

Clean Water Plan

Making the Right Investments at the Right Time

MWPAAC Monthly Update

January 22, 2020



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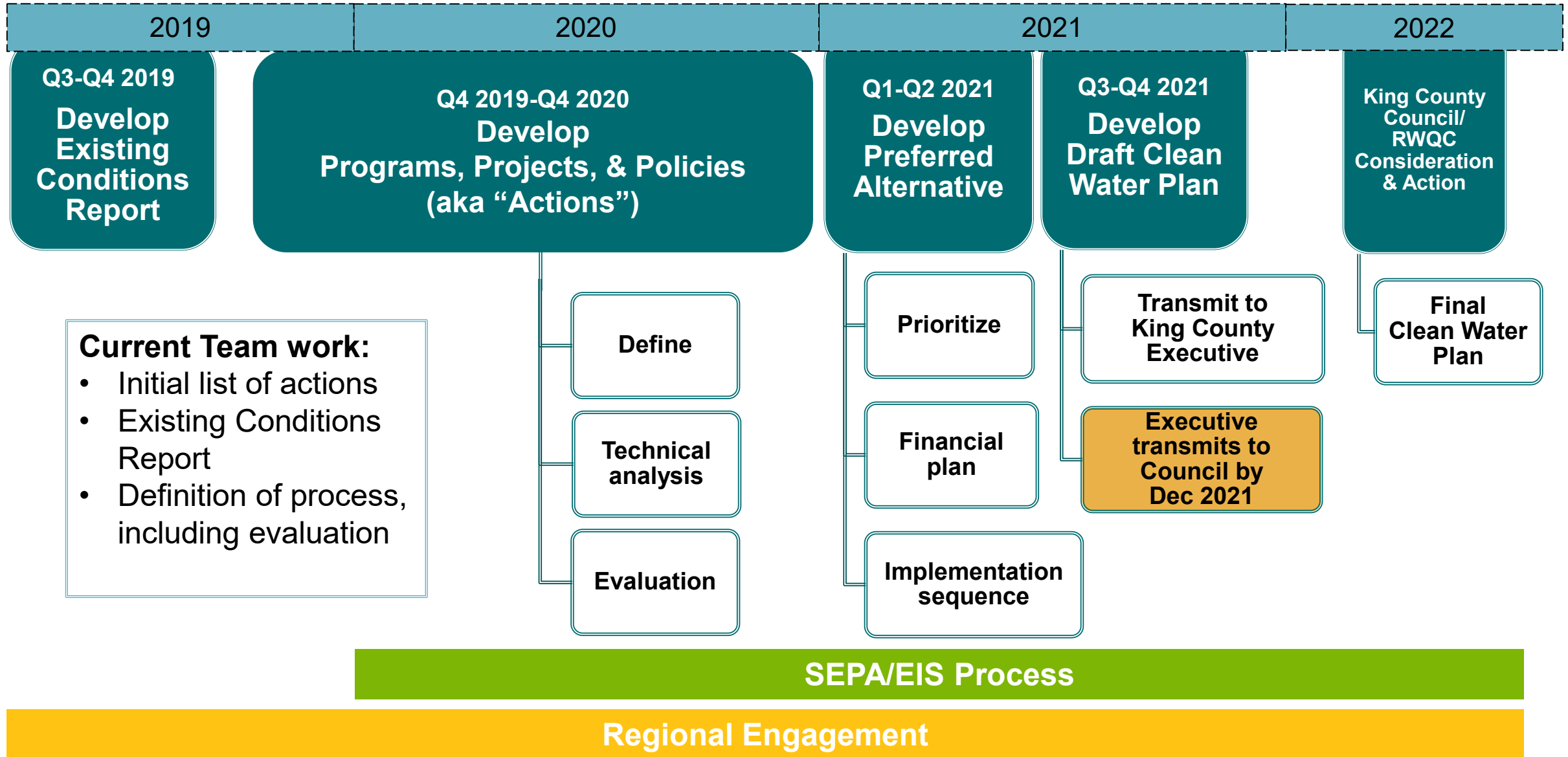


King County

Department of Natural Resources and Parks
Wastewater Treatment Division

What is the most appropriate path to ensure we direct the right public investments to the right actions at the right time for the best water quality outcomes?

Planning Process Overview



Overview of Planned 2020 Clean Water Plan Tasks

Current Team work:

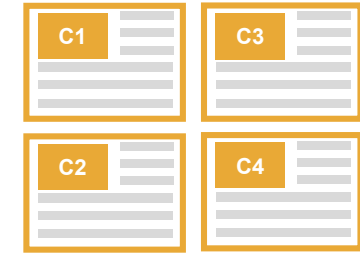
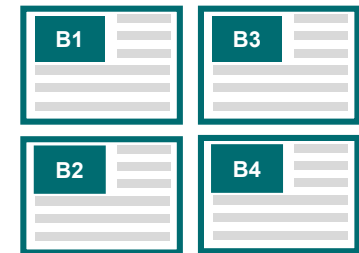
- Initial list of actions



Scope Guidance

- Authority/Influence
- Potential Financial Impact
- Potential Water Quality Benefit
- Key Differentiator

Subject Matter Expert (SME) Input
Decision Area Specific Considerations
Regional Engagement Input



Multiple Evaluations of Actions:

- Water quality (WQBE, others)
- Environmental (SEPA, climate, others)
- Equity and Social Justice
- Financial
- etc.

Clean Water Plan Core Question: *What is the most appropriate path to ensure we direct the right public investments to the right actions at the right time for the best water quality outcomes?*

Preliminary Decision Areas

- Treatment Plants: What treatment plant investment should be made? [October 2019 Briefing](#)
- Pollutant Source Control / Product Stewardship: Are there more efficient or effective methods than wastewater treatment to address pollutants of concern? [December 2019 Briefing](#)
- Stormwater and Combined Sewer Overflows: What approach should be taken to address stormwater and combined sewer overflows in King County's system? [January 2020 Briefing](#)
- Wastewater Conveyance System: What are the best investments in collection systems to ensure sufficient capacity? [December 2019 Briefing](#)
- Asset Management, Resiliency, and Redundancy: What investments should be made to care for an aging regional wastewater system and protect investments that have been made? [October 2019 Briefing](#)
- Legacy Pollution: What are the opportunities to address legacy pollution? [January 2020 Briefing](#)
- Resource Recovery: What level of investment should King County make in recovering resources from wastewater?
- Finance: How will regional water quality investments be financed?

Example Actions – CSO and Stormwater

What are the opportunities to address legacy pollution?

- **Example Action 1** – Complete the existing CSO Long-term Control Plan to meet current Consent Decree
- **Example Action 2** – Complete an alternate set of projects under a modified Consent Decree to achieve equal or better benefits than current plans.
 - ▶ Accept and treat more stormwater in the regional wastewater system to reduce the amount of untreated runoff
 - ▶ Stormwater treatment facilities focused on reduce pollution and have measurable improvements to water quality

Example Actions - Legacy Pollution

What are the opportunities to address legacy pollution?

- **Example Action 1** - Implement the existing Sediment Management Plan that addresses legacy pollution.
- **Example Action 2** – Implement an accelerated SMP, prioritizing critical habitat and Equity and Social Justice communities for near term action.
- **Example Action 3** – Implement a broad legacy pollution program. Program elements could include:
 - ▶ Investigating and developing a cleaning program for legacy sediments in sewer pipes.
 - ▶ Developing a program to remediate high-concentration legacy sources of PCBs (e.g., sidewalk caulks and road paints) and other contaminants of interest prior to entering the sewer system.
 - ▶ Investigating historical wastewater treatment and combined sewer overflow outfall locations for legacy pollutant cleanup and habitat restoration opportunities.

Discussion and Questions

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The Following Slides are from Previous MWPAAC Briefing and for Reference if Needed

Example Actions – Treatment Plants

What treatment plant investments should be made?

- **Example Action 1:** Individual treatment plant nitrogen reduction target. Upgrade of all WTD secondary treatment plants or construction of new treatment plant(s) to include nitrogen removal through a phased approach from 2030-2060.
- **Example Action 2:** Upgrade one or more WTD secondary treatment plants or construct new treatment plant(s) to advanced treatment (e.g., reverse osmosis) in the 2040s-2050s to address specific toxics or contaminants of emerging concern.
- **Example Action 3:** Expand WTD treatment plant capacity to accommodate population growth while maintaining the existing levels of treatment.



Example Actions – Asset Management, Resiliency, and Redundancy

What investments should be made to care for an aging regional wastewater system and protect the investments that have been made?

- **Example Action 1:** Accept lowest level of system failure risk and improve asset management program to “excellent” International Organization for Standards (ISO) 55000 maturity level.
- **Example Action 2:** Accept a level of system failure risk and maintain asset management program at a “competent” ISO 55000 maturity level.
- **Example Action 3:** Implement an aggressive earthquake resiliency program funding project to reinforce the regional wastewater system and mitigate the potential for earthquake damage.
- **Example Action 4:** Facilities in the regional wastewater system are brought up to current earthquake building codes as they are replaced at the end of useful life. Prepare a regional wastewater system post-earthquake reconstruction plan to proactively prepare and enable a speedy recovery.



Example Actions – Conveyance

What are the best investments in collection systems to ensure sufficient capacity?

- **Example Action 1:** Continue current 20 year conveyance system level of service (5% chance overflow in any given year). Complete Projects Identified in the 2017 Conveyance System Improvement (CSI) Program Update.
- **Example Action 2:** Revise conveyance system level of service standard to 5 year (20% chance of overflow in any given year). Revise 2017 CSI Program Update and future updates to the 5 year level of service standard.
- **Example Action 3:** Implement additional infiltration and inflow measures beyond those in current I/I program. (Note: this includes ongoing I/I program work that MWPAAC and WTD are collaborating on.)
- **Example Action 4:** Implement widescale collection system sensors, monitoring, and data transmission to track real-time conditions through the collection system (e.g., flows, levels, temperature, precipitation, etc.). Use data analytics to optimize collection system capacity, performance, and overall management.

Example Actions – Pollutant Source Control/Product Stewardship

Are there more efficient or effective methods than wastewater treatment to address pollutants of concern?

- **Example Action 1:** Expand/augment existing activities to provide or influence incentives for product stewardship. For example, ensure proper disposal of products that contain toxic chemicals, like PFAS-containing products.
- **Example Action 2:** Expand/augment existing source control programs or activities beyond current regulation to influence the development of new regulations and regulatory actions for product stewardship. Potential new regulations include bans on phthalates, PFAS chemicals, and the hazardous class of flame retardants. Implementation could be immediate (e.g., Hawaii ban of sunscreen containing the coral-harming chemicals oxybenzone and octinoxate) or phased (e.g., copper free breakpad Initiative is an MOU between EPA and Automotive Industry).
- **Example Action 3:** Implement existing King County pollutant source control programs (e.g. municipal wastewater, stormwater, local hazardous waste) and wastewater pretreatment program (e.g. WTD industrial waste program).