

Murray Basin Combined Sewer Overflow Control Facility Design Advisory Group

Meeting Summary

December 13, 2011 6:30-8:30 pm

Fauntleroy School House, 9131 California Ave S.W.

Overview

On December 13, 2011, the King County Wastewater Treatment Division (WTD) hosted the second Design Advisory Group (DAG) meeting for the Murray Basin Combined Sewer Overflow (CSO) Control Facility. The DAG is providing input and advice regarding the site's layout including facility location, landscaping and aesthetics, and the site's post-construction use. The group is reviewing technical analyses in order to understand proposed layouts and provide input about design options to inform the County's decision-making. The DAG is acting as a sounding board for the project technical team, and a project liaison to the public, helping ensure the County project team receives a broad community perspective.

Topics for the December 13 DAG meeting included:

- Follow up from the introductory DAG meeting, the design workshop and open house
- Project discussion with Seattle Department of Transportation's (SDOT) Mary Rutherford
- Geotechnical summary
- Odor control and electrical facilities requirements
- Feedback on design opportunities given odor control and electrical facility requirements

Welcome and Introductions

Meeting facilitator Penny Mabie welcomed participants and thanked everyone for their attendance, especially considering the busy holiday season. Penny noted that the facilitation team has not yet sent out the DAG operating guidelines for final approval and adoption and will do that shortly after this meeting. Penny led a round of introductions and reviewed the meeting agenda.

WTD project manager Erica Jacobs explained the project to ensure all community members in attendance were aware of the project's goals. WTD community relations lead Doug Marsano added that King County has made community involvement in the facility's design a top priority and hopes that the project can ultimately become an asset to the community.

Community Design Workshop Common Themes

Doug turned the group's attention to the handout outlining common themes from the October 29 Design Workshop. The workshop offered community members the opportunity to express their views and values to help inform facility design while at the same time learning about the facility's needs for safety and reliability. The morning session primarily focused on discussion and the afternoon session consisted of small groups working hands-on with schematic layouts and drawings by the project team to help visually articulate some of the project's possibilities. In the end, the workshop produced the following principles:

- Minimize "industrial facility" feel
- Encourage views of Puget Sound
- Discourage through traffic on Beach Drive
- Enhance continuous space between Lowman Beach Park and King County's new site across the street

Doug recommended that DAG members keep these themes in mind as they consider the facility's electrical and odor control requirements.

Seattle Department of Transportation (SDOT) Briefing

SDOT's Mary Rutherford joined the group to answer questions about the department's procedures for street improvements and changes. She explained that SDOT's process addresses several different components when working within a right-of-way including lighting, sidewalks and other street features. She noted that SDOT always attempts to work collaboratively with representatives from any entity who owns and/or operates infrastructure around the right-of-way. King County and SDOT have been working together from the beginning of the Murray CSO project. This is important for consistency across existing policies and to allow for discussion of a variety of streetscape concepts.

Mary responded to several DAG members who asked about discouraging traffic down Beach Drive. She stated that SDOT is generally supportive of the idea and that narrowing the street from the Lincoln Park Way entrance would most likely calm traffic. A 25-foot wide street would still permit parking on both sides and give enough room for one vehicle at a time, thereby discouraging outside traffic.

Questions and Discussion

- Chas Redmond brought up the idea of softening the edge of the road to allow for parking but also serve as a buffer.
 - Mary answered that the idea is certainly feasible – limiting parking spots would fit well with the City’s “Walk, Bike, Ride” program.
 - Chas asked if the street could be taken a step further and formed into a woonerf - a street without boundaries that is equally shared by all street users. Pedestrians, cyclists, and vehicles all move at the same slow speed.
 - Mary responded that SDOT has been experimenting with these kind of streets (such as in South Lake Union) and would not be against putting a similar concept in the project’s design plans.
- Barbara Owens asked who represents King County at meetings with SDOT and what will be presented at those meetings.
 - Erica answered that it is usually herself along with Hien Dung, WTD’s permitting lead. A preliminary meeting will be held with SDOT on January 24.
 - Doug added that as the DAG starts to find commonalities among design concepts, King County will then bring those ideas to SDOT and solicit feedback.
- Scott Gunderson asked if the Murray right-of-way will be addressed at the meeting with SDOT.
 - Erica and Mary responded that the issue will be addressed.
- Patrick stated that some DAG members presume the facility could be placed within the Murray right-of-way to make the facility more accessible. Would it be possible to place permanent structures in the Murray right-of-way?
 - Mary answered that SDOT looks at the merits of the design and the site’s current use. One option is a vacation of the right-of-way, effectively handing it over to King County. This would be a longer process as there must be a measurable community benefit to offset the loss of the right-of-way. Another alternative is for King County to get a term permit for a permanent structure within the right-of-way. King County is already in the process of applying for a term permit for the Barton CSO. The term permit would be less work upfront than a vacation.
- Cheryl Eastberg asked about the long- and short-term costs of each option.
 - Mary answered that the term permit can last anywhere from five to 75 years. A vacation has a built-in cost in that there must be a community benefit seen from the project.
 - Cheryl asked about SDOT’s Street Improvement Process (SIP).

- Mary responded that a SIP permit is exactly what King County will need for this project. It requires the applicant to supply a lot of information, especially if it is a non-standard project.
- Patrick asked if the boundary between SDOT's right-of-way and Lowman Beach Park must be strictly adhered to or if the community may move it slightly to adjust for certain uses, such as an expanded pedestrian zone.
 - Mary answered that a right-of-way is first used for the mobility of citizens, then for utility use. The locations of lanes within a right-of-way can always be talked about, especially if the Parks Department is at the table. An extra-wide sidewalk, for example, might not be contained by the right-of-way itself, in which case it could spill over into the park.
 - The King County project team noted that altering the right-of-way on the western side of Beach Drive would be an issue for Seattle Parks and SDOT to resolve.
- Chas asked how the community could get SDOT to engineer a more pedestrian- and bicycle-friendly entrance to Beach Drive and the park. This is an excellent opportunity to take back part of the street for non-vehicle uses.
 - Mary answered that the community should write down their concerns and goals in order to inform SDOT's ongoing discussion about the site.

Presentations

Geotechnical Investigation Results

HDR consultant team project manager Dan Pecha and HDR engineer Eric Bergstrom presented results from an initial geotechnical investigation. Overall, six borings were made around the site. No surprises were found and the team's expectations were largely confirmed. The groundwater level is two to three feet below ground surface. The site is within a valley or river bed with hard glacial soils found at about 70 feet deep. Above the glacial soils is a loose mix of alluvium deposits (sand, peat, and clay) running through the middle of the site. Constructing a facility in these materials is feasible, but more complicated than in glacial soils. A circular tank design will help the tank more easily support itself.

- Cheryl asked how water is kept out of the foundation during construction
 - Dan answered that a circular cofferdam is built with excavation support. The facility is then built within that support system. Some dewatering will be used to build trenches between the facility site and the existing Murray Pump Station, but for the most part, dewatering will not be used for facility construction.
- Chas asked if the team anticipates any settling movements after the facility is built.
 - Eric answered that the site is not one where the facility's foundation will move laterally. The team is not anticipating any shifts of the facility.

Odor Control Facility

Dan stated that the existing odor control facility currently located in Lowman Beach Park will be removed and possibly replaced with landscaping. The new odor control facility will allow for increased safety and accessibility for King County employees, increased efficiency for maintenance, and more effective control of the pump station's odor. The odor control facility can be built below or partially below grade on the site east of Beach Drive.

Dan explained that air is pulled in through carbon to remove the odor and then pushed through the exhaust stack by a fan. There will be two independent odor control units – one for the pump station, the other for the tank. Employing independent systems allows maintenance to occur on the odor control for the facility without affecting odor control on the pump station or vice versa.

Two options exist for the exhaust stack: a vertical stack, which could be masked to blend in with the existing site, or a horizontal discharge which could be designed so that Puget Sound winds will disperse the exhaust air.

- Patrick asked how discernible the odor will be to the neighborhood and park users.
 - Dan answered that the odor should not be detected by nearby neighbors.
 - Erica added that there have been numerous odor complaints with the current facility because of its passive design. The new facility will actively remove odor from the air.
 - Dan theorized that the current system probably doesn't have enough vents to handle all the air that it receives.
- Chas remarked that the 53rd Avenue Pump Station has no noticeable odor or exhaust stack.
 - Doug responded that the stack at 53rd Avenue Pump Station stack is disguised as a light post.
- Cheryl asked if there are any examples of facilities with a stack at ground level.
 - Dan answered that there are a few examples, but not many in the area.

Electrical Facility

Dan reviewed the electrical needs of the project. A standby generator will be installed, something the current station does not have. The electrical facility will be above ground due to the shallow groundwater level. The existing pump station's electrical equipment has a history of groundwater intrusion, which is potentially dangerous. The generator will be relatively large – up to 800 horsepower. Additionally, King County requires a fuel storage capacity of at least 24 hours, requiring a nearly 2000 gallon fuel tank will need to be built as the diesel engine goes through about 70 gallons of fuel per hour. Noise-reducing components will be included to meet code, making the generator's noise roughly equivalent to a typical conversation. Like most

engines, the generator requires a large intake for air, a radiator, and an exhaust fan to push hot air out.

- Linda Cox asked about the inclusion of night time lighting.
 - Penny answered that lighting is not a topic of this meeting but would be addressed at the next meeting on the facility's architectural themes.
- Chas asked if the generator and electrical room both need to be at grade.
 - Dan responded that the high groundwater levels require both rooms and the fuel tank to be placed at or above grade.
- Patrick commented that the site is sloped. One idea could be a configuration where the facilities are above ground with a sitedscape sloping away from Lincoln Park Way down to the park.
 - Dan responded that the site certainly lends itself to placing the facilities back into the hillside as much as possible.
 - Patrick added that if the retaining wall along the slope is secured satisfactorily, the facilities could be placed back into the hill and covered with a gradual slope, using the roofs of the facility structures. This could then be used as educational opportunities for living roofs and stormwater management – using sustainable infrastructure to prevent the exact problem that the tank below has been constructed for.
- Chas remarked that some of the facilities and their components must require some sort of security measures, particularly the fuel tank. He asked what specifically can be used by the public and what is off-limits.
 - Penny mentioned that security measures will be discussed with the project's architects at the next DAG meeting.
 - Dan added that there will need to be a number of hatches for maintenance access. The exact number is not yet known, but it is something to keep in mind.
 - Cheryl stated that not everything in the facility can be on a horizontal plane – some vertical openings in the structure will be a necessity.
 - Dan responded that the primary maintenance the odor control facility will require is a vactor truck excavating used carbon from the facility and inserting new carbon. Also, the generator needs to be at grade so that it can be removed if necessary.
 - Erica added that operations and maintenance access, particularly of specialized vehicles, will be required for some of the facilities.

Next Steps and Action Items

Doug stated that the next DAG meeting will most likely take place in late January or early February. A Doodle poll for scheduling will be sent out to all DAG members. The next DAG meeting will include a larger discussion on the architectural and landscape design aspects of the

project, including green building opportunities. The meeting will also feature drawings that the County prepares for the meeting with SDOT. Dan added that HDR could have some early conceptual drawings by early to mid January.

Penny reminded the group that the process will get complicated due to the multiple levels and departments of government involved with the project. King County must work with the City of Seattle and the Department of Planning and Development to acquire permits since components of the project will be constructed on City property.

Doug told the group that the County is now in the process of a major siphon and pipe replacement in the Ballard and Interbay neighborhoods. The replacement project is using some of the same construction techniques that the Murray CSO project will require. The 70-year-old siphon currently takes wastewater from North Seattle to one of the County's wastewater treatment facilities. He invited any DAG or community members to contact him if they would like a tour of the site.

Action Items

- Send the DAG operational guidelines out to the group for comment and finalization.
Find examples/pictures of woonerfs and other non-traditional road concepts.
Find examples of odor control facilities that discharge at the ground level.
- Keep January 18th open for King County to visit and update the Morgan Community Association (MoCA) on the project.
- Send out a Doodle poll to DAG members to determine the best day for DAG meeting #3.

Attendance

DAG members

- ☐ Scott Gunderson
- ☐ Pamela Allen
- ☐ Barbara Owens
- ☐ Chas Redmond
- ☐ Steve Utaski
- ☐ Patrick Gordon
- ☐ Cheryl Eastberg

Community Members

- ☐ Linda Cox
- ☐ Nancy Lestich
- ☐ Deb Reinhart
- ☐ Charlie Dougherty, Parametrix

City of Seattle Representative

- ☐ Mary Rutherford (SDOT)

WTD Project Staff

- ☐ Erica Jacobs King County WTD Project Manager
- ☐ Doug Marsano King County WTD Community Relations Lead
- ☐ Hien Dung King County WTD Permitting Lead

Project Consultants

- ☐ Dan Pecha HDR Project Manager
- ☐ Eric Bergstrom HDR Engineering Lead

Facilitation Team

- ☐ Penny Mabie, EnviroIssues
- ☐ Landon Bosisio, EnviroIssues