

**Imagine a Day
Without Water**
October 23, 2019



#Value Water

Clean Water Plan

Making the Right Investments at the Right Time

MWPAAC Monthly Update

October 23, 2019



Clean Water Plan

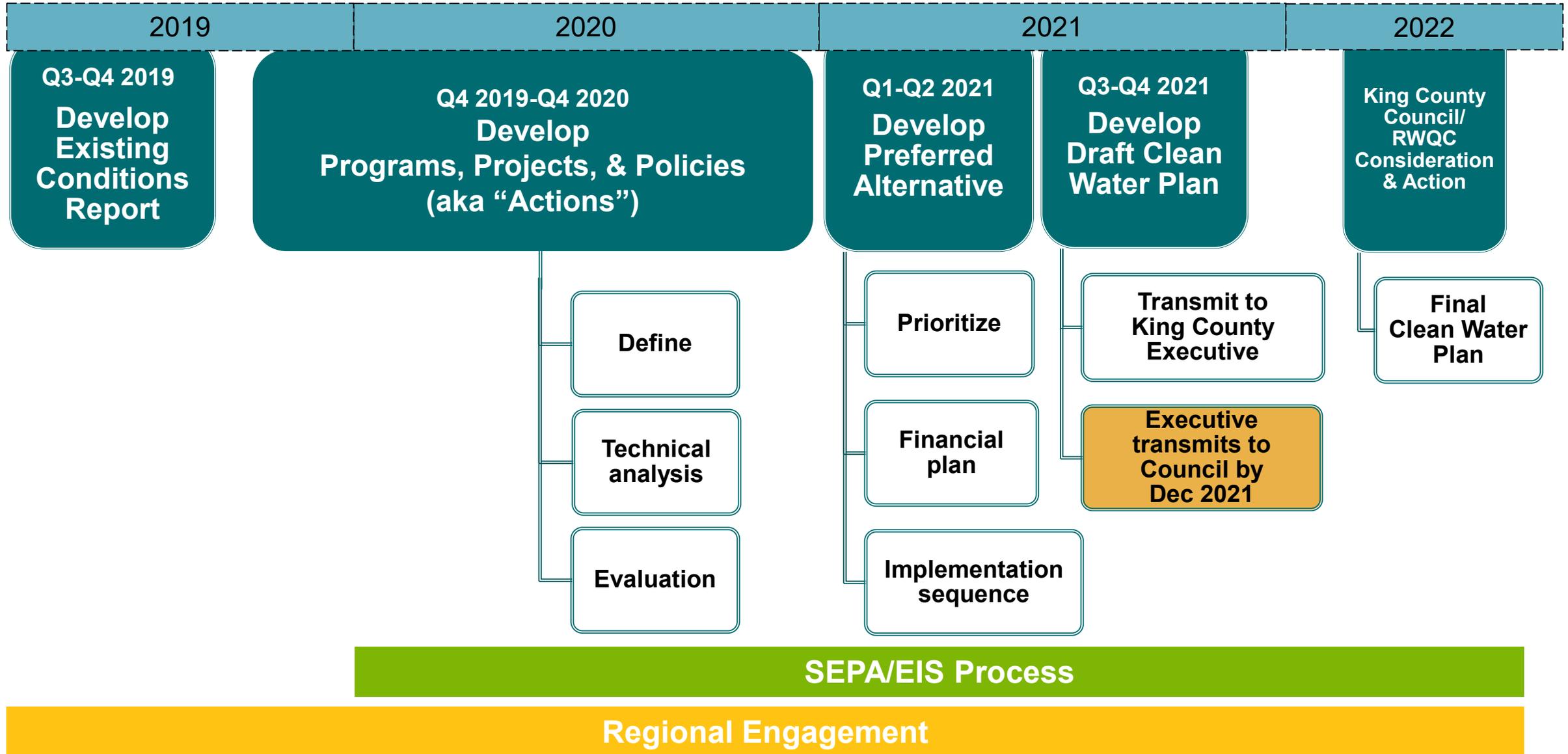
Making the right investments at the right time



King County

Department of Natural Resources and Parks
Wastewater Treatment Division

Planning Process Overview



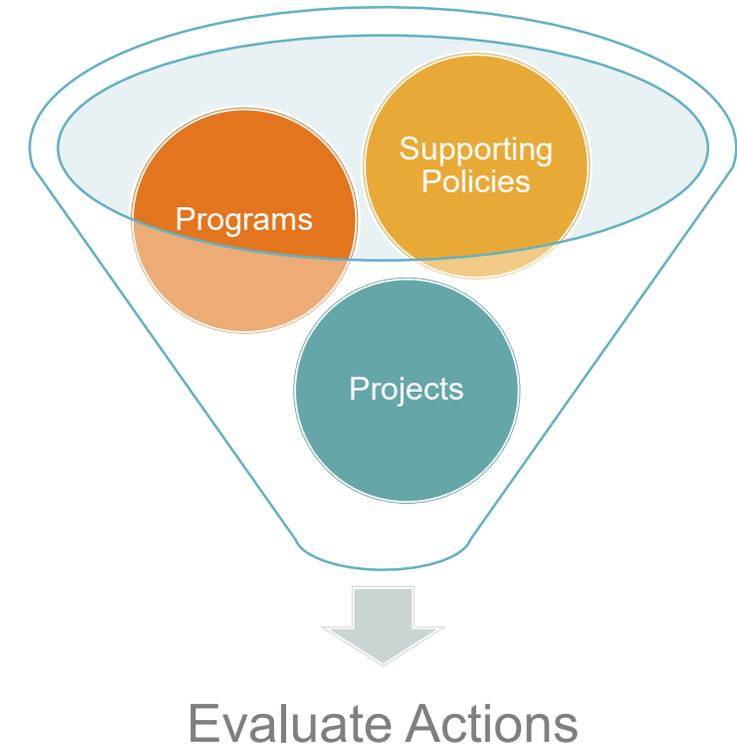
Actions are Programs, Projects, and Policies

- Define actions & develop details
 - ▶ Will consider packaging of actions
- Develop evaluation process
- Evaluate actions/packages of actions

London eliminated cholera outbreaks after 1866 with a novel invention: the sewer!



Imagine a Day Without Water
October 23, 2019 | #ValueWater



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?
- Pollutant Source Control / Product Stewardship: Are there more efficient or effective methods than wastewater treatment to address pollutants of concern?
- Stormwater and Combined Sewer Overflows: What approach should be taken to address stormwater and combined sewer overflows in King County's system?
- Wastewater Conveyance System: What are the best investments in collection systems to ensure sufficient capacity?
- 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?
- Legacy Pollution: What are the opportunities to address legacy pollution?
- 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 – Treatment Plants

After working around the clock for 100 years or more, water infrastructure is aging and failing.



Imagine a Day Without Water
October 23, 2019 | #ValueWater

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.



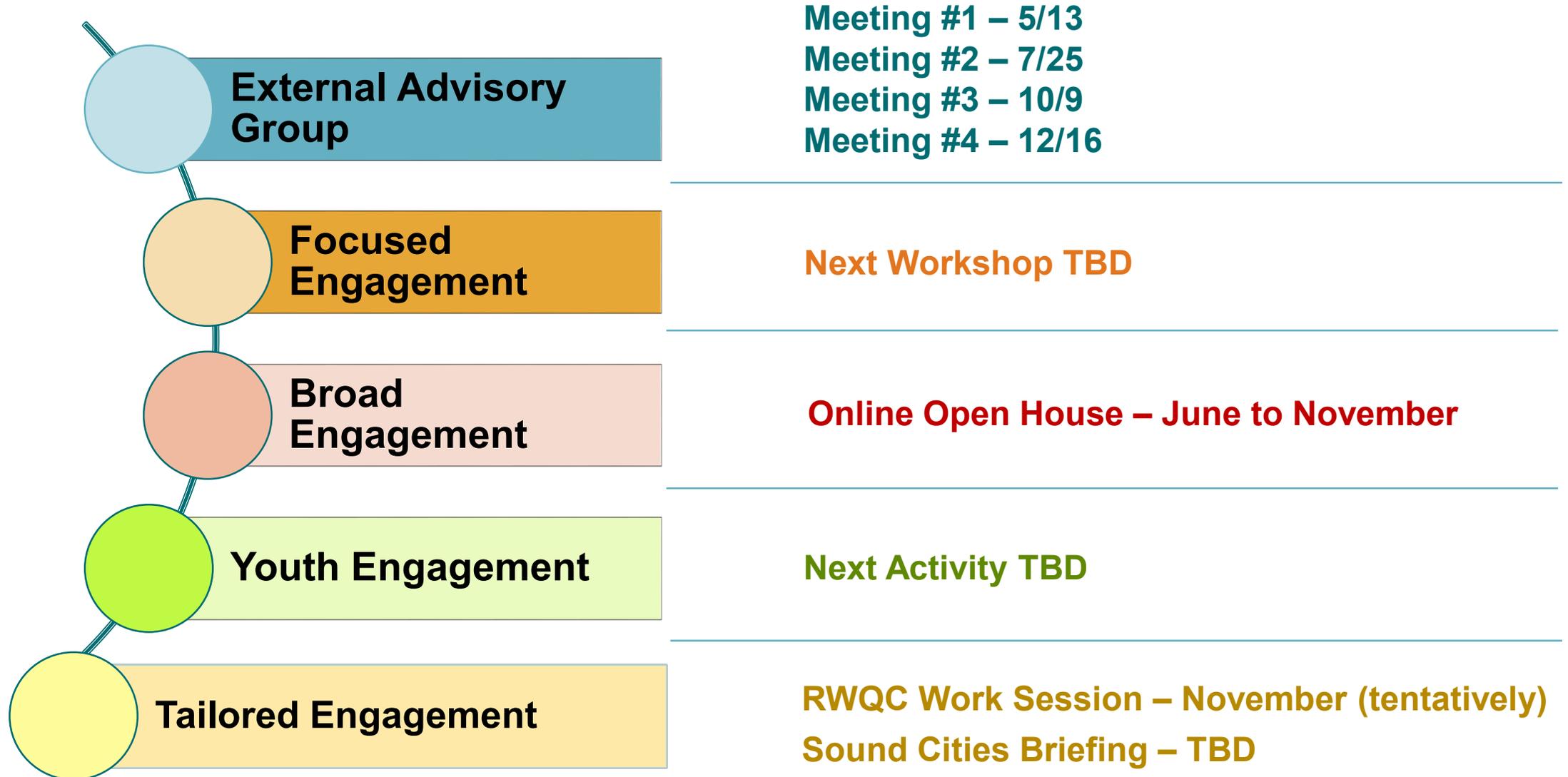
Example Actions – Asset Management, Resiliency, and Redundancy

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.



Regional Engagement Activities



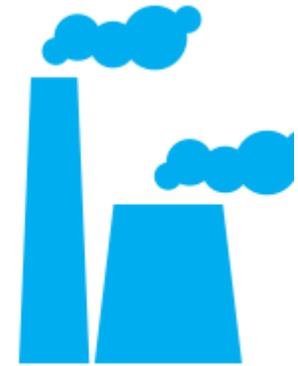
Discussion and Questions

Steve Tolzman, Program Manager, 206.477.5459 or steve.tolzman@kingcounty.gov



11/15/2019

1/5 of the US economy would grind to a halt without reliable water infrastructure.



Imagine a Day Without Water
October 23, 2019 | #ValueWater

Clean Water Plan

Making the right investments at the right time



King County

Department of Natural Resources and Parks
Wastewater Treatment Division