



# BUSINESS OF THE CITY COUNCIL CITY OF SNOQUALMIE

**AB24-034**  
**March 25, 2024**  
**Committee Report**

## AGENDA BILL INFORMATION

<b>TITLE:</b>	<b>AB24-034:</b> Water Reclamation Facility Effluent Mixing Zone Study	<input type="checkbox"/> Discussion Only
<b>PROPOSED ACTION:</b>	Adopt Resolution No. 1683 Selecting Kennedy Jenks for completing the WRF Effluent Mixing Zone Study	<input checked="" type="checkbox"/> Action Needed: <input type="checkbox"/> Motion <input type="checkbox"/> Ordinance <input checked="" type="checkbox"/> Resolution

<b>REVIEW:</b>	Department Director	Jeff Hamlin	2/26/2024
	Finance	Janna Walker	3/12/2024
	Legal	David Linehan	Click or tap to enter a date.
	City Administrator	Mike Chambless	3/18/2024

<b>DEPARTMENT:</b>	Parks & Public Works		
	<b>STAFF:</b> Andrew Vining, Project Engineer		
	<b>COMMITTEE:</b> Parks & Public Works		<b>COMMITTEE DATE:</b> March 19, 2024
	<b>EXHIBITS:</b> 1. AB24-034x1 (Res.) 2. AB24-034x2 (Effluent Mixing Zone Plan of Study) 3. AB24-034x3 (Design Consultant Selection Memorandum) 4. AB24-034x4 (Excerpt from NPDES Permit)		

<b>AMOUNT OF EXPENDITURE</b>	\$ 73,965
<b>AMOUNT BUDGETED</b>	\$ 4,106,822
<b>APPROPRIATION REQUESTED</b>	\$ 0

## SUMMARY

### INTRODUCTION

This Agenda Bill seeks approval to select Kennedy Jenks to complete an Effluent Mixing Zone Study for the Water Reclamation Facility Outfall 001. This work will fulfill NPDES Permit requirements and will be performed as outlined in the Effluent Mixing Zone Plan of Study (Attachment 3).

### BACKGROUND

The City Water Reclamation Facility (WRF) discharges treated municipal wastewater to the Snoqualmie River through Outfall 001, which is approximately 1,700 feet upriver of Snoqualmie Falls. Outfall 001 is permitted by the Washington State Department of Ecology (Ecology) under National Pollutant Discharge Elimination System (NPDES) Waste Discharge Permit No. WA0022403 (Permit). The current Permit (version 6) was issued May 19, 2021, and is effective July 1, 2021, through June 30, 2026.

## ANALYSIS

Previous City of Snoqualmie NPDES Permit limits have relied on simple volumetric equations prepared by Ecology to estimate the amount of mixing at Outfall 1, quantified as dilution factors. These results are generally consistent with the Snoqualmie River Basin Temperature TMDL Study prepared by Ecology in 2011. More commonly NPDES Permit dilution factors are based on past mixing zone studies prepared by permittees.

Special conditions in the current Permit require the City to perform a mixing study that will more accurately determine mixing characteristics of the discharge by modeling those characteristics under specified conditions at the outfall. This information may be used by Ecology to prepare future permit modifications that will consider increased WRF flows and more stringent nutrient removal requirements for the Snoqualmie River. To maintain compliance with the NPDES permit requirements and prepare information for future permit modifications the City must complete and submit the Effluent Mixing Zone Study to Ecology prior to July 31, 2024.

The City submitted an Effluent Mixing Zone Plan of Study prepared by Parametrix in September 2023. The City must next submit an Effluent Mixing Report before July 31, 2024.

## BUDGET IMPACTS

Administration recommends approving a contract with Kennedy Jenks in the amount of \$73,965 to complete an Effluent Mixing Zone Study for the WRF. This contract will be paid from the Wastewater Utility Fund (#402) budget. The 2023-24 amended budget appropriates \$4,106,822 for services within the Wastewater Utility Fund. Currently, \$2,628,425 has been spent in the current biennium. With the addition of the Kennedy Jenks contract, the remaining Biennial Budget appropriation is \$1,404,432. Therefore, sufficient appropriation exists within the 2023-2024 Biennial Budget (Wastewater Utility Fund #402) to fund the contract.

### Wastewater Utility (#402) - Services

2023-2024 Amended Biennial Budget	
Beginning Budget	\$ 4,106,822
Expenditures	\$ (2,628,425)
Current Available Budget	\$ 1,478,397
Contract with Kennedy Jenks	\$ (73,965)
Available Services Budget after Contract	\$ 1,404,432

Spending within Wastewater Utility (#402) during 2023 was higher than expected. It is possible that the Wastewater Utility budget will be exceeded before the end of the 2023-2024 Biennial Budget. As a result, the City may need an additional appropriation for the Wastewater Utility Fund. Staff will continue to monitor and manage the Wastewater Utility budget and if needed will introduce a budget amendment prior to the end of the 2023-2024 budget cycle.

**NEXT STEPS**

Staff and Consultants will gather information to prepare the Effluent Mixing Zone Study. The Effluent Mixing Zone Study will be submitted to Ecology prior to July 31, 2024. In 2025 the City will begin preparing an application for permit renewal based on projected flow and load to the WRF and current mixing zone data.

**PROPOSED ACTION**

Move to adopt Resolution No. 1683 Selecting Kennedy Jenks for completing the WRF Effluent Mixing Zone Study, and authorize the Mayor to sign.