

LOCAL HAZARD MITIGATION PLAN

Revised October 2009

(Original LHMP Document Adopted March 2004)

Prepared by Lakehaven Utility District

**LAKEHAVEN UTILITY DISTRICT
2009 REVISED LOCAL HAZARD MITIGATION PLAN**

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SECTION 1 – INTRODUCTION

1.1 INTRODUCTION

Lakehaven Utility District has prepared this Local Hazard Mitigation Plan as an independent element of its overall planning strategy for providing and maintaining water and wastewater service to its customers in accordance with all applicable rules and regulations. The purpose of this plan is to identify potential hazards and impacts to its water and sanitary sewer systems and ways to mitigate or reduce risks associated with potential hazards. This document includes assessment of natural hazards only and is independent of the District's vulnerability assessment addressing man-made hazards and risks, and/or its Emergency Management Plan which outlines response and recovery actions. The general objectives of the mitigation strategy developed in this Plan are to:

- Protect health and safety by reducing public exposure to identified risks;
- Reduce or prevent damage to public and private property;
- Reduce adverse environmental or natural resource impacts, and;
- Reduce the potential financial impact on the District, other public agencies and the general public.

These objectives are achieved through the following series of goals which are discussed in detail with mitigation actions in Section 4.

- Increase staff response capabilities to the impacts of identified hazards on the District and its customers.
- Increased sustainability of existing water sources, or increase the number of water sources.

- Increase reliability of the water and sewer infrastructure and maintain service during and following hazard or emergency event.
- Protect property and the environment, and reduce the potential for claims following sewer overflow or flooding caused by damaged infrastructure following a hazardous event.
- Assist business community by maintaining service to insure business continuity and resumption of normal business functions as soon as possible following an emergency event.
- Lessen the economic impact and customer inconvenience resulting from loss or damage to the water/sewer infrastructure following an identified emergency event.
- Maintain water and wastewater systems safe from vulnerability to man-made or terrorist events.

1.2 AUTHORITY, MANAGEMENT AND CONDUCT OF BUSINESS

Lakehaven Utility District is a special purpose district responsible for provision of potable water service and wastewater collection, treatment and disposal within a 34 square mile corporate area primarily located in the southwest corner of King County. Authority and procedures for special purpose district functions are provided in Title 57 of the Revised Code of Washington. Lakehaven is operated by a five member, elected Board of Commissioners and a staff of approximately 104 people. Day to day operation of the District is the responsibility of the General Manager, who oversees all water, sewer and field operations and reports directly to the Board of Commissioners. The administrative and financial functions of the District are overseen by General Counsel, who also reports directly to the Board of Commissioners. Because Lakehaven does not have any land use or code enforcement authority, it relies on close coordination with the nine separate jurisdictions within which it operates. These agencies are the cities of Auburn, Des Moines, Edgewood, Federal Way, Kent, Milton, Tacoma, Pacific and unincorporated King County.

1.3 SYSTEMS OVERVIEW

For its water system, Lakehaven maintains a series of water supply and treatment facilities, storage reservoirs, and a water transmission and distribution system for the delivery of potable water to its customers, while also providing fire protection for the local cities and counties within its water service area. The sewer system includes a network of collection and trunk line sewers, pump station and two wastewater treatment plants.

Approximately 29,201 water service connections are served by the District. The wastewater utility encompasses a similar area and serves an estimated 22,889 connections.

Lakehaven's water system consists of 450 miles of water mains, 25 active wells and 12 separate storage reservoirs. The average daily supply is about 11.5 million gallons per day with a total active well pumping capacity of approximately 32.2 million gallons per day (mgd) as of July 2009 plus the Second Supply Project pipeline capacity. Customers are served with groundwater from the District's four major aquifer systems and the surface water through the Second Supply Project (SSP) pipeline. The SSP can provide the District with an annual daily flow of 7.6 million gallons per day of water and is capable of delivering up to 21 + million gallons per day of water on a peak day based upon the District's share of pipeline capacity. The District also maintains interties with neighboring utilities to provide another alternate source of water supply.

The existing collection system consists of approximately 275 miles of sanitary sewer pipes, 6,500 manholes, 27 pump stations, six siphons and two secondary wastewater treatment facilities. The system has been constructed over a number of years, and from a wide variety of materials, as dictated by

development trends in the area. The system is divided into seven primary basins and 40 smaller sub-basins. The two largest basins, Lakota and Redondo, flow to the District's wastewater treatment plants. The remaining basins currently discharge to other utilities for treatment and disposal.

SECTION 2- THE PLANNING PROCESS

2.1 OVERVIEW OF THE PROCESS

In 2002, Lakehaven Utility District retained the services of a consultant to initially facilitate development of a Local Hazard Mitigation Plan and a multi-disciplined team of staff members was formed to develop the plan. This committee developed the initial plan in accordance with FEMA and State of Washington Emergency Management Division requirements while adhering to the goals, policies and procedures of the District and considered other planning documents that have been adopted by the District. Planning committee participants included various staff members with experience and knowledge in the configuration of the design and operation of the existing water and wastewater systems, historical knowledge of past hazard events and how the functionality and efficiency of the systems were impacted, and their understanding of the policies, procedures and programs adopted or planned by the District.

In 2009, the Hazard Mitigation Planning Committee members who reviewed and helped revise the plan included the following team of staff members identified in Table 2-1.

**TABLE 2-1
LAKEHAVEN UTILTIY DISTRICT
LOCAL HAZARD MITIGATION PLANNING COMMITTEE**

Don Perry	General Manager Planning Committee Member
John Bowman	Engineering/Water Manager Planning Committee Member
Stan French	Water Quality/Production Engineer Planning Committee Member and Lakehaven Project Manager
Tim Osborne	Development Engineer/Manager of Development Services

	Planning Committee Member
Gene Yoder	Field Operations Manager Planning Committee Member
Dale Haase	Field Assistant Operations Manager Planning Committee Member
Chris McCalib	Wastewater Treatment Plant Supervisor Planning Committee Member

The Project Manager initially reviewed the adopted 2004 plan to identify changed conditions, and then submitted to the Planning Committee Members a proposed draft revision of identified changed conditions for the document. Each Planning Committee Member completed a review of the draft revised document and submitted back to the Project Manager additional comments and revisions. On October 30, 2009 a formal draft of proposed revisions approved by the Planning Committee was accepted for submittal for public comment.

Shared information from the various Planning Committee members helped identify the source of pertinent plans, studies, policies, and programs already maintained by the District that might impact the development of revisions to the existing Local Hazard Mitigation Plan. The collaborative data collection effort resulted in a streamlined planning process and helped insure this Plan's consistency with other key documentation. A summary of key documents utilized in preparation of this plan is provided under Section 2.2.

The initial development of the Local Hazard Mitigation Plan that was adopted in 2004 included the Mitigation 20/20 Software developed by Emergency Response and Management, Inc. to determine the risk associated with various potential hazards that could impact the District and evaluate each key facility in the District's water and wastewater systems for vulnerability to the identified hazard and risks. It also included using King County Sensitive Area Mapping

and consideration of the land use maps of the eight jurisdictions within which the District operates.

The Planning Committee Members reviewed the previously rated vulnerability of each facility to various natural and man-made hazards and the risk associated with each hazard was reviewed in terms of the potential for loss of systems functionality, and the associated risk to people and property. The Committee was also responsible for reviewing potential mitigation strategies that are in place or should be considered to be addressed in the identified hazards and system vulnerabilities. Please note that specific threats associated with security were not included in this planning process and have been identified by the District in accordance with the requirements of the Homeland Security Act and Safe Drinking Water Act.

The revision of the Local Hazard Mitigation Plan provides an updated development of mitigation strategies for reducing exposure to the identified risks, preventing damage to public and private property, reduced adverse environmental/natural resource impacts, and reduced potential financial impacts on the District, other public agencies, and the general public.

2.2 RELATED PLANS AND PROGRAMS

Development of the original 2004 Local Hazard Mitigation Plan was accomplished using a variety of base data, and information previously compiled by the District in other planning documents and programs. Key documents that assisted in development of the 2009 Revised Plan are the District's 2008 Comprehensive Water and Wastewater System Plan, Emergency Management Plan, Water System Vulnerability Assessment, and various operation and maintenance program details.

In addition, the land use plans, sensitive areas documentation and mapping accomplished by the cities of Auburn, Des Moines, Edgewood, Federal Way, Kent, Milton, Pacific and King County have been utilized to evaluate existing

and future land use trends and assist in hazard identification and assessment.

2.3 PUBLIC INVOLVEMENT – ORIGINAL PLAN

The public Involvement process for the original Local Hazard Mitigation Plan began in 2001 with a public hearing held on August 23, 2001 to request for public comment regarding funding for the seismic upgrade of the 312th Street Tank and completion of the Hazard Mitigation Plan. A public notice for additional comments was published on September 19 and 26, 2001. Following finalization of the Draft Plan, the Committee presented it to the Board of Commissioner on July 10, 2003 at an open public meeting. This meeting was advertised in the local newspaper of record in accordance with District established public notification procedures. The findings of the Hazard Mitigation study were overviewed at the public meeting and no comments were received. Notices of all public meetings were posted on the District's website and at its office, and published in the Tacoma News Tribune, the District's local Newspaper of Record. Documentation of the public notification process is on file with Lakehaven Utility District and included in the Attachments to this Plan. No comments were received during the public involvement process.

2.4 PUBLIC INVOLVEMENT – REVISED 2009 PLAN

The public involvement process for the revised 2009 Local Hazard Mitigation Plan began on November 12, 2009 at a public meeting where the plan and revisions were made available for public review and comment. A public notice for additional comments was published on __(ADD DATE)__ 2009. Following public comment of the draft Revised 2009 Plan, the Committee presented the final revised plan to the Board of Commissioner on __(PROPOSED FOR DECEMBER 10, 2009)__ at an open public meeting. The findings of the Revised 2009 Hazard Mitigation Plan were overviewed at these public meetings (If true add: and no comments were received during the public

involvement process.) These meetings were advertised in the local newspaper of record in accordance with District established public notification procedures. In addition, notices of all public meetings were posted on the District's website and at its office, and published in the Tacoma News Tribune, the District's local Newspaper of Record. Documentation of the public notification process is on file with Lakehaven Utility District and included in the Attachments to this Plan.

2.5 REVISED 2009 PLAN ADOPTION

The Board of Commissioners of Lakehaven Utility District at the regular (ADD DATE) 2009, meeting approved and formally adopted the District's 2009 Revised Local Hazard Mitigation Plan. Resolution number (ADD NUMBER XXXXX) adopts this policy and authorizes responsible staff to carry out this plan. A copy of the resolution is included in Section 6 Attachments.

SECTION 3 - HAZARD IDENTIFICATION

3.1 IDENTIFYING HAZARDS

Hazard Identification is a key element of the planning process and was accomplished during the initial development of the 2004 plan with the aid of Mitigation 20/20 Software developed by Emergency Response and Management, Inc., the experience of the Planning Committee and the benefit of the documented historical events and outcomes. A summary of the credible hazard that could impact functionality and performance of Lakehaven Utility District water and sewer system facilities are summarized in Table 3-1 and the risk of each identified hazard as determined through the Mitigation 20/20 Software process is presented in Table 3-2. Maps indicating known hazard areas are provided on Figures 3-A, 3-B, 3-C, and 3-D, and specific hazards are described in Section 3.2.

A summary of King County declared disaster events in recent years is provided below. This historical perspective is intended to provide an overall summary of potential hazard events and frequency in the general area of Lakehaven Utility District, which is located on the southern boundary of King County.

January 2009 — Severe Winter Storm & Flooding
December 2005 & January 2006 — Severe Winter Storm
February 2001 — Nisqually Earthquake
March 1997 — Flood, Landslide
February 1997 — Snow, Landslide, Flood
December 1996 — Ice, Windstorm
February 1996 — Severe Winter Storm & Flooding
January 1996 — Severe Winter Storm & Flooding
December 1995 — Flood
November 1995 – Flood
January 1995 Winter Storm Event – Redondo Mud Slide
January 1993 - Windstorm
December 1990- Flood
November 1990 Flood
January 1990 — Flood, Landslide, Windstorm
November 1986 — Flood
January 1986 — Flood

May 1980 — Volcanic Eruption
 December 1979 — Flood
 December 1977- Flood, Landslide
 December 1975 - Flood
 February 1972 - Flood
 May 1965 - Earthquake
 December 1964 - Flood
 October 1962 — Flood, Windstorm

**TABLE 3-1
HAZARD INVENTORY**

Hazard	How Identified/ Previous Events	Potential Impact Summary
Earthquake	Past Events (Significant events in 1965 & 2001). Project Impact Lifeline Study. King County HIVA and GIS Mapping. Washington State HIVA.	Location creates high probability of future events. Potential for damage to multiple facilities and high water system demands for fire fighting. Seismic studies and subsequent improvements minimize risk associated with facility damage from earthquakes.
High Winds	Historical Experience. Severe windstorms in 1993 and 1996.	Loss of power, structure damage, and loss of automated SCADA operation would impact operations. Emergency generators and the District's Emergency Management Plan provide mitigation for high wind events.
Severe Winter Storm	Historical Experience. Significant Event in January 1996 and January 2009.	Personnel, facility access and emergency response may be limited.
Drought	Historical Experience. Potential exists for regional drought conditions.	Could result in customer inconvenience, economic impacts and increase risk of fires. Groundwater sources minimize potential impacts.
Volcanic Activity	Historical Experience. Mt. St. Helens eruption in 1980 — no significant impact to District.	Proximity to Mt. Rainier and Mt. St. Helens creates potential for minimal damage to equipment and vehicles due to ash. Personnel, access and emergency response may be limited.
Power Outage	Historical experience. Potential for major power outage exists as a secondary hazard.	Loss of power would impact operations and SCADA monitoring. Emergency generators minimize potential impact.

Hazardous Material Event	Potential exists; no past experience or events.	Curtailment of operation of certain supply facilities could be required. Redundant supplies and emergency response procedures minimize potential.
Landslide/ Erosion	Risk Assessment Mapping. King County HIVA and GIS Mapping. No significant events noted.	Localized pipeline failure and potential impact to services could result. Areas monitored for signs of failure.
Flooding	King County HIVA and GIS Mapping. Historical Experience. FEMA Floodplain Maps.	Manhole flooding and increased wastewater flows would be anticipated. Anticipated minor flooding is addressed in Lakehaven's Emergency Management Plan.
Fire	Potential for major fire exists throughout the District.	Water system may experience abnormally high demands. Multiple sources and storage limit potential impacts.
Civil Disorder; Terrorism	Potential exists; no past experience or events.	Facility damage or service interruptions could result. Police protection by others is primary mitigation. Addressed in District's confidential Vulnerability Assessment.
Pandemics	Potential exists; no past experience or events.	Increased absenteeism among workers could place a severe strain on water and sewer operations. Personnel, facility access and emergency response may be limited.

LAKEHAVEN UTILITY DISTRICT HAZARD RISK ASSESSMENT							
HAZARD	Area Impacted	Probability of Occurrence	Consequence of Occurrence			Total Risk Rating = Probability of Occurrence X (Area Impacted + Sum of Consequences)	
			Health and Safety	Property Damage	Environmental Impact		Economic Impact
	0=No appreciable Area Impacted 1=Less than 25% of District impacted 2=Less than 50% of District impacted 3=Less than 75% of District impacted 4=More than 75% of District impacted	1=Unknown but rare occurrence 2=Unknown but anticipate occurrence 3=100 years or less occurrence 4=25 Years or less occurrence 5=Annual or less occurrence	0=No health and safety impact 1=Few injuries or illnesses 2=Few fatalities - man injuries/illnesses 3=Numerous fatalities	0=No property damage 1=Few properties destroyed or damaged 2=Many damaged - few destroyed 3=Many destroyed and damaged	0=Little or no environmental damage 1=Resources damaged - short term recovery practical 2=Resources damaged - long term recovery feasible 3=Resources destroyed beyond recovery	0=No economic impact 1=Low direct and/or indirect costs 2=High direct costs - low indirect costs 2=Low direct costs - high indirect costs 3=High direct and indirect costs	
HAZARD							
Earthquake	4	3	2	2	3	42	
High Winds	4	4	1	1	1	32	
Severe Winter Storm	4	4	1	0	0	24	
Drought	4	4	0	0	1	24	
Volcanic Activity	4	2	1	1	2	18	
Power Outages	1	4	0	1	1	16	
Hazardous Material Event	1	2	1	2	2	16	
Ground Movement	1	2	1	1	2	14	
Flooding	1	3	0	1	1	12	
Fire	1	2	1	1	1	10	
Civil Disorder/Terrorism		Addressed Separately in District's Confidential Vulnerability Assessment					
Pandemics	3	2	2	0	0	12	

3.1.1 Earthquake

Earthquakes are a significant hazard in the Northwest and pose the highest risk level within the District. More than 1,000 earthquakes are recorded in Washington State each year and although most of these go unnoticed by most people, a dozen or more cause shaking and occasional damage. Significant earthquakes occurred in May 1965 (magnitude 6.5) and February 2001 (magnitude 6.8).

As indicated on Tables 3-1 and 3-2, seismic activity poses a relatively high perceived risk to the District because of the importance of maintenance of fire flows in such an event and the potential for pipeline damage and loss of service. Although there are no appreciable areas of liquefiable soils that exist within the corporate area as indicated on Figure 3-A, depending on the epicenter location and magnitude of an earthquake, significant damage to property throughout the District and loss of lifeline services could result. The District has taken precautions to minimize direct impacts to water and sewer system facilities and District operations, and continues to protect itself against secondary impacts through its emergency response planning and disaster preparedness planning.

3.1.2 High Winds

High winds in excess of 50 miles per hour, are very likely to occur throughout the Puget Sound region and within Lakehaven Utility District. The analysis of the risks associated with high winds presented in Table 3-2 indicates that they are expected at a relatively high level of frequency (less than once every 25 years). The expected impacted impacts of wind storms include downed trees, structure damage (especially roofs), and power outages. These impacts however, present a relatively low level of risk to District facilities and operations. The most significant potential issue with high wind events is the potential for tree fall damage to facilities and structures, access restrictions in heavily wooded areas and the potential for power outages and communication

system failures. The recent (October 16, 2003) wind storm in the area provides evidence of typical effects of a windstorm on the District. This event resulted in a tree fall which took out the power line serving the Well 16/Tank 2 site. Operations were not significantly impacted due to adequate redundancy of facilities and Puget Sound Energy restored power to the site. Other localized power outages resulted in District staff utilizing back-up power generators to maintain system operation. No property damage was noted during the storm.

The December 2006 Wind Storm caused commercial power outages for multiple days at all District facilities. The District had previously acquired emergency generators to provide auxiliary power to maintain water production and no loss of water service occurred for customers during this storm event. All the wastewater sewer pump stations without emergency generators were manually pumped out using district staff and equipment which prevented overflows and backups into customer's homes and businesses.

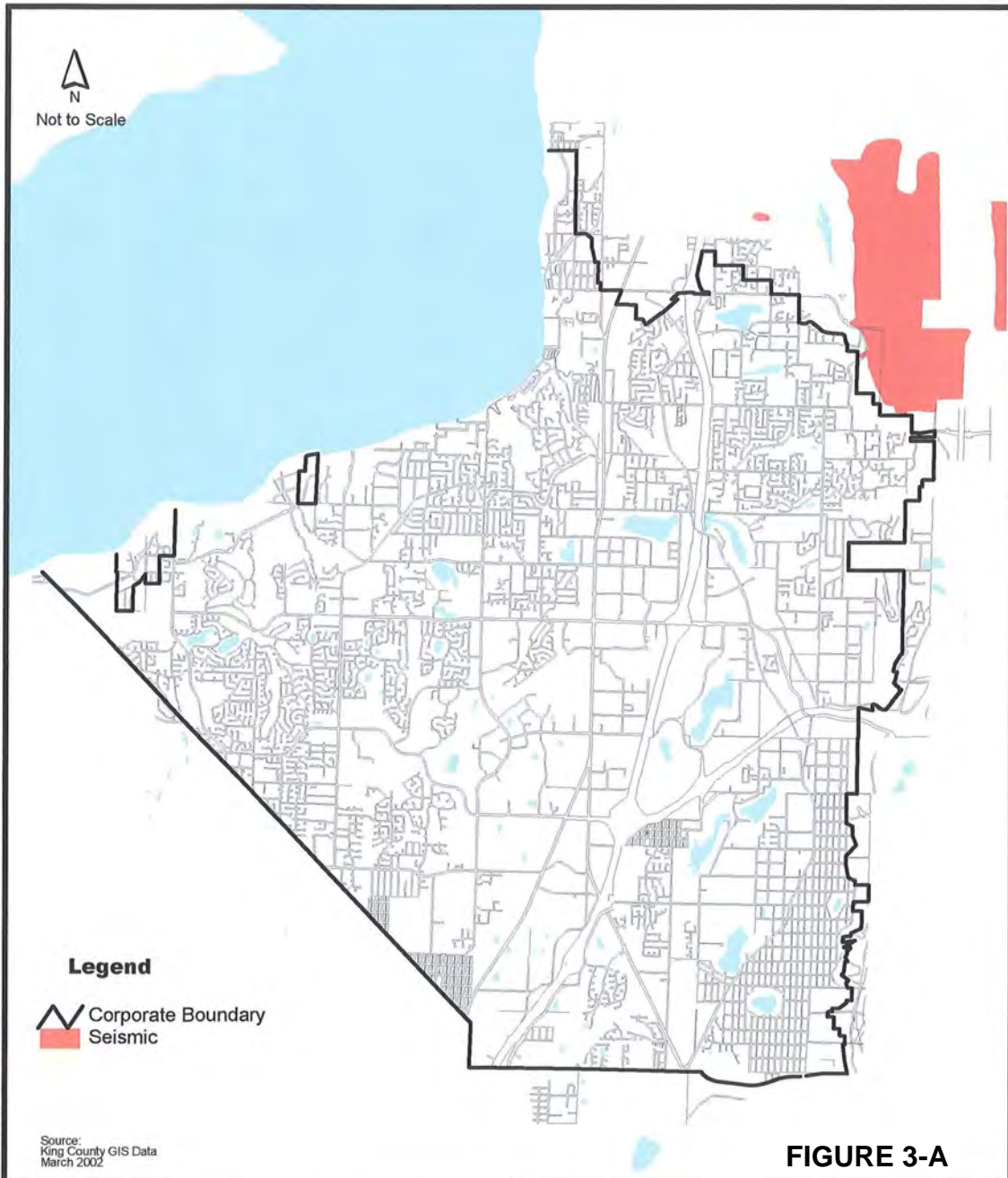


FIGURE 3-A



Seismic

**Lakehaven Utility District
Hazard Mitigation Plan**



3.1.3 Severe Winter Storm

Severe storms are the most common widespread hazard in the Northwest and occur on a regular basis throughout the year. Severe storm events range from extreme rainstorms delivering as much as five inches of rain in a 24 hour period, to wind, snow, hail, and freezing rain storms. Many of the specific hazards that would result from a severe storm (flooding, high winds) are addressed separately in this assessment. Although the likelihood of a severe storm is high, the effects of such an event are minimized through District operations, procedures and emergency response programs. The general effects of most storms are immobility and loss of utility services. Direct impacts to District facilities could include power outages, damage from fallen trees, facility access difficulties and the inability of personnel to report to work due to road closures.

3.1.4 Drought

The Puget Sound Region is considered vulnerable to drought conditions which can impact instream flows, aquatic life, agricultural and industrial activities and individual water consumption. In recent years, several instances of low rainfall and snowpack have resulted in drought conditions in the region, effecting surface water supplies. Drought conditions however are very unlikely to impact Lakehaven Utility District operations because the District supply includes a network of groundwater wells at various depths and locations throughout the service area as well as interties with neighboring utility systems with independent sources of water. Both Highline Water District to the north and the City of Tacoma have the ability to deliver an alternate source of supply to the District in the event of an emergency or interruption in groundwater supply. Supply management strategies such as water conservations programs and emergency water shortage response plans are in place to further reduce the potential impact of drought conditions on the District.

3.1.5 Volcanic Activity

The location of Lakehaven in close proximity at least to two active volcanoes, Mt. Rainier and Mt. St. Helens, creates a likelihood of impact in the event of an eruption. The 1980 eruption of Mt. St. Helens had no appreciable impact on Lakehaven Utility District systems or operations. The most likely risks associated with a future eruption are limited to ashfall impacting mechanical equipment and vehicle operation and the possibility of staff limitation due to restricted travel and access. Lahar flows could impact the Kent/Green River and Puyallup Valley floors and would result in disruption of transportation routes in the vicinity of the District and possibly a population influx from impacted areas.

3.1.6 Power Outages

Energy supplies may fail at any time and from a number of causes. Earthquakes, landslides, fires, severe weather, transportation problems or accidents, design failure or terrorism all could cause problems that lead to energy utility outages or shortages. Interruption in energy lifelines that are of greatest concern to Lakehaven are electrical outages and petroleum product shortages. Nearly all power lines in the District are located above-ground, making them susceptible to high winds, interference from trees and vegetation or subject to terrorism or vandalism. Petroleum shortages could be either fast developing or slow developing.

Power outages occur in portions of the District relatively frequently but present only a moderate risk to the District due to the presence of on-site power generation at critical facilities and the availability of portable generators at less critical facilities. The District's Emergency Response Plan details the procedures and protocols to be implemented in the event of a power outage.

Gasoline and diesel fuel shortages would have an impact on operations as most work is dependent on petroleum-powered equipment. Loss of fuel for generators during power outages would also be compromised. Several sites are fitted with large supply of diesel fuel for extended power outages and for use in other areas if necessary. The District has also installed a diesel fuel tank at the Lakota treatment plant site for dispensing purposes. The District has a fuel tanker that can be utilized to transport fuel if it is available in the area and can not be delivered to the District by the District's vendor due to lack of trucks or drivers.

3.1.7 Hazardous Material Event

Hazardous material incidents can occur at any time or place. The District is faced not only with the responsibility of managing its own hazardous materials but also reducing vulnerabilities to off site accidents from transportation accidents, fuel spills or illicit drug labs. The greatest impact upon District operations would be from a spill contaminating a water source, either occurring from a natural event or an intentional act. This would necessitate taking a portion of the infrastructure out of service, obtaining alternate methods of supplying potable water to customers and disinfecting the contaminated facilities.

Transportation accidents could occur from trucks hauling materials, fuel spills from accidents, or an airplane crash. These incidents would have only minor impacts upon the District unless a facility was directly involved. Illegal drug labs present a hazard throughout any urban area as documented by ongoing news reports. These illegal facilities present a hazard to the utility system because chemicals could easily be dumped down the sewer system, spreading the hazard to a greater area. In addition, personnel having to enter the sewer conveyance system downstream of an illegal drug lab would be at increased risk.

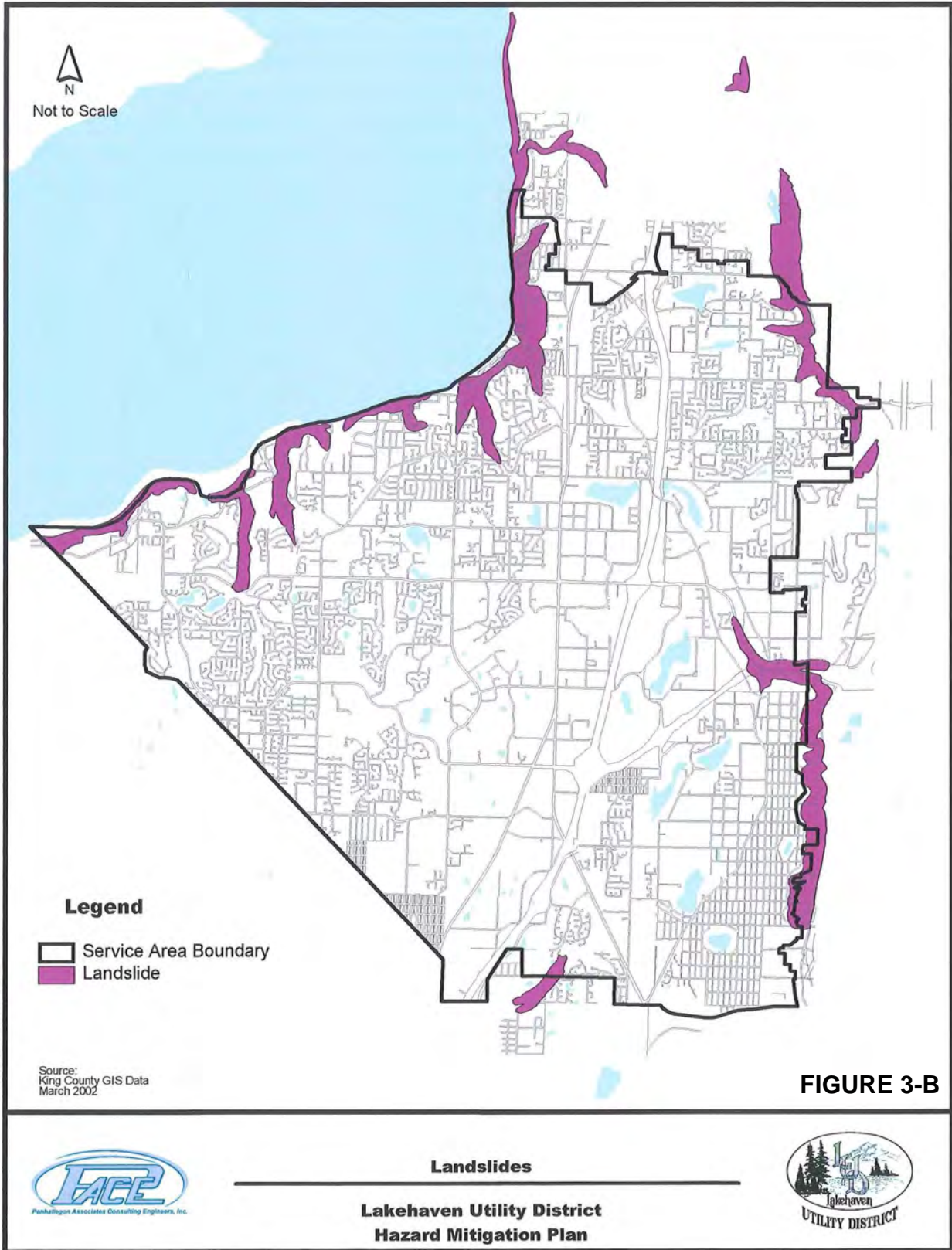
3.1.8 Ground Movement

Ground movement, including erosion and landslides present a significant threat in steep slopes areas of the northwest, where high rates of precipitation and associated ground saturation is expected. Areas within Lakehaven which are particularly susceptible to ground movement are along the shoreline areas and steep slopes along streams and drainages to the Puget Sound. Erosion and landslides, particularly those that are rain induced pose a threat to properties within the District and have the potential for localized disruption of water and/or sewer service due to pipeline failure. Areas of specific concern are designated on Figure 3-B. The overall perceived risk associated with ground movement is low.

3.1.9 Flooding

Flooding is a significant issue throughout the Puget Sound region but presents a relatively low perceived risk to the District because there are no major rivers in the area and, as indicated on Figure 3-D, only small area that is within the 100 year flood plain. The primary type of flooding that would be expected within the District's service area is urban flooding resulting from clogged catch basins and storm drainage facilities. Although there are limited areas of the District which are within identified floodplains, in low-lying areas of the District, and along the shore of the Puget Sound, District facilities in these areas are generally limited to water distribution and wastewater collection pipelines, which would not be significantly impacted in the event of flooding. The only exception to this is the potential for manhole flooding and subsequent increased wastewater flows. In these localized areas, the District requires special measures to seal manholes and prevent standing water from seeping through openings in the lids. A few years ago a rain storm that produced more than five inches of rain in a 24-hour period resulted in isolated flooding and access road and gate damage at the District's Well 15/15A site. The incident was caused by a clogged undersized culvert used for vehicle access over a

stream and the culvert is scheduled for replacement in 2010 to prevent this type of event from occurring again at the well site.



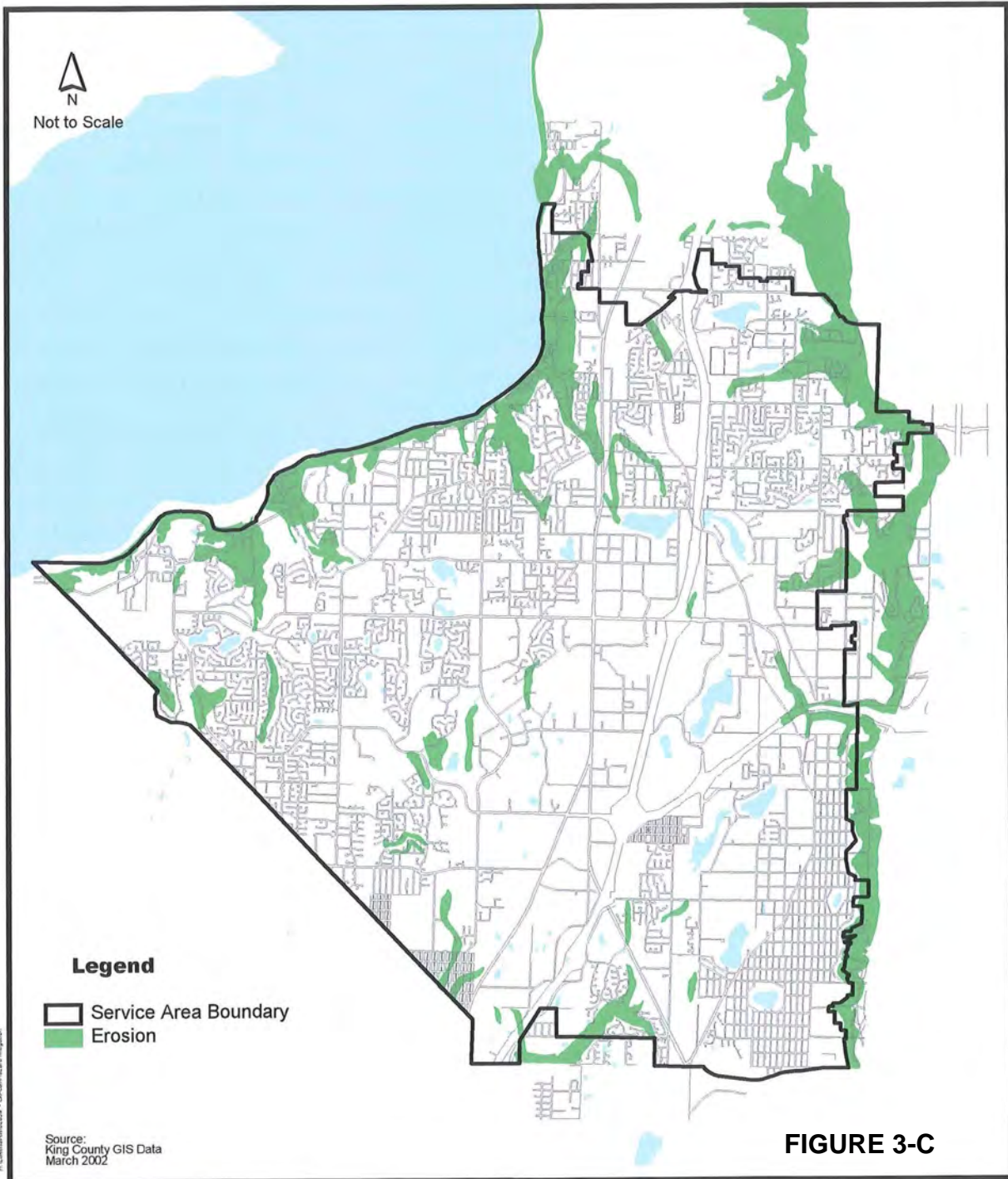


FIGURE 3-C



Erosion

**Lakehaven Utility District
Hazard Mitigation Plan**



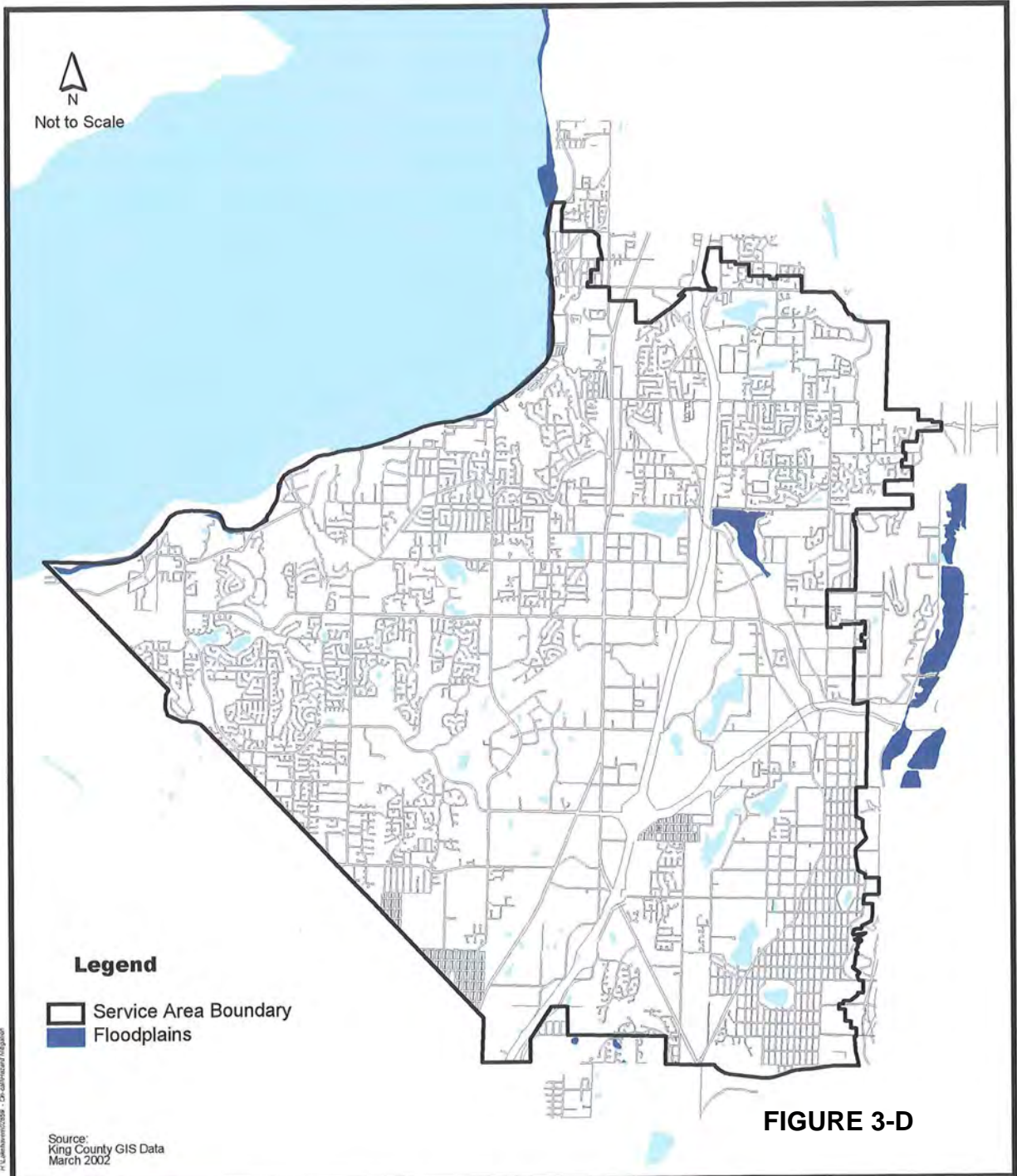


FIGURE 3-D



Floodplains

**Lakehaven Utility District
Hazard Mitigation Plan**



3.1.10 Fire

As a water service provider, fire represents two distinct hazards to the District. The first concern is related to maintaining adequate fire flows and pressures to protect public health and safety, structures, and the environment. Because adequate fire flow is critical to the protection of life and property, Lakehaven's emergency response and recovery efforts following a hazard event or disaster focuses on preserving water supply and facilities required for fire fighting. The District works closely with local fire marshals to insure that the water system is capable of meeting minimum fire flow requirements. All jurisdictions within which the District operates require building permit applicants to contact the District regarding fire flow availability. If adequate flow is not available in accordance with fire marshal requirements, physical improvements to the water system are mandated as a building permit condition.

The second concern is a structural fire at a District facility. This type of fire has the highest probability of impacting District operations and represents the highest potential direct cost to the District. Protection of District facilities has been accomplished by constructing all new facilities in accordance with current building codes and maintaining fire protection equipment such as sprinkler systems and fire hydrants. In addition, telemetry equipment at remote facilities such as pump stations, wells, etc. include alarm equipment to facilitate timely emergency response.

3.1.11 Civil Disorder/Terrorism

Crime, vandalism, civil unrest and terrorist acts are considered as one category. Any of these events could have a direct and significant impact on District facilities and operations. Because of the secure nature of many of the mitigation strategies that would be employed to reduce the likelihood and

impact of this type of event, analysis of this type of hazard is accomplished in the District's Vulnerability Assessment and not for public disclosure.

3.1.12 Pandemics

Pandemics are caused by the outbreak of a new epidemic of infectious disease that causes serious illness and spreads easily among communities across a large region (continent) or even worldwide. The Puget Sound area is vulnerable during a pandemic but there have been no recent cases of a pandemic or epidemic outbreak affecting the operation of the District. The probability of a pandemic outbreak occurring increases with a growing global population and the large diversity of people traveling and living in the Puget Sound region provides opportunities for infectious diseases to occur and spread. The severity of a pandemic will depend upon the disease itself and the duration of the event.

Although District facilities and structures are not vulnerable in the event of a pandemic, the greatest impact upon District operations would be from staff absences due to illness which could be as high as 50%. The number of healthy staff available to perform essential functions during a pandemic would have an impact on the ability of the District to efficiently operate and maintain water production, water treatment, and sewer treatment operations. A reduction in staff during a pandemic would also have an impact on the District's general administrative business operations and internal customer service. A shortage of staff would also cause poor external customer service with increased response time to complete regular or emergency utility locates and field repairs of water or sewer service lines, fire hydrants, and main breaks. Staff cross training of jobs are in place to reduce the potential impact of pandemic conditions on the District.

3.3 IDENTIFYING ASSETS

The District's 2004 Hazard Mitigation Planning committee used King County GIS data base maps and other similar resources from the cities within which the District operates to determine which facilities are vulnerable to the identified hazards. The planning committee utilized water and sewer industry standards in defining the District's critical facilities as those that could either not lose functional capabilities or that could not be out of service for longer than 8 hours. These critical facilities are vulnerable to a multitude of hazards such as the effects of earthquakes, severe local storms and power outages. Hazard event vulnerability assessment for District facilities is provided in Table 3-2. A total Vulnerability Score was determined for each facility within the water and sewer systems based on not only the hazards identified earlier in this section, but also the secondary effects of those hazards. These relative vulnerability scores assisted in developing the mitigation strategy presented in Section 4 of this Plan. Generally, it was determined that all facilities within the system are well designed and protected against potential hazards and impacts that have been identified for the corporate area. The most vulnerable facilities identified are clearly within the water system, primarily because that loss of service, pressure or flow could significantly impact the ability to provide fire protection and otherwise protect health and safety of residents of the District. On the wastewater side of operations, the need for generators to protect against sewage overflows in the event of an extended power outage and the location of the Redondo Treatment Plant in relation to steep slopes (with a relatively high potential for erosion or landslides) have been identified as concerns.

Critical facilities other than District infrastructure were not identified as part of this planning process and it is assumed that each agency having jurisdiction will assume responsibility for the assessment and mitigation of their facilities and operations. Although the District has no control over the facilities of other jurisdictions, it recognizes that District operations could have an impact on the ability of others to maintain business or provision of services to the

community. The District solicited comments and input from the public as well as neighboring jurisdiction through the public involvement process outlined in Section 2 of this Plan.

TABLE 3-3

Water System Hazard Assessment

	High Winds	Flooding	Storm Surge/Tsunami	Drought	Hail Storms	Disease	Earthquake	Landslide/Erosion	Subsidence	Volcanic Activity	Winter Storm	Lightning	Major Fire	History Damage	Power Outage	Access/Egress	Water Supply	Sewer Service	Civil Disorder	Terrorist Attacks	Hazardous Material Event	Radiological	Communication Failure	Employment Crisis	Health and Safety Hazard	Psychological Hardship	Economic Impact	Community Service	Environmental	Total
16th Avenue Tanks A & B	2						1		1	1					3	2	1			1					2		2		15	
Wells 15 & 15A	3						1		1	1						2				1	1				2		1	2	14	
Wells 10 & 10A	3						1		1	1		1								1	1				2		2		12	
Wells 17, 17A & 17B	2						1		1	1										1	1				2		1		9	
Wells 19 & 19A	2						1		1	1										1	1				2		1		9	
Wells 23 & 23A	2						1		1	1		1			2	3				1	1				1				13	
SeaTac Tank							1		1	1							1		1	2					2		2		10	
Water Operations Building							1		1	1							1		1	1		1			1	1	1		11	
305th Tanks A & B and Well 29							1		1	1		1			1	1			1	1					2		1		10	
Tank 2 and Well 16	3						1		1	1					1	1			1	1					1		1		11	
Wells 20 & 20A and 33							1		1	1		1			2				1	1					2		1		10	
2nd Supply Connections 1, 2, & 3							1		1	1					1				1	1					2		2		9	
Tanks 1 & 4 and Well 25							1		1	1					1				1	1					1				6	
312th Booster Station							1		1	1					1				1	1					1		1		6	
320th Booster Station							1		1	1					1				1	1					1		1		6	
337th Booster Station							1		1	1					1				1	1					1		1		6	
Well 7							1		1	1					1				1	1					1		1		5	
Well 9							1		1	1					1				1	1					1		1		5	
20th Avenue Tank							1		1	1					1				1	1					1		1		6	
312th Street Tank							1		1	1					1	1			1	1					1		1		5	
Military Road Tank							1		1	1					1				1	1					1		1		6	
Tank 3							1		1	1					1				1	1					1		1		6	
Well 10C							1		1	1					1				1	1					1				0	
Well 18							1		1	1					1				1	1					1		1		5	
Well 21							1		1	1					1	1			1	1					1		1		6	
Wells 22, 22A & 22B							1		1	1					1	1			1	1					1		1		6	

Notes:

1 = Low vulnerability to specified hazard; 2=Medium vulnerability to specified hazard; and, 3=High vulnerability to specified hazard. Total Score indicates relative total vulnerability of facility to potential situations identified in Mitigation 20/20 Software. Situations are events that might arise out of hazard events defined as possible for Lakehaven Utility District.

3.4 ESTIMATING POTENTIAL LOSSES

Review and evaluation of the potential hazards, associated risk to facilities, and the mitigation efforts already accomplished by the District indicates that damage would not exceed that budgeted for regular operation and maintenance activities.

3.5 ANALYZING DEVELOPMENT TRENDS

Development trends with Lakehaven are established by the zoning codes of the eight cities and King County that govern land use within the District. Lakehaven is entirely within the established Urban Growth Area and as such, an urban level of services is mandated by the Growth Management Act planning accomplished by land use authorities in the area. Approximately 117,000 people reside within the corporate area and an additional 40,000 people work within the corporate area. This is expected to increase by approximately 50% in the next 20 years and the growth in population and employment are related to development of currently undeveloped areas in the eastern portion of the corporate area and infill development/redevelopment throughout the corporate area. . This growth in population has been accounted for in the District's long range planning efforts, infrastructure analyses and capital facility planning.

SECTION 4- MITIGATION GOALS AND STRATEGY

4.1 MITIGATION GOALS

As documented in Section 3, Lakehaven Utility District's Hazard Mitigation Planning Committee identified the potential hazards within the District that have a likelihood of impacting the ability to deliver safe and uninterrupted domestic water service, fire protections and/or sanitary sewer collection, treatment and disposal. Key hazards are listed below, in order of perceived risk to District operations as determined in 2004 using Mitigation 20/20 software as documented in Section 3 (Table 3-2) and updated in 2009.

- Earthquake;
- High Winds;
- Severe Winter Storm;
- Drought;
- Volcanic Activity;
- Power Outages;
- Hazardous Material Event;
- Ground Movement;
- Flooding; and,
- Fire,
- Pandemics

Civil Disorder/Terrorism is also considered a viable hazard and risk to Lakehaven Utility District, but in accordance with Federal Regulations, is specifically addressed in a confidential Vulnerability Assessment. With these hazards identified and an assessment of the vulnerability of key facilities in the District's water and sanitary sewer system, the Planning Committee set out to

identify a mitigation strategy consistent with the overall objectives identified early in the planning process. These objectives are:

- Protect health and safety by reducing public exposure to identified risks;
- Reduce or prevent damage to public and private property; reduce adverse environmental or natural resource impacts, and;
- Reduce the potential financial impact on the District, other public agencies and the general public.

Development of a sound mitigation strategy included identification of mitigation goals and actions consistent with the overall mission. Goals and actions identified for Lakehaven Utility District are summarized in the following paragraphs.

1) Goal:

Increase staff response capabilities to the impacts of identified hazards on the District and its customers.

Actions:

- Continued Staff training on emergency preparedness, mutual aid agreements, emergency response procedures, cross training of jobs and security awareness. (Ongoing)
- Perform tabletop exercises to strengthen knowledge or correct response actions and practice drills to carry out these actions. (Ongoing)
- Consider practice drills without operational telemetry system to afford staff the knowledge of manual system operations. (Ongoing)
- Continue to develop written plans and procedures to further staff knowledge and skills. (Ongoing)

2) Goal:

Increased sustainability of existing water sources, or increase the number of water sources.

Actions:

- Seismic upgrades of water storage tanks (Complete).
- Construction of an additional connection to the City of Tacoma's regional water system surface water source (Complete).
- Water system modeling to identify circulation and flow improvements and increase system reliability (Complete).
- Continuation of implementation of the District's aquifer storage and recovery (OASIS) program to increase source sustainability (Ongoing).
- Site security upgrades and staff security training (Ongoing).

3) Goal:

Increase reliability of the water and sewer infrastructure and maintain service during and following hazard or emergency event.

Actions:

- Seismic upgrades of water storage tanks (Complete).
- Install backup generation capabilities at critical pump and lift stations (Complete).
- Construction of an additional connection to the City of Tacoma's regional water system surface water source (Complete).
- Water main flow modeling to simulate system impacts associated with pipeline failure (Complete).
- Sewer main capacity modeling (Ongoing).
- Construction specification and standards updating (Ongoing).
- Emergency response training and drills (Ongoing).

4) Goal:

Protect property and the environment, and reduce the potential for claims following sewer overflow or flooding caused by damaged infrastructure following a hazardous event.

Actions:

- Seismic upgrades of water storage tanks (Complete).
- Purchase additional backup power generators. (Complete)
- Construction specification and standards updating. (Ongoing)
- Maintain adequate repair and emergency material and equipment inventory. (Ongoing)
- Regular system renewal to eliminate pipes approaching useful life or experiencing premature signs of failure (Ongoing).
- Site security upgrades and staff security training.
- Construct all new facilities and facility upgrades in accordance with current building codes. (Ongoing)
- Work with local cities to enforce minimum fire flow and public sewer requirements for new developments. (Ongoing)

5) Goal:

Assist business community by maintaining service to insure business continuity and resumption of normal business functions as soon as possible following an emergency event.

Actions:

- Maintain a current and well practiced Emergency Management Plan. (Ongoing)

- Emergency response training and drills for staff and Commissioners. (Ongoing)
- Cross training of jobs for staff. (Ongoing)
- Site security upgrades and staff security training.

6) Goal:

Lessen the economic impact and customer inconvenience resulting from loss or damage to the water/sewer infrastructure following an identified emergency event.

Actions:

- Maintain up to date Hazard Mitigation and Emergency Management plans. (Ongoing)
- Staff training, education and drills on emergency response and recovery actions. (Ongoing)
- Maintain adequate repair material and equipment inventories for quick recovery. (Ongoing)
- Board policy decisions to support identified mitigation actions.

7) Goal:

Maintain water and wastewater systems safe from vulnerability to man-made or terrorist events.

Actions:

- Continued involvement in regional and local response activities. (Ongoing)
- Implementation of District Vulnerability Assessment. (Ongoing)

Table 4-1 presents a summary of hazards and actions identified for mitigation of each hazard identified as a perceived risk to Lakehaven Utility District

system facilities, operations and/or ability to meet the objectives of maintaining service to protect health and safety, reducing or preventing damage to public and private property, the environment and natural resources, and/or reducing the potential financial impact on the District, other public agencies and the general public. Table 4-1 also includes project funding sources and schedule for each activity and identification of the Lakehaven staff member responsible for implementation of each activity or program.

During development of the mitigation strategies the planning committee considered a variety of factors to assign a high, medium or low priority for each action. Factors considered included the number of hazards addressed by each activity, project status and available funding, Cost Benefit analyses of each activity, project or action and perceived public support and acceptance of each activity identified. A minimum threshold for each project was a positive cost benefit ratio. For non-project activities and programs consideration was given to regulatory requirements, operational benefits and overall improvements to emergency response and recovery. This was particularly important in defining activities such as training and emergency response activities. High, medium and low priority projects generally meet the following criteria:

- High Priority: High Priority projects are those that address multiple hazards, have been budgeted for (or have received outside public assistance), are directly related to the protection of public health and safety, have high cost-benefit ratios and/or are programs which are either required by federal and state regulations or have been identified as critical emergency response for the hazard that they address.
- Medium Priority: Medium Priority projects are those that may address multiple hazards but are not considered critical to protection of health and safety, are part of ongoing operational activities but are not necessary critical to emergency response for the hazard they address. Medium

priority projects must retain a positive cost-benefit ratio although costs and benefits may in some instances be more difficult to define or less tangible.

- Low Priority: Low priority activities would likely have close to a 1:1 cost benefit ratio or be considered incidental activities and/or provide minimal protection of health, safety and the environment. No low priority actions were identified by the Planning Committee.

TABLE 4-1
IMPLEMENTATION OF MITIGATION ACTIONS

HAZARD	MITIGATION ACTIONS	PRIORITY	FUNDING SOURCE	LEAD AGENCY/RESPONSIBLE STAFF	DATE
Earthquake	Seismic retrofit of Storage Reservoirs	High	Grant	Lakehaven/General Manager	Complete
	Construct new Intertie to city of Tacoma Supply	High	Rates	Lakehaven/General Manager	Complete
	Emergency Response Training	High	Rates	Lakehaven/Engineering Water Manager	Ongoing
	Tabletop Emergency Exercises	High	Rates	Lakehaven/Engineering Water Manager	Ongoing
	Water System Modeling to Identify Vulnerable Areas/ Fire Flow Issues	High	Rates	Lakehaven/Engineering Water Manager	Complete
High Winds	Sewer System Capacity Modeling	Medium	Rates	Lakehaven/Engineering Water Manager	Complete
	Cross Training of Staff	Medium	Rates	Lakehaven/General Manager	Ongoing
	Interlocal And Mutual Aid Agreements	Medium	No Cost	Lakehaven/General Counsel	Ongoing
	Utilize Current Building Codes in Construction Activities	Medium	Rates	City having Jurisdiction	Ongoing
	Maintain Adequate Inventory and Emergency Supplies	Medium	Rates	Lakehaven/Purchasing Coordinator	Ongoing
Severe Winter Storm	Backup Power Generators	High	Rates	Lakehaven/Field Operations Manager	Complete
	Emergency Response Training	High	Rates	Lakehaven/Engineering Water Manager	Ongoing
	Interlocal And Mutual Aid Agreements	Medium	No Cost	Lakehaven/General Counsel	Ongoing
	Continued Development of Emergency Plan & Procedures	Medium	Rates	Lakehaven/General Counsel	Ongoing
	Backup Power Generators	Medium	PWTF/Grant	Lakehaven/Field Operations Manager	Complete
Drought	Emergency Response Training	Medium	Rates	Lakehaven/Engineering Water Manager	Ongoing
	Interlocal And Mutual Aid Agreements	Medium	No Cost	Lakehaven/General Counsel	Ongoing
	Maintain Adequate Inventory and Emergency Supplies	Medium	Rates	Lakehaven/Purchasing Coordinator	Ongoing
	Construct new Intertie to city of Tacoma Supply	High	Rates	Lakehaven/General Manager	Complete
	Maintain Conservation and Water Shortage Response Plans	High	Rates	Lakehaven/Engineering Water Manager	Ongoing
Volcanic Activity	Emergency Response Training	Medium	Rates	Lakehaven/General Counsel	Ongoing
	Interlocal And Mutual Aid Agreements	Medium	Rates	Lakehaven/General Counsel	Ongoing
	Maintain Adequate Inventory and Emergency Supplies	Medium	Rates	Lakehaven/Purchasing Coordinator	Ongoing
	Backup Power Generators	Medium	PWTF/Grant	Lakehaven/Field Operations Manager	Complete
	Emergency Response Training	Medium	Rates	Lakehaven/Engineering Water Manager	Ongoing
Power Outage	Interlocal And Mutual Aid Agreements	Medium	Rates	Lakehaven/General Counsel	Ongoing
	Emergency Response Training	Medium	Rates	Lakehaven/Engineering Water Manager	Ongoing
	Interlocal And Mutual Aid Agreements	Medium	Rates	Lakehaven/General Counsel	Ongoing
	Emergency Response Training	High	Rates/Grant	Lakehaven/Engineering Water Manager	Ongoing
	Maintain Wellhead Protection Plans and Programs	High	Rates/Grant	Lakehaven/Water Quality Production Engineer	Ongoing
Hazardous Material Incident	Cross Training of Staff	Medium	Rates	Lakehaven/General Manager	Ongoing
	Maintain Water Shortage Response Plans	High	Rates	Lakehaven/Engineering Water Manager	Ongoing
	Mutual Aid and Interlocal Agreements	Medium	Rates	Lakehaven/General Counsel	Ongoing
	Emergency Response Training	High	Rates	Lakehaven/Engineering Water Manager	Ongoing
	Interlocal And Mutual Aid Agreements	Medium	No Cost	Lakehaven/General Counsel	Ongoing
Ground Movement	Utilize Current Building Codes in Construction Activities	Medium	Rates	City having Jurisdiction	Ongoing
	Maintain Adequate Inventory and Emergency Supplies	Medium	Rates	Lakehaven/Purchasing Coordinator	Ongoing
	Emergency Response Training	High	Rates	Lakehaven/Engineering Water Manager	Ongoing
	Interlocal And Mutual Aid Agreements	Medium	No Cost	Lakehaven/General Counsel	Ongoing
	Utilize Current Building Codes in Construction Activities	Medium	Rates	City having Jurisdiction	Ongoing
Flooding	Maintain Adequate Inventory and Emergency Supplies	Medium	Rates	Lakehaven/Purchasing Coordinator	Ongoing
	Emergency Response Training	High	Rates	Lakehaven/Engineering Water Manager	Ongoing
	Interlocal And Mutual Aid Agreements	Medium	No Cost	Lakehaven/General Counsel	Ongoing
	Utilize Current Building Codes in Construction Activities	Medium	Rates	City having Jurisdiction	Ongoing
	Maintain Adequate Inventory and Emergency Supplies	Medium	Rates	Lakehaven/Purchasing Coordinator	Ongoing
Fire	Emergency Response Training	High	Rates	Lakehaven/Engineering Water Manager	Ongoing
	Water System Modeling to Identify Vulnerable Areas/ Fire Flow Issues	High	Rates	Lakehaven/Engineering Water Manager	Complete
	Utilize Current Building Codes in Construction Activities	Medium	Rates	City having Jurisdiction	Ongoing
	Cross Training of Staff	Medium	Rates	Lakehaven/General Manager	Ongoing
	Pandemics	Utilize Current Building Codes in Construction Activities	Medium	Rates	Lakehaven/Engineering Water Manager
	Cross Training of Staff	Medium	Rates	City having Jurisdiction	Ongoing
				Lakehaven/Engineering Water Manager	Ongoing

SECTION 5 - PLAN UPDATE AND MAINTENANCE

5.1 MONITORING, EVALUATING AND UPDATING MITIGATION PLAN

Consistent with FEMA requirements and in the interest of maintaining a proactive hazard mitigation strategy, Lakehaven will perform regular reviews and updates of the Hazard Mitigation Plan as required to address changing conditions within the District. cursory review of the Hazard Mitigation Plan will be accomplished annually, as part of the annual review of the Emergency Management Plan. Review will include monitoring and evaluating the progress of the mitigation strategies in the plan and determination of whether or not revisions to the Mitigation Plan are required. Complete review and update of the plan will be accomplished at least every five years, or more frequently if annual reviews determine that conditions have changed significantly. Responsibility for review and update of the Plan will be the responsibility of the Engineering/Water Manager, the District's Emergency Response Planning team and other staff members as determined appropriate.

Plan updates will include detailed review of the goals and actions proposed in the Hazard Mitigation Plan, as well as changes in state or federal policy. The vulnerability determination and facility assessment portions of the plan will also be reviewed to determine if this information requires update or modification. Progress regarding implementation actions will be documented with detail provided regarding which implementation processes worked well, any difficulties encountered, how coordination efforts were proceeding, and which strategies should be revised.

Revisions to the plan will be made available to the general public for review and comment, addressed at a public meeting, discussed with neighboring jurisdictions at regular interagency coordination meetings and approved by the Board of Commissioners before submittal to the State Hazard Mitigation

Program Manager. If no changes are necessary, the State Hazard Mitigation Program Manager will be given a justification for this determination in writing.

Following any revisions and final Board approval, the updated plan will be forwarded to the Washington State Mitigation Office and to the King County Regional Mitigation plan administrator.

5.2 IMPLEMENTATION THROUGH EXISTING PROGRAMS

Lakehaven does not have control over several important aspects of hazard mitigation and instead relies on the enforcement mechanisms of other jurisdictions for land use, building, grading, right-of-way and fire codes and restrictions. The following District planning documents, however, will incorporate the findings of the Hazard Mitigation Plan and subsequent updates thereto. The Engineering/Water Manager is responsible for overall coordination and development of the programs listed and for inclusion of incorporation of hazard mitigation goals, activities and programs into the scope of work developed for each document update.

- Future capital improvement planning (annual update);
- Future updating of the Comprehensive Water and Wastewater System Plans (updated every six years);
- Emergency Management Plan (reviewed and updated annually);
- Operations and Maintenance Programs (ongoing updates); and,
- Safety Programs (ongoing updates).

5.3 CONTINUED PUBLIC INVOLVEMENT

Lakehaven Utility District is dedicated to having public involvement in planning. Hazard Mitigation goals and proposed actions are published in the District customer newsletter each year requesting comments. Additional comment and coordination is sought from neighboring jurisdictions and land

use authorities in the area. Participation in various associations and the King County Regional Mitigation Planning ensures communication and coordination on a regional basis.

A summary of the Hazard Mitigation Plan, its goal and objectives is published in the newsletter yearly. Public information meetings will be conducted in conjunction with a regular Board of Commissioner meeting after plan review has been conducted and recommended changes developed. This meeting provides for public comment. The planning committee will publicize and host this meeting and will coordinate with the general public and/or other agencies to address any suggestions or comments received. A primary goal of future mitigation planning is maintaining a proactive approach to incorporating new data and additional information and guidance from other local and regional hazard identification and mitigation planning.

LAKEHAVEN UTILITY DISTRICT

Resolution No. 2004-1015

A Resolution of the Board of Commissioners of the Lakehaven Utility District, King County, Washington, adopting a Local Hazard Mitigation Plan.

WHEREAS, the District operates water and sewer infrastructure that provides essential public services within and without the District's service area, and

WHEREAS, in order to protect the water and sewer systems and better ensure the provision of services in the event of disaster conditions, the District has developed a Local Hazard Mitigation Plan to comply with the requirements of the Disaster Mitigation Act of 2003, and

WHEREAS, the Local Hazard Mitigation Plan has been reviewed and approved by the reviewing agencies and formal adoption by the District's legislative body is now appropriate, and

WHEREAS, the Board of Commissioners having reviewed the Local Hazard Mitigation Plan and desiring to provide for its formal adoption,

NOW, THEREFORE, BE IT RESOLVED as follows:

- 1. The Board of Commissioners hereby adopts the attached "Lakehaven Utility District Local Hazard Mitigation Plan" for all purposes approved under applicable local, state and federal law.
2. District staff is authorized and directed to submit a copy of this resolution to any agency with jurisdiction under the Disaster Mitigation Act of 2003 as full evidence of the Lakehaven Utility District's formal adoption of the Plan
3. This resolution shall be effective on the date of adoption below.

ADOPTED by the Board of Commissioners of Lakehaven Utility District, King County, Washington, at an open public meeting this 20th day of May, 2004.

ATTEST: [Signature] President and Commissioner
Yea [check]
Nay
Abstain

Edward C. Stewart ✓
Vice President and Commissioner Yea Nay Abstain

Deverly J. Tweddle ✓
Secretary and Commissioner Yea Nay Abstain

Thomas M. Giovanni ✓
Commissioner Yea Nay Abstain

Ronald A. Miller ✓
Commissioner Yea Nay Abstain

Approved as to form:

At H. Patcher
General Counsel

**PUBLIC NOTICE
LAKEHAVEN UTILITY DISTRICT**

Notice is hereby given that a regular meeting of the Board of Commissioners of the Lakehaven Utility District will be held on Thursday, November 12, 2009 at 6:00 PM. The meeting will be held at Lakehaven Center located at 31531 First Avenue South, Federal Way, Washington.

In addition to the regular meeting, a presentation will be given on the District's draft 2009 Revised Local Hazard Mitigation Plan. This presentation will initiate a public involvement process and public comments and/or questions will be welcome.