METROPOLITAN WATER POLLUTION ABATEMENT ADVISORY COMMITTEE

Meeting Summary

Skype Meeting **Wednesday, September 23, 2020** **Start 10 a.m.**
Adjourned 12:02

1. MWPAAC Chair's Report – Pam Carter

- Welcome and Introductions
- Determine Quorum
- Approval of August Meeting Summary (action item)
- Regional Water Quality Committee (RWQC) Update

Olivia Robinson, WTD Government Relations, took attendance by roll call.

A quorum was in attendance. The August meeting summary was approved as written.

Pam Carter, Chair, provided an update on the Regional Water Quality Committee (RWCQ). RWQC met on September 2 and the following briefings were provided:

- Nutrient Discharges into Puget Sound-County Strategies for Responding to Anticipated Ecology Regulatory Action; and
- Asset Management Needs and Costs-Preliminary Discussion in Preparation for Rate Process.

Pam noted nutrients was on the RWQC agenda in preparation for the Nutrients Study that is on today's agenda. Pam also reviewed the dates of the next couple of MWPAAC general meetings, October 28 and December 9, and tentative agenda items. In December, MWPAAC will hear about COVID-19 impacts and the Department of Natural Resources and Parks' GreenWhereWeWork teleworking project.

2. Wastewater Treatment Division Director's Report – Mark Isaacson, Division Director, Wastewater Treatment Division (WTD)

Mark Isaacson, Division Director, shared that it has been a difficult year and noted as we look to the end of the year, please continue to take care of yourselves and the organizations we love.

Mark reported on recent awards the Wastewater Treatment Division (WTD) has received.

- Utility of the Future Today – one of 65 utility recipients – for beneficial use of Biosolids. This is the third time WTD has received this award in the last four years.
- NACWA Platinum Awards
    - Platinum 22 South Treatment Plant – in recognition of twenty-two years of complete and consistent National Pollutant Discharge Elimination System (NPDES) permit compliance.
    - Platinum 09 Vashon Treatment Plant – in recognition of nine years of complete and consistent NPDES permit compliance.
- 2019 NACWA Gold Awards in recognition of its complete and consistent permit compliance during the calendar year

Next MWPAAC General Meeting is October 28, 2020 via Skype.

  - West Point Treatment Plant
  - Carnation Treatment Plant
  - Brightwater Treatment Plant
- Ecology Outstanding Performance Awards for Carnation, Vashon and Brightwater Plants, plus Brightwater and South Plant's Reclaimed Water.

Mark noted all these awards are attributable to the men and women who maintain our plants.

Mark reported on the COVID-19 budget impacts. He reviewed there had been some initial discussions during the rate process when there wasn't a lot of information about COVID-19 and potential impacts. Due to billing cycles, WTD will feel the impacts in 2021 and 2022. Early projections indicated a potentially high anticipated loss, but there will be less of an impact if WTD relies on emergency operating reserves, and WTD may be able to make up the difference in 2021 and 2022. WTD will have more information to share with MWPAAC on this topic before the end of the year.

Mark reported that the Sewer Heat Recovery legislation was passed by King County Council (Council). He also thanked members for all the work that was put in on the Capacity Charge rate structure and policy change to average persons per household, which passed at a recent meeting on the consent agenda. The budget is now before Council and there's nothing particularly different for WTD as far as budget overview. Mark shared the Class A Biosolids Pilot project continues to be in the budget with production expected in 2021.

Mark reported that Operations and Maintenance has been preparing for Wet Weather Season. Staff have completed training, and training and standard operating procedures have been updated. Staff are also working on fine tuning alarm prioritizations at Brightwater and South Plant and expect that to be completed soon. Electrical, mechanical and generator work at offsite locations is now complete. Obsolete equipment around wet wells and facilities has been replaced with an upgraded system to improve reliability. Force main repairs, which are important, have been completed at North Beach and Interbay Pump Stations. Summer maintenance projects at the plants are scheduled for completion next week. West Point primary and secondary tanks were taken down and cleaned for wet weather preparedness. Also, power sag ride-through was successfully installed and tested at West Point for effluent and testing for influent is expected to be completed by Oct. 9.

3. Subcommittee Reports

September 3, 2020, Rates & Finance:

- Operating Forecast
- Asset Management – Brightwater (Joint Topic)

September 3, 2020, Engineering & Planning:

- Asset Management – Brightwater (Joint Topic)
- Sewer Heat Recovery

4. Seattle City Light Study, Stan Hummel, Capital Projects Managing Supervisor, WTD

Stan Hummel, Capital Projects Managing Supervisor, presented on a joint study that WTD commissioned with Seattle City Light. The full presentation can be found here. Stan reported on the following items:

- Background and objective of the study
- Nature of Voltage Sags at WPTP
- Report Recommendations
- Near Term Recommendations – Cost & Timeline
- Long Term Recommendation – Cost & Timeline
- Follow-up Actions

Questions & Answers:
Q: Asset Management Roll-up? What is that?
A: Within the capital budget there are a number of categories and funds for projects that are below 2.5 million dollars and are needed on an ongoing basis. Roll-up is for structural projects, pipeline repair/replacement, electrical, etc. Funding for these projects are approved by a governing board.

Q: Do we have an estimate as to when the West Point Plant will be in good shape regarding voltage sags?
A: We have to recognize the nature of the system West Point is on. In that it is a very big distribution system and we are somewhat susceptible at West Point. Will we ever get to 100 reliability is the big question. We can incrementally improve reliability with better utilization of equipment, ride through capabilities, avoiding any preventable occurrences. Treating the sewage and avoiding the bypasses is one of the highest priorities at WTD. Even with a power interruption we do the work to analyze the problem. Bruce Kessler, Deputy Director, added that we have a lot of confidence in the reprogramming of West Point equipment which would have theoretically prevented the last four bypasses. We reprogrammed the control strategies and Variable Frequency Drive (VFD) controls.

Q: Who developed the recommendations?
A: A consultant did the technical work, Seattle City Light contributed, as well as WTD. The consultant did an analysis and we combined all the work. It was a joint study. Brown and Caldwell was the consultant.

5. Nutrient Report, Rebecca Singer, Resource Recovery Section Manager, WTD

Rebecca Singer, Resource Recovery Section Manager, presented on Nutrient Management and Strategies. The full presentation can be found here. Rebecca reported on the following items:

- Background – what are the drivers?

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Meeting Summary

- Timeline – health of Puget Sound – work started in 2006
- Preliminary Modeling Results
- Issues (WTD is concerned with)
- Nitrogen Removal Study – Approach
- Scenario Development (springboard - looking at today based on current capacity and current dollars) – next level based on future growth to be included in the Clean Water Plan
- West Point Summary – Scenarios
- South Plant Summary – Scenarios
- Brightwater Summary – Scenarios – already at a higher level than South Plant and West Point
- Nitrogen Removal Study Summary
- What we know
- Alternatives
- Water Quality Approach
- The Freshwater Trust
- Next Steps

Q: Is the oceanic circulation contribution human caused? Natural biological processes? both? How much of each?
A: The ocean is huge, and the Puget Sound is a unique water body. Not sure how much is contributed to human cause. It's very complex to delineate what is happening naturally in oceanic circulation and the things that are happening as a result of human contributions. It's a very complex system (circulation).

Q: Is it fair to say that imposing nutrient limits will have, at best, a minor effect on dissolved oxygen (DO)?
A: We'll get more into that as we move along. We do question whether there will be an effect or decrease - we'll see by putting limitations on permit limits. The current cap on limits would see no improvement. We're not sure if we are going to see any improve even if we improve nitrogen loading. We're looking at limit of technology at the LOTT (Lacey, Olympia, Tumwater, and Thurston County) facility that has been reducing nutrient loadings for several decades, but Budd Inlet has not seen any improvement in the dissolved oxygen. We're asking Ecology to provide some data on realized improvements.

Q: Has Victoria, located at the mouth of the Strait of Juan de Fuca, implemented wastewater treatment yet? Is that part of the nitrogen load coming in from the ocean?
A: Victoria is primarily looking at doing secondary treatment. The Strait of Juan de Fuca has not been modeled out yet. Salish Sea does not include that area. Victoria's population is very low, so they don't have a high discharge.

Q: Is there earlier data to compare to, to know if DO is declining or Nitrogen is increasing, especially in the red areas?
A: There have been several studies – don't have results but will get information. **Follow-up item.**

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Q: Is the DO issue largely from human/pet waste nutrient sources? Industrial sources?
A: Yes, all of the above are contributing. Anything, we deal with agriculturally. Everything within the watershed (flowing from the uplands down into the sound).

Q: Is phosphorous an issue?
A: Not at this time, but we know it is coming.

Q: Shipping – is that being figured out in the Salish Sea modeling?
A: I don't think that is included.
Comment: Recommends including that.

Q: Are you planning to illustrate what you could do from a non-point reduction perspective for the same amount of money as spent on plant upgrades?
A: Yes, that's where we are working with the Fresh Water Trust. Their modeling efforts include what can be done upstream as well as downstream. Also partnering with other jurisdictions on additional science related to the Salish Sea Model. We should be able to see some information in the next four to six months.

Q: Has Ecology expressed an opinion on this kind of approach? It sounds good.
A: They have, they are in favor of this type of approach, but they don't have the resources to explore or implement so they are depending on the utilities to do that. They do approve. However, not all partners view it equally.

Q: Does that mean that their regulatory scheme would be sympathetic? Ecology supports but no resources. Is there an expectation they would modify the approach Rebecca described?
A: Things have warped and changed a little bit with the development of the General Permit. Ecology will implement several permits over time with each one being more stringent. They recognize it will take decades and will use a phased approach - phase 1, permit 1. They are also open to adding in alternative approaches - will put it in the permit in some shape or form.

6. Clean Water Plan Monthly Update, Steve Tolzman, Program Manager and Planning Project Manager, WTD

Steve Tolzman, Program Manager and Planning Project Manager, presented an update on the Clean Water Plan. The full presentation can be found here. Steve provided an update on the following items:

- Planning Process
- Current Scope of Actions Identified
    - Each action is a concept for future water quality investment
        - Develop the details of the action
        - Determine the outcomes of the action analysis and evaluation
- Example Action Development Process
    - Wastewater Treatment Division Area: Nutrient Removal Actions

- Clean Water Plan Actions
    - Example: Nutrient Removal Action Under Development
    - Initial Findings
    - Formulation Strategies: Overview of Conceptual Flow
- Regional Engagement Activities for Fall 2020
- Clean Water Plan Activities

Q: Will each strategy have a theme?
A: Yes, we are working hard on the strategies and we'll bring MWPAAC and other groups along.

7. Clean Water Plan Advisory Committee Update, Advisory Committee Member

Ben Marre, Seattle Public Utilities, reviewed the work of the Clean Water Plan Advisory Committee. The committee last met on September 7, 2020. Ben provided an update on the following items:

- SEPA Scoping: Comment Highlights (The full SEPA Scoping Summary of Comments can be found here.)
- Decision Areas and Actions - focused on four of the decision areas.
    - Wastewater Treatment
        - Nutrients – Individual Discharge Permits
        - Nutrients – Single Bubble Permit Across Discharges
        - Advanced Treatment to Reduce Effluent Discharge at South Plant
        - Pollutant removals compared for these three, as well as information about greenhouse gas emissions and energy use, but not capital or lifecycle costs
        - Findings – Advanced treatment and bubble permit nitrogen actions have similar pollutant removals
        - Feedback – Is there a way to get the same nitrogen removal for less cost if focusing money on other sources?
    - Wet Weather Management
        - Expanded Stormwater Treatment at Existing Facilities
        - Stormwater Treatment at New Facilities
        - Not much analysis available for these
        - Findings – County reports that pollutant reductions likely to be similar for both of these actions, and also that costs may be 2-5 times higher for new infrastructure (e.g., GSI) that use of existing wastewater infrastructure
    - Asset Management, Resiliency and Redundancy
        - Medium Level Asset Management Investment
        - Low Level Asset Management Investment
        - Run to Failure Asset Management
        - Not much analysis available
        - Findings – More analysis needed, different levels of investment have different community and environmental impacts

- Wastewater Conveyance
  - Status Quo Conveyance (20-year level of service)
  - 5-year level of service
  - Preliminary cost and risk information presented
  - Findings – More analysis needed, but there is opportunity here, 20-year level of service is one of the highest in the nation
- Strategy Alternatives
  - Formed based on
    - Results of action analysis
    - Community input on regional priorities and values
    - SEPA scoping comments
    - Critical requirements
    - Current and anticipated regulations and obligations
    - County plans to assemble between 3-5 distinctive strategies through groups of actions

The Advisory Committee is looking forward to seeing the next level of detail and analysis. There is a strong desire to see a consistent set of details – i.e., fact sheets – with information about key assumptions that can be used to better understand what is being considered.

Q: The Gates Foundation has a closed cycle for wastewater treatment that has no discharge. Are we going to be looking at something like that?
A: Yes, it's building scale decentralized treatment. We'll have something included and it will be available for the discussion.

8. General Announcements

None.

The meeting was adjourned at 12:02.