

Built with the environment in mind

In addition to providing enough wastewater treatment capacity to protect public health, the environment and the economy in our growing region over the next several decades, the Brightwater Treatment Plant will incorporate sustainable or “green” design and building practices in all facets of its construction and operation.

Sustainable design practices on the treatment plant site include:

- Reducing impervious surface on the 114-acre site by about 50 percent.
- Building an innovative stormwater treatment system that will include multiple stages of filtration through wetlands, which will improve the quality of stormwater flowing to Little Bear Creek.
- Using recycled or green building materials in facility buildings and designing to maximize use of natural light.
- Using green construction materials such as flyash concrete, and meeting exceptionally high standards for recycling construction material waste.
- Retaining excavated soil onsite to significantly reduce truck trips, and using the excavated soil to create landforms and buffers that will attractively screen the plant.
- Substantial native landscape planting around facility buildings.
- Building an Environmental Education/Community Center on site that will include:
 - Natural ventilation and lighting plus energy efficient lighting and temperature controls
 - Use of recycled materials
 - Energy star appliances
 - Radiant floor heating that uses waste heat from the treatment plant processes
 - Low-flow toilets that use reclaimed water from the treatment plant (water that gets treated to such a high level that it can be used safely for non-drinking water purposes)
 - Designing buildings to possibly accommodate green roofs
 - Reclaimed water for irrigation
 - Green building features used as educational tools
 - Pursuit of a **LEED's Gold** level for the facility

The “North 40”

Brightwater features 70 acres of open space and enhanced habitat, including 43 acres on the north portion of the site that has been transformed from an underused, environmentally damaged site into a community amenity with open space and trails and improved habitat.

Examples of green building practices in the North Mitigation area include:

- Using excavated soil on the site to create landforms (hills) within the habitat area, reducing traffic impacts, fuel consumption and greenhouse gases
- Planting more than 22,000 plants including 5,000 seedling trees using only native plant species that have been grown and purchased through the King County Plant Salvage and Parks Nurseries, and reusing more than 200 trees and root wads cleared from the site during an earlier road expansion project in stream and pond salmon habitat reconstruction.
- Recycling approximately 15,000 cubic yards of compost material found on-site and eliminating the need for importing material while also reducing cost

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- Restoring approximately 1,350 feet of stream corridor and adding an additional 350 feet of new stream corridor.
- Creating 29,000 square feet of pond habitat with an amphibian shelf and ladder that connects two open wetland systems
- Constructing more than four acres of additional enhanced emergent and forested wetland habitat
- Using large sprinklers to provide infiltration for the stormwater runoff from the entire construction area located to the south
- Building a 1,500-square-foot field house that will include:
 - Composting toilets
 - Partial straw bale construction
 - Solar panels
 - Sustainable & recycled building materials
 - A rainwater catchment system for irrigation of the demonstration gardens
 - Demonstration gardens that will display native plants, edible plants, and drought-tolerant plants to show how we can design for the benefit of humans, wildlife (especially native birds), and the environment, without compromising visual beauty or practical function uses of a garden

Award-winning design team

The Brightwater design team is world-renowned. Hargreaves Associates led the Brightwater site planning and landscape architecture design. Mithun, a local architecture firm and international leader in environmentally sustainable architecture, designed Brightwater's facilities as well as the Environmental Education/Community Center. The firm's other projects have included the Islandwood Environmental Learning Center on Bainbridge Island and REI stores worldwide.

For more information about the Brightwater project, visit the website at <http://dnr.metrokc.gov/wtd/brightwater/>

**Information available in alternative formats by calling 206-684-1280
or 711 TTY Relay**