BUSINESS OF THE CITY COUNCIL
CITY OF SNOQUALMIE

AB24-XXX
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AGENDA BILL INFORMATION

TITLE:	**AB24-082**: Reclaimed Water Reservoir Improvements Project Update	☒ Discussion Only ☐ Action Needed:
PROPOSED ACTION:	Discussion only	☐ Motion ☐ Ordinance ☐ Resolution

REVIEW:	Department Director	Jeff Hamlin	6/28/2024
	Finance	n/a	Click or tap to enter a date.
	Legal	n/a	Click or tap to enter a date.
	City Administrator	Mike Chambless	7/8/2022

DEPARTMENT:	Parks & Public Works	
STAFF:	Andrew Vining and Jeff Hamlin	
COMMITTEE:	Parks & Public Works	**COMMITTEE DATE:** July 16, 2024
EXHIBITS:	1. Map of Class A Reclaimed Water System 2. Reclaimed Water Distribution System Engineering Report 3. Reclaimed Water Facilities Manual (The Purple Book) 4. WAC Chapter 173-219 Reclaimed Water Rule 5. RCW Chapter 90.46 Reclaimed Water Use 6. 2023 Class A Compliance Monitoring Reports	

AMOUNT OF EXPENDITURE	$ n/a
AMOUNT BUDGETED	$ n/a
APPROPRIATION REQUESTED	$ n/a

SUMMARY

INTRODUCTION

The City produces and distributes Class A reclaimed water during dry season months for non-drinking uses such as landscape irrigation. Reclaimed water is wastewater that gets treated to such a high level that it can be used safely for irrigation. By using reclaimed water the City preserves potable water resources for drinking water purposes. The reclaimed water reservoir improvements will upgrade the dated reclaimed water distribution system and bring it into compliance with current state standards.

LEGISLATIVE HISTORY

State Legislation

The state legislature approved the Reclaimed Water Use Act in 1992 codified as RCW 90.46. This act encouraged using reclaimed water for land application, industrial, and commercial uses. In 1997 the Water Reclamation and Reuse Standards were developed to support this act. Most recently in 2006 this act was amended to expand uses of reclaimed water and directed state agencies to develop framework for safe and beneficial use of reclaimed water – this amendment is the origin of the reclaimed water rule.

Following the 2006 legislative direction state agencies (Department of Health and Department of Ecology) jointly began developing the framework over a 12-year period based on stakeholder feedback. In 2018 the Reclaimed Water Rule (WAC 0173-219) was adopted to encourage the use of reclaimed water to help meet the growing need for clean water across the state by establishing regulatory framework for the generation, distribution, and the use of reclaimed water for beneficial use. Concurrently agencies published the Reclaimed Water Facilities Manual or "Purple Book" which provides more in-depth guidance for utilities that produce reclaimed water.

RCW 90.46, WAC 173-219, and the Reclaimed Water Manual are enclosed for reference.

City Legislation

Following the state adoption of Reclaimed Water Rule in 2018 the City began evaluating options to ensure compliance with updated state standards. On February 25, 2019 under **AB19-022** City Council authorized RH2 Engineering (RH2) to prepare a Reclaimed Water Irrigation System Analysis Feasibility Study to provide agency coordination and evaluate potential solutions to meet the Reclaimed Water Rule standards. During this period the City also renewed it's Water Reclamation Facility NPDES Permit WA0022403 (Permit) which authorizes the production and distribution of up to 1.56 million gallons of Class A Reclaimed Water daily. The City provided comment to the City's draft permit on February 24, 2020 and received responses from Ecology documented in the permit. The final Permit outlines necessary improvements to the City's reclaimed water distribution system and an associated compliance schedule. The following agenda bills were approved by Council to facilitate these improvements and continue production of Class A water. On November 28, 2022 City Council approved **AB22-146** Resolution No. 1632 authorizing a contract with RH2 to complete a Reclaimed Water Distribution System Engineering Report (enclosed). This contract was amended on October 3rd, 2023 under **AB23-110** which authorized RH2 to complete design of the reclaimed water reservoir improvements.

BACKGROUND

The City's reclaimed water distribution system was constructed by the Snoqualmie Ridge Developer in 1997 based on RCW 90.46 standards at that time. The City utilizes sand filtration enhanced treatment followed by ultraviolet disinfection to treat reclaimed water to Class A standards. Following treatment, Class A water is then pumped to Eagle Lake Reservoir for temporary storage prior to distribution as irrigation water to various locations on the ridge including Snoqualmie Ridge Golf Course, City parks and rights-of-way, and the Snoqualmie Ridge Business Park. The reclaimed water system has operated for 25 years in this configuration with no major improvements or recorded public health incidents.

Despite this clean track record of public use, City operations staff have observed times of degraded class A water quality in the reclaimed water distribution system. The water degradation is a result of the distribution system being built to the old standards, specifically the system lacks adequate cross-connection controls needed to protect Class A water from lower-quality water sources. Class A water

produced at the City's Water Reclamation Facility is monitored daily and consistently meets state standards, as demonstrated in Exhibit 6. However, once delivered to Eagle Lake Class A water is degraded by lower-quality water including urban stormwater runoff. In addition, the pump station intake is located near the lake bottom and results in periodic intake of lake sediments.

The 2018 Reclaimed Water Rule standards are more comprehensive than the 1997 standards and require that reclaimed water produced not be degraded during storage and distribution. The 2018 Reclaimed Water Facilities Manual (The Purple Book) Chapter 7 provides guidelines for delivery of reclaimed water including storage and cross-connection control requirements. The old standards did not consider protection of Class A water during storage and distribution. The City's current Permit provides a 6-year extension to the 2018 reclaimed water rule and an associated compliance schedule for implementing improvements.

ANALYSIS

The City's Class A reclaimed water storage and distribution system does not meet current state standards and must be improved to ensure compliance with new standards for safe and reliable delivery of reclaimed water to customers. Over the past 5 years and following adoption of the Reclaimed Water Rule, City staff and consultants have discussed with state agencies options to upgrade the Class A distributions system to current standards. These discussions are reflected in Permit comments, meeting minutes, and the Reclaimed Water Distribution System Engineering Report. The City has been granted a 6-year extension to the 2018 reclaimed water rule and must complete upgrades to the system no later than July 2026 to continue Class A water distribution.

The City distributes an annual average of 18 million gallons Class A water to customers for irrigation purposes. Available during peak irrigation season this volume of water offsets potable water usage by up to 15% of the peak demand, equivalent to 2,000 ERUs. The City's Water System Plan identifies limitations to water rights and source capacity within the current 20-year planning period. As a result, due to the City's projected population growth and limited water rights, switching Class A customers to potable water is not a viable long-term solution.

City administration recommends improving the Class A water distribution system to current standards to ensure safe and reliable delivery of reclaimed water and preservation of potable water resources.

BUDGET IMPACTS

The overall project cost is estimated to be $9 million. The City has received $6.866M state funding for this project thru the Ecology Water Quality Combined Funding program. The offer consists of a $6.866 million low-interest loan which will be used for project design and construction costs.

NEXT STEPS

City administration will provide agenda bills to council for upcoming project action items including design of irrigation pump station, acceptance of state funding for the project, and land purchase documents for acquiring property for the improvements. These agenda bills will be brought forward to meet the following project deadlines:

- December 31, 2024 – Final Plans and Specifications (currently underway)
- June 30, 2026 – Declaration of Construction Completion

PROPOSED ACTION

None at this time.