



TO: Elizabeth Pauli, City Manager
FROM: Scott Dewhirst, Superintendent; Water Division
COPY: Infrastructure, Planning and Sustainability Committee
SUBJECT: Tacoma Water Integrated Resource Planning
DATE: June 13, 2018

SUMMARY:

Tacoma Water is developing an Integrated Resource Plan (IRP) and a new source model of its water supply system. The IRP will help Tacoma Water evaluate sufficiency of water resources to meet customer needs, both now and in the future, and provide a foundational basis for communicating water supply adequacy. The developed model will simulate the integrated surface water and groundwater supplies under long-term planning conditions, and will also operate in a short duration forecast mode to improve operational decision making, and provide advanced notice of potential shortage conditions.

The IRP will be a tool for Tacoma Water to be able to make better informed, proactive decisions about the need for new supplies, facilities, and operating policies. It will support decision-making around the timing and use of stored water, groundwater supplies, and periodic demand limitations or curtailment.

A Public Advisory Committee has been formed and engaged to increase awareness and help inform decisions made during the planning process.

BACKGROUND:

Tacoma Water uses the Green River as its primary water source. That source may be constrained by natural weather phenomena and environmental commitments, including maintaining minimum instream flows to protect fish. Uncertainties regarding weather, climate change, drought, and demand growth shape the analysis and planning required to ensure reliable water supply.

Tacoma Water also has robust groundwater resources that are used during peak use periods, especially when low flows occur in the Green River. These groundwater sources were catalogued and evaluated, and incorporated into the system model during this planning effort.



ISSUES:

Key issues related to this work are:

Engagement of Public Advisory Committee – Operating departments of the City of Tacoma recognize that better decisions are made with public engagement. A Public Advisory Committee was established to guide key work elements in this effort.

Development of strong modeling capability – The complexity of Tacoma’s water resources require a complex computational model to flexibly analyze possible future conditions. This work is developing that capability, and training staff engineers to use new tools.

Incorporating Climate Change – Climate experts anticipate that Pacific Northwest temperatures will be warmer over the coming decades, and that the Cascade Mountains will receive less snowpack. The impacts of these expected changes are incorporated in the Integrated Resource Plan.

Conservation Program Update – Tacoma Water is updating its water conservation program to create water savings goal(s) for a ten-year period that begins in 2018. This will assist in complying with Washington State DOH regulations for water-use efficiency of municipal water systems.

Investigating Reuse as a source – This potential resource was explored as part of the evaluation of our source opportunities.

Communicating Resource Adequacy – Tacoma Water has a robust and reliable water resource portfolio today. There are relatively unusual and infrequent conditions that stress resources, and can trigger necessary mitigation measures, including voluntary or mandatory curtailment. Clearly understanding and communicating these conditions and mitigation steps, along with potential future conditions is a key objective of this work.

ALTERNATIVES:

This is an information briefing only. There are no alternatives presented at this time.

FISCAL IMPACT:

This is an information briefing only. There is no fiscal impact.

RECOMMENDATION:

This is an information briefing only. There is no recommendation.