



Utility Advisory Committee

LOTT Clean Water Alliance (LOTT) Reclaimed Water Infiltration Study Update

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Title

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Recommended Action

None. Briefing only.

Report

Issue:

LOTT produces Class A Reclaimed Water from treated wastewater. Class A Reclaimed Water is approved for any use, except for drinking. Production and reuse of reclaimed water is key to LOTT's long-range plan for managing our communities growing demand for wastewater treatment capacity. Infiltration of reclaimed water to replenish groundwater is also part of that strategy, and is key to the City of Olympia's ability to fulfill the requirements of mitigation for the McAllister Wellfield water right.

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Presenters:

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Background and Analysis:

LOTT provides services to treat and manage wastewater for the urban areas of Lacey, Olympia, and Tumwater. Since 2006, LOTT has also produced reclaimed water at the Budd Inlet Reclaimed Water Plant and the Martin Way Reclaimed Water Plant (MWRWP). The reclaimed water is used for irrigation and other nondrinking purposes. Some of the reclaimed water produced at the MWRWP is used to recharge (replenish) groundwater at infiltration basins on the LOTT Hawks Prairie Ponds and Recharge Basins and by the Cities of Olympia and Lacey to replenish Woodland Creek base flows by infiltrating reclaimed water at the Woodland Creek Groundwater Infiltration Facility.

Questions about infiltration of reclaimed water have been raised, including concerns regarding the fate and possible health and ecological impacts of certain types of chemicals that may remain in reclaimed water after treatment. These residual chemicals include pharmaceuticals, personal care

products, and other organic chemicals typically found at very low concentrations in reclaimed water.

To address these questions, LOTT is engaged in a multi-year Reclaimed Water Infiltration Study. The purpose of the Study is to improve the understanding of which residual chemicals exist in LOTT's reclaimed water and in the local environment, how reclaimed water that is infiltrated into shallow groundwater interacts with soils and local groundwater, and what happens to these residual chemicals over time in the environment. Findings of the study will be used to inform future decisions about levels of treatment and uses of reclaimed water.

The Study includes the following tasks:

Water Quality Characterization - sampling and laboratory analysis to determine the current quality of our local waters: groundwater, surface water, wastewater and reclaimed water.

Treatment Effectiveness - evaluation to determine what happens to reclaimed water that is infiltrated to groundwater: where does it travel and how quickly, and how does the quality of the water change over time?

Risk Assessment -determining the relative human health and ecological risks of replenishing groundwater with reclaimed water.

Cost/Benefit Analysis - determining the costs and benefits of various approaches for treating and using reclaimed water.

LOTT staff will provide an update on the status of these tasks and preliminary Study results.

Neighborhood/Community Interests (if known):

Localized owners of domestic wells in the vicinity of reclaimed water infiltration facilities.

Options:

Not applicable. Information only.

Financial Impact:

Not applicable. Information only.

Attachments:

None