

# Covington Water District Plan Annex

## Introduction

### Brief History

The Covington Water District was formed in southeast King County in 1960 with less than 100 customers. Over the years, a number of small districts merged into the Covington Water District and more customers were added as development occurred.

Currently, the District has 38 employees and the District’s service area contains residential, small farm, commercial, governmental, medical facility and institutional/educational development.

### Geography

The District is located in southeast King County and serves an area established by the South King County Coordinated Water System Plan. The District is roughly bounded by State Route (SR) 18 on the southwest, King County Water District #111 on the northwest, the City of Black Diamond (Black Diamond) on the southeast, the Lake Retreat area on the east, and the Green River on the south. The District is bordered on the north by Cedar River Water and Sewer District (CRWSD). The District serves all of the City of Covington (Covington) and portions of the City of Maple Valley (Maple Valley) and Black Diamond, along with portions of unincorporated King County.

The District is also responsible for the satellite water system known as Sugarloaf Water System, which serves Sugarloaf Estates and Sugarloaf Mountain. The system has 192 rural large-lot tracts and is served by a well.

The District is a partner with Tacoma Public Utilities, Lakehaven Utility District and the City of Kent in planning and use of a Regional Water Supply System (RWSS). The RWSS operates a pipeline from an intake and headworks on the Green River to serve the partners and wholesale customers which are supplied by water allocations from Tacoma Public Utilities.

### District’s Operating Budget

Although 2019 resulted in warm and very dry conditions early in the summer, but due to managing our groundwater and Partnership supplies, CWD was safely and reliably able to meet the needs of our customers. CWD’s undesignated cash on hand

### Jurisdiction Profile

Population: 50,000 people through 18,000 water connections (Dec. 2019)

Government: Special purpose district governed by a five member Board of Commissioners. The General Manager is the chief executive officer of the District, having general oversight of the District’s departments and operations.

Land Area: 55-square miles in South King County, Washington

Critical Infrastructure: The District’s water distribution system consists of more than **318 miles** of pipeline, 12 wells and pumps, 11 water storage tanks, 4 booster pump stations, 6 interties, 14 pressure reducing stations, and 28 control valve stations.

### Jurisdiction Point of Contact:

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Title: General Manager  
Entity: Covington Water District  
Phone: 253.867.0900  
Email: [thomas.keown@covingtonwater.com](mailto:thomas.keown@covingtonwater.com)

### Plan Prepared By:

Name: Steve Lee, P.E.  
Title: Engineering Manager  
Entity: Covington Water District  
Phone: 253.867.0940  
Email: [steve.lee@covingtonwater.com](mailto:steve.lee@covingtonwater.com)

has improved to \$28M (up from \$14.8M in 2017). 2019 water rate revenue is approximately \$0.6M above budget and is consistent with what would be expected given the summer conditions we experienced. The district's debt ratio has improved from 46.7% (2016) down to 32% and total liabilities have decreased from \$53.4M (2016) to \$44M. Next year's projected revenue flow provides a positive cash basis to continue reliable delivery of safe, potable water with no rate revenue increases.

For 2020, Residential water rates will remain the same while commercial rates will be going up slightly and irrigation rates will decrease slightly to account for the cost differences in fire flow protection. The proposed 2020 budget contains:

- 2020 water revenue requirement of \$13M.
- Power costs remain lower due to turbine power production.
- Recommends no 2020 or 2021 increase in water revenue requirements with modest 2% per year increases for 2022-2025.
- No new debt is anticipated, but staff will continue to refine the CIP budget to assess financial impacts (impacted by inter-local partner city's projects progress, Tank 1 and Tank 4 Reconstructions, etc.)
- Major activities in 2020 include the design completion for the replacement of Tanks 1A/1B and Tank 4 Seismic Rehabilitation, design completion and construction of the Pebble Creek Extension to increase reliable peak demand delivery to the 770 zone, continued Witte Well field and station improvements, corrosion control improvements at the Sugarloaf Water System, support of Regional Water Supply System (RWSS) capital needs and collaboration on capital projects lead by the cities of Covington and Maple Valley.

Other programmatic efforts include further development of CWD's asset management program, IT improvements to support the development of our mobile workforce and cyber security needs, on-going emergency response planning and continued improvement of relationships with our local agencies.

Our conservative budgeting partnered with the short and long-term view of the communities we serve is a significant reason why our community is great. Unlike other regions in King County, there is still land available for affordable residential and commercial growth to meet the needs of the community. We will continue to plan and build wisely in partnership with the other municipal agencies and development industry to do this in an economically and community friendly way.

### **Development Trends**

Since 2016, our service area has changed in many ways. King County itself has seen a growth of 13.4% population growth rate in the past five years. The City of Covington's (WA) 2015 Population count was 20,053 and its 2020 estimates are at 21,500. This is about a 7% growth in population, significantly higher than the average 3% over the past 10 years. The City of Maple Valley's (WA) 2015 Population count was 25,713 and its 2020 estimates are at 27,114. This is approximately a 5.5% growth in population, significantly higher than the average 2.5% over the past 10 years. With the lifting of moratoriums and the increase in building permits and interest in the area for both residential and commercial growth, the area expects to see growth trends that follow its population growth.

## Covington Water District Risk Summary

In an effort to develop a long-term risk planning strategy for the District’s water service area, this plan evaluates the existing system, potential vulnerabilities facing our systems, and its ability to meet the anticipated requirements for water source, quality, transmission, storage, and distribution over the five-year planning cycle. Water system improvement projects have been developed to meet the changing demands of regulatory impacts, and population growth, as well as infrastructure repair and replacement needs. The District plans for both the short and long term because we understand the risks in terms of what a disruption could do to property, economy, natural systems, infrastructure systems, operations and the populations we serve that would likely suffer losses or have long time recovery times from a disaster.

In conjunction with the King County Regional Hazard Mitigation Program, Covington Water District also wishes to “build a foundation of resilient before, during and after disasters. Incidents will always occur, but their impact is within our ability to change if we target investments in areas that will reinforce those areas most critical to our community, thereby making us all more resilient.” As a 60-year old water utility, we know that “clean, potable water is made accessible through strong infrastructure systems and efficiently and effectively run districts ensuring its accessibility for individuals and families remain a reliable necessity for resilience.” (2020, p.11) The District’s plan is formatted to be consistent with King County’s Hazard Mitigation Plan and the Washington State Enhanced Hazard Mitigation Plan.

### Hazard Risk and Vulnerability Summary

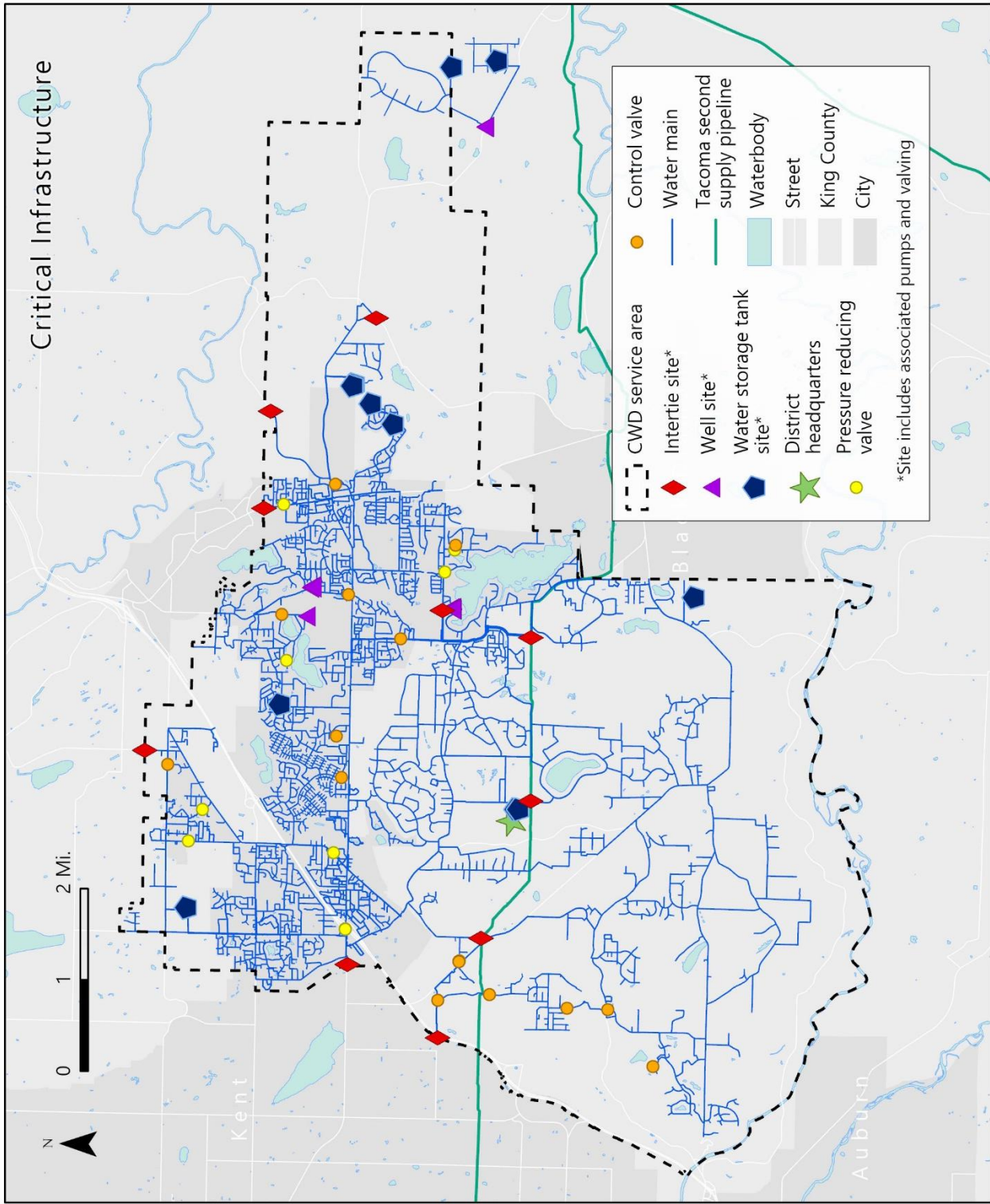
HAZARD	HAZARD SUMMARY	VULNERABILITY SUMMARY	IMPACT SUMMARY
<b>Earthquake</b>	There are three sources of earthquakes in the Pacific Northwest: Cascadia subduction, deep and crustal. King County has a long history of documented earthquake activity.	District tanks are not seismically fit to withstand earthquakes. Water systems are vulnerable to earthquakes’ shaking and potential impacts from the shaking, landslides and liquefaction related to the shaking. District tanks need to be retrofitted/replaced to meet life safety codes.	If an earthquake was to occur, many of our tanks and system lines identified in this plan would receive medium/significant damage. Water service may be disrupted after an earthquake.
<b>Severe Weather</b>	Severe weather includes heavy rain, drought, rain and snow precipitation, wind, tornado, extreme cold and ice, or extreme heat. Climate change is expected to affect extreme weather incidents.	King County sees rainfall vary from city to city, although precipitation is common here, potentially causing flooding or landslide potential. Wind can knock down communications for systems utilized by the water distribution system.	Drought can impact the District severely as water levels in reservoirs and ground wells drop. Heavy rain can cause landslide and flooding impacting water infrastructure.
<b>Severe Winter Weather</b>	Severe snow and ice could impact the region and has a documented history of doing so for the region.	Facilities can be impacted by wind, snow, or heavy winter condition, ultimately preventing water operators from maintaining facilities potentially damaged by the weather.	Facilities can be impacted by wind, snow, or heavy winter condition, ultimately preventing water operators from maintaining facilities potentially damaged by the weather.

<b>Flood</b>	<p>Flooding is King County’s most persistent and recurrent natural hazard. The Green River Basin, especially the upper watershed above the Howard Hanson Dam would be the closest impact to the District service area.</p>	<p>Flooding in King County typically impacts the District in the service area by potentially causing landslides, impacting distribution systems along the path of the floods, directly impacting service to residents, businesses and life safety facilities.</p>	<p>If flooding occurs, the District would be concerned with potential landslides and movement of the linear infrastructure.</p>
<b>Cyber Attack</b>	<p>Wherever information technologies exist and are used, cyber incidents can occur. Government and public agencies have been targets more often as technology has advanced.</p>	<p>Vulnerability is low for Covington Water District due to size and progressive measures the District has taken to ensure safety such as training, IT Manager monitoring and regularly utilizing various safety measures.</p>	<p>With many security mechanisms in place for a utility our size, impact would be from low/medium depending on the type of attack.</p>
<b>Landslide</b>	<p>Landslides are usually a secondary hazard, typically driving by precipitation or earthquake. They can also be debris landslides.</p>	<p>Landslides or debris flows in and around reservoirs or waterbodies that support water systems can cause disruptions in water services and the loss of infrastructure. Water supply pipelines may cross unstable areas and be damaged by slope movement.</p>	<p>The district has a pipeline currently out of commission caused by a landslide. The project being impacted is one of the projects in this plan.</p>
<b>Hazardous Materials Incident</b>	<p>This hazard is low for the service area discussed. Potential events could include railroad accident or derailment.</p>	<p>If a hazard materials incident was to occur, the District would dispatch water quality team to test water source points to ensure safety and quality of water.</p>	<p>Low specific impacts expected to populations in service area for this hazard.</p>
<b>Public Health Emergency</b>	<p>King County has a large concentration of healthcare resources, but in a pandemic these resources can be stretched.</p>	<p>Food and water are a concern when planning for disease outbreaks. All district reservoirs are closed and have security measures in place. Regular testing for safety are also completed. Currently, COVID-19 is a health incident occurring. However, it does not live or thrive in water because of the treatment process.</p>	<p>COVID-19 is the first of its kind that the area is dealing with. It has more of an economic impact than it does vulnerability wise.</p>
<b>Dam Failure</b>	<p>Howard Hanson Dam is where the District gets much of its water supply from. Extremely low risk</p>	<p>Many mitigation actions have been taken to reduce the risk at the dam to prevent corrosion of failure of dam.</p>	<p>The District’s assets are at extremely low risk of damage. If supply from Howard Hanson Dam was to stop, we would have</p>

			District wells to pull from temporarily.
<b>Avalanche</b>	Extremely low risk; no avalanche risk areas are identified within District boundaries	None	None.
<b>Tsunami</b>	Extremely low risk; no tsunami risk areas are identified within District boundaries	None	None
<b>Wildfire</b>	Extremely low risk; No wildfire risk areas are identified within District boundaries	None	The distribution of fire hydrants and storage tanks within the District boundary reduces the potential impact of this hazard.
<b>Civil Disturbance</b>	Extremely low risk; No civil disturbance risk areas are identified within District boundaries	None	None
<b>Terrorism</b>	Extremely low risk; No terrorism risk areas are identified within District boundaries	None	None
<b>Volcano</b>	Extremely low risk; No volcano risk areas are identified within District boundaries	None	None

Hazard and Asset Overview Maps

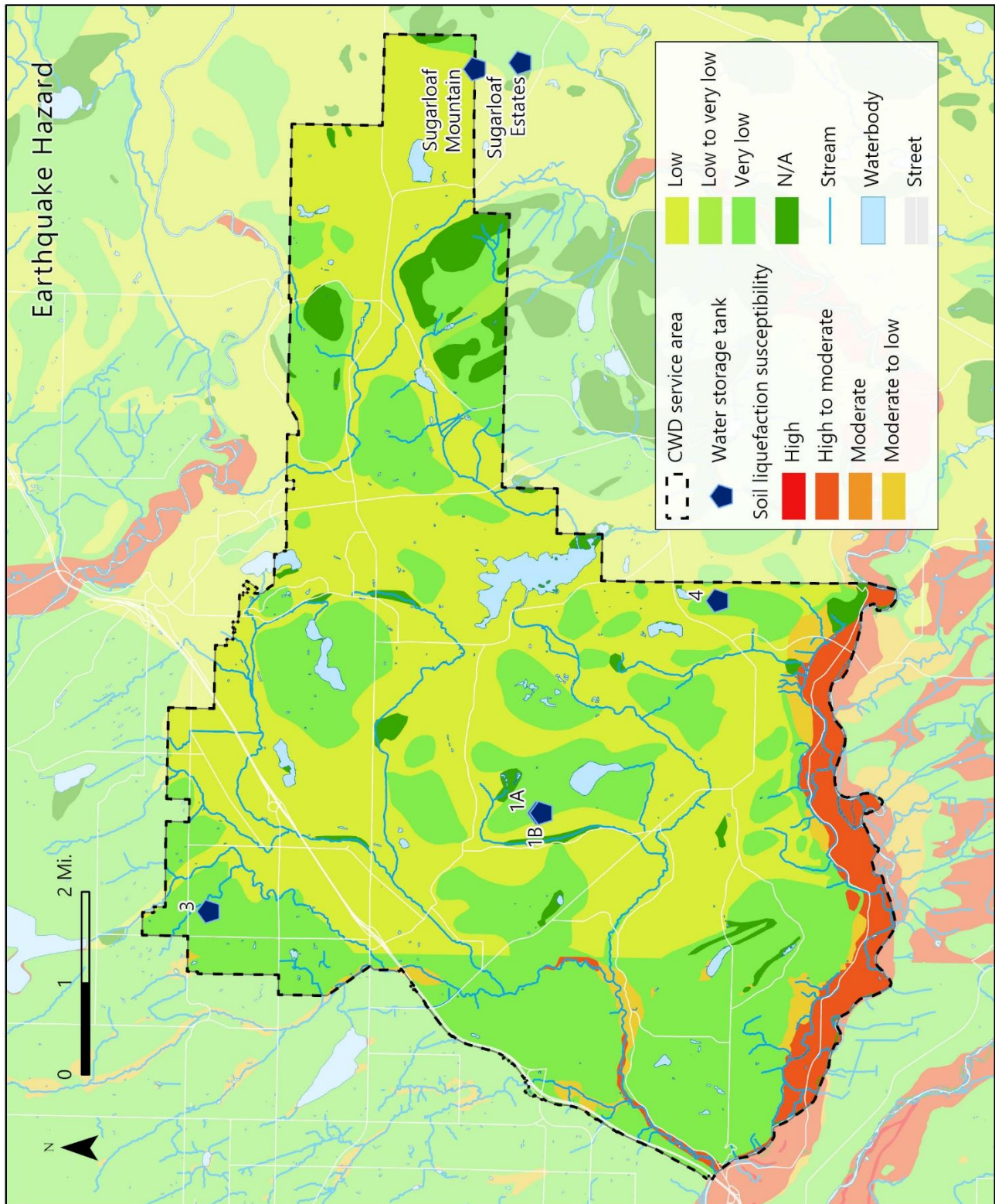
*Critical Infrastructure Map*



Data credit: Covington Water District, King County

Figure 1: Covington Water District Critical Infrastructure Map

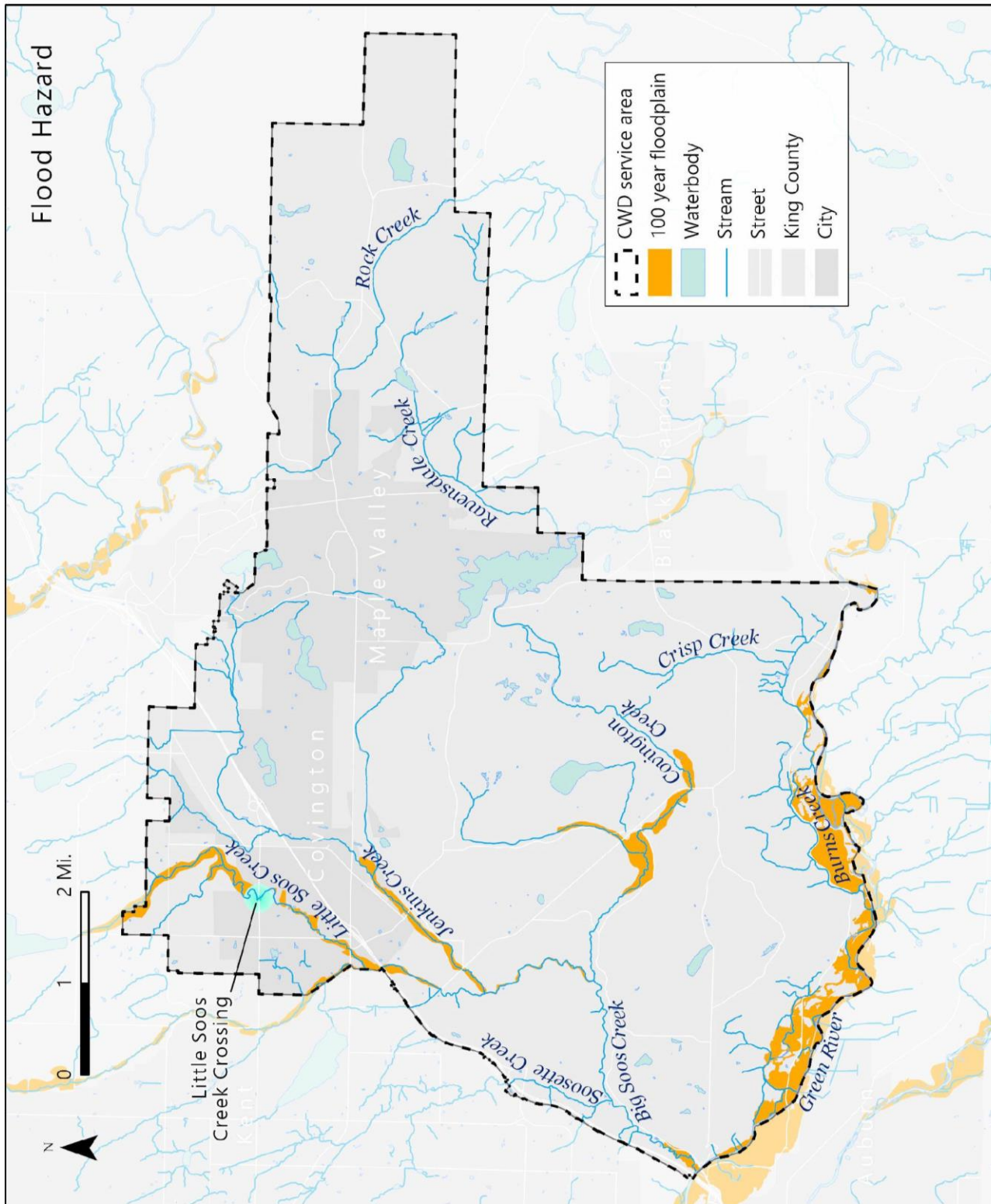
### Earthquake Hazard Map



Data credit: Covington Water District, King County, WADNR

Figure 2: Covington Water District Earthquake Hazard Map

**Flood Hazard Map**

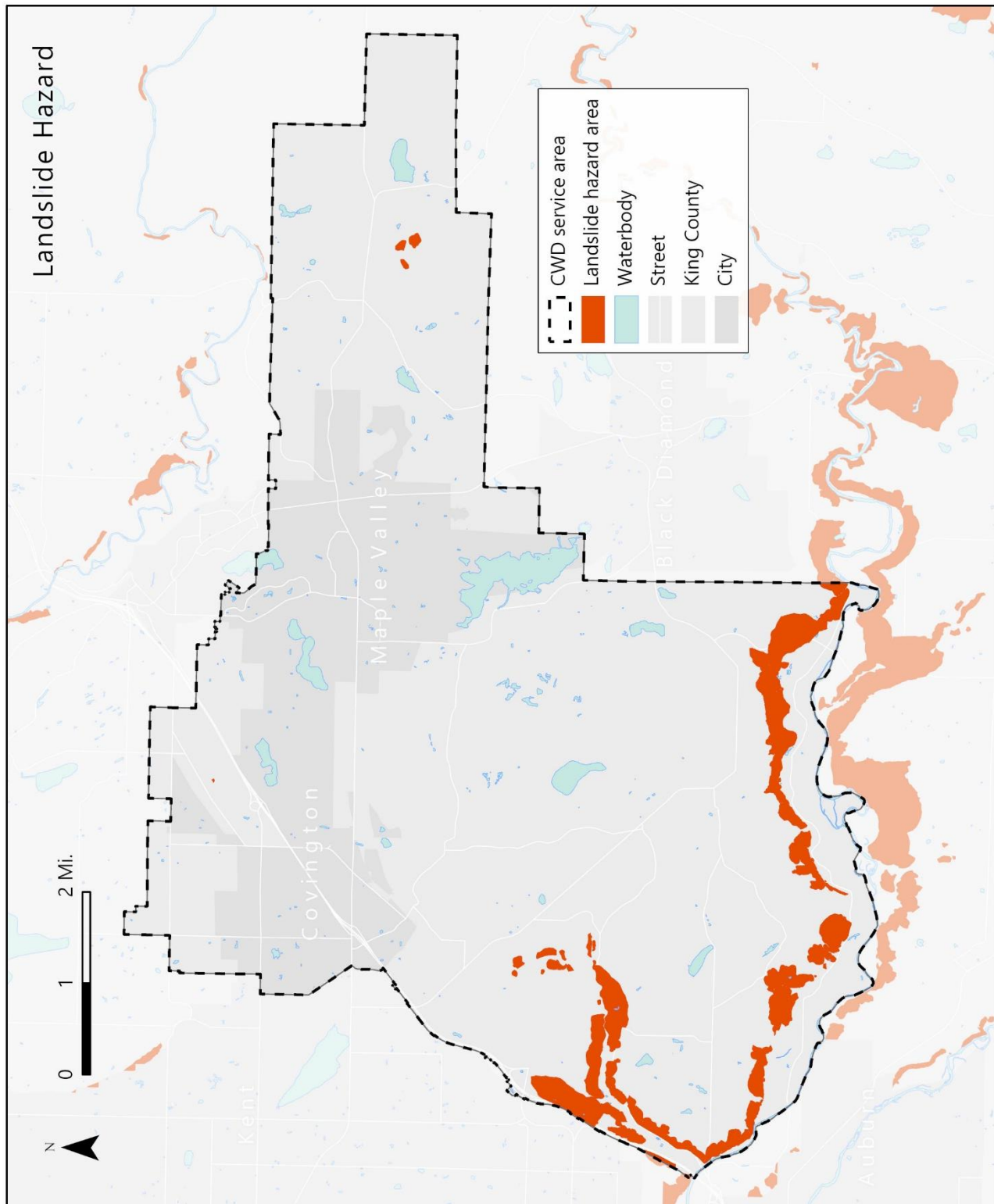


Data credit: Covington Water District, King County

Figure 3: Covington Water District Flood Hazard Map



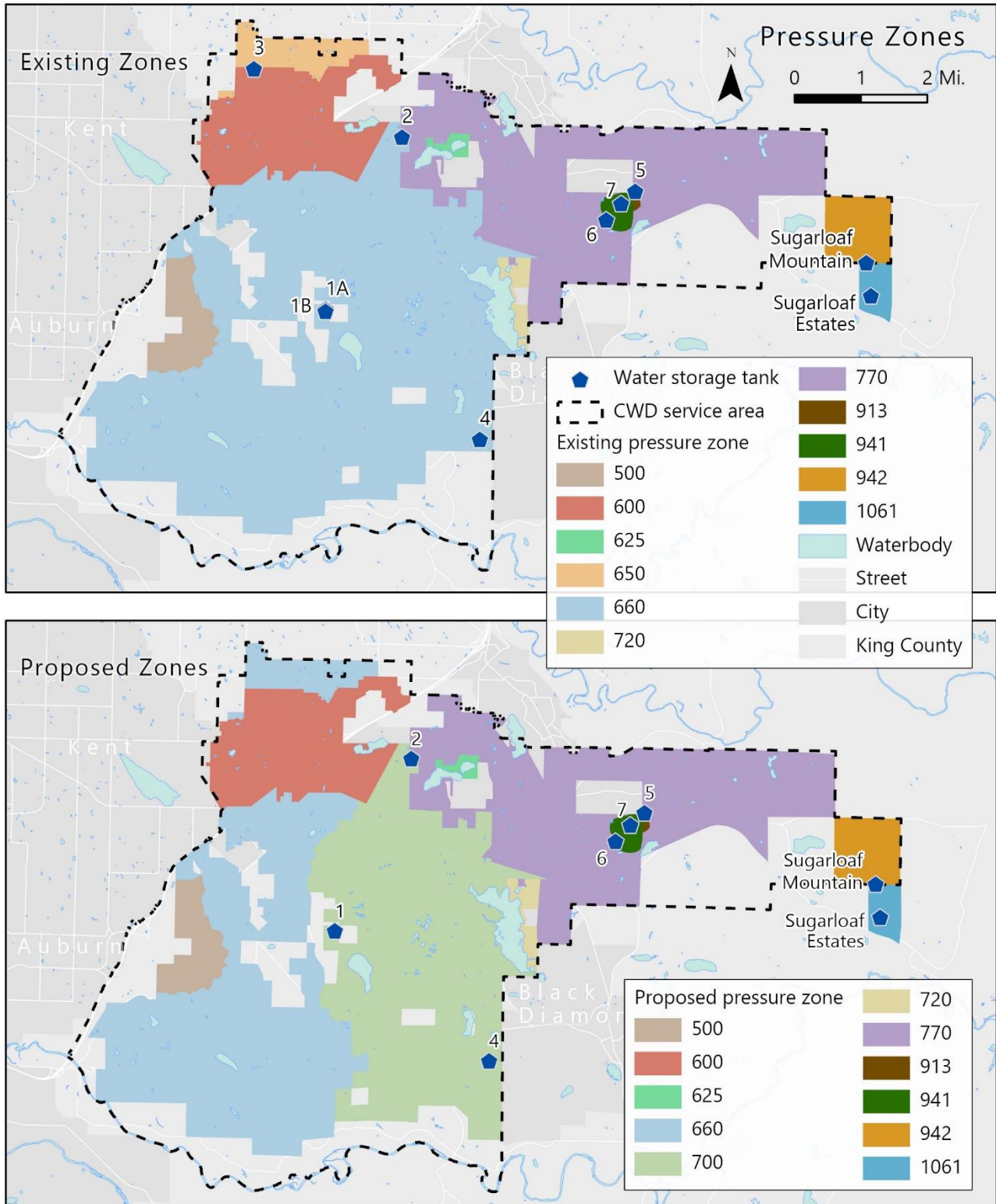
### Landslide Hazard Map



Data credit: Covington Water District, King County

Figure 4: Covington Water District Landslide Hazard Map

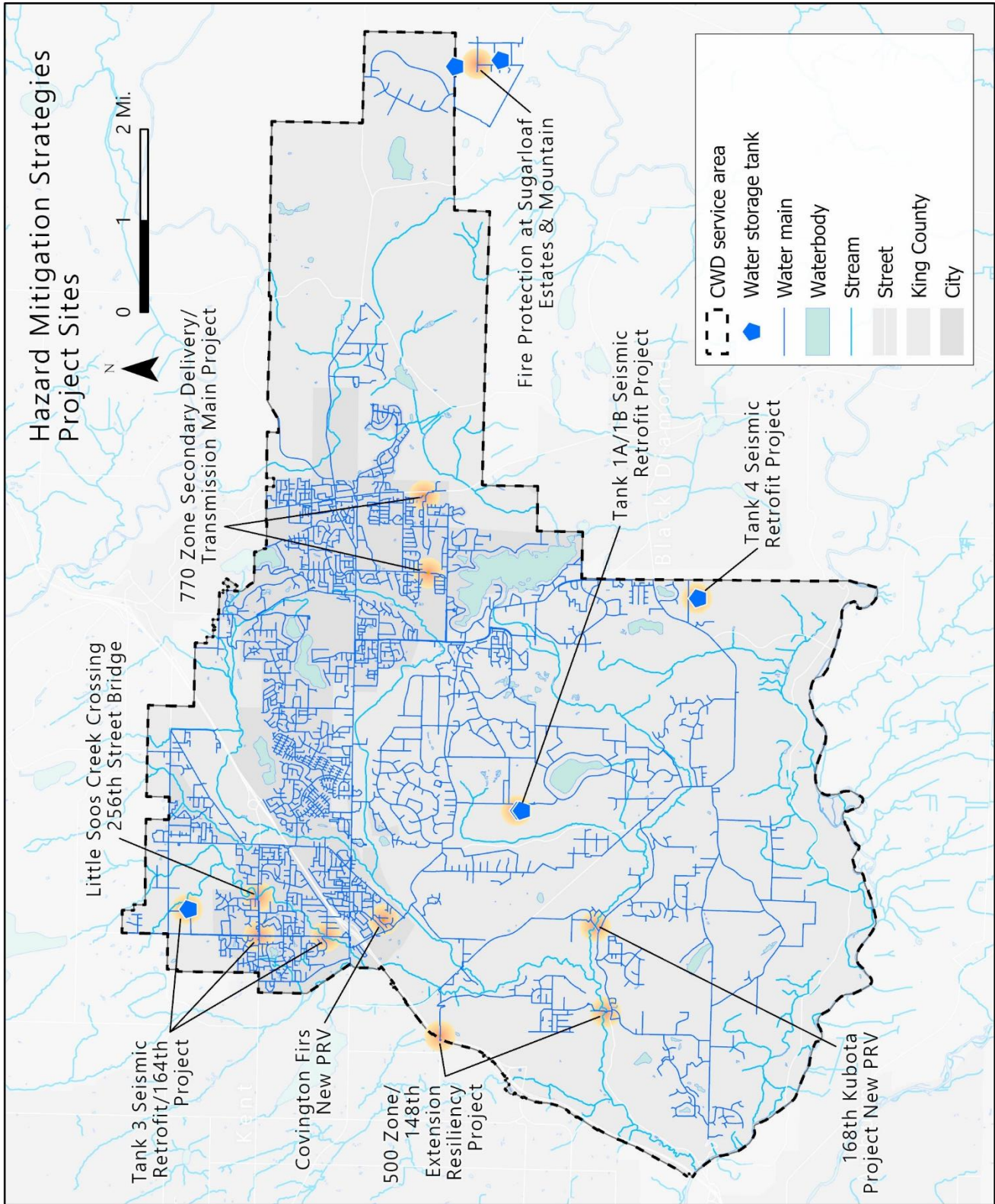
**Pressure Zones Map**



Data credit: Covington Water District, King County

Figure 5: Covington Water District Current and Proposed Pressure Zones

**Hazard Mitigation Strategies Project Sites**



Data credit: Covington Water District, King County

Figure 6: Covington Water District Hazard Mitigation Strategies Project Sites Map

### Assets at Risk

ASSET	VALUE (\$)	HAZARD SUMMARY	VULNERABILITY SUMMARY	IMPACT SUMMARY
<b>Tank 3</b>	\$3,500,000	Seismic Resiliency	District tanks are not seismically fit to withstand earthquakes. District tanks need to be retrofitted/ replaced to meet life safety codes.	Project will mitigate the potential water service disruption from earthquake. Mitigation of damage to nearby properties from flooding from stored water tank collapsing.
<b>Tank 4</b>	\$7,408,000	Seismic Resiliency	District tanks are not seismically fit to withstand earthquakes. District tanks need to be retrofitted/ replaced to meet life safety codes.	Project will mitigate the potential water service disruption from earthquake. Mitigation of damage to nearby properties from flooding from stored water tank collapsing. Potential loss of life also mitigated with project.
<b>Little Soos Creek Crossing at 256<sup>th</sup> Street Bridge</b>	\$1,000,000	Seismic and Liquefaction Resiliency	Flooding and seismic activity in King County typically impacts the District in the service area by potentially causing landslides, liquefaction impacting distribution systems along the path.	Project will reduce current hazardous risks to the district water main with current high event floods that occur through the culverts/ bridge. Mitigation project will also provide a more resilient water delivery on this major east – west distribution network for its existing customers.
<b>Tank 1A/1B</b>	\$9,016,000	Seismic Resiliency	District tanks are not seismically fit to withstand earthquakes. District tanks need to be retrofitted/ replaced to meet life safety codes.	Project will mitigate the potential water service disruption from earthquake. Mitigation of damage to nearby properties from flooding from stored water tank collapsing.
<b>Sugarloaf Water Storage</b>	\$3,000,000	Fire protection Resiliency	Access to water storage and pressure necessary for fire protection needs.	Residents living in this community and fire districts will have ample water supply and pressure to save property and lives if an event was to occur.
<b>Zone 500 Resiliency (Soos Creek Water Main Replacement)</b>	\$1,500,000	Flood and Landslide Resiliency	Flooding in King County typically impacts the District in the service area by potentially causing landslides, impacting distribution systems along the path of the flooding.	Project will mitigate the potential water service disruption from earthquake. Mitigation of damage to nearby properties from flooding from stored water tank collapsing.
<b>Secondary Transmission Main to 770 Zone</b>	\$3,000,000	Seismic Resiliency	District tanks are not seismically fit to withstand earthquakes. District tanks need to be	This is two projects: 1 <sup>st</sup> is Pebble Creek extension which will provide a secondary transmission to the 770 zone. 2 <sup>nd</sup> is 241 <sup>st</sup> extension which will provide a

			retrofitted/ replaced to meet life safety codes.	secondary transmission to the 770 zone also.
<b>Headquarters Admin Building</b>	\$500,000	Seismic and Cybersecurity	Evaluate existing and needed bldg. seismic issues, cybersecurity, trenching for new conduits for new security system	Would replace old building issues and provide a more secure facility post-earthquake. Presently, the existing building does not provide for current seismic codes. Additional security

## Plan Update Process

A planning team was assembled for the plan update, consisting of staff from the Covington Water District and use of various past studies completed by technical consultants for all projects in the plan.

The team conducted a planning process with staff and the board and also spoke to the plan at various events 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 staff assessed the vulnerability of buildings and infrastructure by the various hazard vulnerabilities. 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. The District planning process utilized asset assessment, risk assessment and strategies to prioritize work.

Covington Water District staff also participated in the multi-jurisdictional planning process led by King County by attending the following events, meetings and planning workshops:

- Mitigation Technical Workshop - 06/10/2019
- CSA Town Hall Outreach Event - 06/18/2019
- Regional Emergency Management Operations Committee meetings with City of Maple Valley staff and community partners (Quarterly)
- Staff met with Derrick Hiebert at King County (Renton, WA) to discuss planning process and additional update requirements on December 9<sup>th</sup>, 2019.
- Staff attended FEMA PDM workshops hosted at Camp Murray dated February 18<sup>th</sup>-20<sup>th</sup>, 2020.

### *District Planning Team*

NAME	TITLE	ORGANIZATION	CONTRIBUTION
<b>Tom Keown, PE</b>	General Manager	Covington Water District	Oversight and review
<b>Steve Lee, PE</b>	Engineering Manager	Covington Water District	CIP, review and long term planning
<b>Dan Sleeth</b>	Operations Manager	Covington Water District	Emergency management
<b>Emily McGinty</b>	GIS Technician	Covington Water District	GIS mapping

### Plan Update Timeline

PLANNING ACTIVITY	DATE	SUMMARY	ATTENDEES
<b>CWD's 2017-2026 Comprehensive Plan</b>	Approved by Board in May 2016 Approved by DOH in January 2017	Capital improvement projects and system deficiencies were identified and planned for in the plan. Staff includes policies applicable to vulnerabilities and principles for future development.	District Engineer, District Engineering Manager, Project Coordinator DOH Representative Neighboring jurisdictions and district partners
<b>King County Regional Hazard Mitigation Program meetings</b>	06/25/2019 07/25/2019 11/6/2019	Staff attended various staff meetings related to Hazard Mitigation Planning Efforts	General Manager, District Engineering Manager, Operations Manager
<b>Regional Emergency Management Committee</b>	Quarterly meetings coordinated by Shaunna Lee-Rice, City Clerk from City of Maple Valley	Engagement with neighboring jurisdictions	General Manager, District Engineering Manager, Operations Manager, Executive Assistant
<b>Regional Emergency Management Fairs</b>	Sept. 30 <sup>th</sup> , 2017 Sept. 29 <sup>th</sup> , 2018 Sept. 28 <sup>th</sup> , 2019	Engagement with neighboring jurisdictions, communities, businesses and citizens	Various staff representing all departments, community partners, community members, business owners
<b>City of Covington, WA Development Meetings</b>	Every four to six months	Engagement to coordinate with City and Soos Creek and Cedar River Water and Sewer Districts to review current and upcoming developments.	District Engineer, District Engineering Manager, Project Coordinator
<b>City of Maple Valley Economic Development Commission Meetings</b>	May 2018-April 2020 Attended regularly scheduled monthly two-hour meetings at either the City of Maple Valley City Hall or other city-designated meeting locations.	As Chair for the Maple Valley Economic Development Commission, staff was able to be an integral part of all economic development activities related to the City as an active, engaged subject matter expert representing utilities for the region.	District Program Manager-Community Engagement, Other Commission officers representing the community, city staff.
<b>City of Maple Valley's Development Meetings</b>	Every four to six months	Engagement to coordinate with City and Soos Creek and Cedar River Water and Sewer Districts to review current and upcoming developments.	District Engineer, District Engineering Manager, Project Coordinator
<b>WRIA 9 Watershed Plan Update</b>	Committees meet every 2 weeks; General WRIA 9 meets monthly.	The District is a board member with voting rights. Meet to revise Watershed Plan every 12 years, due to new regulations (i.e. well use, groundwater draw, etc.)	General Manager, District Engineering Manager

## Public Outreach

The District performed various public outreach during the plan update process. We utilized social media, Covington Water District website as well as provided information at public forums such as board meetings, the Regional Emergency Management Fairs, local public fairs and SEPA/NEPA Public Notice specific to the projects that have been proposed as strategic initiatives for this plan.

### Public Outreach Events

EVENT	DATE	SUMMARY	ATTENDEES
Website and Twitter Promotion	April 17-30 <sup>th</sup> , 2020	Placed draft Hazard Mitigation Plan Update as banner online for commenting	Public, Staff outreach via online presence
Available for Public Comment	April 17-30 <sup>th</sup> , 2020	Placed draft Hazard Mitigation Plan Update online for commenting	Public, Staff Outreach via online commenting option
Updates to Board	Quarterly	Every development project, CIPS, upcoming project budgets (6 years and 20 year) including to hazard mitigation strategy projects	Board of Commissioners, Public, Staff
Emergency Management Fairs	Sept. 30 <sup>th</sup> , 2017 Sept. 29 <sup>th</sup> , 2018 Sept. 28 <sup>th</sup> , 2019	Regional effort to educate community on emergency preparedness and management efforts being implemented by CWD and partner agencies	Community Partners, Staff, Public
Covington Days	July 15-16 <sup>th</sup> , 2017 July 22-23 <sup>rd</sup> , 2018 July 20-21 <sup>st</sup> , 2019	Local effort to educate community on emergency preparedness and management efforts being implemented by CWD and partner agencies	Community Partners, Staff, Public
Board Workshop/Meetings (Risk Specific)	Sept. 23, 2015 Oct. 05, 2016	Discussed infrastructure resiliency for systems with board, staff and public.	Board, Staff, Open to public
SEPA/NEPA Publications	June 21, 2019	Tank 4 SEPA/NEPA Public Notice	Public, Staff, Community

## Covington Water District Hazard Mitigation Plan

The Covington Water District Plan Annex Draft is available for review and comments.

In an effort to develop a long-term risk planning strategy for the District's water service area, this plan evaluates the existing system, potential vulnerabilities facing our systems, and its ability to meet the anticipated requirements for water source, quality, transmission, storage, and distribution over the five-year planning cycle.

Because of COVID-19 and Governor Inslee's Stay at Home Order, we will be providing the draft plan for public review via our website.

If you have additional questions or comments, please contact our Engineering Department, at (253) 867-0925 or email [steve.lee@covingtonwater.com](mailto:steve.lee@covingtonwater.com).

Thank you for your understanding as we work through this situation together.

Please visit CWD's document center for full draft.

The Covington Water District Plan Annex Draft will be available for review and comment until April 30, 2020.

Banner displayed on Covington Water District Website showcasing banner for public comment. April 2020



Regional Emergency Preparedness Fair  
Sept. 2018 and 2019

and the General Manager will work on business cases for the CIPs and present them in November. No action was taken.

**Water Supply and Resources Update.** Mike Amburgey gave a presentation on the District's water supply that included the regional water supply system (RWSS), District's ground water supply, seasonal operations, the green river filtration facility, District facilities and water right capacities, and 2015 weather impacts on system demands and supply. Amburgey took questions from the Board. No action was taken.

**Information Security / Security and Infrastructure Resiliency.** Kurt Zager gave a presentation on information security providing explanation that it is the protection of information from unauthorized access and use regardless of whether the information is stored as a physical or cyber security element; the need to establish a balance between security versus convenience; various types of security threats and protection measures; predicted types of future security threats and information security initiatives; identified the security committee staff and their roles and responsibilities. Zager took questions from the Board. No action was taken.

Due to time constraints, the Security and Infrastructure Resiliency presentation was deferred and will be presented at a regular board meeting in the future.

**Regional Water Cooperative of Pierce County (RWPCPC).** Larry Jones, President of the RWPCPC, gave a presentation on the Coop that provided historical information, membership requirements and statistics, current members, committee structures and their responsibility, Coalition Partners, the Coop's 2014-2015 budget information, and membership benefits and cost. Jones summarized the Coop membership benefits which included legislative and regional representation, regional wholesale water distribution, group purchasing and equipment sharing, mutual aid and access to critical information. Jones took questions from the Board. No action was taken.

**District Administrative Code (DAC) Chapters 4 & 5 – Recommended Revisions.** Steve Lee and Melanie Mesker presented recommended DAC revisions to sections 4.08.130 and 4.08.140 "To and Through Policy"; section 4.04.170 "Easements"; section 4.04.320 "Acceptance"; section 5.12.090 "No Resale of Water"; and sections 4.08.130 "Residential Main Extension" and 5.12.060 "Separate Meters – SFR" as it relates to ADUs. Lee also recommended making revisions to the District's Standards and Specifications for piping material and trench zone backfill. Lee took questions from the Board. Following discussion, the Board requested staff provide additional information and recommended DAC language at future meeting. No action was taken.

Board Workshop discussing District resiliency related to weather impacts, information security, security and infrastructure September 2015.

Attendees included Board, staff, and open to public.



## Overview of CWD Probability-Based Risk Assessment



Covington, King County, Washington  
5 October 2016

## Probability-based Risk Assessment

### CWD Assessment Scope

• Total Assets Considered	680
• Major Assets Identified	88
• Critical Assets Assessed	49
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• Total Threats Considered	44
• Critical Threats Assessed	23
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• T-A Pairs Assessed	29,920
• T-A Pairs Analyzed	249

October 5, 2016 Board Meeting: Presentation discussing district's risk assessments.  
Attendees included Board, staff, and open to public.



Covington Days July 2017, 2018 and 2019  
Covington, WA

## Covington Water District Hazard Mitigation Program

Hazard mitigation strategies were developed through a departmental communications process. The district leadership team met with to identify a comprehensive range of mitigation strategies. These strategies were then prioritized using a process established in-house and compared to the plan at the county level and documented in the base plan.

Hazard mitigation strategies related to water are essential. Clean, potable water is made accessible through strong infrastructure systems and efficiently and effectively run districts ensuring its accessibility for individuals and families remain a reliable necessity for resilience. The District plans for both the short and long term because we understand the risks in terms of what a disruption could do to property, economy, natural systems, infrastructure systems, operations and the populations we serve that would likely suffer losses or have long time recovery times from a disaster. Without water, communities cannot eat, sanitize, fight fires, take care of their people, let alone run businesses or maintain their lives regularly.

### 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, Covington Water 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.

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. Covington Water District has submitted for potential grant funding through FEMA PDM opportunities and will continue to apply for funding that may be applicable to District projects.

The next King County Hazard Mitigation plan update is expected to be due in April 2025. Covington Water District plans to submit our letter of intent by 2023, at least two years prior to plan expiration.

### King County Hazard Mitigation

#### 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 Neighborhoods**

## Mitigation Program

In the past the King County Hazard Mitigation Plan (2009 and 2014) was used as a high level hazard mitigation plan to identify projects with it's various risks and was integrated along with the Covington Water District capital facilities planning including the District's 6 and 20 year capital project list during bi-annual budgeting. In addition, the King County Hazard Mitigation Plan is referenced and used as a guide with the District's Water System Plan that is updated every 10 years. The District Water System Plan is a planning document that analyzes best available projections of future growth and how it may affect potable water consumption and demands. Future growth needs coupled with hazards mitigation and resilience solutions would rank projects forward in the District's capital project budgeting. The Covington Water District planning vision includes evaluating infill projects that meet triple bottom line components that would be propagated quicker ahead in the capital facilities planning and budgeting. Starting July 2020, the District will further cross reference the King County Hazard Mitigation Plan and analyze natural hazards as they relate to District assets based upon requirements of the American Water Infrastructure Act of 2018 (AWIA). The AWIA Act follows the risk and resilience assessment that ranks in detail District assets at risk that includes cyber attacks. After the assessment following the J-100 AWWA process is completed the District Emergency Response Plan will be revised accordingly and come full circle with additional future modifications to future Covington Water District Annex Plan to be included with the future KCHMP.

## Continued Public Participation

King County and its partner cities already maintains substantial public outreach capabilities, focusing on personal preparedness and education. As a special purpose district that provides an essential service to the communities we serve, Covington Water District will regularly engage with our jurisdictional partners in public outreach efforts. 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-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, Covington Water District will participate in public tours of mitigation projects to allow community members to see successful mitigation in action.




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Turbine Open House –  
November 1, 2018:  
The Covington Water District Turbine Project was part of a new intertie project with the Tacoma Water System to improve the 660 pressure zone. The District installed a water turbine in the new C-3 intertie to capture energy and generate electricity that would otherwise be lost to the environment.

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## Hazard Mitigation Authorities, Responsibilities, and Capabilities

The District will begin the process of updating the water system plan soon (2020-2022). The District is currently working to update the District Emergency Response Plan in 2020 in accordance with America’s Water Infrastructure Act (AWIA) of 2018. Since Covington Water District is its own Municipal Corporation, it is responsible for all hazard mitigation efforts within its water system’s service boundaries.

### *Plans and Agency Responsible for Hazard Mitigation Plan*

PLAN TITLE	RESPONSIBLE AGENCY	POINT OF CONTACT	RELATIONSHIP TO HAZARD MITIGATION PLAN
<b>Covington Water District’s Comprehensive Water Plan</b>	Covington Water District Engineering Department	Engineering Manager	Includes policies applicable to sensitive areas and principles for future development.
<b>Covington Water District’s Comprehensive Emergency Management Plan</b>	Covington Water District All Hazards Safety Committee	District Emergency Officer/ Operations Manager	Comprehensive Emergency Plan currently include mitigation approaches with roles/ responsibilities of District departments and community partners
<b>Covington Water District’s Annual Operations Plan</b>	Covington Water District Operations Department	Operations Manager	Identifies critical infrastructures and major programs related to the repair and replacement of District assets
<b>Covington Water District’s Annual Budget</b>	Covington Water District Leadership Team	General Manager	Day to day operations and training to help prepare staff for emergency efforts. With an efficient and effective budget in place, the District will be able to recognize potential hazard areas investment areas.
<b>Covington Water District’s Asset Management Plan</b>	Covington Water District General Admin and Leadership Teams	General Manager	Utilizes data related to infrastructure asset management to plan ahead to ensure system can withstand potential hazards and long term viability.

Below are the programs, policies and processes in which the District has in place to ensure that all critical infrastructure are built to meet the needs to withstand potential hazards that the service area are at risk to.

*Programs, Policies, and Processes*

PROGRAM/POLICY	RESPONSIBLE AGENCY	POINT OF CONTACT	RELATIONSHIP TO HAZARD MITIGATION PLAN
<b>Building Codes</b>	City of Maple Valley, WA; City of Covington, WA; King County, WA; Covington Water District's District Administrative Code	Engineering Manager, Building Officials and Planning Departments	District facilities will be built to current standards so facilities will withstand hazards and are long lasting.
<b>Emergency Management Program</b>	Covington Water District All Hazards Committee	Operations Manager and District Emergency Management Officer	Ensure staff will be trained to be prepared for regional disaster response.
<b>CWD Designs and Specifications</b>	Covington Water District Engineering Department	Engineering Manager	Includes requirements to ensure all new water system components are designed and built to a consistent standard
<b>Fire Flow Requirements</b>	Fire Districts in Service Area	Fire Marshal of various Fire Districts	District works with fire marshals to ensure all fire flows and pressures are sufficient for fire protection needs

Since Covington Water District is its own Municipal Corporation, it is responsible for all hazard mitigation efforts within its water system's service boundaries.

*Entities Responsible for Hazard Mitigation*

AGENCY/ORGANIZATION	POINT OF CONTACT	RESPONSIBILITY(S)
<b>Covington Water District (Agency)</b>	General Manager	General day-to-day operations and management of the District. Public Information Officer for District.
<b>Engineering Team</b>	Engineering Manager	Facilitator and reviewer of the Covington Water District Hazard Mitigation Plan portion.
<b>Operations Team</b>	Operations Manager	Emergency Management Officer and coordination with local jurisdictions and partners.

## National Flood Insurance Program

Covington Water District is not participating in the National Flood Insurance Program (NFIP). Communities serviced by the District such as Cities of Auburn, WA, City of Kent, WA and King County, WA are participants of NFIP and Community Rating System (CRS). Questions related to floodplain management related to the District should be sent to Steve Lee, PE, Covington Water District's Engineering Manager.

### *National Flood Insurance Program Compliance*

<b>What department is responsible for floodplain management in your community?</b>	District's Engineering Department
<b>Who is your community's floodplain administrator? (title/position)</b>	Engineering Manager
<b>When was the most recent Community Assistance Visit or Community Assistance Contact?</b>	None
<b>Does your community have any outstanding NFIP compliance violations that need to be addressed? If so, please state what they are?</b>	No, not applicable.
<b>Do your flood hazard maps adequately address the flood risk within your community? If so, please state why.</b>	Yes, we have been working in coordination with King County and property owners to redo the pipe that was damaged and is currently out of commission.
<b>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?</b>	No
<b>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?</b>	No
<b>How many Severe Repetitive Loss (SRL) and Repetitive Loss (RL) properties are located in your jurisdiction?</b>	SRL: 2 events RL: 1 property
<b>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?</b>	No. The District is not interested in pursuing buyouts of flood prone properties.

## Hazard Mitigation Strategies

The District made progress in mitigation projects over the past five years. For a medium sized district, some of the accomplishments to date include completing a no-structural seismic retrofit of the District’s Headquarters facilities and installing a back-up generator at the Tank 2 Booster Pump Station. Significant progress will be made in the five years to come, with many of the Hazard Mitigation Plan projects in the design queue with funding planned for construction. Covington Water District will continue to move projects towards completion that are identified in this plan.

### *2015 Hazard Mitigation Strategy Status*

STRATEGY	DESCRIPTION	PRIORITY	STATUS
<b>Hazard Mitigation Strategy</b>	Continue to support KC Hazard Mitigation Program county-wide initiatives	Low	Ongoing – will carry over to new plan.
<b>Hazard Mitigation Maintenance Strategy</b>	Participate in the KC Hazard Mitigation Program maintenance strategy	Low	Completed.
<b>Tank 3 Structural Seismic Retrofit</b>	Perform structural seismic retrofit to Tank 3.	High	Not complete - will carry over to new plan. 2021 estimated completion date.
<b>Tank 4 Structural Seismic Retrofit</b>	Perform structural seismic retrofit to Tank 4.	High	Not complete - will carry over to new plan.
<b>Soos Creek Water Main Replacement Project</b>	Relocate Soos Creek water main crossing out of floodway and landslide prone area. Main was damaged and is currently out of commission.	Medium	Not complete - will carry over to new plan.
<b>Non-Structural Seismic Retrofit of District Headquarters</b>	Perform non-structural seismic retrofit of District Headquarters.	Low	Completed.
<b>Generator for Tank 2 Booster Pump Station</b>	Installed a backup generator at the Tank 2 Booster Pump Station	Low	Completed.

In revisiting of this plan, several strategies have been updated and revised for inclusion in the 2020-2025 King County Hazard Mitigation Plan. We will continue to monitor the progress of each program during our annual review of the District’s portion of the plan.

### *2020 Hazard Mitigation Strategies*

STRATEGY	LEAD AGENCY/POC	TIMELINE	PRIORITY
<b>Hazard Mitigation Strategy</b>	Covington Water District/ Engineering Manager	2020-2025	Medium
<b>Tank 3 Structural Seismic Retrofit</b>	Covington Water District/ Engineering Manager	2021-2025; Started pre-planning phase.	High
<b>Tank 4 Structural Seismic Retrofit</b>	Covington Water District/ Engineering Manager	2021-2025; Currently in design phase.	High
<b>Little Soos Creek Crossing at 256<sup>th</sup> Street Bridge</b>	Covington Water District/ Engineering Manager	2021-2025	Medium
<b>Tank 1A/1B Seismic Retrofit</b>	Covington Water District/ Engineering Manager	2020 Design Completion; 2020-2022 Construction.	High
<b>500 Zone Resiliency Project (Soos Creek Water Main Replacement)</b>	Covington Water District/ Engineering Manager	2020-2021; Currently at 30% design.	Medium/High
<b>Fire Protection Strategy at Sugarloaf Estates and Mountain</b>	Covington Water District/ Engineering Manager	2023-2025	Low
<b>770 Zone Secondary Delivery/Transmission Main/PRV</b>	Covington Water District/ Engineering Manager	2023-2027	Medium



## Hazard Mitigation Strategy

<p>Lead Points of Contact (Title)</p> <p><b>Covington Water District Engineering Manager</b></p>	<p>Partner Points of Contact (Title)</p> <p><b>Cities of Kent, Covington, Maple Valley, Auburn; King County, WA; DOH; King County Office of Emergency Management</b></p>	<p>Hazards Mitigated / Goals Addressed</p> <p><b>Goals 1-14; Without water, none of these goals can be met.</b></p>	<p>Funding Sources and Estimated Costs</p> <p><b>District Funds \$200,000</b></p>
<p>Strategy Vision/Objective</p> <p><b>King County, regional and District priorities change regularly to meet the needs of the customers and demands of supplying water to residents, businesses and community. Covington Water District’s vision and mission is to supply clean, potable water efficiently and effectively to our customers 24/7/365. Add tank seismic valves, bridge seismic valves for creek crossings and BNSF railroad crossings.</b></p>			
<p>Mitigation Strategy</p> <p><b>District staff will continue to support county-wide initiatives identified in the King County Hazard Mitigation Plan. Staff will communicate regularly with King County’s Office of Emergency Management and attend any relevant meetings related to the regular update of this plan and any other risk assessment meetings, workshops, or education opportunities made available to the district.</b></p>			
<p>2-Year Objectives</p> <p><b>Annually review hazard mitigation goals and projects to ensure that projects are moving forward. Update projects and plan as needed.</b></p>	<p>5-Year Objectives</p> <p><b>Annually review hazard mitigation goals and projects to ensure that projects are moving forward. Update projects and plan as needed.</b></p>	<p>Long-Term Objectives</p> <p><b>To address the goals and projects identified in the plan to mitigate hazards and increase resiliency when incidents do arise.</b></p>	
<p>Implementation Plan/Actions</p> <p><b>District staff will continue to support county-wide initiatives identified in the King County Hazard Mitigation Plan. Staff will communicate regularly with King County’s Office of Emergency Management and attend any relevant meetings related to the regular update of this plan and any other risk assessment meetings, workshops, or education opportunities made available to the district. Staff will regularly meet with partner agencies to stay aware of hazard mitigation opportunities</b></p>			
<p>Performance Measures</p> <p><b>Planning, design, budget/business case strategy, and actual start and finish construction costs.</b></p>			

### Tank 3 Structural Seismic Retrofit

<p>Lead Points of Contact (Title)</p> <p><b>Covington Water District Engineering Manager</b></p>	<p>Partner Points of Contact (Title)</p> <p><b>Lake Meridian Water District</b></p>	<p>Hazards Mitigated / Goals Addressed</p> <p><b>1, 2, 3, 5, 6, 8, 12, 14</b></p>	<p>Funding Sources and Estimated Costs</p> <p><b>District Funds; \$3,500,000</b></p>
<p>Strategy Vision/Objective</p> <p><b>Project is related to the 164<sup>th</sup> Avenue SE, Tank 3 and Tank 4 projects. The 164<sup>th</sup> Avenue SE 12-inch main extension would allow connectivity between the old 650 Zone to the existing 660 Zone. The 650 Zone will be increased to the 660 Zone without dramatically increasing pressures and causing other pressure problems, but must be connected to the existing 12-inch main near 164<sup>th</sup> Avenue SE and 272<sup>nd</sup> Street intersection immediately across the street of Covington Library. Additionally, 2 new pressure reducing valves (PRVs) must be installed along with zone valves to separate portions of the 600 Zone distribution piping. Upon completion of the proposed 164<sup>th</sup> Avenue SE main, Tank 3 can be deleted along with the booster pump station.</b></p>			
<p>Mitigation Strategy</p> <p><b>Retrofit can include construction of a new tank, but a replacement project tying the 164<sup>th</sup> water main project is a better long term strategy since a new Tank 1 and Tank 4 will provide more efficient delivery of water without pumping and better seismic resiliency to the 660 zone and revised 650 zone. PRVs from the 164<sup>th</sup> water main will connect to the 600 zone to provide demand. Upon completion of the new Tanks 1 and 4, and lastly the 164<sup>th</sup> water main extension for the 12-inch pipe, the Tank 3 can be removed thereby removing the seismic issues for the District's entire 660 zone.</b></p>			
<p>2-Year Objectives</p> <p><b>Complete design in 2023. Start construction in 2024. Complete construction in 2025.</b></p>	<p>5-Year Objectives</p> <p><b>Complete design in 2023. Start construction in 2024. Complete construction in 2025.</b></p>	<p>Long-Term Objectives</p> <p><b>Maintain the new 164<sup>th</sup> water main and hydrants as part of the District's valve and hydrant maintenance programs.</b></p>	
<p>Implementation Plan/Actions</p> <p><b>2023 Planning for budget and start design only after Tank 1 and 4 is completed. 2024 Complete design and start construction at end of year only if Tank 1 or 4 are completed. 2025 Start and complete by end of year the Tank 3 retrofit/deletion.</b></p>			
<p>Performance Measures</p> <p><b>Planning, design, budget/business case strategy, and actual start and finish construction costs.</b></p>			

## Tank 4 Structural Seismic Retrofit

<p>Lead Points of Contact (Title)</p> <p><b>Covington Water District Engineering Manager</b></p>	<p>Partner Points of Contact (Title)</p> <p><b>Property owners near Tank 4 Site, businesses and residents being serviced by Tank 4</b></p>	<p>Hazards Mitigated / Goals Addressed</p> <p><b>1, 2, 3, 5, 6, 8, 12, 14</b></p>	<p>Funding Sources and Estimated Costs</p> <p><b>District Funds and potential FEMA PDM Grant; \$7,408,000</b></p>
<p>Strategy Vision/Objective</p> <p><b>Structural retrofits to buildings and infrastructure to higher seismic standards can save lives and property and dramatically speed post-disaster recovery. The project will provide improved water pressure, fire protection capabilities, and water quality to the residents and businesses the District serves.</b></p>			
<p>Mitigation Strategy</p> <p><b>Build a new tank to retrofit the existing tank. New tank construction will provide multiple advantages as compared to the old tank. Due to higher pressure and fire suppression requirements, not all the water stored in the tank is usable. Water in the tank must be stored at an elevation necessary to reach the 660 Pressure Zone for gravity flow to function property. Only approximately 1.1 MG of the 4 MG is currently usable. The remaining water requires adequate measures to ensure that the relatively large volume is turned over frequently to prevent water quality problems, requiring higher levels of monitoring and management for chlorine decay. Upgrade of Tank 4 will bring the tank up to the seismic and fire protection regulatory and building requirements. The proposed 1.5 MG composite elevated welded steel tank will be constructed with a reinforced concrete base column supporting it. The proposed storage height will increase the water level elevation to meet the 700 Pressure Zone requirements and maintaining the minimum required regular pressure, 30 pounds per square inch (psi) and 20 psi for emergencies.</b></p>			
<p>2-Year Objectives</p> <p><b>Complete design in 2020-2021. Start construction if funding is available.</b></p>	<p>5-Year Objectives</p> <p><b>Start and complete construction of Tank 4.</b></p>	<p>Long-Term Objectives</p> <p><b>Maintain the structure with repainting and regular seismic and structural inspections.</b></p>	
<p>Implementation Plan/Actions</p> <p><b>Dependent on funding, project may be started in 2020 or 2021.</b></p> <p><b>Design work completed; bidding process (one month); construction start (with approximately 14<sup>th</sup> month duration); site restoration, project completion, and regular inspections and maintenance.</b></p>			
<p>Performance Measures</p> <p><b>Planning, design, budget/business case strategy, and actual start and finish construction costs.</b></p>			

## Little Soos Creek Crossing @ 256<sup>th</sup> Street Bridge

<p>Lead Points of Contact (Title)</p> <p><b>Covington Water District Engineering Manager</b></p>	<p>Partner Points of Contact (Title)</p> <p><b>City of Covington (City Engineer and City Project Manager)</b></p>	<p>Hazards Mitigated / Goals Addressed</p> <p><b>1, 2, 3, 5, 6, 8, 12, 14</b></p>	<p>Funding Sources and Estimated Costs</p> <p><b>District Funds; \$1,000,000</b></p>
<p>Strategy Vision/Objective</p> <p><b>CWD shall work in conjunction with the City of Covington to remediate the 256th Street Bridge. Replacement of the bridge shall include replacing the exiting 10-in cast iron water main currently servicing the 600 zone. This critical main should include installation of seismic valves on both sides of the bridge due to potential liquefaction of soils and bridge seismic movement. In the past 16 years more current structural seismic codes as well as raising the bridge to provide recommended free board debris clearances would bring the bridge into compliance for life safety. This project will reduce current hazardous risks to the district water main with current high event floods that occur through the culverts/bridge. Replacement of the water main along with the City’s anticipated bridge replacement would provide a more resilient water delivery on this major east – west distribution network in the 600 zone for its existing customers.</b></p>			
<p>Mitigation Strategy</p> <p><b>CWD staff and consultants recommend the construction a new water main with restrained joints for a minimum of 500-ft to the east and 500-ft to the west of the replaced bridge. In addition, seismic valves able to withstand at least the 100 year seismic event should be designed and installed. Planning/budgeting, design and construction are major milestones to achieve. The project is being funded by district funds and does not include federal or state funding.</b></p>			
<p>2-Year Objectives</p> <p><b>Complete design in 2020/2021. Start construction in 2022/2023. Complete construction in 2023/2024.</b></p>	<p>5-Year Objectives</p> <p><b>Complete construction by 2025 but in conjunction with City of Covington grant for the bridge construction</b></p>	<p>Long-Term Objectives</p> <p><b>Maintain the structure with inspections, hydrant painting and valve exercising activities.</b></p>	
<p>Implementation Plan/Actions</p> <p><b>2021- Complete design work 2022/2023- Start construction 2023- Construction completed (best case scenario but also is reliant on City gaining their bridge building budget)</b></p>			
<p>Performance Measures</p> <p><b>Planning, design, budget/business case strategy, and actual start and finish construction costs.</b></p>			

## Tank 1A/1B Seismic Retrofit

<p>Lead Points of Contact (Title)</p> <p><b>Covington Water District Engineering Manager</b></p>	<p>Partner Points of Contact (Title)</p> <p><b>District staff, customers, businesses and community partners being served by the District.</b></p>	<p>Hazards Mitigated / Goals Addressed</p> <p><b>1, 2, 3, 5, 6, 8, 12, 14</b></p>	<p>Funding Sources and Estimated Costs</p> <p><b>District Funds; \$9,016,000</b></p>
<p>Strategy Vision/Objective</p> <p><b>CWD currently operates nine reservoirs. It was concluded that Tanks 1A and 1B does not meet current standards. In the past 16 years, codes have been revised and thus the two tanks have remained noncompliant to seismic life safety codes. This project will reduce hazard risks to the district, staff and its customers.</b></p>			
<p>Mitigation Strategy</p> <p><b>CWD staff and consultants recommend the construction a new 6.1 MG tank to replace the existing Tanks 1A and 1B. Construction of this tank will increase storage for the 660 Pressure Zone and will also allow CWD to take the existing, seismically deficient tanks out of service. Per the preliminary design phase, CWD anticipates that this tank will be approximately 105-feet tall to the overflow and 99-feet in diameter and will be constructed of welded steel. CWD will be designing a water main connection to the system and Tacoma Water’s Regional Water Supply System by a separate contract. The project is being funded by district funds and does not include federal or state funding.</b></p>			
<p>2-Year Objectives</p> <p><b>Complete design in 2020. Start construction in 2021. Complete construction in 2023.</b></p>	<p>5-Year Objectives</p> <p><b>Complete design in 2020. Start construction in 2021. Complete construction in 2023.</b></p>	<p>Long-Term Objectives</p> <p><b>Maintain the structure with repainting and regular seismic and structural inspections.</b></p>	
<p>Implementation Plan/Actions</p> <p><b>2020- Complete design work 2021- Purchase adjacent lot; start construction. 2023- Construction completed. And beyond – Inspections and maintenance of structure regularly.</b></p>			
<p>Performance Measures</p> <p><b>Planning, design, budget/business case strategy, and actual start and finish construction costs.</b></p>			

## 500 Zone Resiliency Strategy (Soos Creek Water Main Replacement)

<p>Lead Points of Contact (Title)</p> <p><b>Covington Water District Engineering Manager</b></p>	<p>Partner Points of Contact (Title)</p> <p><b>Fire districts, landowners, customers served by the 500 Zone, Lake Meridian Water and Sewer District</b></p>	<p>Hazards Mitigated / Goals Addressed</p> <p><b>1, 2, 3, 5, 6, 8, 12, 14</b></p>	<p>Funding Sources and Estimated Costs</p> <p><b>District Funds; \$1,500,000</b></p>
<p>Strategy Vision/Objective</p> <p><b>Construction of the 12-inch water main and a PRV station will provide fire flow to existing customers, new development opportunity, as well as provide additional resilience to the 500 pressure zone.</b></p>			
<p>Mitigation Strategy</p> <p><b>The previous secondary transmission line that provided past redundancy to the 500 zone was damaged due to landslide issues along the Big Soos Creek in late 1980's through 2002. This project will relocate and replace the redundancy provided by the last transmission line to the 500 zone area and increase fire protection flows requested by the fire districts. This creek crossing water main has historically failed multiple times due to moving thalweg conditions and earth sliding movement. An alternative route is being proposed thru 148<sup>th</sup> Lane to work in concert with private landowners without water service, the Pacific Raceways and connecting to the new intertie with Water District 111 (now Lake Wilderness Water District) to the north. Construction of the 12-inch water main and a PRV station will provide fire flow to existing customers as well as provide additional resilience to the 500 pressure zone.</b></p>			
<p>2-Year Objectives</p> <p><b>2020 - Currently at 30% design. 2021 - Project in conjunction with Soos Creek Mitigation crossing project</b></p>	<p>5-Year Objectives</p> <p><b>2020 - Currently at 30% design. 2021 - Project in conjunction with Soos Creek Mitigation crossing project</b></p>	<p>Long-Term Objectives</p> <p><b>Provide fire flow to 500 Zone; Continue providing a secondary source to the 500 Zone.</b></p>	
<p>Implementation Plan/Actions</p> <p><b>2020 –The District will continue to collect revenues to complete design and construction of the project. Design will be completed. 2021 - The District will enter into a private developer agreements with future Pacific Raceways' expansion. Construction to be completed. 2021 and beyond – Continue to maintain long term objectives listed above.</b></p>			
<p>Performance Measures</p> <p><b>Planning, design, budget/business case strategy, and actual start and finish construction costs.</b></p>			

## Fire Protection Strategy at Sugarloaf Estates and Mountain

<p>Lead Points of Contact (Title)</p> <p><b>Covington Water District Engineering Manager</b></p>	<p>Partner Points of Contact (Title)</p> <p><b>Fire districts and residents of Sugarloaf Community</b></p>	<p>Hazards Mitigated / Goals Addressed</p> <p><b>1, 2, 3, 5, 6, 8, 12, 14</b></p>	<p>Funding Sources and Estimated Costs</p> <p><b>District Funds; \$3,000,000</b></p>
<p>Strategy Vision/Objective</p> <p><b>Provide needed storage to existing Sugarloaf customers, link two systems and provide a more resilient water delivery. One of the systems is aging and in needed of replacement and additional storage. Connection through an additional storage tank and connected distribution system would provide better operational options.</b></p>			
<p>Mitigation Strategy</p> <p><b>Planning, design and construction of a new tank and distribution system would remedy low pressure and flows in the system. Current system to Sugarloaf Estates is for domestic flows only. If new homes need to be constructed or irrigation usage increases, then the system cannot provide any new supply. Construction of the tank will also provide adequate domestic use storage to the homes. Construction will provide additional operational pumping changes that will not tax the Qi rate of the wells. Currently the existing demands may be exceeded and post construction the pumping can be completed during non-peak demand periods in the day.</b></p>			
<p>2-Year Objectives</p> <p><b>2023- Acquire property or easement for future tank</b>  <b>2024- Plan new tank budgeting through District rates and cash savings</b>  <b>2025- Once the budget is available the District will post a RFP to design the tank and distribution main connection project.</b></p>	<p>5-Year Objectives</p> <p><b>2025 - Once the budget is available the District will post a RFP to design the tank and distribution main connection project.</b>  <b>2026 to 2027 – Bid and construct the project.</b></p>	<p>Long-Term Objectives</p> <p><b>2027 and Beyond – Manage system storage with adequate storage.</b></p>	
<p>Implementation Plan/ Actions</p> <p><b>2023- Acquire property or easement for future tank</b>  <b>2024- Plan new tank budgeting through District rates and cash savings</b>  <b>2025- Once the budget is available the District will post a RFP to design the tank and distribution main connection project.</b>  <b>2026 to 2027 – Bid and construct the project.</b>  <b>2027 and Beyond – Manage system storage with adequate storage.</b></p>			
<p>Performance Measures</p> <p><b>Acquire properties, Planning, design, budget/business case strategy, and actual start and finish construction costs.</b></p>			

## 770 Zone Secondary Delivery/Transmission Main Strategy

<p>Lead Points of Contact (Title)</p> <p><b>Covington Water District Engineering Manager</b></p>	<p>Partner Points of Contact (Title)</p> <p><b>City of Maple Valley, City of Ravensdale, and Cedar River Water and Sewer.</b></p>	<p>Hazards Mitigated / Goals Addressed</p> <p><b>1, 2, 3, 5, 6, 8, 12, 14</b></p>	<p>Funding Sources and Estimated Costs</p> <p><b>District Funds; \$3,000,000</b></p>
<p>Strategy Vision/Objective</p> <p><b>Provide secondary supply to Maple Valley downtown which is the District’s 770 zone. Add distribution flows and reduce velocities during summer peak day demand periods. Reduce wear and tear on only point of delivery currently available.</b></p>			
<p>Mitigation Strategy</p> <p><b>Plan, budget, design and construct two new projects that crosses existing BNSF and BPA ROW or easements. 1<sup>st</sup> project is the Pebble Creek water main project that will cross below existing BNSF / BPA properties or easements. The 2<sup>nd</sup> project is the 241<sup>st</sup> Street water main extension project that will cross below existing BNSF / BPA properties or easements as well as a King County Parks property. Both in the past required extensive permitting to acquire so the secondary supply to the zone / Maple Valley was never built.</b></p>			
<p>2-Year Objectives</p> <p><b>Gain permits by end of 2021 for Pebble Creek Extension project</b></p>	<p>5-Year Objectives</p> <p><b>2023-Construct Pebble Creek Project 2024- Gain permits for 241<sup>st</sup> Extension project 2026- Construct 241<sup>st</sup> Street Extension project</b></p>	<p>Long-Term Objectives</p> <p><b>Eliminate excessive pipe velocities that currently may shear pipe walls and reduce life of the pipe. Provide additional flows to the Maple Valley and above pressure zones.</b></p>	
<p>Implementation Plan/ Actions</p> <p><b>2021- Gain permits by end of 2021 for Pebble Creek Extension project 2023-Construct Pebble Creek Project 2024- Gain permits for 241<sup>st</sup> Extension project 2026- Construct 241<sup>st</sup> Street Extension project</b></p>			
<p>Performance Measures</p> <p><b>Planning, design, budget/business case strategy, and actual start and finish construction costs.</b></p>			