



King County

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Brightwater

T R E A T M E N T S Y S T E M

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- Residents comment on Brightwater at scoping meetings
- Get answers to common questions
- Tunneling history described





Brightwater

T R E A T M E N T S Y S T E M

Residents, businesses and agencies comment on Brightwater at scoping open houses

About 500 people attended four public open houses in June sponsored by King County to express their thoughts, concerns and learn more about issues King County should evaluate in the environmental impact statement (EIS) for the Brightwater facilities. The meetings took place in Lake Forest Park, Woodinville, Edmonds and Bothell.

The county's Wastewater Treatment Division announced the meetings through scoping notices sent to 60,000 addresses, advertisements, articles and legal notices in local and regional newspapers, and announcements on the King County Web site.

Scoping is required by the State Environmental Policy Act. Comments received during scoping will help the county decide what to analyze in the EIS.

Project Web Site

Learn more about the project and important decision-making milestones by visiting us at <http://dnr.metrokc.gov/wtd/brightwater>

About 150 people provided verbal comments that were recorded by a court reporter. Meeting attendees could also provide written comments. Written and oral comments will be given equal consideration when deciding what to include in the EIS.

Here are the key issues and concerns we heard:

Systemwide

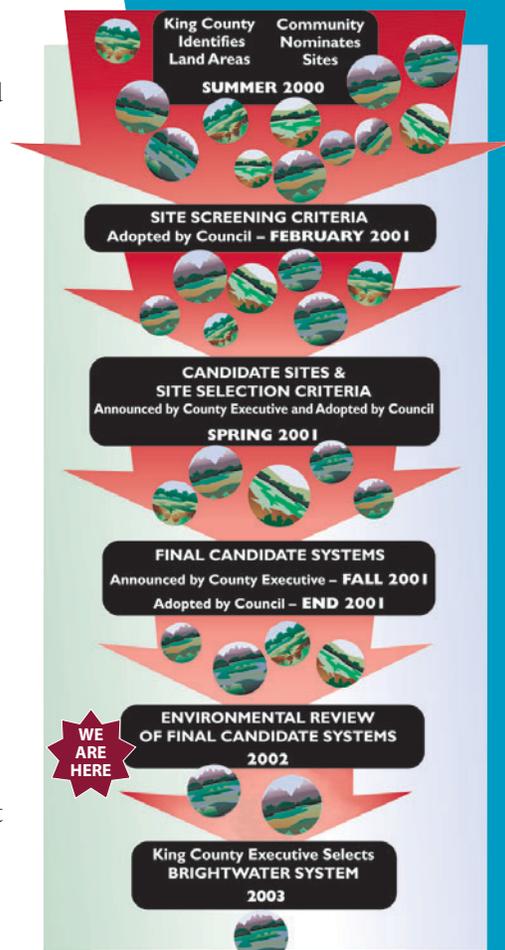
People expressed concerns about the effects Brightwater might have on wildlife, land and Puget Sound. Odor, traffic, safety, aesthetics and property values were issues at all the meetings. People expressed concern about King County constructing facilities in Snohomish County and asked for "guarantees" that King County would be accountable for problems in the future. People expressed concern about the impact construction would have on local economies. Some speakers suggested reconsidering other treatment plant sites such as the Gravel Quarry and Point Wells that were considered earlier in the planning process.

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Department of Natural Resources and Parks
Wastewater Treatment Division



King County staff explained details of Brighwater at four public open houses in June.

Continued from front page

Pipeline routes

People worried about construction impacts including air and water pollution, noise and traffic. They wanted to be sure sensitive resources like artesian wells, wetlands and salmon-bearing streams would be protected.

Proposed Unocal treatment plant site

Edmonds residents wanted to be sure that sensitive areas near the site — including wetlands, a wildlife refuge, salmon-bearing creeks, and a fish hatchery — would be protected. They believed the site is too small to provide adequate buffers between the plant and these resources and homes. They said Edmonds has enough public facilities, including two treatment plants, a train station and a ferry terminal, and stated that a treatment plant is not allowed under current zoning. Participants expressed concern about higher sewer rates if Edmonds joined King County's system. People raised issues about the impact the treatment plant would have on recreation, tourism and businesses

and suggested the property should be used in ways that would produce revenue for the city or as a multimodal transportation center. They expressed concern about earthquake faults, soil liquefaction and unstable slopes. Some residents suggested there were fewer opportunities to use reclaimed water in Edmonds than at Route 9.

Proposed Route 9 treatment plant site

Participants suggested the Route 9 system would have a greater environmental impact than Unocal because there are more miles of conveyance pipeline. Residents expressed concerns that there may not be adequate emergency and other support services in the unincorporated area to respond to accidents at the treatment plant. People were concerned about air and water pollution and flooding. They wanted to be sure Little Bear Creek and groundwater are protected. There were concerns the plant would foster too much population growth. People expressed concern about biosolids storage and noise from biosolids trucks. Some suggested there would be more opportunities for using reclaimed water near Route 9, and, if the plant is well built, King County might be the best steward of the property.

How comments will be used

Comments received during the scoping period will help focus the analysis in the Draft environmental impact statement. There will also be opportunities to comment on the Draft EIS, which King County will issue this fall. Comments on the Draft EIS will be addressed in the Final EIS, scheduled for issue in 2003. 

Frequently asked questions at scoping meetings

Q: Why would King County build a treatment plant in Snohomish County?

Wastewater from a large part of south Snohomish County has flowed to King County for treatment for nearly 40 years. The system was built to clean up Lake Washington, which had become too polluted for swimming. It was designed within natural watersheds where streams flowed toward Lake Washington, not political boundaries. By 2010, we will reach the limit of available capacity at King County's two existing regional treatment plants. About 63 percent of flows treated at Brightwater will come from homes and businesses in Snohomish County.

Q: Why don't the Route 9 and Unocal sites have to be the same size? Will the plant fit on either site?

The minimum amount of buildable space needed for the Brightwater plant is 25 acres. That minimum acreage allows for the space required for the treatment plant, reclamation of all wastewater flows, energy self-generation, and future treatment process upgrades and expansions. Both the Unocal and Route 9 sites comply with all the site selection criteria used to evaluate the candidate sites for the Brightwater treatment plant. The Unocal site has about 53 acres; 40 acres are buildable. The Route 9 site is 111 acres with 79 estimated usable acres.



Permanent above-ground structures like the **York Pump Station**, located in north King County, are designed to fit into the surrounding area.

Q: How far out will the outfall — the pipe carrying treated wastewater into Puget Sound — go?

The Brightwater Treatment Plant will have an outfall 4,000-7,000 feet from the shore at a depth of 500-700 feet.

Q. What is the earthquake potential at the Route 9 and Unocal sites?

A. Treatment plants are designed to withstand earthquakes and include redundant systems to provide back-up. All land areas considered for treatment plant sites and conveyance pipes that were within 0.5 kilometer from a documented seismic fault were removed from consideration early in the process. Both Route 9 and Unocal were found suitable for construction of a wastewater treatment plant. Wherever located, the facilities will be engineered, designed and built to meet all regulations and standards for seismic concerns.

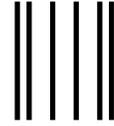
Q. Will other King County facilities be sited alongside the Brightwater treatment plant?

A. No, King County is planning to build only the wastewater treatment plant on either the Route 9 or Unocal

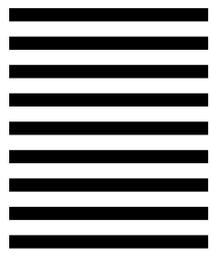
site. Other potential structures related to mitigation measures could be developed in conjunction with the community. For example, an educational center focusing on water quality or sports fields could be sited next to Brightwater as a community amenity.

Q. How much land will be needed to build the conveyance pipelines?

A. Ten conveyance corridors have been identified. Eventually, only one will be built. Pipelines will be built underground, often in public right-of-way (under a street). They can be placed underground close to the surface or in tunnels. Once the pipelines are built, communities will not see the pipes. Other conveyance facilities include portals (holes in the ground used during construction to bring materials in and dirt out) and pump stations (permanent facilities used to pump wastewater over hills). Portals and pump stations each need 1-2 acres. We've identified 70-acre siting areas for portals and pump stations along each of the conveyance corridors, but only 1-2 acres in each siting area would be needed. Currently King County has built and operates 37 pump stations and has nearly 275 miles of pipelines. 



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Other opportunities to be involved this summer

Conveyance seminars will provide the opportunity to learn about the pipeline system that carries water to and from the treatment plant. They will focus on specific geographic areas.

Design guidelines workshops will take place this summer so people help shape the design of the Brightwater Treatment Plant.

For details on these meetings, look for a separate postcard, visit our Web site or call King County (see below).

Send us your comments, concerns or ideas.

E-mail
brightwater@metrokc.gov

Phone
Debra Ross at 206-684-6799 or, if calling long-distance, use our toll-free number 1-888-707-8571

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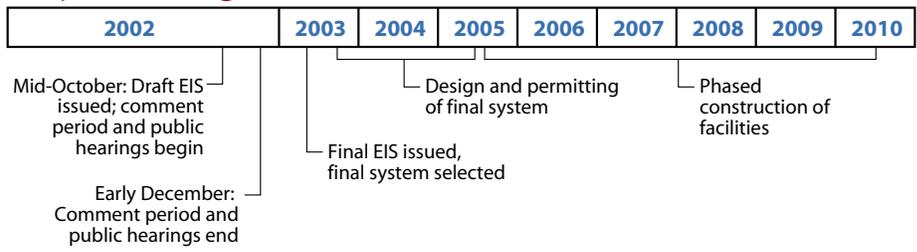
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What do you think is important to consider when selecting a site and pipeline routes for our facilities? Mail or fax this form to Debra Ross at the numbers listed below.

Projected Brightwater Timeline



Tunnels have been part of the sewer system since Seattle's early days

Brightwater's pipelines will run underground — many built in tunnels. The Wastewater Treatment Division has extensive experience building and maintaining tunnels. Some tunnels in our system have been in use since the late 1800s.

In the early 1900s, workers dug tunnels by hand, and they used timber framing as protection from the surrounding soil. The Lake Union Tunnel in Seattle, completed in 1893, conveys wastewater flows from the south Lake Union area to the Elliott Bay interceptor at the west end of Denny Way. The tunnel was dug by hand, supported by temporary timber lagging, and completed with a brick lining. The tunnel remains in service today.

Newer tunnels in the system include the Second Avenue sewer tunnel under downtown Seattle. This tunnel was built in 1968 using a digger shield — a “can” that surrounded the digging apparatus to protect it from the surrounding soils — to enable construction through glacial sands, gravel, clay and till.

These days, tunneling technology commonly uses a tunnel boring machine that drills and lines the tunnel in one continuous operation. The machine bores a tunnel with a rotating disk and closed front end. It is slightly larger than the necessary diameter so segments of tunnel lining may be installed behind it.

In 1997, King County completed the West Seattle tunnel to transfer flows from the Alki/West Seattle area to the West Point Treatment Plant. This tunnel is nearly two miles long with an inside diameter of 11 feet. At its deepest point, it is about 400 feet below the ground surface.

The Wastewater Treatment Division is now building tunnels in the Denny Way area of Seattle and in downtown Renton. Advances in technology used in the current Denny project included the computerized laser guidance system and earth-pressure balance tunneling technology.

The laser guidance system ensured that the tunnel was built on the intended alignment (both horizontal and vertical). The earth-pressure-balance tunneling technology ensured that there was virtually no surface impact to streets or buildings. Thousands of people drove over the tunneling operation every day without knowing the work was even under way.

Future tunnel projects are also planned. 



This tunnel was dug in 1922 and it is still in service today, conveying drinking water from the Volunteer Park reservoir to Seattle residents.

Photo courtesy of the Museum of History and Industry.



This shows the portal of the Denny Way tunnel, one of King County's deep tunneling projects. The boring machine is emerging from the tunnel, after completing its 1.2-mile route under the lower Queen Anne neighborhood, sometimes reaching depths of 160 feet below the surface.