GORST AREA
1995 - 96 ON-SITE SEWAGE SYSTEM SANITARY SURVEY PROJECT
FINAL REPORT

EXECUTIVE SUMMARY

The Gorst area is an older, urbanized, residential area where most property parcels were platted and developed prior to existing on-site sewage system (OSS) regulations. The natural physical conditions of the area, primarily the surface and ground water conditions and the soil types and depths, are not conducive for individual OSS due to the density of development in the area. The Gorst area has long been recognized as having OSS problems, with historical OSS failure rates at some of the highest levels seen in Kitsap County.

The Gorst Sanitary Survey Project was conducted between November 1995 and April 1996. Results showed that the Gorst area was found to have a total OSS failure rate of 14% (49 failures out of 341 systems surveyed). Of the 49 failing OSS, 28 were residential sites and 21 were business sites. When isolated from the residences, 40% of the business OSS were found to be failing (21 of 53).

With respect to the history of poor OSS performance in the Gorst area, suspect and marginal OSS are also a major concern which must be considered when evaluating the possible long-term repair options for this area. When the numbers of OSS rated as either suspect or marginal are added to the OSS which are failing, 81% (277 out of 341) of the OSS of Gorst are either failing now, or are showing indications of the potential to fail sometime in the near future

Although OSS failures in the Gorst area were widespread, the majority of the failures were clustered within a "failure zone". The failure zone runs along the Highway 3/Highway 16 corridor, and parallels the Sinclair Inlet shoreline. In the failure zone, the OSS failure rate climbs to 30% (31 of 104 OSS are failing). Due to small lot sizes, poor soils, and surface water setback requirements, most of the repairs in the failure zone will be of an extensive nature.

Failing OSS in the Gorst area are contaminating natural freshwater sources and the stormwater systems in this area. During the project, 21% of shoreline discharge samples and 47% of stormwater system samples exceeded 1,600 fecal coliform/100ml, an indication of the presence of raw sewage. All of the freshwater and stormwater sources discharge directly into Sinclair Inlet.

Pursuant to state and local on-site sewage regulations, owners of failing OSS essentially have three realistic repair options for making corrections:

1. Repair or replace their on-site sewage system with a conforming system or Table VI repair;
2. Connect to a large or community on-site sewage system; or
3. Connect to a municipal sewer system.

If the area is going to continue to have its sewage needs handled through individual OSS, it is estimated that 35 (69%) of the total number of OSS failures will require extensive repairs. Extensive repairs will be expensive in the short term due to site preparation work, capital expenditures for the new OSS components, and on-going operation and maintenance to ensure that the OSS continues to function adequately. For many of the OSS failures, easement areas will have to be procured in order to have enough area to complete the repairs according to code. Also, once a new system is installed, there is no guarantee that it will continue to function properly for an extended period of time. If the repaired OSS fails in the future, as historical data would suggest is possible, some of the businesses and residences in the area could be left with no available options short of installing holding tanks or abandoning the property.

If an adequate land area is available, development and connection to a large or community OSS would also a viable option. This option would require the community to form a local improvement district (LID), and find a sizable land area in close proximity to enable construction of the new system. Except for the City of Bremerton's Water Utility Lands, there does not appear to be any other sizable property in the area to install such a system. Initial capital costs could be high depending on the cost of property acquisition and the type of system proposed for the site, and the number of individuals that participate in the LID.

Connection to a municipal sewer system is probably the best long-term solution for solving the OSS performance problems of the Gorst area. Once connected, residents and business owners would have no on-going operation and maintenance responsibilities and would not have the possibility of OSS failure again in the future. Costs associated with the installation and hook-up to municipal sewers can often be amortized over time to reduce initial costs. Regular utility payments would also result. There are currently no plans to sewer the Gorst area. Additionally, Gorst is not included within an urban growth boundary, a land use designation that may be needed to construct municipal sewers in the future.

Considering these findings, the Health District's Water Quality Program offers the following recommendations to the Gorst Community, local government officials, Bremerton-Kitsap County Board of Health, and the Kitsap County District Health Officer:

1. The community of Gorst and local government officials should strongly consider attempting to bring municipal sewers to the Gorst area. Given the area's history of poor OSS performance and the general lack of adequate soils and sufficient land area for system repairs, municipal sewers would appear to be the best long-term solution for sewage handling and disposal.

2. The Kitsap County District Health Officer should declare a "Severe Public Health Hazard" for the "failure zone" area of Gorst along the Highway 3/Highway 16 corridor. By

definition, a severe public health hazard is a situation in which the potential for illness exists, but illness is not occurring or imminent. If remedial action is not taken, a severe public health hazard may become a public health emergency (where illness is occurring or is imminent). The declaration of a severe public health hazard is appropriate here since the majority of OSS failures are within the business district and Sinclair Inlet shoreline area. Consequently, this failure zone area is also the area that has the most public exposure because of the presence of businesses. Also, it is the area in which OSS repairs will be more difficult and expensive due to the poor soil conditions, lack of sufficient land area for system repairs, and the horizontal and vertical setback restrictions because of surface and ground water conditions.

By declaring a severe public health hazard, the Gorst area could be eligible for state funds, such as the Centennial Clean Water Fund, to help off-set the costs of developing a large or community OSS or providing municipal sewers. In order to be eligible for state support, the severe public health hazard declaration must be submitted to, and approved by, the State Departments of Health and Ecology.

3. The Health District should sponsor community meetings for the residents of Gorst to provide education and to inform them of the sanitary survey project findings. Local government officials, utility managers, and community leaders should attend these meetings to help coordinate a unified approach to solving Gorst's sewage problems.

4. The businesses owners and residents of Gorst should hold community meetings among themselves to develop a coordinated, unified approach to deal with their sewage problems. Community spokespersons should be appointed to represent the community in discussions with local government officials.

5. The Health District and owners of failing OSS should work together to develop acceptable, reasonable mitigative measures to reduce the public health and environmental impacts from failing OSS until a community-wide sewage solution has been selected and implemented. The Health District should issue repair orders to owners of failing OSS to ensure their prompt and continued participation in solving the Gorst sewa problem.