

# **PUBLIC UTILITY DISTRICT NO. 1 OF SKAGIT COUNTY**

## **OVERVIEW**

The Public Utility District No. 1 of Skagit County (the District) is a community water system which serves some 22,000 water services and approximately 65,000 persons in Skagit County, Washington.

## **AREA SERVED**

The District has the largest service boundaries of any water purveyor in Skagit County, encompassing an existing service area of roughly 290 square miles. The District serves these areas with over 600-miles of transmission and distribution pipes. The District currently serves water to the cities of Mount Vernon, Burlington, and Sedro-Woolley, the rural villages of Alger, Conway, Bay View, Rockport, and Cedargrove, and to communities on Guemes Island and Fidalgo Island, as well as rural areas within Skagit County, including satellite water systems at Cedargrove, Skagit View Village, Rockport and Marblemount.

## **SERVICE TRENDS**

The growth and overall economic trends of the areas served by the District are a reflection of the growth and economic trends of Skagit County as a whole. Forecasts of future growth indicate that the population (and therefore water services) will continue to grow at a rate between 1-2% per year.

## **INVENTORY OF DISTRICT FACILITIES**

For security reasons, the District has not listed the location and valuation of individual facilities. The District has completed an inventory of all facilities and has considered these facilities in our planning and mitigation strategy development process. This information will be made available to FEMA personnel if it is required to obtain future hazard mitigation grant funding.

## **APPLICABLE HAZARD MITIGATION PLANS**

The District completed a Vulnerability Assessment and Emergency Response Plans per the requirements of the Bioterrorism Preparedness and Response Act of 2002, in December 31, 2003. The District completed an Emergency Response Plan in 2004; this plan is currently being updated.

## **RECENT NATURAL HAZARD EVENT HISTORY**

The floods of 1990 and 1995 caused or contributed greatly to slides at Gilligan Creek, Monte Vista (Mount Vernon) and Salmon Beach (Fidalgo Island), each requiring District labor, materials and equipment to repair damage and reinstate water supply/service.

***Beyond routine requests for services and maintenance, Skagit County Public Utility District #1 infrastructure have NOT been impacted by natural hazard events during the 2003-2008 plan cycle (that concluded September 30, 2008).***

## NATURAL HAZARD VULNERABILITY ANALYSIS RATING

The District considers itself most vulnerable to the following natural disasters, ranked in order:

1. **Flooding:** There is a high probability of flooding events in Skagit County because of the Skagit River. During a flood event, there is some potential for contamination of water in submerged pipes. Further, the flood could cut off movement of District personnel, leaving them unable to respond to leaks or water outages.
2. **Drought:** As a water utility which relies on surface water supplies, the District is very dependant on rainfall to have sufficient water supply.
3. **Earthquake:** The probability of an earthquake is considered moderate (seismic zone 3), but the effect could be devastating. An earthquake could lead to breaks in the distribution and transmission pipelines, resultant failures of water storage tanks, and liquefaction of soils supporting water facility pipelines and facility foundations, all leading to loss of the water stored for emergency and customer needs. Further, power and communications could be lost in such an event which would also lead to adverse consequences.
4. **Severe Storm:** While a more common occurrence, District facilities have proven to be relatively hardened against severe storms. However, power outages could lead to water outages in areas which are dependent on pumping of water.

## EXISTING APPLICABLE NATURAL HAZARD MITIGATION POLICIES, ORDINANCES, AND CODES

In addition to meeting local building codes, the main regulations for water systems in the State of Washington are governed by WAC 246-290. This legislation dictates requirements for virtually all District water facilities; including requirements for items such as emergency water storage volumes. Further, the Washington Department of Health must review all new large construction activities to ensure they meet these requirements.

## PRIORITIZED NATURAL HAZARD MITIGATION STRATEGIES OR PROJECTS

*The mitigation strategies/projects listed below were proposed as part of the development of the Skagit PUD #1 portion of the Skagit County Natural Hazard Mitigation Plan in 2003. In some cases minor changes have been made to this listing for the 2008 – 2013 plan cycle. Progress made (if any) and deletions have been noted.*

1. Purchase and install emergency generators for critical pump stations and the district headquarters facility.

LEAD DEPARTMENT:	Engineering
FUNDING SOURCES:	Various grant funding sources
TIME-LINE:	Short Term (less than 3 years)

*This mitigation strategy remains valid for the district but has been deferred due to lack of funding.*

2. Purchase and install earthquake shut-off valves for water storage tanks (reservoirs).

LEAD DEPARTMENT: Engineering  
FUNDING SOURCES: Various grant funding sources  
TIME-LINE: Long Term (Greater than 3 years)

***This mitigation strategy remains valid for the district but has been deferred due to lack of funding.***

4. Replace/reinforce existing unrestrained water transmission pipelines with pipelines that can withstand a DBE3 earthquake event.

LEAD DEPARTMENT: Engineering  
FUNDING SOURCES: Various grant funding sources  
TIME-LINE: Long Term (greater than 3 years)

***This mitigation strategy remains valid for the district but has been deferred due to lack of funding.***

5. Purchase/lease or otherwise make arrangements for the emergency use of an appropriate parcel of land outside of the 100-year floodplain of the Skagit River to serve as an alternate equipment storage site and maintenance facility for the district.

NOTE: The District's main office and construction yard are located within the 100-year floodplain of the Skagit River.

LEAD DEPARTMENT: Engineering  
FUNDING SOURCES: Various grant funding sources  
TIME-LINE: Long Term (greater than 3 years)

***This mitigation strategy previously included the elevation of the district offices to reduce vulnerability to flooding. The district no longer considers the elevation of the district offices a viable mitigation strategy due to the costs of such a project. An appropriate alternate mitigation strategy for the district offices has not been identified.***

***This mitigation strategy (as modified and listed above) is valid for the district and has been included for the 2008 – 2013 plan cycle.***

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***NOTE: The mitigation strategy listed below was listed in the 2003 version of the plan. This strategy is no longer considered valid and has been deleted from the plan.***

Purchase a large volume water truck (or trailer with tandem dolly) to provide for emergency water distribution during a flood, earthquake, or power-outage event.

LEAD DEPARTMENT: Engineering  
FUNDING SOURCES: Various grant funding sources  
TIME-LINE: Short Term (less than 3 years)