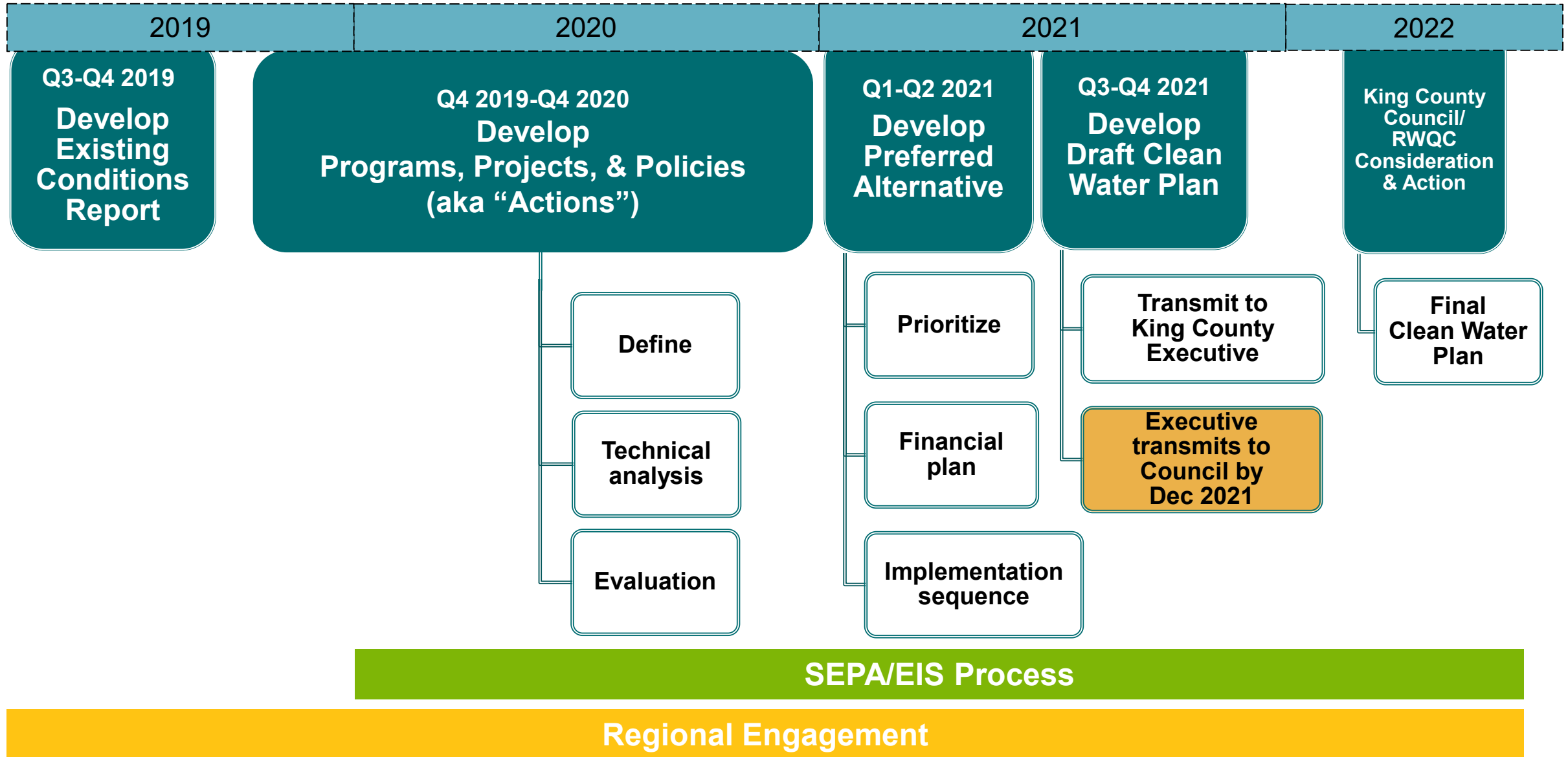


Planning Process Overview



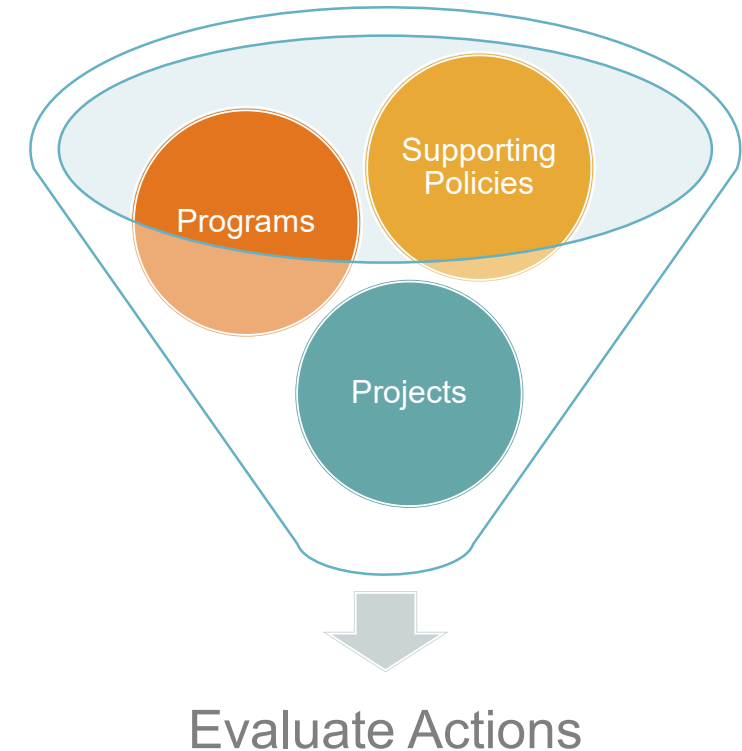
Actions are Programs, Projects, and Policies

- 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!



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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.



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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

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11/15/2019

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



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Clean Water Plan

Making the right investments at the right time



King County

Department of Natural Resources and Parks
Wastewater Treatment Division