

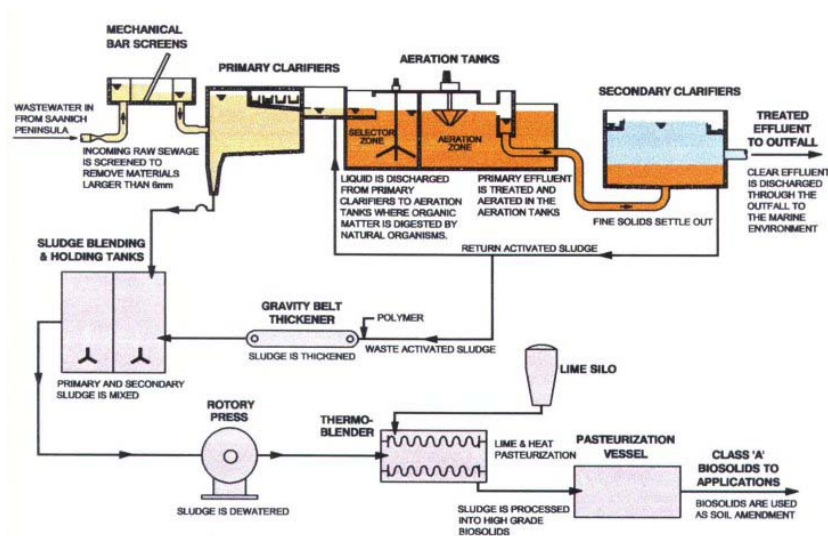


Capital Regional District

Saanich Peninsula Wastewater Treatment Plant

Project Development

- A 1991 study concluded that a new wastewater treatment plant was needed on the Saanich Peninsula to replace three older plants that were either out of permit or expensive to operate.
- The big question was: Where should the plant be located?
- After assessing eleven sites over a period of four years (1992 - 1996) the Bazan Bay Road site was selected and rezoned by North Saanich Council.
- An alternative access road to the site was constructed off Mainwaring Road.
- The project was approved by the Minister of Environment in November 1996, and with the receipt of a 50% provincial grant, the system design was commenced in 1997.
- Construction of the plant began in early 1998 and was completed within budget by the end of 1999.
- The plant began to treat sewage in early February 2000 and the transition to the new plant was complete by mid February.



Liquid Process:

Screens

The influent wastewater is passed through a 6mm traveling screen to remove bulk solids. The screenings are washed, compacted and removed for disposal to the landfill. The screened wastewater proceeds to primary clarifiers.



Primary Clarifiers

Wastewater enters two rectangular tanks. Solids that settle to the bottom of the tanks are removed to the solids blend tank and the liquid effluent proceeds to the aeration tanks.



Aeration Tanks

Wastewater is treated in one of the two aeration tanks. Each tank biologically treats the sewage.

Secondary Clarifiers

The final process takes place in the two secondary clarifiers. Solids that settle on the bottom of the tanks are either returned to the aeration tanks or to the gravity belt thickener. Final effluent leaving the secondary clarifiers is discharged out the 1.5 km marine outfall.

Solids Process:

Gravity Belt Thickener

Secondary sludge is thickened on the gravity belt and then sent to the sludge blend tank.

Dewatering Press

Blended primary and secondary sludge is removed from the blend tank. Water is removed by the press. The solids are sent to the lime stabilization/pasteurization process.

Lime Stabilization/Pasteurization

In this final process, lime is added to the dewatered sludge and is heated to 70C for 30 minutes. The end product is a pasteurized biosolid which can be used as an unrestricted soil conditioner.



Design Basis:

Influent Flow

- Average annual 18,150 m³/day
- Maximum day 36,300 m³/day

Permitted Final Effluent

- BOD 45 mg/L
- TSS 45 mg/L

Population Served



- Current population 30,000
- Maximum population 50,000

Treatment Plant Cost

- \$20,000,000