Clean Water Services
Clean Water Advisory Commission
Meeting Notes

November 14, 2018

Attendance

The meeting was attended by Commission Chair Tony Weller (Builder-Developer), Commission Vice Chair Mike McKillip (District 3/Rogers) and members Lori Hennings (Environmental), John Jackson (Agriculture), Art Larrance (At-Large/Duyck), Judy Olsen (Agriculture), Stu Peterson (Builder-Developer), Erin Poor (District 1/Schouten), David Waffle (Cities/non-voting), Matt Wellner (Builder-Developer), and Kevin Wolfe (Business) along with Diane Taniguchi-Dennis (Clean Water Services Chief Executive Officer (CEO)/non-voting).

Commission members Molly Brown (District 2/Malinowski) and Richard Vial (District 4/Terry) were not in attendance.

At the meeting from Clean Water Services were Mark Jockers (Government and Public Affairs Manager), Chris Maher (Senior Operations Analyst), Anne MacDonald (Senior Water Resources Program Manager), Stephanie Morrison (Executive Assistant), Damon Reische (Planning and Development Services Division Manager), Ryan Sandhu (Field Operations Division Manager), and Tonya Zinzer (Engineering Project Coordinator).

1. Call to Order

Mr. Weller called the meeting to order at 6:37 PM. The meeting was held in the Tualatin Room at the Clean Water Services Administration Building Complex in Hillsboro, OR.

2. Previous Meeting Notes

There were no comments regarding the meeting notes from September 12, 2018.

3. 2018 LIFT Intelligent Water System Challenge Award

Mr. Sandhu noted that the Leaf Program discussion originally scheduled for this meeting will be on the January agenda instead. He thanked Ms. Hennings for her help with LIDAR data from Metro.

Mr. Sandhu, Ms. Zinzer, and Mr. Maher spoke about the 2018 LIFT Intelligent Water System Challenge and related background information ***(presentation attached)***. Clean Water Services teams submitted two projects. One dealt with increasing pump station efficiency and one was based on using sensor data as an early warning of a toxic event (related to water quality). Results of the competition were announced during the Water Environment Federation's Annual Technical Exhibition and Conference (WEFTEC), held Sept. 29-Oct 3, 2018 in New Orleans. The toxic event warning project received an Honorable Mention. The pump station project was selected as a finalist and awarded Third Prize ($5,000.00).

Ms. Zinzer reviewed the Clean Water Services energy policy, which was developed with input from Commission members in 2009 and emphasizes renewability, conservation, and partnerships, and pointed out that the Challenge project meshed well with those aspects. Ms. Zinzer shared some other examples of how Clean Water Services carries out the energy policy.

Mr. Maher described the Clean Water Services project, "Influent Pump Station High Efficiency Operation (at) Rock Creek AWWTF." Wastewater (influent) destined for the Rock Creek Advanced Wastewater Treatment Facility goes into a "wet well" at the pump station. The pumps must lift the influent 70 feet before it can pass through screening, grit removal, and other processes within the treatment facility. Staff saw an opportunity to decrease energy use and reduce operation and maintenance costs by increasing the water level in the influent wet well so the pumps would have lower head (gravity/resistance) to overcome. No new equipment was required; they analyzed historical records as well as data from existing monitoring tools to predict and manage risks and concerns such as backups, sanitary sewer overflow, blockage, grit accumulation, odor generation, etc.

Based on the four-month project results, increasing the wastewater level by 12 feet in the wet well would reduce energy use by more than 500,000 kWh/year and save more than $30,000. In addition, the pumps had fewer clogs and staff expects to see less wear and lower maintenance requirements. There are still some long-term questions about grit, odors, corrosion, etc. and those will be studied further as the new approach continues at the Rock Creek pump station. Mr. Maher noted that there are about 40 other pump stations to which this cost-effective approach could be applied.

Mr. Sandhu added that the Challenge project not only resulted in energy and cost savings, but also fostered important inter-department relationships. For example, data that had been only seen/used by one group is now available to all staff for any purpose. The project allowed treatment plant staff and field staff to collaborate and explore how changes in one department's work might affect the work of other departments.

Questions and comments related to the LIFT Challenge presentation are listed in Appendix A.

4. Design & Construction Standards Update Implementation Plan

Mr. Reische outlined the latest progress on the Design & Construction Standards (D&Cs) update ***(presentation attached)*** for stormwater management, reminding Commission members of their charge from the Clean Water Services Board of Directors to serve as a sounding board and public forum during the update process. As reviewed in detail at several previous Commission meetings, the D&Cs update was triggered by requirements in the Clean Water Services NPDES (National Pollutant Discharge Elimination System) permit which was renewed in 2016.

Phase I of the update primarily focused on a 1,000 SF treatment threshold and the prioritization of LIDA (Low Impact Development Approach) and was completed in April, 2017 with input from Commission members. The major focus for Phase II of the

update is the new requirements for addressing hydromodification. These must be adopted by April, 2019 to comply with the permit. Hydromodification is the alteration of land which results in changes to the timing and volume of stormwater runoff. Such changes lead to erosion and sediment in receiving streams and rivers and negatively impact water quality, and beneficial uses.

Mr. Reische said that Clean Water Services will address hydromodification with a combination of tools and practices to manage stormwater in the context of the overall landscape and ecological system of a particular stream basin or sub-basin, rather than impose a "one-size-fits-all" requirement throughout the entire watershed. There will be a strategy tailored to each sub-basin, with several options for each development site, which can be adapted and expanded to a regional scale. Staff will focus first on strategies for areas which are or will soon see the most development and that are at highest risk (for example, Cooper Mountain with its steep terrain). Mr. Reische noted there will be ongoing refinements as more sub-basin strategies are developed and as the strategies are actually implemented.

Mr. Reische also noted the new hydromodification requirements will have a significant impact on upcoming development projects and potentially for those in progress. Staff members have been working with partner cities to identify likely issues and consider how to accommodate projects in various stages of the development process when the new rules take effect. City planning staff input indicates the hydromodification standards are of a scale more similar to land use requirements than that of engineering development standards.

With this in mind, staff will propose to the Board of Directors an implementation policy that ensures the new standards take effect no later than April 22, 2019 as required by the NPDES permit but also provides some predictability for projects in progress. Mr. Reische outlined the proposed implementation policy for Commission input*:

1. Current standards (D&Cs) will apply (through engineering, permitting, and construction) when the land use application is made on or before the effective date of the new/updated D&Cs. Applicants will still have 180 days to get to a complete land use application.

2. New/updated standards (D&Cs) will apply when the land use application is made after the effective date of the new/updated D&Cs.

3. For smaller projects which do not have to go through a land use application/approval process (such as building a house on an older existing lot of record, adding a deck to an existing home, etc.), current standards (D&Cs) will apply if the construction permit application is made within 90 days of the date the new/updated D&Cs take effect AND construction begins within one year after application is made.

Mr. Jockers will verify that all Commission members are included on the email list for

news about D&Cs updates.

Mr. Reische will bring more information to the January Commission meeting, with public meetings after that.

**Questions and comments related to the D&Cs update are listed in Appendix B.*

5. Announcements

During the LIFT Challenge presentation, Mr. Jockers noted that Clean Water Services was further recognized at WEFTEC with a "Utility of the Future" award and a "Perfect Permit Compliance" award.

Mr. Jockers shared a list of Commission member names, terms, and term expiration dates. He noted that the Commission is set up so that only about 25% of the Commission terms expire each year.

Mr. Weller asked about the status of the challenge to the NPDES permit renewal, which was mentioned at a past Commission meeting. Ms. Taniguchi-Dennis said Bob Baumgartner (Assistant Director, Regulatory Affairs Department) would have that information.

The next meeting will be Wednesday, January 9, 2019.

6. Adjournment

Mr. Weller adjourned the meeting at 8:34 PM.

(Meeting notes compiled by Sue Baumgartner.)

Appendix A

Clean Water Services Advisory Commission Meeting Notes
November 14, 2018

Questions and comments regarding the LIFT Challenge Pump Station Project:

1. What is "demand response?"
   1.1. On days when there is a high demand for power, PGE calls its Energy Partners (such as Clean Water Services and other big power users) and asks them to reduce demand; our staff turns off mixers and other equipment for 2-4 hours.
   1.2. PGE also has a "dispatchable standby generation" arrangement with Clean Water Services, whereby PGE provides maintenance for the generators at pump stations and in exchange can turn generators off and on according to power needs.

2. Does all the Clean Water Services energy savings get calculated into PGE's "credit" for energy savings goals?
   2.1.1. Yes, as far as staff knows.
   2.1.2. Energy Trust calculates the energy savings for many corporate entities and provides that data to PGE.

3. Couldn't these conservation efforts be seen as taking away from PGE's energy sales?
   3.1. No; it is a cooperative arrangement (that helps PGE meet its larger goals).
   3.2. PGE even provides some financial incentive to Energy Partners. Clean Water Services received about $12,000 for having two treatment plants participate in the demand response program over the summer season (July-October). Partners receive these funds even if PGE doesn't call out with a request; it is worth it to PGE to have that flexibility and that energy in reserve.

4. What is grit in pipes?
   4.1. Grit is particles (sand, for instance) that can settle out and continue to collect in sanitary sewer pipes, increasing maintenance costs, making the system less efficient as it reduces the pipe capacity for transporting wastewater, and possibly even causing clogs/backups. It's a potential issue in high-efficiency mode because the slower the wastewater moves and the longer it moves more slowly or is held, the more grit settles out.

5. When projecting annual savings, what assumptions did you make about frequency of going to high-efficiency mode?
   5.1. We looked at numerous estimates but eventually assumed standard mode 20% of the time and high-efficiency mode 80% of the time.
   5.2. We'd be pretty comfortable using high-efficiency mode throughout the summer and would probably still use it at this time of year, based on 10-day forecasts.

6. If you are thinking you would continue/expand this practice, could you reinvest the money you save on energy costs into automating the process?

6.1. Yes, we would like to continue using high-efficiency mode and look at using it at other pump stations, starting conservatively with this one by not using it much in the winter but starting again around June.
6.2. Yes, the savings could definitely be reinvested in some way.

7. As you were looking at various ways of doing this and how it affected the treatment plant, did you find any potential problems in terms of the (NPDES) permit conditions?
   7.1. The main concern is the increase in flow that happens when reducing the level in the IPS (drawdown), and that a flow surge could upset the process. Particularly during the summer months, using high-efficiency mode did not challenge the plant from a flow quantity perspective. It was the equivalent of about 1.5 MGD (million gallons per day) extra, and we selected drawdown times to mimic normal fluctuations.

8. Is this something that could be implemented at the Durham wastewater treatment facility?
   8.1. Yes, that is very possible. There is a large conveyance project underway there at the moment, so we'd have to wait until that is done.

Appendix B

Clean Water Services Advisory Commission Meeting Notes
November 14, 2018

Questions and comments regarding the D&Cs Update:

1. Does having strategies (at sub-basin level) mean capital projects?
   1.1. Possibly, but may be more looking at risks, prioritizing, and staying flexible to accommodate development as it occurs.

2. There has to be (a policy/process for implementing that provides some continuity/certainty); you can't buy a piece of property and then find out you will lose 20%. And how it's implemented has to track with the land use—you can't make those decisions without that info.

3. Is there a grace period for a project that has progressed to a certain stage?
   3.1. In land use it's tied to the approval date; standards as of that date are the ones that apply regardless of how they change in the future. Everybody involved with that property, including neighbors, needs to know what is happening or could happen.
   3.2. The proposed implementation policy would have current standards apply if the land use application is made prior to the effective date of the new standards. It would not have to be a complete application—you would still have 180 days to finish the application.
      3.2.1. There is a lot of work and research before an application is submitted so it's not likely that someone making a frivolous application just to get in before the deadline would be able to pull together a legitimate complete application.
      3.2.2. This will create an interesting window as you get closer to the effective date of the new standards; some projects may not happen as a developer can't run the risk of getting stuck not being approved prior, and/or there may be a big rush of applications.

4. What is the best way to track the progress as the hydromodification standards are being developed?
   4.1. There is an email list for anyone interested, as well as information posted on the Clean Water Services website (cleanwaterservices.org). Staff will be speaking to builder/developer groups and there will be public meetings as well as a public hearing. ,

5. (The proposed implementation policy) will be challenging if someone buys a lot in an existing subdivision that had all its infrastructure designed under older standards and the new standards apply to that lot when there is no infrastructure in place for it.
   5.1. Some of those do exist; we also have a fair number of landowners who do major remodels, change their driveways, add a structure, etc. We're not looking to make people build a pond just because they are adding a deck. They'll have to

address water quality and there should be some sort of credit or fee-in-lieu toward hydromodification.

5.2. Why 90 days ("grace period" for activity not requiring a land-use application); why not 180 days? Why do we have such restrictions, especially as housing costs keep going up? This agency does not seem to be concerned about the cost of housing.

5.2.1. We do have to meet the permit requirements and there is a deadline for that. Also the 90-day period from the April effective date would be into July, around the time that rates & charges would be updated anyway.

5.2.2. The "permit" is the NPDES permit issued via DEQ; Clean Water Services does not really have a choice.

6. How do you let people, who really have no understanding of this, know about the new standards—and that Clean Water Services doesn't have a lot of leeway in implementing or not implementing these new standards? Billing inserts?

7. When will these new standards be written and available for review? There is nothing on paper yet and the effective date is less than six months away. People are trying to plan projects right now.

7.1. It is a complicated process. Some drafts will be out in December and more in January. Until more sub-basin strategies are developed, much of what we do will be similar to what other jurisdictions are doing, so it will not be unfamiliar to most in the development community.

8. Have you just been using the TRUST model then; have you done any correlation with the Clackamas Water Environment Services blackbox model?

8.1. We haven't settled on that yet. TRUST is not a blackbox. It is really just a tool or more of an overlay.

9. Will the standards vary by sub-basin?

9.1. Not the standards, but the strategy and the tools to meet the standard.

9.1.1. It's the same thing to the person buying the property or doing the project.

9.1.2. Good point; we'll need to look at that so we don't trap anyone as we develop sub-basin-specific strategies and begin to apply them.

9.1.2.1. Give people the option—might be to their advantage to "opt in" to the new standards even if they are already vested in the old ones.

9.2. Our goal (in tailoring strategies for each sub-basin) would be to say for instance that using a pond in any of these three places in this sub-basin is the best approach, while another sub-basin could benefit more from the use of vegetated corridors.

9.3. It will take years to develop the strategies for all the sub-basins.

10. Because the majority of the Clean Water Services District has been developed before hydromodification standards, another piece of this in some sub-basins will be creating a retrofit strategy to address prior hydromodification without using the funds paid by developers for current projects.

11. The new standards for hydromodification will also impact commercial development, not just residential.

12. Seems like things are going in a good direction; this (implementation policy) is a really good step to give people some certainty on a project that is in process. The way staff has approached it so far has been very fair; feel very hopeful about the next steps.

13. What is the cost to go through the approval process for something that triggers the 1,000SF threshold?
    - 13.1. We have calculated a cost of about $1.00 per square foot, based on fee-in-lieu.
        - 13.1.1. But that doesn't fix the issue on that property.
        - 13.1.2. Those fee-in-lieu funds are put back into restoration projects (that have a greater overall benefit over a larger area than could be achieved with piecemeal sites).
    - 13.2. We don't yet have an analysis on hydromodification costs...

14. Clean Water Services is dealing with both sides of the coin on this update. There is a feeling of not doing enough fast enough but at the same time people need some certainty to allow for planning. It is also absolutely true that these new rules will add cost, but we can't just keep building huge detention facilities. It will require everyone working together to figure it out.

15. If hearings aren't until March, what is the possibility that something big will crop up that will affect your April deadline?
    - 15.1. Based on our outreach and conversations with stakeholder groups, it seems unlikely.

16. A big development is going to be easier to work with than infill projects.
    - 16.1. Yes, a three-lot subdivision doesn't pencil out anyway and then if it becomes a two-lot to accommodate a detention pond it isn't worth doing at all.
    - 16.2. There may be a public perception issue—if you are doing a big development like Cooper Mountain you can make a case for hydromodification rules, but if there is an existing home addition in the middle of an existing neighborhood, you can't say with a straight face that it has any effect on flow—water quality, yes, but it can't have that much of an impact on flow as it is such a small percentage of the total area.

17. And again (as with existing rules), this is all to save fish?
    - 17.1. It's to protect water quality in streams…it's to protect homeowners from losing part of their property to erosion…it's all tied together. It affects the whole community

18. Do the hydromodification standards apply everywhere in the county that is not part of a city?
    18.1. No, the D&Cs apply in the urban portion of the county.