



Purple Coming Down the [^]Pipe... Hawks Prairie Reclaimed Water Satellite

The LOTT Alliance's first Reclaimed Water Satellite system was built to produce 2 million gallons of Class A Reclaimed Water per day. Over time, the system can be expanded to 5 mgd.

Providing New Treatment Capacity for LOTT and a New Source of Water for Our Community

The Hawks Prairie Reclaimed Water Satellite provides the first increments of new treatment capacity under LOTT's Wastewater Resource Management Plan. A membrane bioreactor system cleans water to Class A Reclaimed Water standards so it can be beneficially used in the community.

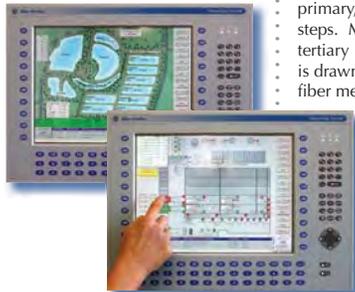
Producing the Water: Martin Way Reclaimed Water Plant

The Martin Way Reclaimed Water Plant treats up to 2 million gallons of used water daily, producing high quality water to serve many community needs. The Plant has been designed to be aesthetically pleasing and compatible with its surrounding neighborhood. It's located on a 3.4-acre site on Martin Way. Most of the treatment process occurs in underground tanks, covered with above-ground eco-roofs featuring water-efficient northwest plants.



The satellite includes the Martin Way Reclaimed Water Plant, Hawks Prairie Reclaimed Water Ponds/ Recharge Basins, and three miles of distribution pipelines.





The treatment technology used at the Plant is a membrane bioreactor, including primary, secondary, and tertiary treatment steps. Membrane filtration provides the tertiary level treatment. Filtered effluent is drawn through thousands of tiny hollow fiber membranes that look like strands of spaghetti. The holes, or pores, are so small that bacteria and other fine materials are left behind in the membrane tank. The clean water proceeds to the disinfection step.



Reclaimed water is monitored for many water quality parameters in several locations in the treatment and conveyance process. In fact, some of the permit requirements that allow LOTT to operate the Plant are more stringent than drinking water requirements. These monitoring stations are tied into the control system and allow the control system to adjust or stop processes if necessary. If, for instance, something happens to one of the filters and substandard reclaimed water is produced, the control system will automatically open a valve that sends the substandard reclaimed water into the sewer and to the Budd Inlet Treatment Plant instead of being pumped to the ponds.

Moving the Water: From Plant to Ponds

The cleaned water travels three miles through a 14-inch purple pipeline from the Martin Way Reclaimed Water Plant to the Hawks Prairie Reclaimed Water Ponds/Recharge Basins. Some of the water will ultimately be drawn-off along the way for irrigation or other beneficial uses.



The Hawks Prairie Ponds/Recharge Basins site is located at 3001 Hogum Bay Road in Lacey, Washington.



Displaying and Storing the Water: Hawks Prairie Reclaimed Water Ponds

At the 41-acre site on Hogum Bay Road, the Class A Reclaimed Water circulates through a series of five constructed wetland ponds, containing over 225,000 wetland plants.

The Ponds serve two purposes:

- Public Visibility and Education – The ponds provide opportunities for public education, recognition, and acceptance of reclaimed water. Four large interpretive kiosks display information about reclaimed water, groundwater recharge, and natural features of the site.
- Community Benefits – As the featured attraction is in a park-like setting, with walking trails and benches, the ponds serve as an amenity for the surrounding industrial and residential area.



The pond site also has many controls. Each of the ponds has valves that allow operators to remotely stop flow into or out of a pond. There is a monitoring station at the ponds that alerts operators if substandard reclaimed water enters the facility. In the event that this were to occur, operators can close the first pond to contain the substandard water, giving them time to address whatever is causing the substandard reclaimed water.

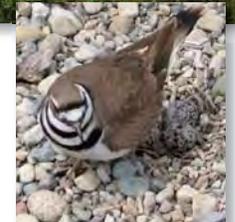
Infiltrating the Water: Recharge Basins

Water from the Reclaimed Water Ponds flows to the rectangular Recharge Basins at the Hawks Prairie site. From there, the water infiltrates through the soils to the underground aquifer. Eight on-site recharge cells, one acre each, allow some cells to be rested and rehabilitated while others are in operation; no more than half the cells are in use at any one time.



Distributing Water to Users

Once distribution pipelines are in place, the City of Lacey and the City of Olympia will distribute the water to users within their respective areas. Lacey has already installed a purple pipeline under Marvin Road from I-5 to the new regional athletic complex where Lacey plans to use Class A Reclaimed Water for irrigation and toilet flushing. Additional purple pipelines to transport the water to individual users will be constructed over time and are the responsibility of the Cities and individual users.



Satellite Cost and Financing

The total construction cost was about \$35 million. The construction was financed at 1.5% interest through a loan from the Department of Ecology's State Revolving Fund.



For More Information...

For more information about the production of Class A Reclaimed Water or LOTT's other reclaimed water projects, please contact:

LOTT Clean Water Alliance
500 Adams Street NE
Olympia, WA 98501-6911
(360) 528-5719

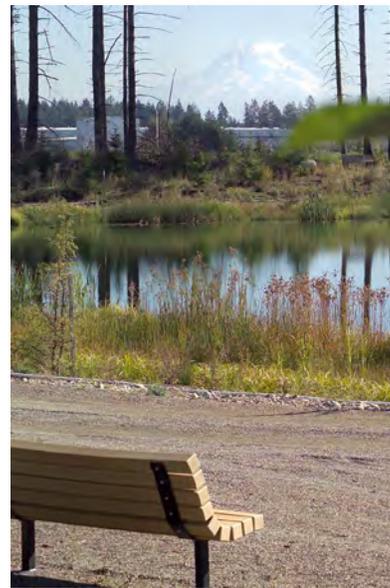


For information about distribution and uses of Class A Reclaimed Water, please contact:

City of Lacey
PO Box 3400
Lacey, WA 98509-3400
(360) 438-2687



City of Olympia
PO Box 1967
Olympia, WA 98507-1967
(360) 753-8793



Class A Reclaimed Water is the highest quality of reclaimed water as defined by the Washington State Departments of Health and Ecology. It can be used for irrigation, a variety of commercial and industrial uses, and environmental benefits such as streamflow augmentation, wetland enhancement, and groundwater recharge.