Intercity Transit Annex to the Hazards Mitigation Plan for The Thurston Region

Table of Contents

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Community Profile

Intercity Transit

(360)786-8585

www.intercitytransit.com

Background

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 318 people.

Governance: Nine 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 appointed by the Authority, and one member is a labor representative.

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.

Demographics

Public Transportation Benefit Area (sq mi.)[1]:	97.6
Service Area Population, 2015[2]:	171,850
Limited English Proficiency (Title VI) (2013)[3]:	
English	89.2%
Spanish	4.1%
Asian/Pacific	4.5%
Other	2.2%

Service / Operations

Service Summary
25 Fixed Routes, 203 Commuter Vanpool Groups, and
"door to door" paratransit service for ADA qualified customers with disabilities.

Fleet
71 Fixed Route Buses, 35 paratransit vehicles, 254 Vanpool Vehicles

Local Communities Served	**Local Service**
Lacey/Olympia/Tumwater/Yelm/Parts of Thurston Co.	20
Regional Communities Served	**Express Service**
Lakewood and Tacoma via Express Service	5

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

Annual Boardings [4]	**2015**
Fixed Route	4,283,418
Vanpool	68,865
Dial-A-Lift	161,594
Revenue Service Hours Per Year	
Fixed Route	207,484
Dial-A-Lift	68,865
Vanpool	92,366

Financial

Assets (2015)[3]:	
Valuation of Infrastructure	$60,000,000
Valuation of Contents	$9,200,000
Total	$69,200,000
Budget Summary (2015)[4]	
Revenues by Source	
Fares	$5,012,362
Advertising	$356,718
Interest Income	$514,167
Sales Tax	$33,593,368
Grants	$13,564,040
Miscellaneous	$187,299
january 1 Cash Balance Carryover	$33,194,635
Total Revenue	**$86,422,589**
Expenditures by Function	
Vehicle Operations	$18,184,991
Vehicle Maintenance	$9,333,235
Non-Vehicle Maintenance	$2,258,347
Administration	$9,631,681
Vanpool	$599,549
Capital	$18,833,508
Total Expenditures	**$58,841,311**

Sources:
[1]Thurston Regional Planning Council
[1]Thurston Regional Planning Council
[3] Intercity Transit
[4]Intercity Transit

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Intercity Transit Plan Development Process

Hazard Mitigation Plan Development Team

Intercity Transit's Environmental and Sustainability Coordinator, Jessica Brandt attended the Regional Natural Hazards Workgroup meetings on behalf of Intercity Transit and coordinated agency planning efforts with agency staff and the Transit Authority.

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

Representative	Title
Jessica Brandt	Environmental and Sustainability Coordinator
Mark Sandberg	Fixed Route Manager of Operations
Brent Campbell	Information Systems Manager
Mark Kallas	Facilities Manager
Heather Stafford-Smith	Administrative Services Director
Ann Freeman-Manzanares	General Manager
Jeff Peterson	Procurement Coordinator
Dennis Bloom	Planning Manager
Joy Gerchak	Customer Service Manager

Hazard Mitigation Plan Development

The planning team met regularly during the plan development to review previous plans and update and develop new mitigation priorities. The following activities supported the development of Intercity Transit's local hazard mitigation planning process:

Date	Location	Activity	Subject
January –February 2015 Eight cross-departmental planning meetings held in this time frame.	Intercity Transit	Department Meetings/Work sessions	Reviewed of Hazards Mitigation Plan for Thurston Region and IT Annex with all departments. Mitigation project ideas generated and discussed.
June 29, 2015	Intercity Transit	Internal work session	Prioritized Mitigation Activities
July 10 –July 31, 2017	Social Media and Website	Public invited to comment on draft plan	I.T. Annex to Hazards Mitigation Plan for Thurston Region
July 17, 2017	Intercity Transit	Citizen Advisory Committee Briefing Public Meeting	Brief public and CAC on updated Hazards Mitigation Plan for the Thurston Region and I.T. Annex
July 19, 2017	Intercity	Transit Authority Briefing	Brief public and ITA on updated

	Transit	Public Meeting	Hazards Mitigation Plan for the Thurston Region and I.T. Annex
August 9	Intercity Transit	Transit Authority Adoption	Adoption of I.T. Annex to Hazards Mitigation Plan for Thurston Region.

Opportunities for Public Participation

The first opportunity for public participation was July 1, 2015. A briefing was provided to the intercity Transit Authority about the agency's Emergency Management Program. Discussion of the development of the Hazards Mitigation plan was discussed. The packet items were posted on the Intercity Transit website and the meeting was open to the public.

On July 10, 2017 a press release was issued informing the public of the draft annex for review.

Future Public Participation

Intercity Transit's Citizen Advisory Committee will be briefed on the annex July 17, 2017. The Citizen Advisory Committee is a 20-member advisory group that provides input to the Authority on local public transportation issues such as: Dial-A-Lift policies, service changes, strategic plans, the budget, fare structures, transit amenities and other issues. Members are selected to achieve diversity and geographical representation in the Public Transportation Benefit Area. The group includes senior citizens, youth, people with disabilities, college students, business owners, social service agency representatives, neighborhood associations, the medical community, environmentalists and bicyclists. The packet items will be posted to the website and the public is invited to hear the briefing.

The Intercity Transit Authority will be briefed July 19, 2017. The packet items will be posted to the website and the public is invited to hear the briefing. The public will be allowed to submit comments online about the annex from July 10-31, 2017.

Integration in Plans, Policies, and Planning Mechanisms

The Intercity Transit's Strategic Plan, Transit Development Plan, and Annual Budget are all used to implement mitigation initiatives specified by this annex. After adoption of the Hazards Mitigation Plan, the agency will continue to integrate mitigation priorities into those documents.

Updates

The Executive Department will be responsible for updating the plan as needed. Senior management will continue to participate on the planning team and the project coordinator will provide annual briefings to keep the plan more in the forefront and place the decision makers in a more ready position to update the plan if needed. Intercity Transit plans to work with Thurston County and Thurston Regional Planning Council in four years to meet the required five year update to the plan. Intercity Transit has participated in updates in this manner on a regular basis since the plan was first adopted in the early 2000s.

Mitigation Initiative Prioritization Process

Intercity Transit completed mitigation initiative IT-MH 1, installing a generator in the Operations/Maintenance Facility, which was listed in the 2004 plan. From the 2009 plan, one initiative IT-MH-2 was carried over and modified, and six new initiatives were identified. The new initiatives were prioritized based on STAPLEE criteria.

A range of new mitigation projects was considered and reviewed using the benefit cost review criteria provided by TRPC in Chapter 2 of the core plan. Several of these ideas were selected and crafted into new Mitigation Initiatives for Intercity Transit.

The agency planning team discussed the benefits and costs of each initiative. Members provided input based on their experience with and understanding of past disaster events and the ability of the mitigation initiatives to protect public and private property. The plan development staff weighed the significance of the initiatives using the criteria established for the regional planning process as shown below. The final ranking of the initiatives was sorted through an iterative, consensus-based process.

• Life safety. How effectively will the action protect lives and prevent injuries?

• Property protection. How significant will the action be at eliminating or reducing damage to structures and infrastructure?

• Technical. Is the mitigation action technically feasible? Is it a long-term solution? Eliminate actions that, from a technical standpoint, will not meet the goals.

• Political. Does the public support the mitigation action? Is there the political will to support it?

• Legal. Does the community have the authority to implement the action?

• Environmental. What are the potential environmental impacts of the action? Will it comply with environmental regulations?

• Social. Will the proposed action adversely affect one segment of the population? Will the action disrupt established neighborhoods, break up voting districts, or cause the relocation of lower income people?

• Administrative. Does the community have the personnel and administrative capabilities to implement the action and maintain it, or will outside help be necessary?

• Local champion. Is there a strong advocate for the action or project among local departments and agencies who will support the action's implementation?

• Other community objectives. Does the action advance other community objectives, such as capital improvements, economic development, environmental quality, or open space preservation?

The order of implementation may vary from the identified priority due to changing hazard conditions or the criteria of available city funds and grants. Intercity Transit will pursue funding for projects that stand the greatest chance of competing for limited state and federal mitigation grant programs.

Intercity Transit Risk Assessment

Introduction

This Annex describes how Intercity Transit's risks vary from the entire planning area. Chapters 4.0 through 4.6 of the core plan address the Disaster Mitigation Act risk assessment planning requirements. The Risk Assessment summarizes the hazards and the risks that pose the greatest threat to Thurston County. The Risk Assessment includes hazard profiles that describe the hazards, their causes, sources, severity, effects and impacts, probability of occurrence, historical occurrences, geographic extent or delineation, and the portion of the population, assets, and essential facilities potentially exposed to the hazard. The information is presented for general audiences and includes figures, maps, and tables.

Hazard Analysis Definitions

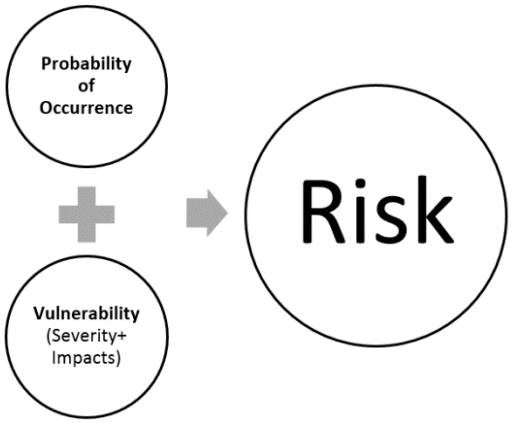
The *Hazards Mitigation Plan for the Thurston Region* uses a subjective risk measurement process based on Thurston County's Hazard Inventory and Vulnerability Assessment or HIVA. This methodology rates elements of each hazard's risk characteristics using the descriptors high, moderate, and low. These descriptors are applied to the hazards' probability of occurrence, vulnerability, and overall risk. The following is an overview of this risk measurement model:

Risk Rating: A description (high, moderate, or low) of the subjective estimate of the combination of any given hazard's probability of occurrence and the region's vulnerability to the hazard.

- High – There is strong potential for a disaster of major proportions.
- Moderate – There is medium potential for a disaster of less than major proportions.
- Low – There is little potential for a disaster.

Probability of Occurrence: A description (high, moderate, or low) of the probability of a hazard impacting Thurston County 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: A description (high, moderate, or low) of the potential impact a hazard could have on Thurston County. Vulnerability can be expressed as combination of the severity of a hazard's effect and its consequential impacts to the community. It considers the population, property, commerce, infrastructure, and services at risk relative to the entire county.

- High – The total population, property, commerce, infrastructure, and services of the county are uniformly exposed to the effects of a hazard

of potentially great magnitude. In a worst case scenario, there could be a disaster of major to catastrophic proportions.

- Moderate – The total population, property, commerce, infrastructure, and services of the county are exposed to the effects of a hazard of moderate influence; or The total population, property, commerce, infrastructure, and services of the county 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 county are exposed to the effects of a hazard. In a worst case scenario, a disaster could be moderate to major, but 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.

Hazard Profiles

The core plan includes detailed profiles of hazards that pose the greatest risk to the Thurston County. Because the core plan treats the entire county as the planning area, the core plan's risk assessment is the definitive risk assessment for Thurston County. Each hazard profile fulfills all the following criteria:

1. There is a high probability of the natural hazard occurring in Thurston County within the next 25 years
2. There is the potential for significant damage to buildings and infrastructure; and/or
3. There is the potential for loss of life.

The following hazards meet one or more of the above criteria. Every hazard profile was evaluated and updated during the plan update process.

Summary Assessment of Intercity Transit's Risks

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

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 Intercity Transit

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 for Intercity Transit's Service Area

Hazard	Probability of Occurrence	Vulnerability	Risk
Earthquake	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 Intercity Transit

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 for Intercity Transit's Service Area

Hazard	Probability of Occurrence	Vulnerability	Risk
Storm	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 Intercity Transit

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 for Intercity Transit's Service Area

Hazard	Probability of Occurrence	Vulnerability	Risk
Flood	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 Intercity Transit

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 for Intercity Transit's Service Area

Hazard	Probability of Occurrence	Vulnerability	Risk
Landslide	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 Intercity Transit

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 the overall risk is low.

Summary Risk Assessment for Wildland Fire for Intercity Transit's Service Area

Hazard	Probability of Occurrence	Vulnerability	Risk
Wildland Fire	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 Intercity Transit

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.

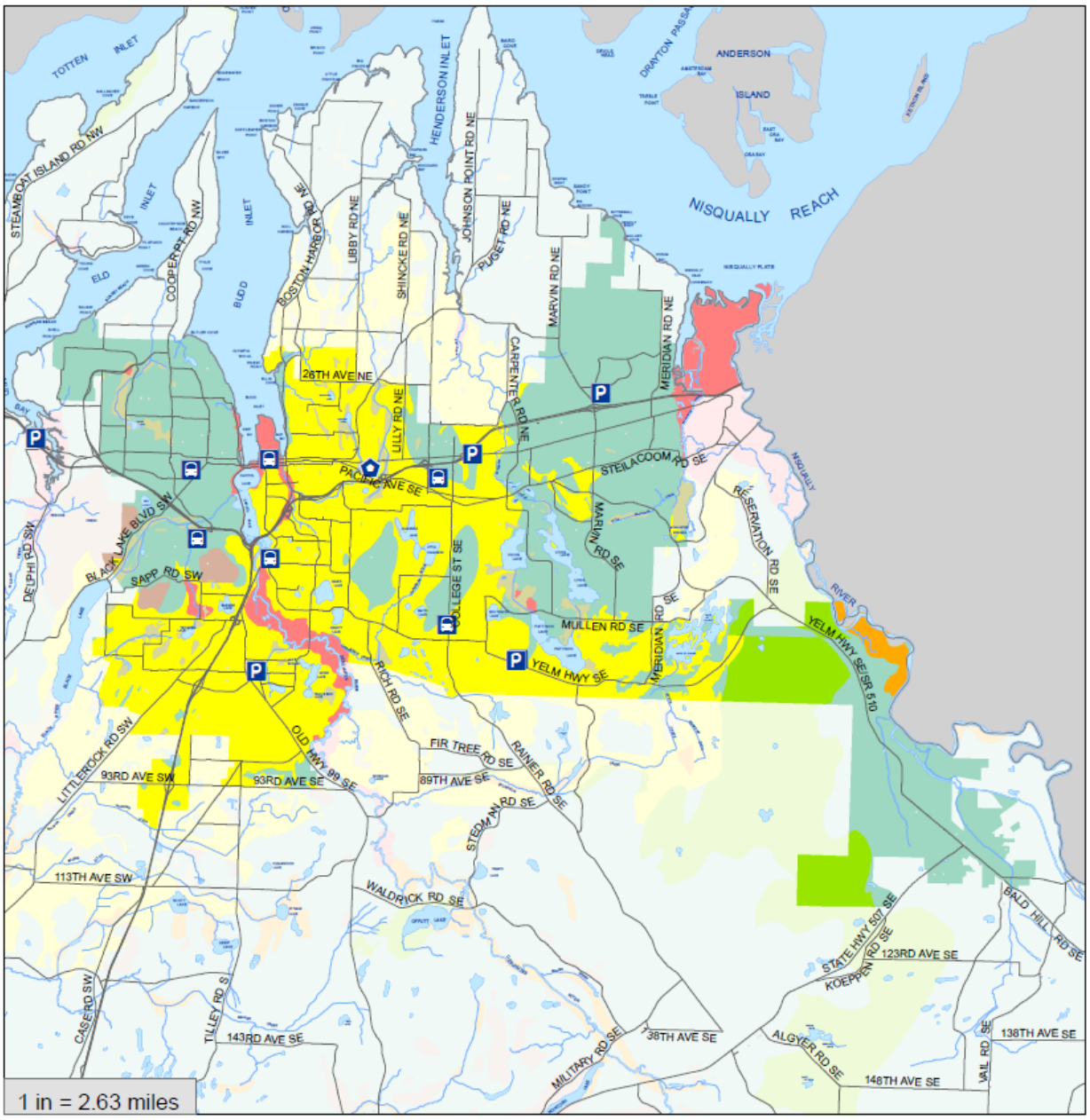
Summary Assessment

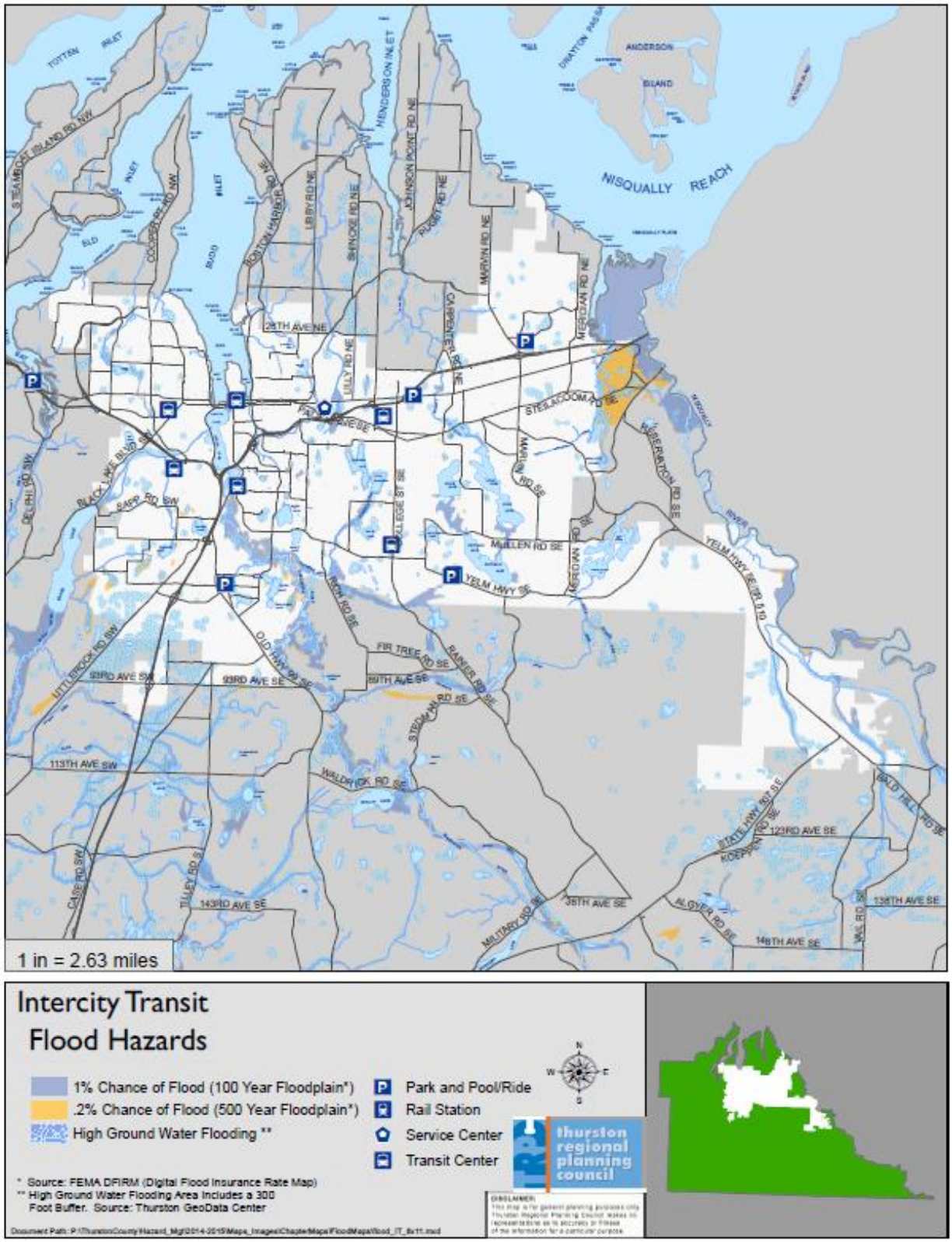
Due to the possible impact on nearby Nisqually River valley roadways and subsequent disruption of service on Intercity Transit routes, vulnerability would be moderate, but paired with a low probability of occurrence, the overall risk would be low.

Summary Risk Assessment for Volcanic Events for Intercity Transit's Service Area

Hazard	Probability of Occurrence	Vulnerability	Risk
Volcanic Event	Low	Moderate	Low

Risk Maps of Intercity Transit Service Area




NISQUALLY REACH
1 in = 2.63 miles
Intercity Transit
Flood Hazards
1% Chance of Flood (100 Year Floodplain*)
.2% Chance of Flood (500 Year Floodplain*)
High Ground Water Flooding **
Park and Pool/Ride
Rail Station
Service Center
Transit Center
* Source: FEMA DFIRM (Digital Flood Insurance Rate Map)
** High Ground Water Flooding Area includes a 300 Foot Buffer. Source: Thurston GeoData Center
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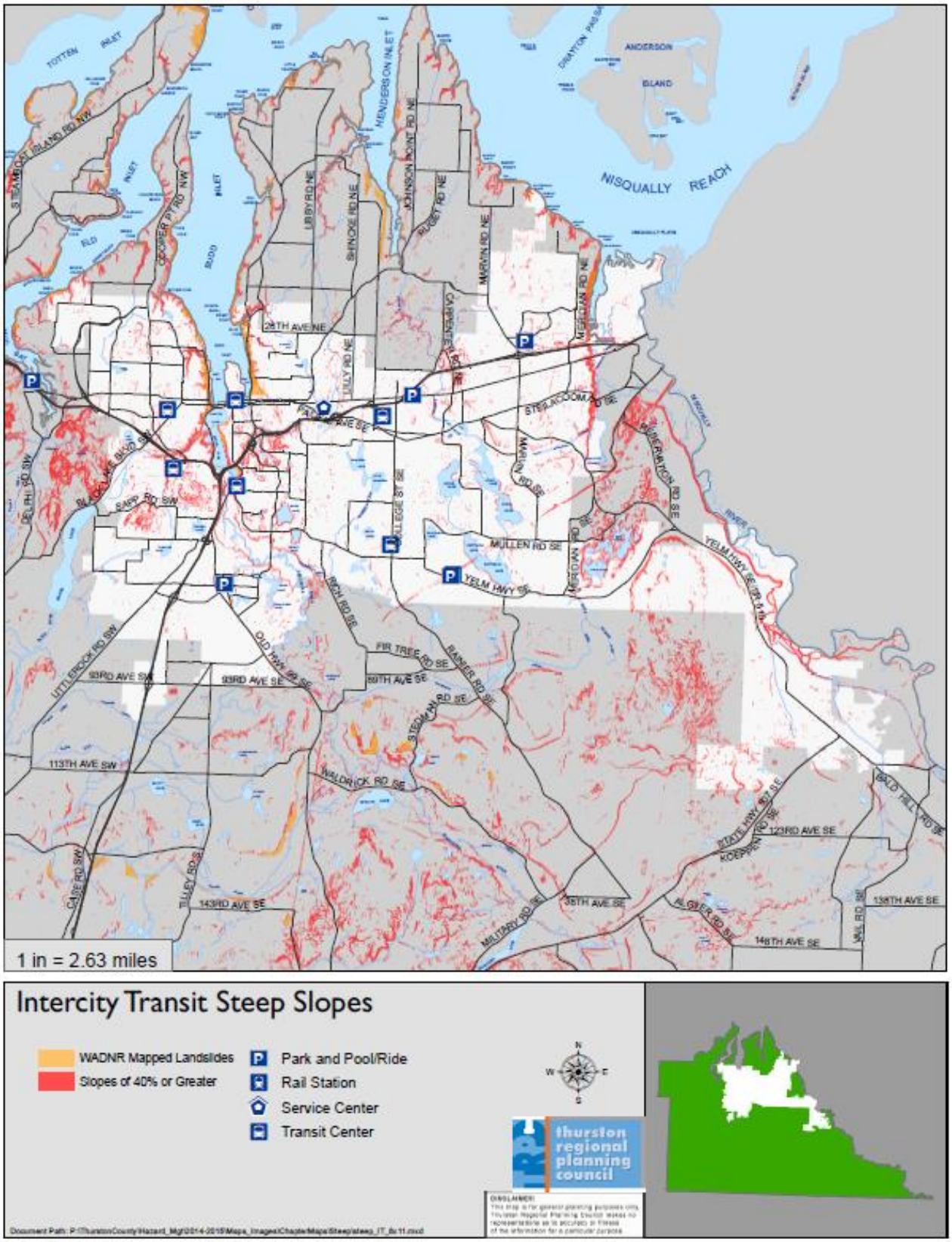
DISCLAIMER:


Intercity Transit Steep Slopes
WADNR Mapped Landslides
Slopes of 40% or Greater
Park and Pool/Ride
Rail Station
Service Center
Transit Center
thurston regional planning council
1 in = 2.63 miles
NISQUALLY REACH
ANDERSON ISLAND
HENDERSON INLET
STEAMBOAT ISLAND RD NW
COOPER PT RD NW
LIBBY RD NE
JOHNSON POINT RD NE
MARVIN RD NE
MERIDIAN RD NE
28TH AVE NE
PACIFIC AVE SE
STEILACOOM RD SE
DELPHI RD SW
SAPP RD SW
COLLEGE ST SE
MULLEN RD SE
YELM HWY SE
MERIDIAN RD SE
RIVERMATION RD SE
YELM HWY SE (SR 510)
UTTLEROCK RD SW
93RD AVE SW
93RD AVE SE
DUPONT-STEILACOOM RD SE
FIR TREE RD SE
RAINIER RD SE
STEDMAN RD SE
113TH AVE SW
WALDRICK RD SE
CASE RD SW
TULLEY RD SE
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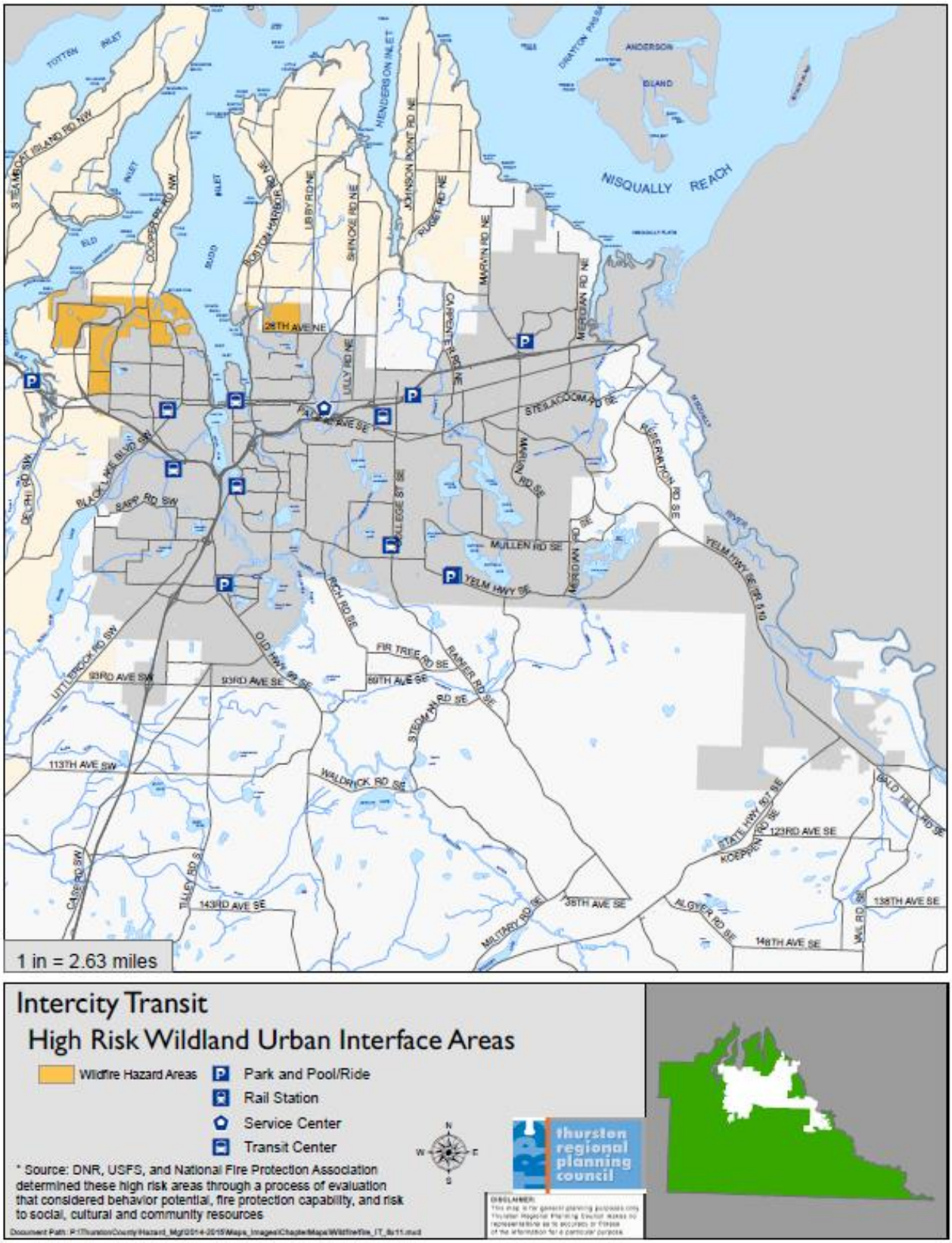
123RD AVE SE
BALD HILL RD SE
138TH AVE SE


NISQUALLY REACH
ANDERSON ISLAND
28TH AVE NE
PACIFIC AVE SE
STEILACOOM RD SE
MULLEN RD SE
YELM HWY SE
93RD AVE SW
93RD AVE SE
99TH AVE SE
113TH AVE SW
WALDRICK RD SE
123RD AVE SE
138TH AVE SE
143RD AVE SE
148TH AVE SE
35TH AVE SE
1 in = 2.63 miles
Intercity Transit
High Risk Wildland Urban Interface Areas
Wildfire Hazard Areas
Park and Pool/Ride
Rail Station
Service Center
Transit Center
* Source: DNR, USFS, and National Fire Protection Association determined these high risk areas through a process of evaluation that considered behavior potential, fire protection capability, and risk to social, cultural and community resources
thurston regional planning council

Mitigation Initiatives – Adopted

The adopted mitigation initiatives are Intercity Transit's specific actions for mitigating losses and protecting life and property. They consist of initiatives that carried over from the previous plan and new initiatives that were identified during the plan update process. All of Intercity Transit's adopted initiatives were reviewed and updated by the development team.

Priority	ID Number	Category	Description	Status
1 of 7	IT-MH 1	Hazard Preparedness	Install 300kW generator at Olympia Transit Center	New
2 of 7	IT-MH 2	Hazard Preparedness	Update Emergency Operations Plan and Develop Continuity of Operations Plan.	Modified
3 of 7	IT-MH 3	Hazard Preparedness	Provide Emergency Preparedness and Response Training to Employees	New
4 of 7	IT-MH 4	Hazard Preparedness	Replace ACS/Orbital Radio System	New
5 of 7	IT- MH 5	Hazard Preparedness	Determine Feasibility and Options for a Mobile Command Center	New
6 of 7	IT-EH-1	Critical Facilities Replacement/Retrofit	Evaluate and Prioritize Structural Seismic Retrofit Options for Operations/Administration/ Maintenance Building	New
7 of 7	IT-EH-2	Critical Facilities Replacement/Retrofit	Evaluate and Install Non-Structural Seismic Retrofits in Operations/Administration/ Maintenance Building	New

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 7 **Status:** New

IT-MH 1: Install a 300kW generator at the Olympia Transit Center

Hazard Addressed: Multi Hazard
Category: Hazard Preparedness

Rationale: The Olympia Transit Center is the main transfer center for our service and the location of Customer Service. 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. The current emergency system has to be supplemented with the use of three portable power generators. A new administration building adjacent to the Transit Center is scheduled for completion in 2020, and the new generator will power that building as well. This installation will include an auto transfer switch to provide uninterrupted power.

Relates to Plan Goal(s) and Objectives: 1A

Implementer: Procurement and Capital Projects Division

Estimated Cost: $100,000

Time Period: 2017-2018

Funding Source: Local funds

Source and Date: Olympia Transit Center Administration Master Plan

Adopted Plan Number:

Reference Page:

Initiative and Implementation Status: Construction for the OTC Administration Building is scheduled for 2017.

Priority: 2 of 7 **Status:** Modified

IT-MH 2: Update Emergency Operations Plan and Develop Continuity of Operations Plan

Hazard Addressed: Multi Hazard
Category: Hazard Preparedness

Rationale: As the County's lead on ESF1, Intercity Transit stuff must have plans in place to ensure preparedness for catastrophic events. Staff will update existing emergency operations plans, and also develop a continuity of operations plan. These plans will provide the framework for an organized agency response to community disasters and maintain transit services to the general public.

Relates to Plan Goal(s) and Objectives: 4E

Implementer: Executive Services Department

Estimated Cost: $50,000

Time Period: 2016-2018

Funding Source: Local funds

Source and Date: 2009 Thurston County Natural Hazards Mitigation Plan: Intercity Transit Annex.

Adopted Plan Number:

Reference Page: Page 26 of Annex

Initiative and Implementation Status: This initiative was carried over from the 2009 plan because plan reviews and updates are an ongoing program at Intercity Transit.

Priority: 3 of 7 **Status:** New

IT-MH 3: Provide Emergency Preparedness and Response Training to Employees

Hazard Addressed: Multi Hazard
Category: Hazard Preparedness

Rationale: Employees providing a community critical service, public transit, must be prepared for all hazard emergencies. Intercity Transit will train employees on the updated Emergency Operations and Continuity Plans. Training will also emphasize personal preparedness. Training will be a combination of seminars and drills.

Relates to Plan Goal(s) and Objectives: 1D

Implementer: Human Resources Department

Estimated Cost: $50,000

Time Period: 2017

Funding Source: Local Funds

Source and Date: Intercity Transit 2016-2021 Strategic Plan

Adopted Plan Number: N/A

Reference Page: page 15

Initiative and Implementation Status: New

Priority: 4 of 7 **Status:** New

IT-MH 4: Replace satellite navigation and wireless communications system

Hazard Addressed: Multi Hazard
Category: Hazard Preparedness

Rationale: Intercity Transit's current analog radio system is 8 years old. The equipment has almost no redundancies, so if the equipment at the main Administration/Operations building stops working, Intercity Transit will have no radio communication with Bus Operators. 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. The current radio's major components are no longer manufactured, and will be out of support in three years from the manufacturer. Some equipment is propriety and no longer available. The relay system has many vulnerabilities that need to be addressed and redundancies that need to be created. A new system will create redundancies because it will not be tied to anyone one building, it will be digital.

Relates to Plan Goal(s) and Objectives: 1A

Implementer: Finance/Administration Department, Information Systems Division

Estimated Cost: $4,000,000

Time Period: 2017-2019

Funding Source: Local Funds

Source and Date: Intercity Transit 2016-2021 Strategic Plan

Adopted Plan Number: N/A

Reference Page: Page 34

Initiative and Implementation Status: New

Priority: 5 of 7 **Status:** New

IT-MH 5: Determine feasibility of a mobile command center

Hazard Addressed: Multi Hazard
Category: Hazard Preparedness

Rationale: Having a Mobile Command Center provides redundancy in the case of building failure where our dispatch center is located. It also provides space, equipment, and flexibility during a large-scale incident. The primary use would be for communications with Bus Operators on the road, On-Scene Coordinators/Road Supervisors, local first responders, and County or State Emergency Managers.

Relates to Plan Goal(s) and Objectives: 1A

Implementer: Executive Department

Estimated Cost: $10,000

Time Period: 2017-2019

Funding Source: unknown

Source and Date: N/A

Adopted Plan Number: N/A

Reference Page: N/A

Initiative and Implementation Status: New

Priority: 6 of 7 **Status:** New

IT-EH 1: Evaluate and Prioritize Structural Seismic Retrofit Options and Costs for Operations/Administration/Maintenance Building.

Hazard Addressed: Earthquake Hazard
Category: Critical Facilities Replacement / Retrofit

Rationale: Intercity Transit completed a cursory structural assessment in 2009. KPFF Consulting Engineers performed seismic evaluations of three structures at Intercity Transit's Pattison Base, located in Olympia, Washington. The evaluations were performed on the Operations/Administration Building, Maintenance Building, and Pedestrian Bridge. The scope of that report included a seismic evaluation and the review of a 1998 Structural Engineering Feasibility Study. Each structure was designed in accordance with 1979 Uniform Building Code (UBC), and is constructed primarily of steel framing. The buildings are one-story tall with partial mezzanines. The Bridge is a steel truss with open sides and a metal roof. During that tier 1 screening, the highest potential risk to life safety was identified. The consultants recommend further evaluation using the more rigorous ASCE 31 Tier 2 procedure to determine whether the potential deficiencies pose life safety hazards. Also, they recommended an evaluation of geologic site hazards be performed by a geotechnical engineer.

Relates to Plan Goal(s) and Objectives: 2A

Implementer: Procurement and Capital Projects Division

Estimated Cost: $150,000

Time Period: 2018-2019

Funding Source: unknown

Source and Date: N/A

Adopted Plan Number: N/A

Reference Page: N/A

Priority: 7 of 7 **Status:** New

IT-EH 2: Evaluate and Prioritize Non-Structural Seismic Retrofit Options and Costs for Operations/Administration/Maintenance Building

Hazard Addressed: Earthquake Hazard
Category: Critical Facilities Replacement / Retrofit

Rationale: The goal of seismic non-structural retrofitting is to reduce the risk of death, serious injury, and property damage during a future earthquake event. This will be accomplished by securing, bracing or isolating architectural elements, mechanical equipment, and building contents. This project coupled with Priority 6 for structural retrofitting will greatly reduce risk of death, injury to occupants and damage to Intercity Transit's primary facility.

Relates to Plan Goal(s) and Objectives 2A

Implementer: Procurement and Capital Projects Division

Estimated Cost: $50,000

Time Period: 2017-2020

Funding Source: unknown

Source and Date: N/A

Adopted Plan Number: N/A

Reference Page: N/A

Initiative and Implementation Status: New

IT-MH 2: Update Emergency Operations Plan and Develop Continuity of Operations Plan
Status: Completed

Hazard Addressed: Multi Hazard
Category: Hazard Preparedness

Initiative and Implementation Status: Plan reviews and updates are an ongoing program at Intercity Transit. This initiative carried over to current plan.