

Under the Small Community Project Priority List (SCPPL) provision, in the State Fiscal Year 2025 (SFY 25) Water Quality Program Funding Guidelines, the City of Quincy would like to amend the Scope of Work and add Task 3 to its application for project: WQC-2025-QuinPW-00126, in the SFY 25 Draft Water Quality Funding Offer List and Intended Use Plan (SFY25 Draft List). A detailed Task 3 Scope of Work is provided below.

Task #3

Task Title: Reclaimed Water Plan Update

Task Cost: \$235,000 (50% loan and 50% forgivable principal loan requested)

Expected Start Date: April 1, 2024

Expected Finish Date: September 30, 2024

Overview

This scope of work presents the project engineering work, project schedule and project costs to prepare an updated Quincy Reclaimed Water Use Plan. The updated Reclaimed Water Plan will modify the 2023 Reclaimed Water Plan to meet the requirements of WAC 173-240, either for a General Sewer Plan (WAC 173-240-050), and/or Engineering Report/Facility Plan (WAC 173-240-060) and the reclaimed water engineering report requirements of WAC 173-219-210, as specifically outlined in Chapter 5.2 of the Reclaimed Water Facilities Manual (aka the Purple Book).

The tasks associated with this work scope includes the following:

- Task 3.1: Reclaimed Water Quality Assessment
- Task 3.2: Reclaimed Water Regulatory Review
- Task 3.3: Identify Reclaimed Water Application Sites
- Task 3.4: Reclaimed Water Demand Requirements
- Task 3.5: Conduit Application Site Hydrogeologic Assessment
- Task 3.6: Establish Application Design Criteria (Basis of Design)
- Task 3.7: Develop Public Awareness Plan
- Task 3.8: Develop Preliminary Design
- Task 3.9: Develop Preliminary Project Cost Estimates & Implementation Schedules

The following sections of this plan present a more detailed scope of each task.

Scope of Work

Task 3.1: Reclaimed Water Quality Assessment

This task will gather several years of water quality data on the Class A water from the treatment of domestic wastewater by the Quincy Municipal Water Reclamation Facility

(MWRf). The MWRf has been delivering Class A water to existing shallow groundwater percolation beds since 1984. This assessment of the reclaimed water quality will provide the data to support the regulatory review (Task 3.2) and the hydrogeologic assessment (Task 3.5). A focus of the task will be to gather the data that can be compared with the Washington Department of Ecology (Ecology) Groundwater Standards as defined in WAC 173-200. The water quality constituents of concern may include Total Organic Carbon, Total Dissolved Solids, Sodium, Calcium, and Magnesium. Data tables will be prepared that will provide the range of concentrations as well as the average, mean and standard deviation.

Deliverables: 1. MWRf Class A water quality tables for the last 3 years.

Task 3.2: Regulatory Review

The regulatory review will consist of applying the Washington Reclaimed Water regulations; RCW Chapter 90.46 and WAC 173-219 to the specific application of using reclaimed water to irrigate public parks, school yards and residential lawns. In addition, the data developed from Task 3.1 will be reviewed relative to the Groundwater Quality Standards (WAC 173-200) and Ecology's Implementation Guidance for Groundwater Standards (Publication 96-02). The review will also include relevant documents from the Washington Department of Health (DOH) and potential laws and regulations listed in Table 3-1 of Ecology's Reclaimed Water Facilities Manual (The Purple Book).

Deliverables: 1. Technical memorandum with details of regulatory review.

Task 3.3: Identify Reclaimed Water Application Sites

The City of Quincy has preliminarily identified several sites for the application of reclaimed water for irrigation during the growing season. These sites include:

- a. Lauzier Park
- b. Quincy Innovation Academy
- c. Monument Elementary School
- d. South Park
- e. Pioneer Elementary School
- f. East Park
- g. Quincy Middle School

Other sites may be identified during this task. This task will include the determination of the available irrigation area, a site visit to confirm the features of the area, existing irrigation

system design and physical information, use of land, landscaping features, surface water flow conditions, stormwater management features, and types of vegetation.

- Deliverables:
1. Feature map of each site
 2. Tabulation of information obtained on each site
 3. Existing Irrigation System details

Task 3.4: Establish Reclaimed Water Demands

From the site information developed in Task 3.3, an irrigation demand for reclaimed water will be established for each site. The demand for each site will then be evaluated relative to an overall demand for reclaimed water and the available capacity of the existing reclaimed water pumping and piping system within the City. This demand evaluation will include the irrigation scheduling requirements of each site as well.

- Deliverables:
1. Technical memorandum detailing the evaluation of each site
 2. Technical memorandum detailing the use of the existing reclaimed water piping and pumping systems

Task 3.5: Application Site Hydrogeologic Assessment

This site will identify existing soil types and groundwater conditions at each application site to determine if the hydrogeologic setting of each site is consistent with Ecology's groundwater recharge criteria. It will also review the water right requirements and responsibilities as these relate to the application of reclaimed water to each site.

- Deliverable:
1. Technical memorandum

Task 3.6: Establish Design Criteria (Basis of Design)

This task will take all of the work done in the previous tasks, along with the requirements of Ecology's Reclaimed Water Facilities Manual and the DOH Water Systems Design Manual to develop the Design Criteria for preparing detailed design and technical specifications for the construction of the reclaim water application systems.

- Deliverables:
1. Basis of Design Report

Task 3.7: Public Awareness Plan

This task will develop an outline of the components of a public awareness plan that would be implemented well before the construction of any reclaimed water application infrastructure for irrigation. The plan would incorporate the elements of a plan as outlined by the Washington Department of Ecology and Washington Department of Health. The plan would include the pre-construction communication plans, public meetings, multi-language fliers and announcements, and on-site signage requirements.

Deliverables: 1. Preliminary Public Awareness Plan

Task 3.8: Develop Preliminary Design(s)

Based on all the work performed in the previous tasks, a preliminary design will be developed that can be applied to each site. The design will include details on cross-connection control, underground piping, flow metering and monitoring, and special design requirements that might be relevant to a specific irrigation site. The design will include any electrical and control requirements as well as an outline of specific technical specifications.

Deliverables: 1. Preliminary design drawings
2. Outline technical specifications

Task 3.9: Preliminary Cost Estimates & Project Schedules

This task will develop final design and construction cost estimates and project schedules for each of the reclaimed water irrigation sites. This will include any upgrades to the existing reclaimed water pump station or booster pump stations should they need to be required.

Planning Scope of Work – Project Schedule

Figure 1 presents the project schedule. The preferred project schedule will start in April 2024 and be completed in about 6 months. The City understands it may not be awarded funds until summer of 2024, if and when the project is included in the Water Quality Program SFY 25 Final Offer List and an agreement is signed.

Planning Scope of Work – Project Costs

Table 1 of this scope of work presents the estimated project costs to complete the Reclaimed Water Plan. The cost to conduct this work is \$235,000. A detailed budget for Task 3 is attached.