Valley View Sewer District Plan Annex

Introduction

Valley View Sewer District (VVSD) is located south of the City of Seattle, in King County, Washington. The District generally extends from the Seattle City limits on the north, to South 176th and 182nd Streets on the south, and from Interstate Highway 5 and State Route 599 on the east to First Avenue South and State Route 509 on the west. The District serves portions of the cities of Burien, SeaTac, Seattle, Tukwila, and unincorporated King County.

Valley View Sewer District is authorized to operate as a public utility system by the State of Washington under the Revised Code of Washington (RCW) Title 57 and is beholden to federal, State, county, and respective city rules, regulations, and requirements. The District functions under a three-commissioner system, whereby the citizens of the District elect the commissioners. Resolutions and motions adopted by the Board make and establish policies that govern its operations. Public meetings are held on the first and third Tuesday of every month at the District's office.

The District's current service area reflects the 1995 merger of Rainier Vista Sewer District, founded in 1945, into Val Vue Sewer District, founded in 1946, which was later renamed "Valley View Sewer District" (VVSD).

The District does not maintain wastewater treatment or disposal facilities and instead relies on the sewer disposal services of King County-Metro, Southwest Suburban Sewer District and Midway Sewer District for these services. Delivery of flow to these entities for treatment and disposal of wastewater is accomplished through system connections and in accordance with existing interlocal agreements, including sewage disposal agreements with King County Wastewater Treatment Division (KCWTD), the Port of Seattle, and the City of Tukwila; a video inspection work agreement with the City of SeaTac; and an AKART (all known, available and reasonable methods of prevention, control and treatment) agreement with the Port of Seattle.

The jurisdiction is best classified as urban residential and encompasses the areas commonly known as Glendale, Southern Heights, Boulevard Park, Duwamish, Latona, Riverton, Riverton Heights, Foster, McVan, and McMicken Heights. Land use within the District is mostly single family residential, with multi-family residential and commercial areas located primarily along the major thoroughfares of Des Moines Memorial Dr and Tukwila Intl. Blvd. Additionally, there is a large industrial area along the Duwamish River in the District's north and northeasterly corners and a large mixed industrial and aviation zone within SeaTac city boundaries in the southwest of the District.

Valley View Sewer District Profile

- **Valley View SD** is a Special Purpose District governed by an elected three-member board
- **Population Served:** 37,600 people as of 2015
- **Service Connections:** 8,100 connections *or* 17,400 ERUs (2015)
- **Land Area Served:** approximately 6,000 acres
- **Drainage Flows (2015):**
  - District avg: 2,349 gallons/minute
  - Residential avg.: 75 gallons/capita/day
  - Industrial avg.: 75 gallons/employee/day
  - Commercial avg.: 35 gallons/employee/day
- **General Location:** *east* of Interstate 5 and the Duwamish River, *west* of SR 509, *south* of City of Seattle, *north* of Angle Lake and the City of Kent
- **Assets**
  - Critical Infrastructure: $8,234,130 (2019)
  - Total Assets: $42,831,076 (2017)

As of 2015, the District's approximate 6,000 acre sewer service area comprised 8,100 connections or 17,800 equivalent residential units (ERUs), at which point it was estimated to have served a residential population of 37,600 people, with 16,140 workers employed within its boundaries.

The District's sanitary sewer system has been divided into eleven primary drainage basins and twenty five drainage sub-basins for the purpose of analysis of the system and projection of future needs. Pipe sizes within the District range from 6- to 24-inches and the District currently maintains 19 pump stations to compensate for the hilly terrain within its service boundaries. Areas of VVSD are currently unsewered for various reasons. Some areas are undeveloped and can potentially be sewered, while others are not serviceable due to physical limitations of the land. It is not always economically practical to construct all facilities with the capability to provide full service under saturation conditions, especially when those conditions may take a long time or may never materialize. As development scenarios occur, sufficient capacity must be provided to accommodate expected development.

Development Trends

Based on interpolation of population and employment projections provided by area City planners and the Puget Sound Regional Council in 2015, it is estimated that the District's population will increase from approximately 37,600 in 2015 to over 50,000 by the year 2030 and that the number of ERUs served by the District will increase from approximately 17,800 to approximately 30,000 over the same period of time.

Projected development within the service area is largely limited to that associated with infill development in the short term and redevelopment in the future. It is expected that population and employment within the District will increase over the immediate and long-range planning periods. The most significant increases are expected in the multi-family and commercial (including industrial) customer classification. This shift in development is expected as a result of infill development and single-family property redevelopment around the two light rail stations built by Sound Transit. One light rail station is at the intersection of International Boulevard (Pacific Highway South) and Southcenter Boulevard in Tukwila, and the other has been built just west of the City of SeaTac's city center at Sea-Tac International Airport. The biggest influence on future development and growth within the District is expected to be increased activity and development related to these light rail stations.

As proposed in the previous comprehensive plan, a reduction in single-family residential uses and an increase in multi-family and commercial uses have occurred between 2009 and 2015. Increased activity around SeaTac International Airport is believed to have impacted this recent development and has also contributed to the increased shift from single-family to multi-family and commercial land uses that are necessary to support additional airport activity.

The District's service area boundary has been determined by the logical area which could be served by Valley View based on topography and the distance to existing system facilities, which will continue to change as new facilities are constructed and new service demands arise. While the current and anticipated future service area of the District is slightly larger than the District's corporate boundary, as a general rule, the District anticipates annexation of all areas within the service area and that eventually the corporate and service area boundaries will be identical.

Valley View Sewer District Risk Summary

The following is a summary of the natural hazards that were reviewed. References are made to the District's 2015 Comprehensive Plan and prior Hazard Mitigation Plan; the most recent update of which was adopted in 20015.

Hazard Risk and Vulnerability Summary

HAZARD	RISK SUMMARY	VULNERABILITY SUMMARY	IMPACT SUMMARY
Avalanche	Extremely low risk; no avalanche risk areas are identified within District boundaries	None	None
Earthquake	High risk; a portion of the District is within the Seattle Fault zone and approximately one mile of active fault line runs through the Glendale are of unincorporated King County near the District's northerly boundary (between S 96th St & S 99th St). Liquefaction potential is low throughout most of the District, with high and moderate-to-high potential zones located in the north and along the easterly boundary of the District's northern half, particularly along the Duwamish River. Three small zones (one very high, one high, and one moderate) also reside in the District's southern half. (see fig. 7)	There are three District facilities located within a quarter mile radius of the fault line. The 96th St. Pump Station (S 96th St & Des Moines Memorial Dr) and the Delta Marine Pump Station (1600 S 96th St) are both located approximately 200 ft. north of the fault line, while the Union Hall Pump Station (9230 14th Ave S) and Aqua Way Pump Station (10202 4th Ave S) are located approximately a quarter mile north and south of the line respectively. There are two district facilities located within high liquefaction potential zones; the Seagate Pump Station (11600 E Marginal Way S) and the Metro Pump Station (located at 11911 E Marginal Way S). Additionally, there are seven district facilities located in the high-to-moderate zones; in addition to the before mentioned Union Hall, 96th St., and Delta Marine Stations, these include the Boeing Pump Station (10500 W Marginal Way S), Towing Pump Station (10712 E Marginal Way S), E Marginal Way Pump Station (11200 E Marginal Way S), and Duwamish Pump Station (3819 S 117th St). (see fig. 8) While there are no District facilities within very-high liquefaction zones, the District storage building at 13845 18th Ave S is located less than one hundred ft. from the very-high risk zone surrounding Tub Lake. In terms of below ground infrastructure, there is 1,796 ft, 9,278 ft, and 47,767 ft of District sewer main located within very-high, high, and moderate-to-high zones respectively.	With the exception of the 96th St Pump Station, all aforementioned pump stations are equipped with generators. Sewer mains and wastewater treatment conveyance lines are particularly important to the District's operation. In the event of an earthquake, there is significant risk of damages to main and conveyance infrastructure located in high risk zones which could result in the disruption of sewer service for some rate payers and possible contamination from or exposure to hazardous waste, particularly around high traffic roadways with dense multi-family zoning.

HAZARD	RISK SUMMARY	VULNERABILITY SUMMARY	IMPACT SUMMARY
Flood	No significant risk.	Although the Duwamish River runs adjacent to and in some areas through the District's eastern boundary, no District properties reside within its mapped floodway (including the FEMA 100 Year Floodplan), although the Boing Pump Station and Generator lies less than a thousand ft east of the Duwamish River floodway. (see fig. 6)	As the majority of the District's assets are located below ground, the risk of damage to these assets due to surface flooding is extremely low. Damages due to extreme flooding may occur in the case of high pressure water surge and/or soil erosion exposing buried pipes.
Landslide	Low risk; there are two small pockets of landslide potential within the District.	The first landslide potential pocket is approximately one thousand sq. ft. (including a 50 ft buffer zone) centered on the Hamm Creek Natural Area off Des Moines Memorial Dr S in the Glendale area. The second one is approximately half a sq mile located in the Southern Heights area at the intersection of Tukwila Intl. Blvd and SR 599. No District facilities reside within or near either of the District's two landslide potential zones. Although no sewer mains reside within the smaller landslide potential zone in the Glendale area, approximately half a mile of sewer main piping is located within the zone in Southern Heights. (see fig. 5)	In the event of a landslide in these areas, sewer mains are at risk of damage or breach, posing an additional risk of contamination in surrounding areas. Additionally, road blockages caused by landslides could hinder the mobility of operations and repair staff.
Severe Weather	High risk; is a high likelihood of numerous severe weather events annually, such as uncharacteristically strong wind, rain, lighting, snow, and hail storms. Most such events are localized weather anomalies that may not develop into a large event. Changing climate will continue to increase the frequency and intensity of these events.	The climate of King County is classified as Marine West Coast. This type of climate is characterized by relatively mild marine air, which moderates both summer and winter temperatures. There are 305 documented instances of severe weather in King County occurring between 1960 and 2017. The District lies central in the County, no specific severe weather events occurred in the District that did not occur in the County. These events include 220 instances of severe winds, 5 tornados, 33 instances of severe lighting, 2 severe hailstorms, and 45 instances of severe winter weather.	Severe weather could potentially impact the mobility of service employees due to loss of power or obstruction of roadways. While prolonged loss of power could potentially impact sewer management services, the District possesses several generators.

HAZARD	RISK SUMMARY	VULNERABILITY SUMMARY	IMPACT SUMMARY
Severe Winter Weather	Relatively high risk.	Extended power outages are the most common impact of severe winter weather. Employee safety is also of concern when roadways to service area are impacted. The District currently has multiple generators, some being fixed onsite at critical locations and others mobile.	A generator is currently available onsite at each of the District's pump stations except for the 96th St and Hilltop Pump Stations in the north and the 96th St Pump Station in the south. As such, risk of severe service disruption due to loss of power is unlikely.
Tsunami	No tsunami areas are identified within the District boundaries.	None	None
Volcano	No volcano areas are identified within the District boundaries.	None	None
Wildfire	Extremely low risk	Because the District is located within a developed area, it is unlikely that localized fires would spread to woodlands or develop into wildfires.	The distribution of fire hydrants within the District boundary reduces the potential impact of this hazard.
Civil Disturbance	There is no risk of civil disturbance identified within the District boundaries.	None	None
Cyber Attack	High Risk	While the District has systems in place to safeguard non- authorized access to District computer systems, utilities systems are prime targets for cyber-attacks and there are continually new threats that require continued updates.	In the event of an attack, water and wastewater systems could be impacted that could result in a loss of sewer and water services.
Dam Failure	Extremely low risk	The District's northeasterly boundary contains and/or is adjacent to a section of the Duwamish River which is downstream from the Howard Hanson Dam, however, it is far away enough that major flooding within District boundaries due to dam breach would be highly unlikely.	The District's assets are at extremely low risk of damage.

HAZARD	RISK SUMMARY	VULNERABILITY SUMMARY	IMPACT SUMMARY
Hazardous Materials Incident	King County is classified as high risk for hazardous materials incidents relative to all other counties in WA state due to its population density and industrial activity.	Although the District's operation is not vulnerable to contamination from industrial waste, it must be vigilant about contamination of waterways and potable water sources due to the proximity of the majority of its wastewater treatment conveyance lines as well as sewer mains to the Duwamish River, which is a relatively high liquefaction potential zone. Additionally, although the District's dosing pump station located at 5120 S 178th St is within close proximality to I-5 and a number of residences, it is not located within a high risk zone for any of the hazards considered here and is closely monitored for safety compliance.	Thorough monitoring of water quality in King County, as directed by District policies, acts as a safeguard against consumption of toxic water and access to multiple emergency sources eliminates dependence upon any potentially contaminated source.
Public Health Emergency	Periodic outbreaks including influenza are a likely hazard in Washington.	The most critical public health emergencies relating to water quality are those resulting from backflow incidents within the water system. As with hazardous materials incidents, King County water sources are not significantly vulnerable to public health emergencies due to water testing and purification.	All neighboring and jurisdiction-overlapping Water Districts' staff monitors water quality within the system. multiple forms of communication are ongoing within the District and can be utilized in the event of an emergency. VVSD also monitors wastewater flows
Structure Fire	Low risk	VVSD's operations, administrative, and storage buildings are constructed from wood, metal, and mason and are located in areas with relatively low risk of fire hazard. Wastewater structures are typically constructed of masonry and are also located in areas of low fire hazard.	In the event of a fire damaging or burning VVSD's structures, operations may be temporarily affected, but are unlikely to be halted. All buildings are well insured against fire borne damages
Terrorism	Low	Although a public agency with critical facilities, the District is significantly less vulnerable to malevolent acts of terrorism than larger organizations. See Cyber-attack vulnerability summary.	The impact of a terrorist attack on the District would differ greatly depending on the nature of the act. See Cyber-attack impact summery.

Hazard and Asset Overview Map

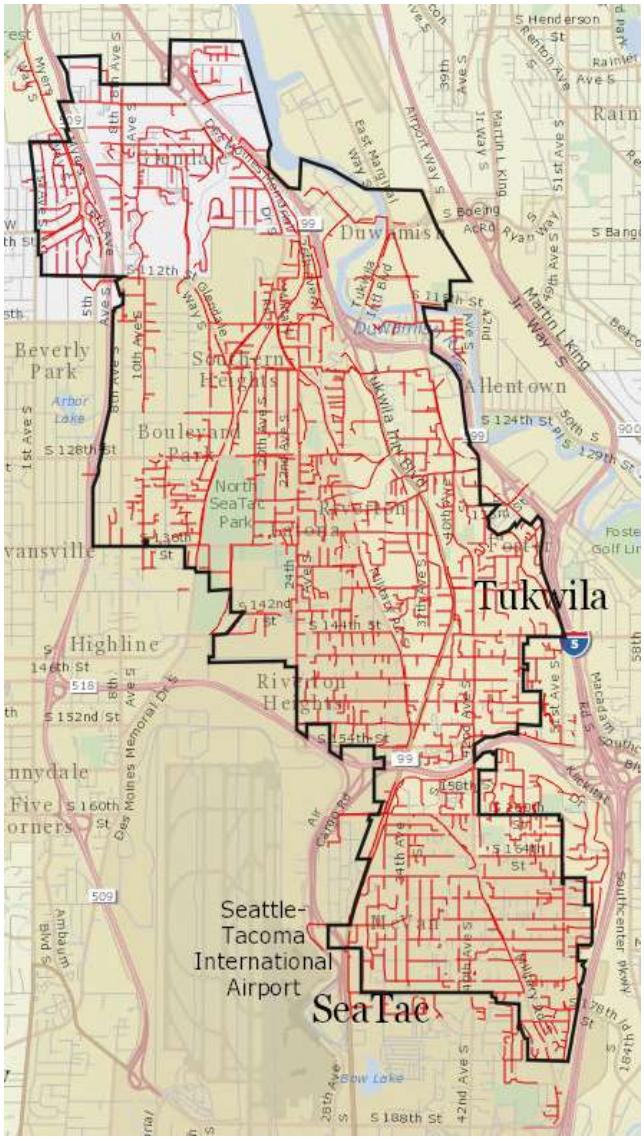

Figure 1: VVSD Sewer Mains

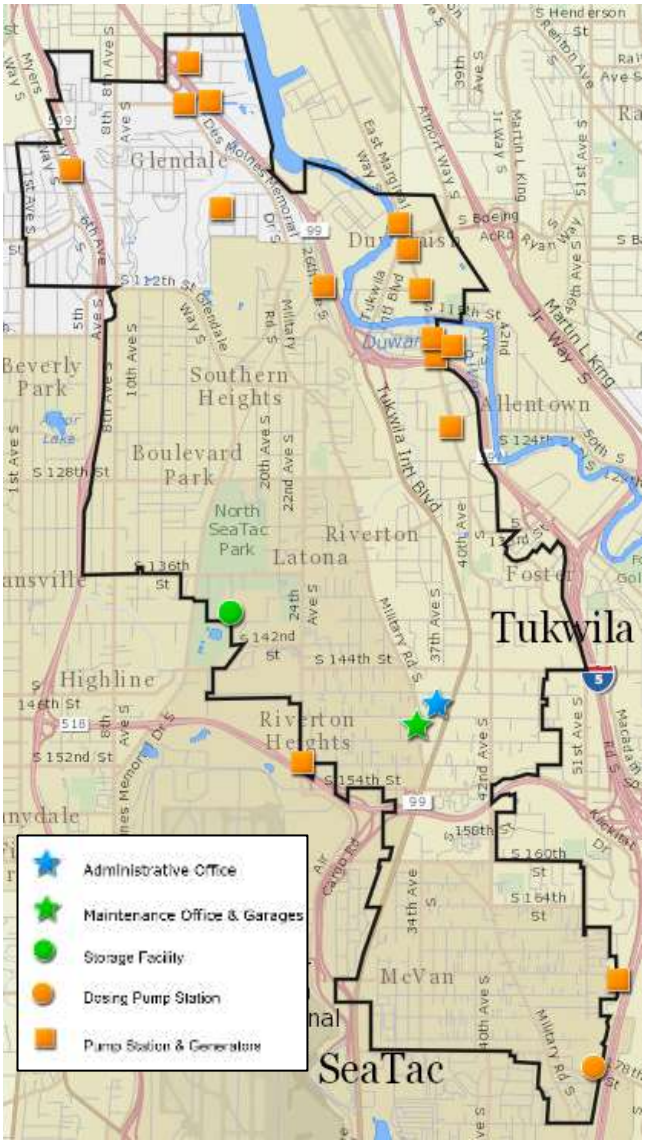

Figure 2: VVSD Property Asset Locations

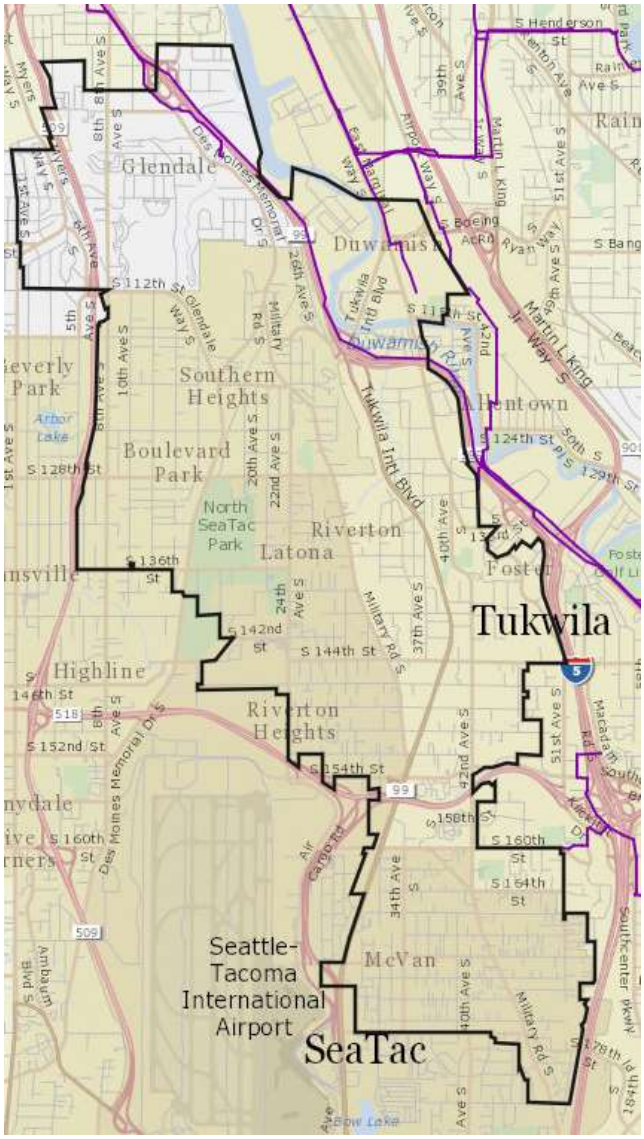

Figure 3: Wastewater Treatment Conveyance Lines in & around VVSD

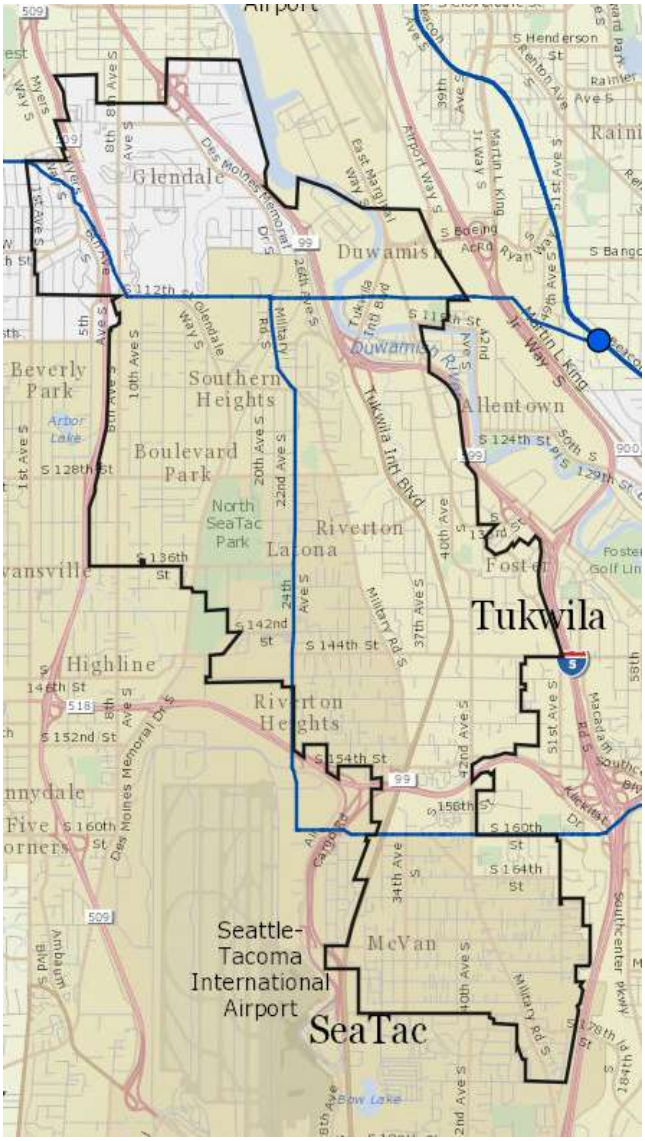

Figure 4: VVSD Boundary Adjacent (SPU) Water Source & Supply Lines

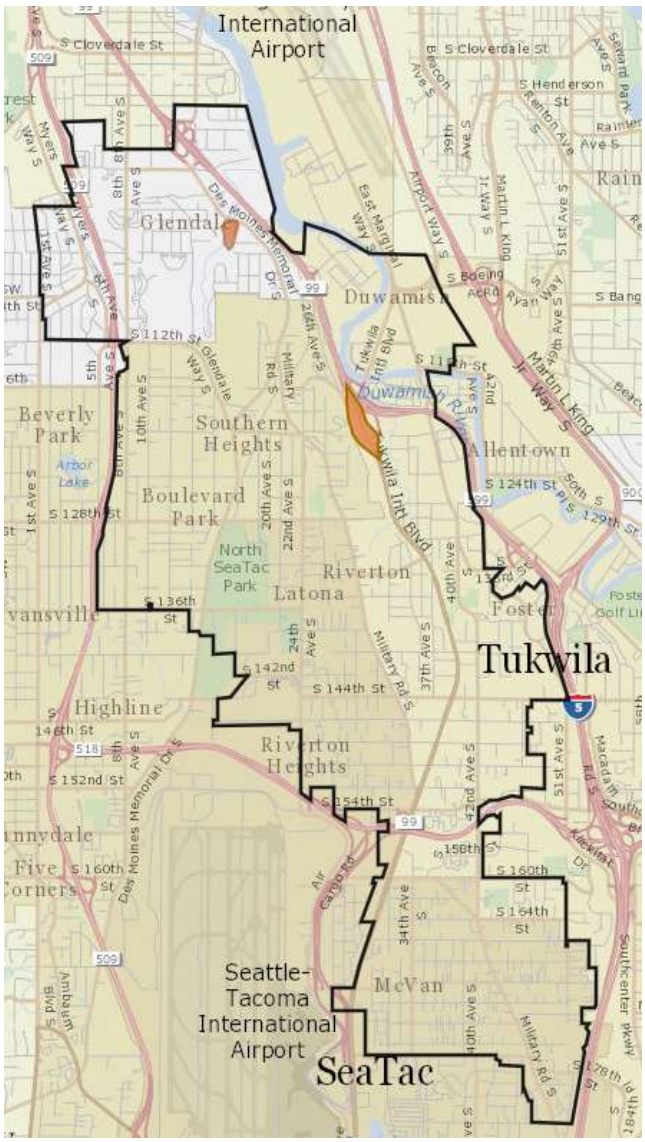

Figure 5: VVSD Landslide Hazard Areas Plus 50-Foot Barriers

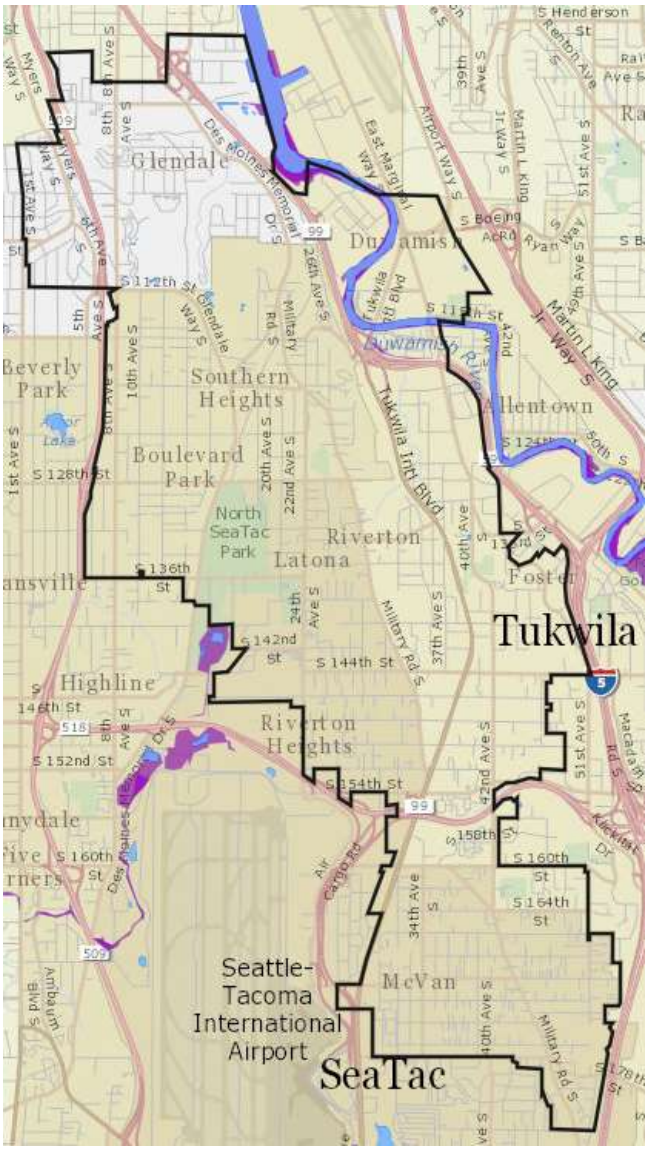

Figure 6: Floodways & FEMA 100 Year Floodplains in & Around VVSD

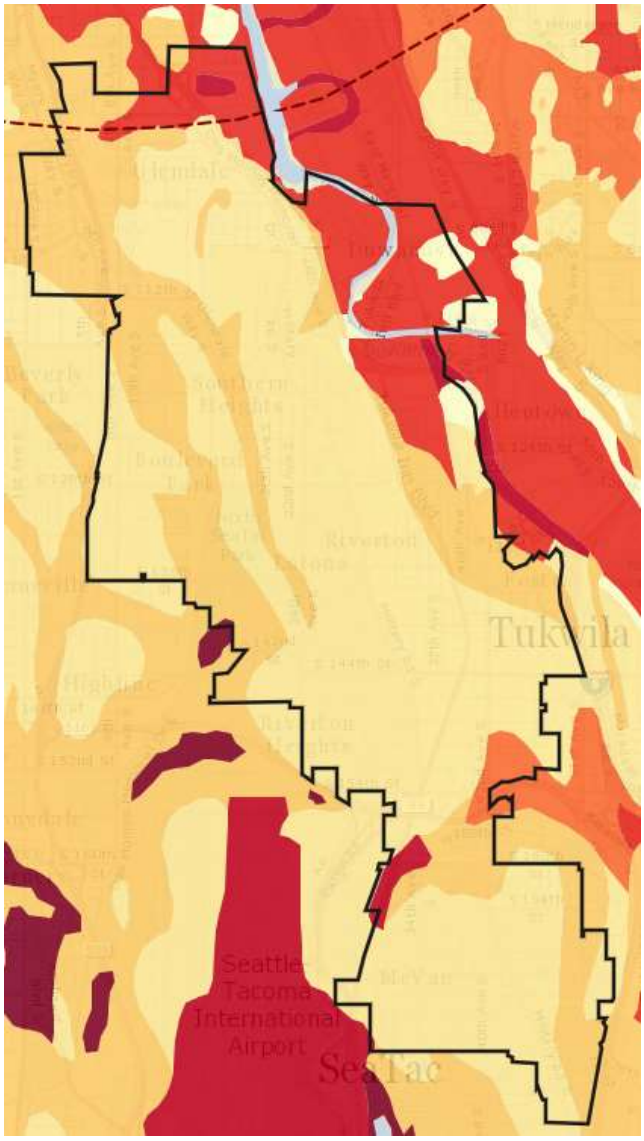

Figure 7: Fault Lines & Liquefaction Potential in & Around VVSD

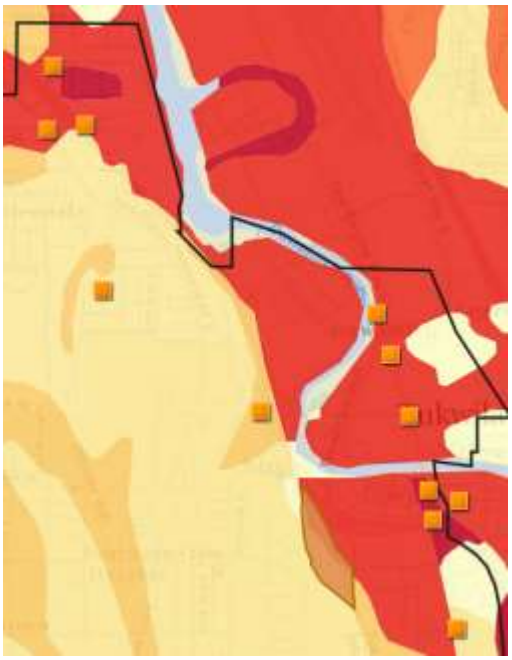

Figure 8: VVSD Pump Stations Located in the District's High Liquefaction Potential Northeasterly Zone

Assets at Risk

ASSET	VALUE ($)	RISK SUMMARY	VULNERABILITY SUMMARY	IMPACT SUMMARY
Critical Sewer Infrastructure (pump/dosing stations, etc.)	$4,726,122	In the event of an earthquake, liquefaction can displace pipe joints, cause damage to pump stations and treatment facilities, break connections, and cause damage service lines. . Landslides can have a similarly destructive effect on below ground infrastructure.	The presence of an active fault line as well as 'high' liquefaction potential along the north and northeasterly boundary along the Duwamish river renders several pump stations and the underground main/transmission infrastructure in that area vulnerable to damage in the event of an earthquake. (See earthquake Hazard Summery, pg. 3). Landslide potential in the Southern Heights area off Tukwila Intl. Blvd renders the underground sewer mains in that area vulnerable to damage. (see landslide Hazard Summery, pg. 4).	Damages to critical infrastructure could result in backed up sewers which could pose a potential health hazard and could cause river contamination.
Equipment and Facilities Owned by District – Field and Administrative (vehicles, generators, etc.)	$3,508,008	While District administrative, operations, and storage facilities are not located in areas of high hazard potential, events such as earthquakes and severe weather may still cause significant damage to office/field equipment as well as roads that will have to be accessed by District staff and vehicles during emergencies.	As the location of field equipment and vehicles may very when not housed in their storage facilities, they are more vulnerable to unexpected hazardous events.	The District's administrative function is crucial to maintaining adequate operation of sewer services. and a major disruption to this function could potentially impact the service available to rate payers. Power outages would reduce potential ability to perform work and communicate with field staff, access GIS database in the field, and communicate with outside agencies. The availability of mitigates this potential risk.

Plan Update Process

A planning team was assembled for the plan update, consisting of staff from the Valley View Sewer District and PACE Engineers, Inc., as the technical consultant.

The team conducted a public hearing to help customers understand what was important to them. Coordination with the County throughout the plan update process occurred. A review of the District's existing plan and programs was conducted to support and direct hazard mitigation planning and actions.

The District updated their hazard risk assessment by measuring property damage resulting from natural hazards. This process assesses the vulnerability of buildings and infrastructure by natural hazards. The District also estimated the cost of potential damage. The mitigation actions recommended in this plan include some that address limitations in the modeling caused by insufficient data.

Jurisdiction Planning Team

Name	Title	Organization	Contribution
Andrew LaRue	General Manager	Valley View SD	Owner
Kathleen Onih	Finance Officer	Valley View SD	Owner
Kirk Utley	District Engineer	PACE Engineers, Inc.	Engineer/Consultant
Paul Weller	Planning Manager	PACE Engineers, Inc.	Consultant – Lead Writer
Arash Muntazir	Assistant Planner	PACE Engineers, Inc.	Consultant

Plan Update Timeline

Planning Activity	Date	Summary	Attendees
Planning workshop	June 10, 2019	Understanding King County's planning process and steps	Paul Weller
Strategy workshop	July 25, 2019	Understand mitigation strategies for the plan	Andrew LaRue Paul Weller

Public Outreach

This Hazard Mitigation Plan is intended to be a document for the District's customers and is designed to include the public in the decisions and direction of the document. The District held a public hearing to discuss assets and updates to the plan. No significant public comment was received at this public outreach event. The District also held a special Board Meeting open to the public where the capital improvement projects were discussed and the projects specific to the hazard mitigation plan had special emphasis.

Public Outreach Events

Event	Date	Summary	Attendees
Open House & Board Meeting	April 2, 2019	In the absence of the attendees, the Board was informed of the update of the King County Hazard Mitigation template.	No public attended
Open House – joint meeting with King	July 11, 2019	A hazard mitigation presentation was	Though some customers stopped by to hear the

County Water District #125		provided with map handouts.	presentation during the Open House, turnout was modest.

Jurisdiction 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.

Plan Monitoring, Implementation, and Future Updates

The District will continue to work with King County in their monitoring of Hazard Mitigation Strategies. King County leads the mitigation plan monitoring and update process and schedules the annual plan check-ins and biannual 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, the District 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.

The District anticipates coordination with King County on potential funding opportunities. Currently, King County Emergency Management plans to send to working partners any federal notices of funding opportunities for the Hazard Mitigation Assistance Grant Program. These proposals will be assessed according the prioritization process identified in King County's base plan and the county will provide support to the District if they intend to submit a grant proposal.

Hazard Mitigation Plan Goals

- Ensure systems are in place to rapidly restore sewer service after a hazard
- Ongoing engineering analysis and system review to ensure a wastewater collection system which is both environmentally and economically sound
- Minimize system damage and maximize infrastruture use life
- Minimize impact and loss to customers
- Minimize negative impacts on public health and employee safety
- Provide emergency public information

The District intends to participate in the next plan update which is expected to be in April 2025. The District will submit a letter 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

The District will continue to maintain substantial public outreach and will be focusing on personal preparedness and education. Information on ongoing progress in implementing the hazard mitigation plan will be integrated into public outreach efforts.

The District will continue to work with the public to explain how the District's vulnerabilities are being addressed. Incorporating all public outreach of Hazard Mitigation into other Plans (water and sewer system planning, coliform monitoring plan, emergency response plan, etc.) will be a focus of the District.

Hazard Mitigation Authorities, Responsibilities, and Capabilities

Plans

PLAN TITLE	RESPONSIBLE AGENCY	POINT OF CONTACT	RELATIONSHIP TO HAZARD MITIGATION PLAN
Sewer System Comprehensive Plan and Update	Valley View Sewer District	Andrew LaRue	System deficiencies were discovered, and planned improvement are developed to address these deficiencies. Identifying vulnerable areas in the District's system is critical for Hazard Mitigation.

Programs, Policies, and Processes

PROGRAM/POLICY	RESPONSIBLE AGENCY	POINT OF CONTACT	RELATIONSHIP TO HAZARD MITIGATION PLAN
Standard Details	Valley View Sewer District	Andrew LaRue	District must maintain surplus supplies for operation and maintenance purposes. Having standards assures that in the case of an emergency the District has the parts needed for response and repair.

Entities Responsible for Hazard Mitigation

AGENCY/ORGANIZATION	POINT OF CONTACT	RESPONSIBILITY(S)
Valley View Sewer District	Andrew LaRue	Oversees management and operations
PACE Engineers, Inc.	Paul Weller and Kirk Utley	District Engineers

National Flood Insurance Program

National Flood Insurance Program Compliance

What department is responsible for floodplain management in your community?	N/A
Who is your community's floodplain administrator? (title/position)	The District is a special purpose district and does not have a floodplain administrator.
What is the date of adoption of your flood damage prevention ordinance?	N/A
When was the most recent Community Assistance Visit or Community Assistance Contact?	The District has not had a Community Assistance Visit

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.	N/A; the District does not manage the flood hazard maps
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?	No
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: Unknown RL: Unknown
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

Hazard Mitigation Strategies

The tables below list the initiatives that make up King County's hazard mitigation plan from 2015 and the current 2020 hazard mitigation strategies. The 2015 table orders the initiatives in their respective priority. The 2020 table provides the strategies reprioritized from 2015; a full mitigation strategy page is provided for each strategy

2015 Hazard Mitigation Strategy Status

STRATEGY/ DESCRIPTION	PRIORITY	STATUS
Continue to support county-wide initiatives identified in Part 3 of Volume 1 of this plan.	High	Ongoing; county-wide initiatives 1-7 as outlined in the plan are being funded through a combination of grants, the King County Office of Emergency Management operations budget, and local funds. Initiatives 2 and 4 involve the continuation of established protocol and require no additional work at this time. Initiatives 1, 3, 4, 6, and 7 involve continued advancement of existing best practices and/or collaborative participation. Initiative 5 involves the implementation of data collecting best practices in the event of a future hazard.
Participate in the plan maintenance strategy identified in Part 3 of Volume 1 of this plan	High	Ongoing; following plan maintenance strategies, planners have monitored, evaluated and updated this hazard mitigation plan over the 5-year planning cycle, incorporating its content in other planning mechanisms such as the District's comprehensive plan, and considering strategies to maintain and improve public participation in the process.
Consider Hazard Areas, Critical Areas & system performance history (i.e., pipeline breaks) in prioritizing renewal & replacement projects.	High	Ongoing; continued consideration of system vulnerabilities, performance, and needs has informed 2020 hazard mitigation strategies 2 and 3 (listed below). Understanding of the system will be further advanced by 2020 strategy #1.

STRATEGY/ DESCRIPTION	PRIORITY	STATUS
Continue to coordinate through hazard mitigation & emergency planning with neighboring jurisdictions to ensure continuous water supply & adequate storage.	High	Ongoing; collaboration and communication between the District and its utility providing neighbors has been continued through the current planning.
Coordinate with neighboring Jurisdictions for assistance & equipment/supply inventory backups	High	Ongoing; were an inventory supply or hazard management deficiency to occur in the event of an emergency, assistance and/or equipment backups could be coordinated with neighboring jurisdictions at this time .
Annual review of procedures, inventory, & purchase of emergency supplies & equipment	High	Ongoing; the established annual review process has been and continues to be upheld.

2020 Hazard Mitigation Strategies

STRATEGY	LEAD AGENCY/POC	TIMELINE	PRIORITY
Ongoing sewer repair and replacement program.	Valley View Sewer District: Andrew LaRue	2019- 2025; ongoing	High
Replace and upgrade aging pump stations.	Valley View Sewer District: Andrew LaRue		High

Ongoing Sewer System Repair & Replacement

Lead Point of Contact	Partner Points of Contact	Hazards Mitigated / Goals Addressed	Funding Sources and Estimated Costs
• Andrew LaRue (General Manager)	• Paul Weller, Planning Manager (PACE Engineers)	• Plan Goal Nos. 2, 3 and 5	• Sources: ratepayer revenue

Strategy Vision/Objective

This strategy is part of the effort to ensure adequate sewer service coverage throughout the District and maintain current standards of service in coming years. Project includes repair of existing damages, I&I monitoring, and sewer video inspection.

Mitigation Strategy

Ongoing repair, rehabilitation, and upgrade of (but not limited to) the following locations:

- 2020: Sewer improvements at:
  - S. 116th St. & 20th Ave. S.
  - 16th Ave S. and S. 116th St
  - 22nd Ave S and S 133rd St
- 2021: Redesign and replacement at t International Blvd and 32nd Ave S
- Sewer extension projects at:
  - 2020: 8th Ave S Trunk
  - 2021: Riverton Crest (Military Rd & S 140th St)
  - 2022: NW McMicken (Military & 164th, 162nd & 42nd)
  - 2023: 51st Ave S @ S 182nd St
  - 2023: S 112th St to S120th St Sewers
  - 2023: 14th Ave S at S 116th St Sewers
  - 2023: S 120th St to S 128th St Sewers
  - 2024: Cedarhurst Sewer Extension
  - 2025: 12th Ave S & S 138th St Sewers

2-Year Objectives	5-Year Objectives	Long-Term Objectives
Completion of sewer improvements, redesign/replacement, and top three sewer extension projects listed.	Approximately 100% of work completed.	A prepared and resilient sewer system.

Implementation Plan/Actions

- Project will continue as planned and outlined in the 2019 Capital Improvements Program.

Performance Measures

Partnered with PACE Engineers consulting service for assessment implementation.

Replace & Upgrade Aging Pump Stations

Lead Point of Contact	Partner Points of Contact	Hazards Mitigated / Goals Addressed	Funding Sources and Estimated Costs
• Andrew LaRue (General Manager)	• Paul Weller, Planning Manager (PACE Engineers)	• Plan Goal Nos. 2-5	• Sources: ratepayer revenue

Strategy Vision/Objective

This strategy is part of the effort to ensure adequate sewer service coverage throughout the District and maintain current standards of service in coming years. Project includes replacement of current pump stations with submersable stations to improvme cost effectiveness.

Mitigation Strategy

- 2020: 24th Ave. S. Pump Station Rehabilitation; upgrade to submersible
- 2021: Cast Iron Force Main Replacement at McMicken Pump Station
- 2021: East Marginal Way Pump Station Rehabilitation; upgrade to submersible
- 2022: Boeing Pump Station Rehabilitation; upgrade to submersible
- 2023: 2011 Towing Pump Station Rehabilitation; upgrade to submersible

2-Year Objectives	5-Year Objectives	Long-Term Objectives
Completion of first four replacements listed.	Further analysis of system needs.	A prepared and resilient sewer system.

Implementation Plan/Actions

- Project will continue as planned and outlined in the 2019 Capital Improvements Program.

Performance Measures

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