Protecting Puget Sound

Landscape architect Angela Danadjieva’s job was to beautify (and hide) Seattle’s new half billion dollar sewage treatment facility.

By LESLEE JAQUETTE

A decade of planning; permits; building a 3,000-foot-long retaining wall; moving 30,000 cubic yards of topsoil; 20 miles of irrigation line; 10,000 trees and 15,000 shrubs and ground cover plants, the $573 million West Point Sewage Treatment Plant in Seattle, Wash., is open.

Found on a spit of land on the east side of Puget Sound, adjacent to Seattle’s largest public park, the secondary treatment plant was the single largest investment ever made to protect the water quality of Puget Sound. The key to the success of the project was the landscape design created by Angela Danadjieva of Tiburon, Calif., and CHM2Hill of Seattle.

“I’ll probably never work on a job where landscaping receives a higher priority,” says Landscape Project Manager Linda Sullivan, Seattle.

The goal of the project was to install the plant on a linear piece of land. Sullivan says the landscape designers promised to hide the plant from the perspective of the shoreline trails that are popular with visitors to Discovery Park. To achieve this goal many of the tanks were submerged on the 32 acres dedicated to the plant facilities. The inside of the plant includes three acres of landscaping while the outside doubled the public area to 20 acres of landscaping, trails and beach access.

Beyond the goal to create a landscape that blends with Discovery Park, the landscape screens the plant from view, increases wildlife habitat and diversity and creates a tranquil and passive environment where people can enjoy nature, undisturbed by the sewage plant. A tall order considering the old plant, built in the 1960s, included acres of concrete surrounded by chain link fence.

“She’s sculptural in approach,” says Sullivan of Danadjieva. “What you see instead of an industrial facility is the undulation of wetlands, wall, trail and water, blended by the use of native plants.”

One of Sullivan’s responsibilities was managing the growing contracts for the project. Working with regional nurseries was important because the job was so large planners couldn’t be certain plants would be available through the conventional bidding process. To obtain the right plants (80 native species) all the right size at the right time, she negotiated growing contracts after a selection process in which nurseries submitted qualifications, growing plants, financial plans and, finally, prices. Price was a factor, but only about 30 percent of the qualification process, says Sullivan, adding, “it was more important to get high quality materials.”

The plant list for the project included 10,000 trees, mostly willow and pine, 50,000 shrubs and 100,000 plugs of American dunegrass and wetland grass. Because of the strong commitment made to the public that
the sewage plant be screened immediately, the plant material was planted very close together. The design calls for the material to gradually slope from the flat, sandy spit and intertidal lagoon up toward the treatment plant and forested hillside.

To achieve best growth, 110,000 lineal feet of irrigation was submerged in 30,000 yards of topsoil. Compatible with the subgrade, this soil is a mix of 60 percent sand and 40 percent Croco.

"We realized we needed to have a sandy, loose soil to be successful and forgiving during winter construction," says Sullivan.

Sullivan credits Ohno Construction of Seattle with a job well done, particularly given they had to bring in the topsoil by barge to minimize impact on the neighborhood and park.

In March and April, Niehaus floods the wetlands to control cattails and keep roots from choking out other vegetation.

PHOTOS BY LESLEE JAQUETTE

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