

## Tri-City Water Resource Recovery Facility Outfall Project Frequently Asked Questions

- 1. What is an outfall?** An outfall is the discharge point of effluent, which is treated wastewater. The outfall is designed to maximize mixing and dilution of effluent. The “mixing zone” must meet state water quality standards to ensure clean water for boating, swimming, fishing and aquatic resources.
- 2. How will this project be funded? Will it have an economic impact?** The project, which is estimated at \$21,500,000 is fully funded as part of WES’ Capital Improvement Plan. This includes all project management and administration costs, engineering design and construction services, and construction. The outfall will create jobs during the construction process, support economic growth and provide \$200,000 to park and natural habitat restoration within Oregon City.
- 3. Why is a replacement outfall needed? What happens to the current one?** Built in 1984, the current outfall is nearing capacity during peak wet weather events. The replacement outfall will be large enough to provide safe, reliable service for decades to come. The existing outfall is structurally sound and will remain in place for use if needed.
- 4. Where will the outfall be located?** The outfall will run from the Tri-City Water Resource Recovery facility parallel to I-205 and under the OR 99E off-ramp. It will continue under Jon Storm Park and discharge into the Willamette River just north of the I-205 Abernethy Bridge. The distance from the Tri-City facility to the river is approximately 5000 feet.
- 5. What are the environmental impacts of this project?** The outfall diffuser will contribute to fish recovery in the Willamette River. Its location will be about 1,600 feet upstream of the existing outfall in a deep, stable aquatic bed feature that will better mix and dilute treated wastewater as it enters the Willamette River. It will maintain the existing cold-water fish refuge area at the mouth of the Clackamas River, and minimize future maintenance needs. This will also ensure the water meets state water quality standards, including water chemistry characteristics that fish need.
- 6. What will the construction impacts be? For how long? Will it be loud?** Construction impacts will be brief and temporary, lasting only a few months. Once complete, the outfall will operate without any obstructions to current river uses. Trenchless technologies are being explored to minimize impacts to nearby properties and parks. Noise from construction activities related to the outfall will not be excessive.

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7. **How long will the project take to complete?** Pending ballot approval of the project elements in 2020, construction is anticipated in 2023 and 2024, with operation starting in 2024.
8. **What will the outfall look like?** The outfall will be completely buried and not visible. The outfall will be beneath the river and only smaller pipes will penetrate the river's bottom. They will be in a deep segment of the river and will not interfere with boating, recreation or aquatic life.
9. **How far will the diffuser go into the river?** The diffuser section of the pipeline will be buried under the riverbed, extend beyond the middle of the river and will be located at a particularly deep spot for better mixing that will enhance water quality. The actual diffuser ports will extend up above the diffuser bed. The diffuser is an improved river discharge mechanism that will be built at the end of the outfall.
10. **How will the river bottom and other aquatic life be protected during construction?** Construction crews will strictly adhere to the Oregon Department of Fish and Wildlife's Willamette River in-water work window. The in-water work guidelines were created to minimize potential impacts to fish, Pacific lamprey, wildlife and habitat resources. In addition, WES' consultants are performing an archeological investigation in compliance with the National Historic Preservation Act to prevent any disruption to culturally sensitive resources in the area.
11. **What is the temperature of the outfall? Will it warm the water?**  
The model-predicted dilutions for the preferred 150-foot long outfall diffuser have been developed using current and future wastewater flows and maximum summer temperatures. The modeled results demonstrate this outfall will be well below the Oregon water quality temperature standards. The design of the diffuser will ensure that the outfall discharge stays well below any temperatures that could affect biological resources.
12. **What is WES doing to ensure archeological artifacts are not disturbed?**  
WES is actively designing the project to avoid known archaeological resources in the vicinity of the project and will complete a due diligence effort to identify any previously unidentified cultural resources that may be affected by the project. WES will follow the Oregon State Historic Preservation Office project review process and regulations.

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13. **Will this project impact the fishery?** There will be no impacts on the fishery after construction is completed and the outfall is brought online. The outfall location will provide better mixing which will help improve overall water quality in the river.
14. **What conservation measures will be taken?** WES will deploy conservation measures to ensure that seals and sea lions, which may be present if fish are abundant, are not impacted by construction. The improved diffuser will ensure that treated wastewater doesn't disrupt the natural environment and keep the river clean for swimming, boating, fishing, and aquatic life.
15. **What time of year will construction happen?** Construction of the outfall pipe in the river will follow in-water work windows established by the Oregon Department of Fish and Wildlife (July 1- October 31 and December 1 – January 31). Construction of the land portions of the outfall could occur at any time during the year. Construction is anticipated in 2023 and 2024, with operation starting in 2024.
16. **What other improvements will be made?** In addition to returning park property to its original condition, the project will also include enhancements to the park and surrounding areas, which may include native landscaping, riverbank restoration, trails and other needs identified by the City of Oregon City Parks and Recreation Advisory Committee.
17. **Will Jon Storm Park be closed? If yes for how long?** At this time it is unknown if the park will need to be closed for any portion of this project. If the park does close, the closure time will be limited.
18. **Will the Jon Storm dock be closed? If yes, for how long?** It is anticipated that the Jon Storm Park dock will need to be closed for the in-water portion of construction of the outfall. Every effort will be made to keep the closure time to a minimum. Clackamas Water Environment Services will work closely with the City of Oregon City as potential impacts become clear.

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- 19. Will construction impact Abernethy Creek? Will the project include drilling through bedrock?** Construction should not impact Abernethy Creek. The tunnel will not be going through bedrock, as bedrock is deeper than our anticipated tunnel corridor. The location of the new outfall diffuser in the Willamette and the most inshore diffuser port location is approximately 400 feet distance from the mouth of Abernethy Creek. This substantial offshore location will allow a wide inshore region for fish migrating into Abernethy Creek. The project will specifically design the river diffuser ports and velocities to remain below the NMFS “guidance” of less than 8 fps for outfall ports to avoid fish attraction.
- 20. Will there be any risk of sewer overflow?** Providing additional outfall capacity and reducing the amount of Infiltration & Inflow of extra water in the collection system will reduce the risk of potential sewer overflows.
- 21. Will tunneling impact the ground water or weaken the road? Could it create a sinkhole?** Tunneling will not have an impact on the ground water. Tunneling will not weaken the road or create a sinkhole. The outfall tunnel will be installed much deeper than the road subgrade.
- 22. Will construction affect access to the Best Western Plus Rivershore Hotel? Will there be disturbances to the hotel or local roads?** Access to the hotel will not be affected by construction. Additional information is being gathered and assessed to confirm tunneling options, which is WES’ preferred installation method. Tunneling would minimize impacts to local roads.