



# Focus on **Water Reclamation and Reuse**



## Ten Years of Progress

The 2003 legislative session marks the tenth anniversary of Washington's Reclaimed Water Use Act, Chapter 90.46 RCW. This legislation initiated a fundamental shift in wastewater management and ushered in a new era of integrated water and wastewater management to meet the growing demands of our state.

### What is reclaimed water?

Reclaimed water is defined in state law as wastewater that is "adequately and reliably treated" such that it is no longer wasted but is "suitable" for beneficial uses such as irrigation, commerce and industry and aquifer recharge. The law also recognizes three additional categories of water that can be treated to quality suitable for reuse: Greywater, Agricultural Industrial Process Water and Industrial Reuse Water. These wastewater categories are differentiated from reclaimed water in that they contain no sewage. Grey water refers to residential and commercial wastewater such as water from sink or shower drains. Agricultural Industrial Process Water refers to wastewater from the agricultural food processing industry. Industrial Reuse Water refers to water from industrial processing. Each of these is treated differently in state law.

### Where have we been?

#### *Interagency Cooperation*

This landmark legislation launched the Department's of Ecology and Health into a unique partnership to encourage the development of water reclamation and reuse while protecting public health and the environment. Toward that end, the departments coordinate to pursue the following objectives:

- Protect public health and safety and increase the reliability of drinking water supplies;
- Protect environmental water quality and value clean water to support all beneficial uses; and
- Improve water resources management, maintain instream flows and protect existing water rights.

#### *Program Development*

As directed and funded by the Legislature, Ecology and DOH developed standards, procedures, and guidelines for municipal reclaimed water that were published in 1997. The 1997 Water Reclamation and Reuse standards provide design, treatment, and use criteria for public health and safety and environmental protection. The program has grown from four initial demonstration projects to a total of 16 municipal reclaimed water facilities within the state of Washington.

### Lessons learned from our ten-year journey

Washington's ten-year journey has been marked by a number of successes including coordination and cooperation between agencies, adoption and implementation of the reclaimed water standards, and refinement of both technologies and processes. Along the way we have also identified a number of challenges to fully realizing the benefits of water reclamation.

- **Value and affordability** – Reclaimed water projects do not always compete well when viewed solely from the perspective of the wastewater utility. The state must make reclaimed water more cost effective and communicate the value and benefits of improved water quality and water management.
- **Public acceptance** – Public confidence is key to the success of reclaimed water. State efforts must focus on ensuring the public that their health, their communities, and the environment are being protected.
- **Conflicts with the water code** – State law prohibits reclaimed water facilities from impairing existing downstream water rights. However, insufficient characterization of natural hydrologic systems and confusion related to water rights can make impairment difficult to determine. Recent innovative reuse proposals that commingle reclaimed water with state resources also complicate decisions regarding when water rights are required. Uncertainty on these issues can be a barrier to project implementation and should be addressed by state agencies and the legislature as appropriate. Inconsistency in law – There are several inconsistencies in the current law that warrant review for future revision. For instance, the impairment language is not consistent between municipal and industrial reuse facilities and could be perceived as inequitable.
- **Need for state support** – Financial and institutional support for reclaimed water projects is critical to the success and future expansion of the state’s program.

## A vision for the future and the next steps toward that vision

The future of reclaimed water in Washington State should be marked by a robust number of reclaimed water and other reuse projects putting cutting-edge technology to work, increased public confidence that the state is protecting their health, safety and environment, improved water quality, and responsible management of the state’s water resources. To realize that vision, the Departments of Ecology and Health are moving forward with the following steps:

- **Further development across the state** – There are more than 20 facilities in various stages of planning, design and construction, in addition to the 16 currently in operation. State agencies will continue to work with these projects, and new ones, to get them on line.
- **Further improvements in agency coordination** – Recognizing the complexities presented by reclaimed water, Ecology has convened an interagency technical working group. This group brings together experts from Ecology’s Water Resources and Water Quality programs and Health’s Drinking Water Program to deal with day-to-day reclaimed water issues and identify statewide program needs.
- **Improved guidance** – In order to provide consistency and increase efficiency of program implementation, Ecology, in consultation with Health, will undertake revision of its Permit Writer’s Manual to include application of existing standards and interagency processes.
- **Regional watershed planning** – Ecology continues to work with local watershed leads and to ensure that opportunities to improve water management through use of reclaimed water are fully evaluated and utilized.
- **Developing partnerships** – Ecology, in consultation with Health and Washington State University, contacted the National Water Research Institute (NWRI) for assistance. The NWRI Board of Directors responded favorably to our request with both technical support from national experts and financial support to help move the state’s water reuse program forward. This support is critical in these tight budget times and will help us develop a strategic program for successful implementation.

***Completed Reclaimed Water Projects***

<b><u>County</u></b>	<b><u>Facility</u></b>	<b><u>Description</u></b>	<b><u>Contact</u></b>
Clallam	City of Sequim	Class A reclaimed water for irrigation, stream flow enhancement, ground water recharge and city uses (0.67 MGD).	Jim Bay (360) 683-4908
Clallam	Sunland Water District	Class D reclaimed water for irrigation (0 .1 - .3 MGD). Planned upgrade to Class A.	Dick Stuhr (360) 683-3905
Grant	City of Ephrata	Class A reclaimed water for groundwater recharge, irrigation, city and commercial uses (1.12mgd).	Jim Cherf (509) 754-4601
Grant	City of Quincy	Class A reclaimed water for aquifer recharge (1.54 MGD).	Daniel Frazier (509) 787-3523
Grant	City of Royal City	Class A reclaimed water for groundwater recharge; irrigation uses (0.25 MGD).	Al Watson (509)346-2263.
King	South Plant	Class A reclaimed water for landscape irrigation (1.3 MGD).	Tom Fox (206) 296-5279
King	City of Snoqualmie	Class A reclaimed water for golf course and landscape irrigation (1.6 - 2 MGD). Planned expansion.	Kirk Holmes (425) 888-5435, ext. 12
King	West Point	Class reclaimed water for irrigation and plant process water (1.0 MGD).	Tom Fox (206) 296-5279
Mason	North Bay/ Case Inlet	Class A reclaimed water for land application and groundwater recharge (0.3 MGD).	Gary Yando (360) 427-9670, ext.270
San Juan	Friday Harbor	Class A reclaimed water for toilet flushing (1000 gpd).	Mike Kauffman, Env. Health. (360) 378-4474
Spokane	Medical Lake	Class A reclaimed water for streamflow augmentation (1.85 MGD).	Steve Cooper (509) 299-6860
Thurston	City of Yelm	Class A reclaimed water for irrigation; wetlands and groundwater recharge (1.0 MGD).	Shelly Badger (360) 458-8405
Walla Walla	City of College Place	Class A reclaimed water treatment installed but does not have alternative disposal site for reliability (1-1.5 MGD) Uses include irrigation, stream flow augmentation and wetlands.	Paul Hartwig (509) 529-1200
Walla Walla	City of Walla Walla	Providing reclaimed water for land application (6.2 MGD).	Frank Nicholson/ Hal Thomas (509) 527-4463
(Whidbey Island)	Holmes Harbor Water District	Class A reclaimed water for golf course irrigation (0.1 MGD); Planned expansion to 0.2 MGD.	Mark Dumke (360) 331-4636
(Whidbey Island)	Main Street Sewer District	Class A reclaimed water for irrigation and possible toilet flushing (17,500 gpd).	Rick Almberg (360) 675-2438

***Planned Reclaimed Water Projects***

<b><u>County</u></b>	<b><u>Facility</u></b>	<b><u>Description</u></b>	<b><u>Contact</u></b>
Cowlitz	Cowlitz Regional	Class A reclaimed water for use at energy co-generation facility (2.3 MGD) – On-hold	Jerry Schultz (360) 577-2040
Pierce	Crystal Mountain Sewer District	Small Class A pilot reclaimed water demonstration to make snow /seasonal landscape irrigation.	Bill Steel (360) 663-2265

<b><u>County</u></b>	<b><u>Facility</u></b>	<b><u>Description</u></b>	<b><u>Contact</u></b>
King	Lakehaven Utility District	Class A reclaimed water planning for irrigation and groundwater recharge.	Don Perry (253) 941-1516
King	Sammamish Satellite	Class A reclaimed water for seasonal landscape irrigation (2-5 MGD).	Tom Fox (206) 296-5279
Lewis	City of Chehalis	Class A and D reclaimed water for poplar irrigation, (3.5 MGD).	Jim Nichols (360) 748-0238
Mason	City of Shelton	Exploring feasibility to allow a capacity increase without expanding shellfish closure zone.	Mike Golat (360) 426-9731
Pierce	Cascadia/Orting	Class A reclaimed water for landscape irrigation golf course, schools and parks, (0.5 MGD).	James Mercer (360) 893-2219
Pierce	Chambers Creek	Chambers Creek master plan includes reclaimed water use for site restoration and irrigation	Marsha Huebner (253) 798-4050
Pierce	Park Junction Resort	100% Class A reclaimed water for proposed destination resort (0.3 MGD).	Sylvia Cleaver (503) 282-3357
Snohomish	City of Everett	Poplar Irrigation, Class C reclaimed water for hybrid poplar tree irrigation (1.5 MGD).	Chris Chesson (425) 257-8246
Snohomish	City of Everett/ Kimberly Clark	Class C reclaimed water for industrial cooling (6-8 MGD).	Chris Chesson (425) 257-8246
Spokane	City of Cheney	Proposed Class A reclaimed water for wetlands, ground water recharge and irrigation of EWU	Terry Pickel (509) 235-7293
Spokane	Spokane County	Class A reclaimed water plan for ground water recharge, irrigation and industrial uses.	N. Bruce Rawls (509) 477-3604
Thurston	City of Tenino	Class A reclaimed water planned for groundwater recharge to improve based streamflows.	Dave Dafoe (360) 264-2368
Thurston	LOTT, Budd Inlet	Class A reclaimed water for landscape irrigation. (1.0 – 1.5 MGD).	Karla Fowler (360) 664-2333
Thurston	LOTT, Hawks Prairie Satellite	Class A reclaimed water for landscape irrigation, aquifer recharge, commercial/industrial uses (1–5MGD).	Karla Fowler (360) 664-2333
Whitman	City of Pullman/ WSU	Class A reclaimed Water proposed for irrigation uses (2.0 MGD).	Mark Workman (509) 334-4555 Gerald Schlatter (509) 335-5571

Many additional projects throughout the state are conducting planning and feasibility studies, including the cities of Buckley, Olympia, Lynden, Port Orchard, Duvall, Carnation, and Clinton, the Vineyards, Bear Mountain Resort and the Indian John Hill rest stop.

## **For more information**

Please contact Kathy Cupps, Department of Ecology at (360) 407-6452; or Craig Riley, Department of Health at (509) 456-2466.

*If you require this publication in an alternative format, please contact the Secretary at (360) 407-6401 (Voice) or (TTY) at 711 or 1-800-833-6388.*