



## CASE STUDY

### PROJECT NAME

Condominium Resort Facility

### DESIGN FLOW

16,000 Gallons Per Day

### PROCESS USED

Extended Aeration

### DEGREE OF TREATMENT

Sludge Chamber  
Anoxic Chamber  
Aeration Chamber  
Clarifier Chamber  
Tertiary Filtration  
Chlorine Contact

### WASTE TYPE

Domestic

### LOCATION

Ocean Park, Washington

## Resort Required to Update Treatment Unit Due to Stringent Local Regulations

### SUMMARY

This coastal Washington resort facility needed a brand new treatment unit to meet the stringent discharge criteria of local regulations. The influent characteristics were typical domestic waste loadings, with effluent requirements of less than 20 mg/L BOD/TSS and 10 mg/L total nitrogen. The process selected for this system is a modified extended aeration process utilizing anoxic zones for denitrification follow by clarification, tertiary filtration and disinfection. Flow proportioning boxes received the incoming wastewater from a pre-existing flow equalization chamber, which then discharged into either the anoxic chamber or the aeration basin. The dual hopper clarifiers are designed for a minimum 4 hour retention. The clarifier is equipped with both a sludge and scum return system. For control of the activated sludge, an aerated sludge holding chamber was provided. It is equipped with an air lift decant pump to transfer supernatant back to the aeration chamber. The effluent flows thru a rapid sand tertiary filter for additional solids and nutrient removal, and finally thru a disinfection chamber equipped with a chlorine tablet feed system. Effluent data collected from the unit over several months has proven the system's ability to consistently maintain effluent quality per permit regulations. Delta Environmental provided the full treatment unit, ancillary equipment and controls for this project.



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