



CLACKAMAS

WATER
ENVIRONMENT
SERVICES



Tri-City Water Resource Recovery Facility Outfall Project

Greg Geist, Director
May 20, 2020



Project Review

- The current outfall from the Tri-City Water Resource Recovery Facility (TCWRRF) was constructed in 1984 and is nearing its capacity during peak wet weather events.
- The solution is to build an outfall which will be large enough to provide potential capacity for decades to come.
- In May 2019, the Board of County Commissioners approved a contract with CH2M Hill (Jacobs), to design the new outfall.



Oregon City Charter

- In order to move forward with placing the outfall in the preferred alignment under Jon Storm Park, WES is seeking support of the Oregon City voting public through a ballot measure.
- WES has been conferring and working with Oregon City staff to prepare for the ballot measure.

Planning for the Future

- Our community expects dependable, affordable sewer services that are essential to our quality of life. Our personal health, the community's economic health, and the health of our rivers and environment depend in large part on treating the wastewater we all generate so that it can be safely returned to the environment.
- The Outfall Project is a critical component of WES' long-range Capital Improvement Plan. By proactively planning now, WES ensures that ample wastewater treatment facilities will be in place to continue to provide reliable service at an affordable cost well into the future.

Pump Station Improvement

- 0% Reduction
- 20% Reduction
- 30% Reduction
- 65% Reduction

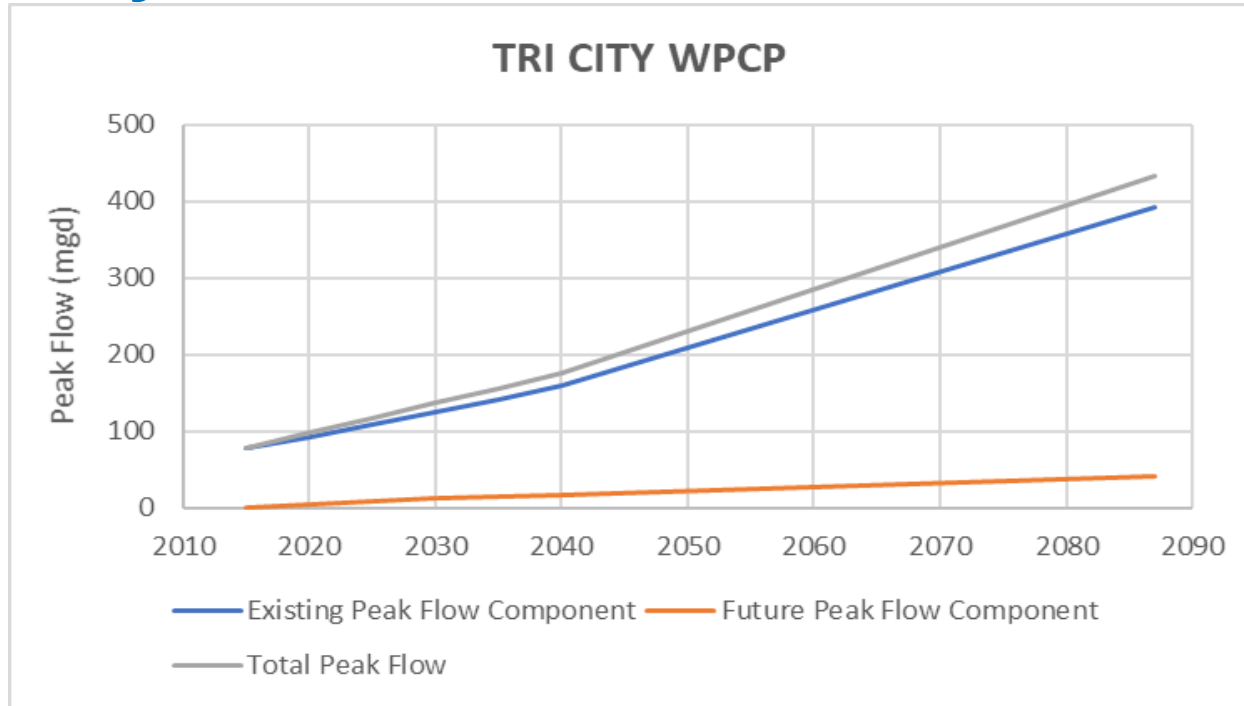
Conduit Improvement

- 0% Reduction, Gravity
- 0% Reduction, Forcemain
- 20% Reduction, Gravity
- 20% Reduction, Forcemain
- 30% Reduction, Gravity
- 30% Reduction, Forcemain
- 65% Reduction, Gravity
- 65% Reduction, Forcemain

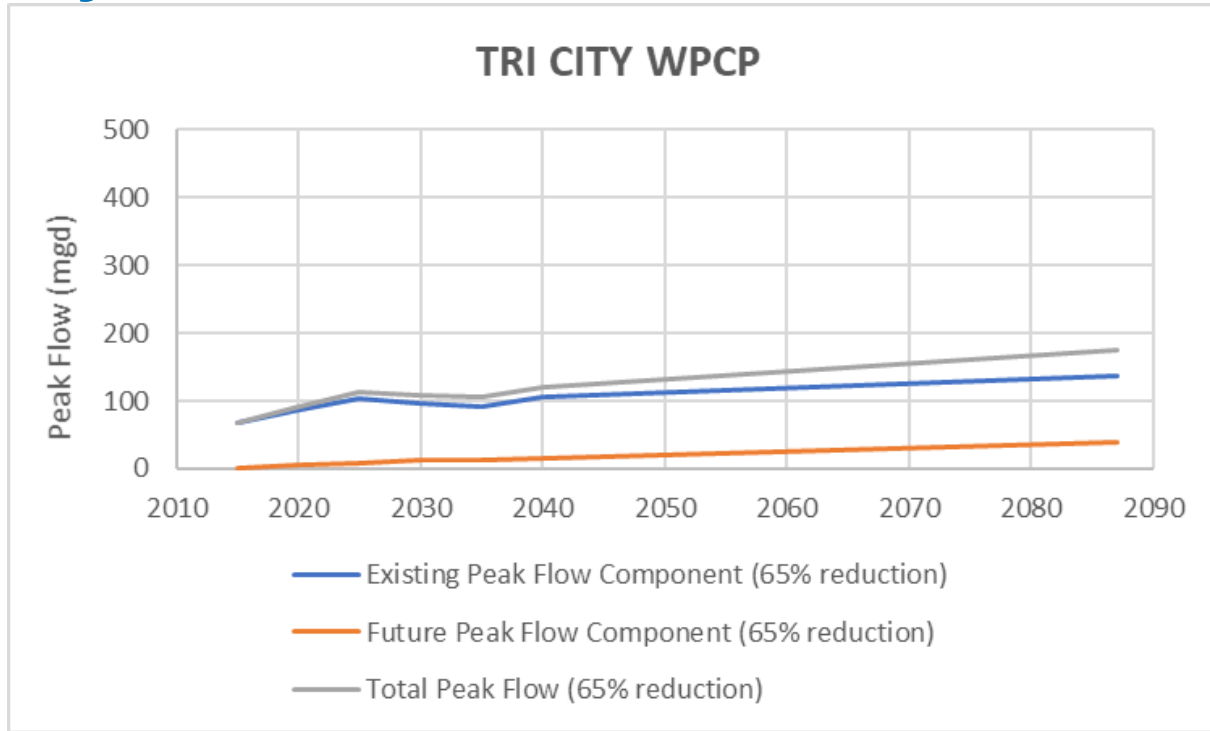
Targeted I&I Basin

- 0% Reduction
- 20% Reduction
- 30% Reduction
- 65% Reduction

Tri-City Flows – No I&I Reduction

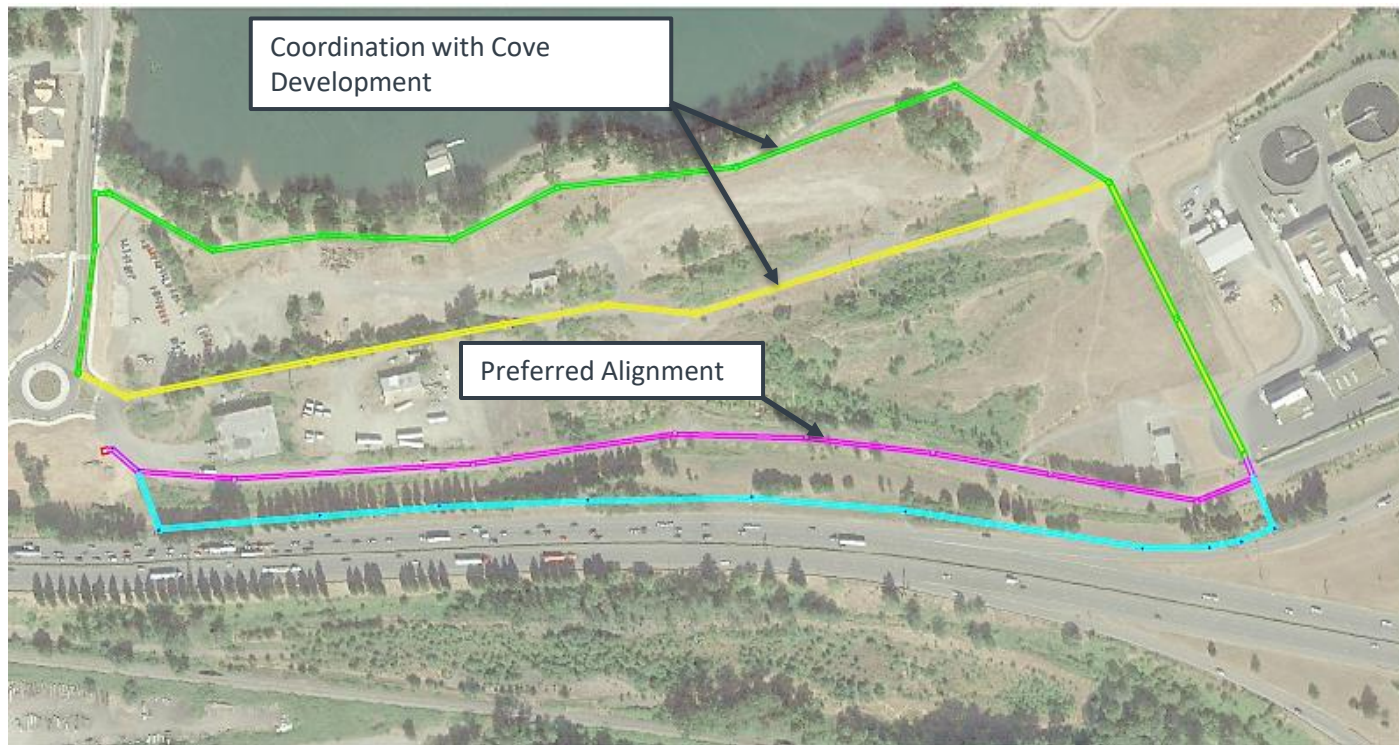


Tri-City Flows – I&I Reduction



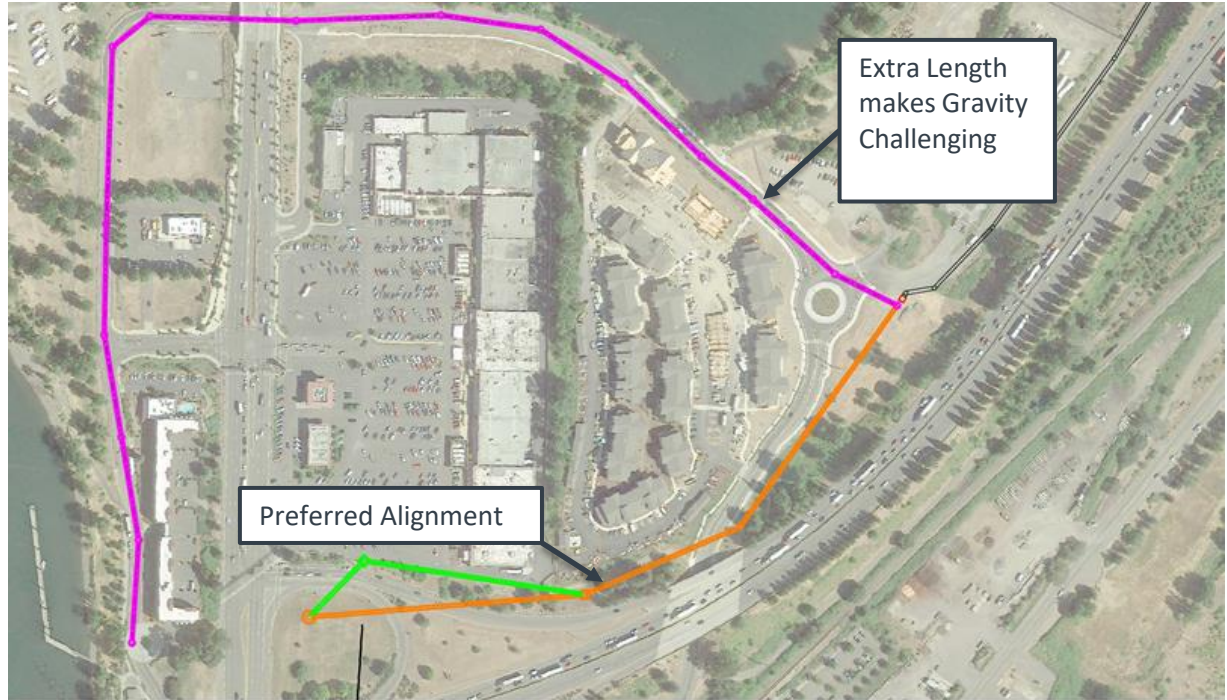
Outfall Routing Study

- First step in project was to perform a routing study.
- The alignment was broken into **three pieces** starting at the plant.

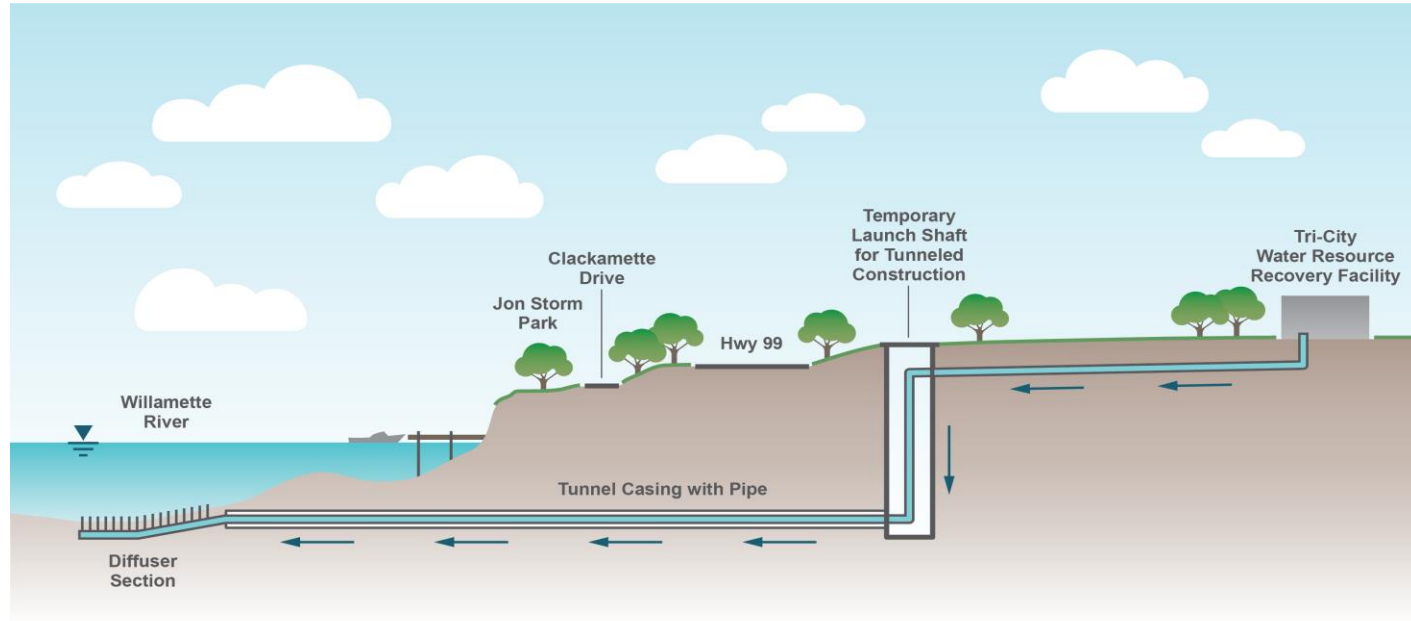


Outfall Alternatives Evaluation

- Study looked for fatal flaws with alignments and potential synergy with other planned projects along the corridor: ODOT Bridge and Cove Development.
- Construction methods will include Traditional Open Cut, but a large amount Tunneling.



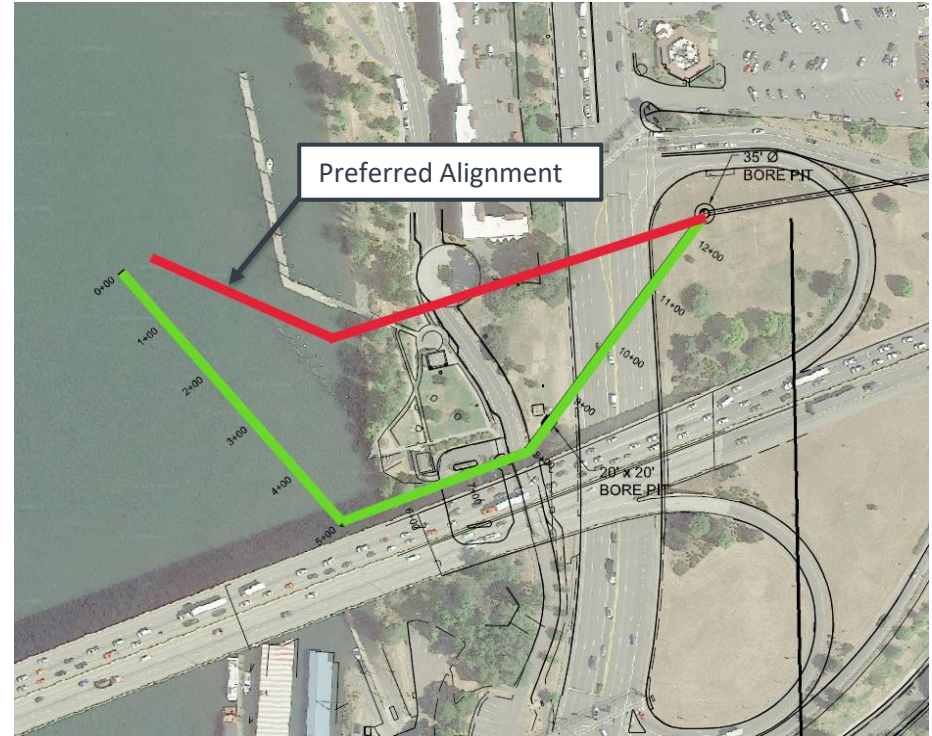
Tunneling Technologies



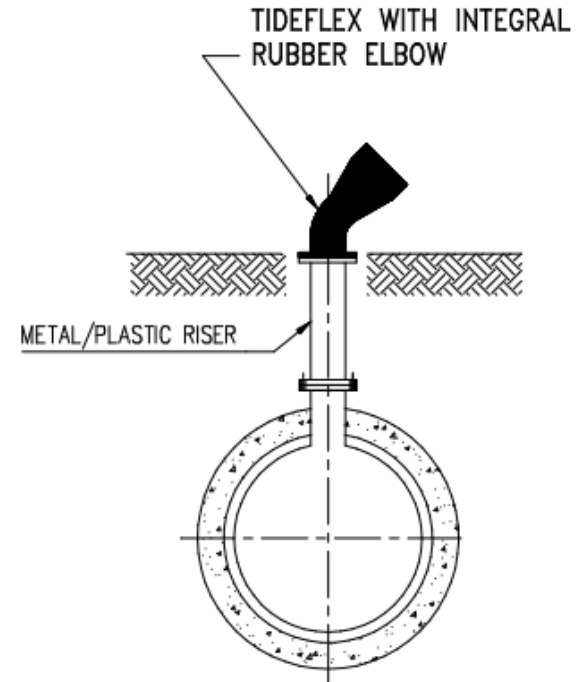
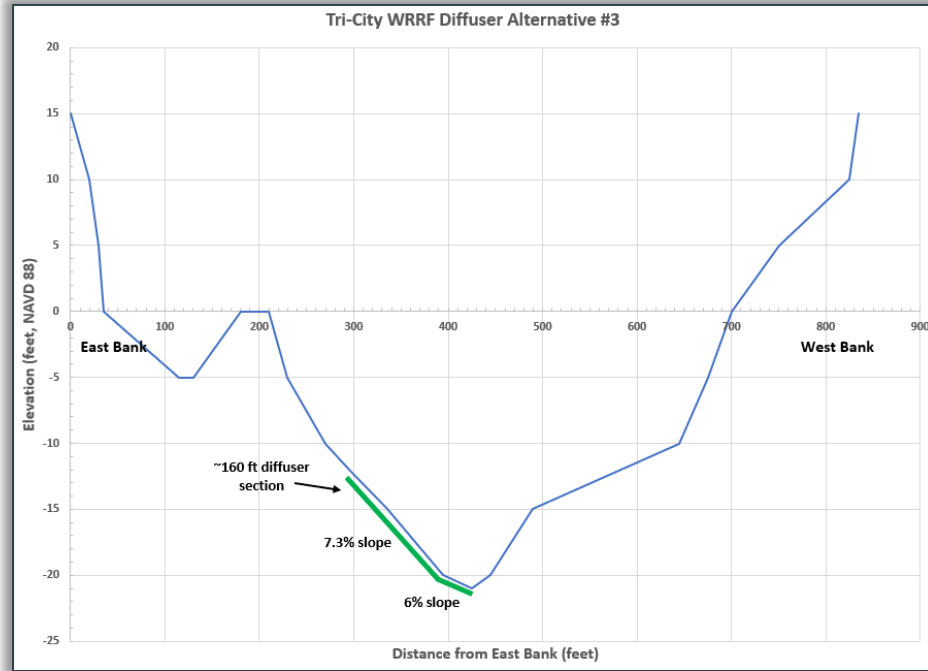
NOT TO SCALE

Outfall Location and Preferred Route

- Alignment with Abernethy Bridge Project evaluated closely to minimize construction impacts to Jon Storm Park.
- ODOT Alignment was a less cost effective and included a uncertain schedule.



Diffusers – Portion of Outfall extended into the water flow



Portion of pipeline above river bottom is just the diffuser valve.

Preferred Alignment Next Steps

- Collect additional Geotechnical Data on the preferred route to confirm construction approach – underway and will continue into Summer 2020.
- Finalize Size (90") and Pipe Material (FRP).
- Develop a permit strategy.
- Ask for voter support.



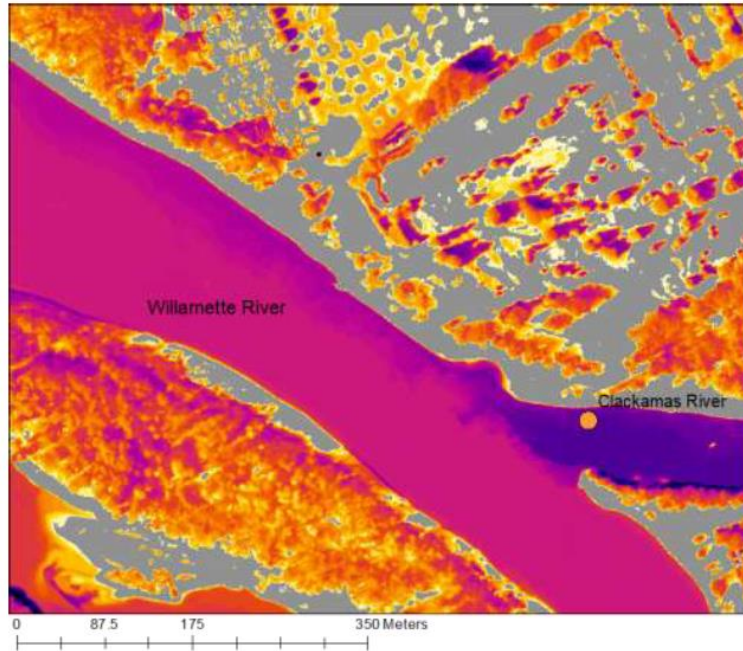


Aligning Planning with Community Values

- WES will make sure that construction, installation, and operation of the outfall will be environmentally sound, cost-effective, fiscally responsible, and address neighbor and rate payer concerns.
- The new outfall is gravity fed and will require minimal energy and maintenance to operate. It will also ensure continued reliable service at a stable, affordable rate by planning for the long-term.
- Enhance water quality and protect cold water refuge.

Cold Water Refuge: Clackamas and Willamette River

Clackamas River
1009 cfs (NorWeST)



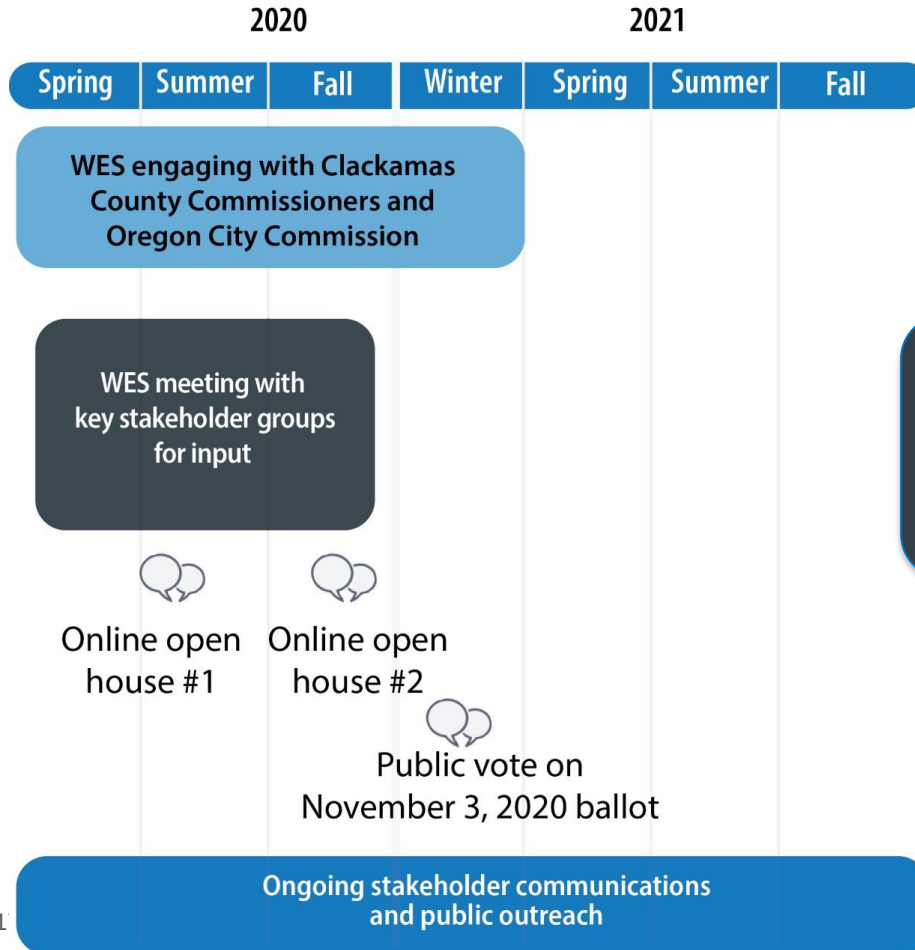
The Clackamas River is the largest cold water refuge in the lower Willamette River Basin.

This image shows the cold water plume created at the confluence of the Clackamas and Willamette Rivers.



Community Benefits

- The Outfall Project will create jobs during the construction process, support economic growth and provide \$200,000 to park and natural habitat restoration within Oregon City.
- Our goal is to leave the park better than we found it, and in addition invest in other area enhancements identified by the Oregon City Parks and Recreation Advisory Committee.



Public Involvement Plan Timeline
www.tricityoutfall.info



Recommendation

Move forward in working with the City of Oregon City on an Oregon City ballot measure that would authorize WES to construct a new outfall under Jon Storm Park.

Next Step: Incorporate any feedback and add Resolution No. 20-14 to the June 3, 2020 Consent Agenda for approval.