13	A2	Lisa Herbold	City of Seattle Councilmember	1 d i	I	Attachment		Vegetation	10.The PEIS needs to evaluate the impacts to the riparian vegetation and changes to shade per alternative. This should include looking at changes to the riparian area tall plant density, canopy cover and organic inputs into the aquatic system, and any resultant possible changes to water temperature and food production (macroinvertebrate, primary production) as it relates to impacts on ESA species.
14	14	A2	Lisa Herbold	City of Seattle Councilmember	2 d vii	I	Attachment	Alt 2, Alt 3	Flood control	11.The extensive addition of new levees as proposed in the second and third alternatives , and the subsequent permanent loss of connectivity between the main channel and its floodplain. The third alternative which does include some restoration and protection would not replace what would be permanently lost with the addition of the new levees.
14	15	A2	Lisa Herbold	City of Seattle Councilmember	1 d i	I	Attachment		Flood control; Salmon habitat	Seasonally inundated floodplain habitat is lacking in the Lower Green. The rest of our comments focus on a discussion of the importance and value of floodplains and wetlands systems for Chinook salmon, and include multiple references to scientific documents which are listed following the comments. We hope this will be helpful. The cited research demonstrates the importance of seasonally inundated floodplain habitat for the growth and survival of juvenile Chinook salmon, particularly during their first year, along with protection of life stage diversity, and prey density. Much of the research comes from the Yolo Bypass, which is the primary floodplain remnant of the Sacramento River, originally installed to bypass floodwater around the city of Sacramento. The literature emphasizes the importance of restoring the connectivity between a river and its floodplain (even if the river is regulated), and the importance of protecting what remains.
15	1	1	Rick Minutoli		2 b v	O			Recreation	1. Make it a recreation focused project rather than a flood control first project. 2. Make year around public access and recreation the priority.
15	2	1	Rick Minutoli		2 d ii	O			Public services	3. Public Safety must be a design criteria. Poor public safety planning now will incur costs later for the City of Kent and limit public access due to crime and other concerns. 5. Direct access to the river must be planned. Recreation access to the river must be planned. Public safety access to the river must be planned. Maintenance along the river bank must be planned.
15	3	1	Rick Minutoli		2 d v	O			Public services	4. Plan a systematic maintenance plan for each area along the riverbank. If maintenance plans are not built in now, it will not occur later as demonstrated in prior joint projects. The lack of maintenance drives positive usage out and destroys expensive restoration and habitat as per other joint prior projects.
15	4	1	Rick Minutoli		1 d i	M			Salmon habitat	6. Restored habitat must be protected in a cost effective manner after the project is complete!
16	1	1	Karen Spencer		2 b ii	A		Alt 2	Alternative preference	I prefer Alternative 2 - it seems comprehensive without being the most expensive. I live in the Kent Lakes area, and the water table has been high for the last two years. The projects you propose in Alternative 2 look promising for businesses, residents, and travelers through the valley.
17	1	1	Peggi Lewis Fu	NAIOP	2 d vii	I			Flood control	The primary objective of the Lower Green River Corridor Flood Hazard Management Plan is to allow King County to assure flood control necessary to meet FEMA requirements. Flood risk modeling conducted in 2014 estimated the present value of flood damage and economic impacts over the next 50 years at $1.1 billion. The secondary objective is to provide environmental protection.
17	2	1	Peggi Lewis Fu	NAIOP	2 d vii	A		All	Support for alternatives	NAIOPWA supports the three Alternatives presented by the King County Flood Control District: • Alternative 1: the "No Action Alternative" is required by SEPA in order to provide a benchmark to objectively evaluate and compare the "action" alternatives. It would include completing existing projects adopted in the 2018-23 capital improvement program. • Alternative 2: the "Moderate Geographic Extent of Increased Level of Protection" Alternative would include 3 miles of new levees and improvements to 17 miles of existing levees. • Alternative 3: the "Greater Geographic Extent with Increased Level of Protection, Integrated Habitat and Recreation, Agricultural Protection Facilities, and Habitat Restoration Project Partnerships" Alternative is the same as Alternative 2 with the addition of 10 miles of new levees and 2 miles of non-structural improvements. Incentives to provide habitat restoration could also be provided.

Comment Catalog

Item No.	Comment No.	Page No.	Commenter	Organization	Subject	Concern	Notes	Alternative	Comment Summary	Comment Text
17	3	2	Peggi Lewis Fu	NAIOP	2 d vii	A		New	Flood control	Some have suggested a new Alternative 4, which prioritizes fish habitat over flood control. This includes purchasing urban land and buildings to provide for fish mitigation projects, rather than assuring protection of the Lower Green River valley, including a levee system that will meet FEMA 500-year flood level standards. We respectfully request that the District reject the addition of a fourth Alternative, as it does not prioritize flood control. We also encourage the County to include only alternatives that reasonably meet the primary objective of flood control, and to acknowledge the myriad fish mitigation opportunities within those existing Alternatives 1, 2 and 3.
17	4	2	Peggi Lewis Fu	NAIOP		O			Economics	Additionally, NAIOP is concerned about adequate funding for any of these Alternatives. We respectfully request a funding summary to demonstrate how implementation of one of the proposed approaches will be realistically achieved.
17	5	2	Peggi Lewis Fu	NAIOP	2 b ii	A		All	Property impacts (businesses)	Finally, we recommend the PEIS analysis assume Alternative 1 is used in already-developed urban environments to avoid negative impact to existing businesses, and a blend of Alternatives 1, 2 and 3, may be used elsewhere, depending upon adjacent land conditions.
18	1	1	Allan Ekberg	City of Tukwila	2 b i	O			Corridor planning efforts	There is a tremendous amount of work and energy currently going into improving and restoring the Green-Duwamish River corridor, which should be synchronized with corridor planning efforts: • Aided by the Flood District and Federal and State salmon recovery and community resiliency funds, WRIA 9 and its member jurisdictions have invested millions of dollars restoring salmon habitat in the Green-Duwamish River, in accordance with the science-based WRIA 9 Salmon Recovery Plan. • The long-awaited Lower Duwamish Waterway cleanup is nearing implementation. • In June 2018, the US Supreme Court upheld the recent injunction on the state to remove fish barriers associated with highways, validating the Boldt decision and the treaty rights granted to Tribes to fish in their usual and accustomed places. • In November 2018, the Governor's Southern Resident Orea Task Force issued its final Report and Recommendations, identifying the lack of Chinook prey availability as a key threat, citing that habitat loss and degradation arise from the "effects of urbanization, ... (rivers being) straightened, diked and cleared of complex habitat features" (p. 17). The report called for increasing Chinook abundance "by restoring and acquiring salmon habitat and food sources" as goal number 1. • In February, The Army Corps of Engineers received the final Biological Opinion from the National Marine Fisheries Service (BiOp) mandating the creation of fish passage at Howard Hansen Dam by the year 2030.
18	2	1	Allan Ekberg	City of Tukwila		A		New	Alternative preference	Upon review of the information provided in the Flood District's PEIS scoping document, we have determined that the integrated, multi-objective framework that was presented in the scoping document is not reflected well in the three alternatives, and does not address goals related to important issues such as community resiliency, species recovery and quality of life. We encourage the District to consider and evaluate at least one additional alternative - a 4th alternative - with a true multi-objective approach that contributes to safer, healthier and sustainable communities that are integrated with the landscape and the environment that is uniquely Pacific Northwest.
18	3	1	Allan Ekberg	City of Tukwila	2 b i	P		New	PEIS process; Related projects	The PEIS process should: 1. Define and follow through on a multi-objective and integrated approach that considers objectives related to flood protection, community resiliency, public safety, salmon habitat restoration, and water quality, among others. 2. Honor the legal framework provided by Tribal treaty fishing rights, the Endangered Species Act and the Clean Water Act. 3. Dovetail and be coordinated with efforts including: a. The goals and policies described of the latest version of the WRIA 9 Salmon Habitat Plan b. Governor Inslee's 2018 Southern Orea Task Force recommendations c. King County's Land Conservation Initiative d. Fish passage at the Howard Hanson Dam e. Fish barrier removal efforts by the State f. Department of Ecology/Floodplains by Design efforts
18	4	1	Allan Ekberg	City of Tukwila	2 d vii	I			Flood control; Property impacts	4. Consider expanding on the concept presented in project type C, which has some potential to meet multi-objective framework goals in certain locations. As such, the District should consider the construction of floodwalls instead of backslopes, and the acquisition of additional property to allow for the construction of setback levees. (see Figures 1 & 2). Acquisition through eminent domain should also be used for habitat purposes when appropriate.
18	5	1	Allan Ekberg	City of Tukwila	1 c iii	I			Flooding	5. Expand the study area and scope to include all areas of the Duwamish River that may be subject to current or future riverine flooding . The projected 500-year floodplain and sea level rise should be mapped to determine the extent of flooding within the Duwamish River and the project limits adjusted to include those areas.
18	6	1	Allan Ekberg	City of Tukwila		O			Economics	6. Examine costs and funding mechanisms for implementation.
19	1	1	Roxy Hill		2 b ii	I			Property impacts (housing)	Due to the large senior population in the downtown and central Kent, SHAG and other property management companies need to prep their building managers and residents in case of a flood. But without some kind of directive from King County they most likely won't.
20	1	1	Christine Marshall		2 b ii	I			Property impacts (housing)	We have a levee directly behind our homes that was imposed on us several years ago. The Type A levee causes several stresses on homeowners, including only twice a year maintenance from the city which means 3 foot grass on a steep hill directly behind our homes that becomes a fire hazard in the summer and is now the only view from our living room windows. It also allows a constant flow of walkers that supposedly only authorized personnel are to use. The paved pathway along the river is far enough away that it causes little problems for us but now with the levee it means that on a daily summer basis hundreds of people are within 15 feet of our patio and windows. This option, when considered near housing should be scraped and redesigned. As aging homeowners it will not be long before we can no longer cut back this very steep hill ourselves. If this is going to be mandatory than monthly trimming should also be mandatory in the growing season.
21	1	1	Peter Tenerelli		1 d i	I			Salmon habitat	Please, please, please clean the Green River and Mill Creek channels. Stop putting artificial fish habitat logs in the river. Prioritize your thinking to PEOPLE FIRST then FISH not the other way around. Fish have survived floods, muddy water, volcanos, over 80 feet of alluvium from Mt. Rainier to Puget Sound over the centuries and they will survive whatever nature "provides" in the future; however, people won't! Until I see Mill Creek channel being cleaned out and some attempt to clean the overgrowth in and around the Green River channel I won't take seriously the County Politician's or Engineer's words about what they plan for us, the people - period! Thank you for this opportunity to have some input....and for the record I can remember as a child not being able to easily get to my uncle's house in Covington from our home in Seattle because of flooding in Kent before Howard A. Hanson Dam was built in 1961 and I was a construction supervisor in the building the updated levees for the City of Kent in the 2000's. Respectfully submitted.....
22	1	1	Joan Crawford		1 c iii	O			Flood map	Glad you said what that it was a "FLOOD RISK MAP' as I would not known. I am in the Flood Risk? Could not tell from that so call map? Thanks, Joan C.
23	1	1	Deborah A. Miller		2 d vii	A		New	Flood control	[illegible] with drainage; Underground water pump; Water evaporation; Water turbine; Water vacuum river boat; Sea walls; Windmills
23	2	2	Deborah A. Miller		2 d vii	A		New	Flood control	Water domes built over river so not so much water can get out; But then where will walls go; Dams [illegible] ; What soaks up water a mop [illegible]; [illegible] algae water plants sponge
23	3	3	Deborah A. Miller		2 d vii	A		New	Flood control	Flood control; Water evaporation; Vacuuming river boats; Water domes over river to keep water out; High sea wall
24	1	1	John Oliver		1 c iii	A		Alt 1	Alternative preference	It is difficult to see why one would choose Alternative 2 or 3. What are the likelihoods in a given year that either would be necessary? What are the ramifications of not having them? What is the cost? What would the cost of insuring against damage be instead of Alternative 2 or 3. In the absence of said info, I would go with Alternative 1. While I live in Covington, I work near Ikea.
25	1	1	Josh Walker		1 c iii	A		Alt 3	Alternative preference	I believe option #3 is the best way to go. Our office building in Kent has been flooded 3 times over the last 25 years. We want to do everything we can to prevent the devastation of floods

Comment Catalog

Item No.	Comment No.	Page No.	Commenter	Organization	Subject	Concern	Notes	Alternative	Comment Summary	Comment Text
26	1	1	Marla Ballentine		1 d i	A		Alt 3	Alternative preference	In my view of the alternatives presented, Alternative 3 contains the best plan to both protect manmade infrastructure as well as attempting to preserve natural habitat which in my mind is absolutely necessary. I am guessing this is the most expensive choice monetarily, but environmentally, it is the only choice. I do not live in an area of Auburn that typically floods thanks to the protection of a strong levee system. I do live close enough to the Green River to enjoy visits from herons, ducks, geese, raccoons etc and I don't want to change that!
27	1	1	Shannon Snyder		2 d vii	O			Flood map	I notice there are 2017 maps that show a levee seclusion area. When are those maps going to be effective?Second, after the project with the Corp of Engineers is complete, will the Levee be accredited?
28	1	1	Chad Lester			O			Flood insurance	1. I'm wondering if there is a non-private flood insurance option for the Green River Corridor? What are our options for flood insurance?
28	2	1	Chad Lester			A		Alt 3	Alternative preference	2. I am strongly in favor of Alternative 3.
28	3	1	Chad Lester		2 d v	I			Economics; Maintenance	My primary concern is: What are the long term maintenance costs? American municipalities tend to build more infrastructure than they can afford to maintain. I think we must consider long term maintenance costs. Generally speaking, it is better to pay more up front for longlasting high-quality infrastructure that will stand the test of time than compromised projects that will drown future generations with maintenance costs. If you build it, then build it right. Lastly, If new levees are built—we should not allow developers and residents to develop a false sense of security. We want to avoid a Maginot Line sense of false safety.
29	1	1	Keven Bechen		2 d vii	O			Flood control	I live in a house just on the side neer green river, our street connects directly to three mall in kent but our side has no drainage for the streets, even in slight rain we get large pools of water build up that can last long periods of time. We need some sort of street drain system in place with our proximity to the river.
30	1	1	Kristie Duggan		2 b v	O			Recreation	Your current plan of keeping the park and people away from the river prevents us from seeing and feeling a part of the environment. We have had many group parties there and it would be a shame to loose that. the river is the reason to be there, otherwise it is just another green space.
31	1	1	Christine Fairchild		2 d vii	O			Economics	Of course, we all want the best and greatest flood protection possible, for as many as possible. I find the information provided is too technical... and it doesn't answer any of my questions? How will any of these changes improve my flood protection? How much will it cost? Who will pay for it? How do we compare?
32	1	2	Jennifer Quan	National Marine Fisheries Service	1 d i	I			Salmon habitat	After reviewing the Flood Control District's 2018 PEIS, NMFS is concerned that the stated alternatives provide flood management risk analysis, but do not integrate objectives or actions that would support improvements to the environmental conditions necessary to recover ESA-protected species and their critical habitats. We recommend that additional analysis be conducted, and additional alternatives be developed, to include the multi-objective approach, so that actions that provide the necessary flood risk reduction also improve environmental conditions critical to the survival of our region's iconic and important ESA-listed species.
32	2	2	Jennifer Quan	National Marine Fisheries Service	1 c i	I			Water quality; Salmon habitat	We reiterate below those comments that from NMFS perspective would be essential to a multiobjective approach. • An "integrated and long term approach to reduce flood risks" while balancing multiple objectives including environmental protection including habitat restoration, salmon recovery, and water quality. Habitat and water quality protection should consider stream temperatures, stormwater input and toxicity, habitat connectivity, critical flow management (necessary for redd scour reduction, effects on stream temperature, habitat connectivity, adult and juvenile salmon migration, spawning and rearing habitat), and shoreline vegetation.
32	3	2	Jennifer Quan	National Marine Fisheries Service	2 d vii	A		Alt 1	Flood control	• A range of alternatives that address levee setbacks and create additional floodplain areas restoring habitat necessary for salmonid survival. As already mentioned in technical comments provided by interested agencies, the "No Action" alternative is not a true "no action". The proposed alternative includes actions that will negatively affect the stream and riparian environment and should be reconsidered to include a true "no action" alternative to provide an accurate baseline for action alternative comparisons.
32	4	2	Jennifer Quan	National Marine Fisheries Service	1 d i	I			Water quality; Habitat	• Water quality and habitat analysis for the estuarine environment that clearly identifies impacts resulting from flow alterations and water quality degradation. • Clearly indicate how the proposed actions will result in a minimum of "no net loss" of habitat including physical habitat structures, water quality, stream temperatures, habitat connectivity, and impacts to benthic biological communities (ensuring high quality habitat for benthic organisms which provide a forage base for juvenile and adult fish).
32	5	3	Jennifer Quan	National Marine Fisheries Service	2 b ii	I			Economics; Property impacts	• Include a cost-benefit analysis for the acquisition of additional lands for floodplain enhancements to be held in perpetuity.
32	6	3	Jennifer Quan	National Marine Fisheries Service	2 d vii	I			Water quality	• Consider shoreline softening opportunities to improve riparian area-to-groundwater and stream interactions, to further improve water quality and habitat.
33	1	1	Stephanie Thurston		2 d vii	A		Alt 2	Economics	I am wondering what the cost implications of each of these alternatives? Depending on those factors, I currently think that alternative 2 would be what I would most support. It provides some planning and insurance for the future without going too far.
34	1	1	Michael Kosa			O			PEIS process	I have reviewed the provided documents. I am generally positive toward flood protection. However, with levees that require more than 150' setbacks, it is difficult to determine how large the affected area would be. Without the extents of the project identified, it is not possible to complete a valid SEPA process. The information is too generic to provide all benefits of a full SEPA. If work is proposed as part of this SEPA that is beyond 150' setback, that project should go through a full SEPA process. Without another SEPA, the public is not able to be engaged to judge the usefulness and extents of these impacts.
35	1	1	Russell Betteridge		2 d vii	O			Flood risk; Flood control	I need to be able to go to a resource and find out the projected flood depth at my home. Without this information, my flood risk is unknown and not insurable. FEMA ZONE X is not enough information. I need an active warning system that tells me, in plenty of time to protect my property and beings within it, that a flood is coming. I believe that my comments will not be heard, or used in any meaningful sense, and that your agency has already determined the path you are taking and continuing to raise my taxes to spend as you see fit, without oversight. I believe the Flood Control District should be reformed and overhauled to provide King County residents and businesses with actual protection, not just sandbags on a failing levee.
36	1	1	Samuel Green		2 d vii	O			Flood risk	I believe King County should use a website called MyFloodMap.com to help increase awareness about flood risk. As the founder and developer of MyFloodMap.com. I'd be happy to talk about how we can work together on this issue.
37	1	1	Chris Varo		2 d vii	I			Flood control	The Riverview Community between 222nd St S. and 212th St S. along the west side of the Green River needs levy protection like was provided during the repair of the Howard Hanson Damn many years ago. Please make sure our side of the river is protected from flood with the constructions of new levies. I see you're planning on constructing a levy on the east side of the river opposite the Riverview development but I haven't seen any plans to protect our side, the west side, of the river from flooding.
38	1	1	Jeanette Dorner	Mid Sound Fisheries Enhancement Group	1 d i	A		All	Salmon habitat	While your plan is primarily driven by an interest in reducing flood hazards it is critical to remember that the decisions made in this plan will make other important decisions about our potential opportunity to recover salmon in the Green River. By having only alternatives in your plan that eliminate some of the future opportunities for restoration the Flood District would be in fact preventing the ability to successfully implement the Green Duwamish salmon recovery plan.
38	2	1	Jeanette Dorner	Mid Sound Fisheries Enhancement Group	1 d i	A		New	Salmon habitat	That is why we ask you to not limit that possibility in your alternatives and add a fourth alternative that does not further limit our ability to restore habitat.
38	3	2	Jeanette Dorner	Mid Sound Fisheries Enhancement Group	2 a	I			Environmental health	We also want to point out that this does not have to be a conversation about salmon vs. people. Restoring our streams and rivers to improve salmon habitat doesn't just benefit the fish. Healthy fully functioning rivers are also important to the environmental health of our communities. Having abundant salmon runs are also an important healthy food source for people.
38	4	2	Jeanette Dorner	Mid Sound Fisheries Enhancement Group	2 e iii	I			Tribal	And of course having abundant salmon runs are critical to honoring the treaties our federal government signed with tribal governments reserving their right to continue to harvest fish in all their usual and accustomed places.
39	1	1	Dana Ralph	City of Kent	2 d vii	I			Flood control	The City supports the scoping of the system with a goal of a level of protection of 18,800 cubic feet per second plus a minimum of three feet of freeboard. This has been designated by the US Army Corps of Engineers as a 0.2o/o flood event (500-year flood) which is approximately the flood event that the Howard Hanson Dam was designed to originally protect against (Standard Project Flood). The City also supports the scoping of the system to meet or exceed all federal levee codes and standards. The adequacy of the levee system in the Lower Green to protect from flooding is dependent on the Howard Hanson Dam and its operation by the US Army Corps of Engineers in the Upper Green River watershed. The scope of the corridor plan should include working with the Corps to look at alternatives that would increase the flood risk reduction capacity of the dam. Improvements in the performance of the dam will allow the district and other local agencies the ability to balance the other priorities along the river and improve the quality of life for residents, businesses and wildlife.

Comment Catalog

Item No.	Comment No.	Page No.	Commenter	Organization	Subject	Concern	Notes	Alternative	Comment Summary	Comment Text
39	2	1	Dana Ralph	City of Kent	2 d vii	A		Alt 3	Flood control	As part of Alternative 3 issued to the public in the scoping notice, the city requests the District include two other critical left bank (looking downstream) levee sections, Frager Road and the Kent Airport. The Frager Road Levee between river miles 17.8 and 18.8 is included as a levee to be improved in alternative three. However, the scope for this levee should be extended to include tie ins at the upstream and downstream ends to high ground or to other levees. Specifically, the upstream end of the levee should be extended to connect to the west valley wall and the downstream end of the levee should scoped to extend to connect to the levee in Tukwila. Without those tie ins, floodwater could outflank one or both ends of the levee and increase flood risk to the people and properties protected by the levee. There are large residential neighborhoods in the valley that are protected from flooding by the Frager Road Levee.
39	3	2	Dana Ralph	City of Kent	2 b ii	I			Flood control; Property impacts	The area south of the Kent Airport Levee (left bank between river miles 23.8 and 24.0) includes large businesses in the manufacturing, shipping, transportation, automotive and the railroad industries, The area is bordered by the Green River and S. 277rh St. on the north and south, and SR-167 and the Union Pacific Railroad on the west and east. The river reaches upstream and downstream of the Kent Airport Levee include creek openings which allow the Green River at flood stage to flow backward up those creeks and flood agricultural lands. This floodwater can then flood overland to other areas/ including the area landward of the Kent Airport Levee. Consequently, the scope should include a levee scenario at the Kent Airport Levee which would encircle the developed area south of this levee.
39	4	2	Dana Ralph	City of Kent	2 b vii	I			Agriculture impacts	The agricultural areas south of Kent are some of the most productive agricultural land in the state. Not only are these areas an important local resource in food production, they also provide a steady source of jobs for the community, They should be considered in the scoping of the proposed plan.
39	5	2	Dana Ralph	City of Kent	1 d i	I			Salmon habitat	The City has historically been very supportive of salmon habitat improvements along the Green River, working independently and with WRIA 9 and other agencies on capital projects and programs to improve water quality and increase habitat for salmon. Several large projects have been constructed by the City Kent with the support of the District and WRIA 9 and others are in progress. The City supports the exploration and inclusion of salmon habitat improvements in Flood Control District Projects with the use of available salmon habitat funding.
39	6	2	Dana Ralph	City of Kent	2 b v	I			Recreation	Our recreational facilities along the Green River will need to continue to expand capacity in order to keep up with projected growth in population and the number of jobs in Kent. In an effort to ensure Kent's trail system would meet the future recreational demands anticipated the Kent City Council adopted the "Kent Valley Loop Trails Plan" on B/79/14. This plan utilizes the existing intersection of the Green River and Interurban regional trails, connecting an array of existing parks, bridges, and trails to create a sequence of loops that provide a variety of experiences for users. The proposed loops vary in length from 1.7 miles to 13 miles to provide for multiple user types, from the Sunday morning walker to the long-distance cyclist.
39	7	2	Dana Ralph	City of Kent	2 b v	I			Recreation	On 6/7/76 the Kent City Council adopted the "City of Kent Park & Open Space Plan 2016." The plan lists Anderson Greenbelt, Anderson Park, BMX property, Boeing Rock Property, Briscoe Park, Cottonwood Grove Park, Eagle Scout Property, Foster Park, Hogan Park at Russell Road, Neely/Soames Historic Home, Old Fishing Hole, Riverview Property, Russell Woods Park, Springbrook Greenbelt, Three Friends Fishing Hole, Valley Floor Property and Van Doren's Landing Park as park properties in the Green River Region. Most of these properties do not currently meet their maximum potential recreational value, and the City of Kent has plans to redevelop many of these properties to provide more recreational value in the coming years, It is important that future flood protection projects and associated habitat projects do not diminish the current or potential recreational value of park properties along the Green River. In addition to the park properties listed in the, "City of Kent Park and Open Space Plan 2016", three regional trails are listed; the Green RiverTrail, Frager Road, and the Interurban Trail, It is important that future flood protection projects and associated habitat projects do not diminish the current or potential recreational value of Kent's regional trails along the Green River. A need for shade along the Green River to address environmental concerns has the potential to inadvertently impact the visual and experiential connection between these trails and the Green River, We look forward to continuing to work with the ing County Flood Control District to find creative solutions to ensure that the Green River Trail, Frager Road, and the Interurban Trails still provide users a "river trail" experience,
39	8	3	Dana Ralph	City of Kent	2 d i	I			Emergency services	The scope of the study should also include consideration of emergency access to the river for rescue or removal operations. There are necessary times when first responders require safe and efficient access to the river, and these should be included in the plan, even if in general locations to be included in projects as they progress into their detailed planning and design.
40	1	1	Denis Law	City of Renton	2 d vii	A		All	Flood control	The three alternatives presented in the proposal are comprised of no-action, a limited extent of improvements and an extensive level of improvements. However none of the proposed alternatives include any proposed flood facilities in the segment of Green River downstream of South 180th Street for Alternatives 1 and 2 and downstream of I-405 (approximately RM 12.4) for Alternative 3. A hydraulic analysis needs to be completed demonstrating that no improvements are needed downstream of South 180th Street to the Black River Pump Station for all alternatives considered. We believe the proposed alternatives, if implemented upstream of South 180th Street, will increase the risk of flooding in the reaches of the Green River downstream of South 180th Street (RM 14.5). The improvements proposed by each alternative would convey floodwater during the 500-year flood event into the section of river downstream of South 180th Street, which would result in higher surface water (flood) levels in this reach of the Green River. This unimproved reach downstream of South 180th Street would have the lowest level of flood protection and result in flooding in this reach of the Green River, which could potentially cause flooding in the cities of Kent, Tukwila and Renton. Due to the relatively flat slope of the Green River Valley, floodwater would inundate valley floor areas along the east side of the Green River behind the upstream river sections where flood reduction alternatives are proposed. This would defeat the purpose, benefit and effectiveness of the implementation of the currently proposed flood reduction alternatives.
40	2	2	Denis Law	City of Renton	1 c iii	I			Flooding	During floods greater than the 100-year event, floodwater from the Green River could overflow along the right-bank (east side) of the Green River, along the Black River channel and around the District's Black River Pump Station (BRPS). The BRPS pumps direct flow from a 24-square mile tributary basin on the east side of the Green River into the Green River, and provide flood protection to the cities of Kent, Tukwila and Renton. If floodwaters were to overtop the unimproved reaches of the Green River (downstream of South 180th Street - Alternative 1 and 2, downstream of 1-405 - Alternative 3) and flood the valley floor on the east side of the Green River, the BRPS would fail to operate as intended and would not provide flood protection to the upstream tributary area.
40	3	2	Denis Law	City of Renton	2 d vii	I			Utilities	The area along this reach of the Green River downstream of South 180th Street and the valley area served by the BRPS houses a substantial number of developed commercial and industrial properties with significant property values, along with important transportation and utility infrastructure, which is vital to the region's employment and economy. The King County South Wastewater Treatment Plant at RM 11.9 is located in the area and needs protection from flooding. If this wastewater treatment plant were to flood due to an insufficient level of protection along the Green River, sewage treatment serving 800,000 people and businesses in the facility's 241 square mile service area south and east of Lake Washington would be impacted.
40	4	2	Denis Law	City of Renton	2 d vii	A		All	Flood control	Based on the above concerns the City of Renton recommends that all proposed alternatives evaluate the need for, and include improvements, that provide the same level of flood protection for the reach of the Green River, extending along the east side (right bank) of the river from South 180th Street and north of 1-405, to the Black River channel (RM 11) and along the Black River Channel up to the BRPS as is provided upstream of this reach. The reach of the Black River Channel from the Green River to the BRPS and the east side of the Green River from RM 11 to approximately RM 26, needs to include improvements that provide the same continuous level of flood protection for all alternatives considered in the PEIS.
40	5	2	Denis Law	City of Renton	2 d vii	I			Flood control	The Lower Green River Corridor Flood Hazard Management Plan targets a provisional level of protection at a flow volume of 18,800 cubic feet per second (the 500-year event) plus three feet of freeboard. FEMA requires three feet of free board above the 100-year event water surface elevation for levee accreditation. The implemented flood reduction improvements need to be designed and constructed to allow the flood protection facility to be certified and accredited by FEMA. A value engineering review is recommended to determine the cost and benefit of the need for three feet of free board in addition to providing 500-year level of flood protection. Ifthe amount of freeboard above the 500-year water surface elevation can be reduced, it will reduce the land requirements, impacts to developed properties and overall cost of the flood reduction alternatives.

Comment Catalog

Item No.	Comment No.	Page No.	Commenter	Organization	Subject	Concern	Notes	Alternative	Comment Summary	Comment Text
40	6	3	Denis Law	City of Renton	1 d i	M			Salmon habitat; Water quality	The PEIS will need to identify and evaluate the cumulative environmental effects of the proposed alternatives to impacts to fish habitat, water quality and temperature. A mitigation plan will be needed which indicates how impacts will be avoided, minimized and mitigated. Where opportunities allow, the mitigation plan should support habitat restoration, enhancement, and riparian vegetation that aligns with the Endangered Species Act requirements for the listed and threatened species, habitat improvement goals, policies and needs that are identified in the WRIA 9 Salmon Habitat Plan in the Lower Green River, along with state salmon recovery goals. We recommend that the Lower Green River Corridor Flood Hazard Management Plan take into consideration improvements that are identified as being needed for habitat restoration and water quality protection in the WRIA 9 Salmon Habitat Plan and are being worked on by the WRIA 9 Ecosystem Forum and the state and federal agencies.
40	7	3	Denis Law	City of Renton	2 b ii	I		Alt 3	Property impacts	The extent and cost of land acquisitions required for the proposed improvements, specifically for Alternative 3, are significant. The lead agency is thus encouraged to put together cost estimates for the proposed alternatives to assess their feasibility. Additionally, given that floodwalls and embankment levees are proposed along the river banks, the impact to adjacent properties, infrastructure (roads, bridges, utilities) and property values should be evaluated as part of the PEIS.
40	8	3	Denis Law	City of Renton	2 d vii	A		All	Flood control	Recognizing the physical constraints and the built environment along the Lower Green River, Facility Type A is needed in some areas to minimize impacts to existing buildings and infrastructure. Where possible, Levee Types Band C would help to achieve the Plan's multiobjective goals to provide flood protection, improve fish habitat, provide space for increased riparian buffers along the river to reduce water temperature, and allow for recreational opportunities.
41	1	3	Glen St. Amant	Muckleshoot Indian Tribe	2 d vii	I			Flood control	The Draft PEIS should address the following significant adverse impacts for each of the alternatives considered in the OS/Scoping Notice: 1. Potential impacts of levee construction and repairs on pools and eddies that provide adult holding habitat for salmon and steelhead, including an inventory of all river pools and eddies, and their hydraulic characteristics at a range of stream flows.
41	2	3	Glen St. Amant	Muckleshoot Indian Tribe	2 e iii	I			Tribal	2. Potential impacts of levee construction and repairs upon tribal fishing sites and access to these sites under each alternative. The river pools and eddies inventory from item 1 should be used cooperatively with the Tribe for a fishing site impact analysis. The analysis of the impacts should include both short- and long-term effects on hydraulic characteristics of the fishing sites and on fishing site access from upland areas, including during construction activities.
41	3	3	Glen St. Amant	Muckleshoot Indian Tribe	1 c i	I			Water quality	3. The potential for riparian shade of adequate buffer width, tree height, and density recommended in the Green River Temperature Total Maximum Daily Load {TMDL) (Ecology, 2011) to meet the State's temperature water quality criteria given the constrained footprint and steep riverward slopes of flood facility projects (e.g., Type A and Type B) proposed in the Scoping Notice. 4. The potential for riparian shade of adequate buffer width, tree height, and density recommended in the Green River Temperature TMDL (Ecology, 2011) to meet the State's water quality criteria for temperature given the ongoing maintenance under the interim SWIF Vegetation Management Plan. 5. Analysis of the potential for each alternative for riparian development and necessary river shading along each of the critical, high, and medium priority river banks identified in the Lower Green River Riparian Aspect Priorities maps (Muckleshoot Indian Tribe 2013).
41	4	4	Glen St. Amant	Muckleshoot Indian Tribe	1 d i	I			Water quality; Salmon habitat	6. Potential impacts for each alternative on water temperature effects on salmon and steelhead life stages as identified by EPA Issue Paper 5 (2001), including a detailed summary of the effects of water temperature impairment on juvenile and adult salmon and steelhead life stage development, growth, health, and survival and an analysis of population-level impacts for Green River Chinook, steelhead, and coho populations (hatchery and natural origin).
41	5	4	Glen St. Amant	Muckleshoot Indian Tribe	1 d iii	I			Fish passage	7. Potential impacts to the creation and maintenance of high quality juvenile Chinook rearing habitat (e.g., shallow water areas available from January through May/June with instream cover, sandy substrates, and overhanging vegetation). The DPEIS analysis should include acreage of rearing habitat expected under all alternatives and provide a comparison to applicable targets in the WRIA 9 Salmon Recovery Plan-Making Our Watershed Fit for a King (WRIA 9 Steering Committee 2005). As part of this analysis, the Draft PDEIS needs to inventory existing culverts and culverts with flapgates on tributaries at their confluences with the Green River to determine if these facilities are barriers for adult and juvenile salmon to access stream habitat upstream.
41	6	4	Glen St. Amant	Muckleshoot Indian Tribe	1 c i	I			Cumulative impacts; Climate change	8. Analysis of the cumulative effects of each alternative in combination with other reasonably foreseeable past, present, and future actions and conditions on lower river habitat and water temperatures (to river mile 11) of each alternative. This analysis should include but not be limited to a) climate change effects on temperatures in the lower river, including the potential for an increased frequency of minimum and critical instream flows that also influence stream temperatures; and b) contribution of future levee construction, repairs, and vegetation maintenance to the projected increased river temperatures associated with climate change.
41	7	4	Glen St. Amant	Muckleshoot Indian Tribe	1 d i	I			Salmon habitat	9. An analysis of the direct and cumulative adverse effects of construction of 19 to 30 miles of new or improved levee facilities under all alternatives on physical and biological habitat processes important for salmonids, including effects on designated critical habitat for ESA listed salmonids. 10. An analysis of the direct and cumulative adverse effects of levee maintenance and repairs of existing, new or improved levees on physical and biological habitat processes important for salmonids, including effects on designated critical habitat and PCEs for ESA listed salmonids, and riparian habitat for all alternatives. 11 . An analysis of the direct and cumulative adverse effects of adding levee toe protection (more riprap at the base of the levee) for existing facilities on designated critical habitat and PCEs for ESA listed salmonids. 12. The potential stability of the various facility types and the need for repairs and reconstruction due to extreme flood events and climate change and the likely impacts to salmon habitat from these repairs/reconstruction.
41	8	5	Glen St. Amant	Muckleshoot Indian Tribe	1 d i	A		New	Salmon habitat	The Draft PEIS should also include the following recommended measures to avoid, minimize, and mitigate effects of the Corridor Plan: 1. Present a new range of alternatives, each of which are capable of avoiding, minimizing, and mitigating their effects on water temperatures, salmonid habitat, salmonid populations, and tribal fishing sites in the Lower Green River while meeting flood control objectives. The range of alternatives described in the OS/scoping notice are too narrowly scoped and fail to meet state and federal requirements to avoid, minimize, and mitigate impacts.
41	9	5	Glen St. Amant	Muckleshoot Indian Tribe	1 c i	M			Mitigation; Water quality	2. Mitigation needs to occur where the impacts occur. It is not possible to mitigate the impacts of lower Green River flood protection facilities on Green River salmonid populations, and treaty resources and rights by providing mitigation elsewhere in the watershed. For example, the TMDL report found that shading the entire river up to Howard Hanson Dam with a tall tree buffer 150 feet wide everywhere except along the levees in the Lower Green River would still not approach meeting the State's water temperature criteria (Ecology 2011).
41	10	5	Glen St. Amant	Muckleshoot Indian Tribe	2 b i	P			Policy objectives (KCFCD); Property impacts	3. KCFCD policies for the Corridor Plan should be revised to allow the acquisition of parking areas, buildings, buildings, or non-essential traveled roadways where needed and feasible to provide for setback levees of 150 feet or greater.
41	11	5	Glen St. Amant	Muckleshoot Indian Tribe	2 b vii	P			Policy objectives (KCFCD); Agriculture impacts	4. Resolve the existing policy or other obstacles to the potential for acquisition of easements on agricultural land along riverbanks of critical and high value as identified in the Lower Green River Riparian Aspect Priorities maps. For example, landowners who allow a wide buffer of trees to grow along the river could be compensated with measures that enhance agricultural production on their remaining property, or alternative compensation as desired by the individual landowner. The Corridor Plan should discuss the potential for the FCD to negotiate individual landowner agreements and outline the steps needed to remove existing impediments to landowner agreements for the purpose of establishing shade as early as possible on priority agricultural lands in the lower Green River.
41	12	6	Glen St. Amant	Muckleshoot Indian Tribe	1 d i	I			Salmon habitat	5. Repair or replace existing barrier culverts that prevent adult and juvenile salmon access to tributaries from the mainstem Green River within the planning area.
42	1	1	Judy Blanco	Forterra	1 d i	I			Vegetation; Flood control	Forterra requests that the PEIS evaluate the impacts of precluding future revegetation at proposed facility locations. The addition of 10.17 miles of Type A facilities proposed in PEIS Alternative 2, and 15.43 miles of Type A facilities proposed in PEIS Alternative 3, would substantially limit the opportunities available for Forterra and partners to continue this work. The PEIS should evaluate the impacts of precluding future revegetation at proposed facility locations, where revegetation would benefit surrounding communities as well as fish and wildlife.

Comment Catalog

Item No.	Comment No.	Page No.	Commenter	Organization	Subject	Concern	Notes	Alternative	Comment Summary	Comment Text
43	1	1	Lawrence Solomon	Lummi Indian Business Council	1 d i	I			Water quality; Salmon habitat	It is important that we learn from history. We know that here, as in other locations, flood control have negatively impacted water quality. This has a cascading impact on rearing habitat for Chinook salmon in the Middle and Lower Green which, in turn, impacts the health of our SRKW population. Sadly, over half of the Lower Green's river banks have little or no shading adding to the stress on our migrating salmon. It is imperative that what we do, today, does not negatively impact habitat restoration in the future. We encourage the Flood District to move towards a holistic, integrated, and multi-objective Corridor Plan; one that honors the treaty obligation, reduces the threat of flood, and promotes salmon recovery. To that end, we recommend that you develop an alternative that integrates the objectives of reducing water temperatures, increasing salmon habitat, and honoring tribal treaty rights.
43	2	2	Lawrence Solomon	Lummi Indian Business Council		I			Cumulative impacts	We also need to stress the importance of a cumulative impact assessment. As you understand, linear (additive) assessments do not give an adequate or accurate picture. In many cases, the whole of the impact is greater than the sum of the stressors. We need to also analyze, account for, and be sure to mitigate impacts that result from the interaction between two or more stressors.
44	1	1	Mindy Roberts	Washington Environmental Council	1 d i	A		All	Salmon; Orcas	WEC does not support any of the alternatives currently identified in the PEIS as they are insufficient to protect communities, Chinook salmon, Southern Resident orcas, and other species in the Lower Green River. We urge you to develop further alternatives that address multiple objectives in the Lower Green River, including but not limited to flood risk, water quality, and endangered species.
44	2	1	Mindy Roberts	Washington Environmental Council	1 c i	I			Water quality	The Lower Green River supports remnant runs of Chinook salmon as well as hatchery production, which are important to tribal and non-tribal fishers throughout the Puget Sound region. Both native and hatchery fish face habitat limits that must be resolved. The three alternatives offered in the PEIS would continue to worsen conditions as temperatures are expected to warm due to lack of riparian vegetation in a changing climate. As the Lower Green River flows through Tukwila, Kent, Auburn, and unincorporated King County, Chinook salmon face too little rearing habitat and refugia to support existing populations, let alone needed population increases. We do not find the three alternatives offered sufficient, nor are we confident that any of them would meet the requirements of the Clean Water Act or the Endangered Species Act in their implementation. For example, the Department of Ecology issued the Lower Green River Temperature Total Maximum Daily Load Study in 2011 (Coffin et al., 2011), which identified lack of riparian shade as a contributing factor to high summer temperatures. This portion of the Green River does not meet the Washington State water quality standards for temperature and remains on the 303(d) list of impaired waters under the Clean Water Act. None of the alternatives identified in the PEIS would support actions needed to meet the water quality standards for temperature. Cooler temperatures are critical for salmon recovery, and we cannot afford to exacerbate warming temperatures that are lethal to salmon.
44	3	2	Mindy Roberts	Washington Environmental Council	1 d ii	A		All	Salmon; Orcas	Further, each of these alternatives runs counter to recommendations of the Orca Recovery Task Force (2018) on which WEC serves. NOAA National Marine Fisheries Service and Washington Department of Fish and Wildlife have identified the fall run in the Green River as part of the second most important Chinook salmon runs to Southern Resident orca recovery (NOAA Fisheries and Washington Department of Fish and Wildlife, 2018) out of 31 potential stocks. Therefore, given that the orcas are starving from lack of food, the Puget Sound region, including the Lower Green River, must invest in salmon recovery. Juvenile Chinook salmon face a bottleneck in terms of limited habitat in this region.
44	4	3	Mindy Roberts	Washington Environmental Council	1 d i	I			Salmon habitat; Flood control	We believe the King County Flood Control District must do more to balance multiple objectives in the Lower Green River, including but not limited to flood control for public safety and salmon recovery. We recognize the need to meet US Army Corps of Engineers levee policies. However, solutions are underway in other parts of the Puget Sound regions that both protect levees and improve conditions for salmon. These must be considered in the King County Flood Control District's Lower Green River Corridor Plan.
44	5	3	Mindy Roberts	Washington Environmental Council	2 e iii	I			Environmental justice; Tribal	Environmental justice must be addressed explicitly in this plan. For too long, the needs of tribes and communities of color have not been centered in decisionmaking. The King County Flood Control District should initiate consultation with the affected tribes to determine solutions. The region is part of the Muckleshoot Tribe's Usual and Accustomed areas, and significant information on salmon resources and threats has been published in Northwest Indian Fisheries Commission (2011) and Northwest Indian Fisheries Commission (2016). WEC views this PEIS as a generational opportunity to increase salmon productivity in the Lower Green River. We ask that the King County Flood Control District develop sufficient alternatives that address these multiple objectives such as salmon recovery and water quality in the context of tribal treaty rights. We cannot afford to make the mistake of steering flood management in the wrong direction for another 50 to 100 years.
45	1	3	Wendy McDermott	American Rivers	2 b i	P			SWIF and WRIA objectives	1. Define integrated goals that support the needs of both people and fish; The proposed Lower Green Flood Hazard Management Plan has a stated goal "to provide an integrated and reasonable long-term approach to reduce flood risk within the Lower Green River Corridor while balancing multiple objectives within the study area." Unfortunately, the proposed Plan does not include stated goals for any objectives other than flood protection improvements, and it does not incorporate the stated objectives of the WRIA 9 Salmon Habitat Plan. Rather than the multi-objective corridor plan that integrates flood protection improvements and habitat restoration envisioned to follow the Interim SWIF, the Plan seeks to propose actions to improve the flood control system with minimal opportunities for habitat restoration in one alternative. American Rivers encourages the Flood Control District to recommit to a Lower Green River Corridor Plan with an integrated framework that will meet multiple goals of flood risk reduction, improved water temperature, salmon recovery, enhanced open space, recreation, treaty fishing, public access, resiliency and productivity, and reduce long-term facility maintenance costs. At the very least, the review process under the State Environmental Policy Act (SEPA) must establish integrated goals for the Lower Green that will ensure the Plan aligns with salmon recovery objectives for the river. American Rivers recommends the District consider goals that include: - Promote ecosystem function- Integrate the restoration of key river and floodplain functions and native habitats that are critical for native species into improvements to the flood management system; and - Promote multi-benefit projects- Include flood management projects that contribute to other river management objectives and have been identified through other plans or programs. - Promote integrated habitat – Adhere to the long-term habitat goals for the Lower Green River adopted during the Salmon Recovery Plan and use the degree of habitat created as a key metric when evaluating the proposed alternatives.
45	2	4	Wendy McDermott	American Rivers	2 b i	I			Property impacts	2. Maximize the number of levee setbacks to increase flood storage capacity and salmon habitat and more effectively manage floods; and salmon habitat and more effectively manage floods Due to the constrained nature of the Lower Green, some voluntary property acquisition is often necessary to implement meaningful levee setbacks and restoration. However, all the facility types proposed in the alternatives "…would not impact existing agricultural lands, buildings, parking, or traveled roadways". This policy seems to eliminate the opportunity to voluntarily acquire new properties or assess future acquisitions as part of a the PEIS. The PEIS should analyze property acquisition opportunities as part of a long-term strategy to increase levee setbacks and develop a connected riparian corridor.
45	3	4	Wendy McDermott	American Rivers	2 d vii	I			Flood control	Type C facilities would provide the most habitat benefit, yet they occur at the lowest percentages in all three alternatives evaluated. - The "No Action Alternative" would implement approximately 0.86 miles of Type C facilities - Alternative 2 would implement approximately 5.41 miles of Type C facilities - Alternative 3 would implement approximately 9.08 miles of Type C facilities Voluntary acquisitions and alternative designs must be considered to increase the number of Type C facilities overall and maximize the amount of habitat available. Type C flood facility projects include levee setbacks with benches but fail to address the critical needs of salmon. The cross section shows a uniform planting bench but does not maximize the off-channel rearing habitat. As the width of the levee setback is increased the amount of habitat complexity should also increase. The PEIS should include language that would promote off-channel habitat where available and not limit it to riparian planting only. The current Type C flood facility shows 3:1 slope on the riverside side of the levee. By incorporating a floodwall on the riverside side at strategic locations the amount of habitat could be tripled.

Comment Catalog

Item No.	Comment No.	Page No.	Commenter	Organization	Subject	Concern	Notes	Alternative	Comment Summary	Comment Text
45	4	4	Wendy McDermott	American Rivers	1 d i	I			Salmon habitat; Water quality	3. Offer clear habitat restoration actions that address the critical needs of salmon rearing habitat and riparian shade in the Lower Green River. There is a legal and moral obligation to recover salmon populations in the Green-Duwamish Basin, and given the significant economic investments and commitments the County, State and Federal government and others have made in the basin, it is simply irresponsible to proceed with a flood management plan for the basin that does not fully integrate recovery plans. WRIA 9 represents 17 local governments and numerous local, state, and federal partners committed to chinook salmon recovery. The salmon need in the Lower Green River Subwatershed including protecting and restoring side channels, off-channel wetlands, tributary mouths, and pools that provide shelter and habitat complexity for young salmon must be integrated into the Plan In addition, the Re-Green the Green: Riparian Revegetation Strategy for the Green-Duwamish and Central Puget Sound watersheds was developed to improve water temperature by restoring tree shade along the Green River and to improve habitat for threatened chinook, steelhead and bull trout. The strategy includes 2,384 newly planted riparian acres by 2025. The Lower Green is a high priority location for revegetation as identified by WRIA 9 partners. Riparian revegetation must be incorporated into the design for facility improvements and new facilities to the maximum extent possible.
45	5	5	Wendy McDermott	American Rivers	1 d i	A		New	Salmon habitat	WRIA 9 has proposed a “fourth alternative” that embraces a multi-benefit framework and would inform development of an alternative that: - Integrates flood risk reduction and salmon habitat restoration consistent with established goals and policies; - Reflects salmon habitat restoration concepts for the Lower Green River that are supported by the cities and King County; - Makes substantive contribution towards achieving the salmon habitat goals established for the Lower Green Subwatershed; and - Ensures vegetation management and facility alignment support healthy riparian vegetation in high priority areas identified by the 2013 Muckleshoot Riparian Aspect Mapping. American Rivers supports the development of at least one alternative that reflects these broader, multi-benefit needs of communities within the watershed and we recommend that the District work with the WRIA 9 to develop this alternative.
45	6	5	Wendy McDermott	American Rivers		O			PEIS process	The scoping process for the Plan is intended to identify and analyze the significant adverse impacts that should be evaluated in the PEIS. The District suggests the following factors may be considered in the PEIS: - Agriculture - Aquatic Resources - Climate Change - Cultural and Historical Resources - Cumulative Impacts - Equity and Social Justice - Geology and Geomorphology - Land and Shoreline Use - Public Health and Safety - Recreation and Public Access - Socioeconomics - Terrestrial and Riparian Resources - Transportation - Tribal Treaty Resources - Utilities and Public Services - Water Resources - Wetlands
45	7	6	Wendy McDermott	American Rivers	1 d i	I			Salmon habitat	o Determine how each of the proposed alternatives would affect past and future salmon recovery investments in the Green- Duwamish Watershed including: • Completed habitat restoration projects • Planned habitat restoration projects • Revegetation projects o Assess how the proposed alternative could adversely affect salmon populations within the Green-Dwuamish Basin including: • Loss of habitat including side channels, off-channel wetlands, tributary mouths, and pools • Impacts to water quality including in-stream water temperatures o Consistency with 10 and 50-year WRIA 9 habitat targets including: • Off-channel habitat: 50-yr: 5,039 ac. of connected floodplain/10-yr: 240 ac reconnected • Riparian habitat: 50-yr: 75% of river bank vegetated to 165 ft/ 10-yr: 250 ac revegetated • Woody Debris: 50-yr: 1705 pieces per mi/ 10-yr: 425 pieces per mi • Bank Armor: 50-yr: no new, decrease total/ 10-yr: 1 mi. levee setback o Include mitigation for any loss of habitat or shade vegetation
45	8	6	Wendy McDermott	American Rivers	1 d iii	I			Orcas	Southern Resident Orca Recovery: • Alignment with the Governor Inslee’s Southern Resident Orca Task Force’s recommendations • Implications for orca recovery
45	9	6	Wendy McDermott	American Rivers	2 d vii	I			Flood control	Public Health and Safety o Potential for increased development and residual risk in improved and new levee protected areas o Potential economic loss due to levee breach and overtopping scenarios o Change in flood height and velocity provided by each alternative for an array of flood recurrence intervals.
45	10	6	Wendy McDermott	American Rivers	2 e ii	I			Environmental justice	Equity and Social Justice: o Assessment of the socio-economic characteristics of communities that would benefit from proposed projects within the proposals o Consider ramifications for communities downstream of the Lower Green corridor
45	11	6	Wendy McDermott	American Rivers	1 b iii	I			Climate change	Long-term resilience o Assess the potential flood risk reduction benefits provided by each proposes alternatives under potential long-term climate change scenarios including changes to hydrologic cycles o Assess the potential flood risk reduction benefits provided by each alternative under future development scenarios (zoning and expected growth as well as change in forest cover within the watershed.) o Assess vulnerability to other natural disasters including earthquakes, tsunamis, volcanoes, and mudslides and potential impacts to evacuation routes
45	12	7	Wendy McDermott	American Rivers	2 b vi	I			Tribal	Tribal treaty resources o American Rivers does not purport to speak for any tribal government, tribal member, or culture that could be impacted by the proposed Flood Damage Reduction Project. We note, however, that the proposed actions may disturb cultural sites and treaty resources that could exist in this area. Any impacts to cultural, historic, and current tribal fisheries must be considered as a major effect of the proposed actions. We strongly encourage the engagement of tribal nations in a meaningful way, including through direct government-to-government consultation.

Comment Catalog

Item No.	Comment No.	Page No.	Commenter	Organization	Subject	Concern	Notes	Alternative	Comment Summary	Comment Text
45	13	7	Wendy McDermott	American Rivers	2 d vii	A		All	Facility types	Comments on proposed Alternatives: In general, American Rivers is disappointed in the limited array of Alternatives provided in the proposed Plan. The District proposes three Alternatives which include 2.03, 20.26, or 31.9 miles of upgraded or newly constructed facilities. This is a significant difference in construction of new facilities and will potentially result in substantially different impacts. A more robust array of alternatives would be beneficial, and every alternative should include nonstructural alternatives and improved integration of habitat improvements.
45	14	7	Wendy McDermott	American Rivers	2 d vii	A		Alt 1	Flood control	• The No Action Alternative is not a true No Action Alternative, as it assumes implementation of actions that are expected to take place regardless of the Plan including the currently adopted six-year capital improvement program, including PL 84-99 program levees according to the SWIF Vegetation Management Plan. However, the No Action Alternative omits alterations to the flood control system that are planned to recover salmon habitat including Downey Farmstead and Russell Road setback.
45	15	7	Wendy McDermott	American Rivers	1 d i	A		Alt 3	Salmon habitat	• Alternative 3, the option with the most construction of new levees, is the only Alternative with "incentives for partnership funding to create habitat restoration opportunities within Water Resource Inventory Area 9". By structuring the alternatives in this manner indicates that the only habitat restoration opportunities that could be provided will occur with the maximum amount of new infrastructure. Habitat restoration opportunities and incentives must be included in every alternative.
45	16	7	Wendy McDermott	American Rivers	2 d vii	A		All	Facility types	• Cross-sections facility types currently do not represent aquatic or riparian habitat improvements. If the intent is to include these types of habitat- as they should under a multi-objective plan- habitat details such as large wood and off-channel rearing habitat should be represented in the cross sections. • Large rock at the toe of the riverside levee slope indicates the intent is to armor the banks to prevent or limit channel migration. Channel migration is a vital part of natural stream evolution and should be integrated to the highest degree possible within this channelized environment. • While a 2:1 slope is not ideal, steeper slopes or floodwalls should be options for the Type B and C Facilities to maximize floodplain habitat and riparian plantings in select locations. • Type A facilities show a floodwall on the non-river side of the levee but do not consider a floodwall on the riverside. If a wall was included the riparian/wetland planting area could be doubled. Why was this not considered? • The use of Type D facilities- Non-Structural Improvements including home elevations, basement removal with utility addition projects, flood-proofing, berms, ring levees, farm pads, and drainage improvements- is very limited. Only Alternative 3 includes Type D facilities, with only 1.91 miles proposed. This is an extremely low amount of nonstructural improvements being proposed, and very little information on potential locations or justification in the proposed Plan. Construction of new levees and flood control structures should be a last resort, invested in to protect vital infrastructure and development when nonstructural approaches are not feasible. The alternatives should.
46	1	1	Brandon Patoc			A		No Action		I stand by and support the no action initiative. I've lived in the Kent Valley for nearly 32 years and feel confident in the current plan and infrastructure.
47	1	1	Joyce Weir		1 d i	I			Salmon habitat	Please develop an alternative for the Lower Green River Corridor Flood Hazard Management Plan that will support thriving habitat for salmon.
48	1	1	Jeanette Dorner	Mid Sound Fisheries Enhancement Group	1 d i	A		New	Salmon habitat	And so I'm here tonight on behalf of my organization and also myself personally to encourage the district to consider a fourth alternative in the management plan to be even more expansive in terms of the opportunities for habitat restoration as well as flood protection.
49	1	1	Greg Wingard	Green River Coalition	1 d i	A		New	Salmon habitat	Our organization's also interested in a fourth alternative.· One of our concerns is that the -- while we recognize that flood control is a vital need and that there is a huge amount of human life and property and structures and all of that that are in need of protection, and that a lot of funds have already been spent on that and more will be, the habitat that is in the lower Green is a very critical reach of the river.
49	2	1	Greg Wingard	Green River Coalition	2 d vii	I			Flood control	And one of our concerns is that decisions made in this process are going to be a huge thumb on the scale of river management for that reach of the river for 50 years or more, and that this reach of the river also has critical problems. When the flood control dam in -- went in, that allowed business and private property owners to get much closer to the river, their structures to get much closer to the river, with the sense of safety because we're now protected by this dam. Come to find out that was a little bit misplaced. And then we built on the surrounding hillsides, and lo and behold, we had flooding that wasn't coming from up the river; it was coming from the side hills, and we have a new type of flooding to address.
49	3	1	Greg Wingard	Green River Coalition	1	I			Cumulative natural resources	Also very concerned about making sure the climate change, orca recovery, and salmon recovery are integrated into this plan effectively, and that we maintain our options for making sure that the river functions ecologically as well as hydraulically.
50	1	1	James Laitila		1 d i	I			Salmon habitat	Future plans to increase storage at HAH reservoir should be considered to help with flood control and flow augmentation during "dry" season to protect fish habitat and maintain better water temperature for salmon.
51	1	1	Rob Purser	Suquamish Tribe	1 d i	A		New	Salmon habitat	After reviewing the District's Proposed Alternatives and Scoping Notice for the Programmatic Environmental Impact Statement (PEIS), the Tribe believes the scope of the PEIS should be expanded to include additional alternatives that will better support the District's stated intention of improving fish habitat and supporting salmon recovery while reducing long-tenn flood risks.
51	2	1	Rob Purser	Suquamish Tribe	2 b i	P			Policy	In particular, the Tribe urges the District to develop additional alternatives that better align with policies enumerated in the 2006 and 2013 King County Flood Hazard Management Plan. For example, Policy G-3 calls for the Plan to "enhance aquatic and riparian habitat in a manner consistent with adopted salmon habitat recovery plans" and Policy G-4 calls for "reducing flood and channel migration hazards by preserving open space in flood hazard areas and channel migration zones." Policy G-10 calls for protection of natural functions and values of floodplains, wetlands, and riparian areas and, when feasible, "enhance or restore these ecological functions and values" in coordination with salmon habitat recovery plans while Policy G-6 calls for "close cooperation with cities, counties, tribes, [and] salmon habitat recovery planning partners."Finally, Policies PROJ-6 and PROJ-7 call for flood protection facilities tI1at protect or enhance riparian habitats and for siting such facilities "farther from the river edge and associated buffers to increase flood conveyance and allow natural river processes to occur," whenever possible. These alternatives and facility types should be evaluated for their consistency with each of these policies. Furthennore, alternatives should be evaluated for their consistency with achieving goals in the Green/Duwamish (WRIA 9) Salmon Recovery Plan, including numeric goals for off-channel habitat area, riparian vegetation, large woody debris, and bank armoring.
51	3	1	Rob Purser	Suquamish Tribe	2 d vii	A		All	Facility types	The intentions of the Corridor Plan ostensibly include "improving fish habitat." However, the Tribe could not identify measures in any of the proposed alternatives that will harmonize its flood hazard risk reduction with any of multiple other potential benefits, including salmon recovery. Type C facilities provide the greatest opportunity for habitat restoration, community, and ecological resilience, but the scoping notice could have done a much better job of demonstrating how investments in habitat elements would be integrated with Type C facility projects. In its scoping notice, the District states that Type C facilities would only be constructed in "locations where a levee setback would not impact existing agricultural land, buildings, parking, or traveled roadways." As a long-term plan to address flood risks and habitat needs for the next 50 or more years, the Tribe believes that the District should not limit application of Type C facilities in this arbitrary manner.
51	4	2	Rob Purser	Suquamish Tribe		A		New	Cumulative impacts; Climate change; Orcas	Rather, an additional alternative should be considered that takes full advantage of land and easement acquisition and levee setbacks to maximize benefits for fish and support of salmon recovery while meeting the District's flood risk reduction goals. Considered in conjunction with planned investments in fish passage upstream at Howard Hanson Dam and ongoing cleanup of the lower Duwamish Waterway, the Corridor Plan represents a once in a generation opportunity to set the entire watershed on a path that will recover the abundance, productivity, and resilience of its salmon runs, including populations that are vital to Southern Resident Killer Whale, while meeting the concurrent need to address long-term flood risks, climate change, and the challenges of a rapidly growing human population.

APPENDIX E

Catalog Summary

Catalog Summary

Subject	Category	Count
1	**Natural Environment**	85
a	**Earth**	0
i	Geology	0
ii	Soils	0
iii	Topography	0
iv	Unique physical features	0
v	Erosion/enlargement of land area	0
b	**Air**	2
i	Air quality	0
ii	Odor	0
iii	Climate & climate change	2
c	**Water**	19
i	Surface water movement/quality/quantity	12
ii	Runoff/absorption	0
iii	Floods	7
iv	Groundwater movement/quality/quantity	0
v	Public water supplies	0
d	**Plants and animals**	63
i	Habitat/numbers/diversity of plants/fish/other	52
ii	Unique species	6
iii	Migration routes	4
e	**Energy and natural resources**	0
i	Amount required/rate of use/efficiency	0
ii	Source/availability	0
iii	Nonrenewable resources	0
iv	Conservation and renewable resources	0
v	Scenic resources	0

Subject	Category	Count
2	**Built environment**	94
a	**Environmental health**	1
i	Noise	0
ii	Risk of explosion	0
iii	Releases (toxic/hazardous materials)	0
b	**Land and shoreline use**	40
i	Land use plans	17
ii	Housing and businesses	12
iii	Light and glare	0
iv	Aesthetics	0
v	Recreation	5
vi	Historic/cultural preservation	1
vii	Agricultural crops	5
c	**Transportation**	1
i	Transportation systems	0
ii	Vehicular traffic	0
iii	Waterborne, rail, and air traffic	0
iv	Parking	0
v	Movement/circulation of people/goods	1
vi	Traffic hazards	0
d	**Public services and utilities**	45
i	Emergency services (e.g., fire)	1
ii	Police and safety	1
iii	Schools	0
iv	Parks/recreational facilities	1
v	Maintenance	3
vi	Communications	0
vii	Water/stormwater	39
viii	Sewer/solid waste	0
ix	Other governmental services/utilities	0
e	**Equity and social justice**	7
i	Child and youth development	0
ii	Economic development and jobs	1
iii	Environmental and climate	6
iv	Health and human services	0
v	Housing	0
vi	Information and technology	0
vii	Justice system	0
viii	Transportation and mobility	0

Catalog Summary

Concern		Count
A	Alternative	65
I	Impact	85
M	Mitigation	5
O	Other	19
P	Policy	18
	Total	**192**

Format		Count
E	Email	3
ET	Email Template	581
F	Form	21
L	Letter	24
O	Other	3
	Total	**632**

Commentor		Count
T	Tribal	4
F	Federal	3
S	State	3
L	Local	6
N	NGO	10
B	Business	1
I	Individual	24
IT	Individual Template	581
	Total	**632**

APPENDIX F

Comment Items Received

Tribal

January 25th 2019

King County Flood Control District
Michelle Clark, SEPA Responsible Official
516 Third Avenue, Room 1200
Seattle, WA 98104

Re: Lower Green River Corridor Plan Programmatic Environmental Impact Statement Scoping Comments

Dear Ms. Clark,

Please accept the following comments regarding the scope of the King County Flood Control District (District)'s Lower Green River Corridor Plan Programmatic Environmental Impact Statement (PEIS).

The Snoqualmie Tribe—sdukʷalbixʷ in our Native language—consists of a group of Coast Salish Native American peoples from the Puget Sound region of Washington State. We have been in the Puget Sound region and the Snoqualmie Valley since time immemorial. sqʷed (Snoqualmie Falls) is the birthplace of the sdukʷalbixʷ. We had more than 90 long houses along the Snoqualmie River and its tributaries. These rivers and streams were the highways used to travel from village to village and connected all the ʔaciɬtalbixʷ (Natives).

Our Tribe was a signatory of the Treaty of Point Elliott with the United States and Territory of Washington in 1855. At that time, our people composed one of the largest tribes in the Puget Sound region totaling around 4,000. We lost federal recognition in 1953, but after much battle, we regained federal recognition in October of 1999. Today, the Snoqualmie Tribe is made up of approximately 650 members and occupies a sovereign homeland in the Snoqualmie Valley. The Snoqualmie Tribe (Tribe) is governed by an elected Council and our Tribal Constitution.

The Tribe is very concerned with the narrow scope of the alternatives proposed so far by the District for the Lower Green River Corridor PEIS. The proposed actions within those alternatives are similar in type to past human actions that have degraded salmon habitat of the Salish Sea's tributary streams and estuaries. Our concerns are not just about the risks the alternatives present for the Lower Green River and Salish Sea marine ecosystem, including Chinook salmon, other salmon species, and orca, but in particular we are concerned by the potential implications for the Snoqualmie River and other rivers in King County.

We urge the District to revise its existing action alternatives and develop one or more additional action alternatives, so that all action alternatives incorporate a multi-benefit approach to the management of river and floodplain habitats. The Corridor Plan presents the District with an extraordinary opportunity to apply its

upcoming substantial investments in the Lower Green River to simultaneously achieve flood hazard reduction and environmental resiliency in a way that will be to the mutual benefit of people, salmon, and orca. Given the habitat and salmon recovery investments in the Green River basin that have occurred so far, and are slated to occur in the future, which are funded through public, tribal, and private dollars, the District has a responsibility to work with local and regional partners to make sure those ecosystem recovery investments have the opportunity to pay dividends, and that these dividends will not be negated by the current narrow focus of the Lower Green River Corridor PEIS.

The Tribe requests revision of the existing action alternatives and addition of one or more action alternatives that include more projects that incorporate features included in the District's online materials as Project Type D, although it may be that even the amount of armoring that is shown in the conceptual drawings is not actually needed everywhere to prevent lateral migration, and that other more deformable alternatives exist. This would be consistent with existing District policies in the 2006 and 2013 King County Flood Hazard Management Plan, including:

- Policy G-3 - Comprehensive River & Flood Hazard Management: King County should provide comprehensive river and flood hazard management through the implementation of projects and programs that result in multiple benefits, including those created by meeting any or all of the following non-prioritized objectives, including (e) protect and, where possible, enhance aquatic and riparian habitat in a manner consistent with adopted salmon habitat recovery plans.
- Policy G-4 – River and Flood Hazard Management Services: King County should provide river and flood hazard management services to reduce the risk of flood and channel migration hazards by preserving open space in flood hazard areas and channel migration zones.
- Policy G-10 - Protecting Natural Functions & Values: King County shall protect flood storage, conveyance, and ecological values of floodplains, wetlands, and riparian corridors and, when feasible, should enhance or restore these ecological functions and values. Flood risk reduction strategies and projects should be coordinated on a river-reach scale with the salmon habitat recovery plans.
- Policy G-6 – Inter-Government Coordination and Cooperation: King County flood hazard management activities should be planned and implemented in close cooperation with cities, counties, tribes, salmon habitat recovery planning partners and other agencies sharing jurisdiction in each basin.
- Policy PROJ-6 - Flood Protection Facility Design & Maintenance Objectives: King County should construct new flood protection facilities and maintain, repair or replace existing flood protection facilities in such a way as to: (a) require minimal maintenance over the long term; (b) ensure that flood or channel migration risks are not transferred to other sites; (c) protect or enhance aquatic, riparian and other critical habitats; and (d) protect or enhance multiple beneficial uses of flood hazard areas.

• Policy PROJ-7 - Flood Protection Facilities within Critical Areas Ordinance Aquatic Areas and Aquatic Area Buffers: Wherever possible, King County should relocate existing flood protection facilities farther from the river edge and associated buffers to increase flood conveyance and allow natural river processes to occur.

Please assess the costs and benefits associated with more property acquisitions, including levee setback and levee removal projects. These types of multi-objective projects address the most critical habitat needs in many of our Salish Sea rivers, including the Lower Green and the Snoqualmie River, but they also serve the District's and the ratepayers' needs by being fiscally responsible over the long term, because a one-time investment relieves the District of untold future liability in maintaining facilities in the face of a changing climate.

We request the following specifics be addressed in the PEIS:

Alternative 1 – No Action

What are the implications of maintaining existing facilities on aquatic habitat, including ongoing impacts to ESA-listed species through lack of edge complexity or access to off-channel habitat, lack of flood refuge, lack of flood storage, lack of vegetation and this affects water temperatures?

Alternative 2 – Moderate Geographic Extent of Increased Level of Protection

What impacts will existing and new facilities cause to aquatic habitat, including ongoing impacts to ESA-listed species through lack of edge complexity or access to off-channel habitat, lack of flood refuge, lack of vegetation, and how will this affect water temperatures?

Alternative 3 – Greater Geographic Extent with Increased Level of Protection, Integrated Habitat and Recreation, Agricultural Protection Facilities, and Habitat Restoration Project Partnerships Alternative

Unfortunately, the name of this alternative is somewhat misleading, since the increased level of protection to the 500 year level of protection would preclude meaningful habitat improvements in many areas and instead would build walls along the river. Under this alternative, what impacts will existing and new facilities cause to aquatic habitat, including ongoing impacts to ESA-listed species through lack of edge complexity or access to off-channel habitat, lack of flood refuge, lack of flood storage, lack of vegetation, and how will this affect water temperatures?

In the Snoqualmie, the District—to its credit—has exhibited some willingness to incorporate a multi-objective, multi-benefit approach into Corridor Plan development, which the Tribe both appreciates and supports. The importance of the Lower Green and the Snoqualmie/Snohomish Rivers to salmon recovery is widely

documented in ESA Critical Habitat designations for Puget Sound Chinook and steelhead, in the watersheds' respective Salmon Recovery Plans, and again more recently through Governor Inslee's Southern Resident Orca Task Force. Without adequate habitat, including in the Lower Green and the Snoqualmie, our salmon and orca will perish. When Snoqualmie leaders signed the Treaty of Point Elliot, they ceded lands from the Nisqually River to near the US-Canada border. Courts have reaffirmed time and again that it is a treaty obligation to provide adequate habitat for salmon. Please fulfill treaty, legal and societal obligations by revising existing action alternatives, and developing at least one additional action alternative for the Lower Green River Corridor PEIS that focuses on salmon and Salish Sea ecosystem recovery.

Thank you for the opportunity to comment.

Sincerely,

Matt Baerwalde
Water Quality Manager
425-363-2008
mattb@snoqualmietribe.us

CC: Joe Hovenkotter, King County Department of Natural Resources and Parks

MUCKLESHOOT INDIAN TRIBE
Fisheries Division
39015 - 172nd Avenue SE • Auburn, Washington 98092-9763
Phone: (253) 939-3311 • Fax: (253) 931-0752

May 1, 2019

Ms. Michelle Clark
Executive Director and SEPA Responsible Official
King County Flood Control District
516 Third Avenue, Room 1200
Seattle, WA 98104

RE: Lower Green River Corridor Flood Hazard Management Plan, Determination of Significance, Programmatic Environmental Impact Statement (PEIS)

Dear Ms. Clark:

Our staff have reviewed the Determination of Significance (DS)/Scoping Notice for the proposed Programmatic Environmental Impact Statement (PEIS) to be developed for the Lower Green River Corridor Flood Hazard Management Plan. Our comments are provided in the interest of protecting and restoring the Tribe's treaty- protected fisheries resources.

The Green/Duwamish River basin supports fisheries resources that have cultural and economic importance to the Muckleshoot Indian Tribe. Chinook, coho, chum, pink salmon, steelhead, and other fisheries resources utilize portions of the basin for spawning, rearing, holding, and migration. The Green/Duwamish River basin is part of the Tribe's Usual and Accustomed Fishing Area (U & A), as defined in U.S. v. Washington, 384 F. Supp. 312,367 (W.D. Wash. 1974). Within the U & A, the Tribe retains commercial, subsistence, and ceremonial treaty fishing rights, as well as the authority and responsibility to co-manage shared natural resources with Washington State. The Tribe invests millions each year to produce salmon and protect habitat in the Green/Duwamish River to benefit its members and Washington's citizens. Adult returns of salmon to the Green River have been substantially diminished in comparison to historical runs, and these reduced run sizes have impacted tribal treaty harvest opportunities in recent years. The Green River Chinook stock is also among the highest priority sources of prey for the endangered Southern Resident Killer Whale population (NOAA and WDFW 2018).

The construction and maintenance of flood control facilities along the Lower Green River is problematic for treaty fishing. The existing flood control facilities are generally on over-steepened banks covered in blackberries. The extent of rock fill and size of bank protection rock has reduced scour in the river which limits eddy features that are used by adult salmon and steelhead to hold before continuing upstream migration. Historical river tribal fishing sites have been lost as a result of levee construction, maintenance, and repairs. In some areas, the levees are blocked by gates and

have limited access from the landward side for tribal fishers to set their nets. All of these conditions have resulted in the loss of fishing sites and limited access for tribal fishers to those sites that remain.

Existing flood control facilities and their maintenance has degraded fish habitat. The opportunity to restore former salmon habitat in the Plan area is already diminished by existing levees and floodplain development, which have eliminated salmon productivity from thousands of acres of floodplain. Poor habitat and water quality conditions in the lower river are a grave threat to Chinook and other fish in the Green-Duwamish River, and the outlook for their long-term survival is dependent, in part, upon the approach that the King County Flood Control District (KCFCD) will take in this Lower Green River Corridor Flood Hazard Management Plan (Corridor Plan).

It is vital that the Corridor Plan seeks to achieve a dramatic improvement in habitat conditions on equal terms with its flood risk reduction objectives. The construction and maintenance of flood control facilities is a leading cause of lethal temperatures and degraded salmon habitat in the lower 28 miles of the river. This river reach suffers from deficient tree shade, few deep pools for adult salmon, and essentially no natural floodplain rearing areas for salmon. Seven-day moving average maximum daily temperatures in the lower Green River typically exceed 70°F and can exceed 75°F, far exceeding the Washington state water quality criteria of 60.8°F and 63.5°F that are established to protect fish life. These temperatures are high enough to promote disease outbreaks and pre-spawning mortality in migrating adult Chinook and other negative effects on other species and/or life stages. Fortunately, modeling conducted for the Green River Temperature TMDL Study (Ecology 2011) found that tall tree shade along the river would reduce temperatures to meet or nearly meet the state temperature criteria.

Presently, 17 miles of levees in the lower river are enrolled in the U.S. Army Corps of Engineers' PL-84-99 program in which levee repairs are federally funded at 80 percent in exchange for compliance with very salmon-unfriendly design and vegetation maintenance rules. These rules mandate levee repairs using significant rock armoring, tree removals, and thinning that perpetuate ongoing habitat loss and degradation despite mitigation measures used. The lower Green River's entrenched and narrow confined condition within revetments and steeply-sloped levees contributes to a cycle of repairs and re-construction resulting in chronic impacts to habitat and to tribal fishing sites.

The alternatives described in the DS are insufficient to correct these problems and shortcomings. Instead, they would largely maintain the status quo for existing levees and construct up to 30 miles of new or improved levees, most of which still would require the same level of salmon-unfriendly PL-84-99 vegetation maintenance and repairs over time. The alternatives also fail to capitalize upon opportunities to maximize restoration of fish habitat within the Plan area or reflect the need for that effort. For example, all Plan alternatives should be expanded to include all restoration sites mapped from Alternative -3 of the interim Green River System-Wide Improvement Framework (SWIF), such as extensive setback levees on left bank Green River at (a) Teufel Nursery site above 228th Bridge, (b) Cow Lake below 228th Bridge, and (c) Valley Floor Community Park below 212th Bridge.

The FCD policy guidance (FCD Motion No. 18-01.2) for the Corridor Plan restricts land acquisition for levee setbacks wide enough for adequate riparian vegetation and off-channel Chinook rearing habitat to places that would not impact existing agricultural land, buildings, parking, or traveled roadways. Therefore, all or nearly all of the lower river would be off limits for significant improvement for salmon habitat and riparian conditions. This policy, combined with the FCD's reliance on the PL-84-99 program, almost guarantees the perpetuation of poor habitat and lethal water temperatures in the lower Green River.

Finally, it is important to understand that it is not possible to mitigate the current and future impacts of lower river flood protection facilities on Green River fish populations, and treaty resources and fishing sites by mitigation elsewhere in the watershed. For example, modeling found that fully shading the river up to the TPU diversion (river mile 60) everywhere but along the levees in the lower river would still not approach meeting the state water temperature criteria (Ecology 2011).

Our specific comments and recommendations to the DS/Scoping Notice for Draft PEIS for the Lower Green River Flood Hazard Management Plan (Corridor Plan) are below:

The Draft PEIS should address the following significant adverse impacts for each of the alternatives considered in the DS/Scoping Notice:

1. Potential impacts of levee construction and repairs on pools and eddies that provide adult holding habitat for salmon and steelhead, including an inventory of all river pools and eddies, and their hydraulic characteristics at a range of stream flows.
2. Potential impacts of levee construction and repairs upon tribal fishing sites and access to these sites under each alternative. The river pools and eddies inventory from item 1 should be used cooperatively with the Tribe for a fishing site impact analysis. The analysis of the impacts should include both short- and long-term effects on hydraulic characteristics of the fishing sites and on fishing site access from upland areas, including during construction activities.
3. The potential for riparian shade of adequate buffer width, tree height, and density recommended in the Green River Temperature Total Maximum Daily Load (TMDL) (Ecology, 2011) to meet the State's temperature water quality criteria given the constrained footprint and steep riverward slopes of flood facility projects (e.g., Type A and Type B) proposed in the Scoping Notice.
4. The potential for riparian shade of adequate buffer width, tree height, and density recommended in the Green River Temperature TMDL (Ecology, 2011) to meet the State's water quality criteria for temperature given the ongoing maintenance under the interim SWIF Vegetation Management Plan.
5. Analysis of the potential for each alternative for riparian development and necessary river shading along each of the critical, high, and medium priority river banks identified in the Lower Green River Riparian Aspect Priorities maps (Muckleshoot Indian Tribe 2013).

6. Potential impacts for each alternative on water temperature effects on salmon and steelhead life stages as identified by EPA Issue Paper 5 (2001), including a detailed summary of the effects of water temperature impairment on juvenile and adult salmon and steelhead life stage development, growth, health, and survival and an analysis of population-level impacts for Green River Chinook, steelhead, and coho populations (hatchery and natural origin).

   See also

   https://www.epa.gov/wa/northwest-water-quality-temperature-guidance-salmon-steelhead-and-bull-trout)

   https://www.govlink.org/watersheds/9/pdf/technical-white-papers/Green_River_Temperature_%20and_%20Salmon_Technical_Briefing_2_28_17_final.pdf)

7. Potential impacts to the creation and maintenance of high quality juvenile Chinook rearing habitat (e.g., shallow water areas available from January through May/June with instream cover, sandy substrates, and overhanging vegetation). The DPEIS analysis should include acreage of rearing habitat expected under all alternatives and provide a comparison to applicable targets in the WRIA 9 Salmon Recovery Plan-Making Our Watershed Fit for a King (WRIA 9 Steering Committee 2005). As part of this analysis, the Draft PDEIS needs to inventory existing culverts and culverts with flapgates on tributaries at their confluences with the Green River to determine if these facilities are barriers for adult and juvenile salmon to access stream habitat upstream.

8. Analysis of the cumulative effects of each alternative in combination with other reasonably foreseeable past, present, and future actions and conditions on lower river habitat and water temperatures (to river mile 11) of each alternative.

   This analysis should include but not be limited to a) climate change effects on temperatures in the lower river, including the potential for an increased frequency of minimum and critical instream flows that also influence stream temperatures; and b) contribution of future levee construction, repairs, and vegetation maintenance to the projected increased river temperatures associated with climate change.

   See https://www.govlink.org/watersheds/9/pdf/technical-white-papers/WRIA9SalmonPlan-ClimateChangeBriefing_FINAL_9-20-2017.pdf)

9. An analysis of the direct and cumulative adverse effects of construction of 19 to 30 miles of new or improved levee facilities under all alternatives on physical and biological habitat processes important for salmonids, including effects on designated critical habitat for ESA listed salmonids.

10. An analysis of the direct and cumulative adverse effects of levee maintenance and repairs of existing, new or improved levees on physical and biological habitat processes

important for salmonids, including effects on designated critical habitat and PCEs for ESA listed salmonids, and riparian habitat for all alternatives.

11. An analysis of the direct and cumulative adverse effects of adding levee toe protection (more riprap at the base of the levee) for existing facilities on designated critical habitat and PCEs for ESA listed salmonids.
12. The potential stability of the various facility types and the need for repairs and reconstruction due to extreme flood events and climate change and the likely impacts to salmon habitat from these repairs/reconstruction.

The Draft PEIS should also include the following recommended measures to avoid, minimize, and mitigate effects of the Corridor Plan:

1. Present a new range of alternatives, each of which are capable of avoiding, minimizing, and mitigating their effects on water temperatures, salmonid habitat, salmonid populations, and tribal fishing sites in the Lower Green River while meeting flood control objectives. The range of alternatives described in the DS/scoping notice are too narrowly scoped and fail to meet state and federal requirements to avoid, minimize, and mitigate impacts.
2. Mitigation needs to occur where the impacts occur. It is not possible to mitigate the impacts of lower Green River flood protection facilities on Green River salmonid populations, and treaty resources and rights by providing mitigation elsewhere in the watershed. For example, the TMDL report found that shading the entire river up to Howard Hanson Dam with a tall tree buffer 150 feet wide everywhere except along the levees in the Lower Green River would still not approach meeting the State's water temperature criteria (Ecology 2011).
3. KCFCD policies for the Corridor Plan should be revised to allow the acquisition of parking areas, buildings, buildings, or non-essential traveled roadways where needed and feasible to provide for setback levees of 150 feet or greater.
4. Resolve the existing policy or other obstacles to the potential for acquisition of easements on agricultural land along riverbanks of critical and high value as identified in the Lower Green River Riparian Aspect Priorities maps. (See Lower Green River Sun Maps 1-13 available at:

   https://www.kingcounty.gov/depts/dnrp/wlr/sections-programs/river-floodplain-section/capital-projects/green-river-system-wide-improvement-framework/green-river-swif-documents.aspx

   For example, landowners who allow a wide buffer of trees to grow along the river could be compensated with measures that enhance agricultural production on their remaining property, or alternative compensation as desired by the individual landowner. The Corridor Plan should discuss the potential for the FCD to negotiate individual landowner

agreements and outline the steps needed to remove existing impediments to landowner agreements for the purpose of establishing shade as early as possible on priority agricultural lands in the lower Green River.

5. Repair or replace existing barrier culverts that prevent adult and juvenile salmon access to tributaries from the mainstem Green River within the planning area.

Thank you for the opportunity to comment on the DS/Scoping notice for the Draft PEIS for the Lower Green River Corridor Flood Hazard Management Plan. Please feel free to contact me with any questions at glen.stamant@muckleshoot.nsn.us or (253) 876-3130.

Sincerely,

Glen St. Amant
Fisheries Habitat Protection Assistant Director

Cc: Reagan Dunn, Chair KC FCD Board of Supervisors
Barry Thom, NOAA West Coast Regional Director
Maia Bellon, WDOE, Director
Kelly Susewind, WDFW Director

References

EPA Issue Paper 5: Summary of Technical Literature Examining the Physiological Effects of Temperature, EPA-910-D-01-005.May 2001

NOAA Fisheries West Coast Region and WDFW. 2018. Southern Resident Killer Whale Priority Chinook Stocks Report.

Washington Department of Ecology. June 2011. Green River Temperature Total Maximum Daily Load Water Quality Improvement. 11-10-046.

LUMMI INDIAN BUSINESS COUNCIL
2665 KWINA ROAD BELLINGHAM, WASHINGTON 98226 (360) 312-2000
DEPARTMENT_____DIRECT NO. _____

May 1, 2019

Ms. Michelle Clark, SEPA Responsible Official
King County Flood Control District
516 Third Ave. #1200
Seattle, WA 98104

Re: Lower Green River Corridor Flood Hazard Management Plan and Programmatic Environmental Impact Statement (PEIS)

Dear Ms. Clark:

Hu'tchni'ng xe'xe-s etse Lha'qte'Mish. Elhtel'nexw xe'chi't-s the hu'tchni'ng xe'xe-s ske'lot'ses, i net'se hu'tchni'ng-s et'se, i Ahh'Tse'le'ni, i AhhTse'lu'lh, i AhhTse'Kw'e. Xwlemi' Kwe'lang'et: Tse Xwlemi Elhtelnexw xw'chi'ts tse Xe'Xellh Snepenexw et'se selexw-le-s etse Xwelemi St'lelnep-s. Xe'chits tse sa'le'lexw-s Xe'xe'lh Snep'enews-s et'se elh'tel'nexw chi'langelh ong'es-t etse si'si'lh tle, on'gest tse sle'qwen etse Swe'tan etse Lh'aTe'Mish-s tenewe-s i onges-t tse sxw'olet.[1]

We would to thank you for this opportunity to provide our comments on the Lower Green River Corridor Flood Hazard Management Plan (Corridor Plan) PEIS.

The Lummi Nation, like other tribal governments on the Salish Sea, supports efforts that promote treaty rights and protect the natural and cultural heritage of the Salish Sea. This is especially true today with the Salish Sea at a tipping point, the Southern Resident Killer Whales (SRKW) struggling to survive, and our salmon facing numerous nearly insurmountable stressors, including rising water temperatures resulting from climate change. It is incumbent on all of us do what we can to repair and restore these natural systems. The proposed Corridor Plan provides an opportunity to move in this direction by addressing some of the key challenges to the future health of the Salish Sea.

It is important that we learn from history. We know that here, as in other locations, flood control have negatively impacted water quality. This has a cascading impact on rearing habitat for Chinook salmon in the Middle and Lower Green which, in turn, impacts the health of our SRKW population. Sadly, over half of the Lower Green's river banks have little or no shading

[1] Our sacred feelings of the First People who know the feelings of our territory and the understanding about why we feel this emotionally, mentally and spiritually; feelings which come from things we understand and feel in our language, by the kind gestures we receive from all the spirited things, and from our land and our peoples. The Lummi people know our 'sacred teachings' of the ancestors regarding our traditional territory. We know and understand our responsibility as to the inherent rights given by our Creator who gave His breath to create our first ancestor and then gently placed our first ancestor back onto the earth.

adding to the stress on our migrating salmon. It is imperative that what we do, today, does not negatively impact habitat restoration in the future. We encourage the Flood District to move towards a holistic, integrated, and multi-objective Corridor Plan; one that honors the treaty obligation, reduces the threat of flood, and promotes salmon recovery. To that end, we recommend that you develop an alternative that integrates the objectives of reducing water temperatures, increasing salmon habitat, and honoring tribal treaty rights.

We also need to stress the importance of a cumulative impact assessment. As you understand, linear (additive) assessments do not give an adequate or accurate picture. In many cases, the whole of the impact is greater than the sum of the stressors. We need to also analyze, account for, and be sure to mitigate impacts that result from the interaction between two or more stressors.

It is our sacred obligation to the future generations to act as responsible stewards who understand mistakes from the past and who have a vision for restoring, enhancing and protecting the Salish Sea bioregion.

Please let me know if you have any questions or concerns regarding these comments.

Sincerely,

Lawrence Solomon, Secretary
Lummi Indian Business Council

THE SUQUAMISH TRIBE

FISHERIES DEPARTMENT
PO Box 498 Suquamish, WA 98392-0498

25 March 2019

King County Flood Control District
ATTN: Michelle Clark, SEPA Responsible Official
516 Third Avenue Room 1200
Seattle, WA 98104

Subject: Scoping Comments for proposed Lower Green River Corridor Flood Hazard Management Plan

Dear Ms. Clark:

The King County Flood Control District's (District) proposed Lower Green River Corridor Flood Hazard Management Plan (Corridor Plan) will affect treaty-reserved resources important to the Suquamish Tribe (Tribe), a federally recognized Indian tribe with fishing rights downstream from the Lower Green River Corridor. These treaty-reserved resources include, but are not limited to, multiple species and populations of anadromous salmon, steelhead, and char (some of which are listed as threatened under the federal Endangered Species Act) that utilize the corridor for migration, rearing, and spawning during critical phases of their life histories. The Tribe's cultural, spiritual, and economic well-being has depended on these Green/Duwamish River resources since time immemorial.

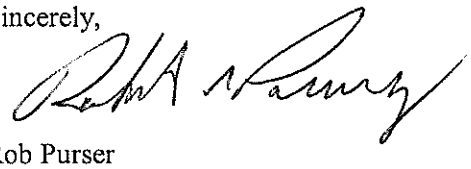
After reviewing the District's Proposed Alternatives and Scoping Notice for the Programmatic Environmental Impact Statement (PEIS), the Tribe believes the scope of the PEIS should be expanded to include additional alternatives that will better support the District's stated intention of improving fish habitat and supporting salmon recovery while reducing long-term flood risks. In particular, the Tribe urges the District to develop additional alternatives that better align with policies enumerated in the 2006 and 2013 King County Flood Hazard Management Plan. For example, Policy G-3 calls for the Plan to "enhance aquatic and riparian habitat in a manner consistent with adopted salmon habitat recovery plans" and Policy G-4 calls for "reducing flood and channel migration hazards by preserving open space in flood hazard areas and channel migration zones." Policy G-10 calls for protection of natural functions and values of floodplains, wetlands, and riparian areas and, when feasible, "enhance or restore these ecological functions and values" in coordination with salmon habitat recovery plans while Policy G-6 calls for "close cooperation with cities, counties, tribes, [and] salmon habitat recovery planning partners."Finally, Policies PROJ-6 and PROJ-7 call for flood protection facilities that protect or enhance riparian habitats and for siting such facilities "farther from the river edge and associated buffers to increase flood conveyance and allow natural river processes to occur," whenever possible. These alternatives and facility types should be evaluated for their consistency with each of these policies. Furthermore, alternatives should be evaluated for their consistency with achieving goals in the Green/Duwamish (WRIA 9) Salmon Recovery Plan, including numeric goals for off-channel habitat area, riparian vegetation, large woody debris, and bank armoring.

The intentions of the Corridor Plan ostensibly include "improving fish habitat." However, the Tribe could not identify measures in any of the proposed alternatives that will harmonize its flood hazard risk reduction with any of multiple other potential benefits, including salmon recovery. As proposed in the scoping notice, the Corridor Plan consists of a mix offour facility types (Type A, B, C, and D) in three potential alternatives. As traditional levees and floodwalls, Type A and B facilities are the most constrained, allowing for little, if any, channel migration, off-channel habitat, or improved riparian and floodplain vegetation. Type C facilities are levee setbacks and/or floodwalls. Type C facilities provide the greatest opportunity for habitat restoration, community, and ecological resilience, but the scoping notice could have done a much better job of demonstrating how investments in habitat elements would be integrated with Type C facility projects. In its scoping notice, the District states that Type C

facilities would only be constructed in "locations where a levee setback would not impact existing agricultural land, buildings, parking, or traveled roadways." As a long-term plan to address flood risks and habitat needs for the next 50 or more years, the Tribe believes that the District should not limit application of Type C facilities in this arbitrary manner. Rather, an additional alternative should be considered that takes full advantage of land and easement acquisition and levee setbacks to maximize benefits for fish and support of salmon recovery while meeting the District's flood risk reduction goals. Considered in conjunction with planned investments in fish passage upstream at Howard Hanson Dam and ongoing cleanup of the lower Duwamish Waterway, the Corridor Plan represents a once in a generation opportunity to set the entire watershed on a path that will recover the abundance, productivity, and resilience of its salmon runs, including populations that are vital to Southern Resident Killer Whale, while meeting the concurrent need to address long-term flood risks, climate change, and the challenges of a rapidly growing human population.

The Tribe requests consultation with the District as it finalizes the scope (including additional alternatives and necessary major modifications to the listed alternatives) of the PEIS. Please direct future communications concerning this project to Tom Ostrom, Salmon Recovery Manager, (360-394-8446, tostrom@suquamish.nsn.us), Thank you for the opportunity to comment on the scope of this PEIS and for considering the Tribe's comments.

Sincerely,



Rob Purser
Fisheries Director
360-394-8436

RP:TO

c Members, Metropolitan King County Council
Joe Hovenkotter, King County Department of Natural Resources and Parks

Federal

URBANWATERS
FEDERAL PARTNERSHIP
Restoring Urban Waters, Revitalizing Communities

March 29th, 2019

King County Flood Control District
Attn: Michelle Clark, SEPA Responsible Official
516 Third Avenue, Room 1200
Seattle, WA 98104
lowergreensepa@kingcounty.gov

Re: Lower Green River Corridor Flood Hazard Management Plan

Dear Ms. Clark,

We write today to provide feedback on the Programmatic Environmental Impact Statement being prepared for Lower Green River Corridor Flood Hazard Management Plan.

In 2013 the Green-Duwamish Watershed was designated one of 19 national Urban Waters Federal Partnership sites. The Urban Waters Federal Partnership (UWFP) Green-Duwamish is supported by the US Forest Service Pacific Northwest Research Station and the State and Private Forestry's Urban and Community Forestry Program. After reviewing the materials provided we recommended that you please do not move forward with any of the Alternatives 1-3 as drafted.

Each of the alternatives provided fail to work towards any of the five central goals of the UWFP:

- Connect watershed recovery with local needs and priorities.
- Promote cross-agency partnerships.
- Reconnect people to their waterways.
- Advance social equity, environmental justice, local economic development benefits.
- Promote the multi-benefit opportunities generated by green infrastructure investments especially those framed by the health/nature nexus.

The scope and scale of the Lower Green is too vast to be so heavily dictated by one particular use. In addition to failing to meet the UWPF goals, the alternatives provided do not advance the multi-objective salmon recovery strategies supported by the WRIA 9 Salmon Habitat Plan, or committed to in the 2013 King County Flood Hazard Management Plan and 2014 Lower Green System-Wide Improvement Framework (SWIF) process.

As stated in the Flood Controls District's 2016 transmittal of the interim SWIF, the Board of Supervisors committed to integrate habitat and recreation objectives left out of the interim SWIF into a future corridor plan. This proposed PEIS is that future corridor plan, and yet these integrated objects are still absent in the alternatives.

Specifically, the 2016 Interim SWIF Transmittal states: "Pursuing an Interim SWIF is a short-term solution to retain eligibility under the P.L. 84-99 rehabilitation assistance program, and does

not meet all of the goals and objectives of the stakeholders for a Green River vision that includes flood protection, levee certification, habitat, and recreation. The Flood District is committed to achieving these additional goals in a long-range Lower Green River Corridor Plan that will integrate elements of the Interim SWIF and which we plan to scope in conjunction with a programmatic environmental impact statement under SEPA."

Therefore, the PEIS should be amended to integrate specific goals and objectives related to habitat enhancements and salmon recovery; or a new fourth alternative, as requested by WRIA 9, State agencies, NGOs and others needs to be developed. When the District decided to submit the pared-down Interim SWIF to ensure it retained temporary eligibility for PL-84-99 assistance, it stipulated that the broader objectives of the SWIF stakeholders would be better achieved through a corridor planning process (FCS2016-05.2). Please strive to meet those broader objectives in a new alternative that:

- Integrates flood risk reduction and salmon habitat restoration consistent with established goals and policies;
- Maximize the number of levee setbacks to increase flood storage capacity and salmon habitat and more effectively manage floods;
- Reflects salmon habitat restoration concepts for the Lower Green River that are supported by the cities and King County;
- Makes substantive contribution towards achieving the salmon habitat goals established for the Lower Green Subwatershed; and
- Ensures vegetation management and facility alignment support healthy riparian vegetation in high priority areas identified by the 2013 Muckleshoot Riparian Aspect Mapping.

Additionally, when a revised "Alternative 4" is delivered and as part of future processes, we strongly encourage the FCD to target specific outreach and genuine engagement of the many federal agencies that are key actors in the Lower Green River. Many relevant federal departments are unable to provide comment without explicit, official engagement. These alternatives lack input from critical stakeholders without this federal input.

Sincerely,

Weston Brinkley
Ambassador
Urban Waters Federal Partnership,
Green-Duwamish Watershed
206-412-3244

From: LowerGreenSEPA
To: Kjristine Lund
Subject: FW: ESA Compliance for Lower Green River EIS?
Date: Tuesday, April 9, 2019 11:41:10 AM

LGRCFHMP PEIS comment

Michelle Clark
Executive Director, King County Flood Control District
(206) 477-2985

From: Cooper, Erin <erin.cooper@fema.dhs.gov>
Sent: Wednesday, April 3, 2019 10:33 AM
To: LowerGreenSEPA <LowerGreenSEPA@kingcounty.gov>
Subject: ESA Compliance for Lower Green River EIS?

Hello,

I have reviewed the Programmatic EIS documentation online for the Lower Green River project being led by the District and would like to ask for some clarification separate from providing official comment. We would like to know whether the District is seeking compliance with the Endangered Species Act (ESA) Biological Opinion through Army Corps of Engineers or through FEMA's National Flood Insurance Program. Given the nature of this project, ESA compliance will be required.

We'll look forward to learning more about your plans. Please feel free to contact me with questions.

Best,
Erin Cooper

Erin Cooper, CFM
FEMA Region X - Mitigation Division
Senior NFIP ESA Specialist
130 228th St NW
Bothell, WA 98021
Office: 425-487-4691
Cell: 202-856-1927

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
West Coast Region
1201 NE Lloyd Boulevard, Suite 1100
Portland, OR 97232

April 25, 2019

King County Flood Control District
Attn: Michelle Clark, SEPA Responsible Official
516 Third Avenue
Seattle, WA 98104
lowergreensepa@kingcounty.gov

RE: National Marine Fisheries Service (NMFS) Comments on the Scope of Lower Green River Corridor Plan and Programmatic Environmental Impact Statement (PEIS)

Dear Ms. Clark:

I am writing on behalf of the NMFS to provide comments on the King County Flood Control Districts Lower Green River Corridor Flood Hazard Management Plan (LGRFMP). We would like to extend our sincere appreciation for the opportunity to comment on the proposed action and look forward to working with you to ensure success in providing flood risk reduction as well as restoration and protections for our important habitat and species resources. The NMFS recognizes the critical importance in protecting life and property, as well as the difficulty in providing those protections while simultaneously meeting the County's recovery plan objectives by restoring and maintaining the integrity of our natural resources. The NMFS agrees with and supports the proposed intent to reduce flood risks while integrating the needs for fish habitat and water quality improvements.

As you might be aware, the Green/Duwamish river system has been identified as one of the most endangered rivers in the U.S. by the environmental group American Rivers (https://endangeredrivers.americanrivers.org/green-duwamish-river/). Further evidence of this can be found in NMFS's recent Endangered Species Act (ESA) review and resulting biological opinion that concluded the continuation of operations and maintenance of the Howard A. Hanson Dam (HAHD) on the Green River would likely inhibit survival and recovery of Puget Sound (PS) Chinook Salmon, PS Steelhead and Southern Resident Killer Whales (SRKW)[1]. As a result, the US Army Corps of Engineers will construct fish passage allowing salmon and steelhead access to more than 100 miles of higher quality spawning and rearing habitat and is expected will greatly improve recovery prospects for these ESA protected fish in the Green/Duwamish system.

[1]This conclusion is also known as a "Jeopardy and Adverse Modification of Critical Habitat." To date, in Puget Sound NMFS, has come to this conclusion two other times. See below referenced for NMFS 2008 and NMFS 2014.

Because salmon and steelhead rely on the entire river throughout their life stages, to maximize benefits of fish passage at HAHD and meet the objectives of salmon and steelhead recovery it will be necessary to continue to improve water quality/quantity and habitat quality/access downstream of the dam and within the estuary. As more adult fish access the upper watershed and spawn, the habitats in the mid and lower watersheds will need to support juveniles in a way that increase their survival out to sea and back. For the Green River, sufficient rearing habitats are limiting this survival. Specifically, to maximize the efforts, costs, and benefits of establishing fish passage at HAHD, there will need to an increase in floodplain accessibility and off-channel areas in the mid and lower Green River.

After reviewing the Flood Control District's 2018 PEIS, NMFS is concerned that the stated alternatives provide flood management risk analysis, but do not integrate objectives or actions that would support improvements to the environmental conditions necessary to recover ESA-protected species and their critical habitats. We recommend that additional analysis be conducted, and additional alternatives be developed, to include the multi-objective approach, so that actions that provide the necessary flood risk reduction also improve environmental conditions critical to the survival of our region's iconic and important ESA-listed species.

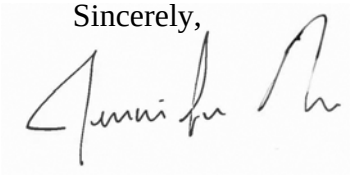
The NMFS also reviewed technical recommendations and comments provided by the King County Flood Control Advisory Committee, State Agencies, and Non-Governmental Organizations (NGO's). Many of these recommendation and comments are consistent with the recovery plan and cover the critical components necessary for progress toward flood risk reduction while integrating components vital to recovery and protection of ESA-listed species. We reiterate below those comments that from NMFS perspective would be essential to a multi-objective approach.

- An "integrated and long term approach to reduce flood risks" while balancing multiple objectives including environmental protection including habitat restoration, salmon recovery, and water quality. Habitat and water quality protection should consider stream temperatures, stormwater input and toxicity, habitat connectivity, critical flow management (necessary for redd scour reduction, effects on stream temperature, habitat connectivity, adult and juvenile salmon migration, spawning and rearing habitat), and shoreline vegetation.
- A range of alternatives that address levee setbacks and create additional floodplain areas restoring habitat necessary for salmonid survival. As already mentioned in technical comments provided by interested agencies, the "No Action" alternative is not a true "no action". The proposed alternative includes actions that will negatively affect the stream and riparian environment and should be reconsidered to include a true "no action" alternative to provide an accurate baseline for action alternative comparisons.
- Water quality and habitat analysis for the estuarine environment that clearly identifies impacts resulting from flow alterations and water quality degradation.
- Clearly indicate how the proposed actions will result in a minimum of "no net loss" of habitat including physical habitat structures, water quality, stream temperatures, habitat connectivity, and impacts to benthic biological communities (ensuring high quality habitat for benthic organisms which provide a forage base for juvenile and adult fish).

- Include a cost-benefit analysis for the acquisition of additional lands for floodplain enhancements to be held in perpetuity.
- Consider shoreline softening opportunities to improve riparian area-to-groundwater and stream interactions, to further improve water quality and habitat.

Again, the NFMS sincerely appreciates the opportunity to comment on the proposed actions and would welcome the opportunity for early collaboration and discussion during the development of alternatives and the EIS. It is our firm belief that with some additional considerations you will emerge with a set of actions that provide the necessary levels of flood risk management and human life and property protection while simultaneously moving toward the recovery of our natural resources in a meaningful way. Please feel free to reach out to the NMFS by contacting Ben Mann (ben.mann@noaa.gov, or 360-753-7761) for questions or comments.

Sincerely,



Jennifer Quan
Oregon/Washington Coastal Area Office
Branch Chief - Central/South Puget Sound

REFERENCES CITED

NMFS. 2008. Endangered Species Act Section 7 Formal Consultation and Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Consultation for the on-going National Flood Insurance Program carried out in the Puget Sound area in Washington State. HUC 17110020 Puget Sound. National Marine Fisheries Service. West Coast Region.

NMFS. 2014. Mud Mountain Biological Opinion and Conference Opinion. National Marine Fisheries Service, Northwest Region. West Coast Region.

State

PUGET SOUND SALMON RECOVERY COUNCIL

Puget Sound Salmon Recovery Council Members

Skagitonians to Preserve Farmland

Washington Forest Protection Association

Washington Policy Center

Long Live the Kings

Puget Sound Anglers

Washington Environmental Council

League of Women Voters

US Environmental Protection Agency

National Oceanic & Atmospheric Administration

US Army Corps of Engineers

US Dept. of Agriculture

Lummi Nation

Makah Tribe

Nisqually Tribe

Nooksack Tribe

Northwest Indian Fisheries Commission

Point No Point Treaty Council

Port Gamble S'Klallam Tribe

Sauk-Suiattle Tribe

January 29, 2019

King County Flood Control District
ATTN: Michelle Clark, SEPA Responsible Official
516 Third Avenue Room 1200
Seattle, WA 98104

RE: Lower Green River Corridor Flood Hazard Management Plan Draft Programmatic Environmental Impact Statement

Dear Ms. Clark:

The Puget Sound Salmon Recovery Council (PSSRC) respectfully submits the following comments on the King County Flood Control District Corridor Plan Draft Programmatic Environmental Impact Statement (DPEIS). The PSSRC is a multi-stakeholder council that advises the Puget Sound Partnership's Leadership Council in implementing the Puget Sound Salmon Recovery Plan. Members include Tribes; local, state and federal government agencies; representatives of agriculture, business, and environmental interests; and representatives from each of the 16 watershed areas in Puget Sound and represent literally thousands of people active in salmon recovery across Puget Sound.

Since the 1999 listing of Puget Sound Chinook as a Threatened species, significant local, state, and federal resources have been invested to avert extinction of Puget Sound Chinook. A fundamental need to recover Chinook throughout Puget Sound is increasing the area of floodplain channel habitat. Floodplain off-channel habitats are safe-sites for rearing Chinook. The Puget Sound Salmon (Chinook) Recovery Plan identifies the Lower Green River as a significant bottleneck to recovering Puget Sound Chinook salmon due to substantial reduction of rearing habitat and a subsequent dramatic decrease in the survival of Chinook salmon. It is absolutely critical to increase the rearing habitat of the Lower Green River to recover the Green River Chinook salmon population--and to facilitate recovery of Chinook salmon Puget Sound-wide.

Continued decline in the Green River Chinook salmon population is of regional and statewide concern as its recovery is essential to de-listing Puget Sound Chinook as Threatened and, moreover, to avoid losing the Southern Resident orca population. The three alternatives identified in the November 26, 2018 DPEIS scoping notice will not advance Puget Sound Chinook salmon recovery.

PUGET SOUND SALMON RECOVERY COUNCIL

Skokomish Tribe

Tulalip Tribe

WA Dept. of Ecology

WA Dept. of Fish & Wildlife

WA Department of Natural Resources

WA State Conservation Commission

Puget Sound Partnership

WA State Association of Counties

Green/Duwamish Watershed

Hood Canal Watershed

Island Watershed

Lake Washington/Cedar/ Sammamish Watershed

Nisqually Watershed

Nooksack Watershed

North Olympic Peninsula Lead Entity

Puyallup/Chambers Watershed

San Juan Watershed

Skagit Watershed

Snohomish Watershed

South Sound Watershed

Stillaguamish Watershed

West Sound Watersheds

Additionally, NOAA Fisheries' draft Puget Sound Steelhead Recovery Plan classifies the Green River (winter run) Distinct Individual Population (DIP) of steelhead as one of four DIPs in the South/Central Puget Sound Major Population Group that must be viable to achieve recovery of the Puget Sound Steelhead Distinct Population Segment as a whole. Furthermore, the draft Recovery Plan identifies floodplain reconnection as a key element of the steelhead recovery effort that will expand available rearing habitat and mitigate for the impacts of climate change, among other factors.

The PSSRC requests that the King County Flood Control District evaluate and quantify the ability to recover Puget Sound Chinook salmon by the ability to recover the Green River Chinook population. The SEPA environmental evaluation and analysis must identify an additional alternative for flood management of the Lower Green River that is consistent with the Puget Sound Salmon Recovery Plan. Ideally, the Corridor Plan should approach flood management in a manner that considers and integrates Chinook salmon and steelhead recovery, economic development, recreational opportunities, and environmental justice.

Specifically, rather than widening existing levee structures and planting trees on the levee shoulders, we recommend the addition of a fourth alternative that leads to the creation of more floodplain habitat. A multi-pronged alternative to reduce flood risk and increase floodplain habitat is consistent with the approach outlined in the Green River Chinook recovery plan, which reflects habitat restoration concepts for the Lower Green River that are supported by jurisdictions in the watershed and that will lead to achievement of the habitat goals established for the Lower Green River.

The Puget Sound region cannot afford losing opportunities to reverse declines of salmon and orca. The proposed Lower Green River Corridor Plan will set the stage for salmon habitat restoration and protection in a critical reach of the Green River Watershed for the next fifty years. The PSSRC strongly believes that a narrow approach to long-term flood risk reduction throughout Puget Sound, without appropriately integrating the needs of Chinook salmon recovery, is a significant step backward and does not meet Washington State Best Available Science criteria. To ensure the value of the millions of dollars that have been invested in Puget Sound to recover Chinook salmon, a multi-benefit approach to floodplain management is imperative for the Lower Green River.

Finally, we note that the federal government shutdown prevented our federal partners – a number of whom participate as members of the PSSRC – from commenting on this DPEIS, and request an extension of the comment period to allow sufficient time for these partners to submit comments.

Thank you again for the opportunity to comment.

Sincerely,

David Troutt
Chair, Puget Sound Salmon Recovery Council
Nisqually Indian Tribe

Cc: Laura Blackmore, Deputy Director, Puget Sound Partnership
Jennifer Lee, Director of Policy & Planning, Puget Sound Partnership
Amber Moore, Salmon Recovery Manager, Puget Sound Partnership
Tristan Contesse, Boards Program Manager, Puget Sound Partnership
Cory Zyla, Ecosystem Recovery Coordinator, Puget Sound Partnership
Deborah Hagen, Special Assistant to the Boards, Puget Sound Partnership
Puget Sound Salmon Recovery Council members

January 29, 2019

Michelle Clark, SEPA Responsible Official
King County Flood Control Flood District
516 Third Avenue - Room 1200
Seattle, WA 98104
lowergreensepa@kingcounty.gov

RE: State Agency Comments on Scope of Lower Green River Corridor Plan and Programmatic Environmental Impact Statement (PEIS)

Dear Michelle Clark:

Thank you for the opportunity to comment on the King County Flood Control District's (Flood District) Lower Green River Corridor Flood Hazard Management Plan (LGR Corridor Plan). The Puget Sound Partnership, Washington Department of Fish and Wildlife, Washington Department of Natural Resources, and Washington Department of Ecology (State Agencies) sincerely appreciate the Flood District's long-term perspective in managing flood hazards throughout the Lower Green River corridor. We similarly are committed to supporting a long-term integrated flood management approach ensuring flood protection, economic viability, and ecological improvements aligned with regional salmon recovery goals and consistent with applicable regulatory authorities.

Regional and Statewide Interest in Recovery

Listing of Puget Sound Chinook salmon as "Threatened" in 1999 under the Endangered Species Act (ESA) stimulated a collective need for all interests from all corners of the Salish Sea to commit to recovery efforts and work collaboratively to save this iconic resource. This effort continues through 20 years of dedicated planning and investment targeted to salmon recovery throughout the state. Therefore, recovery of the Green River Chinook salmon population is not just a local issue, but is of regional and statewide importance, as it is essential to de-listing of Puget Sound Chinook and, moreover, a significant factor in avoiding further loss of the Southern Resident orca population.

Urban development and flood intervention have essentially disconnected the Lower Green River from 82 percent of the historic floodplain, heavily degrading the river and salmon habitat over time. This reach, along with the Green-Duwamish Estuary, is characterized in the Puget Sound Chinook Recovery Plan as a critical barrier, limiting survivability of out-migrating juvenile salmon due to the lack of available rearing habitat within the corridor. The loss of riparian vegetation though this corridor has led to high (lethal) water temperatures, which has also created a breeding ground for five aquatic parasites that have further increased mortality rates for out-migrating juveniles and returning adult salmon. In 2009, after Chinook salmon yearly return numbers dropped to as low as 200 natural-origin adults, the Co-Managers (Washington Department of Fish and Wildlife and the Muckleshoot Indian Tribe) took costly measures to supplement the returning natural-origin Chinook runs by boosting hatchery production.

WRIA 9 Salmon Recovery Plan

In addition to the Co-Managers' efforts described above, other organizations, such as the Puget Sound Leadership Council, have been supporting the work of the Green-Duwamish and Central Puget Sound Watershed (WRIA 9) groups in their efforts to develop and implement a salmon recovery strategy for the Green River.

WRIA 9, in collaboration with a diverse set of stakeholders, has partnered with King County and neighboring cities to develop a salmon recovery plan identifying specific recovery objectives at both a 10- and 50-year interval. Many of the proposed flood control measures listed in the PEIS appear to contradict with the WRIA recovery goals related to riparian habitat enhancements[1], reduction of bank armor[2], and establishment of off channel habitat[3]. Therefore, to ensure alignment with state and regional recovery efforts, it is imperative the Flood District work collaboratively with the leaders of WRIA 9 in development of PEIS alternatives that support ongoing work to recover salmon in the watershed.

Connections to Orca Recovery

As part of the federal response to the decline in the Southern Resident orca population, the Governor's Orca Task Force recommended an increase in production of hatchery Chinook, for which the Green River hatchery system plays a key role implementing immediate and moderate response efforts. In fact, the Washington Department of Fish and Wildlife's Green River Hatchery facility plans to increase hatchery Chinook releases by fifty percent. These Green River Chinook are expected to contribute twenty percent of the estimated needed lift in adult Chinook prey for Southern Resident orcas. Therefore, it is critically important the LGR corridor provide sufficient salmon habitat to support these out-migrating Chinook targeted as orca prey.

Moderate to long-term Orca Task Force actions call for an increase in salmon recovery investments with additional funding for restoration project brought forward through groups like the Salmon Recovery Funding Board. Therefore, the Flood District's commitment to a multi-

[1] WRIA 9 plan calls for establishment of 250 acres of revegetated riparian habitat as a 10-year goal and 75% of the river bank revegetated to 165 feet as a 50-year goal.

[2] WRIA 9 plan calls for one mile of levee setback as a 10-year goal and no new bank armoring as a 50-year goal.

[3] WRIA 9 plan calls for reconnection of 240 acres of floodplain as a 10-year goal and reconnection of 5,039 acres of floodplain as a 50-year goal.

benefit approach identifying habitat improvements and restoration opportunities could align the flood hazard planning effort with this funding opportunity, while also confirming the County's commitment to threatened salmon and orca recovery.

State Agencies' PEIS Recommendations:

Build on Previous Efforts and Past Commitments
The State Agencies remain committed to long-term sustainable management of the Green River corridor. We actively contributed to the 2014-2016 Green River System Wide Improvement Framework (SWIF). Unfortunately, the SWIF was not completed consistent with the original vision (provided below). However, the Flood District's current effort in establishing a corridor plan is the right opportunity to reincorporate the original long-term, multi-benefit vision into the PEIS.

> *"Improve flood protection for current and future generations, in a way that builds economic, ecological, and community resiliency."* 2014 SWIF Vision Statement.

As established in Resolution FCD 2016-05, the Flood District's adoption of the "Interim SWIF" in 2016 only incorporated some elements of the original SWIF vision. However, as stated in the Flood District's 2016 transmittal of the interim SWIF, the Board of Supervisors committed to integrate habitat and recreation objectives left out of the interim SWIF into a future corridor plan, such as the proposed PEIS.

> *"Pursuing an Interim SWIF is a short-term solution to retain eligibility under the P.L. 84-99 rehabilitation assistance program, and does not meet all of the goals and objectives of the stakeholders for a Green River vision that includes flood protection, levee certification, habitat, and recreation. The Flood District is committed to achieving these additional goals in a long-range Lower Green River Corridor Plan that will integrate elements of the Interim SWIF and which we plan to scope in conjunction with a programmatic environmental impact statement under SEPA."* 2016 Interim SWIF Transmittal (emphasis added).

Therefore, the Flood District needs to follow through on this commitment and incorporate habitat-related elements into the proposed LGR Corridor Plan, which unfortunately do not appear to be reflected in the current PEIS.

Multi-Objective Goal Not Reflected in Proposed Alternatives
The proposed LGR Corridor Plan is broadly described within the PEIS scoping documents as intended to *"…provide an integrated and reasonable long-term approach to reduce flood risk within the Lower Green River Corridor while balancing multiple objectives within the study area…while supporting the economic prosperity of the region and improving fish habitat."* Inconsistent with this description, the PEIS alternatives focus on a singular objective to reduce flood hazards, with little reference or commitment to other objectives, such as habitat or water quality improvements.

As conveyed by State Agencies[4] through the SWIF process, we recognize the importance of maintaining economic vitality within the Green River Valley and continue to support elevation of flood protection to a 500-year level at certain locations. However, inherent in this support is the understanding that commensurate levels of habitat and water quality improvements will also be included. Therefore, all of the PEIS alternatives need to include habitat and water quality enhancements in alignment with regulatory requirements and regional interests. Incorporation of these elements is not only necessary for transparency in PEIS development but also will be required as compensatory mitigation as flood protection projects are implemented.

Recommend Clear Project Purpose and Corresponding Objectives

An integrated flood hazard corridor plan for the Lower Green River must clearly articulate the complete suite of objectives into the project purpose statement, goals, and corridor plan objectives. Therefore, the PEIS should be amended to integrate specific goals and objectives related to habitat enhancements and salmon recovery, or a new fourth alternative, as requested by WRIA 9, needs to be developed. The 2016 Vision, Goal and Objective statement developed for the SWIF process serves as a good example. At a minimum, the following SWIF goals should be carried forward in the PEIS:

> *Integrated river and floodplain management - Reach agreement on an integrated list of multi-objective, prioritized projects and non-regulatory, programmatic actions that achieve the Green River SWIF's agreed to goals for level of protection from flooding. This integrated set of flood protection strategies and actions shall: (a) improve water temperature; (b) advance progress towards meeting salmon protection and recovery goals; (c) enhance open space, recreation, treaty fishing, and public access; (d) support farmland protection, resiliency and productivity; and (e) reduce long-term facility maintenance costs.*
>
> *Vegetation management - Develop shoreline and levee vegetation management recommendations to further the goals of the ESA, CWA, and Corps PL84-99 standards.*
>
> *Ecological resilience - Improve the ecological resilience of the Lower Green River's aquatic and terrestrial habitats through implementation of the Green River SWIF's priority projects and non-regulatory, programmatic recommendations.*

Narrow Consideration of Facility Types and Constraints

The PEIS is characterized as a long-term, non-project environmental review. However, the section describing the four facility types provides very specific flood protection perimeters and site-level constraints that fundamentally limit the feasibility of habitat improvements. We recognize certain segments of the corridor are constrained due to existing development. However, long-term, multi-benefit aspects of the environmental review should not foreclose potential opportunities to work through these challenges. For example, currently, many of the urban physical constraints are single-story commercial buildings or parking areas that contribute significant economic benefits to the regional economy but also limit opportunities to restore floodplain functions through a setback levee or similar treatment. Even though the economic value of these buildings today is tied to a single-story warehouse use, we should not foreclose the

[4] See November 3, 2014 letter from State Agencies (attached).

possibility that future land-use demand will change over the next 25 or 50 years. A local jurisdiction could potentially incentivize redevelopment of existing single-story (large footprint) structures into smaller-footprint, higher structures that maintain (or increase) local tax base, while also creating opportunities to restore or reconnect the floodplain over the long term.

Uncertain Regulatory Alignment, Permit Appeal Risk
The PEIS lacks necessary analysis considering if the proposed alternatives are consistent with applicable regulatory programs. According to Ecology's SEPA Handbook, in defining a "proposal" it is necessary to determine what permits or approvals will be needed from state, local, and federal agencies[5]. The Flood District should identify permits or approvals that will be required under each alternative, along with consideration of the degree of regulatory alignment between the proposed alternatives.

Similarly, SEPA requires identification of mitigation that will be required by applicable development regulations under WAC 197-11-158 and 330(1)(c). However, the PEIS does not identify mitigation required under each alternative. Further, with a high likelihood of third-party appeal of decisions issued by local governments or state agencies for flood control structures, it is important for the Flood District to propose self-mitigating projects tied to a comprehensive flood hazard management plan, providing a sound basis for future regulatory decisions.

In light of these factors, it is imperative the Flood District include multi-benefit projects that consider floodplain storage, salmon recovery goals including temperature TMDL implementation, treaty rights, facility lifecycle costs, and resilience to climate change in scoping the PEIS.

The following section provides a brief synopsis of questions or concerns regarding potential inconsistencies between the PEIS alternatives and applicable regulatory authorities, including local/state/federal floodplain management requirements, the state Shoreline Management Act, the federal Clean Water Act and the Washington Water Pollution Control Act, and the State Environmental Policy Act.

Floodplain Management
King County's 2006 Flood Hazard Management Plan identified the following foundational goals to be followed in their management of designated flood areas:

1. *To reduce the risks from flood and channel migration hazards.*
2. *To avoid or minimize the environmental impacts of flood hazard management.*
3. *To reduce the long-term costs of flood hazard management.*

Portions of the 2006 plan were updated in the County's 2013 Flood Hazard Management Plan, including adoption of the following multi-benefit policies the PEIS should be consistent with:

[5] See page 11 of Ecology's SEPA Handbook.

Policy G-3 Comprehensive River & Flood Hazard Management - King County should provide comprehensive river and flood hazard management through the implementation of projects and programs that result in multiple benefits, including those created by meeting any or all of the following non-prioritized objectives, including (e) protect and, where possible, enhance aquatic and riparian habitat in a manner consistent with adopted salmon habitat recovery plans.

Policy G-10 Protecting Natural Functions & Values - King County shall protect flood storage, conveyance, and ecological values of floodplains, wetlands, and riparian corridors and, when feasible, should enhance or restore these ecological functions and values. Flood risk reduction strategies and projects should be coordinated on a river-reach scale with the salmon habitat recovery plans.

Policy PROJ-6 Flood Protection Facility Design & Maintenance Objectives - King County should construct new flood protection facilities and maintain, repair or replace existing flood protection facilities in such a way as to: (a) require minimal maintenance over the long term; (b) ensure that flood or channel migration risks are not transferred to other sites; (c) protect or enhance aquatic, riparian and other critical habitats; and (d) protect or enhance multiple beneficial uses of flood hazard areas.

Policy PROJ-7 Flood Protection Facilities within Critical Areas Ordinance Aquatic Areas and Aquatic Area Buffers - Wherever possible, King County should relocate existing flood protection facilities farther from the river edge and associated buffers to increase flood conveyance and allow natural river processes to occur.

Below is a number of other floodplain management related questions that should be considered in development of the PEIS scope and consideration of alternatives:

1. FEMA BiOp[6] requirements across the local jurisdictions (Auburn, Kent, Renton, Tukwila, and Seattle) within the corridor.
2. Evaluation of the zero-rise standards related to proposed project developments and the need to not transfer flood risk from one reach to another.
3. Consistency with channel migration zone development standards.
4. Recreation-related standards required by the cities within the corridor.

Puget Sound Partnership - Floodplain Implementations Strategy

Working in collaboration with many partners, the Puget Sound Partnership developed an Implementation Strategy for integrated floodplain management that balances the need to maintain flood protection in alignment with regional recovery goals. We strongly encourage the Flood District to incorporate relevant recommendations from this strategy into the PEIS.

Shoreline Management Act

The Green River flows through several cities, including Auburn, Kent, Renton, Tukwila, and Seattle. All of these jurisdictions have local Shoreline Master Programs (SMPs) with policies and

[6] Biological Opinion for the FEMA National Flood Insurance Program in the Puget Sound Region

development regulations applicable to flood protection actions contemplated in the PEIS, yet the PEIS does not provide any reference or consistency analysis of the flood hazard reduction projects described under the three PEIS alternatives in comparison to applicable SMP provisions. Local and, in some cases, state authorization will be required for project actions located in shoreline jurisdiction (i.e. aquatic areas and 200 feet upland of the ordinary high water mark). The Flood District will need to demonstrate consistency with applicable development standards for the permit to be approved. Therefore, we strongly recommend consistency with local SMP policies and regulations be incorporated as a key screening criteria in scoping of the PEIS alternatives.

The Green River is characterized as a shoreline of statewide significance under RCW 90.58.030, as the mean annual average flow is greater than 1,000 cubic feet per second. Areas designated as shorelines of statewide significance are recognized at the planning level through development of SMP provisions aligned with the core policies of the Shoreline Management Act, as well as through individual project review, requiring consistency with the following criteria:

- Recognize and protect statewide over local interests.
- Preserve the natural character of the shoreline.
- Result in long-term rather than short-term benefits.
- Protect shoreline resources and environment.
- Increase public access to publicly owned shoreline areas.
- Expand recreational shoreline opportunities for the public.

In addition, each of the local SMPs has been developed to maintain no net loss of shoreline ecological functions. Many of the flood protection actions identified in the PEIS may not align with applicable SMP provisions or would require a significant level of mitigation to offset anticipated impacts. Therefore, since shoreline permit authorizations will be needed for many of the proposed flood control actions, analysis of consistency with applicable SMP provisions should be clearly articulated in the PEIS to fairly evaluate the range of alternatives under consideration.

Clean Water Act – Washington Water Pollution Control Act

The Washington Department of Ecology's 2011 Temperature - Total Maximum Daily Load (TMDL) Water Quality Improvement Report[7] for the Green River indicates lack of mature vegetation along the levee-buffered Lower Green is causing exceedances of state water quality standards. These temperature exceedances subject ESA-listed species to lethal water temperatures and compromise significant investments that have been made for recovery efforts. The report concludes 150-foot riparian buffers along the entire corridor are in fact necessary to reduce water temperature by 3 – 5° C to ensure habitat conditions suitable for ESA-listed salmon. The TMDL report also emphasized the importance of the United States Army Corps of

[7] The Green River Temperature TMDL uses the applicable temperature criteria for the designated aquatic life uses defined in WAC 173-201A-200(c) and 173-201A-602.

Engineers' maintenance policy supporting vegetated levees or levee setbacks that include vegetation enhancements as essential to meeting temperature water quality standards.

As discussed during the SWIF, implementing 150-foot buffers along all of the developed areas of the Lower Green may not be practicable. However, considering the long-term nature of the LGR Corridor Plan, the Flood District should not preclude projects with the potential to decrease water temperature and improve water quality. In addition, we recommend the Flood District fully assess future levee modifications with respect to the Riparian Aspect Mapping effort ("Sun Map") completed by the Muckleshoot Indian Tribe in 2013 and integrated into the Interim SWIF.

Therefore, the LGR Corridor Plan should reevaluate levee vegetation management guidelines and/or alternate levee setback locations that do not preclude reestablishment of functional riparian habitats where they may be feasible – especially where proposed levee alignments intersect with "high potential shade" areas.

State Environmental Policy Act
The Flood District has prepared this PEIS pursuant to SEPA requirements under RCW 42.21C.030(2)(c). The PEIS is generally characterized as a "non-project proposal that is likely to have significant adverse impacts on the environment."

Ecology's SEPA Handbook distinguishes "project" from "nonproject" actions through the following definitions:

> ***Project actions*** *are agency decisions to license, fund, or undertake a specific project.*
>
> ***Nonproject actions*** *are agency decisions on policies, plans, and programs, including adoption or amendment ordinances, regulations that will regulate future projects, or capital budgets…etc.*

Based on these definitions and the proposal description provided in the PEIS notice, the State Agencies assume the Flood District is planning to run a separate environmental review for individual project actions, where project-level details will be described and evaluated in a manner that can support implementation of specific project actions.

Moving Forward
In closing, the State Agencies would like to continue to work with the Flood District to make sure ongoing EIS developments and other future actions support or accelerate, when possible, the recovery of salmon in the Green/Duwamish River system.

Flood protection, ecological improvements, and economic vitality should not be perceived as mutually exclusive goals, but rather should be integrated into each of the alternatives considered in the PEIS. Since the PEIS articulates a long-term strategy, we urge the Flood District to balance the need for economic vitality with the need to provide thriving salmon runs for orcas and fishermen alike, now and into the future.

We remain confident the Flood District's commitment to a multi-benefit approach will have both short- and long-term benefits. In the short term, implementation of individual project actions could be streamlined by upfront demonstration through the PEIS of individual project connections to the overall objectives of the LGR Corridor Plan. In the long term, a multi-benefit approach will ensure community values are protected within the corridor and resilience to unforeseen challenges is increased.

If you would like to discuss our comments, please feel free to reach out to the following contacts at each agency:

- Puget Sound Partnership – Jennifer Lee, Director of Policy & Planning, at Jennifer.lee@psp.wa.gov or (360) 688-4174.
- WA Department of Natural Resources – Kristin Swenddal, Aquatic Resources Division Manager, at Kristin.swenddall@dnr.wa.gov or (360) 902-1124.
- WA Department of Fish & Wildlife – Stewart Reinbold, Assistant Regional Habitat Program Manager, at Stewart.reinbold@dfw.wa.gov or (425) 313-5660.
- WA Department of Ecology – Joe Burcar, Shorelands & Environmental Assistance Program Regional Section Manager, at Joe.burcar@ecy.wa.gov or (425) 649-7096.

Sincerely,

Laura Blackmore, Deputy Director
Puget Sound Partnership

Kristin Swenddal, Aquatic Resources Division Manager
WA Department of Natural Resources

Amy Windrope, Regional Director
WA Department of Fish & Wildlife

Gordon White, State Floodplain Manager
WA Department of Ecology

Enclosure

E-cc: Tom Buroker, Northwest Regional Office Director – WA Department of Ecology

PUGET SOUND PARTNERSHIP
324 East D Street
Tacoma, WA 98421

GOVERNOR'S OFFICE OF REGULATORY INNOVATION AND ASSISTANCE
1101 Plum Street SE
Olympia, WA 98504

STATE OF WASHINGTON DEPARTMENT OF FISH AND WILDLIFE
16018 Mill Creek Boulevard
Mill Creek, WA 98012

WASHINGTON STATE DEPARTMENT OF ECOLOGY
3190 160th Avenue SE
Bellevue, WA 98008

November 3, 2014

Reagan Dunn, Chair
King County Flood Control District Board of Supervisors
516 Third Avenue, Room 1200
Seattle, WA 98104

Re: **State Agency Perspective on Green River System Wide Improvement Framework**

Dear Chairman Dunn,

Our agencies would like to express our sincere appreciation for including the State in the process to create a Green River System Wide Improvement Framework (SWIF). The SWIF project team has worked diligently to develop a considerable amount of technical analysis to inform thoughtful technical and policy discussions at the Technical Advisory Committee (TAC) and the Advisory Council (Council). We are optimistic that additional work planned for this fall will culminate in a work product that aligns flood management, habitat, water quality, and other social goals like recreation and public access for the important 21-mile stretch of the Green River.

Consistent with the January 2014 vision statement, the SWIF is envisioned as a 50-year planning process designed to "improve flood protection for current and future generations, in a way that builds economic, ecological, and community resiliency." This is an ambitious, long-range goal that deserves a similarly ambitious program which clearly describes how the various interests will be met.

Given the economic importance and vitality of the Green River valley, State agencies support the proposal to elevate the level of flood safety, including the provisional 500-year Level of Protection at key locations. Inherent in this support is the understanding that the SWIF process will establish commensurate levels of protection for habitat and water quality. State agencies believe such protections will be essential for the Flood Control District, King County, and the cities in the Lower Green watershed to implement projects and obtain the necessary regulatory approvals, as well as avail themselves of innovative options now available for meeting mitigation requirements, such as the County's Mitigation Reserves Program. We are heartened by the most recent SWIF deliberations which indicate that such water quality and habitat commitments are forthcoming. State agencies remain committed to helping clarify how those interests can be met.

Following are some key policy themes that inform our thinking as we complete our work on the TAC and Council:

Optimize remaining and potential habitat opportunities. The project team's proposal to maintain existing flood control alignment (Alternative 1) for over 59% of the SWIF area reflects the highly modified and channelized system we have inherited and underscores the importance of optimizing any remaining protection and restoration opportunities. While Alternative 1 may allow for levee setbacks, laybacks, and vegetation strategies, the constrained channel severely limits habitat and water quality opportunity. As such, the State favors Alternative 3 – and, in some cases, Alternative 2 – alignments where possible. This alignment preference should be coupled with establishment of a "conservation area priorities" program. Again, recognizing that this is a 50-year planning process for flood protection, it should likewise be utilized as a 50-year program for water quality and habitat restoration. As discussed at the October 15 TAC, the conservation area priorities program will preserve some potentially higher cost sites for future acquisition and/or restoration in future Flood District capital program iterations.

Design and implement a vegetation strategy to meet water quality standards. The Washington State Department of Ecology's 2006 Total Maximum Daily Load (TMDL) for the Green River recommends 150-foot riparian buffers to improve temperatures by 5 – 9°F to provide habitat conditions suitable for endangered salmon. Recent pre-spawn mortality observed in the Green River and Soos Creek underscores the urgency of this work. As discussed at the TAC, implementing 150-foot buffers along the entirety of the lower Green is not practicable in some of the developed areas. However, TAC support for establishing a goal for such buffers, as well as development of an explicit vegetation management strategy, can significantly improve water quality conditions. Our agencies share a commitment to developing a provisional vegetation management strategy this fall, which would include how to incorporate recreation and public access objectives.

Ensure Flood Control District capital program is considered and implemented in a watershed context. Considering the economic, ecological, and community objectives within a watershed context will provide the greatest opportunity to create synergy between the various interests and optimize the return on public investment. Doing so also lessens legal risks associated with meeting tribal and environmental obligations. The WRIA 9 salmon recovery plan and the Green River TMDL provide watershed approaches that can complement the planning, design, and implementation of the Flood District's capital program. Consequently, the State supports an explicit linkage between a coordinated flood improvement capital program with implementation of the habitat and water quality plans.

Use watershed approach to leverage multiple fund sources. In addition to mitigation requirements that will be required as part of its capital program, the Flood District has the

authority to make water quality and habitat investments as evidenced by the recent $4 million investment in the Cooperative Watershed Management Program. The district can coordinate and complement all its investments with other sources of habitat and water quality funding, such as Floodplains by Design, salmon recovery funding, the County's Mitigation Reserves Program, Ecology's stormwater funding, and the National Estuary Program. The State already has worked with partners to leverage some of these fund sources, and opportunity for multi-benefit projects is only likely to grow.

Consider Climate Change Implications. To date, the implications of climate change have not been rigorously analyzed or incorporated into the SWIF process. Given the SWIF's 50-year planning horizon, climate change impacts should be incorporated into future planning to maximize the SWIF's durability.

In sum, a SWIF that commits to implementing a multi-benefit, watershed program will be far more successful, permittable, and sustainable than the more traditional flood control programs. The Flood District has the authority to implement such a program, which would generate broad support from all levels of government and most other interests. We are confident that the Flood District embraces this path, and the State looks forward to helping further shape and implement this vision. This is a unique opportunity to leave behind a legacy of commitment for environmental restoration and flood protection that future generations will recognize as sound stewardship.

Sincerely,

Marc Daily Deputy Director
Puget Sound Partnership

Jesus Sanchez, Director
Office of Regulatory Innovation and Assistance

Bob Everitt, Regional Director
WA Department of Fish and Wildlife
Northwest Region

Josh Baldi, Regional Director
WA Department of Ecology
Northwest Region

From:	LowerGreenSEPA
To:	Kjristine Lund
Subject:	FW: Lower Green River Corridor Flood Hazard Management Plan - Comment on Programmatic Environmental Impact Statement (PEIS)
Date:	Tuesday, April 9, 2019 11:42:00 AM
Attachments:	image001.png image003.png

LGRCFHMP PEIS comment

Michelle Clark
Executive Director, King County Flood Control District
(206) 477-2985

From: Barker, Myra (RCO) <Myra.Barker@rco.wa.gov>
Sent: Tuesday, March 26, 2019 8:09 AM
To: Clark, Michelle <Michelle.Clark@kingcounty.gov>; LowerGreenSEPA <LowerGreenSEPA@kingcounty.gov>
Subject: Lower Green River Corridor Flood Hazard Management Plan - Comment on Programmatic Environmental Impact Statement (PEIS)

Hello,

This message is in response to the request for comments on the scope of the PEIS for the Lower Green River Corridor Flood Hazard Management Plan. The Recreation and Conservation Office (RCO) provides grant funding for outdoor recreation, habitat protection, and salmon recovery throughout the state. Grant funding comes with a long-term obligation for the project sponsor to maintain the funded site for its intended purpose, usually in perpetuity.

There are numerous funded sites throughout King County and within Lower Green River Corridor. In the event the final proposal impacts any of these funded sites, please contact me so that we may determine if the proposed action will create a compliance issue.

The RCO projects that may be impacted by the Lower Green River Corridor Flood Hazard Management Plan are listed below along with the respective project sponsor, grant project name and number, and a link to the grant project information.

City of Tukwila: Christensen Greenbelt Park, RCO #78-050 https://secure.rco.wa.gov/prism/search/projectsnapshot.aspx?ProjectNumber=78-050, #80-047 https://secure.rco.wa.gov/prism/search/projectsnapshot.aspx?ProjectNumber=80-047, #84-012, here's a link to Tukwila's projects https://secure.rco.wa.gov/prism/search/projectsnapshot.aspx?ProjectNumber=84-012.

City of Kent: Green River Corridor, RCO #87-015

https://secure.rco.wa.gov/prism/search/projectsnapshot.aspx?ProjectNumber=87-015; Three Friends Fishing Hole #00-1295 https://secure.rco.wa.gov/prism/search/projectsnapshot.aspx?ProjectNumber=00-1295; Valley Floor Community Park #99-1113 https://secure.rco.wa.gov/prism/search/projectsnapshot.aspx?ProjectNumber=99-1113; Van Doren's Landing Park #85-044 https://secure.rco.wa.gov/prism/search/projectsnapshot.aspx?ProjectNumber=85-044; Lower Green River – 516 Pond and Van Doren #81-9020 https://secure.rco.wa.gov/prism/search/projectsnapshot.aspx?ProjectNumber=81-9020; Lower Green River Acquisition #02-1601 https://secure.rco.wa.gov/prism/search/projectsnapshot.aspx?ProjectNumber=02-1601; Riverview Park Ecosystem Restoration #09-1418 https://secure.rco.wa.gov/prism/search/projectsnapshot.aspx?ProjectNumber=09-1418; Riverwalk Park #91-9815 https://secure.rco.wa.gov/prism/search/projectsnapshot.aspx?ProjectNumber=91-9815.

King County: Horseshoe Bend Trail RCO #91-236 https://secure.rco.wa.gov/prism/search/projectsnapshot.aspx?ProjectNumber=91-236; East Green River #4 #72-011 https://secure.rco.wa.gov/prism/search/projectsnapshot.aspx?ProjectNumber=72-011; East Green River #3 #70-077 https://secure.rco.wa.gov/prism/search/projectsnapshot.aspx?ProjectNumber=70-077; North Green River #69-132 https://secure.rco.wa.gov/prism/search/projectsnapshot.aspx?ProjectNumber=69-132; #08-2093 Green River Pautzke Restoration https://secure.rco.wa.gov/prism/search/projectsnapshot.aspx?ProjectNumber=08-2093; #69-006 East Green River https://secure.rco.wa.gov/prism/search/projectsnapshot.aspx?ProjectNumber=69-006.

City of Auburn: Auburn Green River Golf Course RCO #67-054 https://secure.rco.wa.gov/prism/search/projectsnapshot.aspx?ProjectNumber=67-054; #71-023 Brannan Park https://secure.rco.wa.gov/prism/search/projectsnapshot.aspx?ProjectNumber=71-023, #73-065 Brannan Park https://secure.rco.wa.gov/prism/search/projectsnapshot.aspx?ProjectNumber=73-065, #07-1949 Brannan Park https://secure.rco.wa.gov/prism/search/projectsnapshot.aspx?ProjectNumber=07-1949; #81-9019 Lower Green River-Housing Bend Property https://secure.rco.wa.gov/prism/search/projectsnapshot.aspx?ProjectNumber=81-9019; #09-1429 Fenster Levee Setback and Flood Protection Restoration https://secure.rco.wa.gov/prism/search/projectsnapshot.aspx?ProjectNumber=09-1429.

Washington Department of Natural Resources: RCO #67-704 Acquisition https://secure.rco.wa.gov/prism/search/projectsnapshot.aspx?ProjectNumber=67-704.

Washington Department of Fish and Wildlife: RCO #71-608 Green River Alcorn https://secure.rco.wa.gov/prism/search/projectsnapshot.aspx?ProjectNumber=71-608; #68-603 Statewide Water Access Green River Bolduc, Green River Farrell https://secure.rco.wa.gov/prism/search/projectsnapshot.aspx?ProjectNumber=68-603; #68-604 Statewide Water Access Green River Parker, Green River Brannan, Green River Malachnik https://secure.rco.wa.gov/prism/search/projectsnapshot.aspx?ProjectNumber=68-604.

If you have any questions, please let me know.

Myra Barker
Compliance Specialist
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PO Box 40917
Olympia, WA 98504
360-902-2976
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Local

WATER RESOURCE INVENTORY AREA 9 (WRIA 9) WATERSHED ECOSYSTEM FORUM

GREEN / DUWAMISH AND CENTRAL PUGET SOUND WATERSHED

Algona
Auburn
Black Diamond
Burien
Covington
Des Moines
Enumclaw
Federal Way
Kent
King County
Maple Valley
Normandy Park
Renton
SeaTac
Seattle
Tacoma
Tukwila

King Conservation District

Vashon/Maury Island Community Council

Covington Water District

Port of Seattle

Washington Department of Ecology

Washington Department of Fish and Wildlife

Washington Department of Natural Resources

U.S. Army Corps of Engineers

Green-Duwamish Urban Waters Partnership

Washington Environmental Council

Green/Duwamish Watershed Alliance

Trout Unlimited/ Mid-Sound Fisheries Enhancement Group

Save Habitat and Diversity of Wetlands (SHADOW)

American Rivers

The Boeing Company

Master Builders Association

King County Agricultural Commission

February 21, 2019

King County Flood Control District
ATTN: Michelle Clark, SEPA Responsible Official
516 Third Avenue Room 1200
Seattle, WA 98104

RE: WRIA 9 WEF Comments on Scope of Lower Green River Corridor Flood Hazard Management Plan (Corridor Plan) and Programmatic Environmental Impact Statement (PEIS)

Dear Ms. Clark:

The Watershed Ecosystem Forum (WEF) for the Green-Duwamish and Central Puget Sound Watershed (WRIA 9) respectfully submits the attached comments on the King County Flood Control District (District) Corridor Plan and PEIS. WRIA 9 represents a coalition of 17 local governments and numerous local, state and federal partners committed to Chinook salmon recovery. The 2005 Salmon Habitat Plan is the watershed's blueprint for salmon recovery and project implementation by partner organizations has collectively resulted in approximately $160 million of habitat-related investments to support "Making Our Watershed Fit for a King."

The Corridor Plan is being developed as the watershed – and the larger Puget Sound region – continues to experience a long-term decline in wild Chinook salmon. Escapement in five out of the past ten years has not achieved the watershed's short-term goal of 1,000-4,200 wild spawners. The 10-year average of 1,363 wild Chinook remains significantly below the long-term target of 27,000. Chinook productivity is currently limited by rearing habitat capacity in the Lower and Middle Green River. Restoring additional rearing habitat is critically needed to increase productivity and reverse the long-term decline in wild Chinook abundance. It will also address the parallel Puget Sound-wide prey availability crisis facing the Southern Resident Orca population.

Several long-term efforts are aligning to create a tremendous opportunity to reverse the long-term decline in wild Chinook salmon and unlock the potential of the watershed. Duwamish clean-up and restoration, fish passage at Howard Hanson Dam, and the Corridor Plan collectively represent over $1 billion in investments in our watershed over the next 50 years. The success of these efforts is inherently interconnected. Integration of salmon recovery and floodplain management in the Lower Green is critical to addressing the current bottleneck in salmon productivity and realizing the full potential of these investments.

As the Puget Sound region weighs the "bold actions" necessary to reverse salmon and Orca declines, it must capitalize on this once in a generation opportunity to think and act comprehensively about the Lower Green River landscape, solve multiple challenges and leverage hundreds of millions of dollars in investments. WRIA 9 recommends the Corridor Plan holistically approach flood management in a way that integrates Chinook salmon recovery, economic development, recreation, and environmental justice. As the state and federally-identified organization responsible for protecting and restoring salmon habitat in the watershed, WRIA 9 has analyzed the three alternatives identified in the November 26,

Financial support provided by signers of Watershed Planning Interlocal Agreement for WRIA 9 including:

Algona, Auburn, Black Diamond, Burien, Covington, Des Moines, Enumclaw, Federal Way, Kent, King County, Maple Valley, Normandy Park, Renton, SeaTac, Seattle, Tacoma, Tukwila

2018 PEIS scoping notice. The alternatives do not advance the multi-objective salmon recovery strategies supported by the WRIA 9 Salmon Habitat Plan, or committed to in the 2013 King County Flood Hazard Management Plan and 2014 Lower Green System-Wide Improvement Framework (SWIF) process.

WRIA 9 embraces the importance of the Lower Green levee system and supports making significant regional investments in flood risk reduction. WRIA 9 recommends the District integrate flood control and salmon recovery by evaluating a fourth alternative that reflects the multi-objective vision adopted by the District Executive Committee during the original SWIF. When the District decided to submit the pared-down Interim SWIF to ensure it retained temporary eligibility for PL-84-99 assistance, it stressed that the "broader objectives" of the SWIF stakeholders would be better achieved through a corridor planning process (FCS2016-05.2). WRIA 9 continues to support the District's commitment to a corridor planning process based on broader, multi-benefit objectives. The WRIA recommends the District-led PEIS review process consider a "fourth alternative" that embraces a multi-benefit framework. The attached draft Alternative 4 Map and Narrative, together with our written comments are intended to help inform development of an alternative that:

- Integrates flood risk reduction and salmon habitat restoration consistent with established goals and policies;
- Reflects salmon habitat restoration concepts for the Lower Green River that are supported by the cities and King County;
- Makes substantive contribution towards achieving the salmon habitat goals established for the Lower Green Subwatershed; and
- Ensures vegetation management and facility alignment support healthy riparian vegetation in high priority areas identified by the 2013 Muckleshoot Riparian Aspect Mapping.

WRIA 9 looks forward to working with the District to develop and implement a Corridor Plan alternative that enhances community and ecological resilience to flooding, while making substantive progress towards "Making Our Watershed Fit for King." As you proceed with the environmental evaluation of alternatives, we strongly recommend an alternative that reflects the broader, multi-benefit needs of the watershed. If you have any questions, please contact Doug Osterman, WRIA 9 Salmon Recovery Manager, at 206-477-4793 or doug.osterman@kingcounty.gov.

Sincerely,

Marlla Mhoon
Councilmember, City of Covington
WRIA 9 Watershed Ecosystem Forum Co-Chair

Bill Peloza
Deputy Mayor, City of Auburn
WRIA 9 Watershed Ecosystem Forum Co-Chair

Cc: WRIA 9 Watershed Ecosystem Forum

WRIA 9 Watershed Ecosystem Forum
PEIS Scoping Comments
February 21, 2019

WRIA 9 Watershed Ecosystem Forum
Comments on Lower Green River Corridor Flood Hazard Management Plan (Corridor Plan)

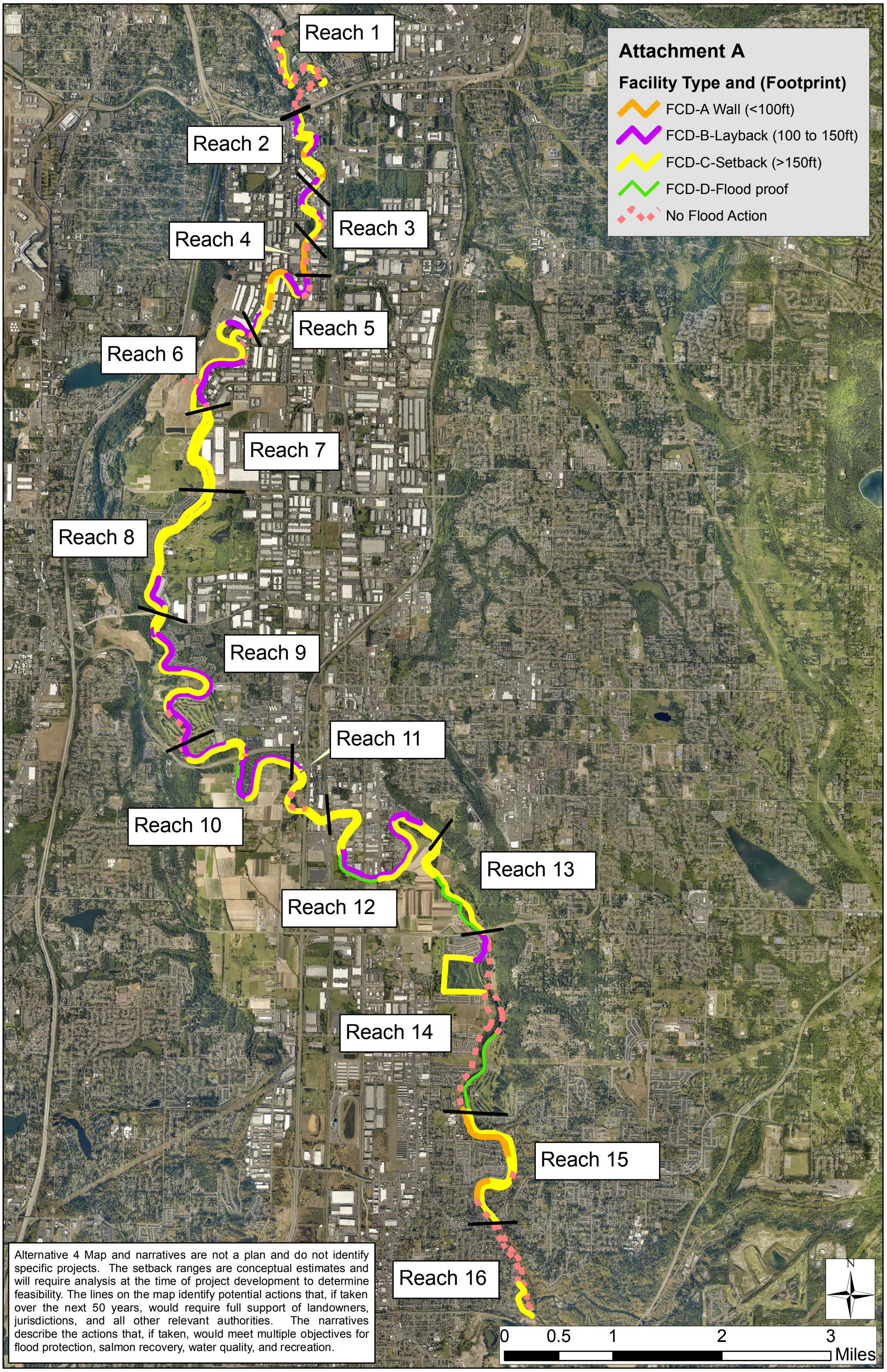
ATTACHMENTS A and B: Map of Potential Alternative Flood Facility Types and Locations and Narratives associated with the Map "Alternative 4"

The PEIS should comprehensively analyze the cumulative impacts of all proposed alternatives to meet the needs of the Green River Summer/Fall Chinook salmon population. Alternatives must be evaluated for their ability to achieve strategies and goals necessary for Chinook salmon recovery. The evaluation should include how alternatives will contribute toward and not preclude progress to achieve the following goals for the Lower Green River:

- Off channel habitat: 5,039 acres of connected floodplain
- Riparian habitat: 75% of the river bank vegetated to 165 feet
- Woody debris: 1,705 pieces per mile
- *Bank armor:* no new armor and decreasing total

To provide assistance for integrating salmon recovery, recreation, and water quality into alternatives, WRIA 9 developed and herein submits a "4th Alternative" (Attachments A and B) for PEIS evaluation. The intent of the Map and Narratives is to inform development of integrated alternatives for the Lower Green River that achieve flood protection, while also advancing salmon habitat restoration consistent with the WRIA 9 Salmon Habitat Plan. The Map uses the flood facility type language of the scoping notice. The Narratives focus on potential areas where multiple-benefit levee setback projects may be feasible.

Alternative 4 Map and Narratives are not a plan and do not identify specific projects. The setback ranges are conceptual estimates and will require analysis at the time of project development to determine feasibility. The lines on the Map identify potential actions that, if taken over the next 50 years, would require full support of landowners, jurisdictions, and all other relevant authorities. The Narratives describe the actions that, if taken, would meet multiple objectives for flood protection, salmon recovery, water quality, and recreation.


Reach 1
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Reach 8
Reach 9
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Reach 12
Reach 13
Reach 14
Reach 15
Reach 16
Attachment A
Facility Type and (Footprint)
FCD-A Wall (<100ft)
FCD-B-Layback (100 to 150ft)
FCD-C-Setback (>150ft)
FCD-D-Flood proof
No Flood Action
Alternative 4 Map and narratives are not a plan and do not identify specific projects. The setback ranges are conceptual estimates and will require analysis at the time of project development to determine feasibility. The lines on the map identify potential actions that, if taken over the next 50 years, would require full support of landowners, jurisdictions, and all other relevant authorities. The narratives describe the actions that, if taken, would meet multiple objectives for flood protection, salmon recovery, water quality, and recreation.
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Miles

ATTACHMENT B:
Alternative 4 Narratives

WRIA 9 urges the Flood District to consider an integrated flood protection and salmon habitat vision. The attached map and associated reach based narratives should help inform the Flood District's work to develop and analyze integrated alternatives that achieve flood protection, while also significantly advancing salmon habitat, recreation, and water quality. The map uses the flood facility type language (Type A facility, Type B facility, etc.) of the environmental review scoping notice, and the narrative focuses on potential areas where multiple-benefit levee setback projects may be feasible. We do not offer any recommendations related to level of flood protection, simply possibilities for optimizing habitat and other multi-benefit objectives waterward of potential flood facilities. The map and narrative are broken into reaches, with the narratives further broken out into right and left banks describing the potential multi-benefit project actions.

Multi-benefit objectives include:

- Increased channel and flood capacity, and associated decrease in water surface elevations
- Creation of off-channel juvenile salmon habitat
- Enhanced riparian function and improved water temperature/quality
- Trail and recreation improvements

Alternative 4 Map and Narratives are not a plan and do not identify specific projects. The setback ranges are conceptual estimates and will require analysis at the time of project development to determine feasibility. The lines on the map identify potential actions that, if taken over the next 50 years, would require full support of landowners, jurisdictions, and all other relevant authorities. The narratives describe the actions that, if taken, would meet multiple objectives for flood protection, salmon recovery, water quality, and recreation.

We recommend that at the time of any individual project's development, the Flood District study the possibilities around optimizing a levee setback in terms of the objectives listed above and in conjunction with local shoreline master programs, irrespective of today's land use and adjacent property ownership. Setbacks could necessitate changes to the existing trail corridor as well as create new recreational opportunities. In locations where levee alignment proposals would impact existing recreational trails, implementation would be contingent on addressing recreational needs during project planning.

Shade need areas described below are based on the methodology laid out in Fox 2014, also known as the Muckleshoot Sun maps. The *Salmon Habitat Plan: Making our Watershed Fit for King* from 2005 is referred to as 'the Salmon Plan' below.

Reach 1, RM 11.0 to RM 12.4 (Black River confluence to I-405 crossing)

Setbacks within this reach could provide a moderate increase in flood capacity, improve juvenile rearing habitat, and enhance riparian function.

Potential left bank actions

- Small setbacks could provide bench and backwater habitats for juvenile salmon, while increasing flood capacity.
- Revegetation opportunities could be expanded in critical and high shade need areas if paved areas were reduced. In more constrained areas, enhance riparian function waterward of flood facility.

Potential right bank actions

- Existing backwater habitat could be expanded to increase amount of juvenile salmon rearing habitat.
- There is one large setback that could increase flood capacity, create flood refugia (versus lower flow aquatic habitat) for juvenile salmon and improve revegetation potential. See LG-17 in the Salmon Plan.
- Existing riparian habitats could be expanded in width and diversity, especially in high shade need area within the potential setback

Reach 2, RM 12.4 to 13.3 (I-405 crossing to railroad bridge crossing)

Setbacks within this reach could significantly increase the quantity and quality of aquatic rearing habitat for juvenile Chinook, channel and flood capacity, improve water quality, and increase available open space to nearby residents.

Potential left bank actions

- Gilliam Creek fish passage improvements could be achieved by replacing the flap gate further back from the river and creating an alcove type habitat at the mouth of creek. See LG-16 in the Salmon Plan.
- Setback possibilities could moderately increase the quantity and quality of aquatic rearing habitat for juvenile Chinook, enhance riparian function, and increase overall channel and flood capacity.
- Revegetation opportunities could be expanded in critical and high shade need areas if paved areas were reduced. In more constrained areas, enhance riparian function waterward of flood facility

Potential right bank actions

- There are three areas with significant setback potential that could provide side channel or backwater habitats, enhance riparian function, and greatly improve overall channel capacity. See LG-15 in the Salmon Plan.
- Revegetation opportunities could be expanded in critical and high shade need areas if paved areas were reduced. In more constrained areas, enhance riparian function waterward of flood facility

Reach 3, RM 13.3 to 13.9 (Railroad crossing to northern end of Costco parking lot)

This reach could provide setbacks that consecutively alternate between sides of the river. If considered together, the setbacks would be synergistic. The setbacks have the potential for significant increases to the quantity and quality of aquatic rearing habitat for juvenile Chinook, channel and flood capacity, trail improvements, and improved water quality conditions.

Potential left bank actions

- Setback could provide significant side channel or backwater habitat using existing pond and provide tree shade in a location identified with a high need.
- Revegetation opportunities could be expanded in critical and high shade need areas if paved areas were reduced. In more constrained areas, enhance riparian function waterward of flood facility

Potential right bank actions

- Explore a moderate setback that could provide side channel habitat and shade in a location identified with a high need for tree shade.
- Revegetation opportunities could be expanded in critical and high shade need areas if paved areas were reduced. In more constrained areas, enhance riparian function waterward of flood facility

Reach 4, RM 13.9 to RM 14.3 (Northern end of Costco parking lot to S 180th St/SW 43rd St)

Potential for enhancing tree cover and riparian function along this reach, much of which is mapped as having a high need for shade.

Potential left Bank actions

- Enhance riparian function waterward of levee and consider replacing existing short ornamental trees landward of levee with taller/greater shade generating trees.

Potential right Bank actions

- There is good potential for enhancing riparian function (e.g. shade, prey production) in area mapped as a high shade need area.

Reach 5, RM 14.3 to 15.4 (S 180th St/SW 43rd St to downstream end of Briscoe wall #2) (Both banks in Tukwila)

This reach could provide setbacks that consecutively alternate between sides of the river for a relatively long ¾ mile stretch of river. If considered together, the setbacks would be synergistic. The setbacks have the potential for significantly improved conditions for flood risk reduction and salmon habitat.

Potential left bank actions

- There is one setback possibility along this highly constrained bank. Potential setback overlaps one of two potential levee breach locations in this reach identified during the SWIF. A setback

could increase overall channel and flood capacity, reducing the likelihood of a levee breach. This setback could also moderately increase the quantity and quality of aquatic rearing habitats for juvenile Chinook and improve water quality conditions.

- Revegetation opportunities could be expanded in critical and high shade need areas if paved areas were reduced. In more constrained areas, enhance riparian function waterward of flood facility.

Potential right bank actions

- Given the constraints on the left bank, increasing channel capacity on the right bank through setbacks has the potential to increase channel capacity which would reduce the likelihood of a left bank levee breach. These setbacks could also significantly increase the quantity and quality of aquatic rearing habitats for juvenile Chinook and improve water quality conditions. See project LG-13 in the Salmon Plan.
- This bank of the reach is entirely made up of critical and high shade need areas and the potential setbacks provide ideal locations for revegetation. In more constrained areas, enhance riparian function waterward of flood facility

Reach 6, RM 15.4 to RM 17 (From downstream end of Briscoe wall #2 to S 200th St) (*left bank is Tukwila, right bank is Kent*)

Five potential breach locations were noted along the left bank of this reach during the SWIF. The potential setbacks in this reach create a relatively long mile and a half stretch of river with the possibility of significantly improved conditions for flood risk reduction and salmon habitat. Setbacks along the left bank could open up new trail opportunities to be integrated with riparian improvements where there is no trail currently.

Potential left bank actions (Tukwila)

- There is an existing mitigation setback at the upstream end of the reach and a potential setback at the downstream end that is part of the Flood District's 2018-2023 CIP. At this time much of the previous envisioned development between the setbacks of this reach is on hold. This creates the potential for a longer setback on what is currently vacant and cleared land. Much of this bank was described as a possible setback project LG-10 in the Salmon Plan. A setback here could significantly increase overall channel and flood capacity, reducing the likelihood of levee breaches in this reach. This setback could also significantly increase the quantity and quality of aquatic rearing habitats for juvenile Chinook and improve water quality conditions.
- Significant potential for improving riparian conditions along this reach, given the current lack of infrastructure. The potential setbacks provide ideal locations for revegetation, but in more constrained areas, recommend enhancing riparian function waterward of flood facility

Potential Right bank actions (Kent)

- Explore feasibility of LG-12 from the Salmon Plan, which recommends creating off-channel juvenile rearing and refuge habitat at Briscoe Park. Such a project could increase channel and flood capacity, reduce flood facility challenges and costs associated with the existing left bank

CIP project by reducing water surface elevations locally. Implementation would be contingent on relocating the existing recreational elements/opportunities at Briscoe Park.

- Reach has a high percentage of critical and high shade need areas and the potential setback provides ideal locations for revegetation. In more constrained areas, recommend enhancing riparian function waterward of flood facility.

Reach 7, RM 17 to 17.8 (S 200th ST to S 212th ST) (*left bank is partly in Tukwila and partly in Kent, right bank is Kent*)

Potential setbacks in this reach could create almost a mile of river with significantly improved conditions for flood risk reduction and salmon. It provides one of the few areas where flood storage could be significantly increased.

Potential left bank actions (RM 17 to 17.3 in Tukwila; the rest is of the LB is in Kent)

- The bank in this reach is a combination of private levee, County revetments and portions of Frager Road that act like a levee. The flapgate at the mouth of Johnson Creek not only restricts salmon access, it disconnects a significant area of potential flood storage from most flows below 100 year events. The entire left bank in this reach is part of project LG-11 in the Salmon Plan. Aspects of LG-11 have already been implemented as a mitigation project, but due to the fish passage barrier those habitat improvements are inaccessible to juvenile and adult salmon. Separate from improving access to the floodplain habitats, there is potential to setback shoreline infrastructure to significantly increase the amount and quality of juvenile salmon rearing habitats along the river, increase flood and channel capacity, and incorporate improved trail opportunities and supporting amenities.
- There are critical and high shade need areas that could be integrated into trail, habitat, and flood actions to increase riparian widths.

Potential right bank actions

- The right bank in this reach is described in the Salmon Plan as LG-10. The flood control levee was previously setback for 100 year LOP and serves as the primary trail location, but portions of the original levee and revetment were left in place along the bank of the river. There is the potential to increase channel capacity and salmon habitat by creating bench and alcove type habitats in several locations along this reach. These potential actions should be integrated with the secondary trails, view corridors, other passive recreational opportunities and river access for the public.
- There is a high shade need area that could be integrated into trail, habitat, and flood actions to increase riparian widths in high shade need areas.

Reach 8, RM 17.8 to 19.3 (S 212th ST to Veterans Dr.)

The potential setbacks in this reach could create over a mile of river with significantly improved conditions for flood risk reduction and salmon. It provides one of the few areas where flood storage could be significantly increased by reconnecting a historic wetland complex.

Potential left bank actions

- Frager Road runs along the shoreline of this reach and acts like a levee, with Flood District maintained revetments along the toe of the bank in the river. Most of the road is closed and used as a trail. From river mile 17.8 to 18.8 there is an opportunity for a moderate setback that could provide bench and alcove type habitats, allowing for an integrated nature experience for users of the Green River trail system in this location.
- From RM 18.8 to 19.2 there is the potential for a setback that would allow for the reconnection of a large floodplain wetland complex to the river which could provide significant flood and channel capacity as well as significant rearing habitat improvements.
- The potential setbacks provide ideal locations for revegetation, especially in the high and critical shade need areas.

Potential right bank actions

- Site of upcoming Lower Russell Road project, project LG-10 in the Salmon Plan.
- This reach has a high percentage of critical and high shade need areas and the potential setback provides ideal locations for revegetation. In more constrained areas, there may be opportunities to enhance riparian function waterward of flood facility.

Reach 9, RM 19.3 to 21.3 (Veterans Dr. to W. Meeker St.)

The SWIF noted three potential levee breach locations on the right bank in this reach. The potential to setback the left bank through much of this reach would provide significant flood risk reduction, especially when considering the heavily constrained right bank. The setbacks have the potential to create significant salmon benefits and the opportunity integrate improved trail and recreational opportunities.

Potential left bank actions

- Potential to setback much of the left bank downstream of the golf course. The potential setback would allow for the reconnection of a stream and wetland complex to the river creating significant juvenile salmon rearing habitat improvement. Setbacks could also provide significant increase to flood and channel capacity, reducing flood risks on the constrained right banks. Within this setback area is the Salmon Plan project LG 9, which has the potential to create significant amounts of juvenile salmon rearing habitat and flood and channel capacity. Trail improvements should be integrated with any setbacks to ensure a quality recreational experience.
- Reach has a high percentage of critical and high shade need areas and the potential setbacks provides ideal locations for revegetation. In more constrained areas, recommend enhancing riparian function waterward of flood facility.

Potential right bank actions

- There is one moderate sized setback noted on the right bank that could increase channel and flood capacity, improve juvenile rearing habitat quantity and quality, and improve water quality. Implementation would be contingent on preserving the current/potential recreational value as

part of the setback project or relocating the existing recreational elements/opportunities at Russell Woods Park
- There may be opportunities to enhance riparian function waterward of flood facility.

Reach 10, RM 21.3 to 23.2 (W. Meeker St to 88th Ave S. (*Most of the left bank is in Unincorporated King County*)

In this reach the right bank is highly constrained, whereas there is potential for setbacks on the left bank that could significantly increase salmon habitat and channel capacity.

Potential left bank actions

- Salmon Plan project LG-7 calls out a variety of off channel habitat creation through bank setbacks throughout this reach, including the Downey Farmstead project at river mile 21.7.
- There is the potential to setback Frager Road where it would not impact existing farm structures, but could provide opportunities to improve rearing habitats, enhance riparian conditions critical and high shade need areas, and integrate trail improvements.
- This bank of the reach has a high percentage of critical and high shade need areas and the potential setbacks provides ideal locations for revegetation. In more constrained areas, there are opportunities to enhance riparian function waterward of flood facility.

Potential right bank actions

- Revegetation efforts should be undertaken in the medium and high shade needs area, focusing on enhancing riparian function waterward of flood facility. Revegetation efforts should take into account significant views, public safety issues and the recreational experience of trail users.

Reach 11, RM 23.2 to 24 (88th Ave S. to Union Pacific Railroad crossing) (*both banks are city of Kent*)

The setbacks on the left bank can work synergistically with the existing Riverview Park side channel and Leber Homestead backwater project. Looking at both banks together there is the potential to create a long stretch of both greatly improved salmon habitat and channel capacity.

Potential left bank actions

- Several opportunities to setback the banks and existing revetments to create off channel juvenile salmon rearing habitat and increase flood and channel capacity that are part of project LG-7 in the Salmon Plan. A portion of the setback would be contingent on relocating existing stormwater infrastructure. There is also the potential to create new trails and increase the amount of natural space lands available to the public.
- The bank of the reach has a high percentage of critical and high shade need areas and the potential setbacks provides ideal locations for revegetation. In more constrained areas, recommend enhancing riparian function waterward of flood facility.

Potential right bank actions

- There is the potential to increase flood refuge habitat by reconnecting the floodplain in Foster Park during moderate to high flood flows while preserving the current/potential recreational value. Foster Park has high recreational value because it is located at the intersection of two regional trails (Green River Trail and the Interurban Trail). The bank of this reach has a high proportion of low shade need areas, though critical and high shade need areas are in areas that are less constrained. Revegetation efforts could be focused in the medium and high shade needs area.

Reach 12, RM 24 to 26.5 (Union Pacific Railroad crossing to intersection of Green River Road and 94th Place S.) (*Left bank is Unincorporated King County, while the right bank is mostly in the city of Kent*).

The SWIF noted two potential levee breach locations on the right bank in this reach. The Potential setbacks through much of this reach would provide significant flood risk reduction benefits, create significant increase in quantity and quality of salmon habitat benefits and create the opportunity to improve the trail corridor and increase access to open space.

Potential left bank actions

- Salmon Plan projects LG-6, LG-5, LG-4, and LG-3 occur along this bank. These projects are focused on creating off channel habitats and providing fish passage to NE Auburn Creek and its associated wetland habitat. The combination of these possible habitat projects would create significant habitat improvements in an area that currently has very limited habitat as well as reduce flood risks on the right bank by increasing flood and channel capacity throughout the reach. Two of the project concepts overlap with existing agricultural uses and agricultural interests would need to be integrated into those projects.
- This bank of the reach has a high percentage of critical and high shade need areas and the potential projects provides ideal locations for revegetating these areas. There are additional revegetation opportunities throughout the reach.

Potential right bank actions

- The Milwaukee and Breda setbacks are currently in planning and design and it is expected that these projects will provide synergistic flood and salmon benefits when combined with Salmon Plan project LG-6 on the left bank. These setback projects also provide the opportunity to complete a missing link of the Green River Trail, and improve the trail in other stretches.
- The bank of this reach has low shade need, however, innovative shading techniques could be used to provide shade in the areas of high shade need of this reach.

Reach 13, RM 26.5 to 27.6 (Intersection of Green River Road and 94th Place S. to the S 277th ST) (*Both banks are Unincorporated King County*)

The potential setbacks through much of this reach would provide significant flood risk reduction benefits, create significant increases in quantity and quality of juvenile salmon habitat rearing and

refuge habitats and the could fill in the missing link of the Green River Trail as well as provide more open space.

Potential left bank actions

- The setback project in this reach spans a narrow portion of land where the river double backs on itself and was described in Reach 12 as part of Salmon Plan project LG-4.
- This reach has a high percentage of critical and high shade need areas which overlap the setback area and an existing, but unused King County Parks trail easement. If the eventual connector of the Green River Trail is not located on the left bank, then the existing easement would provide an ideal location for riparian revegetation.

Potential right bank actions

- There is a degraded floodplain wetland that is predominately in public ownership that could be reconnected back to the river as part of a potential setback. There is an unnamed stream that connects to the wetland and enters the river through a flap gated culvert that is a fish passage barrier. If the flap gate could be removed as part of the setback, a large portion of floodplain storage would be reconnected at lower flood flows as well as provide fish access to flood refuge. If the wetland was also restored, the rearing habitat value to juvenile salmon would greatly increase as well as the value as an open space. This project is LG-1 in the Salmon Plan.
- This reach has a high proportion of medium shade need areas, but revegetation opportunities could be expanded if paved areas near the river were reduced as part of the setbacks.
- The Green River Trail connector appears likely to occur on this bank. Any trail creation or improvements should be integrated with potential setbacks.

Reach 14, RM 27.6 to 29.5 (S 277th St to Southern extent of Reddington Levee) Left bank is Auburn, Right bank is a mixture of Kent, Unincorporated King County and Auburn.

There are opportunities to provide fish passage to several small streams and create additional juvenile salmon off-channel rearing habitats, which would also provide increased channel and floodplain capacity.

Potential left bank actions

- The recently constructed Reddington Levee extends for much of the left bank. While the setback levee is in place, there are still potential areas to create off-channel rearing habitat and expand channel capacity in several locations where the setback is more than 300 feet from the river's edge. Downstream of the Reddington levee there is the potential to create a setback that connects the large wetland mitigation project to the river which would provide juvenile salmon flood refuge and rearing habitats. Trail connections and improvements should be integrated with any setback.
- There are critical and high shade need areas that could be integrated into trail, habitat, and flood actions to maximize riparian widths.

Potential right bank actions

- Along the right bank there are three small streams that have limited fish access and degraded stream habitat near their stream mouths. There is the potential to provide fish passage and undertake stream habitat improvements. Improvements to Mary Olsen Creek is project LG-2 the Salmon Plan.
- There are critical and high shade need areas that could be integrated into trail, habitat, and flood actions to maximize riparian widths.

Reach 15, RM 29.5 to RM 31.1 (Southern extent of Reddington Levee to 8th ST NE bridge) Both banks are Auburn

In this reach, there was one breach location noted in the SWIF. This reach has potential setbacks that consecutively alternate between sides of the river. If considered together, the setbacks would increase channel capacity, synergistically reducing flood risks on the densely populated left bank. The setbacks have the potential for significant increases to the quantity and quality of aquatic rearing habitat for juvenile Chinook, improved water quality conditions, and could be integrated with park redevelopment.

Potential left bank actions

- There is the potential to setback a portion of the Dykstra levee. This could greatly improve channel capacity in a section of the river where it is restricted due to the Green River valley wall extending to the river's right bank edge. Improved channel capacity here would be synergistic with potential setbacks on the right bank upstream and downstream of this location. This would reduce the risk of a left bank levee breach while improving instream conditions and access to habitats for juvenile salmon.
- There are critical and high shade need areas that could be integrated into trail, habitat, and flood actions to maximize riparian widths.

Potential right bank actions

- At the upstream end of the reach there is the potential for setbacks to address moderate channel migration zone hazards, to reconnect floodplain, and create new side channel and/or backwater rearing habitat. Increasing channel capacity here could reduce the risk of the left bank levee overtopping into dense housing. The setbacks would need to be integrated with the recreational improvements being undertaken at the 104 Ave Park.
- There is the potential to set back portions of 104 Ave SE and Green River Road SE which both act as levees. These segments cut off portions of the floodplain and each has a fish passage barrier associated with it. These setbacks could significantly increase channel capacity, reducing flood risks to the dense housing on the left bank and improve juvenile salmon flood refuge and rearing habitats and access to spawning habitat.
- There are critical and high shade need areas that could be integrated into trail, road, habitat, and flood actions to maximize riparian widths.

Reach 16. RM 31.1 to RM 31.9 (8th ST NE bridge to Fenster Park)

The Lower Green River begins at the upstream end of this reach. Most of the right bank is either unpopulated or abuts the Green River Valley wall. This reach has one potential setback noted which would reduce channel migration risks and improve floodplain connectivity and edge habitat for salmon.

Potential Left Bank actions

- Expand recent levee setback to reconnect additional floodplain habitat and reduce risks associated with a mapped severe channel migration area.
- Existing riparian habitats could be expanded in width and diversity, especially in high shade need areas.

Potential Right Bank actions

- Existing riparian habitats could be expanded in width and diversity, especially in high shade need areas.

ATTACHMENT C:
Policy, Management, and Technical Comments and PEIS Scope Analysis

The November 28, 2018 scoping notice deemphasizes a multi-objective approach by stating the Corridor Plan should "balance" versus "achieve" multiple objectives. As a reach-wide flood hazard reduction planning effort, the Corridor Plan should apply a multi-benefit lens in evaluating alternatives for the Lower Green River. The April 20, 2018 Flood Control District (FCD) Motion 19-01.1 acknowledges that the Corridor Plan is a follow-up to the Interim System-Wide Improvement Framework (SWIF) and will apply a multiple objective framework to the planning process. In 2014, the FCD committed to advancing the following multi-benefit objectives in the Lower Green River:

- Integrated river and floodplain management: Reach agreement on an integrated list of multi-objective, prioritized projects and non-regulatory, programmatic actions that achieve the Green River SWIF's agreed to goals for level of protection from flooding. This integrated set of flood protection strategies and actions shall: (a) improve water temperature; (b) advance progress towards meeting salmon protection and recovery goals; (c) enhance open space, recreation, treaty fishing, and public access; (d) support farmland protection, resiliency and productivity; and (e) reduce long-term facility maintenance costs.
- Vegetation management: Develop shoreline and levee vegetation management recommendations to further the goals of the ESA, CWA, and Corps PL84-99 standards.
- Ecological resiliency: Improve the ecological resiliency of the Lower Green River's aquatic and terrestrial habitats through implementation of the Green River SWIF's priority projects and non-regulatory, programmatic recommendations.

Moreover, the following multiple benefit objectives of the *2013 King County Flood Hazard Management Plan* "…provide general guidance for all of its floodplain management activities" and "…define the standard that is binding on cities, towns and special districts in King County":

- Policy G-3 Comprehensive River & Flood Hazard Management: King County should provide comprehensive river and flood hazard management through the implementation of projects and programs that result in multiple benefits, including those created by meeting any or all of the following non-prioritized objectives, including (e) protect and, where possible, enhance aquatic and riparian habitat in a manner consistent with adopted salmon habitat recovery plans.
- Policy G-4 – River and Flood Hazard Management Services: King County should provide river and flood hazard management services to reduce the risk of flood and channel migration hazards by preserving open space in flood hazard areas and channel migration zones.
- Policy G-6 – Inter-Government Coordination and Cooperation: King County flood hazard management activities should be planned and implemented in close cooperation with cities, counties, tribes, salmon habitat recovery planning partners and other agencies sharing jurisdiction in each basin.

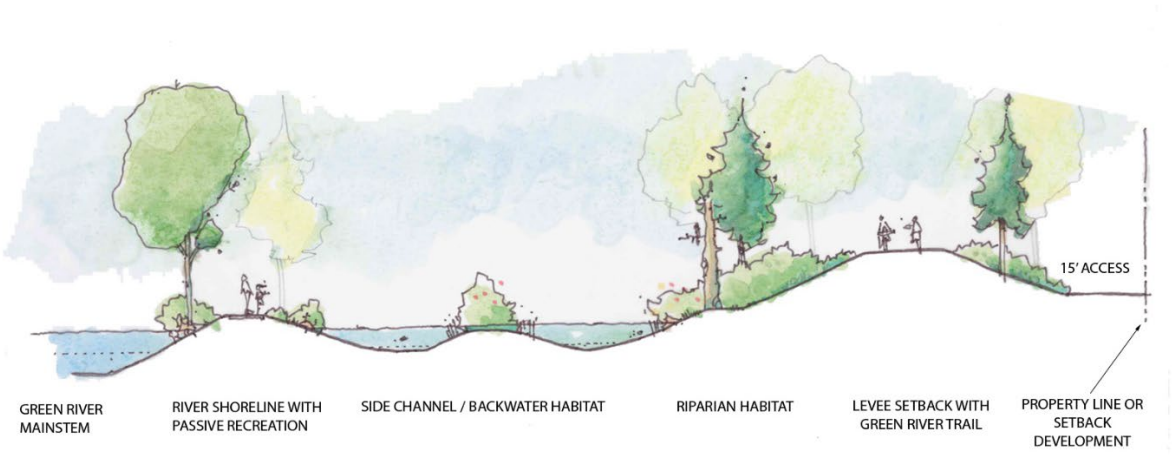
- Policy G-10 Protecting Natural Functions & Values: King County shall protect flood storage, conveyance, and ecological values of floodplains, wetlands, and riparian corridors and, when feasible, should enhance or restore these ecological functions and values. Flood risk reduction strategies and projects should be coordinated on a river-reach scale with the salmon habitat recovery plans
- Policy PROJ-6 Flood Protection Facility Design & Maintenance Objectives: King County should construct new flood protection facilities and maintain, repair or replace existing flood protection facilities in such a way as to: (a) require minimal maintenance over the long term; (b) ensure that flood or channel migration risks are not transferred to other sites; (c) protect or enhance aquatic, riparian and other critical habitats; and (d) protect or enhance multiple beneficial uses of flood hazard areas
- Policy PROJ-7: Flood Protection Facilities within Critical Areas Ordinance Aquatic Areas and Aquatic Area Buffers: Wherever possible, King County should relocate existing flood protection facilities farther from the river edge and associated buffers to increase flood conveyance and allow natural river processes to occur

The FCD confirmed at the February 11, 2016 WRIA 9 Watershed Ecosystem Forum meeting that it would resume the multi-objective planning framework for the Lower Green River under a corridor planning process and programmatic environmental impact statement (EIS).

Despite established policy and management commitments, however, the three alternatives of the November 2018 scoping notice include up to 30 miles of new facilities providing 500-year level of flood protection without substantive information on how the alternatives align with or advance salmon recovery objectives. The PEIS should evaluate all alternatives to ensure consistency with proposed projects in both the Green/Duwamish and Central Puget Sound Salmon Habitat Plan and the Corps Green/Duwamish Ecosystem Restoration Project.

The PEIS should evaluate strategic property acquisitions that provide a substantive contribution toward achieving multiple objectives, including salmon habitat goals, established for the Lower Green. Although levee setbacks are constrained in the Lower Green River, strategic property acquisitions on a case-by-case basis that will enable levees to be setback further from the river and, therefore, multi-benefit projects. Several proposed levee alignments of the three alternatives may preclude habitat opportunities and cumulatively reduce the ability to meet salmon habitat goals, including off-channel rearing habitat and riparian tree cover. Without property acquisitions as a tool, integrating flood risk reduction and salmon recovery needs will not be possible.

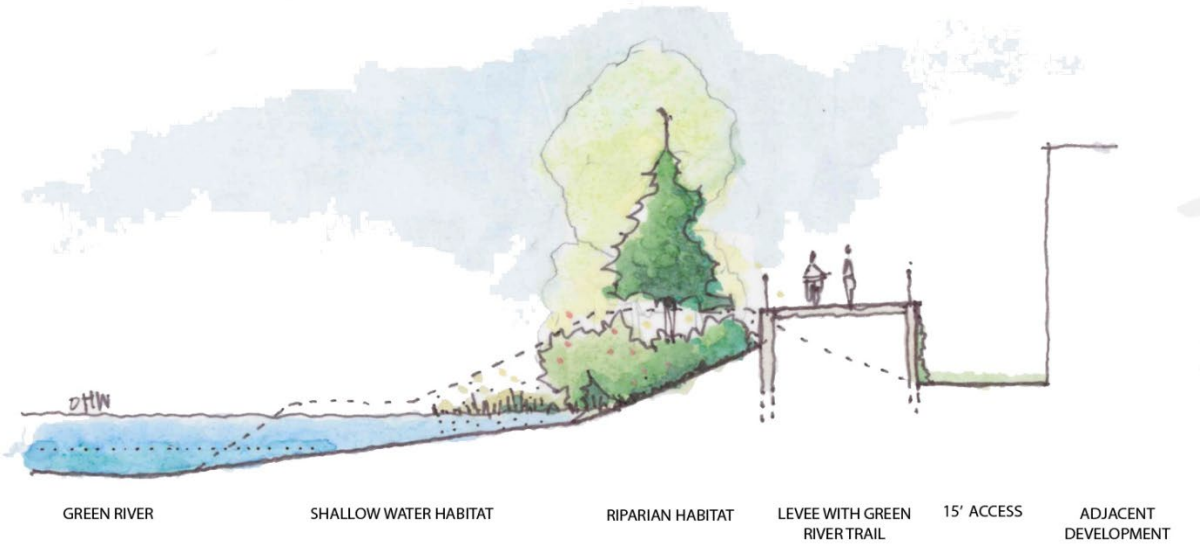
The PEIS should evaluate additional aquatic habitat design features into the facility types of the scoping notice. As described in the scoping notice, Type A and B facilities will cumulatively over time preclude habitat needs, particularly off-channel rearing habitat and riparian tree cover. Type C facilities, including rock armoring at the toe of levee setbacks, do not adequately integrate floodplain habitat riverward of levees and off-channel habitat. Exhibits 1 and 2, cross sections of the Type C facilities, are provided to graphically show how to incorporate habitat needs into setback facilities.



LEVEE SETBACK WITH AQUATIC HABITAT

NOT TO SCALE

Exhibit 1



FLOOD WALLS TO MAXIMIZE HABITAT RIVERWARD OF LEVEE

NOT TO SCALE

Exhibit 2

The PEIS should evaluate the impacts of proposed flood control facilities and interim vegetation management guidelines on in-stream water temperatures. The existing riparian corridor has limited canopy coverage. More than 50 percent of the river banks are devoid of trees within shading distance of the river. Current water temperatures in the Lower Green River regularly exceed water quality standards as described in the *2011 Green River Total Daily Maximum Load (TMDL) Water Quality Improvement Report*.[1] Water temperatures in excess of these standards have been shown to delay adult salmon migration, increase disease exposure, reduce juvenile growth and survival, and result in mortality. The TMDL states that the Lower Green River will not meet state standards and that Threatened species of salmon are likely to experience lethal temperatures if levees are required to be cleared of vegetation and, moreover, that until vegetation standards are changed the Green River will not meet water quality standards.

The PEIS should evaluate the Interim SWIF Vegetation Management Plan ability to support a healthy riparian corridor that addresses elevated in-stream temperatures. Proposed levee alignments should be assessed with respect to the Riparian Aspect Mapping effort (Sun Map) completed by the Muckleshoot Indian Tribe in 2013. Will proposed levee alignments and implementation of vegetation maintenance requirements exacerbate in-stream temperatures and contribute to more frequent and severe water quality exceedances in the Lower Green? How will the proposed vegetation standards impact the watersheds ability to implement the TMDL in the future? No alternative of the PEIS should preclude reestablishment of functional riparian habitats where proposed levee alignments intersect with high potential shade areas. Existing development, including parking lots, agricultural areas, and roads, should not automatically preclude consideration of setting back levees where achieving shade has high potential.

[1] The Green River Temperature TMDL uses the applicable temperature criteria for the designated aquatic life uses defined in WAC 173-201A-200(c) and 173-201A-602 which are:

- To protect the designated aquatic life uses of "Core Summer Salmonid Habitat," the highest 7-DADMax temperature must not exceed 16°C (60.8°F) at a probability frequency of more than once every ten years on average between June 15 and September 15. The 16°C criterion applies to the Green River above approximately river mile 23.8, at the river's confluence with Mill Creek. Downstream of that location the 17.5°C criterion applies.
- To protect the designated aquatic life uses of "Salmonid Spawning, Rearing, and Migration, and Salmonid Rearing and Migration Only," the highest 7-DADMax temperature must not exceed 17.5°C (63.5°F) at a probability frequency of more than once every ten years on average between September 16 and June 14.
- To protect spawning and incubation of salmonid species the Green River from Black River (near Kent) to Howard Hanson Dam must not exceed 13°C between September 15 and July 1.

King County

Dow Constantine
King County Executive

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April 5, 2019

Michelle Clark
SEPA Responsible Official
King County Flood Control District
516 Third Ave. #1200
Seattle, WA 98104

Re: Lower Green River Corridor Flood Hazard Management Plan and Programmatic Environmental Impact Statement (PEIS) – King County Scoping Comments

Dear Ms. Clark:

Thank you for the opportunity to comment on the Lower Green River Corridor Flood Hazard Management Plan (Corridor Plan) PEIS. We are at a crossroads for the Green-Duwamish River. Returning salmon face lethal water temperatures, Southern Resident Orca are critically endangered, and Tribal Treaty rights are at risk. Our changing climate and growing population increase the urgency of actions to reduce flood risks to our residents and economy, while restoring the natural systems we have so degraded. We can and must pursue solutions that meet all of these needs while being good financial stewards.

As a region, we are poised to invest billions in federal, state, and local public dollars on flood hazard reduction, salmon recovery, water quality, transportation, and recreation. It is essential that we work together to invest these dollars responsibly to achieve the best outcomes for our residents, public safety, and environment. The Corridor Plan is a once-in-a-generation opportunity to chart the future of the Lower Green River and address multiple interrelated challenges.

The Howard Hanson Dam and Green River levee system protect lives, infrastructure, more than $8 billion in economic assets, and thousands of jobs. Damages from a levee failure would be catastrophic, and that is why King County supports continued regional investments to reduce flood risks. Unfortunately, the historic flood control facilities that the region relies upon have come at a cost to water quality and the habitat for threatened salmon runs. Recent studies by the Washington Department of Fish and Wildlife indicate that the lack of rearing habitat in the Middle and Lower Green is the limiting factor for Chinook salmon productivity in the watershed. Additionally, more than 50 percent of the Lower Green's river banks are

devoid of trees within shading distance of the river. As a result, summer water temperatures in the corridor already reach lethal levels for migrating salmon.

Restoring off-channel habitat and increasing riparian tree cover is not only critical to reversing the long-term decline of Chinook salmon; it is essential to honoring the Muckleshoot Indian Tribe's established treaty rights to take fish throughout the Green River. The choices of levee alignments made in this Corridor Plan will effectively establish the footprint for future land use, development, and salmon habitat for several generations. We need to make sure the choices we make today do not foreclose habitat restoration opportunities for the future.

More than $1 billion is anticipated to be invested in the watershed's headwaters at Howard Hanson Dam for fish passage and in the Lower Duwamish for clean-up of contaminated sediment. King County is also making significant investments to control combined sewer overflows, protect and restore fish habitat, and control stormwater pollution. For these investments to advance salmon recovery, it is necessary for additional off-channel habitat and increased tree cover to be realized in the Lower Green. These salmon recovery objectives can be accomplished while reducing flood risks by integrating and coordinating investments throughout the corridor.

I urge the Flood District to take this opportunity to develop an integrated, multi-objective Corridor Plan. The Flood District has effectively implemented multi-objective approaches in other basins, including in the Snoqualmie, Cedar, and White Rivers, demonstrating the benefits of integrating flood risk reduction strategies with other objectives like salmon recovery and increased productivity of agricultural lands. Taking a multi-objective approach can help to build community support, provide greater regulatory certainty, and increase eligibility for significant matching dollars from state programs like Floodplains by Design and the Puget Sound Acquisition and Restoration Fund.

In addition to the three flood control-focused alternatives outlined in the Flood District's scoping notice, I recommend that at least one additional alternative be developed that integrates flood protection objectives with salmon habitat restoration, public safety, Treaty fishing rights, water quality, and recreation. For all of the alternatives, I request that Flood District comprehensively evaluate the discrete and cumulative impacts by analyzing specific themes as you prepare the PEIS (please see Attachment A).

I am also attaching a map (Attachment B) and reach-based narrative (Attachment C) describing potential multi-objective actions that can be used to inform additional alternatives. Any setbacks noted in the map and associated narrative are considered potential actions for the purposes of the PEIS analysis and would require a willing landowner and local land use approval. Further, I offer suggestions for policy language and alternative levee cross-sections (Attachment D) to help inform more integrated flood and salmon alternatives as individual flood district projects are developed.

In summary, through an integrated approach, I believe we can achieve flood protection goals, and:

- Reduce water temperatures;
- Increase area of critical rearing habitats for juvenile Chinook salmon;
- Advance progress towards meeting salmon protection and recovery goals;
- Enhance open space, recreation, and public access;
- Honor Indian Treaty rights that provide fishing into the imaginable future;
- Protect King County's and partners' investments in the Lower Duwamish, Middle Green, and Upper Green;
- Support farmland protection, resiliency, and productivity; and
- Reduce long-term facility maintenance costs.

Nearly half a century ago, King County's planning document *River of Green* noted that, "someone should steadily be asking, 'is this the way we want it to be, now and in the future?' The ultimate condition of the Green River Basin should be the result of informed and farsighted public decisions." This is still true today and the PEIS, with transparent assessment of alternatives and impacts, can help to inform these public decisions.

I stand ready to be an active partner in the analysis and future investments that will both increase certainty for flood protection and lead to better outcomes for habitat, water quality, recreation, and agriculture for future generations in King County. Thank you for this opportunity to provide comments.

Sincerely,

Dow Constantine
King County Executive

Attachments (4):
A) Technical comments and suggested PEIS themes for analysis
B) Integrated flood protection and salmon habitat flood facility type map
C) Reach-based map narrative
D) Alternative Cross-Sections

cc: King County Flood Control District Board of Supervisors
Rachel Smith, Deputy King County Executive
Casey Sixkiller, Chief Operating Officer, King County
April Putney, Director of Government Relations, King County Executive's Office
Christie True, Director, Department of Natural Resources and Parks (DNRP)
Josh Baldi, Director, Water and Land Resources Division, DNRP

Attachment A. Technical Comments and Suggested Themes for Analysis

King County and partners are making significant habitat investments upstream and downstream of the Lower Green Basin and a multiple-benefit plan is critical to realizing these investments.

King County is one member of a coalition of partners that comprise WRIA 9, charged with Chinook salmon recovery. Collectively, the coalition has invested approximately $160 million towards habitat recovery since adopting the *2005 Green/Duwamish and Central Puget Sound Salmon Habitat Plan* (Salmon Habitat Plan). Although these investments have yielded important habitat gains throughout the watershed, they have not reversed the long-term decline in Chinook salmon. Looking ahead, several long-term efforts in combination with ongoing strategic investments by WRIA 9, provide a real opportunity to thrust the Green/Duwamish watershed into the forefront of regional salmon recovery efforts and drive the investment needed to recover Chinook salmon.

More than $1 billion in aggregated investments from multiple sources over the next 10 to 20 years will alter the recovery landscape in the Green/Duwamish Watershed and should position the watershed to make significant strides in salmon recovery. Legacy pollution and habitat loss in the Duwamish Estuary remain barriers to juvenile salmon growth and survival. However, the Lower Duwamish Superfund Cleanup Plan calls for approximately $350 million of investment in the near future to reduce sediment contamination by upwards of 90 percent. In a parallel process, Natural Resources Damages Assessment settlements will direct potentially responsible parties to make additional significant investments in habitat restoration.

Further upstream, Howard Hanson Dam currently prevents Chinook salmon access to up to 165 miles of relatively intact spawning and rearing habitats. On February 15, 2019, the National Marine Fisheries Service released a biological opinion requiring downstream fish passage at the dam to address concerns related to Endangered Species Act (ESA)-listed Puget Sound Chinook salmon, Puget Sound steelhead and Southern Resident killer whales. When combined with the $30 million upstream passage facility the City of Tacoma built, passage at Howard Hanson Dam will allow salmon to access the upper watershed after being excluded for over 100 years. Early indications suggest the US Army Corps of Engineers may invest $300-$500 million in establishing fish passage by 2030, providing up to 165 miles of additional habitat.

With an anticipated 50-year implementation period for the Corridor Plan, the Flood District's investment of potentially $500 million in the Lower Green River basin is an opportunity to establish a more resilient and environmentally productive approach to flood hazard reduction. Recent studies funded by WRIA 9 make clear that available rearing habitat is the limiting factor for Chinook salmon productivity in the watershed. Reestablishing off-channel rearing habitat in the Lower Green River Valley is critical to addressing the population bottleneck and ensuring that the benefits of other salmon recovery investments are realized. King County believes a multi-objective approach to floodplain management will reverse the negative long-term trend for salmon and shift towards measurable recovery.

King County supports the Flood District's vision for an integrated Lower Green River Corridor Plan that accomplishes multiple objectives as outlined in the July 12, 2016 and April 20, 2018 motions.

While the November 28, 2018 scoping notice renamed the effort to a "Flood Hazard Management Plan," we recommend the Corridor Plan remain an integrated multi-objective plan as previously described. As a reach-wide flood hazard reduction planning effort, the Corridor Plan can apply a multi-benefit lens in evaluating alternatives for the Lower Green River as originally intended in the *Green River System Wide Improvement Framework* (SWIF). Both the July 12, 2016 Flood District motion (FCD2016-12.2) and the April 20, 2018 Flood District motion (FCD19-01.1) specifically acknowledged that the Corridor Plan is a follow-up to the Interim SWIF and would apply a multi-objective framework to the planning process. The Flood District Executive Committee supported advancing multi-benefit objectives in the Lower Green River with the approval of the SWIF Goals in January 2014. Maintaining these objectives in this process will enable a broad base of support for implementation and ultimately contribute to more permittable flood hazard reduction projects. In addition, these goals reflected the interests of diverse watershed partners and specifically called for integrating and making progress on issues such as water temperature and salmon recovery. SWIF goals we recommend be carried forward in the Corridor Plan include:

- Integrated river and floodplain management - Reach agreement on an integrated list of multi-objective, prioritized projects and non-regulatory, programmatic actions that achieve the Green River SWIF's agreed to goals for level of protection from flooding. This integrated set of flood protection strategies and actions shall: (a) improve water temperature; (b) advance progress towards meeting salmon protection and recovery goals; (c) enhance open space, recreation, Treaty fishing, and public access; (d) support farmland protection, resiliency and productivity; and (e) reduce long-term facility maintenance costs.
- Vegetation management - Develop shoreline and levee vegetation management recommendations to further the goals of the ESA, CWA, and Corps PL84-99 standards.
- Ecological resiliency - Improve the ecological resiliency of the Lower Green River's aquatic and terrestrial habitats through implementation of the Green River SWIF's priority projects and non-regulatory, programmatic recommendations.

Both King County and the Flood District have broad flood hazard reduction responsibilities that call for a multi-benefit approach to flood protection. Multi-benefit objectives are specifically supported by the policies in the *2006* and *2013 King County Flood Hazard Management Plan*. The policies included in the plan guide a PEIS process that results in multiple benefits including, but not limited to: flood hazard management, enhancing aquatic and riparian habitat in a manner consistent with adopted salmon habitat recovery plans, preserving open space in channel migration zones, protecting ecological value of floodplain and riparian corridors, and when feasible, enhancing or restoring ecological function and values. The policies are intended to "...provide general guidance for all of its floodplain management activities" and "...define the standard that is binding on cities, towns and special Flood Districts in King County." Policies applicable to the Corridor Plan include:

- Policy G-3 - Comprehensive River & Flood Hazard Management: King County should provide comprehensive river and flood hazard management through the implementation of projects and programs that result in multiple benefits, including those created by meeting any or all of the following non-prioritized objectives, including (e) protect and, where possible, enhance aquatic and riparian habitat in a manner consistent with adopted salmon habitat recovery plans.
- Policy G-4 – River and Flood Hazard Management Services: King County should provide river and flood hazard management services to reduce the risk of flood and channel migration hazards by preserving open space in flood hazard areas and channel migration zones.
- Policy G-10 - Protecting Natural Functions & Values: King County shall protect flood storage, conveyance, and ecological values of floodplains, wetlands, and riparian corridors and, when feasible, should enhance or restore these ecological functions and values. Flood risk reduction strategies and projects should be coordinated on a river-reach scale with the salmon habitat recovery plans.
- Policy G-6 – Inter-Government Coordination and Cooperation: King County flood hazard management activities should be planned and implemented in close cooperation with cities, counties, tribes, salmon habitat recovery planning partners and other agencies sharing jurisdiction in each basin.
- Policy PROJ-6 - Flood Protection Facility Design & Maintenance Objectives: King County should construct new flood protection facilities and maintain, repair or replace existing flood protection facilities in such a way as to: (a) require minimal maintenance over the long term; (b) ensure that flood or channel migration risks are not transferred to other sites; (c) protect or enhance aquatic, riparian and other critical habitats; and (d) protect or enhance multiple beneficial uses of flood hazard areas.
- Policy PROJ-7 - Flood Protection Facilities within Critical Areas Ordinance Aquatic Areas and Aquatic Area Buffers: Wherever possible, King County should relocate existing flood protection facilities farther from the river edge and associated buffers to increase flood conveyance and allow natural river processes to occur.

The financial investment in flood protection in the Lower Green will be substantial, and there are competing demands for flood hazard reduction in the Snoqualmie, Cedar, Sammamish, and White River watersheds. A Lower Green Corridor Plan that is integrated with efforts to improve habitat, recreation, and agriculture would realize several benefits, including the following: better position the region to compete for multi-objective flood hazard reduction and habitat funding sources like state Floodplains by Design and federal Ecosystem Restoration Project funding; promote cost-effectiveness in implementation by sharing costs and benefits among related actions; attract a stronger and broader base of support; and would facilitate and streamline the permit process, saving time and money.

Strategic land acquisition is essential to implementing a multi-objective approach to flood hazard reduction in the Lower Green Valley.

The policy statement included in the November 28, 2018 scoping document and April 20, 2018 motion (FCD 18-01.1) that setback levee locations "...would not impact existing agricultural lands, buildings, parking, or traveled roadways" precludes implementation of most multi-objective project opportunities and significantly reduces flexibility as land uses change over time. This policy also creates inconsistencies with previous policies issued by the Flood District, including FCD2016-12.2 and FCD19-01.1.[1] Recent projects, including the upcoming Milwaukee #2 and Breda levee projects, rely on voluntary acquisitions of adjacent properties with buildings to optimize levee setbacks. This voluntary approach has been successful and should be included in the environmental analysis.

Although there are considerable constraints to levee setbacks throughout the Lower Green, the Flood District can consider strategic property acquisitions on a case-by-case basis where such setbacks would advance multi-benefit objectives. The Flood District's October 8th Milwaukee #2 staff report acknowledges the importance of pursuing larger setbacks and states, "While Alternative 1 [alternative with largest setback] is the most expensive alternative, the substantial benefits seem to outweigh the cost. These benefits include:

- Lower long term maintenance costs to the District.
- Levee toe will require far less stabilization than a flood wall.
- Provides habitat or ecological lift that can be used as off-site mitigation."

The Corridor Plan would benefit from including policy language that supports voluntary land acquisition as a strategic approach to implementing multi-benefit projects. Similarly, the PEIS can analyze opportunities to acquire land to support increased levee setbacks. Given the anticipated 50-year planning horizon, the PEIS should assess the costs and benefits of a long-term acquisition strategy that would position the Flood District to acquire key parcels of land if/as willing sellers become known.

We recommend the Flood District integrate aquatic habitat design features into its facility type cross-sections to better facilitate a multi-objective approach.

The Type C levee setback facility cross-section is intended to portray a multi-benefit approach to floodplain management and should accurately reflect the types of salmon habitat features critically needed in the Lower Green River. The Flood District's Type C cross-section depicts bench habitat, but does not demonstrate how to maximize floodplain habitat riverward of the levee, including incorporating off-channel habitat. The Type C graphic also includes rock armoring at the toe, which is inconsistent with allowing lateral channel migration that supports increased aquatic habitat formation. We recommend additional Type C cross-sections that

[1] The Flood District's Property Acquisition Policy of November 29, 2016 states an intent is to "make the most cost effective investments in flood facilities while protecting public safety [section 1.2]" with "flexibility … to address unique circumstances of flood emergencies, funding opportunities, and property owner willingness to sell [section 1.6]." Similarly, the Flood District goes on to establish considerations and criteria for acquisition that include acquisition of residential property when such acquisition is "more cost effective than constructing new or expanded flood protection infrastructure [section 6.3]" and acquisition of "more property or more property rights than is necessary for a stand-alone flood protection facility" when such acquisition will "achieve consensus on multi-party goals [section 6.4]."

demonstrate the range of habitat opportunities, including incorporating a wall with a setback to further increase the area for habitat features. Provided for consideration in the PEIS are several examples in Attachment D.

Constrained levee alignments (Type A and Type B facilities) preclude habitat opportunities for up to 50 to 100 years and cumulatively impact the watershed's ability to meet salmon habitat and water quality goals, including off-channel rearing habitat and riparian tree cover. The following comments reflect concerns with the scoping language used to describe these facility types:

- The scoping language implies that Type B facilities are self-mitigating because of a larger footprint and opportunity to incorporate habitat features. Given that most proposed facilities would increase the level of protection (LOP) from 100-yr to 500-yr, they may not be considered self-mitigating by regulatory agencies and tribal governments.
- Scoping language appears to provide unequal treatment of integrated objectives. The scoping language state that Type B shorelines could include funding for enhancing recreational facilities, however explicitly states that the Flood District will not undertake habitat enhancements that are not required as mitigation. As a multi-objective plan, we recommend the Flood District assess the benefits of exceeding minimum state and federal regulatory requirements.
- The Flood District's cross-sections use walls for the protection of buildings and infrastructure in highly constrained locations, however flood walls could be used in less constrained areas to increase habitat area waterward of the flood facility. All alternatives should evaluate the potential to increase the space riverward of the facility for enhanced habitat features using flood walls. Attachment D offers a cross-section example.

To meaningfully advance salmon habitat recovery in the Lower Green River, we recommend the Flood District update its three alternatives to better integrate multi-benefit approaches to flood hazard reduction management.

The Flood District's three alternatives include up to 30 miles of new or improved facilities providing 500-year LOP with no substantive information on how these alternatives align with or advance salmon recovery and other multi-benefit objectives, such as improving water quality. The three alternatives need additional detail to facilitate meaningful evaluation/quantification of potential environmental impacts and/or habitat improvements. For example, in areas identified as a levee setback, it is unclear whether there is an associated salmon habitat benefit. The lack of detail makes it difficult to assess whether any of the three alternatives are likely to be permittable.

We recommend evaluation of how the proposed alternatives align with the National Marine Fisheries Service approved Puget Sound Recovery Plan and delisting criteria. We also recommend the alternatives identify the mitigation necessary to offset unavoidable impacts to salmon habitat that would result from new facility construction, repairs, or ongoing maintenance.

Specific questions and concerns surrounding the three proposed alternatives include the following:

Alternative 1 – No Action

- What are the impacts associated with implementation of the Interim *SWIF Vegetation Management Plan* on salmon habitat, specifically as it relates to in-stream water temperatures?
- The PEIS should analyze ongoing impacts of existing facility maintenance through the lens of ESA-listed fish species habitat, including water velocity, edge habitat complexity, off-channel habitat preclusion, and in-stream temperatures.
- What are the implications of this alternative not satisfying the September 8, 2014 LOP goals agreed upon during SWIF or any system wide increase in LOP?

Alternative 2 – Moderate Geographic Extent of Increased Level of Protection

- To what extent will the proposed 10.17 miles of Type A facilities limit riparian vegetation potential and associated shade in critical/high need locations identified on the Muckleshoot Indian Tribe's Riparian Sun Map and work underway through the Re-Green the Green program?
- How will the alternatives affect agricultural drainage necessary to maintain current levels for agricultural operations? Additionally, the PEIS should assess how proposed drainage improvements can be implemented to provide parallel benefits to in-stream temperatures and salmon habitat.

Alternative 3 – Greater Geographic Extent with Increased Level of Protection, Integrated Habitat and Recreation, Agricultural Protection Facilities, and Habitat Restoration Project Partnerships Alternative

- This alternative precludes many different multi-benefit projects in key locations by suggesting flood walls along the river (see Attachment C for potential levee setback locations). The PEIS should assess the lost opportunities associated with these floodwall locations.
- The LOP exceeds the goals agreed upon during SWIF. One implication of changing LOP from 100 year to 500 year flood protection without providing significant setbacks is reducing the ability of juvenile salmon to reside/shelter in the Lower Green during periodic floods. What are the implications of this habitat reduction?
- Although Alternative 3 includes more Type C setback facilities than Alternative 2, a concomitant increase in Type A and B facilities appears to offsets benefits of the proposed increase in setbacks. The PEIS should assess the implications of these tradeoffs for salmon recovery and water quality.
- The PEIS should assess how the alternatives eliminate connectivity to existing floodplain areas, increases water surface elevations and impacts other connected floodplain areas (e.g. farms), potentially increasing flood risks.
- Providing increased LOP throughout the corridor could alter long-term land use patterns and result in more people and infrastructure in high risk areas (e.g. Lower Green Agricultural Production District). The PEIS should assess the long-term implications of

these patterns to salmon recovery, water quality, costs of infrastructure maintenance, etc. – particularly in the context of changing flow patterns projected from climate change.
- The PEIS should evaluate whether the alternatives are permittable given the extent of new levees and floodwalls proposed.

Questions and Comments specific to both Alternatives 2 and 3:
- Omits Downey Farmstead salmon recovery project, which provides both salmon and flood risk reduction benefits.
- Counting existing 500-year LOP setback levees and floodwalls as future Type C setbacks (i.e., Reddington levee setback in Auburn and the Briscoe walls in Tukwila) overstates potential habitat benefits of proposed alternatives setbacks.
- It is unclear if the alternatives are suggesting additional setbacks in locations that were previously setback (e.g. Segale mitigation, Boeing, Milwaukee #1). If there is no intent to set the current facility further back as part of increasing LOP, then it is unclear why such facilities should be described as new setbacks that imply increased habitat potential.
- The PEIS should describe why a new Type B flood facility is proposed along Riverview Park and not a Type C facility along the road, which is more than 150 feet from the river. What is the proposed facility protecting? As shown, it appears a facility is being proposed for one bank of an island and that the facility might cut-off an existing side channel.
- Language indicates that agricultural drainage improvements may be undertaken to maintain existing LOP. It should be noted that juvenile Chinook salmon have been found throughout the Lower Green Agricultural Production District (APD) and that typical agricultural drainage projects require mitigation due to impacts on salmon habitat. We recommend assessing a multi-benefit approach to drainage improvements and flood proofing that benefits both agricultural landowners and fish habitat, similar to projects described in the 2000 Army Corps of Engineers' *Ecosystem Restoration Project* (ERP).

We recommend the Flood District develop and analyze at least one additional alternative that integrates flood protection with salmon habitat restoration, public safety, water quality, and recreation.

The potential 50-year planning horizon for the Corridor Plan will alter the salmon recovery landscape in the Lower Green for generations. The PEIS would benefit from analyzing multi-objective alternatives that protect local communities while advancing the Green/Duwamish Salmon Habitat Plan. Such analysis would reflect the critical importance of the Lower Green for salmon recovery, and its potential to make a substantive contribution towards achieving the WRIA-approved habitat goals established for the Lower Green.

Regional efforts are underway to accelerate coordination of investments to solve diverse floodplain challenges, increase community and ecological resiliency in the face of climate change, and serve a broad range of stakeholder interests. Nearly all of the salmon habitat

projects envisioned in the Lower Green (e.g., Downey Farmstead in Kent) reduce floods risk through increased flood storage, reduced water surface elevations, and reduced height and costs of adjacent flood facilities. Furthermore, habitat projects that increase flood conveyance provide an additional factor of safety than just relying on flood facilities that are built to 3 feet above base flood elevation. Through the SWIF process, WRIA 9 identified approximately 80 potential locations suitable for an integrated approach to flood risk reduction and salmon recovery. Although not all of these locations are likely feasible, they provided information on the range of possibilities available in the highly constrained Lower Green River Valley. Since SWIF, additional locations for integrated projects have been identified (see maps and narratives in Attachments B and C).

Alternative 2 and 3 propose the greatest length of Type A and Type B facilities, providing minimal opportunity to enhance salmon habitat. Additional alternatives should present a vision that increases the frequency of levee laybacks and setbacks, which provide opportunity to increase riparian vegetation and off-channel rearing habitat. We believe this is an important opportunity to create a comprehensive long-term vision, but recognize that individual project development and implementation can be rife with challenges. The Corridor Plan and associated PEIS should not preclude an integrated approach to flood risk reduction, but rather position the Flood District to capitalize on multi-benefit opportunities as land use shifts over the next 50 years.

The PEIS should comprehensively analyze the discrete and cumulative impacts of all proposed alternatives.

As the Flood District prepares its PEIS, we recommend the Flood District take this opportunity to comprehensively review the cumulative impacts of the Corridor Plan alternatives, as outlined it its April 20, 2018 motion. We further recommend the Flood District analyze each alternative with respect to the themes highlighted below. We provide questions and recommendations by theme for the analysis.

Permitting feasibility and regulatory alignment

- Are the Flood District's alternatives and facility types permittable? Can this be assessed with the limited information provided?
- How much mitigation will be required for each of the Flood District's alternatives and facility types?
- For actions that require "off-site mitigation" (e.g. facility Type A), where will this mitigation be implemented? The PEIS should consider where within the historic floodplain these mitigation actions would take place.
- Is habitat enhancement implicit within the Type C levee setback facility? If not, how will the Flood District assess the cumulative environmental impacts of proposed alternatives?
- How are the alternatives permittable under the National Flood Insurance Program (NFIP) Biological Opinion with FEMA, especially for the areas covered under King County's response to the Biological Opinion?

- How does increasing LOP meet the "no net loss of shoreline ecological function" standard in each jurisdiction's Shoreline Master Plan?
- How does the Interim *SWIF Vegetation Management Plan* (2016) meet the "no net loss of shoreline ecological function" standard in each jurisdiction's Shoreline Master Plan relative to implementation of all the alternatives being assessed?
- How do the alternatives impact the Green River as a "shoreline of statewide significance"? The PEIS should assess the consistency of the various Shoreline Master Programs, both individually and cumulatively, with state/county law and code, including protection of statewide interests over local interests and preservation of the natural character of the shoreline and the shoreline environment.[2]
- Can the alternatives meet zero rise and compensatory storage requirements?
- Are the alternatives consistent with the mapped Channel Migration Zones and associated regulations? How will these hazards change over time relative to climate projections?

Salmon recovery

The November 28, 2018 scoping notice omitted "salmon recovery" from its list of "areas for discussion in the PEIS." We recommend that this topic be included in the analysis of all alternatives.

- The *Salmon Habitat Plan* provides a blueprint for salmon recovery and outlines reach-specific strategies and goals necessary for advancing recovery. The PEIS should evaluate to what extent all the alternatives, including at least one additional multi-benefit approach, are consistent with the federally recognized Chinook Recovery Plan and the past, present and future regional investments in habitat improvements.
- The *Salmon Habitat Plan* outlines specific long-term habitat goals for the Lower Green River. The PEIS should evaluate to what extent the proposed all the alternatives contribute towards (or detract) achieving the following 50-yr. habitat goals:
    - *Off channel habitat:* 5,039 acres of connected floodplain
    - *Riparian habitat:* 75 percent of the river bank vegetated to 165 feet
    - *Woody debris:* 1,705 pieces per mile
    - *Bank armor:* no new armor and decreasing total

  Given the magnitude of projected investment, it is expected that all viable Corridor Plan alternatives will make substantive contribution to advancing – and equally important – not preclude future progress towards these goals.
- Recent studies conducted by the Washington Department of Fish and Wildlife (WDFW) find that juvenile rearing habitat capacity is a bottleneck for Chinook salmon productivity in the Green/Duwamish. To what extent do the proposed alternatives alter rearing habitat capacity and how is this projected to impact salmon productivity moving forward?

[2] Section S-207 in the 2016 King County Comprehensive Plan states that "in developing and implementing its Shoreline Master Program for shoreline of statewide significance, King County shall give preference, in the following order of preference, to uses that: Recognize and protect the statewide interest over local interest; Preserve the natural character of the shoreline; Result in long-term over short-term benefit; Protect the resources and ecology of the shoreline; Increase public access to publicly owned areas of the shorelines; Increase recreational opportunities for the public in the shoreline; and Provide for any other element as defined in Revised Code of Washington 90.58.100."

- Water temperature is a key aspect of water quality for salmonids, and high water temperature is a limiting factor for the distribution, migration, health and performance of salmon. Summertime in-stream temperatures in the Lower Green River regularly exceed water quality standards established for Core Summer Salmonid Habitat. In recent years, temperatures have periodically exceeded the threshold for acute lethal impacts. The PEIS should evaluate how proposed facility alignment and ongoing maintenance (i.e., vegetation management) will impact in-stream temperatures and thermal stress levels experienced by salmon.
- The *Salmon Habitat Plan* and the *2000 Ecosystem Restoration Project* outline specific priority habitat projects in the Lower Green River sub-watershed. We recommend the PEIS identify those projects that would be advanced and those that would be precluded by the proposed alternatives.
- Additional salmon recovery questions to be addressed include:
    - How the proposed alternatives affect the ESA delisting criteria for the Central/South Sound biogeographical region.
    - How Corridor Plan implementation of each alternative will impact increases and/or decreases in habitat quantity and quality.
    - Whether flood refuge area for juvenile Chinook salmon will be lost between existing LOP and proposed 500-year LOP, and if so, by how much?
    - How the impacts of new facilities will be mitigated, specifically the Type A facilities that will require off-site mitigation. The PEIS should evaluate both the availability of suitable mitigation sites and feasibility of meeting mitigation requirements within the Lower Green River basin.

Fish passage

Recent research funded by WRIA 9 documented that non-natal tributaries in the Lower Green River subbasin provide important rearing habitat for juvenile Chinook salmon and that juvenile fish passage is an important consideration in flood facility design.[3] Consequently, we recommend:

- The PEIS assess fish passage constraints associated with existing flood protection facilities and the amount of floodplain tributary habitat that is precluded by barriers. More specifically, how do the alternatives impact juvenile fish passage/access to non-natal tributaries? We recommend the Corridor Plan address fish passage constraints associated with flapgates and culverts contained within flood facilities.

[3] While fish passage has generally been considered in terms of adult passability, this work has shown that passage for juveniles is critical for listed Green River Chinook salmon recovery. Data from this project has demonstrated variability in flapgate performance, therefore future improvements should address design and potential retrofits that will allow juvenile chinook access to tributary and off-channel rearing habitat. King County. 2019. Juvenile Chinook salmon use of non-natal tributaries in the lower Green River- *draft*. Prepared by Chris Gregersen, King County Water and Land Resources Division. Seattle, WA.

Orca recovery

NOAA and WDFW have identified the Green River Chinook salmon stock as among the most important stocks for Southern Resident killer whales.[4] In addition, NOAA recently released a draft supplemental PEIS that examines an increased hatchery production alternative that would release an additional 2 million sub-yearling fish into the Green River.[5]

Given the existing juvenile rearing habitat bottleneck, we recommend the PEIS assess:

- How the proposed alternatives and facility alignments impact efforts to increase Chinook salmon hatchery production and prey abundance for Southern Resident killer whales.
- How the alternatives align with the Governor's Orca Taskforce Recommendations, specifically recommendation #1 to increase investment in the restoration and acquisition of Chinook salmon habitat areas that would provide the most benefit to Southern Resident Orcas.

Water temperature

The Lower Green River corridor has limited existing canopy coverage—more than 50 percent of the river banks are devoid of trees within shading distance of the river. Current water temperatures in the Lower Green River regularly exceed water quality standards. Water temperatures in excess of these standards have been shown to delay adult salmon migration, increase disease exposure, reduce juvenile growth and survival, and result in mortality.

The 2011 *Green River Temperature Total Maximum Daily Load (TMDL) Water Quality Improvement Report* specifically states that the Lower Green River will not meet state standards and that ESA-listed species are likely to experience lethal temperatures if levees are required to be cleared of vegetation.[6] The TMDL report also finds that until vegetation standards are changed, the Green River will not meet water quality standards. While standards were changed as part of the interim *SWIF Vegetation Management Plan*, those standards have

[4] https://www.seattletimes.com/seattle-news/environment/struggling-orcas-heavily-rely-on-urban-chinook-from-seattle-area-rivers-new-analysis-shows/

[5] NOAA Fisheries. 2018. Draft Supplemental Environmental Impact Statement for 10 Salmon and Steelhead Hatchery Programs in the Duwamish-Green River Basin. Prepared by the National Marine Fisheries Service. https://www.westcoast.fisheries.noaa.gov/publications/nepa/hatchery/duwamish-green_hatcheries_dseis_2018.pdf

[6] [1] The Green River Temperature TMDL uses the applicable temperature criteria for the designated aquatic life uses defined in WAC 173-201A-200(c) and 173-201A-602 which are:

- To protect the designated aquatic life uses of "Core Summer Salmonid Habitat," the highest 7-DADMax temperature must not exceed 16°C (60.8°F) at a probability frequency of more than once every ten years on average between June 15 and September 15. The 16°C criterion applies to the Green River above approximately river mile 23.8, at the river's confluence with Mill Creek. Downstream of that location the 17.5°C criterion applies.
- To protect the designated aquatic life uses of "Salmonid Spawning, Rearing, and Migration, and Salmonid Rearing and Migration Only," the highest 7-DADMax temperature must not exceed 17.5°C (63.5°F) at a probability frequency of more than once every ten years on average between September 16 and June 14.
- To protect spawning and incubation of salmonid species the Green River from Black River (near Kent) to Howard Hanson Dam must not exceed 13°C between September 15 and July 1.

many of the same shortcomings as the previous PL84-99 guidance from the ACOE. Consequently, we recommend:

- The Interim *SWIF Vegetation Management Plan* be revisited to ensure the Corridor Plan supports a healthy riparian corridor that addresses elevated in-stream temperatures in the Lower Green.
- The PEIS assess to what extent the proposed alternatives and facility types impact implementation of the TMDL. What are the projected impacts of the proposed facility types and the *Interim SWIF Vegetation Management Plan* (2016) standards on in-stream water temperatures? We recommend the PEIS analyze how much of the shoreline length will provide 150 feet of tree cover, as recommended by the 2011 *Green River Temperature TMDL*.
- That all proposed levee alignments be assessed with respect to the Riparian Aspect Mapping effort conducted by the Muckleshoot Indian Tribe in 2013. The PEIS should reevaluate flood facility types and placement so as to not preclude the reestablishment of functional riparian habitat where they may be feasible – especially when proposed levee alignments intersect with "critical" or "high" potential shade areas.
- Analysis of how all the proposed alternatives and facility types align the 2016 *WRIA 9 Re-Green the Green Revegetation Strategy*.
- That Corridor Plan advance policies for facility design and vegetation that will lead to increased shade and habitat benefits over time in a manner consistent with goals in the TMDL. The first preference should be to maximize vegetation on site as part of capital project design, particularly in critical or high priority shade zones mapped by the Muckleshoot Indian Tribe, before seeking mitigation offsite.

Flood risk reduction

- By increasing flood protection to 500-year LOP, how do the risks to human safety and infrastructure change if there is a subsequent levee failure/breach?
- We recommend the PEIS analyze potential impacts to adjacent lands that are not identified to receive an increased LOP.
- Per earlier comment, evaluation should also detail whether increased LOP in areas without existing flood protection facilities will contribute to land use change that result in additional floodplain development and flood risks.

Indian Treaty rights

- How are the anticipated responsibilities related to the recent Supreme Court ruling regarding culverts being considered in this PEIS analysis?[7]
- How is government to government consultation with Indian Tribal governments for the purpose of integrating their treaty-guarantees being addressed in this process?
- We recommend assessing the cumulative impacts to Treaty fishing rights and Treaty-protected fish habitat from co-implementation of the Flood Control District's flood hazard reduction program and FEMA's flood insurance program be assessed for all alternatives.

[7] *Washington v. United States,* 853 F.3d 946, (9th Cir. 2017), *aff'd per curiam* 584 U.S. --- (2018).

Environmental & social justice

- What are the impacts of the alternatives on equity and social justice, specifically to low income residents and underserved communities along the river?
- What are the impacts on Duwamish and other indigenous people, who do not have treaty rights through a federally-recognized Indian tribal government, but who nonetheless utilize the Green River floodplain for their traditional cultural practices (e.g. subsistence uses, ceremonial uses, etc.)?

Climate change resiliency

Based on work done by the University of Washington's Climate Impacts Group, it is predicted that precipitation patterns in the Pacific Northwest will change, bringing warmer, wetter falls, winters, and springs. This will lead to more intense and frequent floods in the Green River.[8] Meanwhile, hotter, drier summers will lead to slower flows and higher water temperatures in the river.

- How will the alternatives in the PEIS account for anticipated future conditions as a result of climate change, considering 2018 IPCC projections and changes to flow patterns and temperature?
- More specifically, we recommend the PEIS analyze alternatives based on their resiliency to climate change, considering expected increased summer temperatures, decreased summer low flow, increased winter floods, and loss of spring snowmelt.

Economics

- The PEIS should evaluate the economic costs and benefits of the alternatives, including the impacts to economic development, property values, fisheries resources, and flood damage.
- Evaluate the life cycle costs of the three proposed facility types, specifically ongoing repair and maintenance costs of the different facilities (e.g., flood walls versus setback levees). A levee setback will likely require less stabilization than a flood wall, requiring significantly less maintenance.
- Evaluate the life cycle costs of all the alternatives, including the costs of acquisition, construction, and ongoing and future maintenance needs.
- Evaluate the economic benefit/cost savings of undertaking integrated salmon recovery and flood risk reduction projects, versus the alternative of each interest investing separately.

Recreation

- What are the impacts to recreation, including to the Green River Trail and natural lands along the Green River corridor, as a result of implementing the various alternatives?

[8] Engel, J., K. Higgins, & E. Ostergaard. 2017. WRIA 9 Climate Change Impacts on Salmon. Retrieved from http://www.govlink.org/watersheds/9/pdf/technical-white-papers/WRIA9SalmonPlan-ClimateChangeBriefing_FINAL_9-20-2017.pdf.

- We recommend the PEIS assess alternatives for opportunities to include a dual purpose flood hazard reduction project with a regional trail designed to meet the functional requirements, while also meeting shared-use path design standards regarding paved width, shoulders, clear zones, etc. The goal is that these projects optimize maximum public benefit by leveraging every opportunity to extend the Regional Trails Network.
- How will the various alternatives (and their unique suite of proposed projects) integrate with existing and future segments of the Green River Trail? Early and frequent engagement with partner agencies (e.g., King County Parks, etc.) during the development of these alternatives will best ensure this integration.
- King County Parks is currently pursuing a feasibility study to identify a preferred alignment for extending the Green River Trail south from its terminus in Kent, just past river mile 26, to Auburn and looks forward to working with the Flood Control District to integrate this effort with any proposed projects in this area.

Agriculture

- What is the impact to the Lower Green APD from increased LOP? Evaluate whether additional protection will increase likelihood of future development and reduction of total agricultural acres in the APD.
- We recommend a multi-benefit approach to agricultural drainage improvements in the Lower Green APD to reduce flood risks associated with the proposed alternatives and at the same time, provide benefits to both agricultural landowners and fish habitat.
- How would drainage improvements in the APD impact juvenile salmonids that have been found in the creeks and drainages throughout the APD?
- Analyze the permittability and cost-benefits of flood proofing agricultural infrastructure versus protecting with a new levee facility.
- We recommend working collaboratively with agricultural landowners to assess and implement flood proofing and drainage projects in the APD that help protect and preserve King County's farmland.

Options for the Flood District to consider an integrated flood protection and salmon habitat vision.

We offer the following to help inform the Flood District's efforts to develop and analyze more integrated alternatives that achieve flood protection, while also significantly advancing salmon habitat, recreation, and water quality.

Attachment B is a map with alternative flood facility types, with the same facility types used by the Flood District in alternatives 1-3. For clarity and completeness, we added one additional category, "No flood action," denoted by a dotted pink line. This is proposed in locations where existing facilities already meet 500-year LOP and in locations where we do not recommend a new or improved facility. The map is broken into numbered reaches, which correspond to the narratives in Attachment C. The map offers potential locations where setbacks could be

considered; we do not offer any recommendations related to LOP, simply possibilities for optimizing habitat and other multi-benefit objectives riverward of the facility.

Attachment C includes reach-based narratives associated with the reaches delineated on the map in Attachment B. The reach narratives are particularly focused on locations where there is a potential for a levee setback, to optimize space for habitat and recreation. Maps and narratives were developed in coordination with WRIA 9 and in consultation with city staff and elected leaders in the Lower Green valley. The reach-by-reach narratives identify potential right and left bank actions that could achieve multiple benefits, including:

- Increased channel and flood capacity, and associated decrease in water surface elevation;
- Creation of off-channel juvenile salmon habitat;
- Enhanced riparian function (e.g. shade, prey production) and improved water temperature/quality; and
- Trail and recreation improvements.

Any setbacks noted in the map and associated narratives are considered "potential" actions and require a willing landowner and local land use approval. We recommend that at the time of any individual project's development, the Flood District study the possibility of optimizing the levee setback for all of the objectives listed above, irrespective of today's land use and adjacent property ownership. With a 50+ year planning horizon, land use and ownership along the Lower Green River corridor will not remain static. We encourage the Flood District to consider adopting a policy that provides flexibility in the future to adapt to changing economies and land uses to take advantage of multi-benefit project opportunities as they arise. Such a policy would ensure that choices made today do not foreclose future habitat restoration opportunities.

Attachment D includes two alternative cross-sections for Type C levee setbacks that demonstrate ways to maximize floodplain habitat riverward of the levee, including incorporating off-channel habitat (see *Levee Setback with Aquatic Habitat*). We have removed the rock armoring at the toe, as shown in the Flood District's Type C cross-section, to allow for lateral channel migration that supports habitat formation. The second cross-section demonstrates how flood walls (either one or two) could be incorporated into a levee setback to maximize the space riverward of the facility for enhanced habitat features (see *Flood Walls to Maximize Habitat Riverward of Levee*).

Attachment B

Facility Type and (Footprint)

- FCD-A Wall (<100ft)
- FCD-B-Layback (100 to 150ft)
- FCD-C-Setback (>150ft)
- FCD-D-Flood proof
- No Flood Action

Reach 1
Reach 2
Reach 3
Reach 4
Reach 5
Reach 6
Reach 7
Reach 8
Reach 9
Reach 10
Reach 11
Reach 12
Reach 13
Reach 14
Reach 15
Reach 16

Alternative 4 Map and narratives are not a plan and do not identify specific projects. The setback ranges are conceptual estimates and will require analysis at the time of project development to determine feasibility. The lines on the map identify potential actions that, if taken over the next 50 years, would require full support of landowners, jurisdictions, and all other relevant authorities. The narratives describe the actions that, if taken, would meet multiple objectives for flood protection, salmon recovery, water quality, and recreation.

N

0 0.5 1 2 3 Miles

Attachment C. Reach-based map narrative

Overview

King County offers the following reach-based narratives to accompany the reaches delineated on the map in Attachment B. The reach narratives are particularly focused on locations where there is a potential for a levee setback, and describe actions that, if taken, would meet multiple objectives for flood protection, salmon recovery, water quality, and recreation.

The maps and narratives were developed in consultation with WRIA 9 and reviewed by city staff and elected leaders at Tukwila, Kent, and Auburn. The reach-by-reach narratives identify potential right and left bank actions that could achieve multiple benefits, including:

- Increased channel and flood capacity, and associated decrease in water surface elevation;
- Creation of off-channel juvenile salmon habitat;
- Enhanced riparian function (e.g. shade, prey production) and improved water temperature/quality; and
- Trail and recreation improvements.

Any setbacks noted in the map and associated narratives are considered "potential" actions and require a willing landowner and local land use approval. We recommend that at the time of any individual project's development, the Flood District study the possibility of optimizing the levee setback for all of the objectives listed above, irrespective of today's land use and adjacent property ownership. With a possible 50+ year planning horizon, land use and ownership along the Lower Green River corridor will not remain static. We recommend the Flood District consider adopting a policy that provides flexibility in the future to adapt to changing land use and to take advantage of multi-benefit project opportunities when they arise.

Shade need areas described below are based on the methodology laid out in Fox 2014, also known as the Muckleshoot Sun maps. The *Salmon Habitat Plan: Making our Watershed Fit for King* from 2005 is referred to as 'the Salmon Plan' below.

Numbered Reach Narratives

Reach 1, RM 11.0 to RM 12.4 (Black River confluence to I-405 crossing)

Setbacks within this reach could provide a moderate increase in flood capacity, improve juvenile rearing habitat, and enhance riparian function.

Potential left bank actions

- Small setbacks could provide bench and backwater habitats for juvenile salmon, while increasing flood capacity.
- Revegetation opportunities could be expanded in critical and high shade need areas if paved areas were reduced. In more constrained areas, enhance riparian function waterward of flood facility.

Potential right bank actions

- Existing backwater habitat could be expanded to increase amount of juvenile salmon rearing habitat.
- There is one large setback that could increase flood capacity, create flood refugia (versus lower flow aquatic habitat) for juvenile salmon and improve revegetation potential. See LG-17 in the Salmon Plan.
- Existing riparian habitats could be expanded in width and diversity, especially in high shade need area within the potential setback.

Reach 2, RM 12.4 to 13.3 (I-405 crossing to railroad bridge crossing)

Setbacks within this reach could significantly increase the quantity and quality of aquatic rearing habitat for juvenile Chinook, channel and flood capacity, improve water quality, and increase available open space to nearby residents.

Potential left bank actions

- Gilliam Creek fish passage improvements could be achieved by replacing the flap gate further back from the river and creating an alcove type habitat at the mouth of creek. See LG-16 in the Salmon Plan.
- Setback possibilities could moderately increase the quantity and quality of aquatic rearing habitat for juvenile Chinook, enhance riparian function, and increase overall channel and flood capacity.
- Revegetation opportunities could be expanded in critical and high shade need areas if paved areas were reduced. In more constrained areas, enhance riparian function waterward of flood facility.

Potential right bank actions

- There are three areas with significant setback potential that could provide side channel or backwater habitats, enhance riparian function, and greatly improve overall channel capacity. See LG-15 in the Salmon Plan.
- Revegetation opportunities could be expanded in critical and high shade need areas if paved areas were reduced. In more constrained areas, enhance riparian function waterward of flood facility.

Reach 3, RM 13.3 to 13.9 (Railroad crossing to northern end of Costco parking lot)

This reach could provide setbacks that consecutively alternate between sides of the river. If considered together, the setbacks would be synergistic. The setbacks have the potential for significant increases to the quantity and quality of aquatic rearing habitat for juvenile Chinook, channel and flood capacity, trail improvements, and improved water quality conditions.

Potential left bank actions

- Setback could provide significant side channel or backwater habitat using existing pond and provide tree shade in a location identified with a high need.
- Revegetation opportunities could be expanded in critical and high shade need areas if paved areas were reduced. In more constrained areas, enhance riparian function waterward of flood facility.

Potential right bank actions

- Explore a moderate setback that could provide side channel habitat and shade in a location identified with a high need for tree shade.
- Revegetation opportunities could be expanded in critical and high shade need areas if paved areas were reduced. In more constrained areas, enhance riparian function waterward of flood facility

Reach 4, RM 13.9 to RM 14.3 (Northern end of Costco parking lot to S 180th St/SW 43rd St)

Potential for enhancing tree cover and riparian function along this reach, much of which is mapped as having a high need for shade.

Potential left Bank actions

- Enhance riparian function waterward of levee and consider replacing existing short ornamental trees landward of levee with taller/greater shade generating trees.

Potential right Bank actions

- There is good potential for enhancing riparian function (e.g. shade, prey production) in area mapped as a high shade need area.

Reach 5, RM 14.3 to 15.4 (S 180th St/SW 43rd St to downstream end of Briscoe wall #2) (Both banks in Tukwila)

This reach could provide setbacks that consecutively alternate between sides of the river for a relatively long ¾ mile stretch of river. If considered together, the setbacks would be synergistic. The setbacks have the potential for significantly improved conditions for flood risk reduction and salmon habitat.

Potential left bank actions

- There is one setback possibility along this highly constrained bank. Potential setback overlaps one of two potential levee breach locations in this reach identified during the SWIF. A setback could increase overall channel and flood capacity, reducing the likelihood of a levee breach. This setback could also moderately increase the quantity

and quality of aquatic rearing habitats for juvenile Chinook and improve water quality conditions.

- Revegetation opportunities could be expanded in critical and high shade need areas if paved areas were reduced. In more constrained areas, enhance riparian function waterward of flood facility.

Potential right bank actions

- Given the constraints on the left bank, increasing channel capacity on the right bank through setbacks has the potential to increase channel capacity which would reduce the likelihood of a left bank levee breach. These setbacks could also significantly increase the quantity and quality of aquatic rearing habitats for juvenile Chinook and improve water quality conditions. See project LG-13 in the Salmon Plan.
- This bank of the reach is entirely made up of critical and high shade need areas and the potential setbacks provide ideal locations for revegetation. In more constrained areas, enhance riparian function waterward of flood facility.

Reach 6, RM 15.4 to RM 17 (From downstream end of Briscoe wall #2 to S 200th St) (*left bank is Tukwila, right bank is Kent*) 5 potential breach locations were noted along the left bank of this reach during the SWIF. The potential setbacks in this reach create a relatively long mile and a half stretch of river with the possibility of significantly improved conditions for flood risk reduction and salmon habitat. Setbacks along the left bank could open up new trail opportunities to be integrated with riparian improvements where there is no trail currently.

Potential left bank actions (Tukwila)

- There is an existing mitigation setback at the upstream end of the reach and a potential setback at the downstream end that is part of the Flood District's 2018-2023 CIP. At this time much of the previous envisioned development between the setbacks of this reach is on hold. This creates the potential for a longer setback on what is currently vacant and cleared land. Much of this bank was described as a possible setback project LG-10 in the Salmon Plan. A setback here could significantly increase overall channel and flood capacity, reducing the likelihood of levee breaches in this reach. This setback could also significantly increase the quantity and quality of aquatic rearing habitats for juvenile Chinook and improve water quality conditions.
- Significant potential for improving riparian conditions along this reach, given the current lack of infrastructure. The potential setbacks provide ideal locations for revegetation, but in more constrained areas, recommend enhancing riparian function waterward of flood facility.

Potential Right bank actions (Kent)

- Consider implementing LG-12 from the Salmon Plan, which recommends creating off-channel juvenile rearing and refuge habitat at Briscoe Park. Such a project could increase channel and flood capacity, reduce flood facility challenges and costs

associated with the existing left bank CIP project by reducing water surface elevations locally. A project of this type would also change the park experience from an active park to more of an open space or natural area park.

- There is one potential setback noted upstream of Briscoe Park in this highly constrained reach. This moderate sized setback could increase channel and flood capacity, improve juvenile rearing habitat quantity and quality, and improve water quality. Setbacks along the right bank could be an opportunity to provide trail improvements (e.g. way-finding/interpretive signage, trailheads) while integrating riparian enhancements.
- This bank of the reach has a high percentage of critical and high shade need areas and the potential setback provides ideal locations for revegetation. In more constrained areas, recommend enhancing riparian function waterward of flood facility.

Reach 7, RM 17 to 17.8 (S 200th ST to S 212th ST)

The potential setbacks in this reach create almost a mile of river with significantly improved conditions for flood risk reduction and salmon. It provides one of the few areas where flood storage could be significantly increased.

Potential left bank actions (RM 17 to 17.3 in Tukwila; the rest is of the LB is in Kent)

- The bank in this reach is a combination of private levee, County revetments and portions of Frager Road that act like a levee. The flapgate at the mouth of Johnson Creek not only restricts salmon access, it disconnects a significant area of flood storage within the existing floodplain from most flows below 100 year events. The entire left bank in this reach is part of project LG-11 in the Salmon Plan. Aspects of LG-11 have already been implemented as a mitigation project, but due to the fish passage barrier those habitat improvements are inaccessible to juvenile and adult salmon. Separate from improving access to the floodplain, there is potential to setback shoreline infrastructure to significantly increase the amount and quality of juvenile salmon rearing habitats along the river, increase flood and channel capacity, and incorporate new trail opportunities and improvements.
- There are critical and high shade need areas that could be integrated into trail, habitat, and flood actions to maximize riparian widths.

Potential right bank actions

- The right bank in this reach is described in the Salmon Plan as LG-10. The flood control levee was previously setback for 100 year LOP and serves as the primary trail location, but portions of the original levee and revetment were left in place along the bank of the river. There is the potential to increase channel capacity and salmon habitat by creating bench and alcove type habitats in several locations along this reach. These potential actions should be integrated with the secondary trails.
- There is a high shade need area that could be integrated into trail, habitat, and flood actions such to maximize riparian widths in high shade need areas.

Reach 8, RM 17.8 to 19.3 (S 212th ST to Veterans Dr.)

The potential setbacks in this reach could create over a mile of river with significantly improved conditions for flood risk reduction and salmon. It provides one of the few areas where flood storage could be significantly increased by reconnecting a historic wetland complex.

Potential left bank actions

- Frager Road runs along the shoreline of this reach and acts like a levee, with Flood District maintained revetments along the toe of the bank in the river. Most of the road is closed and used as a trail. From river mile 17.8 to 18.8 there is an opportunity for a moderate setback that could provide bench and alcove type habitats, integrated with the existing Green River Loop Trail.
- From RM 18.8 to 19.2 there is the potential for a setback that would allow for the reconnection of a large floodplain wetland complex to the river which could provide significant flood and channel capacity as well as significant rearing habitat improvements.
- The potential setbacks provides ideal locations for revegetation, especially in the high and critical shade need areas.

Potential right bank actions

- Site of upcoming Lower Russell Road project, project LG-10 in the Salmon Plan.
- This reach has a high percentage of critical and high shade need areas and the potential setback provides ideal locations for revegetation. In more constrained areas, there are opportunities to enhance riparian function waterward of flood facility.

Reach 9, RM 19.3 to 21.3 (Veterans Dr. to W. Meeker St.)

The SWIF noted three potential levee breach locations on the right bank in this reach. The potential to setback the left bank through much of this reach would provide significant flood risk reduction, especially when considering the heavily constrained right bank. The setbacks have the potential to create significant salmon benefits and the opportunity integrate improved trail and recreational opportunities.

Potential left bank actions

- Potential to setback much of the left bank downstream of the golf course. The potential setback would allow for the reconnection of a stream and wetland complex to the river creating significant juvenile salmon rearing habitat improvement. Setbacks could also provide significant increase to flood and channel capacity, reducing flood risks on the constrained right banks. Within this setback area is the Salmon Plan project LG 9, which has the potential to create significant amounts of juvenile salmon rearing habitat and

flood and channel capacity. Improvements to the Frager Road trail should be integrated with any setbacks.
- Reach has a high percentage of critical and high shade need areas and the potential setbacks provides ideal locations for revegetation. In more constrained areas, recommend enhancing riparian function waterward of flood facility.

Potential right bank actions

- There is one moderate sized setback noted on the right bank that could increase channel and flood capacity, improve juvenile rearing habitat quantity and quality, and improve water quality.
- There are opportunities to enhance riparian function waterward of flood facility.

Reach 10, RM 21.3 to 23.2 (W. Meeker St to 88th Ave S. (*Most of the left bank is in Unincorporated King County*)

In this reach the right bank is highly constrained, whereas there is potential for setbacks on the left bank that could significantly increase salmon habitat and channel capacity.

Potential left bank actions

- Salmon Plan project LG-7 calls out a variety of off channel habitat creation through bank setbacks throughout this reach, including the Downey Farmstead project at river mile 21.7. Explore feasibility to provide fish passage to the existing floodplain pond and wetland.
- There is the potential to setback Frager Road where it would not impact existing farm structures, but could provide opportunities to improve rearing habitats as well as enhance riparian conditions critical and high shade need areas.
- This bank of the reach has a high percentage of critical and high shade need areas and the potential setbacks provides ideal locations for revegetation. In more constrained areas, there are opportunities to enhance riparian function waterward of flood facility.

Potential right bank actions

- There is one small potential setback that could provide alcove or bench habitat while providing small increases in channel capacity.
- Revegetation efforts should be undertaken in the medium and high shade needs area, focusing on enhancing riparian function waterward of flood facility.

Reach 11, RM 23.2 to 24 (88th Ave S. to Union Pacific Railroad crossing) (*both banks are city of Kent*)

The setbacks on the left bank can work synergistically with the existing Riverview Park side channel and Leber Homestead backwater project. Looking at both banks together there is the

potential to create a long stretch of both greatly improved salmon habitat and channel capacity.

Potential left bank actions

- Several opportunities to setback the banks and existing revetments to create off channel juvenile salmon rearing habitat and increase flood and channel capacity that are part of project LG-7 in the Salmon Plan. A portion of the setback would be contingent on relocating existing stormwater infrastructure. There is also the potential to create new trails and increase the amount of natural space lands available to the public.
- The bank of the reach has a high percentage of critical and high shade need areas and the potential setbacks provides ideal locations for revegetation. In more constrained areas, recommend enhancing riparian function waterward of flood facility.

Potential right bank actions

- There is the potential to increase flood refuge habitat by reconnecting the floodplain in Foster Park during moderate to high flood flows, while at the same time maintaining or improving the existing trail infrastructure (e.g., trail bridge). The bank of this reach has a high proportion of low shade need areas, though critical and high shade need areas are in areas that are less constrained. Revegetation efforts could be focused in the medium and high shade needs area.

Reach 12, RM 24 to 26.5 (Union Pacific Railroad crossing to intersection of Green River Road and 94th Place S.) (*Left bank is Unincorporated King County, while the right bank is mostly in the city of Kent*).

The SWIF noted two potential levee breach locations on the right bank in this reach. The potential setbacks through much of this reach would provide significant flood risk reduction benefits, create significant increase in quantity and quality of salmon habitat benefits and create the opportunity to improve the trail corridor and increase access to open space.

Potential left bank actions

- Salmon Plan projects LG-6, LG-5, LG-4, and LG-3 occur along this bank. These projects are focused on creating off channel habitats and providing fish passage to NE Auburn Creek and its associated wetland habitat. The combination of these possible habitat projects would create significant habitat improvements in an area that currently has very limited habitat as well as reduce flood risks on the right bank by increasing flood and channel capacity throughout the reach. Two of the project concepts overlap with existing agricultural uses and agricultural interests would need to be integrated into those projects.
- This bank of the reach has a high percentage of critical and high shade need areas and the potential projects provides ideal locations for revegetating these areas. There are additional revegetation opportunities throughout the reach.

Potential right bank actions

- The Milwaukee and Breda setbacks are currently in planning and design and it is expected that these projects will provide synergistic flood and salmon benefits when combined with Salmon Plan project LG-6 on the left bank.
- Explore a setback at the upstream end of the reach that could provide improvements to salmon habitat and channel capacity.
- The bank of this reach has a high proportion of low shade need areas. Revegetation opportunities could be expanded in critical and high shade need areas if paved areas were reduced. In more constrained areas, enhance riparian function waterward of flood facility.

Reach 13, RM 26.5 to 27.6 (Intersection of Green River Road and 94th Place S. to the S 277th ST) (*Both banks are Unincorporated King County*)

The potential setbacks through much of this reach would provide significant flood risk reduction benefits, create significant increases in quantity and quality of juvenile salmon habitat rearing and refuge habitats and the could fill in the missing link of the Green River Trail as well as provide more open space.

Potential left bank actions

- The setback project in this reach spans a narrow portion of land where the river double backs on itself and was described in Reach 12 as part of Salmon Plan project LG-4.
- This reach has a high percentage of critical and high shade need areas which overlap the setback area and an existing, but unused King County Parks trail easement. If the eventual connector of the Green River Trail is not located on the left bank, then the existing easement would provide an ideal location for riparian revegetation.

Potential right bank actions

- There is a degraded floodplain wetland that is predominately in public ownership that could be reconnected back to the river as part of a potential setback. There is an unnamed stream that connects to the wetland and enters the river through a flap gated culvert that is a fish passage barrier. If the flap gate could be removed as part of the setback, a large portion of floodplain storage would be reconnected at lower flood flows as well as provide fish access to flood refuge. If the wetland was also restored, the rearing habitat value to juvenile salmon would greatly increase as well as the value as an open space. This project is LG-1 in the Salmon Plan.
- This reach has a high proportion of medium shade need areas, but revegetation opportunities could be expanded if paved areas near the river were reduced as part of the setbacks.
- The Green River Trail connector appears likely to occur on this bank. Any trail creation or improvements should be integrated with potential setbacks.

Reach 14, RM 27.6 to 29.5 (S 277th St to Southern extent of Reddington Levee) Left bank is Auburn, Right bank is a mixture of Kent, Unincorporated King County and Auburn.

There are opportunities to provide fish passage to several small streams and create additional juvenile salmon off-channel rearing habitats, which would also provide increased channel and floodplain capacity.

Potential left bank actions

- The recently constructed Reddington Levee extends for much of the left bank. While the setback levee is in place, there are still potential areas to create off-channel rearing habitat and expand channel capacity in several locations where the setback is more than 300 feet from the river's edge. Downstream of the Reddington levee there is the potential to create a setback that connects the large wetland mitigation project to the river which would provide juvenile salmon flood refuge and rearing habitats. Trail connections and improvements should be integrated with any setback.
- There are critical and high shade need areas that could be integrated into trail, habitat, and flood actions to maximize riparian widths.

Potential right bank actions

- Along the right bank there are three small streams that have limited fish access and degraded stream habitat near their stream mouths. There is the potential to provide fish passage and undertake stream habitat improvements. Improvements to Mary Olsen Creek is project LG-2 the Salmon Plan.
- There are critical and high shade need areas that could be integrated into trail, habitat, and flood actions to maximize riparian widths.

Reach 15, RM 29.5 to RM 31.1 (Southern extent of Reddington Levee to 8th ST NE bridge) Both banks are Auburn

In this reach, there was one breach location noted in the SWIF. This reach has potential setbacks that consecutively alternate between sides of the river. If considered together, the setbacks would increase channel capacity, synergistically reducing flood risks on the densely populated left bank. The setbacks have the potential for significant increases to the quantity and quality of aquatic rearing habitat for juvenile Chinook, improved water quality conditions, and could be integrated with park redevelopment.

Potential left bank actions

- There is the potential to setback a portion of the Dykstra levee. This could greatly improve channel capacity in a section of the river where it is restricted due to the Green River valley wall extending to the river's right bank edge. Improved channel capacity here would be synergistic with potential setbacks on the right bank upstream and

downstream of this location. This would reduce the risk of a left bank levee breach while improving instream conditions and access to habitats for juvenile salmon.
- There are critical and high shade need areas that could be integrated into trail, habitat, and flood actions to maximize riparian widths.

Potential right bank actions

- At the upstream end of the reach there is the potential for setbacks to address moderate channel migration zone hazards, to reconnect floodplain, and create new side channel and/or backwater rearing habitat. Increasing channel capacity here could reduce the risk of the left bank levee overtopping into dense housing. The setbacks would need to be integrated with the recreational improvements being undertaken at the 104 Ave Park.
- There is the potential to set back portions of 104 Ave SE and Green River Road SE which both act as levees. These segments cut off portions of the floodplain and each has a fish passage barrier associated with it. These setbacks could significantly increase channel capacity, reducing flood risks to the dense housing on the left bank and improve juvenile salmon flood refuge and rearing habitats and access to spawning habitat.
- There are critical and high shade need areas that could be integrated into trail, road, habitat, and flood actions to maximize riparian widths.

Reach 16. RM 31.1 to RM 31.9 (8th ST NE bridge to Fenster Park)

The Lower Green River begins at the upstream end of this reach. Most of the right bank is either unpopulated or abuts the Green River Valley wall. This reach has one potential setback noted which would reduce channel migration risks and improve floodplain connectivity and edge habitat for salmon.

Potential Left Bank actions

- Expand recent levee setback to reconnect additional floodplain habitat and reduce risks associated with a mapped severe channel migration area.
- Existing riparian habitats could be expanded in width and diversity, especially in high shade need areas.

Potential Right Bank actions

- Existing riparian habitats could be expanded in width and diversity, especially in high shade need areas.

Attachment D. Alternative cross-sections

LEVEE SETBACK WITH AQUATIC HABITAT

NOT TO SCALE

GREEN RIVER

SHALLOW WATER HABITAT

RIPARIAN HABITAT

LEVEE WITH GREEN RIVER TRAIL

15' ACCESS

ADJACENT DEVELOPMENT

FLOOD WALLS TO MAXIMIZE HABITAT RIVERWARD OF LEVEE

NOT TO SCALE

SEATTLE CITY COUNCIL | DISTRICT 1
COUNCILMEMBER LISA HERBOLD

April 5, 2019

King County Flood Control District
Attn: Michelle Clark, SEPA Responsible Official
516 Third Avenue
Room 1200
Seattle, WA 98104

Dear Ms. Clark:

As the City of Seattle's representative to the Flood Control Advisory Committee and the Watershed Resource Inventory Area (WRIA) 9 Forum, I am writing to provide the City of Seattle's input to the Flood Control District's (District) November 28th, 2018 Scope of Programmatic Environmental Impact Statement (PEIS) for the Lower Green River Corridor Flood Hazard Management Plan (Plan).

We appreciate the opportunity to comment and recognize the challenges the District faces in addressing flood management in the Lower Green River. We fully support the stated intent in the proposal to "provide an integrated and reasonable long-term approach to reduce flood risk within the Lower Green River Corridor while balancing multiple objectives," including improvement of fish habitat while addressing flood risks. The Plan presents our region with a significant opportunity to implement good policy decisions, leading to investments that will benefit our communities and salmon habitat.

However, after careful review, we have determined none of the three proposed alternatives meets the balanced goal of addressing flood risk while also improving habitat for juvenile Chinook salmon in the Lower Green river. All three proposed alternatives are inconsistent with:

a. goals and policies of the 2005 WRIA 9 Salmon Habitat Plan "Making Our Watershed Fit for a King,"
b. Governor Inslee's 2018 Southern Resident Orca Task Force Recommendations; and
c. stated multiple benefit objectives contained in District documents.

The scope needs to evaluate the full range of alternatives, including a fourth alternative with a higher percentage of floodplain restoration as a priority flood management technique. We request that the District develop a fourth alternative using the information provided in the WRIA 9 Salmon Habitat Plan, as well as the information contained in the technical comments and map sent with the WRIA 9 Watershed Ecosystem Forum's comment letter of February 21, 2019.

The WRIA 9 Salmon Habitat Plan was adopted by 17 jurisdictions. Further, the Plan was approved by the National Marine Fisheries Service as part of the regional Puget Sound Chinook Salmon Recovery Plan under the Endangered Species Act. The watershed is at a critical juncture to make a difference for Chinook salmon, and for the Puget Sound Southern Resident Orcas who rely on Chinook as their chief prey. Significant changes will be coming within the next decade, providing improved fish passage at the Howard Hansen Dam and in the lower Duwamish with the Superfund cleanup actions.

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The goals of reducing flood risk and improving fish habitat can be mutual rather than conflicting goals if we invest flood dollars in a manner that provides both flood protection and habitat improvement.

Seattle supports protection of infrastructure and communities, and strongly believes this can be done while helping to meet the multi-benefit goals. We are also very concerned about the potential impacts of these three proposals that could result in increased flooding down river, in the diverse and lower-income Duwamish communities of South Park and Georgetown; the former being a community in the Seattle City Council District that I represent. I know that you agree that solutions must be mindful of impacts on the environment and all our communities. Failure to take this approach would result in potential cost beyond infrastructure loss, lost opportunity for our communities and region, lost treaty rights, and lost salmon production and protection of our Orca population.

The Flood Control District has a unique opportunity to choose the best types of flood management in the Lower Green River Corridor that can protect people, salmon, and orcas. In the spirit of regional cooperation, the City of Seattle respectfully requests that the District develop a fourth alternative encompassing the technical information provided by multiple partners for analysis. Attached are staff technical comments from Seattle Public Utilities and Seattle City Light that convey more specific information on the environmental impacts from the District's proposed alternatives and why including habitat restoration as part of an integrated flood protection approach is in the best interest of the Flood District and our region.

I look forward to continuing to engage on this critically important work for the Lower Green River and to learning what the next steps will be. Thank you again for the opportunity to comment.

Sincerely,

City of Seattle Councilmember Lisa Herbold

CC: King County Councilmembers
King County Executive Dow Constantine
City of Seattle Mayor Jenny Durkan
SPU General Manager Mami Hara
SCL General Manager Debra Smith

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Attachment: Technical Comments and Recommendations from City of Seattle staff – April 2019

The City of Seattle is respectfully submitting technical comments and recommendations on the November 28 notice of SEPA Scope of Programmatic Environmental Impact Statement (PEIS) for the Lower Green River Corridor Flood Hazard Management Plan.

1. The Flood Control District recognized the value of including habitat restoration among other public benefits in FCD Motion FCD18-01 Section 1, which states the goals and purposes of the Lower Green River Corridor Plan are to provide an "integrated and long-term approach to reduce flood risks" while balancing multiple objectives including environmental protection. It also states the intent of this integrated approach includes habitat restoration, salmon recovery, water quality and equity and social justice. Improving fish habitat is specifically mentioned in the last sentence of this section. Furthermore, the fourth WHEREAS line 22 references Resolution FCD2016-05, which stated a future SEPA EIS should include analysis of reasonable alternatives to accomplish multiple objectives including salmon recovery, water quality, habitat restoration and equity and social justice. The current proposal falls short of these goals.

2. The Green/Duwamish River is already one of the most challenging river systems for bull trout, chinook salmon and steelhead due to existing flood protection structures, bank hardening, passage/migration barriers, and land use types within the basin. The proposed alternatives for adding additional flood walls would put further stresses in place that will impact the entire watershed system.

3. The EIS analysis needs to show how the alternatives meet the stated purpose of "an integrated and reasonable long-term approach to reduce flood risk ……while balancing multiple objectives within the study area" including "improving fish habitat." (https://www.lowergreensepa.org/). Furthermore, the analysis must show how the alternatives are consistent or inconsistent with the ongoing Endangered Species Act (ESA) aquatic species restoration programs at the federal, state and local levels including Chinook salmon and the Southern Resident Puget Sound Orca recovery efforts.

4. The PEIS must analyze the full impact on all ESA-listed species, and specifically how the alternatives may alter in-stream habitats, water temperature, water quality and current floodplain connections. To assist in getting a complete understanding of the potential impacts from the PEIS alternatives, the analysis should extend well upstream and downstream of the Lower Green River in order to determine the full extent of the impacts the proposed alternatives will have on the hydraulics, water quality (e.g., water temperature, sediment transport, dissolved oxygen, etc.), and geomorphology with an emphasis on Chinook and steelhead habitat (e.g., rearing, spawning, migration, holding, etc.).

5. There is a significant issue with the proposed alternatives in the PEIS - there is not a full range of alternatives in this proposal. First, the No Action Alternative 1 is not a true "no action" since it includes adding an additional 2 miles of flood facilities. Therefore it cannot be used as a baseline because it may have significant negative impacts on the aquatic resources (biological, chemical, physical). The No Action alternative should be replaced with a true no action (no additional levees, revetments, or hardened banks, etc.) to provide a baseline to compare the other

alternatives against. We also recommend creating a 4th Alternative as based on the WRIA 9 Watershed Ecosystem Comment letter, technical comments and maps of February 21, 2019, to include a true multi-objective approach of adding a variety of setbacks and additional floodplain to serve as places for the river to expand and also create salmon habitat. There have been many successful such floodplain restoration projects throughout Puget Sound that address flood management, habitat restoration and public access.

6. The analysis of the PEIS should clearly show how the alternatives are or are not meeting the requirements under the Clean Water Act and Washington State Water Quality standards (e.g., 303 d list, dissolved oxygen, water temperature, bacteria, etc.). The possible impacts to water temperature both within the project area and downstream should be evaluated to determine the impacts on ESA-listed salmon rearing/holding habitat and migration (smolt and spawning). The analysis needs to determine if there are any impacts on timing of smolt outmigration and adult spawning migration due to changes in water temperature. The secondary impacts from stormwater drainage on water quality and quantity impacts on ESA species also should be analyzed.

7. The Lower Green River is a migration corridor for ESA-listed species. The PEIS needs to include a hydraulic analysis (e.g., HEC-RAS, FLO-2D, etc.) to determine the water velocities and depths to compare with rearing, spawning and migration habitat requirements and swimming criteria for ESA-listed species. Predation on ESA species can cause a significant loss in the population. The PEIS needs to look at how the alternatives change the amount of predator (e.g., native sculpin) habitat (rock-hardened banks) for each alternative. The analysis also needs to look at changes in predation avoidance by ESA species for each alternative.

8. Due to the possible downstream impacts of the floodwalls proposed in each alternative and the high importance of the upper end of the tidal zone between mile 11 and 12 to chinook and steelhead, it is important to analyze how each alternative will impact the chinook salmon and steelhead within river mile 11 and 12.

9. The PEIS must include discussion of any possible impacts on fish passage to tributary channels for each alternative. The analysis must look at fish passage seasonally, including summer flows (access rearing habitat), winter flows, and flood flows (refugia), to determine any changes in access.

10. The PEIS needs to evaluate the impacts to the riparian vegetation and changes to shade per alternative. This should include looking at changes to the riparian area tall plant density, canopy cover and organic inputs into the aquatic system, and any resultant possible changes to water temperature and food production (macroinvertebrate, primary production) as it relates to impacts on ESA species.

11. The extensive addition of new levees as proposed in the second and third alternatives , and the subsequent permanent loss of connectivity between the main channel and its floodplain. The third alternative which does include some restoration and protection would not replace what would be permanently lost with the addition of the new levees.

Seasonally inundated floodplain habitat is lacking in the Lower Green. The rest of our comments focus on a discussion of the importance and value of floodplains and wetlands systems for Chinook salmon, and include multiple references to scientific documents which are listed following the comments. We hope this will be helpful. The cited research demonstrates the importance of seasonally inundated floodplain habitat for the growth and survival of juvenile Chinook salmon, particularly during their first year, along with protection of life stage diversity, and prey density. Much of the research comes from the Yolo Bypass, which is the primary floodplain remnant of the Sacramento River, originally installed to bypass floodwater around the city of Sacramento. The literature emphasizes the importance of restoring the connectivity between a river and its floodplain (even if the river is regulated), and the importance of protecting what remains.

1. The loss of wetland and floodplain habitat is amongst the most important stressors causing the decline of Chinook salmon (NMFS 2014).

2. Research on seasonally inundated floodplain habitat indicates that it can provide higher biotic diversity (Junk et al. 1989), increased production of salmon (Ogston et al. 2015), increased rates of fish growth (Gutreuter et al. 2000, Sommer et al. 2001, 2005, Jeffries et al.2008, Limm and Marchetti 2009, Takata et al. 2017), increased native fish species diversity (Lasne et al 2007), and higher production of invertebrates (Gladden and Smock 1990).
3. Specific to juvenile Chinook salmon, seasonally inundated floodplain habitat can provide better rearing and migration habitat than adjacent river main channels (Sommer et al 2001, Jeffries et al. 2008). Improved growth rates were the result of higher prey consumption and feeding success (greater availability of drift invertebrates).

4. Takata et al.'s (2017) research results indicate increased frequency and duration of floodplain connectivity should be a primary target to increase rearing opportunities for juvenile Chinook salmon to maximize life history diversity. They found that duration of flooding was the most important driver for juvenile Chinook salmon growth and floodplain habitat use. Both wild and hatchery juvenile Chinook salmon resided longer, and achieved larger sizes rearing on the floodplain during years with longer periods of flooding.

5. Locations of groundwater-surface water (GW-SW) exchange (hyporheic zone) are associated with unconstrained stream reaches (floodplains). Stream reaches with GW-SW exchanges are actively selected by adult salmonids during spawning (Geist and Dauble 1998, Baxter and Hauer 2000, Hall and Wissmar 2004), and have been shown to be important sites for salmonid rearing (Sommer et al 2001, Bellmore et al. 2013, Malison et al. 2015).

6. Areas of GW-SW exchange may also be critical habitat for post-emergent salmonid growth and survival. As post-emergent salmonids transition from endogenous (yolk sac) to exogenous feeding (capturing prey items), their bodies contain minimal energy reserves (Armstrong and Nislow 2006). This transition occurs in Chinook salmon in late winter or early spring when terrestrial prey resources may be low (Baxter et al. 2005). GW-SW resource contributions delivered during critically low food periods may maintain fish growth at higher levels.

7. First year survival rates are likely important in the population dynamics of every salmonid stock (Holtby et al. 1990, Sommer et al. 2001). Limm and Marcetti 2009 suggest that any habitat

remnants that remain are likely important to the rearing of salmonids, and that restoration and management of these types of habitat should be included in an overall salmon recovery strategy.

8. Restoration of floodplains and side channels effectively increases juvenile Chinook salmonid rearing habitat (Richards et al. 1992, Sommer et al.2005, Heady and Merz 2006) and juvenile coho salmon production (Ogston et al. 2015). The reconnection of wetland rearing habitats can also facilitate life history diversity of Chinook salmon by expanding the geographic and temporal ranges for freshwater rearing, expand variation in migration timing and increase body size (Bottom et al. 2005). Improved frequency and duration of connectivity between river and floodplain could increase off-channel rearing opportunities and expand life history diversity (Takata et al. 2017).

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City of Tukwila

Allan Ekberg, Mayor

Mayor's Office – David Cline, City Administrator

April 18, 2019

King County Flood Control District
Michelle Clark, SEPA Responsible Official
516 3rd Avenue, Room 1200
Seattle, WA 98104

RE: Lower Green River Corridor Flood Hazard Management Plan and Programmatic Environmental Impact Statement (PEIS) - City of Tukwila Scoping Comments

Dear Ms. Clark:

Thank you for the opportunity to comment on the scoping of the Lower Green River Corridor Flood Hazard Management Plan (the Corridor Plan) PEIS. We appreciate the challenges that the King County Flood Control District (the District) faces in providing flood protection in a changing climate during a time of substantial population growth and with increasing construction costs and land values. We are encouraged by your effort to take a long view of flood hazard management, utilizing an integrated, multi-objective approach as expressed in your November 28, 2018 SEPA notice.

Community Resiliency: Over the last century, since the first levees were built to protect farmland, the lower Green River valley has grown and changed dramatically. As the valley was transformed from forested floodplain to agricultural use to industrial use, the City of Tukwila and other lower Green River valley cities prospered, together becoming an economic center, and one of the largest warehousing districts on the west coast. The original levees have been replaced with bigger, stouter levees and as the river and climate are changing, we are once again in need of replacing the them with larger and higher levees. This cycle of flood control, the way it has been practiced for the last century, is costly and ultimately unsustainable. The maintenance cycle of inspecting, repairing and rebuilding levees is a constant battle against the forces of a dynamic river. Property owners and taxpayers bear the increasing price tag of flood insurance and despite it all, still live with the threat of floods. The lack of flood storage in the valley exposes valley communities to extreme flood events and puts increasing pressure on operators at the Howard Hanson Dam to maintain the dam and manage flood flows. In the face of a changing climate with larger storm events and an annual hydrograph where precipitation falls more as rain and less as snow, operators will be less able to control flood events.

Quality of Life: And the land uses continue to change. Now amongst the warehouses, multi-use communities are being built. Tukwila's Southcenter district is shifting towards an urban center where people live, shop and work, and have access to open space and natural amenities. The City now boasts a 19-story residential/hospitality tower and more high-density urban development is underway. In order to attract people to Southcenter, and to accommodate the needs of this burgeoning community, the City must offer the amenities that people desire, such as access to parks and open space, including the Southcenter area's greatest natural resource, the Green River.

Species Recovery: Two of the biggest impacts that the levee system has had on the threatened Chinook salmon population is the loss of rearing habitat, which impacts salmonid survival and overall population productivity, and increased temperature, due primarily to the loss of tree canopy in the riparian zone. Salmon and the endangered Southern Resident Orca that feed predominantly on Puget Sound Chinook, are Pacific Northwest icons. As Pacific Northwesterners, they help form our identify; they feed us, and they fuel our state's fishing and tourism industries. We can't afford to allow their plight

to continue. In the words of former governor Gary Locke, "Extinction is not an option" (quote: SRFB conference, April 2019).

Time for Action:

This is an exciting and opportune time for the District, the valley communities and other affected parties to work together to create the best possible Corridor Plan. With the knowledge that we have now about the critical functions of floodplains on community resiliency, species recovery and quality of life, we need to act to lift valley communities to their fullest potential.

There is a tremendous amount of work and energy currently going into improving and restoring the Green-Duwamish River corridor, which should be synchronized with corridor planning efforts:

- Aided by the Flood District and Federal and State salmon recovery and community resiliency funds, WRIA 9 and its member jurisdictions have invested millions of dollars restoring salmon habitat in the Green-Duwamish River, in accordance with the science-based WRIA 9 Salmon Recovery Plan.
- The long-awaited Lower Duwamish Waterway cleanup is nearing implementation.
- In June 2018, the US Supreme Court upheld the recent injunction on the state to remove fish barriers associated with highways, validating the Boldt decision and the treaty rights granted to Tribes to fish in their usual and accustomed places.
- In November 2018, the Governor's Southern Resident Orca Task Force issued its final Report and Recommendations, identifying the lack of Chinook prey availability as a key threat, citing that habitat loss and degradation arise from the "effects of urbanization,… (rivers being) straightened, diked and cleared of complex habitat features" (p. 17). The report called for increasing Chinook abundance "by restoring and acquiring salmon habitat and food sources" as goal number 1.
- In February, The Army Corps of Engineers received the final Biological Opinion from the National Marine Fisheries Service (BiOp) mandating the creation of fish passage at Howard Hansen Dam by the year 2030.

All of these efforts are coming together to make this river whole again.

Upon review of the information provided in the Flood District's PEIS scoping document, we have determined that the integrated, multi-objective framework that was presented in the scoping document is not reflected well in the three alternatives, and does not address goals related to important issues such as community resiliency, species recovery and quality of life. We encourage the District to consider and evaluate at least one additional alternative – a 4th alternative - with a true multi-objective approach that contributes to safer, healthier and sustainable communities that are integrated with the landscape and the environment that is uniquely Pacific Northwest.

The PEIS process should:

1. Define and follow through on a multi-objective and integrated approach that considers objectives related to flood protection, community resiliency, public safety, salmon habitat restoration, and water quality, among others.
2. Honor the legal framework provided by Tribal treaty fishing rights, the Endangered Species Act and the Clean Water Act.
3. Dovetail and be coordinated with efforts including:
    a. The goals and policies described of the latest version of the WRIA 9 Salmon Habitat Plan

b. Governor Inslee's 2018 Southern Orca Task Force recommendations
c. King County's Land Conservation Initiative
d. Fish passage at the Howard Hanson Dam
e. Fish barrier removal efforts by the State
f. Department of Ecology/Floodplains by Design efforts

4. Consider expanding on the concept presented in project type C, which has some potential to meet multi-objective framework goals in certain locations. As such, the District should consider the construction of floodwalls instead of backslopes, and the acquisition of additional property to allow for the construction of setback levees. (see Figures 1 & 2). Acquisition through eminent domain should also be used for habitat purposes when appropriate.
5. Expand the study area and scope to include all areas of the Duwamish River that may be subject to current or future riverine flooding. The projected 500-year floodplain and sea level rise should be mapped to determine the extent of flooding within the Duwamish River and the project limits adjusted to include those areas.
6. Examine costs and funding mechanisms for implementation.

The City of Tukwila looks forward to working with the District through the PEIS process and beyond to develop and implement a multi-objective Corridor Plan that promotes community resilience, species recovery and quality of life. Thank you for your work on the Flood Hazard Management Plan and consideration of these comments. In the spirit of this planning effort and in understanding that taking the long view towards rebuilding our lower Green River Corridor, the following quote seems appropriate:

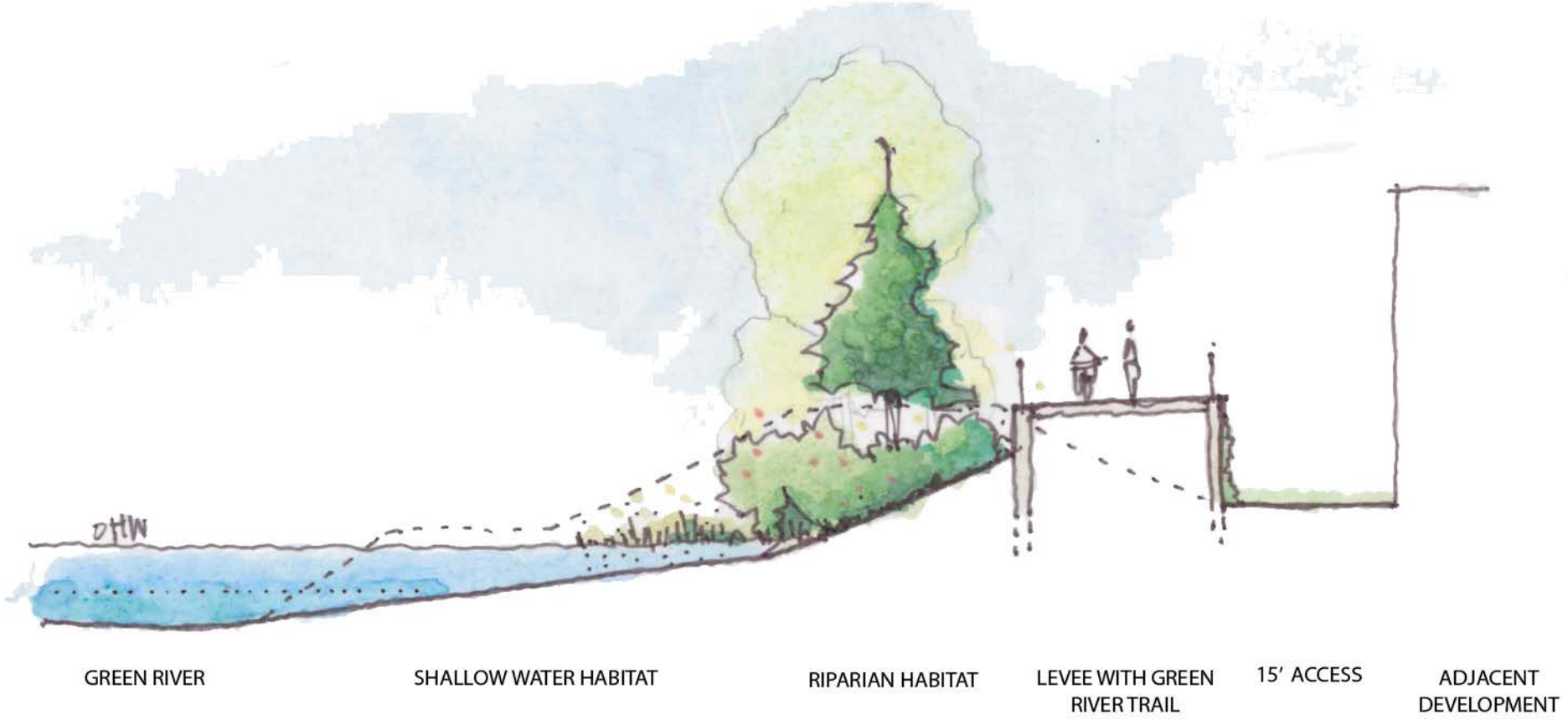
"If your life's work can be accomplished in your lifetime, you're not thinking big enough."
— Wes Jackson, founder of the Land Institute

Sincerely,

Allan Ekberg
Mayor

Enclosures: Figures 1 & 2

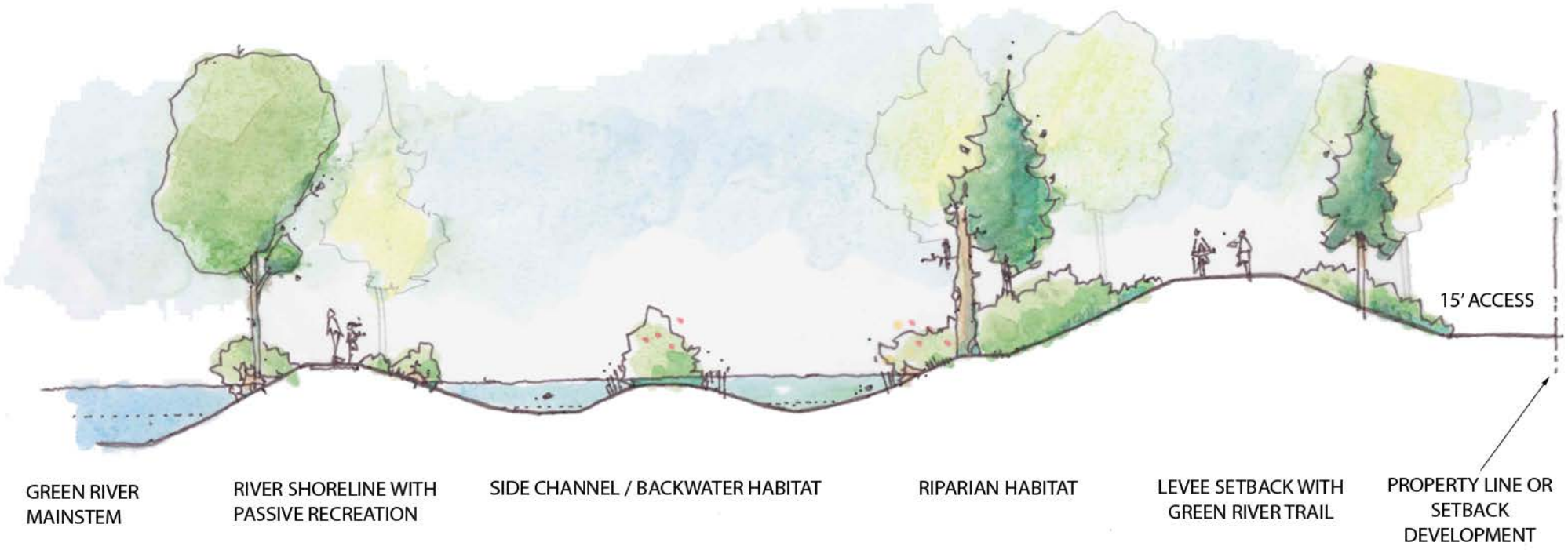
Figure 1



FLOOD WALLS TO MAXIMIZE HABITAT RIVERWARD OF LEVEE

NOT TO SCALE

Figure 2



LEVEE SETBACK WITH AQUATIC HABITAT

NOT TO SCALE

KENT
WASHINGTON

OFFICE OF THE MAYOR
Dana Ralph, Mayor
220 4th Avenue South
Kent, WA 98032
Fax: 253-856-6700

PHONE: 253-856-5700

May 1, 2019

King County Flood Control District
Attn: Michelle Clark, SEPA Responsible Official
516 Third Avenue, Room 1200
Seattle, WA 98104

Re: Lower Green River Corridor Flood Hazard Management Plan
And Programmatic Environmental Impact Statement

Dear Ms. Clark:

Thank you for the opportunity to provide comments on the scoping of the King County Flood Control District's (District) Programmatic Environmental Impact Statement for the Lower Green River Corridor Flood Hazard Management Plan. The residents and businesses in the City of Kent (City) have a significant presence in the Green River Valley. There are approximately 100,000 jobs and 20,000 residents along with 100 million square feet of industrial space in the Green River Valley who rely on the river levees to protect their lives, livelihoods and businesses. Much of the area in the valley is protected by the levees and other flood protection systems owned and maintained by the District. The City supports the mission of the District to improve flood protection facilities in the county and its proposal to prepare and implement a plan for the Lower Green River Valley. This plan will have impacts on the lives and livelihoods of many thousands of people and businesses both within the valley and those in other areas dependent on the services the valley provides. The City has some comments regarding the scoping of this plan.

The City supports the scoping of the system with a goal of a level of protection of 18,800 cubic feet per second plus a minimum of three feet of freeboard. This has been designated by the US Army Corps of Engineers as a 0.2% flood event (500-year flood) which is approximately the flood event that the Howard Hanson Dam was designed to originally protect against (Standard Project Flood). The City also supports the scoping of the system to meet or exceed all federal levee codes and standards.

The adequacy of the levee system in the Lower Green to protect from flooding is dependent on the Howard Hanson Dam and its operation by the US Army Corps of Engineers in the Upper Green River watershed. The scope of the corridor plan should include working with the Corps to look at alternatives that would increase the flood risk reduction capacity of the dam. Improvements in the performance of the dam will allow the District and other local agencies the ability to balance the other priorities along the river and improve the quality of life for residents, businesses and wildlife.

As part of Alternative 3 issued to the public in the scoping notice, the city requests the District include two other critical left bank (looking downstream) levee sections, Frager Road and the Kent Airport.

The Frager Road Levee between river miles 17.8 and 18.8 is included as a levee to be improved in alternative three. However, the scope for this levee should be extended to include tie ins at the upstream and downstream ends to high ground or to other levees.

Specifically, the upstream end of the levee should be extended to connect to the west valley wall and the downstream end of the levee should scoped to extend to connect to the levee in Tukwila. Without those tie ins, floodwater could outflank one or both ends of the levee and increase flood risk to the people and properties protected by the levee. There are large residential neighborhoods in the valley that are protected from flooding by the Frager Road Levee.

The area south of the Kent Airport Levee (left bank between river miles 23.8 and 24.0) includes large businesses in the manufacturing, shipping, transportation, automotive and the railroad industries. The area is bordered by the Green River and S. 277th St. on the north and south, and SR-167 and the Union Pacific Railroad on the west and east. The river reaches upstream and downstream of the Kent Airport Levee include creek openings which allow the Green River at flood stage to flow backward up those creeks and flood agricultural lands. This floodwater can then flood overland to other areas, including the area landward of the Kent Airport Levee. Consequently, the scope should include a levee scenario at the Kent Airport Levee which would encircle the developed area south of this levee.

The agricultural areas south of Kent are some of the most productive agricultural land in the state. Not only are these areas an important local resource in food production, they also provide a steady source of jobs for the community. They should be considered in the scoping of the proposed plan.

The City has historically been very supportive of salmon habitat improvements along the Green River, working independently and with WRIA 9 and other agencies on capital projects and programs to improve water quality and increase habitat for salmon. Several large projects have been constructed by the City Kent with the support of the District and WRIA 9 and others are in progress. The City supports the exploration and inclusion of salmon habitat improvements in Flood Control District Projects with the use of available salmon habitat funding.

The City has spent decades investing millions of tax payer dollars from the federal, state and local level to develop an integrated system of parks and trails along the Green River resulting in the most important recreational amenity for our residents. These parks and trails are heavily used now by both the 130,000 residents of Kent and the over 50,000 workers who are employed in the Kent Valley. Our recreational facilities along the Green River will need to continue to expand capacity in order to keep up with projected growth in population and the number of jobs in Kent.

In an effort to ensure Kent's trail system would meet the future recreational demands anticipated the Kent City Council adopted the "Kent Valley Loop Trails Plan" on 8/19/14. This plan utilizes the existing intersection of the Green River and Interurban regional trails, connecting an array of existing parks, bridges, and trails to create a sequence of loops that provide a variety of experiences for users. The proposed loops vary in length from 1.7 miles to 13 miles to provide for multiple user types, from the Sunday morning walker to the long-distance cyclist.

On 6/7/16 the Kent City Council adopted the "City of Kent Park & Open Space Plan 2016." The Green River Region of Kent is one of 5 geographic regions and highlights its importance to the residents that live in the valley, the 50,000 workers in this region, as well as the importance of the parks and trails along the Green River as regional recreational amenities, a true destination for all South King County residents. This is evident in the selected passage below from page 40:

"The challenge moving forward will be to ensure that people continue to be able to enjoy the scenic beauty of recreating along a river while balancing the priorities of flood control, real estate development and habitat protection. Reinvesting in these parks and trails will ensure that the Green River corridor continues to be a regional draw and recreational treasure."

The plan calls out 5 key strategic projects in the Green River Region:

1. Complete the Kent Valley Loop Trail System (KVLT)
    a. Complete the missing link of the Green River Trail between Foster Park and Central Ave.
    b. Complete the off-right-of-way portion of the Green River Trail between Veteran's Drive and 212th.
    c. Continue to add way-finding/interpretive signage and other trail enhancements
    d. Improve Frager Road for walking and biking.
    e. Implement other recommendations from the approved KVLT plan.
2. Maintain the Green River Trail and Frager Road
    a. Improve trailheads and amenities in the parks along the loop system (Russell Woods, Riverview property, Hogan Park, Boeing Rock, Old Fishing Hole.)
    b. Renovate deteriorating underpasses.
    c. Create and implement a balanced vegetation maintenance strategy to preserve trail user safety and quality of experience.
    d. Broaden the recreational opportunities at the parks along the trail (3 Friends, Neely/Soames, Foster, Boeing Rock, etc.)
3. Van Doren's Park Relocation
    a. Integrate park relocation with flood protection/habitat improvements
    b. Protect/enhance Van Doren's Park's Recreational Value.
4. Hogan Park at Russell Road
    a. Convert the natural grass baseball field to multi-use synthetic field.
    b. Add supporting recreational amenities that will make the park a dawn-to-dusk, year-round recreational destination.
5. Riverview Park Development
    a. Create a new Tier 5 park that serves as downtown's Green River Trailhead and southern anchor for the Green River corridor parks.

The plan lists Anderson Greenbelt, Anderson Park, BMX property, Boeing Rock Property, Briscoe Park, Cottonwood Grove Park, Eagle Scout Property, Foster Park, Hogan Park at Russell Road, Neely/Soames Historic Home, Old Fishing Hole, Riverview Property, Russell Woods Park, Springbrook Greenbelt, Three Friends Fishing Hole, Valley Floor Property and Van Doren's Landing Park as park properties in the Green River Region. Most of these properties do not currently meet their maximum potential recreational value, and the City of Kent has plans to redevelop many of these properties to provide more recreational value in the coming years. It is important that future flood protection projects and associated habitat projects do not diminish the current or potential recreational value of park properties along the Green River.

In addition to the park properties listed in the, "City of Kent Park and Open Space Plan 2016", three regional trails are listed; the Green River Trail, Frager Road, and the Interurban Trail. It is important that future flood protection projects and associated habitat projects do not diminish the current or potential recreational value of Kent's regional trails along the Green River. A need for shade along the Green River to address environmental concerns has the potential to inadvertently impact the visual and experiential connection

between these trails and the Green River. We look forward to continuing to work with the King County Flood Control District to find creative solutions to ensure that the Green River Trail, Frager Road, and the Interurban Trails still provide users a "river trail" experience.

Flood protection and habitat projects also have the potential to inadvertently make parks and trails along the Green River less inviting by creating both real and perceived safety threats to users. Park professionals and landscape architects need to be involved in all stages of these projects and plans from beginning to end to prevent unintended harm to recreational facilities.

The scope of the study should also include consideration of emergency access to the river for rescue or removal operations. There are necessary times when first responders require safe and efficient access to the river, and these should be included in the plan, even if in general locations to be included in projects as they progress into their detailed planning and design.

The City believes all priorities can be accomplished along the river as improvements to the riparian habitat, recreation facilities, and flood protection facilities are made.

Thank you again for the opportunity to provide these comments. Please feel free to contact me if you have any questions.

Sincerely,

Dana Ralph

Dana Ralph
Mayor

Attachments sent to Dropbox:
KVLT Master Plan-Final sans appendix.pdf (on Dropbox.)
_2016 Kent Park and Open Space Plan sans appendix.pdf (on Dropbox)

Denis Law Mayor

May 1, 2019

Ms. Michelle Clark
SEPA Responsible Official
King County Flood Control District
516 Third Avenue, Room 1200
Seattle, WA 98104

RE: Lower Green River Corridor Flood Hazard Management Plan Programmatic Environmental Impact Statement

Dear Ms. Clark:

The City of Renton appreciates the opportunity to provide comments on the King County Flood Control District (District) scope of the Programmatic Environmental Impact Statement (PEIS) for implementation of the Lower Green River Corridor Flood Hazard Management Plan. We applaud the District's proposal to develop a comprehensive plan for increasing the level of flood protection in the lower Green River to protect people, property, businesses, jobs and infrastructure that is vitally important to the region and state's economy. We support the District's approach to reduce flood risks while minimizing impacts to the environment, existing developed properties, regional recreational facilities, roads, utilities and other infrastructure. This will be a significant challenge due to the various physical constraints, diverse interests and large number of stakeholders. We agree with the District's proposal to develop the flood hazard management plan to provide an integrated and reasonable long-term approach to reduce flood risk within the Lower Green River Corridor while balancing multiple objectives of supporting economic development and improving fish habitat as stated in the SEPA notice.

The following are our comments on the scope of the PEIS:

1. Alternatives Presented in the Proposal

The three alternatives presented in the proposal are comprised of no-action, a limited extent of improvements and an extensive level of improvements. However none of the proposed alternatives include any proposed flood facilities in the segment of Green River downstream of South 180th Street for Alternatives 1 and 2 and downstream of I-405 (approximately RM 12.4) for Alternative 3. A hydraulic analysis needs to be completed demonstrating that no improvements are needed downstream of South 180th Street to the Black River Pump Station for all alternatives considered. We believe the proposed alternatives, if implemented upstream of South 180th Street, will increase the risk of flooding in the reaches of the Green River downstream of South 180th Street (RM 14.5). The improvements proposed by each alternative would convey floodwater during the 500-year flood event into the section of river downstream of South 180th Street, which would result in higher surface water (flood) levels in this reach of the Green River. This unimproved reach downstream of South 180th Street would have the

lowest level of flood protection and result in flooding in this reach of the Green River, which could potentially cause flooding in the cities of Kent, Tukwila and Renton. Due to the relatively flat slope of the Green River Valley, floodwater would inundate valley floor areas along the east side of the Green River behind the upstream river sections where flood reduction alternatives are proposed. This would defeat the purpose, benefit and effectiveness of the implementation of the currently proposed flood reduction alternatives.

During floods greater than the 100-year event, floodwater from the Green River could overflow along the right-bank (east side) of the Green River, along the Black River channel and around the District's Black River Pump Station (BRPS). The BRPS pumps direct flow from a 24-square mile tributary basin on the east side of the Green River into the Green River, and provide flood protection to the cities of Kent, Tukwila and Renton. If floodwaters were to overtop the unimproved reaches of the Green River (downstream of South 180th Street - Alternative 1 and 2, downstream of I-405 - Alternative 3) and flood the valley floor on the east side of the Green River, the BRPS would fail to operate as intended and would not provide flood protection to the upstream tributary area.

The area along this reach of the Green River downstream of South 180th Street and the valley area served by the BRPS houses a substantial number of developed commercial and industrial properties with significant property values, along with important transportation and utility infrastructure, which is vital to the region's employment and economy. The King County South Wastewater Treatment Plant at RM 11.9 is located in the area and needs protection from flooding. If this wastewater treatment plant were to flood due to an insufficient level of protection along the Green River, sewage treatment serving 800,000 people and businesses in the facility's 241 square mile service area south and east of Lake Washington would be impacted.

Based on the above concerns the City of Renton recommends that all proposed alternatives evaluate the need for, and include improvements, that provide the same level of flood protection for the reach of the Green River, extending along the east side (right bank) of the river from South 180th Street and north of I-405, to the Black River channel (RM 11) and along the Black River Channel up to the BRPS as is provided upstream of this reach. The reach of the Black River Channel from the Green River to the BRPS and the east side of the Green River from RM 11 to approximately RM 26, needs to include improvements that provide the same continuous level of flood protection for all alternatives considered in the PEIS.

2. Freeboard

The Lower Green River Corridor Flood Hazard Management Plan targets a provisional level of protection at a flow volume of 18,800 cubic feet per second (the 500-year event) plus three feet of freeboard. FEMA requires three feet of freeboard above the 100-year event water surface elevation for levee accreditation. The implemented flood reduction improvements need to be designed and constructed to allow the flood protection facility to be certified and

accredited by FEMA. A value engineering review is recommended to determine the cost and benefit of the need for three feet of freeboard in addition to providing 500-year level of flood protection. If the amount of freeboard above the 500-year water surface elevation can be reduced, it will reduce the land requirements, impacts to developed properties and overall cost of the flood reduction alternatives.

3. Environmental Effects

The PEIS will need to identify and evaluate the cumulative environmental effects of the proposed alternatives to impacts to fish habitat, water quality and temperature. A mitigation plan will be needed which indicates how impacts will be avoided, minimized and mitigated. Where opportunities allow, the mitigation plan should support habitat restoration, enhancement, and riparian vegetation that aligns with the Endangered Species Act requirements for the listed and threatened species, habitat improvement goals, policies and needs that are identified in the WRIA 9 Salmon Habitat Plan in the Lower Green River, along with state salmon recovery goals. We recommend that the Lower Green River Corridor Flood Hazard Management Plan take into consideration improvements that are identified as being needed for habitat restoration and water quality protection in the WRIA 9 Salmon Habitat Plan and are being worked on by the WRIA 9 Ecosystem Forum and the state and federal agencies.

4. Property Values and Land Acquisition

The extent and cost of land acquisitions required for the proposed improvements, specifically for Alternative 3, are significant. The lead agency is thus encouraged to put together cost estimates for the proposed alternatives to assess their feasibility. Additionally, given that floodwalls and embankment levees are proposed along the river banks, the impact to adjacent properties, infrastructure (roads, bridges, utilities) and property values should be evaluated as part of the PEIS.

5. Facility Types

Recognizing the physical constraints and the built environment along the Lower Green River, Facility Type A is needed in some areas to minimize impacts to existing buildings and infrastructure. Where possible, Levee Types B and C would help to achieve the Plan's multi-objective goals to provide flood protection, improve fish habitat, provide space for increased riparian buffers along the river to reduce water temperature, and allow for recreational opportunities.

In conclusion, the City of Renton supports the effort of the District to implement the Lower Green River Corridor Flood Hazard Management Plan and appreciates the opportunity to provide comments on the scope of the PEIS. The Lower Green River is regionally important to the economies of the cities, county and state. The flood protection is necessary to protect public safety, public and private properties, infrastructure, employment and the region's economy. The opportunity to develop a multi-objective Lower Green River Corridor Plan that

achieves increased flood protection, along with fish habitat and water quality improvements needed for salmon recovery and provide for recreational opportunities is a significant goal that we support.

If you have any questions please contact Ron Straka, Utility Systems Director, by phone at 425-430-7239 or via email at rstraka@rentonwa.gov.

Sincerely,

Denis Law
Mayor

DL:aa

cc: Renton City Councilmembers
Robert Harrison, Chief Administrative Officer
Gregg Zimmerman, Public Works Administrator
Jennifer Henning, Community and Economic Development Planning Director
Ron Straka, Utility Systems Director

NGO

SEATTLE SOUTHSIDE CHAMBER OF COMMERCE

February 14, 2019

Michelle Clark
Executive Director
King County Flood Control District
516 Third Ave, Rm 1200
Seattle, WA 98104

Copy: City of Tukwila

RE: Support for the King County Flood Control District to implement the Lower Green River Corridor Flood Hazard Management Plan

Dear Ms. Clark

The Seattle Southside Chamber of Commerce expresses its support for the Flood Control District to move forward and provide an integrated and reasonable long-term approach to reduce flood risk within the Lower Green River Corridor while balancing multiple objectives within the area.

The Chamber of Commerce is very familiar with potential devastating impact a natural disaster could have on the Kent Industrial Valley. Here in South King County we are the center for Manufacturing, and Transportation. A catastrophic flood would have long lasting economic and environmental impacts that our community would find difficulty in recovering from. Therefore, we support preventative action and investment to protect our business and residential community from such a natural disaster.

In reviewing the proposed alternatives and actions proposed on the project website, we would like to encourage the District to not adopt a "one-size fits all" project plan but to use a balanced and pragmatic approach to ensure that flood protection is achieved while balancing environmental, economic and safety interests. Specifically, this would include a combination of all three alternatives, utilizing the best alternative for achieving the primary goal of flood protection, but also taking the opportunity to improve fish habitat within the corridor where those opportunities are cost feasible. We know that in partnership and through community collaboration we will be able to find the best protection for life and safety, as well as improve our environment for fish and wild life and eliminate any potential negative impacts to economic development and business growth.
Please include us in future discussions and keep us apprised of activity regarding this and any County wide projects, proposals and initiatives so that we can ensure maximum engagement with our community partners and stakeholders.

We look forward to working with you to develop and implement the project.
Sincerely,

Andrea H. Reay
President/CEO Seattle Southside Chamber of Commerce

KENT CHAMBER of Commerce
We are in business for your business.
524 W Meeker Street | Suite 1 Kent, WA 98032
(253) 854-1770

February 22, 2019

Ms. Michelle Clark
SEPA Official
King County Flood Control District
516 Third Avenue, Room 1200
Seattle, WA 98104

RE: Programmatic Environmental Impact Statement (PEIS) for the Lower Green River Corridor Flood Hazard Management Plan

Dear Ms. Clark:

As a business located near the Green River corridor, we provide the following comments regarding the PEIS for the Lower Green River Corridor Flood Hazard Management Plan. It is of highest importance that any alternative reflects the priority of protecting property – both commercial and residential – from the negative impacts of flood events.

The Lower Green River has significant industrial and commercial facilities, including over 100 million square feet of warehouse and distribution space. It serves as the economic powerhouse of King County hosting numerous companies – including REI's corporate offices, Boeing, an Amazon Fulfillment Center, Blue Origin's corporate, engineering, manufacturing offices and a Starbuck's Roasting plant – in which over 100,000 employees work. Many of these employees live in highly-dense residential housing that would be impacted in the event of flooding.

When considering alternatives for the Lower Green River Corridor, we believe that:

- Any alternative must also prioritize the protection of roads, bridges and other means of transport so that businesses can remain operational and ensure continuity of the supply chain where possible.
- We support the construction of new and/or improved facilities that meet the 500-year level of protection along the greatest geographical extent of the river so that the potential impact to our business and our employees is minimized.
- We would also like any alternative to emphasize the importance of levee accreditation along the Lower Green River to provide regulatory certainty, for businesses, residents and property owners in the Lower Green River Valley.

Thank you again for the opportunity to provide comments.

Sincerely,

April Sta. Rosa
Board of Directors President

KING-PIERCE FARM BUREAU

King County Flood Control District
Attn: Michelle Clark, SEPA Responsible Official

Date: February 25, 2019

Re: Comments on the Proposed Alternatives for the Lower Green River Corridor Flood Hazard Management Plan

Dear Ms. Clark,

Thank you for the opportunity to comment regarding the Programmatic Environmental Impact Statement. King County has some of the most arable, productive farmland in the Pacific Northwest; particularly in the Kent Valley, which at one point was the lettuce capital of the world and a significant supplier of hops. Much of that farmland has long been lost to development, but the remaining farms are a significant source of local produce. In response, King County has taken considerable proactive steps in preserving farmland, encouraging agriculture, and supporting farmers.

Actions like the Farmland Preservation Program (FPP) and the designation of the Agricultural Production Districts (APDs) created continuous areas of land protected for farming. The work of the Agriculture Commission, program staff, and non-governmental organizations and residents continue to provide support that encourages farmers to farm and keeps farmland in production.
Earlier alternatives for the flood hazard management plan sacrificed farms, such as Carpinito Farms, in the event of a flood. Using valuable farmland as flood storage, and the subsequent loss of the valuable topsoil when the flood receded, negates the purpose of the FPP, the APDs, and the Executive's Local Food Initiative, not to mention the County's residents' desire for local, fresh food. We support considering alternatives, as they preserve valuable farmland for future King County residents.

Kind Regards,

Rosella Mosby
President
King-Pierce County Farm Bureau

P.O. Box 1222 - Enumclaw, Washington 98022 - kpfarmbureau@gmail.com

NAIOP
COMMERCIAL REAL ESTATE DEVELOPMENT ASSOCIATION
WASHINGTON STATE CHAPTER

King County Flood Control District
ATTN: Michelle Clark, Executive Director
516 Third Ave., RM 1200
Seattle, WA 98104

April 15, 2019

Dear Michelle:

Thank you for the opportunity to comment on the King County Flood Control District's Programmatic Environmental Impact Statement (PEIS) for the Lower Green River Corridor Plan. NAIOP Washington State is the commercial real estate development association with more than 1,000 members statewide, including hundreds in King County.

Extending through Auburn, Kent, Renton, Tukwila and King County, the Lower Green River area is the largest warehouse and distribution hub in the region, supplying food and groceries, medical supplies and other critical provisions. It is also the home to many major employers and thousands of local jobs.

The primary objective of the Lower Green River Corridor Flood Hazard Management Plan is to allow King County to assure flood control necessary to meet FEMA requirements. Flood risk modeling conducted in 2014 estimated the present value of flood damage and economic impacts over the next 50 years at $1.1 billion. The secondary objective is to provide environmental protection.

NAIOPWA supports the three Alternatives presented by the King County Flood Control District:

- Alternative 1: the "No Action Alternative" is required by SEPA in order to provide a benchmark to objectively evaluate and compare the "action" alternatives. It would include completing existing projects adopted in the 2018-23 capital improvement program.
- Alternative 2: the "Moderate Geographic Extent of Increased Level of Protection" Alternative would include 3 miles of new levees and improvements to 17 miles of existing levees.
- Alternative 3: the "Greater Geographic Extent with Increased Level of Protection, Integrated Habitat and Recreation, Agricultural Protection Facilities, and Habitat Restoration Project Partnerships" Alternative is the same as Alternative 2 with the addition of 10 miles of new levees and 2 miles of non-structural improvements. Incentives to provide habitat restoration could also be provided.

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WASHINGTON STATE CHAPTER

Some have suggested a new Alternative 4, which prioritizes fish habitat over flood control. This includes purchasing urban land and buildings to provide for fish mitigation projects, rather than assuring protection of the Lower Green River valley, including a levee system that will meet FEMA 500-year flood level standards.

We respectfully request that the District reject the addition of a fourth Alternative, as it does not prioritize flood control.

We also encourage the County to include only alternatives that reasonably meet the primary objective of flood control, and to acknowledge the myriad fish mitigation opportunities within those existing Alternatives 1, 2 and 3.

Additionally, NAIOP is concerned about adequate funding for any of these Alternatives. We respectfully request a funding summary to demonstrate how implementation of one of the proposed approaches will be realistically achieved.

Finally, we recommend the PEIS analysis assume Alternative 1 is used in already-developed urban environments to avoid negative impact to existing businesses, and a blend of Alternatives 1, 2 and 3, may be used elsewhere, depending upon adjacent land conditions.

Thank you again for the opportunity to provide comments on the King County Flood Control District's Programmatic Environmental Impact Statement and we look forward to working with King County as it moves forward.

Sincerely,

Peggi Lewis Fu, Executive Director
NAIOP Washington State

Patrick Gemma, SVP, Investment Officer
Prologis

Richard Kolpa, SVP, Market Officer-Seattle
Prologis

NAIOP
COMMERCIAL REAL ESTATE DEVELOPMENT ASSOCIATION
WASHINGTON STATE CHAPTER

Josh Shearer, SVP & Regional Director
KG Investment Properties

Jeffrey E. Davis, Owner
Davis Properties, LLC

John Pietromonaco
John Pietromonaco, Manager
Pietromonaco Properties

Aaron Ryskalczyk, AVP
Washington Capital Management

Rob Aigner, SVP & Regional Manager
Harsch Investment Properties

Bart Brynestad, Partner
Panattoni Development Company, Inc.

Drew Zaborowski, Development Manager
Avenue 55

John Teutsch, Managing Member
Teutsch Partners, LLC

MID SOUND FISHERIES ENHANCEMENT GROUP

April 30, 2019

King County Flood Control District
Attn: Michelle Clark, SEPA Responsible Official
516 Third Avenue, Room 1200
Seattle, WA 98104

RE: Scoping Comment on the Lower Green River Corridor Flood Hazard Management Plan Programmatic Environmental Impact Statement

Dear Director Clark,

Thank you for the opportunity to submit comments regarding the Lower Green River Corridor Flood Hazard Management Plan Programmatic Environmental Impact Statement. While we were a signatory to a group letter sent on February 8, 2019 we wanted to follow up with our own letter to share our thoughts.

We recognize how difficult it is to develop a plan for a river corridor that has many different interests, benefits, and challenges. We also recognize the importance of ensuring the safety and protection of the communities that live, work, and play in the Lower Green River Basin. Our organization's mission is to work with people in the communities we serve to identify and implement on the ground actions that will restore salmon habitat and recover our struggling salmon populations. That mission calls us to request of you that you create a fourth alternative in your plan that will not further limit opportunities for restoration of salmon habitat in the Lower Green River floodplain.

While your plan is primarily driven by an interest in reducing flood hazards it is critical to remember that the decisions made in this plan will make other important decisions about our potential opportunity to recover salmon in the Green River. By having only alternatives in your plan that eliminate some of the future opportunities for restoration the Flood District would be in fact preventing the ability to successfully implement the Green Duwamish salmon recovery plan.

As you are likely aware there are more and more examples from across the Puget Sound region that are demonstrating that it is not necessary to make a choice between flood reduction and habitat restoration. There are ways we can achieve both if we choose to value both equally. That is why we ask you to not limit that possibility in your alternatives and add a fourth alternative that does not further limit our ability to restore habitat.

7400 Sand Point Way #202N
Seattle, WA 98115

(206) 529-9467
midsoundfisheries.org

We also want to point out that this does not have to be a conversation about salmon vs. people. Restoring our streams and rivers to improve salmon habitat doesn't just benefit the fish. Healthy fully functioning rivers are also important to the environmental health of our communities. Having abundant salmon runs are also an important healthy food source for people. And of course having abundant salmon runs are critical to honoring the treaties our federal government signed with tribal governments reserving their right to continue to harvest fish in all their usual and accustomed places.

Thank you for considering our comments. We hope that we can all find a way to work together to create a plan for the Lower Green that can support the multiple objectives that are important to our community.

Sincerely,

Jeanette Dorner, Executive Director

FORT&RRA

FOR THE PEOPLE. FOR THE LAND. FOREVER.

May 1, 2019

King County Flood Control District
Attn: Michelle Clark, SEPA Responsible Official
516 Third Avenue, Room 1200
Seattle, WA 98104

Re: Lower Green River Corridor Flood Hazard Management Plan Programmatic Environmental Impact Statement (PEIS) Scoping Comments

Dear Ms. Clark,

Thank you for the opportunity to comment on the Lower Green River Corridor Flood Hazard Management Plan PEIS. Forterra appreciates this long term approach to flood hazard management for the Lower Green River, and appreciates the support of the Flood Control District in funding riparian revegetation efforts on the Green-Duwamish River through the Cooperative Watershed Management Program. These grants have allowed Forterra and our grant partners to control invasive riparian weeds along 27 river miles, and revegetate over 1 mile of Green-Duwamish River shoreline. Forterra requests that the PEIS evaluate the impacts of precluding future revegetation at proposed facility locations.

Forterra has operated in the Green-Duwamish Watershed for over two decades, working to secure places – urban, rural and wild – that are keystones to a sustainable future for all. Specific to the Lower Green River Corridor, Forterra collaborates with public and private landowners to enhance the functions of riparian lands to provide multiple benefits, including improved water quality, salmon habitat, terrestrial wildlife habitat, public amenity and improved environmental health. To date, we have collaborated with nine private property owners and engaged over 2000 volunteers to revegetate the Green-Duwamish shoreline. We continue to enroll additional properties in this program, and intend to expand our efforts in the long term.

Beyond Forterra's work, there is sustained momentum across multiple local governments, non-profits and the Muckleshoot Indian Tribe to increase tree shade along the length of the Green-Duwamish River. This is driven and guided by the Re-Green the Green Riparian Revegetation Strategy and Green River Temperature Total Maximum Daily Load Water Quality Improvement Report. More than 15 organizations are actively coordinating to implement the Re-Green the Green Riparian Revegetation Strategy.

The addition of 10.17 miles of Type A facilities proposed in PEIS Alternative 2, and 15.43 miles of Type A facilities proposed in PEIS Alternative 3, would substantially limit the opportunities available for Forterra and partners to continue this work. The PEIS should evaluate the impacts of precluding future revegetation at proposed facility locations, where revegetation would benefit surrounding communities as well as fish and wildlife.

As a 50 year plan, the Lower Green River Corridor Plan has enormous potential to build on the sustained momentum of non-profits, tribes and local governments to achieve multi-benefit objectives in the Lower Green River. We appreciate your consideration of these comments.

Regards,

Judy Blanco
Managing Director of Riparian Restoration

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901 5TH AVE, SUITE 2200
SEATTLE, WA 98164

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WASHINGTON ENVIRONMENTAL COUNCIL

wecprotects.org
1402 Third Ave, Suite 1400
Seattle WA, 98101
206.631.2600

May 1, 2019

King County Flood Control District
ATTN: Michelle Clark, SEPA Responsible Official
516 Third Avenue, Room 1200
Seattle, WA 98104

RE: Lower Green River Corridor Flood Hazard Management Plan Draft Programmatic Impact Statement

Thank you for the opportunity to comment on the Lower Green River Corridor Flood Hazard Management Plan and Draft Programmatic Environmental Impact Statement (PEIS). Washington Environmental Council (WEC) works for clean air, clean water, and clean energy for all Washingtonians. Our Puget Sound program focuses on clean water and healthy habitat to meet the needs of people and wildlife. While we usually focus on state-level issues, we also engage in local government processes that are regionally significant and generationally important.

WEC does not support any of the alternatives currently identified in the PEIS as they are insufficient to protect communities, Chinook salmon, Southern Resident orcas, and other species in the Lower Green River. We urge you to develop further alternatives that address multiple objectives in the Lower Green River, including but not limited to flood risk, water quality, and endangered species.

The Lower Green River supports remnant runs of Chinook salmon as well as hatchery production, which are important to tribal and non-tribal fishers throughout the Puget Sound region. Both native and hatchery fish face habitat limits that must be resolved. The three alternatives offered in the PEIS would continue to worsen conditions as temperatures are expected to warm due to lack of riparian vegetation in a changing climate. As the Lower Green River flows through Tukwila, Kent, Auburn, and unincorporated King County, Chinook salmon face too little rearing habitat and refugia to support existing populations, let alone needed population increases.

We do not find the three alternatives offered sufficient, nor are we confident that any of them would meet the requirements of the Clean Water Act or the Endangered Species Act in their implementation. For example, the Department of Ecology issued the Lower Green River Temperature Total Maximum Daily Load Study in 2011 (Coffin et al., 2011), which identified lack of riparian shade as a contributing factor to high summer temperatures. This portion of the Green River does not meet the Washington State water quality standards for temperature and remains on the 303(d) list of impaired waters under the Clean Water Act. None of the alternatives identified in the PEIS would support actions needed to meet the water quality standards for temperature. Cooler temperatures are critical for salmon recovery, and we cannot afford to exacerbate warming temperatures that are lethal to salmon.

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Further, each of these alternatives runs counter to recommendations of the Orca Recovery Task Force (2018) on which WEC serves.

NOAA National Marine Fisheries Service and Washington Department of Fish and Wildlife have identified the fall run in the Green River as part of the second most important Chinook salmon runs to Southern Resident orca recovery (NOAA Fisheries and Washington Department of Fish and Wildlife, 2018) out of 31 potential stocks. Therefore, given that the orcas are starving from lack of food, the Puget Sound region, including the Lower Green River, must invest in salmon recovery. Juvenile Chinook salmon face a bottleneck in terms of limited habitat in this region.

In addition, King County and many partner groups have already invested in salmon recovery, and the proposed alternatives jeopardize the durability of those investments:

- The City of Kent partnered with King County to complete the Downey Farmstead Restoration Project (river mile 21.5 to 22.3). After acquiring the site, $5,920,000 from the Salmon Recovery Funding Board added off-channel rearing habitat and refugia for juvenile salmonids, in addition to adding flood storage to alleviate damage to both urban and agricultural areas between 2010 and 2016.

- King County partnered with the US Army Corps of Engineers to complete the Porter Levee Setback and Floodplain Reconnection (river mile 34.5 to 35.5) in 2015, at a cost of $13,000,000. The effort reconnects the river to its floodplain and allows for the fundamental ecosystem process of channel migration. The goal was increased productivity for Chinook salmon spawning and rearing.

- The King County Flood Control District partnered with the City of Kent to complete the Lower Russell Levee Setback & Habitat Restoration project. The project created instream habitat complexity, protects water quality, protects and improves riparian vegetation, and removes armoring. The Salmon Recovery Funding Board provided $9,200,000 for this 2017-2018 project.

These are examples of projects that serve multiple objectives – a pattern that should be continued. Our region is investing in cleaning up the Duwamish Waterway and improving conditions throughout the Howard Hansen Dam region. We must equally value the lower Green River to make the system complete.

In April 2019, the Green-Duwamish River was identified as one of the Most Endangered Rivers® in the nation. This is not a distinction we would like to see. American Rivers cited the grave threat that outdated flood management poses to the survival and recovery of Chinook salmon (Parsons and others, 2019). The report specifically calls out the King County Flood Control District and the inadequate alternatives identified in the PEIS. American Rivers and partners are calling on King County to strengthen the plan by "… defining integrated goals, maximizing the number of levee

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setbacks to increase flood storage capacity and salmon habitat, and offering clear habitat restoration actions to address the critical needs of salmon rearing habitat and riparian shade in the Lower Green River."

We believe the King County Flood Control District must do more to balance multiple objectives in the Lower Green River, including but not limited to flood control for public safety and salmon recovery. We recognize the need to meet US Army Corps of Engineers levee policies. However, solutions are underway in other parts of the Puget Sound regions that both protect levees and improve conditions for salmon. These must be considered in the King County Flood Control District's Lower Green River Corridor Plan.

Environmental justice must be addressed explicitly in this plan. For too long, the needs of tribes and communities of color have not been centered in decisionmaking. The King County Flood Control District should initiate consultation with the affected tribes to determine solutions. The region is part of the Muckleshoot Tribe's Usual and Accustomed areas, and significant information on salmon resources and threats has been published in Northwest Indian Fisheries Commission (2011) and Northwest Indian Fisheries Commission (2016).

WEC views this PEIS as a generational opportunity to increase salmon productivity in the Lower Green River. We ask that the King County Flood Control District develop sufficient alternatives that address these multiple objectives such as salmon recovery and water quality in the context of tribal treaty rights. We cannot afford to make the mistake of steering flood management in the wrong direction for another 50 to 100 years.

Sincerely,

Mindy Roberts

Mindy Roberts, Ph.D., P.E.
Puget Sound Director, Washington Environmental Council

References

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Northwest Indian Fisheries Commission. 2011. Treaty Rights At Risk: Ongoing Habitat Loss, the Decline of the Salmon Resource, and Recommendations for Change. http://treatyrightsatrisk.org/

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Southern Resident Orca Recovery Task Force. 2018. Report and Recommendations.

American Rivers
RIVERS CONNECT US®

May 1st, 2019

King County Flood Control District
Attn: Michelle Clark, SEPA Responsible Official
516 Third Avenue
Room 1200
Seattle, WA 98104

RE: Lower Green River Corridor Flood Hazard Management Plan Programmatic Environmental Impact Plan Scope

Dear Ms. Clark:

American Rivers submits the following scoping comments on the proposed Lower Green River Corridor Flood Hazard Management Plan (Plan). Thank you for the opportunity to provide feedback on the scope of the Plan.

American Rivers protects wild rivers, restores damaged rivers, and conserves clean water for people and nature. Since 1973, American Rivers has protected and restored more than 150,000 miles of rivers through advocacy efforts, on-the-ground projects, and an annual America's Most Endangered Rivers® campaign. Headquartered in Washington, DC, American Rivers has offices across the country and more than 200,000 members, supporters, and volunteers. We have been working to protect and restore rivers in the Pacific Northwest for over 25 years through conservation advocacy, public lands management, integrated watershed management, floodplain restoration, and dam removal projects.

American Rivers is working in the Green-Duwamish River Basin to improve river function and connectivity to benefit native fish and other aquatic species and local communities. The communities in the Green Duwamish are protected from floods by an old and outdated flood control system that has separated the river from historic floodplain habitat that aquatic species, including salmon, depend on. Industrial pollution, loss of habitat and habitat degradation have reduced the historic Green-Duwamish salmon runs by as much as 90 percent. In recent years, as few as 800 chinook salmon have returned annually to the Green-Duwamish, and for the past 40 years wild chinook returns have averaged less than 10% of the historic average adult return of 38,000. The combined impact of inadequate fish passage at Howard Hanson Dam and a river tightly confined to its channel by an extensive, narrow levee system, has led to a river system that is largely uninhabitable to salmon.

The existing levee system which protects the highly developed Lower Green River Valley from flood damage is aging and inadequate to protect the 22,000 residents, businesses, and agricultural land from flooding, which is expected to become more frequent due to climate change. American Rivers supports making investments in Lower Green flood management to ensure that the communities of the Lower Green are protected from future flood damage. However, this investment in public safety should not be made at the expense of the natural resources- salmon, orca, rivers- that are at the heart of the Puget Sound's identity when we could instead invest in a flood management system that will both protect the communities and businesses of the Lower Green and restore critical habitat that the regionally significant salmon depend on.

In developing the Plan, the King County Flood Control District (District) has a once in a generation opportunity to establish a future for the Lower Green River Corridor that will provide both reduced flood risk and improvements to fish habitat. While the proposed Plan has a stated goal to "provide an integrated and reasonable long-term approach to reduce flood risk within the Lower Green River Corridor while balancing multiple objectives within the study area", the proposed alternatives fall short of achieving a truly integrated approach. The proposed Plan includes three versions of large-scale flood reduction projects at enormous cost to the citizens of Washington state and to the detriment of salmon recovery efforts and investments in the Lower Green.

Due to these concerns and the imminent impact that the proposed Plan will have on the recovery of salmon populations in the watershed, American Rivers has listed the Green-Duwamish River as one of the America's Most Endangered Rivers® of 2019. Our goal with this listing and our formal comments is to bring awareness to the need to integrate flood risk reduction and salmon habitat restoration in the Green-Duwamish watershed. We strongly encourage the District to:

1. Define integrated goals that support the needs of both people and fish;
2. Maximize the number of levee setbacks to increase flood storage capacity and salmon habitat and more effectively manage floods; and
3. Offer clear habitat restoration actions that address the critical needs of salmon rearing habitat and riparian shade in the Lower Green River.

1) Define integrated goals that support the needs of both people and fish

The State of Washington, including Puget Sound, communities are national leaders in managing floodplains to provide multiple benefits to communities. River and flood experts across the country look to King County and Washington State's Floodplains by Design Program as shining example of the progress that can happen when a communities come together and commit to finding solutions that keep communities safe, improve the environment and provide substantial economic, social and environmental benefits.

The 2014 Green River System Wide Improvement Framework (SWIF) established a goal of integrated river and flood management and sought to reach agreement on an integrated set of flood protection strategies and actions that would improve water temperature; advance progress towards meeting salmon protection and recovery goals; enhance open space, recreation, treaty fishing, and public access; support farmland protection, resiliency and productivity; and reduce long-term facility maintenance costs.[1] In 2016 the District pursued an Interim SWIF and stated in the transmittal letter to the U.S. Army Corps of Engineers:

> "Pursuing an Interim SWIF is a short-term solution to retain eligibility under the PL. 84-99 rehabilitation assistance program, and does not meet all of the goals and objectives of the stakeholders for a Green River vision that includes flood protection, levee certification, habitat, and recreation. The District is committed to achieving these additional goals in a long-range Lower Green River Corridor Plan…"[2]

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[1] Green River System Wide Improvement Framework (SWIF) Vision, Goals and Objectives. Approved by King County Flood Control District Executive Committee on January 27, 2014. https://your.kingcounty.gov/dnrp/library/water-and-land/flooding/capital-projects/SWIF/green-river-SWIF-goals-june2015.pdf

[2] Reagan Dunn, Chairman, Board of Supervisors, King County Flood Control District. Letter to Colonel John G. Buck, Commandre, Seattle District, U.S. Army Corps of Engineers. February 19, 2016.

The WRIA 9 Salmon Habitat Plan "Making our Watershed Fit for a King" is a long-term plan to restore habitat used by chinook salmon, bull trout, and other salmonids in the Green-Duwamish and Central Puget Sound watersheds. Over a century of intense development has resulted in impacts to aquatic species and the listing of chinook salmon, steelhead and bull trout as "threatened" under the Endangered Species Act. The Salmon Habitat Plan is a comprehensive approach to restore and protect salmon habitat and it identifies what salmon need in the Lower Green River Subwatershed including protecting and restoring side channels, off-channel wetlands, tributary mouths, and pools that provide shelter and habitat complexity for young salmon.[3] Over $160 million in habitat-related investments have already been made in the watershed to reverse the long-term decline of wild chinook salmon and over the next 50 years over a billion dollars is expected to be invested in the watershed to restore the Green-Duwamish River, ensure fish passage at Howard Hanson Dam, and the Plan.

The proposed Lower Green Flood Hazard Management Plan has a stated goal "to provide an integrated and reasonable long-term approach to reduce flood risk within the Lower Green River Corridor while balancing multiple objectives within the study area."[4] Unfortunately, the proposed Plan does not include stated goals for any objectives other than flood protection improvements, and it does not incorporate the stated objectives of the WRIA 9 Salmon Habitat Plan. Rather than the multi-objective corridor plan that integrates flood protection improvements and habitat restoration envisioned to follow the Interim SWIF, the Plan seeks to propose actions to improve the flood control system with minimal opportunities for habitat restoration in one alternative.

American Rivers encourages the Flood Control District to recommit to a Lower Green River Corridor Plan with an integrated framework that will meet multiple goals of flood risk reduction, improved water temperature, salmon recovery, enhanced open space, recreation, treaty fishing, public access, resiliency and productivity, and reduce long-term facility maintenance costs. At the very least, the review process under the State Environmental Policy Act (SEPA) must establish integrated goals for the Lower Green that will ensure the Plan aligns with salmon recovery objectives for the river. American Rivers recommends the District consider goals that include:

- Promote ecosystem function- Integrate the restoration of key river and floodplain functions and native habitats that are critical for native species into improvements to the flood management system; and
- Promote multi-benefit projects- Include flood management projects that contribute to other river management objectives and have been identified through other plans or programs.
- Promote integrated habitat – Adhere to the long-term habitat goals for the Lower Green River adopted during the Salmon Recovery Plan and use the degree of habitat created as a key metric when evaluating the proposed alternatives.

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https://your.kingcounty.gov/dnrp/library/water-and-land/flooding/capital-projects/SWIF/green-river-system-wide-improvement-framework-interim-report-february-2016.pdf

[3] P 1-11 https://www.govlink.org/watersheds/9/plan-implementation/WRIA9Salmon%20HabitatPlanFull.pdf

[4] SEPA Notice https://static1.squarespace.com/static/5b22c63afcf7fdc77370bfe9/t/5c914af8b208fc293e15b482/1553025790802/EnglishDSandScopingNotice-MayDate.pdf

2) Maximize the number of levee setback to increase flood storage capacity and salmon habitat and more effectively manage floods
The Lower Green River once migrated freely across the river valley; today, it is extremely constricted. Existing levees and consistent encroachment from development has cut off the Green River from its floodplain eliminating natural floodplain processes and reducing channel complexity essential to salmon life cycles. Without restoring these critical fluvial geomorphic processes meaningful salmon recovery cannot take place.

Due to the constrained nature of the Lower Green, some voluntary property acquisition is often necessary to implement meaningful levee setbacks and restoration. However, all the facility types proposed in the alternatives "…would not impact existing agricultural lands, buildings, parking, or traveled roadways". This policy seems to eliminate the opportunity to voluntarily acquire new properties or assess future acquisitions as part of a the PEIS. The PEIS should analyze property acquisition opportunities as part of a long-term strategy to increase levee setbacks and develop a connected riparian corridor.

Type C facilities would provide the most habitat benefit, yet they occur at the lowest percentages in all three alternatives evaluated.

- The "No Action Alternative" would implement approximately 0.86 miles of Type C facilities
- Alternative 2 would implement approximately 5.41 miles of Type C facilities
- Alternative 3 would implement approximately 9.08 miles of Type C facilities

Voluntary acquisitions and alternative designs must be considered to increase the number of Type C facilities overall and maximize the amount of habitat available.

Type C flood facility projects include levee setbacks with benches but fail to address the critical needs of salmon. The cross section shows a uniform planting bench but does not maximize the off-channel rearing habitat. As the width of the levee setback is increased the amount of habitat complexity should also increase. The PEIS should include language that would promote off-channel habitat where available and not limit it to riparian planting only.

The current Type C flood facility shows 3:1 slope on the riverside side of the levee. By incorporating a floodwall on the riverside side at strategic locations the amount of habitat could be tripled.

3) Offer clear habitat restoration actions that address the critical needs of salmon rearing habitat and riparian shade in the Lower Green River
For the past 40 years, wild chinook salmon returns have averaged less than 10 percent of the historic average adult return of 38,000, with as few as 800 chinook returning in recent years. Salmon declines are having devastating impacts on the southern resident orcas. Returning salmon face a daunting journey up the river. Extensive industrial development has resulted in the loss of approximately 97 percent of the historical estuarine habitat, and industrial pollution from polychlorinated biphenyls (PCBs), arsenic and other toxic chemicals has led to the designation of two contaminated Superfund sites in the estuary. Moving upstream through the Lower Green, salmon must navigate a highly leveed and confined channel, largely devoid of vegetation and natural floodplain habitat. The extensive levee system separates the river from its historic floodplain, negatively impacting water quality, reducing rearing habitat and dramatically decreasing the amount of shade-giving trees along the river. Compounded by

climate change, this has led to high water temperatures that can be lethal to salmon.

There is a legal and moral obligation to recover salmon populations in the Green-Duwamish Basin, and given the significant economic investments and commitments the County, State and Federal government and others have made in the basin, it is simply irresponsible to proceed with a flood management plan for the basin that does not fully integrate recovery plans. WRIA 9 represents 17 local governments and numerous local, state, and federal partners committed to chinook salmon recovery. The salmon need in the Lower Green River Subwatershed including protecting and restoring side channels, off-channel wetlands, tributary mouths, and pools that provide shelter and habitat complexity for young salmon must be integrated into the Plan

In addition, the Re-Green the Green: Riparian Revegetation Strategy for the Green-Duwamish and Central Puget Sound watersheds was developed to improve water temperature by restoring tree shade along the Green River and to improve habitat for threatened chinook, steelhead and bull trout. The strategy includes 2,384 newly planted riparian acres by 2025. The Lower Green is a high priority location for revegetation as identified by WRIA 9 partners. Riparian revegetation must be incorporated into the design for facility improvements and new facilities to the maximum extent possible.

WRIA 9 has proposed a "fourth alternative" that embraces a multi-benefit framework and would inform development of an alternative that:

- Integrates flood risk reduction and salmon habitat restoration consistent with established goals and policies;
- Reflects salmon habitat restoration concepts for the Lower Green River that are supported by the cities and King County;
- Makes substantive contribution towards achieving the salmon habitat goals established for the Lower Green Subwatershed; and
- Ensures vegetation management and facility alignment support healthy riparian vegetation in high priority areas identified by the 2013 Muckleshoot Riparian Aspect Mapping.

American Rivers supports the development of at least one alternative that reflects these broader, multi-benefit needs of communities within the watershed and we recommend that the District work with the WRIA 9 to develop this alternative.

Analysis of proposed alternatives

<u>What should be assessed in the PEIS?</u>

The scoping process for the Plan is intended to identify and analyze the significant adverse impacts that should be evaluated in the PEIS. The District suggests the following factors may be considered in the PEIS:

- Agriculture
- Aquatic Resources
- Climate Change
- Cultural and Historical Resources
- Cumulative Impacts
- Equity and Social Justice
- Geology and Geomorphology
- Land and Shoreline Use
- Public Health and Safety
- Recreation and Public Access
- Socioeconomics

- Terrestrial and Riparian Resources
- Transportation
- Tribal Treaty Resources
- Utilities and Public Services
- Water Resources
- Wetlands

In our opinion, the proposed Plan could have a significant adverse impact on each of the listed factors within the Lower Green River and the PEIS must include a robust analysis of the impacts of each factor listed. In particular, the PEIS must assess the following:

- Salmon Recovery:
    - Determine how each of the proposed alternatives would affect past and future salmon recovery investments in the Green- Duwamish Watershed including:
        - Completed habitat restoration projects
        - Planned habitat restoration projects
        - Revegetation projects
    - Assess how the proposed alternative could adversely affect salmon populations within the Green-Dwuamish Basin including:
        - Loss of habitat including side channels, off-channel wetlands, tributary mouths, and pools
        - Impacts to water quality including in-stream water temperatures
    - Consistency with 10 and 50-year WRIA 9 habitat targets including:
        - Off-channel habitat: 50-yr: 5,039 ac. of connected floodplain/10-yr: 240 ac reconnected
        - Riparian habitat: 50-yr: 75% of river bank vegetated to 165 ft/ 10-yr: 250 ac revegetated
        - Woody Debris: 50-yr: 1705 pieces per mi/ 10-yr: 425 pieces per mi
        - Bank Armor: 50-yr: no new, decrease total/ 10-yr: 1 mi. levee setback
    - Include mitigation for any loss of habitat or shade vegetation
- Southern Resident Orca Recovery:
    - Alignment with the Governor Inslee's Southern Resident Orca Task Force's recommendations
    - Implications for orca recovery
- Public Health and Safety
    - Potential for increased development and residual risk in improved and new levee protected areas
    - Potential economic loss due to levee breach and overtopping scenarios
    - Change in flood height and velocity provided by each alternative for an array of flood recurrence intervals.
- Equity and Social Justice:
    - Assessment of the socio-economic characteristics of communities that would benefit from proposed projects within the proposals
    - Consider ramifications for communities downstream of the Lower Green corridor
- Long-term resilience
    - Assess the potential flood risk reduction benefits provided by each proposes alternatives under potential long-term climate change scenarios including changes to hydrologic cycles
    - Assess the potential flood risk reduction benefits provided by each alternative under future development scenarios (zoning and expected growth as well as change in forest cover within the watershed.)

    - Assess vulnerability to other natural disasters including earthquakes, tsunamis, volcanoes, and mudslides and potential impacts to evacuation routes
- Tribal treaty resources
    - American Rivers does not purport to speak for any tribal government, tribal member, or culture that could be impacted by the proposed Flood Damage Reduction Project. We note, however, that the proposed actions may disturb cultural sites and treaty resources that could exist in this area. Any impacts to cultural, historic, and current tribal fisheries must be considered as a major effect of the proposed actions. We strongly encourage the engagement of tribal nations in a meaningful way, including through direct government-to-government consultation.

Comments on proposed Alternatives:
In general, American Rivers is disappointed in the limited array of Alternatives provided in the proposed Plan. The District proposes three Alternatives which include 2.03, 20.26, or 31.9 miles of upgraded or newly constructed facilities. This is a significant difference in construction of new facilities and will potentially result in substantially different impacts. A more robust array of alternatives would be beneficial, and every alternative should include nonstructural alternatives and improved integration of habitat improvements.

- The No Action Alternative is not a true No Action Alternative, as it assumes implementation of actions that are expected to take place regardless of the Plan including the currently adopted six-year capital improvement program, including PL 84-99 program levees according to the SWIF Vegetation Management Plan. However, the No Action Alternative omits alterations to the flood control system that are planned to recover salmon habitat including Downey Farmstead and Russell Road setback.
- Alternative 3, the option with the most construction of new levees, is the only Alternative with "incentives for partnership funding to create habitat restoration opportunities within Water Resource Inventory Area 9". By structuring the alternatives in this manner indicates that the only habitat restoration opportunities that could be provided will occur with the maximum amount of new infrastructure. Habitat restoration opportunities and incentives must be included in every alternative.
- Cross-sections facility types currently do not represent aquatic or riparian habitat improvements. If the intent is to include these types of habitat- as they should under a multi-objective plan- habitat details such as large wood and off-channel rearing habitat should be represented in the cross sections.
- Large rock at the toe of the riverside levee slope indicates the intent is to armor the banks to prevent or limit channel migration. Channel migration is a vital part of natural stream evolution and should be integrated to the highest degree possible within this channelized environment.
- While a 2:1 slope is not ideal, steeper slopes or floodwalls should be options for the Type B and C Facilities to maximize floodplain habitat and riparian plantings in select locations.
- Type A facilities show a floodwall on the non-river side of the levee but do not consider a floodwall on the riverside. If a wall was included the riparian/wetland planting area could be doubled. Why was this not considered?
- The use of Type D facilities- Non-Structural Improvements including home elevations, basement removal with utility addition projects, flood-proofing, berms, ring levees, farm pads, and drainage improvements- is very limited. Only Alternative 3 includes Type D facilities, with only 1.91 miles proposed. This is an extremely low amount of nonstructural improvements being proposed, and very little information on potential

locations or justification in the proposed Plan. Construction of new levees and flood control structures should be a last resort, invested in to protect vital infrastructure and development when nonstructural approaches are not feasible. The alternatives should.

Thank you for the opportunity to provide comments on the scope of the Lower Green River Corridor Flood Hazard Management Plan. American Rivers looks forward to continuing our with King County and the Flood Control District to develop more integrated solutions to flood hazard management and habitat restoration. We are available to provide additional input, answer questions and clarify our comments at any time.

Sincerely,

Wendy McDermott
Director, Rivers of Puget Sound-Columbia Basin

Page 23

JEANNETTE DORNER: I feel like I won the lottery. Thank you. So my name is Jeannette Dorner, and I am the executive director of the Mid-Sound Fisheries Enhancement Group. We are a

Page 24

nonprofit that works with the community to restore habitat for salmon in the Green, Duwamish, Cedar, Sammamish, and over on the eastern side of Kitsap County. So that's why we're "Mid-Sound." Both sides of Puget Sound, and the rivers and streams that flow into Puget Sound.

So we appreciate the opportunity to comment. And I appreciated what you said, Director Clark, about that the flood district's not interested in creating the tube that goes out into Puget Sound but is interested in something more expansive than that. We feel that that's really important.

And so I'm here tonight on behalf of my organization and also myself personally to encourage the district to consider a fourth alternative in the management plan to be even more expansive in terms of the opportunities for habitat restoration as well as flood protection.

I've actually been doing this work in salmon recovery for over 20 years now. And I've seen great examples throughout Puget Sound where people have been able to come together and do these multi-benefit projects that can address flood protection as well as habitat. And so it really is possible.

And the lower Green is a really important area

Page 25

for salmon recovery. And it's interesting because this -- your directive is to increase flood protection, but this plan has the potential to eliminate options for folks that have other priority values as well if those alternatives aren't considered in the plan.

And so at this point I'm just asking to add a fourth alternative to look at that bigger picture and not exclude opportunities for habitat immediately before we even go through the planning process.

So that's basically it. We plan to submit some written comments as well. So I'll follow up with that. And I'm happy to answer questions from folks off-line if people want to know more. Thank you.

Page 25

GREG WINGARD: My name's Greg Wingard. I'm president of Green River Coalition. We've been around in the area for quite a long time. We used to be the Middle Green River Coalition back when we primarily worked on the middle Green. I was born in Seattle. Grew up in my early years on the Duwamish River. Moved to the lower Green in Kent. Lived there for a number of years and then moved up into the upper Soos Creek basin where I currently reside.

Our organization's also interested in a fourth

Page 26

alternative. One of our concerns is that the -- while we recognize that flood control is a vital need and that there is a huge amount of human life and property and structures and all of that that are in need of protection, and that a lot of funds have already been spent on that and more will be, the habitat that is in the lower Green is a very critical reach of the river.

And one of our concerns is that decisions made in this process are going to be a huge thumb on the scale of river management for that reach of the river for 50 years or more, and that this reach of the river also has critical problems.

When the flood control dam in -- went in, that allowed business and private property owners to get much closer to the river, their structures to get much closer to the river, with the sense of safety because we're now protected by this dam. Come to find out that was a little bit misplaced. And then we built on the surrounding hillsides, and lo and behold, we had flooding that wasn't coming from up the river; it was coming from the side hills, and we have a new type of flooding to address.

Also very concerned about making sure the climate change, orca recovery, and salmon recovery are

Page 27

integrated into this plan effectively, and that we maintain our options for making sure that the river functions ecologically as well as hydraulically.

And so we're going to be looking at this with great interest. We also fully support having a fourth alternative added, and we'll be talking with you more about that. Thanks for your time tonight.

Business

CARPINITO BROTHERS, INC.

1148 North Central • Kent, Washington 98032 • (253) 854-5692, Seattle: (206) 623-8103, Fax: (253) 854-2158

King County Flood Control District
Michelle Clark, SEPA Responsible Official

RE: Comments on the Lower Green River corridor flood hazard management plan and programmatic EIS (PEIS) alternatives.

The Carpinito Brothers family farm has grown through generations to include over 700 acres in the Green River Valley. Our hand-harvested vegetables are some the freshest, tastiest local vegetables in the Pacific Northwest, and the rich, historic land on which they are grown provides optimal quality and taste. Carpinito Grown vegetables have a short, safe trip from our farm to the produce stand or distributor, making farm-to-table living easy, delicious, and community-driven. We are a significant participant in the County Executive's Local Food Initiative.

The Green River Valley has been providing the country with high-quality, nutrient-rich crops for over 160 years. The fertile soil of the valley has been prized for its quality since the 1850s, and we are proud to be working the same historic farmland today. As stated in the King County Comprehensive Plan: "Land suitable for farming is an irreplaceable natural resource." Concern regarding loss of farmland in King County lead to the Farmland Preservation Program, which funded the purchase of farmland development rights. The Farmland Preservation Program became the first voter-approved measure in the nation to protect farmland in a metropolitan area. By purchasing the development rights, the Farmland Preservation Program keeps farmland open and available through covenants that restrict development and limit the uses of the property to agriculture and open space. The covenants remain with the land in perpetuity so the land is protected regardless of ownership. To date, the Farmland Preservation Program and Transfer of Development Rights Program has succeeded in preserving more than 14,000 acres of farmland.

Our farm is included in the Farmland Preservation Program, and is in the Lower Green River Agricultural Production District (APD). Thus, it is protected as a valuable agricultural resource. In 2009, the King County FARMS report produced a set of recommendations for the following ten years. In particular, it stated that flood management projects proposed in the agricultural protection districts must be designed in collaboration with agricultural interests.

I have seen a flood management proposal that used our farm as flood storage, with setback levees placed around the outside of our farm. Such a proposal would subject our farm to irreparable damage. We would lose everything; topsoil, buildings, and the land left after the floods receded would no longer be arable or productive for farming. That proposal served to ensure a total loss of agriculture in the Lower Green River APD.

I am pleased the PEIS alternatives properly account for agricultural interests and King County's resources. I appreciate the work you have put in to form a reasonable approach to reduce flood risk within the Lower Green River Corridor. I support Alternative No. 3, which provides the most protection of agricultural resources. I greatly appreciate that all three alternatives avoid

CARPINITO BROTHERS, INC.

1148 North Central • Kent, Washington 98032 • (253) 854-5692, Seattle: (206) 623-8103, Fax: (253) 854-2158

sacrificing valuable farmland to designated flood storage. I would like to see some added protections in the Lower Green River Corridor, namely flood protections along Mill Creek and Mullen Creek.

I appreciate the consideration of local agriculture found in the Lower Green River Corridor flood hazard management plan alternatives. This consideration benefits all of King County and is in accordance with the desire of King County residents to preserve our farms and allow for greater access to local, fresh food. Thank you for your time and efforts.

Sincerely Yours,

Michael Carpinito

Michael Carpinito,
Carpinito Brothers.

Individual

From:	LowerGreenSEPA
To:	Kjristine Lund
Subject:	FW: Lower Green River Corridor Flood Hazard Management Plan
Date:	Friday, March 1, 2019 12:22:46 PM

Michelle Clark
Executive Director, King County Flood Control District
(206) 477-2985

From: Six, Carol [mailto:Carol.Six@kent.k12.wa.us]
Sent: Wednesday, January 09, 2019 3:47 PM
To: LowerGreenSEPA <LowerGreenSEPA@kingcounty.gov>
Subject: Lower Green River Corridor Flood Hazard Management Plan

I cannot make the meeting at GRCC due to work schedule.

I am wonder if there is more details as to what these proposal will do to my property and the property value.

It sounds like the intent is to put a public walkway along the river. Since I have water front property this is a concern.

When we purchased the property, there was an easement for sports fishermen/women only. This seems to have changed without notice.

You moved my fence (which was on the easement line and constructed by Fish and Game because of issue will the public trashing the area) back eight feet to install sandbags and refused to move it back when the sandbags were removed. Will these proposals cause me to lose more of property and will I still have access to the water from my property?

I am definitely against having public access to my property and my family not have access to the water from our property.

Carol Six
Administrative Assistant
Kent School District
Purchasing Department

From:	LowerGreenSEPA
To:	Kjristine Lund
Subject:	FW: Form Submission - Comments - Comments on Lower Green River Corridor Flood Hazard Management Plan Programmatic EIS
Date:	Tuesday, April 9, 2019 11:40:34 AM

LGRCFHMP PEIS comment

Michelle Clark
Executive Director, King County Flood Control District
(206) 477-2985

From: Squarespace <no-reply@squarespace.info>
Sent: Saturday, April 6, 2019 10:28 AM
To: LowerGreenSEPA <LowerGreenSEPA@kingcounty.gov>
Subject: Form Submission - Comments - Comments on Lower Green River Corridor Flood Hazard Management Plan Programmatic EIS

Name: Rick Minutoli

Zip Code: 98032-3351

Email Address: Piccantep@gmail.com

Subject: Comments on Lower Green River Corridor Flood Hazard Management Plan Programmatic EIS

Comment: 1. Make it a recreation focused project rather than a flood control first project.
2. Make year around public access and recreation the priority.
3. Public Safety must be a design criteria. Poor public safety planning now will incur costs later for the City of Kent and limit public access due to crime and other concerns.
4. Plan a systematic maintenance plan for each area along the riverbank. If maintenance plans are not built in now, it will not occur later as demonstrated in prior joint projects. The lack of maintenance drives positive usage out and destroys expensive restoration and habitat as per other joint prior projects.
5. Direct access to the river must be planned. Recreation access to the river must be planned. Public safety access to the river must be planned. Maintenance along the river bank must be planned.
6. Restored habitat must be protected in a cost effective manner after the project is complete!

(Sent via *Lower Green River Corridor Flood Hazard Management Plan*)

From: LowerGreenSEPA
To: Kjristine Lund
Subject: FW: Form Submission - Comments - Comments on the lower green SEPA alternatives
Date: Tuesday, April 9, 2019 11:39:58 AM

LGRCFHMP PEIS comment

Michelle Clark
Executive Director, King County Flood Control District
(206) 477-2985

From: Squarespace <no-reply@squarespace.info>
Sent: Tuesday, April 9, 2019 11:17 AM
To: LowerGreenSEPA <LowerGreenSEPA@kingcounty.gov>
Subject: Form Submission - Comments - Comments on the lower green SEPA alternatives

Name: Karen Spencer

Zip Code: 98032

Email Address: Kspencer@ci.seatac.wa.us

Subject: Comments on the lower green SEPA alternatives

Comment: I prefer Alternative 2 - it seems comprehensive without being the most expensive. I live in the Kent Lakes area, and the water table has been high for the last two years. The projects you propose in Alternative 2 look promising for businesses, residents, and travelers through the valley.

(Sent via *Lower Green River Corridor Flood Hazard Management Plan*)

From: LowerGreenSEPA
To: Kjristine Lund
Subject: FW: Form Submission - Comments - Seniors in Kent central or downtown area
Date: Monday, April 29, 2019 5:13:27 PM

From: Squarespace <no-reply@squarespace.info>
Sent: Friday, April 19, 2019 5:31 PM
To: LowerGreenSEPA <LowerGreenSEPA@kingcounty.gov>
Subject: Form Submission - Comments - Seniors in Kent central or downtown area

Name: Roxy Hill

Zip Code: 98032

Email Address: roxhillgah@msn.com

Subject: Seniors in Kent central or downtown area

Comment: Due to the large senior population in the downtown and central Kent, SHAG and other property management companies need to prep their building managers and residents in case of a flood. But without some kind of directive from King County they most likely won't.

(Sent via *Lower Green River Corridor Flood Hazard Management Plan*)

From: LowerGreenSEPA
To: Kjristine Lund
Subject: FW: Form Submission - Comments - Levee Designs
Date: Monday, April 29, 2019 4:38:31 PM

From: Squarespace <no-reply@squarespace.info>
Sent: Saturday, April 20, 2019 4:55 PM
To: LowerGreenSEPA <LowerGreenSEPA@kingcounty.gov>
Subject: Form Submission - Comments - Levee Designs

Name: Christine Marshall

Zip Code: 98032

Email Address: christinemarshall@comcast.net

Subject: Levee Designs

Comment: We have a levee directly behind our homes that was imposed on us several years ago. The Type A levee causes several stresses on homeowners, including only twice a year maintenance from the city which means 3 foot grass on a steep hill directly behind our homes that becomes a fire hazard in the summer and is now the only view from our living room windows. It also allows a constant flow of walkers that supposedly only authorized personnel are to use. The paved pathway along the river is far enough away that it causes little problems for us but now with the levee it means that on a daily summer basis hundreds of people are within 15 feet of our patio and windows. This option, when considered near housing should be scraped and redesigned. As aging homeowners it will not be long before we can no longer cut back this very steep hill ourselves. If this is going to be mandatory than monthly trimming should also be mandatory in the growing season.

(Sent via *Lower Green River Corridor Flood Hazard Management Plan*)

From:	LowerGreenSEPA
To:	Kjristine Lund
Subject:	FW: Form Submission - Comments - Lower Green River Mitigation to Prevent Flooding and/or Flood Damage
Date:	Monday, April 29, 2019 4:37:37 PM

From: Squarespace <no-reply@squarespace.info>
Sent: Saturday, April 20, 2019 6:42 PM
To: LowerGreenSEPA <LowerGreenSEPA@kingcounty.gov>
Subject: Form Submission - Comments - Lower Green River Mitigation to Prevent Flooding and/or Flood Damage

Name: PETER TENERELLI

Zip Code: 98035

Email Address: pekaten@comcast.net

Subject: Lower Green River Mitigation to Prevent Flooding and/or Flood Damage

Comment: Please, please, please clean the Green River and Mill Creek channels. Stop putting artificial fish habitat logs in the river. Prioritize your thinking to PEOPLE FIRST then FISH not the other way around. Fish have survived floods, muddy water, volcanos, over 80 feet of alluvium from Mt. Rainier to Puget Sound over the centuries and they will survive whatever nature "provides" in the future; however, people won't!
Until I see Mill Creek channel being cleaned out and some attempt to clean the overgrowth in and around the Green River channel I won't take seriously the County Politician's or Engineer's words about what they plan for us, the people - period!
Thank you for this opportunity to have some input....and for the record I can remember as a child not being able to easily get to my uncle's house in Covington from our home in Seattle because of flooding in Kent before Howard A. Hanson Dam was built in 1961 and I was a construction supervisor in the building the updated levees for the City of Kent in the 2000's.
Respectfully submitted...….
P.

(Sent via *Lower Green River Corridor Flood Hazard Management Plan*)

From: LowerGreenSEPA
To: Kjristine Lund
Subject: FW: Form Submission - Comments - Flood Control District
Date: Monday, April 29, 2019 4:36:31 PM

From: Squarespace <no-reply@squarespace.info>
Sent: Sunday, April 21, 2019 11:01 AM
To: LowerGreenSEPA <LowerGreenSEPA@kingcounty.gov>
Subject: Form Submission - Comments - Flood Control District

Name: Joan Crawford

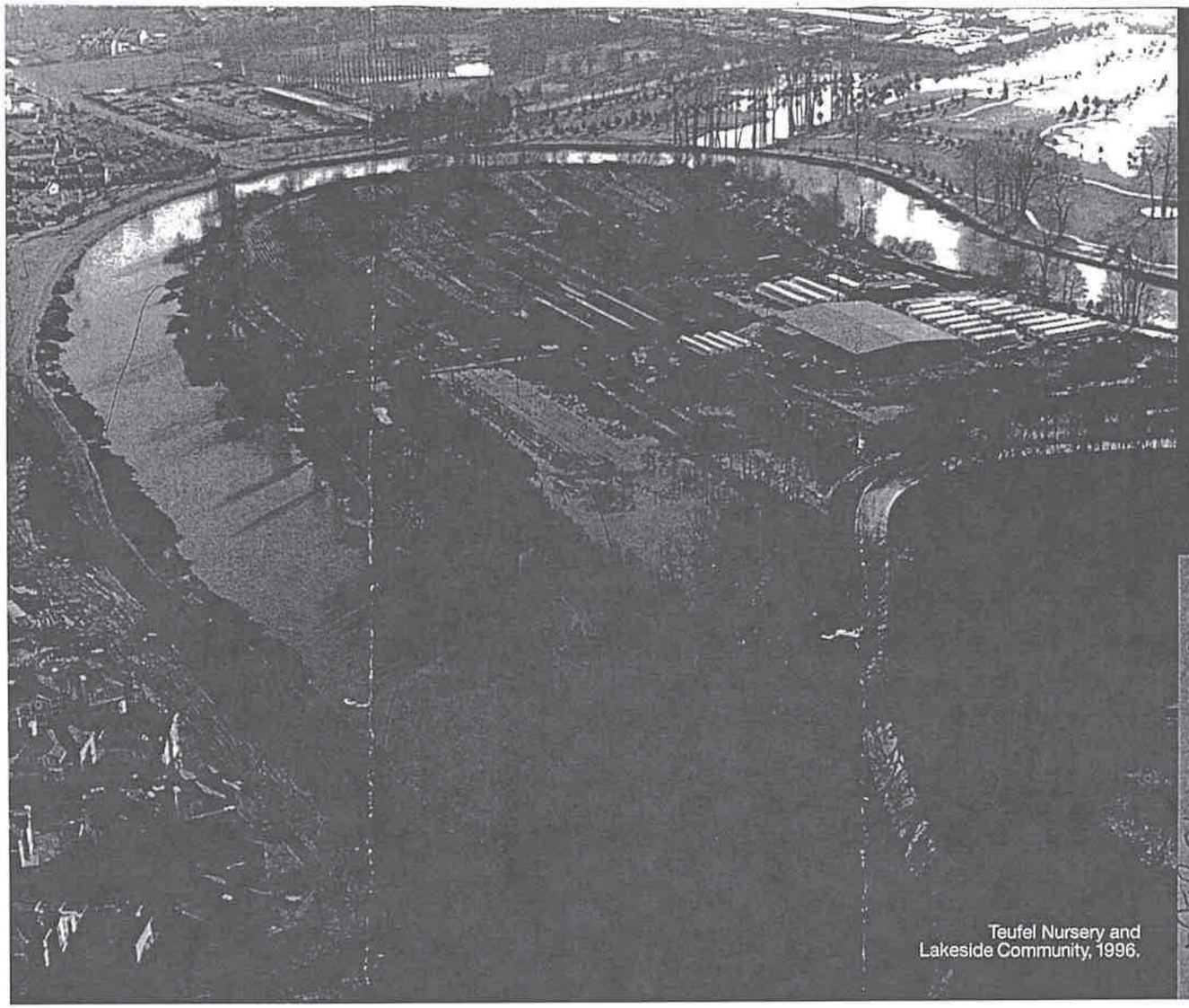
Zip Code: 9832

Email Address: joanmariecrawford2@gmail.com

Subject: Flood Control District

Comment: Glad you said what that it was a "FLOOD RISK MAP' as I would not known. I am in the Flood Risk? Could not tell from that so call map? Thanks, Joan C.

(Sent via *Lower Green River Corridor Flood Hazard Management Plan*)



Teufel Nursery and
Lakeside Community, 1996.

KNOW YOUR FLOOD RISK

PROTECT YOURSELF, YOUR FAMILY, AND YOUR PROPERTY

Floods are one of the most common natural disasters in the world and the Lower Green River is at risk of severe flooding.

Floods are dangerous and destructive, threatening our safety, blocking the movement of people and goods, and causing significant damages.

KING COUNTY
FLOOD CONTROL
DISTRICT

FLOOD RISK MAP

Map depicts flooding expected to occur in the Lower Green River Valley during a 500-year flood. *(A 500-year flood is a flood event that has a 1 in 500 chance, a 0.2% probability, of occurring in any given year)*

The King County Flood Control District is preparing a Flood Hazard Management Plan. The plan will provide a long-term approach to reducing flood risk and improving fish habitat while supporting the economic prosperity of the region. Currently, a Programmatic Environmental Impact Statement (PEIS) is underway to analyze alternatives that could be included in the plan.

AT RISK

- 22,000 residents living in the valley and floodplain
- 100,000+ jobs
- $37 million in gross business income
- 2nd largest warehouse and distribution center on west coast
- Agricultural resources

TELL US WHAT YOU WANT IN FLOOD PROTECTION

Community input will shape this plan. We need to hear from you about the future of your flood protection.

- Go to **LowerGreenSEPA.org**
- Submit comments by May 1, 2019

Email: lowergreensepa@kingcounty.gov
Online: **LowerGreenSEPA.org**
Mail: King County Flood Control District
Michelle Clark, SEPA Responsible Official
516 Third Avenue, Room 1200
Seattle, WA 98104

Informacion disponible en español por favor llame al 206.442.4390.

KING COUNTY FLOOD CONTROL DISTRICT
516 Third Ave. Room 1200 • Seattle WA 98104

PRSRT
U.S.POS
PAI
SEATTL
PERMIT N

water domes built over river so not so much water can get in

*************************AUTO**5-DIGIT 98
RESIDENT
24510 64TH AVE S APT 219
KENT WA 98032-6177

but then where will ... go

*Flood Control

✓Water evaporation

✓Vaccuming River Boats

✓Water domes over river to keep water out

✓High sea wall

from Deborah A Miller
24510 64th Ave S #219
Kent WA 98032
(206) 240-5377

From: LowerGreenSEPA
To: Kjristine Lund
Subject: FW: Form Submission - Comments - Comments on Scoping
Date: Monday, April 29, 2019 4:32:04 PM

From: Squarespace <no-reply@squarespace.info>
Sent: Monday, April 22, 2019 9:32 AM
To: LowerGreenSEPA <LowerGreenSEPA@kingcounty.gov>
Subject: Form Submission - Comments - Comments on Scoping

Name: John Oliver

Zip Code: 98042

Email Address: marnereliot@gmail.com

Subject: Comments on Scoping

Comment: It is difficult to see why one would choose Alternative 2 or 3. What are the likelihoods in a given year that either would be necessary? What are the ramifications of not having them? What is the cost? What would the cost of insuring against damage be instead of Alternative 2 or 3. In the absence of said info, I would go with Alternative 1.
While I live in Covington, I work near Ikea.

John

(Sent via *Lower Green River Corridor Flood Hazard Management Plan*)

From: LowerGreenSEPA
To: Kjristine Lund
Subject: FW: Form Submission - Comments - Comment of scope of flood protection
Date: Monday, April 29, 2019 4:35:22 PM

From: Squarespace <no-reply@squarespace.info>
Sent: Monday, April 22, 2019 7:33 AM
To: LowerGreenSEPA <LowerGreenSEPA@kingcounty.gov>
Subject: Form Submission - Comments - Comment of scope of flood protection

Name: Josh Walker

Zip Code: 98030

Email Address: drj@meridiandentalclinic.com

Subject: Comment of scope of flood protection

Comment: I believe option #3 is the best way to go. Our office building in Kent has been flooded 3 times over the last 25 years. We want to do everything we can to prevent the devastation of floods

(Sent via *Lower Green River Corridor Flood Hazard Management Plan*)

From:	LowerGreenSEPA
To:	Kjristine Lund
Subject:	FW: Form Submission - Comments - Comment on scope of the update to the King County flood plan and impact statement
Date:	Monday, April 29, 2019 4:30:02 PM

From: Squarespace <no-reply@squarespace.info>
Sent: Monday, April 22, 2019 10:53 AM
To: LowerGreenSEPA <LowerGreenSEPA@kingcounty.gov>
Subject: Form Submission - Comments - Comment on scope of the update to the King County flood plan and impact statement

Name: Marla Ballentine

Zip Code: 98002

Email Address: mj_ballentine@comcast.net

Subject: Comment on scope of the update to the King County flood plan and impact statement

Comment: In my view of the alternatives presented, Alternative 3 contains the best plan to both protect manmade infrastructure as well as attempting to preserve natural habitat which in my mind is absolutely necessary. I am guessing this is the most expensive choice monetarily, but environmentally, it is the only choice. I do not live in an area of Auburn that typically floods thanks to the protection of a strong levee system. I do live close enough to the Green River to enjoy visits from herons, ducks, geese, raccoons etc and I don't want to change that!

(Sent via *Lower Green River Corridor Flood Hazard Management Plan*)

From: LowerGreenSEPA
To: Kjristine Lund
Subject: FW: Form Submission - Comments - Mitigation Plan
Date: Monday, April 29, 2019 4:32:31 PM

From: Squarespace <no-reply@squarespace.info>
Sent: Monday, April 22, 2019 7:46 AM
To: LowerGreenSEPA <LowerGreenSEPA@kingcounty.gov>
Subject: Form Submission - Comments - Mitigation Plan

Name: Shannon Snyder

Zip Code: 98002

Email Address: slsnyder20@gmail.com

Subject: Mitigation Plan

Comment: I notice there are 2017 maps that show a levee seclusion area. When are those maps going to be effective?Second, after the project with the Corp of Engineers is complete, will the Levee be accredited?

(Sent via *Lower Green River Corridor Flood Hazard Management Plan*)

From: LowerGreenSEPA
To: Kjristine Lund
Subject: FW: Form Submission - Comments - Comments and Questions Green River SEPA
Date: Monday, April 29, 2019 4:22:42 PM

From: Squarespace <no-reply@squarespace.info>
Sent: Tuesday, April 23, 2019 1:48 PM
To: LowerGreenSEPA <LowerGreenSEPA@kingcounty.gov>
Subject: Form Submission - Comments - Comments and Questions Green River SEPA

Name: Chad Lester

Zip Code: 98002

Email Address: chadelester@gmail.com

Subject: Comments and Questions Green River SEPA

Comment: 1. I'm wondering if there is a non-private flood insurance option for the Green River Corridor? What are our options for flood insurance?

2. I am strongly in favor of Alternative 3.

My primary concern is: What are the long term maintenance costs? American municipalities tend to build more infrastructure than they can afford to maintain. I think we must consider long term maintenance costs. Generally speaking, it is better to pay more up front for long-lasting high-quality infrastructure that will stand the test of time than compromised projects that will drown future generations with maintenance costs. If you build it, then build it right.

Lastly, If new levees are built—we should not allow developers and residents to develop a false sense of security. We want to avoid a Maginot Line sense of false safety.

(Sent via *Lower Green River Corridor Flood Hazard Management Plan*)

From: LowerGreenSEPA
To: Kjristine Lund
Subject: FW: Form Submission - Comments - Flood risk downtown Kent
Date: Monday, April 29, 2019 4:29:35 PM

From: Squarespace <no-reply@squarespace.info>
Sent: Tuesday, April 23, 2019 9:10 AM
To: LowerGreenSEPA <LowerGreenSEPA@kingcounty.gov>
Subject: Form Submission - Comments - Flood risk downtown Kent

Name: Keven Bechen

Zip Code: 98032

Email Address: Keven.g.bechen@gmail.com

Subject: Flood risk downtown Kent

Comment: I live in a house just on the side neer green river, our street connects directly to three mall in kent but our side has no drainage for the streets, even in slight rain we get large pools of water build up that can last long periods of time. We need some sort of street drain system in place with our proximity to the river.

(Sent via *Lower Green River Corridor Flood Hazard Management Plan*)

From: LowerGreenSEPA
To: Kjristine Lund
Subject: FW: Form Submission - Comments - Comment on Lower green sepa
Date: Monday, April 29, 2019 4:19:54 PM

From: Squarespace <no-reply@squarespace.info>
Sent: Tuesday, April 23, 2019 8:52 PM
To: LowerGreenSEPA <LowerGreenSEPA@kingcounty.gov>
Subject: Form Submission - Comments - Comment on Lower green sepa

Name: Kristie Duggan

Zip Code: 98030

Email Address: dugganki@comcast.net

Subject: Comment on Lower green sepa

Comment: Your current plan of keeping the park and people away from the river prevents us from seeing and feeling a part of the environment. We have had many group parties there and it would be a shame to loose that. the river is the reason to be there, otherwise it is just another green space.

(Sent via *Lower Green River Corridor Flood Hazard Management Plan*)

From:	LowerGreenSEPA
To:	Kjristine Lund
Subject:	FW: Form Submission - Comments - Scoping the Programmatic Environmental Impact Statement
Date:	Monday, April 29, 2019 3:56:59 PM

Michelle Clark
Executive Director, King County Flood Control District
(206) 477-2985

From: Squarespace <no-reply@squarespace.info>
Sent: Thursday, April 25, 2019 6:14 PM
To: LowerGreenSEPA <LowerGreenSEPA@kingcounty.gov>
Subject: Form Submission - Comments - Scoping the Programmatic Environmental Impact Statement

Name: Christine Fairchild

Zip Code: 98055

Email Address: hcfairchild@gmail.com

Subject: Scoping the Programmatic Environmental Impact Statement

Comment: Of course, we all want the best and greatest flood protection possible, for as many as possible. I find the information provided is too technical... and it doesn't answer any of my questions? How will any of these changes improve my flood protection? How much will it cost? Who will pay for it? How do we compare?

(Sent via *Lower Green River Corridor Flood Hazard Management Plan*)

From: LowerGreenSEPA
To: Kjristine Lund
Subject: FW: Form Submission - Comments - What is the cost of each alternative?
Date: Monday, April 29, 2019 3:56:37 PM

Michelle Clark
Executive Director, King County Flood Control District
(206) 477-2985

From: Squarespace <no-reply@squarespace.info>
Sent: Saturday, April 27, 2019 9:59 AM
To: LowerGreenSEPA <LowerGreenSEPA@kingcounty.gov>
Subject: Form Submission - Comments - What is the cost of each alternative?

Name: Stephanie Thurston

Zip Code: 98002

Email Address: stephaniethurston801@hotmail.com

Subject: What is the cost of each alternative?

Comment: I am wondering what the cost implications of each of these alternatives? Depending on those factors, I currently think that alternative 2 would be what I would most support. It provides some planning and insurance for the future without going too far.

(Sent via *Lower Green River Corridor Flood Hazard Management Plan*)

From: LowerGreenSEPA
To: Kjristine Lund
Subject: FW: Form Submission - Comments - SEPA comment
Date: Monday, April 29, 2019 3:55:32 PM

Michelle Clark
Executive Director, King County Flood Control District
(206) 477-2985

From: Squarespace <no-reply@squarespace.info>
Sent: Monday, April 29, 2019 12:49 PM
To: LowerGreenSEPA <LowerGreenSEPA@kingcounty.gov>
Subject: Form Submission - Comments - SEPA comment

Name: Michael Kosa

Zip Code: 98032

Email Address: mkosa2000@gmail.com

Subject: SEPA comment

Comment: I have reviewed the provided documents. I am generally positive toward flood protection. However, with levees that require more than 150' setbacks, it is difficult to determine how large the affected area would be. Without the extents of the project identified, it is not possible to complete a valid SEPA process. The information is too generic to provide all benefits of a full SEPA. If work is proposed as part of this SEPA that is beyond 150' setback, that project should go through a full SEPA process. Without another SEPA, the public is not able to be engaged to judge the usefulness and extents of these impacts.

(Sent via *Lower Green River Corridor Flood Hazard Management Plan*)

From:	LowerGreenSEPA
To:	Kjristine Lund
Subject:	FW: Form Submission - Comments - Comments on the scoping of the PEIS for the Flood Hazard Management Plan
Date:	Monday, April 29, 2019 3:56:06 PM

Michelle Clark
Executive Director, King County Flood Control District
(206) 477-2985

From: Squarespace <no-reply@squarespace.info>
Sent: Monday, April 29, 2019 11:57 AM
To: LowerGreenSEPA <LowerGreenSEPA@kingcounty.gov>
Subject: Form Submission - Comments - Comments on the scoping of the PEIS for the Flood Hazard Management Plan

Name: Russell Betteridge

Zip Code: 98002

Email Address: rcbetteridge@gmail.com

Subject: Comments on the scoping of the PEIS for the Flood Hazard Management Plan

Comment: I need to be able to go to a resource and find out the projected flood depth at my home. Without this information, my flood risk is unknown and not insurable. FEMA ZONE X is not enough information. I need an active warning system that tells me, in plenty of time to protect my property and beings within it, that a flood is coming. I believe that my comments will not be heard, or used in any meaningful sense, and that your agency has already determined the path you are taking and continuing to raise my taxes to spend as you see fit, without oversight. I believe the Flood Control District should be reformed and overhauled to provide King County residents and businesses with actual protection, not just sandbags on a failing levee.

(Sent via *Lower Green River Corridor Flood Hazard Management Plan*)

From: LowerGreenSEPA
To: Kjristine Lund
Subject: FW: Form Submission - Comments - MyFloodMap.com flood risk awareness
Date: Monday, April 29, 2019 3:56:24 PM

Michelle Clark
Executive Director, King County Flood Control District
(206) 477-2985

From: Squarespace <no-reply@squarespace.info>
Sent: Monday, April 29, 2019 11:51 AM
To: LowerGreenSEPA <LowerGreenSEPA@kingcounty.gov>
Subject: Form Submission - Comments - MyFloodMap.com flood risk awareness

Name: Samuel Green

Zip Code: 98092

Email Address: sgreen364@gmail.com

Subject: MyFloodMap.com flood risk awareness

Comment: Hi,

I believe King County should use a website called MyFloodMap.com to help increase awareness about flood risk. As the founder and developer of MyFloodMap.com. I'd be happy to talk about how we can work together on this issue.

Best,
Sam Green

(Sent via *Lower Green River Corridor Flood Hazard Management Plan*)

From:	David Mattern
To:	Alyssa Worsham
Subject:	Fwd: Form Submission - Comments - Comments on Scoping the Programmatic Environmental Impact Statement for the Lower Green River SEPA
Date:	Wednesday, May 8, 2019 8:19:30 PM

Begin forwarded message:

From: Kjristine Lund <klund@lundconsulting.com>
Date: May 8, 2019 at 5:45:43 PM PDT
To: David Mattern <DMattern@parametrix.com>, Jenny Bailey <JBailey@parametrix.com>
Subject: FW: Form Submission - Comments - Comments on Scoping the Programmatic Environmental Impact Statement for the Lower Green River SEPA

FYI

From: LowerGreenSEPA <LowerGreenSEPA@kingcounty.gov>
Date: Wednesday, May 8, 2019 at 5:45 PM
To: Kjristine Lund <klund@lundconsulting.com>
Subject: FW: Form Submission - Comments - Comments on Scoping the Programmatic Environmental Impact Statement for the Lower Green River SEPA

Michelle Clark
Executive Director, King County Flood Control District
(206) 477-2985

From: Squarespace <no-reply@squarespace.info>
Sent: Tuesday, April 30, 2019 4:30 PM
To: LowerGreenSEPA <LowerGreenSEPA@kingcounty.gov>
Subject: Form Submission - Comments - Comments on Scoping the Programmatic Environmental Impact Statement for the Lower Green River SEPA

Name: Chris Varo

Zip Code: 98032

Email Address: chris.varo@kingcounty.gov

Subject: Comments on Scoping the Programmatic Environmental Impact Statement for the Lower Green River SEPA

Comment: The Riverview Community between 222nd St S. and 212th St S. along the west side of the Green River needs levy protection like was provided during the repair of the Howard Hanson Damn many years ago. Please make sure our side of the river is protected from flood with the constructions of new levies. I see you're planning on constructing a levy on the east side of the river opposite the Riverview development but I haven't seen any plans to protect our side, the west side, of the river from flooding.

Please acknowledge the receipt of this request.

(Sent via *Lower Green River Corridor Flood Hazard Management Plan*)

From: Squarespace
To: LowerGreenSEPA
Subject: Form Submission - Comments - No Action Initiative
Date: Wednesday, May 1, 2019 8:24:01 PM

Name: Brandon Patoc

Zip Code: 98032

Email Address: brandon@brandonpatoc.com

Subject: No Action Initiative

Comment: I stand by and support the no action initiative. I've lived in the Kent Valley for nearly 32 years and feel confident in the current plan and infrastructure.

(Sent via *Lower Green River Corridor Flood Hazard Management Plan*)

From: jaweir@povn.com
To: LowerGreenSEPA
Subject: Develop habitat-friendly plan for the Lower Green River
Date: Tuesday, April 30, 2019 8:16:34 PM

Dear Executive Director Clark

The King County Flood Control District has a once-in-a-generation opportunity to increase salmon habitat and flood storage capacity and reduce flood risk. Please develop an alternative for the Lower Green River Corridor Flood Hazard Management Plan that will support thriving habitat for salmon.

Sincerely,

Joyce Weir
PO Box 973
Newport, WA
99156
jaweir@povn.com

KING COUNTY
FLOOD CONTROL
DISTRICT

516 Third Avenue • Room 1200 • Seattle, WA 98104
206.296.1020 • info@kingcountyfloodcontrol.org
www.kingcountyfloodcontrol.org

Lower Green River Corridor Flood Hazard Management Plan
Programmatic Environmental Impact Statement
Scoping Comment Form

Submit a comment on the PEIS by filling out this form and leaving it in the comment box at today's meeting or by mailing it to the following address by January 29, 2019:

King County Flood Control District
Attn: Michelle Clark, SEPA Responsible Official
516 Third Avenue
Room 1200
Seattle, WA 98104

You can also email comments to LowerGreenSEPA@kingcounty.gov or submit them online at www.lowergreensepa.org.

Name: James Laitila **Email Address:** James.Laitila@Gmail.Com	**Address:** 19215 SE Green Valley Rd Auburn, WA 98092

Comment:

Future plans to increase storage at HAH reservoir should be considered to help with flood control and flow augmentation during "dry" season to protect fish habitat and maintain better water temperature for Salmon.

(please feel free to use the back of this form if you need more space)

Email Template:

Dear Executive Director Clark

I am writing to urge you and the King County Flood Control District to strengthen the Lower Green River Corridor Flood Hazard Management Plan by taking the following action:

1. Define integrated goals that support the needs of both people and fish;
2. Maximize the number of levee setbacks to increase flood storage capacity and salmon habitat and more effectively manage floods; and
3. Offer clear habitat restoration actions that address the critical needs of salmon rearing habitat and riparian shade in the Lower Green River.

The Green-Duwamish River is the foundation for the prosperous communities and rich environment of King County. The river flows for 100 miles from the Cascade Mountains to Elliott Bay. Salmon are an icon of the Pacific Northwest, and the Puget Sound area's identity is linked to healthy rivers and healthy salmon. However, thanks in large part to antiquated floodplain management and encroachment by development, the chinook salmon and steelhead of the Green-Duwamish lack the critical habitat needed to complete their lifecycle, putting the population at risk of extinction.

Strengthening the Lower Green River Corridor Flood Hazard Management Plan to effectively manage floods in a way that reflects the original multi-objective vision developed during the System-Wide Improvement Framework (SWIF) process will ensure the district's commitment to balance flood risk reduction with salmon recovery.

More than $163 million has been invested to restore vital chinook salmon habitat as part of the Green-Duwamish Salmon Habitat Plan (2005). The Duwamish clean-up, fish passage at Howard Hanson Dam, and this Corridor Plan will result in an additional $1 billion invested in the watershed over the next 50 years. Restoring rearing habitat in the Lower Green River is essential to meet salmon recovery goals and maximize the returns on these investments.

It is due to the imminent threat posed by the Corridor Plan that American Rivers has listed the Green-Duwamish River as one of America's Most Endangered Rivers® of 2019.

The King County Flood Control District has a once-in-a-generation opportunity to increase salmon habitat and flood storage capacity and reduce flood risk. Please develop an alternative for the Lower Green River Corridor Flood Hazard Management Plan that will support thriving habitat for salmon.

Sincerely,

[Email template comments received from 581 individuals]