

PROFILE: Holmes Harbor Sewer District

AREA SERVED

The District serves an unincorporated area of Island County immediately north of Freeland, Washington with its boundaries being the shoreline of Holmes Harbor to the east, Bercot Road to the south; approximately the end of Antelope Drive to the west, and Evenstar Avenue to the north.

SERVICE TRENDS

Growth rate of equivalent residential units (ERUs) has been irregular during the past five years but equaled roughly 40 percent during that period. An average growth rate of approximately 8 percent is anticipated. The District serves one of the highest population density areas and is likely the fastest growing area of the unincorporated south end of the county.

INVENTORY OF DISTRICT FACILITIES

The District owns and operates a waste water treatment plant that includes two concrete sequencing batch reactors (SBRs) with sand filtration systems, and associated equipment, piping, and controls. The primary control systems are housed in a separate concrete block building with a backup propane generator. The total value of the reactors and associated equipment is approximately 15 million dollars.

The District stores processed water in two open basins that have earth mounded sides with flexible liners which can retain a total of 16 million gallons of water. Their value is estimated at 4 million dollars.

The District has a wood framed construction type administration and testing building with an estimated value of \$250,000.00.

The District owns approximately 380 grinder and step system pumps installed at individual residences worth an estimated \$3,500.00 per installation. It also has approximately 11 miles of underground piping that transport waste from each residence to the treatment plant with a replacement value of approximately 6 million dollars. The District eventually pumps all processed water to the adjacent golf course where it is used for irrigation.

The District is in the process of constructing an approximately 2 million gallon capacity temporary retention basin for water not yet processed to Department of Ecology standards which will cost approximately \$900,000.00 when completed.

NATURAL HAZARD EVENT HISTORY

The only natural hazard events that have affected the District to date have been heavy rain and wind storms that have interrupted power for no more than 48 hours. Since the District does have a backup power generator, short power outages have not seriously degraded plant operations. The Nisqually earthquake on February 28, 2001 did not create any detectable damage.

NATURAL HAZARD VULNERABILITY ANALYSIS RATING

1. Earthquake: Inasmuch as the District sits astride the southern most of two known faults that cross Whidbey Island, a large earthquake is possible and could be devastating. It could lead to breaks in underground piping systems, separation of connections, and damage to, or destruction of one or both of the treatment plant SBRs and the control building. Such an event could disrupt communications and effect movement of personnel and equipment to the point of significantly hampering repairs and resumption of operations.

Also inasmuch as the District relies on local commercial vendors for all construction support, response to line breaks and/or other damage could be completely dependant on availability of heavy earth moving equipment not within control of the District. Normally available equipment would likely be diverted to rescue and/or recovery, or reconstruction of vital transportation routes prior to becoming available for District use in repair of piping breaks, retention pond breaches, and/or repair of SBRs.

Probability of occurrence: Unknown

Probability of future occurrence: High

EXISTING NATURAL HAZARD MITIGATION INITIATIVES

#1 Eliminate or reduce long-term risk of earthquake damage by employing appropriate seismic standards in new construction and remodel of existing equipment and buildings.

Lead Agency: Holmes Harbor Sewer District

Support Agencies: None

Funding Sources: Budgeted Funding and applicable grants funding

Timeline: to be completed within 1-3 years of funding.

A cost benefit analysis on the initiatives and new alternatives and options will be completed prior to a final funding request.

#2 Acquire appropriate heavy equipment, such as a backhoe, for District control and use in emergency repair/reconstruction in the event of a devastating earthquake/natural disaster. Such equipment can also be used to augment local public works for road clearing and emergency

drainage work.

Lead Agency: Holmes Harbor Sewer District

Support Agencies: None

Funding Sources: Budgeted Funding and applicable grants funding

Timeline: to be completed within 2-3 years of funding.

Implementation Cost: To be determined as normal maintenance, renovation and upgrading of equipment and buildings occurs. Cost of an appropriate back-hoe for emergency maintenance work is estimated at \$50,000.00. The District may pursue Hazard Mitigation Grant funding or low interest loans to accomplish some goals. A cost benefit analysis on the initiatives and new alternatives and options will be completed prior to a final funding request.