



City of Tukwila

Washington

Resolution No. 1995

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF TUKWILA, WASHINGTON, ADOPTING THE TUKWILA HAZARD MITIGATION PLAN.

WHEREAS, the City of Tukwila and surrounding areas are subject to various hazards, including flooding, earthquakes, landslides, severe windstorms and other natural and technological/man-made hazards; and

WHEREAS, the City of Tukwila is committed to strengthening the City's resilience to the effects of natural and technological/man-made hazards; and

WHEREAS, the Federal Disaster Mitigation Act of 2000, specifically Section 322, addresses local mitigation planning and requires local governments to develop Local Hazard Mitigation Plans as a condition of receiving Hazard Mitigation Grant Program funding, Flood Management Assistance, and Pre-Disaster Mitigation funding from the Federal Emergency Management Agency (FEMA); and

WHEREAS, FEMA has completed a pre-adoption review of the City's Hazard Mitigation Plan and will approve the Plan upon receiving documentation of its adoption by the City;

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF TUKWILA, WASHINGTON, HEREBY RESOLVES AS FOLLOWS:

The City Council approves participation in the hazard mitigation planning process, development of a City-wide Hazard Mitigation Plan and adoption of the proposed Hazard Mitigation Plan subject to FEMA approval, hereby incorporated by reference as "Attachment A."

PASSED BY THE CITY COUNCIL OF THE CITY OF TUKWILA, WASHINGTON, at a Regular Meeting thereof this 20th day of July, 2020.

ATTEST/AUTHENTICATED:

eSigned via SeamlessDocs.com
Christy O'Flaherty
Key: ff0003b0a87c0b42d0d50e14d90e0f1

Christy O'Flaherty, MMC, City Clerk

De'Sean Quinn, Council President

APPROVED AS TO FORM BY:

eSigned via SeamlessDocs.com
Kari L. Sand
Key: c9f0d33729d3e07439e2d29a58d34b

Office of the City Attorney

Filed with the City Clerk: 7-15-20
Passed by the City Council: 7-20-20
Resolution Number: 1995

Attachment A: Tukwila Hazard Mitigation Plan ("City of Tukwila Plan Annex")



City of Tukwila Plan Annex

Introduction

Tukwila lies in the heart of the Puget Sound region, sitting 12 miles to the south of downtown Seattle, 17 miles to the north of downtown Tacoma just east of Seattle-Tacoma International Airport, and at the crossroads of two major interstate highways, I-5 and I-405. The City of Kent is our southern border, with SeaTac to our west and Renton on our east. The Green/Duwamish River runs the full length of the city from north to south. The BNSF Rails dissect the City from north to south. Tukwila is home to the state’s largest shopping mall, Westfield/Southcenter Mall. Tukwila is a local leader in retail and commercial sales, warehousing and distribution of goods and manufacturing. The current population of the City is 20,930. There is a large development on recently annexed land in the south end of the City that could increase the population substantially with the next 5 years.

Governing Body Format- The City of Tukwila has a Mayor-Council form of Government. Tukwila’s Mayor is the chief executive officer of the City, and the Council is the legislative branch and governing body. The City’s management consists of eight department heads, 347 full time employees with 100 part-time employees. The current operating budget of the City is \$65.9 million.

City of Tukwila Profile



Incorporated: 1908
Population: 20,294 (2018 est.)
Location: 47°28'42"N and 122°16'32"W
Located in King County
Area: 9.60 sq miles
Mayor: Allan Ekberg
Website: www.tukwilawa.gov

Jurisdiction Point of Contact:

Name: Jay Wittwer
Title: Emergency Manager Director
Entity: Tukwila Fire Department
Phone: 206-971-8710
Email: Jay.Wittwer@TukwilaWA.gov

Plan Prepared By:

Name: Jason Konieczka
Title: Emergency Manager
Entity: Tukwila Fire Department
Phone: 206-971-8740
Email:
Jason.Konieczka@TukwilaWA.gov

Development Trends

Since 1990, the City of Tukwila’s annual average population growth (with annexations removed) was about 0.9%. Per the City’s Strategic Plan, development and growth assumptions yield an estimated average annual growth rate of about 1.1% for the 20-year period from 2012-2031. In 2010, Tukwila businesses had nearly 43,130 employees. Estimated employment growth over the next 20 years is also estimated to average about 1.0% per year.

Tukwila’s current nighttime population is 20,930. It is projected to grow to 25,635 by 2030. The City’s estimates place Tukwila’s daytime population between 150,000 and 170,000, including approximately 16 million shoppers a year to the Westfield Southcenter Mall alone. This population is 7 to 8 times the size of the City’s residential population.

For the purposes of hazards mitigation there are five key city sub-areas: Tukwila’s Southcenter area, Manufacturing/Industrial Center, Tukwila



International Boulevard corridor, Tukwila South and the remaining residential/commercial areas.

Tukwila’s Southcenter area is intended to develop as a high-density, regionally oriented, mixed use center. It serves major employment, shopping and entertainment destination, with an expanding residential population in an increasingly urban and walkable format. It is anticipated that residential growth in this area will increase to 2,700 units by 2031. There is a total of 672 dwelling units constructed, under construction, or in the permitting stage in this area. Approximately 80% of the units under construction will be occupied by people with disabilities and/or seniors. In 2031, a total of 2,700 housing units are forecasted to be in this area. The trend is to grow vertically with a 19-story combination residential and commercial recently completed; and several other five to six story residential buildings under construction.

The Tukwila South Project will encompass about 400 acres of land along the Green River at the south end of the City. The project is likely to add about 10 million square feet of occupied space, including a mix of office space, residential, retail, and hotel. The development timeline for Tukwila South is currently uncertain due to many factors, including length of time to complete infrastructure improvements and other market factors.

Tukwila’s Manufacturing/Industrial Center comprises an area of 998 acres along the Duwamish River, bounded generally by the City of Seattle on the north, South 125th Street on the south, the Burlington Northern railway right-of way on the east, and the Duwamish River on the west. The employment exceeds 18,000 in this area, and more than three-quarters of this is in manufacturing. More recently three large warehouses are at the permitting stage, which could add significant employment and warehouse space in this corridor.

Tukwila International Corridor is also transitioning to a more urban area with mid-rise multi-story development (Tukwila Village). With the location of Light Rail Station and more recent capital investments by the City along this corridor additional development is anticipated in this area. More intensive development could occur south of the light rail station.

There is not going to be significant single-family development due to limited land and regulations. In a good economic year, the city issues 20 new single-family dwelling permits. There were however two very large residential projects recently completed near the Mall, with about 400 units of both an apartment building and senior housing.

The development of Tukwila South will decrease the risk of hazards, particularly from floods. The developer was able to regrade and excavate the entire hillside to the southwest of the central business district and in doing so was able to relocate all of the dirt to raise the 400 acres for a future development up a significant level. Also, Tukwila Village is located outside of the flood zone or liquefaction zones.

City of Tukwila Risk Summary

Hazard Risk and Vulnerability Summary

HAZARD	HAZARD SUMMARY	VULNERABILITY SUMMARY	IMPACT SUMMARY
Avalanche	Tukwila does not fall within any avalanche zones.	N/A	N/A
Earthquake	Earthquakes are probably the biggest threat to the City of Tukwila. We are located in a region that is susceptible to all three types of earthquakes: crustal, intraplate or	Many of the buildings in Tukwila are not up to the current earthquake standards. The valley floor has many concrete tilt-ups, many of them constructed prior to the stricter codes that were introduced in the 1997 Uniform Building Code. Also, some of	A large earthquake in our City would be devastating. Many of the City’s critical infrastructures would be damaged, so it would be difficult to provide essential



	deep, and subduction zone quakes. The larger more devastating quakes occur every 750 years and we are overdue by 450 years.	the bridges in Tukwila are in need of retrofit to meet the current standard.	services or assist with the response effort. If an event occurred within the region, we would not be receiving mutual aid from our neighbors, as they would be dealing with their own responses.
Flood	The City is bisected by the Green and Duwamish River which runs the entire City from the north and south boundaries.	There are 28 residential and 21 commercial properties including a professional rugby and soccer complex and a golf course that may be affected based on King County's 100-year flood map (see figures 1 and 2).	With the potential of flooding, there is a plan to reinforce the levees throughout the City to lessen the impact.
Landslide	Landslides typically occur where the earth is unstable, and the slope is excessive. There is usually an event that triggers the landslide such as excessive rains or an earthquake.	There is one area prone to landslides in the City of Tukwila located near a major arterial road. The area has seen slides in the past and there has been attempts to stabilize the hillside. The location is just above Interurban Ave South at approximately the 15200 block. Canyon Estates Condominiums sit above the potential slide area. Jersey barriers are located at the bottom to contain debris if a slide occurred.	A landslide in this area could, under extreme conditions, cause life safety issues but will most likely only cause traffic issues as well property damage to residences above the slide area.
Severe Weather	We have seen some strong windstorms blow through our area within the last few years.	As a result of the windstorms, we see many trees down which can result in power outages throughout the region. This can have a negative effect on both communication and electricity, which will impact people's ability to heat their homes.	With widespread power outages, people will not be able to call for emergency services or be able to heat their homes. There may also be access issues for emergency vehicles with downed trees.
Severe Winter Weather	We have had some significant snow events in the last few years in our typically mild region.	With the challenging topographical profiles, our area is affected much more than a place that sees more snowfall. We also have many of our staff that live far from the City which makes it a challenge to report to work.	A large snow event like the one in 2019 can make it difficult to travel throughout the region, making it difficult for people to get their basic needs met.
Tsunami	With a potential tsunami generated in the Puget Sound, the City may experience a similar flood risk, depending on	The same low-lying properties identified in the flood plan would be vulnerable to a tsunami generated flood.	The threat may not be as expected and catch people off guard.



	the tide, from the Duwamish and Green River than a weather-generated flood.		
Volcano	Tukwila is positioned close enough to Mount Rainer to feel the impact of a major eruption. We are also close enough to a few other volcanos to feel the impact, especially if ash was dispersed in our direction.	The entire region could be affected by ash if the weather was right.	A large amount of ash can pose a health risk to both humans and livestock. It will also influence agriculture, transportation and the entire infrastructure.
Wildfire	Tukwila is bordered by only urban areas. There are a few green belts located in and around the City, but nothing large enough to sustain a wildfire.	N/A	N/A
Civil Disturbance	We have seen a trend of civil disturbances in our region that date back to the WTO protests, which fell on Mayday of 1999. We have also seen disturbances attached to large events such as concerts or even gatherings at the Mall.	There is a risk to anybody involved with the disturbance, responding public safety personnel, and bystanders. There can also be damage to property or the environment.	We have seen some disturbances in Tukwila as we are located in the middle of an urban sprawl and therefore can be a gathering place for events that attract disturbances.
Cyber Attack	There are more and more attacks on government agencies network systems to hold that agency for ransom.	A successful attack on the City's network system could potentially shut down the City's ability to function. This would have a crippling effect on services provided by the City including police and fire responses.	I am not aware of any attacks on the City at the time of this report.
Dam Failure	The green river, which runs through Tukwila and into the Duwamish, is downstream of the Howard Hansen Dam, which in 2008 was at risk of failure.	The same residents and businesses that would be affected by a tsunami or a weather-related flood would also be impacted by the dam failure.	The Army Core of Engineers re-engineered and fortified the Howard Hansen Dam and the adjacent abutment back in 2009.
Hazardous Materials Incident	Burlington Northern runs right through our City and currently all the Bakken Oil train cars traveling to the refineries run on it. We are also at the	We would see a large impact if there were a derailment of Bakken Oil cars since they are highly volatile. We could also see just about any type of hazardous material traveling over-the-road with Tukwila	We rely on hazmat technicians that respond in the region. We are part of the Zone 3 response which dispatches the necessary technicians



	intersection of two major freeways which carry a large amount of hazardous materials over-the-road.	being located in the middle of two major ports.	and equipment needed to handle all types of hazmat calls.
Public Health Emergency	Although we do not have any hospitals located in Tukwila, we are surrounded by several as well as a major international airport. Any one of these facilities may become ground zero for some type of disease outbreaks.	We have seen some potential threats over the years including Ebola which didn't bring any cases to King County. There was a recent measles outbreak that brought some cases here.	If we were to have any type of disease outbreak, resources could be quickly overwhelmed and there may be a public panic that would tax our resources even further.
Structure Fire	Structure fires can be devastating to the environment, destroy property and even threaten lives. The standards of fire protection have gone up over the years making structure fires less likely to occur.	We have our share of older structures that were constructed prior to modern fire protection such as sprinklers or fire alarms.	We could see a structure fire that could be very damaging to the City's revenue stream, such as a fire at the major shopping mall. If the fire was to be in significant size, it would impact a lot of jobs and commerce.
Terrorism	Ever since 9/11, there has been a potential terrorist threat.	Tukwila is in the middle of the greater urban Seattle/Tacoma area with the major airport that serves the area located just outside of the City. This makes the City as a potential threat.	We saw a large surge of equipment just to mitigate terrorist threats provided to our hazmat teams to help with the response to potential terrorist threats following 9/11.

Hazard and Asset Overview Map

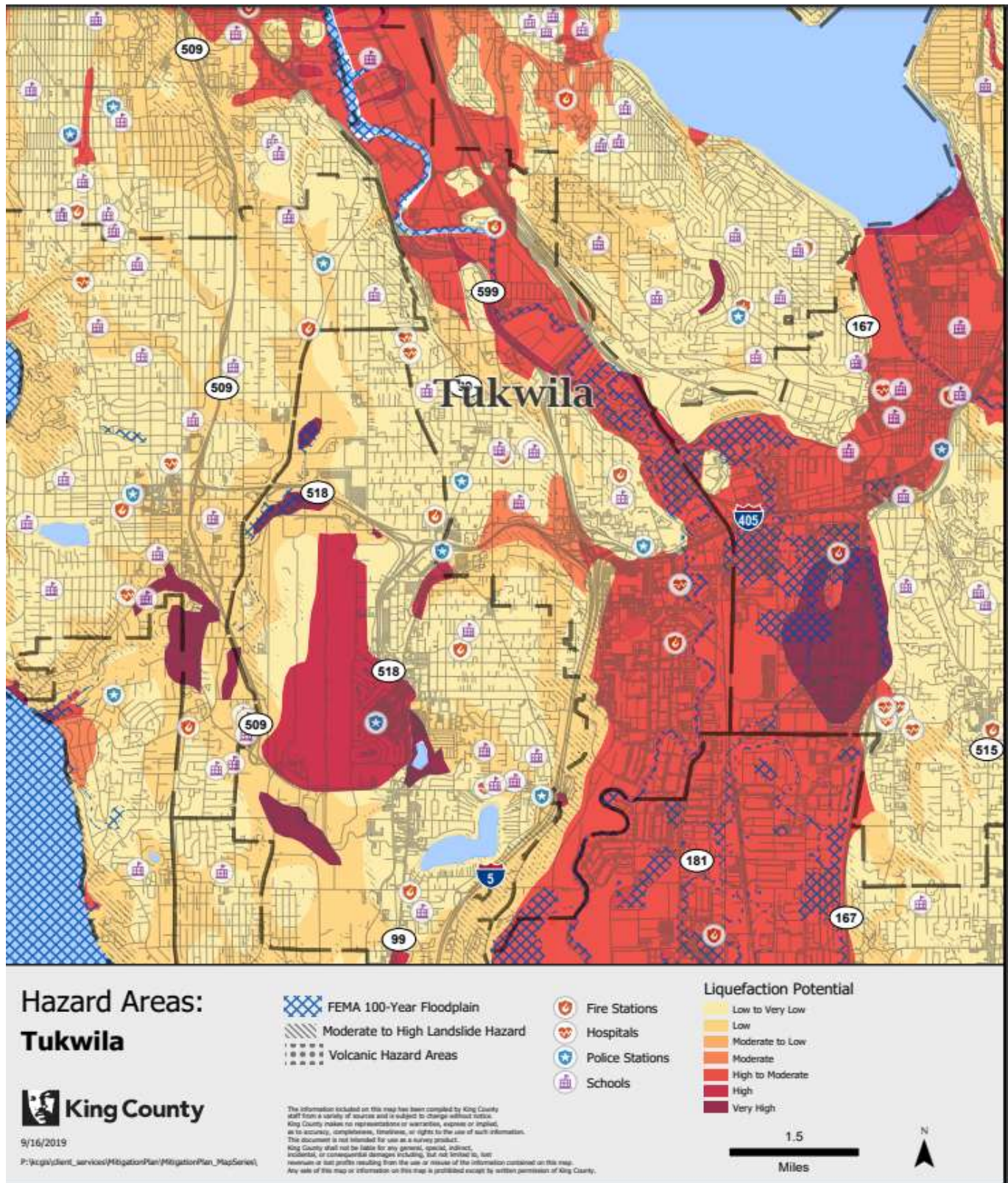


Figure 1: The map produced by King County which adds liquefaction zones which show much of the Central Business District (CBT) in Tukwila is in a high potential zone.

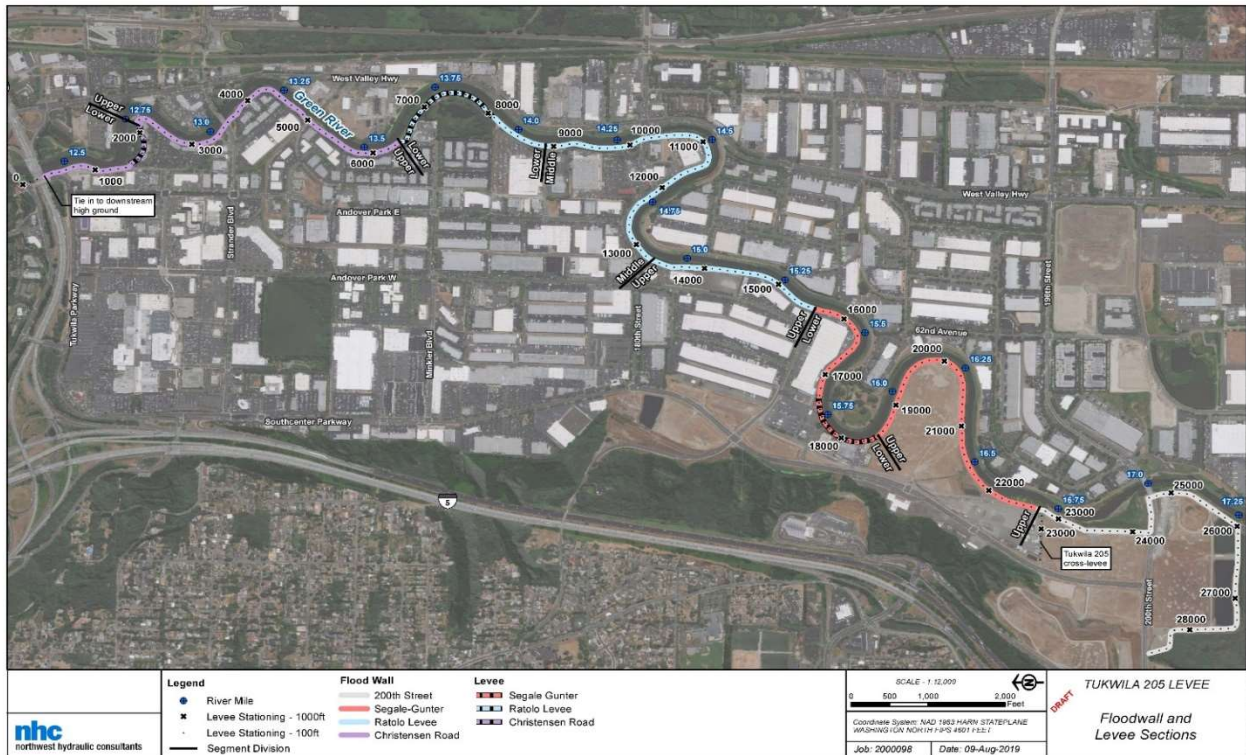


Figure 2: This map shows the planned levee work that was proposed by the City along the Green River. Refer to the flood annex on page 16.

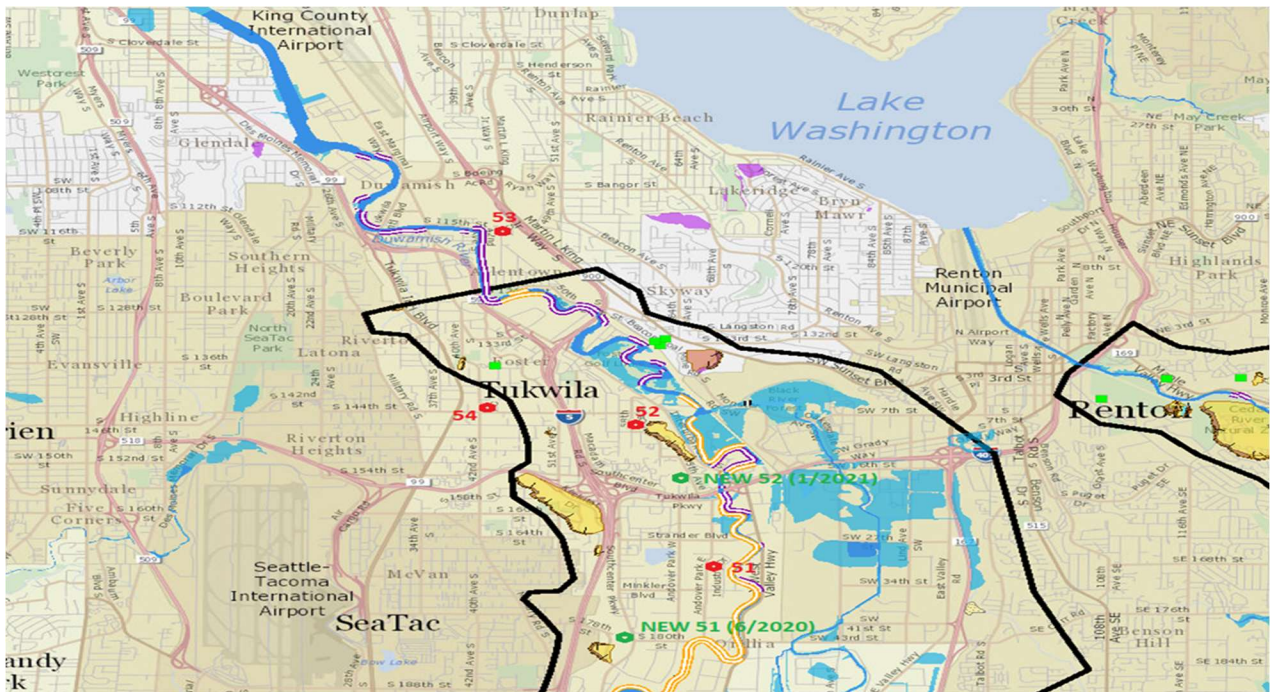


Figure 3: The 100-year flood is depicted here based on the FEMA model. There are also potential landslide and steep slope hazard areas shown with one area just west of the I-5/ 405 interchange not updated since mitigation work was performed. The map also shows the current location of the 4 fire stations in Tukwila and the two new locations that are underway with the completion dates shown.

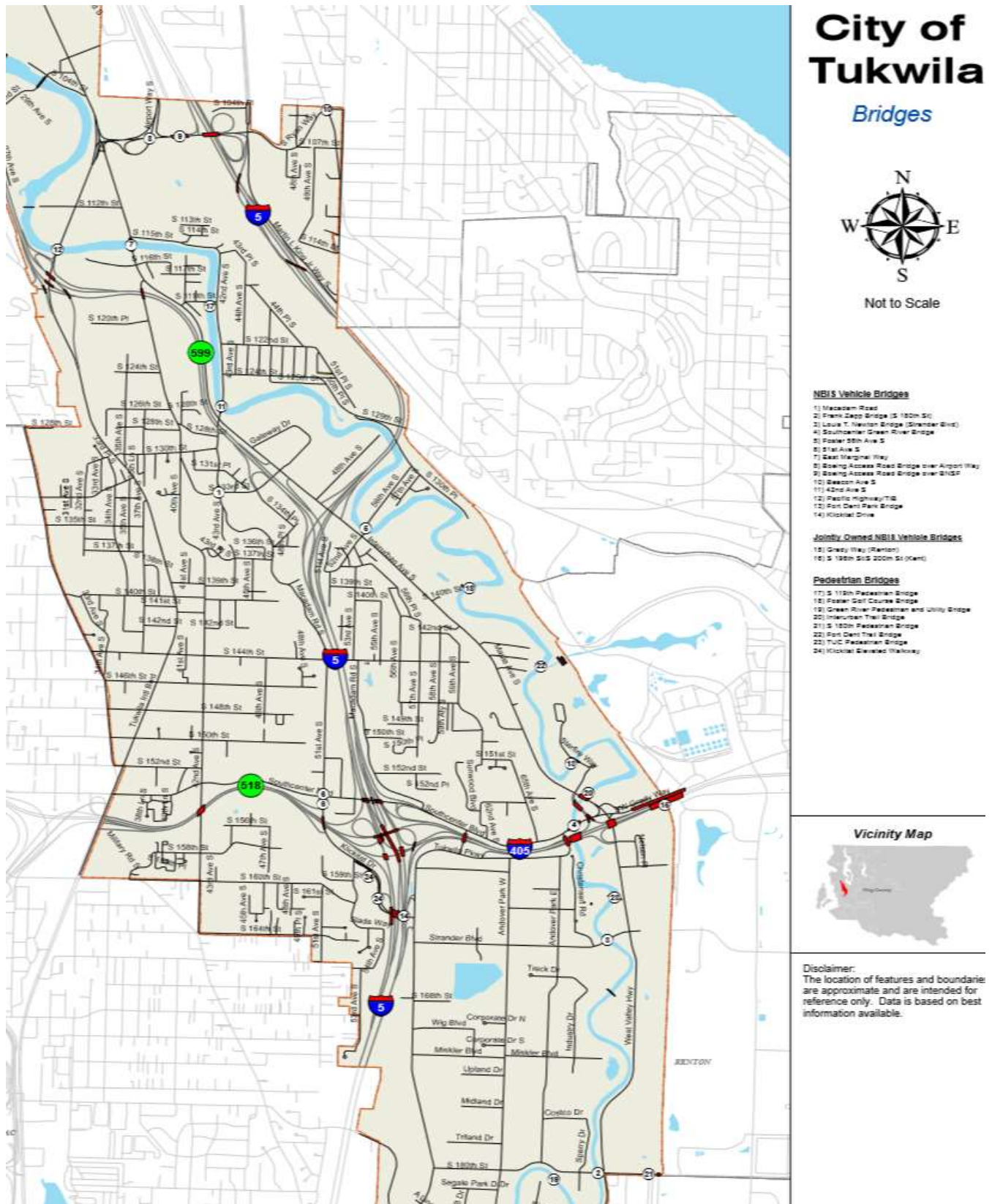
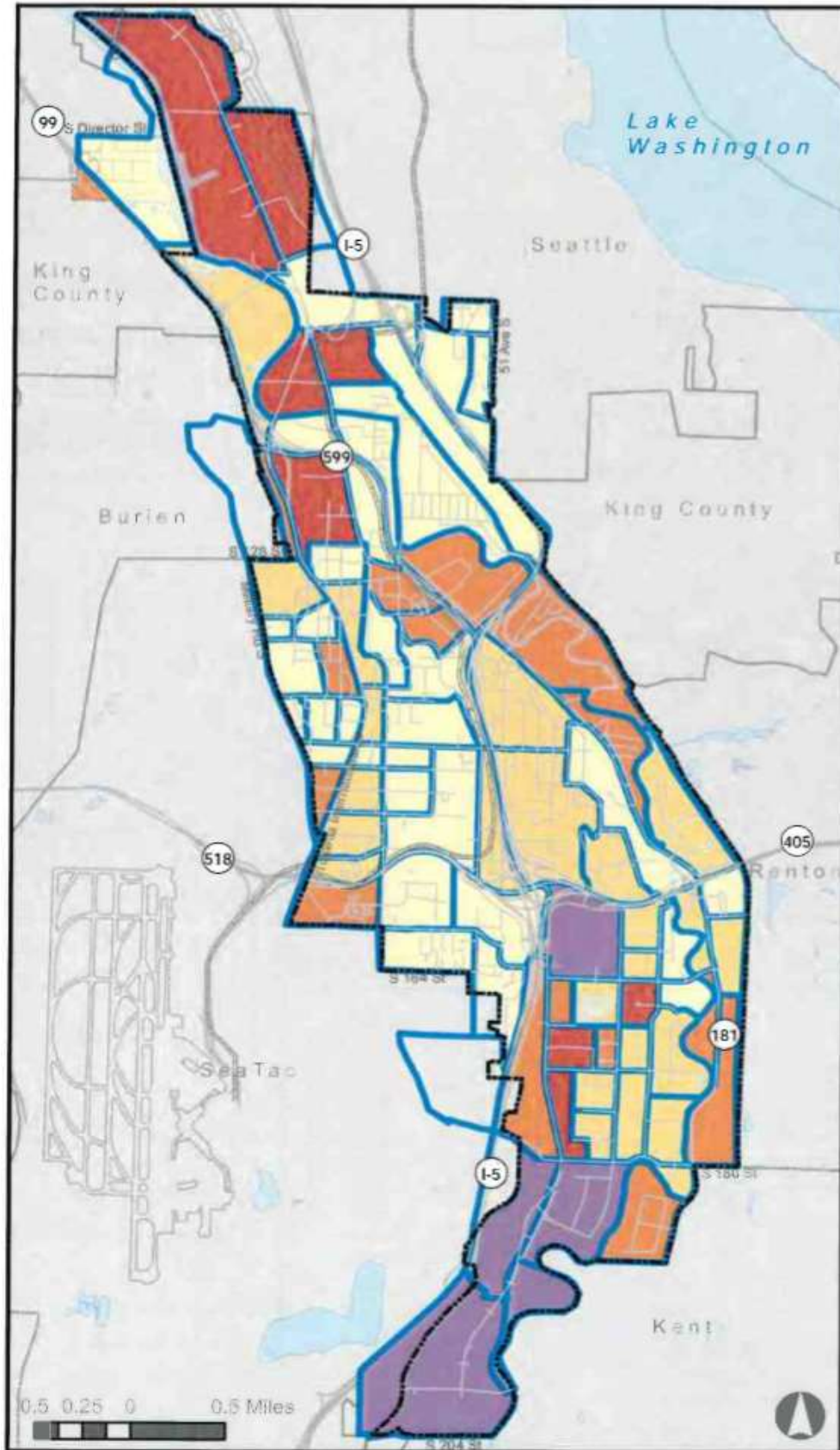


Figure 4: this map shows vehicle and pedestrian bridges located in the City of Tukwila.




**Projected
Employment
Growth by
Traffic Analysis
Zone
2010-2030**



Figure 5: The projected employment growth in the City of Tukwila



Tukwila Planning Team

NAME	TITLE	ORGANIZATION	CONTRIBUTION
Jason Konieczka	Emergency Manager	Fire Department	Update Plan
Jay Wittwer	Emergency Management Director	Fire Department	Oversees Plan
Hari Ponnekanti	Deputy PW Director/City Engineer	Public Works	Provided key information on mitigation plans.
Minnie Dhaliwal	Planning Supervisor	Department of Community Development	Contributed developmental trends of the City.
Tanya Taylor	Admin Support Tech	Public Works	Provided study on the City's facilities current conditions.
Gail Labanara	Public Works Analyst	Public Works	Provides information on current and future projects relating to mitigation projects.

Plan Update Timeline

PLANNING ACTIVITY	DATE	SUMMARY	ATTENDEES
Meeting with Derrick Hiebert	4/22/2019	Went over expectations of the updated plan	Jason Konieczka Derrick Hiebert
Meeting with Seatac EM and Derrick Hiebert	7/3/2019	Covered specific questions regarding the plan.	Will Lugo Jason Konieczka Derrick Hiebert
HMP Workshop	7/25/2019	This workshop covered lots of aspects of the plan and gave some good insight on making the plan successful.	Put on by Derrick Hiebert, numerous attendees.
Meeting with EM, PW and DCD	9/13/2019	Go over the City's current projects and the plans to mitigate them.	Jason Konieczka, Hari Ponnekanti and Minnie Dhaliwal

Public Outreach Events

EVENT	DATE	SUMMARY	ATTENDEES
Public Outreach #1	August 7, 2019	This event was advertised on our Facebook Page, Instagram and our Cities Website. We had posters explaining mitigation needs in our area and a chance for the public to write down any concerns.	Our booth was set up at a "See You in the Park" City function at the Community Center, so there were plenty of attendees expressing varying levels of interest.
Public Outreach #2	August 27, 2019	This was a joint event with the City of Kent, Seatac, Maple Valley, Covington and Tukwila. The event was advertised	There were about 10 citizens in attendance in addition to the representatives from all



		through social media including the City's website.	the cities as well as Derrick Hiebert from King County.
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Tukwila Hazard Mitigation Program

Hazard mitigation strategies were developed through a two-step process. Each jurisdiction met with an internal planning team to identify a comprehensive range of mitigation strategies. These strategies were then prioritized using a process established at the county level and documented in the base plan.

Hazard mitigation strategies in Tukwila include working with Public Works and the Department of Community Development to identify current and future projects and develop mitigation strategies accordingly.

The mitigation plan is referenced in the City’s Comprehensive Emergency Management Plan (CEMP) which is updated annually. The mitigation plan has not been integrated in the past.

Plan Monitoring, Implementation, and Future Updates

King County leads the mitigation plan monitoring and update process and schedules the annual plan check-ins and bi-annual mitigation strategy updates. Updates on mitigation projects are solicited by the county for inclusion in the countywide annual report. As part of participating in the 2020 update to the Regional Hazard Mitigation Plan, every jurisdiction agrees to convene their internal planning team at least annually to review their progress on hazard mitigation strategies and to update the plan based on new data or recent disasters.

As part of leading a countywide planning effort, King County Emergency Management will send to planning partner any federal notices of funding opportunity for the Hazard Mitigation Assistance Grant Program. Proposals from partners will be assessed according the prioritization process identified in this plan and the county will, where possible, support those partners submitting grant proposals. This will be a key strategy to implement the plan.

The next plan update is expected to be due in April 2025. All jurisdictions will submit letters of intent by 2023, at least two years prior to plan expiration. The county will lead the next regional planning effort, beginning at least 18 months before the expiration of the 2020 plan.

Continued Public Participation

King County and its partner cities already maintains substantial public outreach capabilities, focusing on personal preparedness and education. Information on ongoing progress in implementing the hazard mitigation plan will be integrated into public outreach efforts. This will provide King County residents, already engaged in personal preparedness efforts, with context and the opportunity to provide feedback on the county’s progress and priorities in large-scale mitigation. In the vertical integration of risk-

Plan Goals

1. Access to Affordable, Healthy Food
2. Access to Health and Human Services
3. Access to Parks and Natural Resources
4. Access to Safe and Efficient Transportation
5. Affordable, Safe, Quality Housing
6. Community and Public Safety
7. Early Childhood Development
8. Economic Development
9. Equitable Law and Justice System
10. Equity in Government Practices
11. Family Wage Jobs and Job Training
12. Healthy Built and Natural Environments
13. Quality Education
14. Strong, Vibrant Neighborhood



reduction activities from personal to local to state and federal, it is important that the public understand how its activities support, and are supported by, larger-scale efforts.

The outreach and mitigation teams will also continue to work with media and other agency partners to publicize mitigation success stories and help explain how vulnerabilities are being fixed. When possible, public tours of mitigation projects will be organized to allow community members to see successful mitigation in action.

Hazard Mitigation Authorities, Responsibilities, and Capabilities

Plans

PLAN TITLE	RESPONSIBLE AGENCY	POINT OF CONTACT	RELATIONSHIP TO HAZARD MITIGATION PLAN
Comprehensive Plan	City of Tukwila, Department of Community Development	Jack Pace, DCD Director	The elements of the plan address every aspect of the community – social, economic, and environmental. Each element consists of goals, policies, and implementation policies.
Comprehensive Emergency Management Plan (CEMP)	City of Tukwila, Emergency Management	Jay Wittwer, Emergency Manager Director	The document that describes the process for preparedness, response, recovery, and mitigation activities for the City. The Hazard Mitigation Plan provides the risk profiles in the CEMP.
Capital Improvement Plan	City of Tukwila, Public Works	Henry Hash, Public Works Director	Identifies and prioritizes large-scale projects.
Public Safety Plan	Administrative Services Department	Rachel Bianchi, Administrative Services Director	The plan that identifies the City’s facilities directly tied to Public Safety such as the Regional Justice Center, Fire Stations and City Shops.

Programs, Policies, and Processes

PROGRAM/POLICY	RESPONSIBLE AGENCY	POINT OF CONTACT	RELATIONSHIP TO HAZARD MITIGATION PLAN
Building Codes	City of Tukwila, Department of Community Development – Planning Division	Jerry Hight, Building Official	The International Building Codes determine the required design and construction standards for construction, for both



			buildings and nonbuilding structures.
Critical Areas Ordinance	City of Tukwila, Department of Community Development	Jack Pace, Department of Community Director	Provides regulations for wetlands, watercourses and steep slopes.

Entities Responsible for Hazard Mitigation

AGENCY/ORGANIZATION	POINT OF CONTACT	RESPONSIBILITY(S)
Public Works	Henry Hash	Public Works Director
Community Development	Jack Pace	Department of Community Development Director
Office of the Mayor	David Cline	City Administrator

National Flood Insurance Program

National Flood Insurance Program Compliance

What department is responsible for floodplain management in your community?	Public Works
Who is your community’s floodplain administrator? (title/position)	Ryan Larson Senior Program Manager – Surface Water
What is the date of adoption of your flood damage prevention ordinance?	2004
When was the most recent Community Assistance Visit or Community Assistance Contact?	April 2019
Does your community have any outstanding NFIP compliance violations that need to be addressed? If so, please state what they are?	No
Do your flood hazard maps adequately address the flood risk within your community? If so, please state why.	No known flooding outside of identified Special Flood Hazards
Does your floodplain management staff need any assistance or training to support its floodplain management program? If so, what type of training/assistance is needed?	1-day course in floodplain management should be offered to floodplain managers and development staff.
Does your community participate in the Community Rating System (CRS)? If so, what is your CRS Classification and are you seeing to improve your rating? If not, is your community interested in joining CRS?	No
How many Severe Repetitive Loss (SRL) and Repetitive Loss (RL) properties are located in your jurisdiction?	SRL: none RL: none



Has your community ever conducted an elevation or buy out of a flood-prone property? If so, what fund source did you use? If not, are you interested in pursuing buyouts of flood prone properties?	No No
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Hazard Mitigation Strategies

2015 Hazard Mitigation Strategy Status

STRATEGY	DESCRIPTION	PRIORITY	STATUS
Improve capabilities to respond to emergencies.	Construct a new Emergency Operations Center	High	Under Construction, to be completed in 2021
Improve capabilities for response.	Construct a new maintenance and operations center to support critical functions including fleet services, facilities maintenance, water, sewer, surface water, streets and traffic control.	High	Acquired properties, in the process of designing and upgrading to meet the City's needs.
Improve critical streets and infrastructure	Update the existing Boeing Access Road bridges. There are 3 in all, one over I-5, one over BNSF tracks, and the other over Airport Way	High	One of the three bridges over BNSF tracks has been retrofitted with seismic upgrades.

2020 Hazard Mitigation Strategies

STRATEGY	LEAD AGENCY/POC	TIMELINE	PRIORITY
Bridge Maintenance	PW/ Hari Ponnekanti	2-5 years	Varies
Levee Improvements	PW/ Hari Ponnekanti	10 years	Varies
Earthquake (Seismic Study)	EM/Jason Konieczka	2 years	High



Bridge Maintenance

<p>Lead Points of Contact: Hari Ponnekanti</p>	<p>Partner Points of Contact: Public Works Department</p>	<p>Hazards Mitigated / Goals Addressed: Make necessary improvements to all bridges in Tukwila</p>	<p>Funding Sources and Estimated Costs: WSDOT and Bridge Replacement Advisory Committee (cost unknow at this time)</p>
<p>Strategy Vision/Objective Ensure all 23 bridges in the City have a high enough sufficiency rating. There are 16 traffic bearing and 7 pedestrian bridges in the City of Tukwila of which two are jointly owned with neighboring jurisdictions.</p>			
<p>Mitigation Strategy By utilizing the City Bridge Report, we can identify which bridges are in the most need of maintenance. Since the report is conducted every two years, it will continue to identify and prioritize which bridges require the most attention.</p>			
<p>2-Year Objectives: Boeing Access Road Bridge over Airport Way</p>	<p>5-Year Objectives: Boeing Access Road Bridge over Interstate 5</p>	<p>Long-Term Objectives: <i>(see below)</i></p>	
<p>Implementation Plan/Actions</p> <p>Using the City Bridge Inspection Report, identify and prioritize the bridges that require the most immediate work and compose a plan to complete the needed work. Based on the report, there are two bridges that fall under Group I, recommended for major maintenance:</p> <p>Boeing Access Road over Airport Way, Substructure Seismic Rehabilitation <i>Status-</i> <i>This structure is currently funded by the BRAC program. The project is anticipated to be designed in Winter 2019 and constructed in 2020</i></p> <p>Allentown Bridge Replacement (42nd Ave). Deteriorating Structural Condition of the steel superstructure <i>Status -</i> <i>Application is currently under review by the Washington State Department of Transportation Local Programs and the Bridge replacement Advisory Committee (BRAC) program. Application results will likely be announced in September/October 2019.</i></p>			



Performance Measures
The bridges in the City will meet the standard.

Flooding

Lead Points of Contact: Hari Ponnekanti	Partner Points of Contact Public Works Department	Hazards Mitigated / Goals Addressed: Make necessary improvements on levees throughout the City	Funding Sources and Estimated Costs:
Strategy Vision/Objective Update and improve through new floodwalls and setback or raising of the existing earthen levees to protect the City of Tukwila from flooding.			
Mitigation Strategy: By prioritizing Tukwila 205 Levee improvements in an upstream to downstream direction, the percent of land protected steadily increases over time. If construction were to instead progress downstream to upstream, levee failure could occur upstream of newly raised levees, and therefore flood the land area behind the improved levee section. For alternative analysis, design, and construction prioritization, the Tukwila 205 Levee has been divided into three main segments that correspond with the three Tukwila capital improvement projects identified in the Green River SWIF, then with further subdivision of each of these segments into two or three smaller subsegments. Prioritization is also informed by prior analyses of the existing Tukwila 205 Levee system that evaluated Green River water surface elevations and levee overtopping risk, scour, and geotechnical levee stability.			
2-Year Objectives: Upgrade the Segale-Gunter and Gaco-Western upper and lower levees	5-Year Objectives: Upgrade the Ratolo upper, middle and lower levees and Christensen Road levee	Long-Term Objectives: Upgrade the 200 th Street levee, monitor and re-asses all levees.	



Implementation Plan/Actions:

The City of Tukwila sent a letter to the King County Flood Control District (FCD) on May 1, 2019 and requested that FCD include budgets to reconstruct the Tukwila 205 levees within the next ten (10) years based on NHC report findings that the majority of the levee system in its current condition cannot be accredited to provide 100-year flood protection.

The existing Tukwila 205 Levee must be updated and improved through new floodwalls and setback or raising of the existing earthen levees to protect the City of Tukwila from flooding. The Green River System-Wide Improvement Framework (SWIF) declared the level of protection standard as the 500-year flood event plus three feet of freeboard. As important as the freeboard standard, the levees also must meet factors of safety for geotechnical stability under a variety of conditions including flood induced scour, drawdown, and seismic events.

The proposed priority sequence for construction of these flood protection improvements generally starts at the upstream end of the Tukwila 205 Levee, near river mile 16.7, and then proceeds downstream to near river mile 12.4 (see previous map). Upstream of the Tukwila 205 Levee, near South 200th Street, there are existing levees that currently provide 100-year level of flood protection (this includes the Frager Lowest Levee between the Tukwila 205 Levee and South 200th Street). The Tukwila 205 Levee will tie into these 200th Street levees, which also need to be improved in order to provide 500-year event plus three feet of flood protection. These are private levees, but function together as a system with the Tukwila 205 Levee.

Performance Measures

Have our levees meet the protection standard.

Earthquake (Seismic Improvements)

<p>Lead Points of Contact: Battalion Chief Jason Konieczka</p>	<p>Partner Points of Contact (Title) Public Works Department</p>	<p>Hazards Mitigated / Goals Addressed: Make necessary improvements to all critical infrastructures.</p>	<p>Funding Sources and Estimated Costs: Pre-disaster Grants, costs unknown at this time.</p>
<p>Strategy Vision/Objective To upgrade all City owned assets to ensure they meet today's seismic standards.</p>			
<p>Mitigation Strategy Identify and prioritize those structures that are at the greatest risk and determine the best way to secure funding to make the necessary improvements to those structures.</p>			
<p>2-Year Objectives: Perform a study and identify those structures that are in the most need of upgrades.</p>	<p>5-Year Objectives: Utilize available grant money to upgrade as many structures as possible.</p>	<p>Long-Term Objectives: Have all critical infrastructure up to the current seismic codes.</p>	



Implementation Plan/Actions:

We had a seismic study conducted on our Fire Stations and some other City Facilities in 2008 which identified three out of the four stations are deficient by today's standards. Two of those stations are being replaced with new stations currently under construction, but the third's replacement station came up short on funding. We have turned in the application for the Pre-disaster Mitigation Grant (PDM) to make the necessary upgrades to that Fire Station, and we will know by 2020 if we will be rewarded with the grant.

Six other buildings owned by the City were found deficient in the same study done in 2008 with a total of 18.1 million needed to bring them up to seismic standards (this amount includes the 16 million for Station 51 and 7.7 million for Station 52 that would have been spent). Factoring inflation, 18.1 million in 2008 equates to 21.5 million in 2019.

Performance Measures

Have all City-owned structures up to the current seismic standards.