

Model for reliable production of reclaimed water.

Combines state-of-the-art technologies with innovative design and ecological and environmental sustainability.



MBR efficacy testing at King County's Hollywood Pump Station helped determine the feasibility of treating wastewater to a level suitable for agricultural irrigation.

Sammamish Valley Reclaimed Water Production Facility

The Puget Sound region faces significant challenges in meeting the water resource needs of both the environment and people. The King County Department of Natural Resources (KCDNR) recognized that reclaimed water could serve as a significant new source of water to the region, deferring the need to develop new water sources. Reclaimed water also allows augmentation of instream flows to protect salmonids. In conjunction with its mission to expand the use of reclaimed water, KCDNR proceeded with planning and preliminary design of a reclaimed water facility to help meet the growing water demands in the Sammamish Valley.

King County's Wastewater Treatment Division retained Carollo to conduct a pilot study of an MBR to test the feasibility of treating wastewater to a level suitable for unrestricted reuse for agricultural irrigation. The pilot facility was located at the Hollywood Pump Station along the Sammamish River Trail, a popular recreational area, to expose the public to the project and gain support for reclaimed water use. Applying reclaimed water to garden test pilots managed by various local growers helped foster understanding of the benefits of irrigation with reclaimed water. Based on the success of the pilot study, King County moved forward and hired Carollo to provide preliminary design of the 1.5-mgd full-scale facility.

The Sammamish Valley Reclaimed Water Production Facility (RWPF) is the first of several planned satellite reclamation facilities and is considered a model for reliable production of reclaimed water. To meet this commitment, Carollo has developed the first and only method to apply and incorporate sustainability to all design elements within the treatment process.

Specifically, the goals of the RWPF include:

- ▶ Providing a reliable, drought-resistant water supply for customers.
- ▶ Enhancing fish runs by providing an alternative source of irrigation water.
- ▶ Demonstrating the safety and environmental benefits of reclaimed water.
- ▶ Constructing an economically- and ecologically-sustainable reclamation facility.
- ▶ Identifying and meeting the needs of the communities.