

**Intercity Transit’s Annex to the
Natural Hazards Mitigation Plan for
the Thurston Region**

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**INTERCITY TRANSIT
RESOLUTION NO. 03-2010
"NATURAL HAZARDS MITIGATION PLAN FOR THE THURSTON REGION"**

A RESOLUTION of the Intercity Transit Authority adopting the 2009 update to the "Natural Hazards Mitigation Plan for the Thurston Region."

WHEREAS, Intercity Transit is vulnerable to the human and economic costs of natural disasters; and

WHEREAS, Intercity Transit recognizes the importance of reducing or eliminating those vulnerabilities for the overall good and welfare of the community; and

WHEREAS, Intercity Transit has been an active participant in the Natural Hazards Mitigation Planning Workgroup and Task Force, which established a comprehensive, coordinated planning process to eliminate or decrease these vulnerabilities; and

WHEREAS, Intercity Transit staff identified, justified and prioritized a number of proposed projects and programs needed to mitigate the vulnerabilities of Intercity Transit to the impacts of disasters; and

WHEREAS, these proposed projects and programs have been incorporated into the 2009 updated edition of the "Natural Hazards Mitigation Plan for the Thurston Region" that has been prepared and issued for consideration and implementation by the communities of Thurston County.

NOW, THEREFORE, BE IT RESOLVED BY THE INTERCITY TRANSIT AUTHORITY, AS FOLLOWS:

Section 1. The Intercity Transit Authority hereby accepts and approves its designated portion of the 2009 update to the "Natural Hazards Mitigation Plan for the Thurston Region."

Section 2. Intercity Transit staff are requested and instructed to pursue available funding opportunities for implementation of the mitigation initiatives designated therein.

Annex: Intercity Transit

Section 3. Intercity Transit will, upon receipt of such funding or other necessary resources, seek to implement the proposals contained in its section of the strategy.

Section 4. Intercity Transit will continue to participate in the updating and expansion of the "Natural Hazards Mitigation Plan for the Thurston Region" in the years ahead.

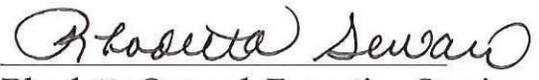
ADOPTED this 7th day of April, 2010.

INTERCITY TRANSIT AUTHORITY

ATTEST

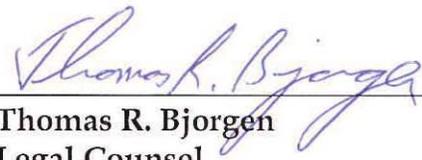


Sandra Romero, Chair



Rhodetta Seward, Executive Services
Director/Clerk to the Authority

APPROVED AS TO FORM



Thomas R. Bjorgen
Legal Counsel

Community Profile Intercity Transit

(360)786-8585

www.intercitytransit.com

Demographics

Public Transportation Benefit	
Area (sq mi.) ¹ :	93.8
Service Area Population, 2007 ² :	147,465

Thurston County Population by Race (2000)³:	
White Alone	86%
Black/African American	2%
American Indian & Alaska Native	2%
Asian	4%
Hispanic or Latino	5%
Other	2%

Service Summary

22 Fixed Routes, 195 Commuter Vanpools, and door to door Americans with Disability Act "Dial-A-Lift" (paratransit) service for people with disabilities

Fleet

99 Buses, 210 Vanpool Vehicles

Local Communities Served	Fixed Routes
Lacey/Olympia/Tumwater/Yelm	20
External Communities Served	Express Routes
Lakewood and Tacoma via express	2

Service Connections

Pierce Transit, Sound Transit, Mason County Transit, Grays Harbor Transit, AMTRAK, Greyhound, and park and ride lots

Annual Boardings (millions) ⁴	2004	2005	2006	2007	2008
Fixed Route	2.78	2.87	3.26	3.64	4.25
Vanpool	0.23	0.38	0.47	0.53	0.62
Dial-A-Lift	0.11	0.11	0.13	0.13	0.14
Boardings per Vehicle Service Hour					
Fixed Route	22.0	19.1	18.9	20.8	22.1
Vanpool	8.9	9.0	9.1	9.2	9.3
Dial-A-Lift	2.5	2.6	2.5	2.3	2.4

Assets (2008)⁴:

Valuation of Infrastructure	\$35,000,000
Valuation of Contents	\$3,700,000
Total	\$38,700,000

Budget Summary (2007)⁴

Revenues by Source

January 1st Carryover	\$16,572,643
Fares	\$2,369,134
Advertising	\$188,285
Interest Income	\$492,723
Sales Tax	\$22,557,402
Grants	\$5,067,500
Miscellaneous	\$78,600
Total Revenue	\$47,326,287

Expenditures by Function

Vehicle Operations	\$11,233,634
Vehicle Maintenance	\$4,815,018
Non-Vehicle Maintenance	\$1,649,442
Administration	\$5,745,120
Vanpool	\$825,886
Capital	\$14,049,900
Total Expenditures	\$38,319,000

Service / Operations

Financial

Intercity Transit is the Public Transportation Benefit Area (PTBA) for Thurston County. The agency provides a variety of transit services and commuter programs within the Thurston region. It was established by voters in September 1980. Intercity Transit's administration, maintenance, and operations center is located in Olympia. The agency employs 288 people.

Governance: Eight Board of Directors comprise the Transit Authority. Five of the directors are elected officials representing the Thurston County Board of Commissioners and the cities of Lacey, Olympia, Tumwater, and Yelm. Three members are citizen representatives and are selected by the board.

Mission: To provide and promote transportation choices that support an accessible, sustainable, livable prosperous community.

Vision: Our vision is to be a leading transit system in the country, recognized for our well-trained, highly motivated, customer-focus, community-minded employees committed to enhancing the quality of life for all citizens of Thurston County.

Sources: ¹Thurston Regional Planning Council.
²Office of Financial Management
³U.S. Bureau of the Census
⁴Intercity Transit

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Intercity Transit Plan Development Process

Hazard Mitigation Plan Development Staff

The following staff served as Intercity Transit's hazards mitigation planning development team:

Title	Representative
Operations Manager, Project Lead	Jim Merrill
Fixed Route Manager	Phil Early
Facilities Manager	Mark Kalias

Hazard Mitigation Plan Development

The following activities supported the development of Intercity Transit's local hazard mitigation planning process:

Date	Location	Activity	Subject
May 12, 2009	Intercity Transit	Meeting / Worksession	Intercity Transit Risk Assessment and Hazards Mitigation Plan
TBA	Intercity Transit	Transit Authority Review	Review of the Natural Hazards Mitigation Plan for the Thurston Region and I.T. Annex
TBA	Intercity Transit	Transit Authority Adoption	Adoption of The Natural Hazards Mitigation Plan for the Thurston Region and I.T. Annex

Mitigation Initiative Prioritization Process

Intercity Transit completed mitigation initiative IT-MH 1. Only one new initiative was identified, IT-MH 2, therefore a prioritization process was not necessary.

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Intercity Transit Risk Assessment

Introduction

The risk assessment provides information about the hazards that threaten Intercity Transit. This information provides the factual basis to identify and support a strategy that can effectively mitigate the effects of the hazards that threaten this jurisdiction's safety and challenge its ability to perform essential functions.

The content and structure of this plan's risk assessment was developed using the Federal Emergency Management Agency's (FEMA) 2008 "Local Multi-Hazard Mitigation Planning Guidance." Table 1 shows the Disaster Mitigation Act (DMA) Risk Assessment Planning Requirements that must be met in order for this plan to receive a "satisfactory" score. Each of these planning requirements is met through the information contained in both the regional risk assessment and in this local annex.

Table 1: Disaster Mitigation Act Risk Assessment Planning Requirements

DMA Section	Requirement
§201.6(c)(2)(i):	[The risk assessment shall include a] description of the type ... of all natural hazards that can affect the jurisdiction ...
§201.6(c)(2)(i):	[The risk assessment shall include a] description of the ... location and extent of all natural hazards that can affect the jurisdiction. The plan shall include information on previous occurrences of hazard events and on the probability of future hazard events.
§201.6(c)(2)(ii):	[The risk assessment shall include a] description of the jurisdiction's vulnerability to the hazards described in paragraph (c)(2)(i) of this section. This description shall include an overall summary of each hazard and its impact on the community.
§201.6(c)(2)(ii):	[The risk assessment in all] plans approved after October 1, 2008 must also address National Flood Insurance Program (NFIP) insured structures that have been repetitively damaged by floods.
§201.6(c)(2)(ii)(A):	The plan should describe vulnerability in terms of the types and numbers of existing and future buildings, infrastructure, and critical facilities located in the identified hazard areas ...
§201.6(c)(2)(ii)(B):	[The plan should describe vulnerability in terms of an] estimate of the potential dollar losses to vulnerable structures identified in paragraph (c)(2)(ii)(A) of this section and a description of the methodology used to prepare the estimate ...
§201.6(c)(2)(ii)(C):	[The plan should describe vulnerability in terms of] providing a general description of land uses and development trends within the community so that mitigation options can be considered in future land use decisions.
§201.6(c)(2)(iii):	For multi-jurisdictional plans, the risk assessment must assess each jurisdiction's risks where they vary from the risks facing the entire planning area.

In general the Federal DMA planning requirements with the words "**shall**" and "**must**" indicate that the item is mandatory and must be included in the plan, otherwise it will not be approved by FEMA. Regulations with the word "**should**" indicate that the item is strongly recommended to be included in the plan, but its absence will not cause FEMA to disapprove the plan.

Hazard Analysis Definitions

The adjective descriptors (High, Moderate, and Low) for each hazard's probability of occurrence, vulnerability, and risk rating are consistent with the terms used in the regional assessment.

The following terms are used in this plan to analyze and summarize the risk of the hazards that threaten this jurisdiction:

Risk Rating:

An adjective description (High, Moderate, or Low) of the overall threat posed by a hazard is assessed for the next 25 years. Risk is the subjective estimate of the combination of any given hazard's probability of occurrence and vulnerability.

- **High:** There is strong potential for a disaster of major proportions during the next 25 years; or History suggests the occurrence of multiple disasters of moderate proportions during the next 25 years.
- **Moderate:** There is medium potential for a disaster of less than major proportions during the next 25 years.
- **Low:** There is little potential for a disaster during the next 25 years.

Probability of Occurrence:

An adjective description (High, Medium, or Low) of the probability of a hazard impacting the jurisdiction within the next 25 years.

- **High:** There is great likelihood that a hazardous event will occur within the next 25 years.
- **Moderate:** There is medium likelihood that a hazardous event will occur within the next 25 years.
- **Low:** There is little likelihood that a hazardous event will occur within the next 25 years.

Vulnerability:

Vulnerability can be expressed as combination of the severity of a natural hazard's effect and its consequential impacts to the community. An adjective description (High, Medium, or Low) of the potential impact a hazard could have on the community. It considers the population, property, commerce, infrastructure and services at risk relative to the entire jurisdiction.

- **High:** The total population, property, commerce, infrastructure and services of the community are uniformly exposed to the effects of a hazard of potentially great magnitude. In a worse case scenario, there could be a disaster of major to catastrophic proportions.
- **Moderate:** The total population, property, commerce, infrastructure, and services of the



Figure 1: Risk is a subjective estimate of the combination of a hazard's probability of occurrence and a community's vulnerability.

community are exposed to the effects of a hazard of moderate influence; or the total population, property, commerce, infrastructure, and services of the community are exposed to the effects of a hazard of moderate influence, but not all to the same degree; or an important segment of population, property, commerce, infrastructure and services of the community are exposed to the effects of a hazard. In a worst case scenario there could be a disaster of moderate to major, though not catastrophic, proportions.

- **Low:** A limited area or segment of population, property, commerce, infrastructure, or service is exposed to the effects of a hazard. In a worst case scenario, there could be a disaster of minor to moderate proportions.

Summary Risk Assessment

Based on the regional risk assessment and the local risk assessment in the subsequent section, the following hazards pose the greatest threat to Intercity Transit.

Hazard	Probability of Occurrence	Vulnerability	Risk
Earthquake	High	Moderate	Moderate
Storm	High	Moderate	Moderate
Flood	Moderate	Moderate	Moderate
Landslide	Low	Low	Low
Wildland Fire	Low	Low	Low
Volcanic Event	Low	Moderate	Low

Local Risk Assessment

A comprehensive risk assessment of the major natural hazards that threaten Intercity Transit was developed for this plan through the regional risk assessment process described in Chapter 4.0. The regional risk assessment and its hazard profiles serve as the foundation for this jurisdiction's risk assessment. A list of all of the potential natural hazards that could impact this jurisdiction is located in Chapter 4. Chapter 4 includes six natural hazard profiles for earthquake, storm, flood, landslide, wildland fire, and volcanic events. Each profile defines the hazard and describes its effects, severity, impacts, probability of occurrence, and historical occurrences. The regional profiles describe this jurisdiction's local vulnerabilities in terms of the portion of the jurisdictions land base or service area, population, employment, dwelling units, jurisdiction-owned assets, and critical facilities that are within each hazard zone.

This section of the plan provides additional details or explains differences where this jurisdiction's risks for each hazard vary from the risks facing the entire planning area. Maps of the hazards that affect Intercity Transit are scaled to local boundaries and are included in this section.

Earthquake

Severity

The epicenter of an earthquake is the point on the earth's surface directly above the earthquake's focus. The severity of an earthquake is dependent on the amount of energy released from the fault or epicenter. The Richter Magnitude Scale measures the intensity of ground motion. Each whole number increase in magnitude represents a ten-fold increase in measured amplitude, and 31 times more energy released. Three kinds of earthquakes are recognized in the Pacific Northwest: shallow earthquakes potentially producing magnitudes mostly less than 3.0 but as high as 7.5, subduction zone earthquakes considered to be the most destructive with potential magnitudes of 9.0 or greater, and deep earthquakes with recorded magnitudes of 7.5.

Impacts

Impacts of earthquakes would be damage to roadways and subsequent disruption of surface transportation.

Probability of Occurrence

History suggests a high probability of occurrence of another damaging earthquake sometime in the next 25 years. The overall probability of occurrence of a damaging earthquake is high.

Historical Occurrences and Impacts Specific to this Jurisdiction

Intercity Transit's service area is 94 square miles with 22 bus routes, 20 routes serving the greater Olympia/Lacey/Tumwater/Yelm area and 2 routes providing express service to Tacoma/Lakewood - Pierce County. Connections to neighboring transit systems also include Grays Harbor and Mason counties. Door-to-Door complementary paratransit service for individuals with disabilities is also provided within this service area. Approximately 190 commuter vanpools travel to and from King, Pierce, Lewis, Grays Harbor, Mason, Kitsap and Thurston Counties with commutes averaging approximately 70 round trip miles. All services combined provided more than 5.1 million rides in 2008.

On February 28, 2001, a 6.8 magnitude deep earthquake was centered in the Nisqually Reach northeast of Olympia, the second worst earthquake in recent Washington history. Intercity Transit experienced an acute increased ridership shortly after the 2001 event, due to riders needing to reach home destinations as soon as possible. Overall impacts of this occurrence were temporary service interruptions to West Olympia destination routes, namely routes traveling over the 4th Avenue Bridge, which received substantial damage from the quake, and Deschutes Parkway, which suffered the most damage of any road in the state. The timeliness of routes, paratransit services and vanpools were temporarily impacted due to high traffic volumes, traffic signal power outages and higher than normal ridership. Temporary detour routes were established to eliminate interruptions and reinstate service to West Olympia. Intercity Transit's facilities (Olympia Transit Center, Lacey Transit Center, Pattison Street Operations hub) did not receive any reportable damage. Landslide impacts are

minimal as Intercity Transit’s service area and its two transit centers are located in specific “low to moderate” liquefaction zones. Facility power outages do not occur due to Intercity Transit’s use of a high powered generator.

Summary Assessment

Though the example of the 2001 quake is not the largest earthquake event possible in the Puget Sound region, future occurrences would have similar temporary impacts on Intercity Transit’s service area and subsequently the service it provides to the community. History does suggest a high probability of occurrence of another damaging earthquake sometime in the next 25 years, however, taking into consideration Intercity Transit’s relatively small 94 square mile service area relegated to surface travel, vulnerability to the impacts of earthquakes would be moderate, as would the overall risk.

Summary Risk Assessment for Earthquake in Intercity Transit

Probability of Occurrence	Vulnerability	Risk
High	Moderate	Moderate

Storm

Severity

Destructive storms come in several varieties: wind, rain, ice, snow, and any combination. Nearly all destructive local storms occur from November through April when the jet stream is over the U.S. west coast and Pacific low-pressure systems are more frequent. The trajectory of these lows determines their effect locally. Southerly lows bring heavy rains; northerly lows bring cold air and potential for snow and ice. Winter storms can bring high winds, with winds above 30 miles per hour causing widespread damage and those above 50 miles per hour causing possible disastrous damage. High winds of short duration can also be destructive though generally not as widespread.

Impacts

1. High winds can bring down trees, telephone and electrical lines over roadways, temporarily interrupting surface transportation.
2. Prolonged heavy rains can cause saturated ground conditions resulting in standing water on roadways impacting surface transportation.
3. Ice storms create treacherous road conditions and often cause downed trees, telephone and electrical lines, temporarily interrupting surface transportation.
4. Snow storms temporarily impact availability and timing of transportation systems due to road conditions.
5. Each of these when in combination with any other or if accompanied by freezing temperatures can exacerbate a storm's impact. High winds, heavy snows and heavy rains often result in increased automobile accidents effecting safety, timing and availability of surface transportation.

Probability of Occurrence

Storms are frequent in Thurston County and history suggests a high probability of wind, rain, ice, snow, and any combination occurring.

Historical Occurrences and Impacts Specific to this Jurisdiction

The ice and windstorms of December 1996 caused large amounts of debris and damage on road systems. Specifically, Intercity Transit temporarily stopped all service the morning after the event until roads had been cleared of branches and power lines. Treacherous road conditions existed due to the ice; Intercity Transit couldn't serve all regular routes. Temporary detour routes were established to eliminate interruptions and reinstate service. The snowstorm of December 2008 again caused treacherous road conditions resulting in temporary detours to eliminate interruptions and reinstate service. This heavy snowfall also caused system wide use of chains on Intercity Transit buses and vans to ensure better traction and safety. The timeliness of routes, paratransit services and vanpools in both events were temporarily impacted due to treacherous road conditions. Intercity Transit's facilities (Olympia Transit Center, Lacey Transit Center, Pattison Street Operations hub) did not receive any reportable damage. Facility power outages do not occur due to Intercity Transit's use of a high powered generator.

Summary Assessment

Though examples of December storms '96 and '08 are not the most severe storm events possible in the Puget Sound region, future occurrences would have similar temporary impacts on Intercity Transit's service area and subsequently the service it provides to the community. History does suggest a high probability of occurrence of damaging storms, however, taking into consideration Intercity Transit's relatively small 94 square mile service area relegated to surface travel, vulnerability to the impacts of storms would be moderate, as would the overall risk.

Summary Risk Assessment for Storm in Intercity Transit

Probability of Occurrence	Vulnerability	Risk
High	Moderate	Moderate

Flood

Severity

Several factors determine the severity of floods, including rainfall intensity (or other water source) and duration. Four types of flooding occur in Thurston County: river or stream building floods, flash floods, tidal floods, and groundwater flooding.

Impacts

Impacts of flooding on surface transportation would likely be from standing water over roadways due to flash and groundwater flooding. Public surface transportation may be called upon for assistance with evacuation and rescue operations.

Probability of Occurrence

Historically, flooding occurs along one or more of the Thurston county's waterways every year, suggesting a high probability of occurrence regionally, however, taking into consideration Intercity Transit's relatively small 94 square mile service area, the majority of which is relegated to surface travel outside of both 100 and 500 year flood plains, the probability of occurrence within Intercity Transit service area is moderate.

Historical Occurrences and Impacts Specific to this Jurisdiction

In local flooding events of 2007 & 2008, Intercity Transit was called upon for assistance evacuating residents outside Intercity Transit's service area, specifically South Thurston and Lewis Counties. No significant flooding events have taken place inside of Intercity Transit's service area in recent history.

Summary Assessment

Though no significant flooding events have taken place inside of Intercity Transit's 94 square mile service area, any future occurrences of standing water over roadways due to flash and groundwater flooding would call for temporary route detours to eliminate interruptions and reinstate service. Vulnerability would be moderate with moderate overall risk.

Summary Risk Assessment for Flood in Intercity Transit

Probability of Occurrence	Vulnerability	Risk
Moderate	Moderate	Moderate

Landslide

Severity

Landslides are movement of rock, soil, or other debris, down a slope. The term landslide includes a wide range of ground movement, such as rock falls, deep failure of slopes, and shallow debris flows. Factors such as erosion, unstable slopes, earthquakes, volcanic eruptions, vibrations, increase of load, hydrologic factors, human activity, removal of lateral and underlying support, increase of lateral pressures and regional tilting will affect the severity of a landslide.

Impacts

Possible impacts of landslides to surface transportation would be debris over roadways.

Probability of Occurrence

Landslides tend to occur in isolated, sparsely developed areas threatening individual structures and remote sections of transportation, energy, and communications infrastructure. Intercity Transit's service area is located in the urbanized areas of Olympia, Lacey, Tumwater and Yelm, therefore landslides would have a low probability of occurrence.

Historical Occurrences and Impacts Specific to this Jurisdiction

No significant landslide events have taken place inside Intercity Transit's service area in recent history. Any future landslide occurrences would call for temporary route detours to eliminate interruptions and reinstate service due to debris over roadways on routes that Intercity Transit serves.

Summary Assessment

Intercity Transit's service area is located in an urbanized area where landslides are not prevalent with no significant history of landslide events. This leads to low vulnerability and low overall risk.

Summary Risk Assessment for Landslide in Intercity Transit

Probability of Occurrence	Vulnerability	Risk
Low	Low	Low

Wildland Fire

Severity

According to the Natural Hazard Mitigation Plan for the Thurston Region, “A wildfire is an uncontrolled fire spreading through vegetative fuels, exposing and possibly consuming structures. Wildfires can begin unnoticed and spread quickly. Naturally occurring and non-native species of grasses, brush, and trees fuel wildfires. In Thurston County, wildfires are most likely to occur during the local dry season, mid-May through mid-October, or anytime during prolonged dry periods causing drought or near-drought conditions.

Impacts

Possible impacts of wildland fires on surface transportation would be spread of fire near roadways, causing safety issues for motorists.

Probability of Occurrence

According to FEMA, a low wildland fire risk area might be a developed portion of a city with few native trees and higher urban densities including commercial or industrial development. Intercity Transit’s 94 square mile service area is located in the urbanized areas of Olympia, Lacey, Tumwater and Yelm, therefor wildland fires would have a low probability of occurrence.

Historical Occurrences and Impacts Specific to this Jurisdiction

No significant wildland fire events have taken place inside Intercity Transit’s service area in recent history. Any future wildland fire occurrences would call for temporary route detours to eliminate interruptions and reinstate service due to spread of fires near roadways on routes that Intercity Transit serves. Smoke from wildland fires could reduce motorist and bus operator visibility.

Summary Assessment

Due to the fact that Intercity Transit’s service area is located in the urbanized areas of Olympia, Lacey, Tumwater and Yelm, matching FEMA’s definition of a low wildland fire risk, vulnerability would be low and low overall risk.

Summary Risk Assessment for Wildland Fire in Intercity Transit

Probability of Occurrence	Vulnerability	Risk
Low	Low	Low

Volcanic Hazards

Severity

An eruption of Mount Rainier, an intermittently active local volcano, could create mud and debris flows called “lahars” Lahars originate on volcano flanks and can surge tens or even hundreds of miles downstream from a volcano. Historically, lahars have been one of the most destructive volcanic hazards.

Impacts

Impacts of an eruption of Mount Rainier and subsequent lahar would be relegated to the Nisqually River valley, impacting nearby roadways, disrupting surface transportation in this area.

Probability of Occurrence

There is evidence (dated to have occurred approximately 300 years ago) that lahars have buried forests near what are now the City of Yelm and the Nisqually Indian Reservation. This indicates a low probability of occurrence.

Historical Occurrences and Impacts Specific to this Jurisdiction

The USGS provides the following short history of a major lahar event which originated from Mount Rainier and impacted the Nisqually River valley:

“Less than 2200 years ago, another lahar of similar origin, named the National Lahar, inundated the Nisqually River valley to depths of 10-40 meters (30-120 feet) and flowed all the way to Puget Sound.” (R.P. Hoblitt, J.S. Walder, C.L. Driedger, K.M. Scott, P.T. Pringle, and J.W. Vallance, 1998, Volcano Hazards from Mount Rainier, Washington, Revised 1998: U.S. Geological Survey Open-File Report 98-428)

Intercity Transit’s service area includes the urbanized area of Yelm serving both the City of Yelm and the Nisqually Indian Reservation. In the event of a Nisqually Valley lahar, nearby roadways would be impacted (I-5, Yelm HWY, HWY 510, and HWY 507) disrupting or potentially cutting off service on Intercity Transit routes in this area. Temporary detour routes would need to be established to eliminate interruptions and attempt to reinstate service.

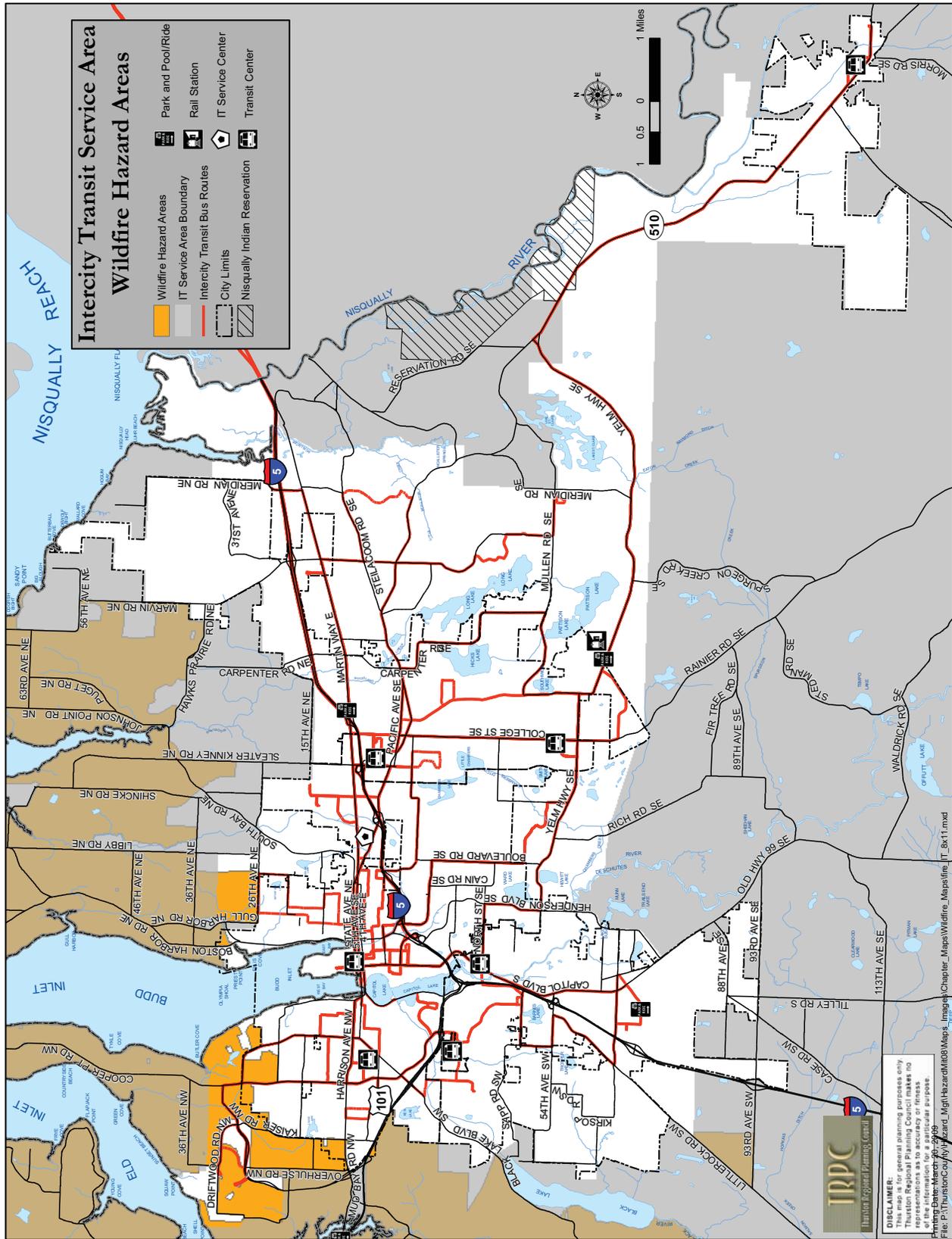
Tephra or ash fall could reduce motorist and bus operator visibility, cause treacherous road conditions, and contaminate air-breathing engines. Frequent monitoring and changing of air filters would prevent vehicle break down and or wear and tear on Intercity Transit’s vehicular engine components.

Summary Assessment

Due to the possible impact on nearby Nisqually River valley roadways and subsequent disruption of service on Intercity Transit routes, vulnerability would be moderate, but paired with a low probability of occurrence, the overall risk would be low.

Summary Risk Assessment for Volcanic Events in Intercity Transit

Probability of Occurrence	Vulnerability	Risk
Low	Moderate	Low



Intercity Transit Mitigation Initiatives

Current Adopted Mitigation Initiatives

The following new initiative was identified by Intercity Transit during the plan update process.

Priority	I.D. Number	Category	Action	Status
1 of 1	IT-MH 2	Hazard Preparedness	Develop Emergency Preparedness and Continuity of Operations Plan	New

Completed or Removed Mitigation Initiatives

The following initiative was completed in the last five years and is included in this plan to provide evidence of progress made. This initiative is no longer relevant and is no longer part of Intercity Transit's adopted mitigation strategy, and therefore not ranked.

I.D. Number	Category	Action	Status
IT-MH 1	Hazard Preparedness	Replace the current 15,000 KW emergency generator at Intercity Transit with a 750,000 KW generator	Completed

Hazard Category Codes are as follows: EH=Earthquake Hazard; FH=Flood Hazard; LH=Landslide Hazard; MH=Multi Hazard; SH=Storm Hazard; WH=Wildland Fire Hazard; and VH=Volcanic Hazard.

Priority: 1 of 1**Status: New****Hazard Addressed: Multi Hazard****Category: Hazard Preparedness****IT-MH 2: Develop Emergency Preparedness and Continuity of Operations plans.**

Rationale: To better establish the importance of being prepared for natural disaster emergencies, Intercity Transit will develop an emergency preparedness plan. The plan will ensure preparedness for catastrophic events. Staff will also develop a Continuity of Operations Plan to organized agency response to these events to maintain, and if necessary recover transit services to the general public. The plan will be familiar to all agency management for timely implementation.

Relates to Plan Goal(s) and Objectives: 4E**Implementer:** Intercity Transit**Estimated Cost:** 10,000**Time Period:** 2010 or 2011**Funding Source:** Intercity Transit**Source and Date:** NA**Adopted Plan Number:** IT-MH-2**Reference Page:** N/A**Initiative and Implementation Status:** New

Priority: N/A**Status: Completed****Hazard Addressed: Multi Hazard****Category: Hazard Preparedness****IT-MH 1: Replace the current 15,000 KW emergency generator at Intercity Transit with a 750,000 KW generator.**

Rationale: Electrical power at Intercity Transit keeps the radio and communication system up and running. The current emergency system has to be supplemented with the use of three portable power generators. Without adequate power there is very limited (if any) contact with employees in the field. This places them in an unsafe situation without knowledge of what roads and bridges are passable as well as being unable to keep them informed as to any further hazards that may arise. Another resource that is maintained with additional power is the ability to refuel our vehicles and any emergency vehicles that may not have access to fuel due to damage to their normal source.

These are just a couple of the benefits. The ability to maintain our customer information system is another way to keep the public informed and aid emergency responders with requests to transport evacuees.

Relates to Plan Goal(s) and Objectives: 3C, 4D**Implementer:** Intercity Transit**Estimated Cost:** 150,000**Time Period:** 2004**Funding Source:** Intercity Transit**Source and Date:** NA**Adopted Plan Number:** N/A**Reference Page:** N/A

Initiative and Implementation Status: Installed in 2006, the generator has enough capacity to completely power Intercity Transit's main base of operation. It was used numerous times in the last few years when storms interrupted the regular power supply.

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