

**NORTH CITY WATER DISTRICT
RESOLUTION 2020.05.20
A RESOLUTION APPROVING AND ADOPTING THE NCWD PLAN ANNEX TO THE
UPDATED KING COUNTY HAZARD MITIGATION PLAN, AS APPROVED BY
THE FEDERAL EMERGENCY MANAGEMENT AGENCY**

Background

A. King County and North City Water District support disaster mitigation efforts and regional disaster planning.

B. A locally adopted plan reviewed and approved by Federal Emergency Management Agency (FEMA) is required under the Mitigation Act of 2000.

C. In October 2004, the King County Council approved the County's initial five-year Regional Hazard Mitigation Plan. Shoreline Water District adopted this plan on August 17, 2004 by Resolution 2004.08.31.

D. In December 2009, the King County Council approved the update of the Regional Hazard Mitigation Plan.

E. In March of 2015, King County Council approved another update of the Regional Hazard Mitigation Plan. FEMA approved the Regional Plan on May 1, 2015. An updated plan is now required to comply with the Disaster Mitigation Act of 2000.

F. King County and other jurisdictions within King County have a cooperative interest in disaster mitigation planning efforts. District staff have been meeting since mid-2019 and have submitted a draft plan annex to FEMA for review. Review comments from FEMA requested:

- i. Process how the mitigation plan goals, data, actions are integrated into other planning mechanisms.
- ii. How the development changes have increased or decreased our hazard risk and vulnerability

G. District staff have included text addressing these two specific comments and have submitted to King County and FEMA for review. King County staff reviewed the District's proposed changes with FEMA and FEMA approved the changes on May 5, 2020. All King County agencies that are seeking FEMA approval are expected to adopt this plan by June 30, 2020.

H. Staff recommends approval and adoption of the District's Plan Annex to the King County Regional Hazard Mitigation Plan (Attachment A) to this resolution.

Action

IT IS RESOLVED THAT:

I. The North City Water District's Plan Annex to the 2020 King County Regional Hazard Mitigation Plan is hereby approved.


J. The North City Water District Board of Commissioner authorizes the Office of Emergency Management to make any required FEMA revisions to update the King County Regional Hazard Mitigation Plan required by FEMA for final approval.

ADOPTED by the Board of Commissioners of North City Water District at an open public meeting the 19th day of May, 2020.

ATTEST:



Ron Ricker, President



Patricia Hale, Vice President

Approved as to Form:

Joe Bennett, District Attorney



Charlotte Haines, Secretary

North City Water District Plan Annex

Introduction

North City Water District (District) is a special purpose district that was created by election of the people on August 1, 1931 (then known as King County Water District No. 42) under RCW 57 specifically to provide water service for an area north of Seattle to the King County line, now in the cities of Lake Forest Park and Shoreline. The District is governed by a three member Board of Commissioners and currently provides water service to nearly 8,200 accounts or 25,000 residents over 5 square miles.

All water supplied to the District is provided by Seattle Public Utilities (SPU) through both its Tolt and Cedar River supply pipelines at five supply stations and one emergency intertie. The District has two interties with the City of Mountlake Terrace to provide water supply to either system in the event of an emergency.

In the mid-1960's, the District replaced over 46 miles of deteriorating water mains to reduce water loss. In the mid-1970's the District constructed a 3.7 MG reservoir and booster pump station to help manage demand peaks from the regional water system. Regular, ongoing system improvements have continued to be a priority of the Board of Commissioners.

The annual operating budget is approximately \$5 million with a staff of 14. The District has spent \$28 million in the past seven years and has plans to spend an additional \$15.5 million in the next six years to improve the operations, maintenance, pre-hazard mitigation efforts and efficiencies of the water system. Funding these capital projects have been by a combination of public/private partnerships with developers, connection charges, revenue bonds, State Revolving Fund loans, sharing in project costs with wireless carriers and rates. The District has also had several Public Works Trust Fund loans, all of which have been paid off in full.

The District's property schedule of critical facilities is \$19 million plus nearly \$5 million in contents and miscellaneous equipment and \$1 million in rolling stock. The District has purchased property and is in the process of building a new maintenance facility, better able to withstand the expected natural disasters in the community. This will be the third essential facility that has been constructed in the past seven years. This project, as well as several other projects that have been completed recently, have been identified in the District's 2003, 2010, and 2014 Hazard Mitigation Plans. The total taxable and total assessed value of the parcels within the District boundaries are \$4,329 and \$5,001 million respectively according to King County Assessor.

North City Water District Profile

North City Water District (District) is a special purpose district that was created by election of the people on August 1, 1931 to provide water service for an area now in the cities of Lake Forest Park and Shoreline. The District is governed by a three member Board of Commissioners and currently provides water service to nearly 8,200 accounts or 25,000 residents.

One hundred percent of the revenues collected continue to go towards the operations/ maintenance and upgrade of the water system.



Development Trends

The District has historically been a bedroom community, made up predominately single family residences with some multifamily and a smaller portion of commercial connections. The population has been relatively unchanged since the mid-1990s. Since then, land use has changed and increased multi-family development is slowly replacing some of the single family development, especially in those areas adjacent to the future Sound Transit Lynnwood Link Light Rail Stations. All new development meets the current District standards. The District has worked with other utilities, fire districts, and cities within its boundaries to coordinate projects and other emergency activities. The District also has an active public outreach effort to communicate its activities with the public.

Jurisdiction Point of Contact & Plan Prepared By:

Name: Diane Pottinger, PE
 Title: District Manager
 Entity: North City Water District
 Phone: (206)362-8100
 Email: dianep@northcitywater.org

North City Water District Risk Summary

The history of hazardous events that have impacted the District has not been well documented in the past. The District has experienced many power outages since its inception. However, the administrative operations of the District has not been impacted due to power lose since the backup generators were installed in 2008. The District has documented a single natural disaster emergency event since 2003, a heavy rainfall event that began on 12/24/2015 and caused approximately \$10,000 in damage to the District. A landslide occurred in the late 1990s which caused approximately \$23,000 in damage and a lighting strike occurred on 6/1/1999 but no information about damage was documented.

The following is a summary of the natural hazards that were reviewed. References are made to prior District Hazard Mitigation Plan, the most recent update adopted in 2014. The new hazards that were introduced with this plan (2019) were reviewed using the [FEMA Risk Map for King County](#).

Hazard Risk and Vulnerability Summary

HAZARD	HAZARD SUMMARY	VULNERABILITY SUMMARY	IMPACT SUMMARY
Avalanche	There has been no change in this hazard since it was included in 2014 plan. No avalanche areas are identified within the District boundaries.	None	None
Dam Failure	There has been no change in this hazard since it was included in 2014 plan. The regional water supply owned and operated by Seattle Public Utilities has dams within the Cedar and Tolt watershed.	Seattle Public Utilities owns and operates the regional water supply dam.	Failure to one or both dams would impact the regional water supply.
Drought¹	Water use is closely monitored year round at the state, regional and local level.	Regional water use would change for both domestic and irrigation use.	Reduced water would mean there is less water available for irrigation and firefighting within the region. Changes in landscape design may occur if the drought continues over multiple years.
Earthquake	There are two faults on within the District boundaries.	There are over 96 miles of transmission and distribution mains within the District boundary, predominately made of cast iron pipe.	Cast iron pipe can break when the earth moves. It is likely that there may be several mains broken throughout the District.

Flood	There is a limited area within the District that has potential flood hazards. Primarily single family residents are located within these areas.	There are approximately 50 homes that are located within the flood zone at the mouth of McAleer Creek according to the FEMA map for King County. This means there is a 1% annual chance of a flood occurring in this area.	The 2007 flooding that occurred at the mouth of Lyons and McAleer Creeks were significant. A flood mitigation project was completed in 2015 in this area to reduce future flooding potential.
Landslide	Approximately half of the District is located in a landslide hazard area with exposures primarily identified to be over \$10 million	Landslide can impact structures, roads and the underground utilities.	Depending on the extent of a landslide, there may be operational changes that would occur until any repairs could be made.
Severe Weather²	Includes tornado, wind events, severe (non-winter) storm events.	Wind gusts have been measured up to 50 mph at the 3.7 MG reservoir. District facilities are designed not have loose equipment/items that can be impacted from these events.	Current and future building and system design will include provisions to secure all loose items.
Severe Winter Weather	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.	Critical district facilities have been adding automatic back up options over the past ten years. Both booster stations have not been upgraded to allow back up power to be available.	Meeting the water supply needs of each pressure zone may be possible without having complete staffing.
Tsunami	There has been no change in this hazard since it was included in 2014 plan. No tsunami areas are identified within the District boundaries.	None	None
Volcano	There has been no change in this hazard. No volcano areas are identified within the District boundaries.	None	None
Wildfire	There has been no change in this hazard since it was included in 2014 plan.	Localized areas could have a potential for wildfire, especially in hot, dry conditions.	Local fire departments can carry water on their response vehicles. The distribution of fire hydrants within the

Hazard and Asset Overview Map

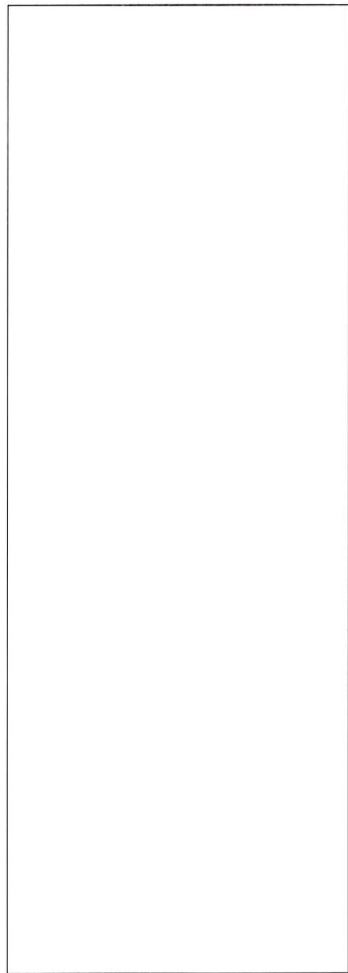
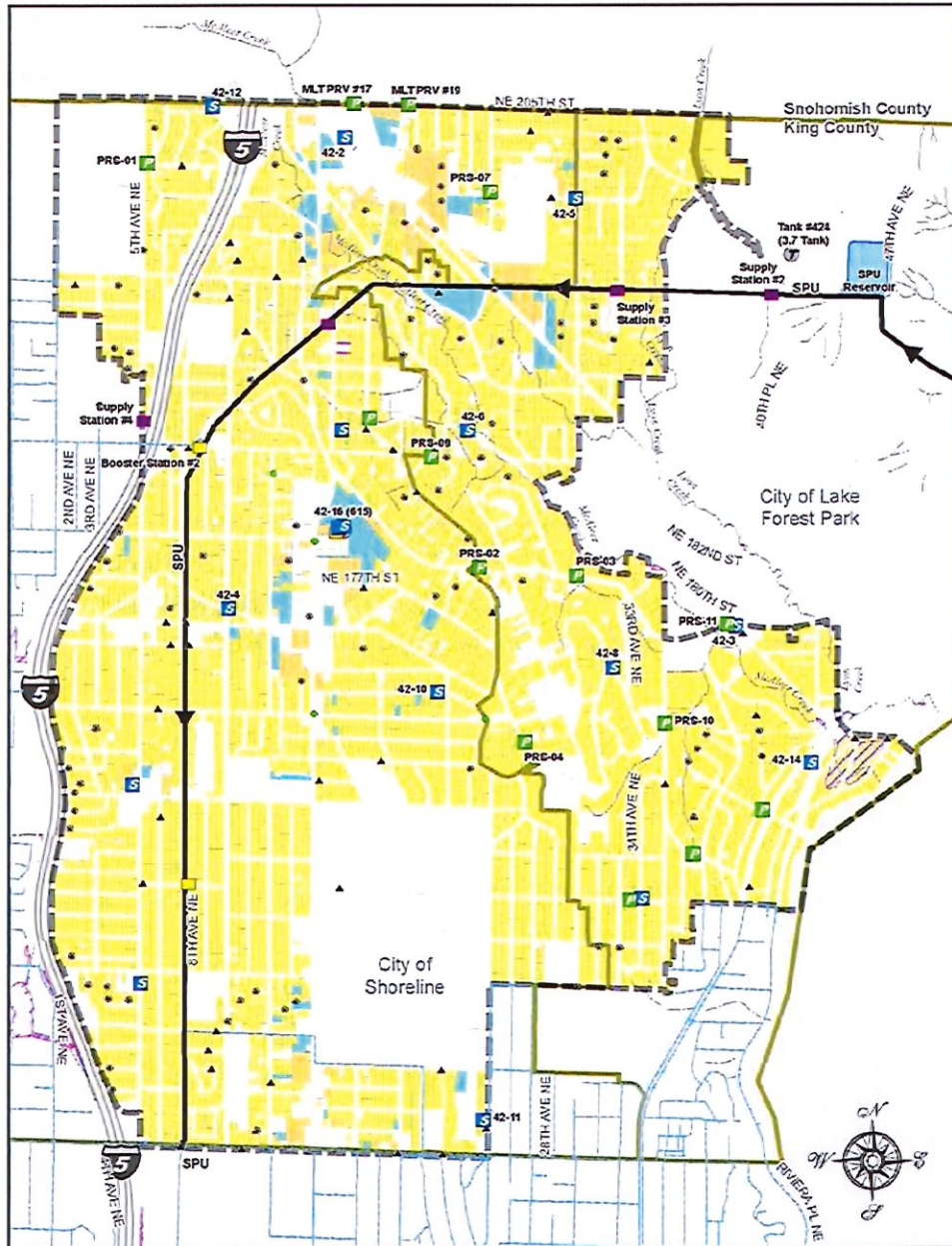
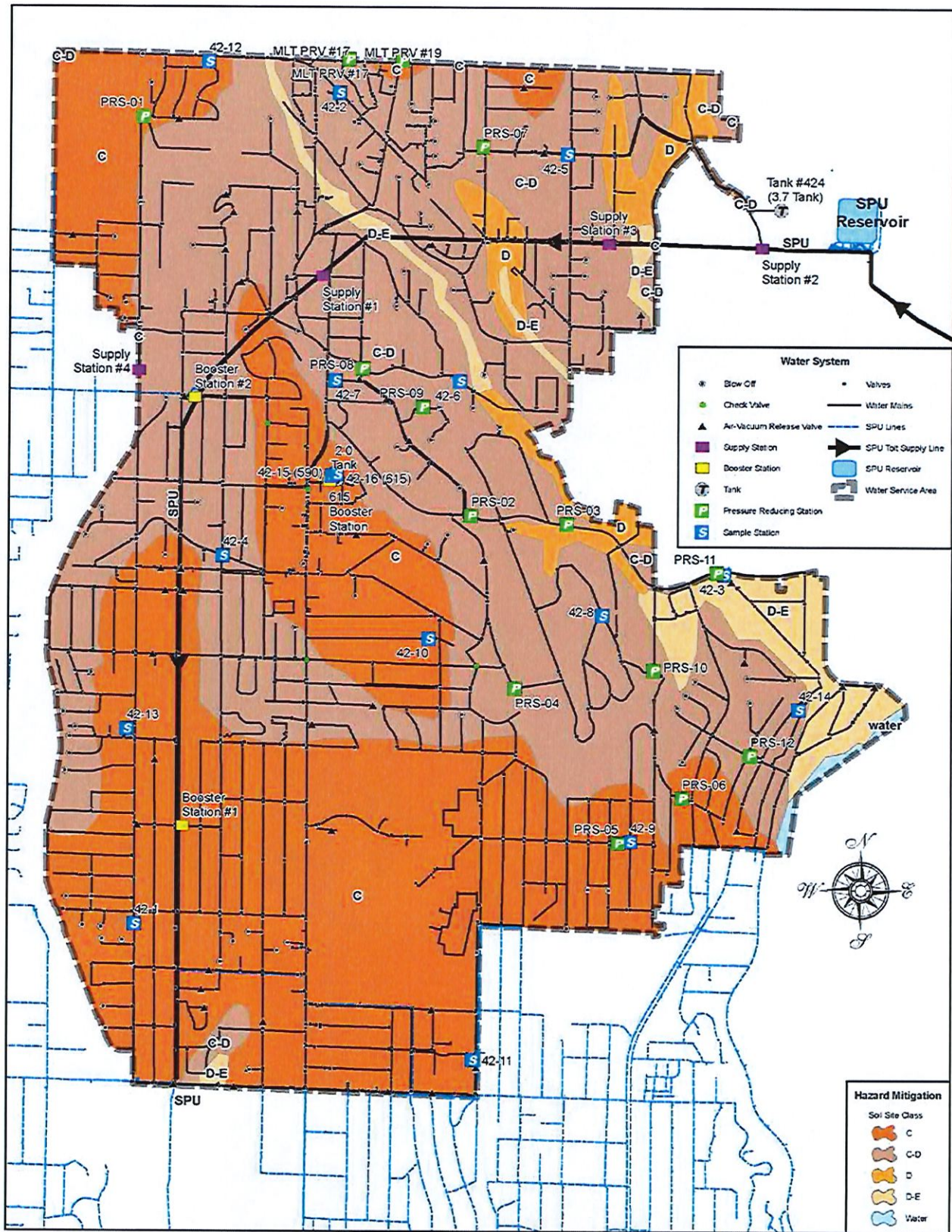


Figure 1: North City Water District with land use type and flood hazards





			District boundary reduces the impact of this hazard.
Civil Disturbance¹	The District had an incident when a board was thrown through a window in the old district administration office	District facilities can be locked to protect the safety of its employees in the event of a disturbance.	The District provides good, continued educational information to its residents year round. . The new administration office has bullet proof glass in the drive up window and safety glass throughout the rest of the building. The other district building have safety glass also.
Cyber Attack¹	The District has systems in place to safeguard non-authorized access to District computer systems.	While much of the computerized systems are protected from unauthorized access, there are continually new threats that require continued updates.	Daily backup of District records will be available in the event our systems have unauthorized access.
Hazardous Materials Incident¹	The District has not had an incident with hazardous materials.	Field staff have access on electronic devices to address any responses to chemical or hazardous spills that may occur during construction activities or in the shops area.	Continued access to any hazard potential is key for field crews to respond safely to any incident.
Public Health Emergency¹	There are a wide range of these emergencies, the most critical are related to backflow incidents within the water system.	District staff stay current with situations that may impact the water quality within the water system, minimizing the potential for contamination.	District staff monitors the water quality within the system and addresses low water quality concerns when they are first noticed. Multiple forms of communication are ongoing with the District and could be utilized in the event of an emergency. A one call service is currently being considered specifically for such emergencies.
Terrorism¹	The District actions are transparent and regularly communicated with the ratepayers.	District facilities can be locked to protect the safety of its employees in the event of a disturbance.	The District provides good, continued educational information to its residents year round.

¹New hazard identified in the 2019 Hazard Mitigation Plan

²Includes tornado, wind events, severe (non-winter) storm events

The District has identified the following assets as critical to the operation of the water system, any and all of which could be impacted by an earthquake. The current value of these assets is \$25 million.

North City Water District Critical assets

FACILITY	FACILITY
Administration Office	Supply Station 4
Existing Shop	SPU Emergency Connection
New Maintenance Facility	13 Pressure Reducing Valve Stations
3.7 MG Reservoir	3 miles of transmission mains
2.0 MG Reservoir	Generator – Administration Building
North City/Denny Clouse Pump Station	Generator – 3.7 MG Reservoir site
Booster Station 1	Mountlake Terrace Emergency Intertie 1
Booster Station 2	Mountlake Terrace Emergency Intertie 2
Supply Station 1	SPU Tolt Pipeline, Northwest subregional system
Supply Station 2	Rolling stock (vehicles)
Supply Station 3	

In addition to these critical assets, the District also has 96 miles of water mains, valves, hydrants, services and water meters at a current estimated value of \$ 43 million for a total net value of \$68 million.

In order to prioritize District capital projects, considerable time was spent identifying projects that would have a positive impact on the operations and maintenance and pre-hazard mitigation efforts of the District. The projects were modeled with a hydraulic model that had been calibrated specifically to the water system. The formation of a new pressure zone has been identified as a key goal for the District in the coming six year period. Sound Transit is also impacting the District both with the Lynnwood Link and the State Route 522/NE 145th Street Bus Rapid Transit. Some of the project identified in the hydraulic model calibration effort will be done in conjunction with the Sound Transit project. These projects have been identified as having the highest priority in the District’s capital plan. Should funding become available for any of the other capital projects identified in the water system plan through grants and public/private partnerships, the District will consider participating in those projects. The District will be doing a thorough long range look at its finances before it takes on any loans, bonds and any rate increases.

All District water system projects meet the King County Hazard Mitigation Goals of: **Goal 2** - Access to Health and Human Services, **Goal 6** - Community and Public Safety, and **Goal 14** – Strong, vibrant neighborhoods.

While many of the projects identified in the District’s capital improvement plan improve the operations and maintenance of the overall water system, the following critical assets have been identified to be vulnerable to a variety of hazards.

Assets at Risk

ASSET	VALUE	HAZARD SUMMARY	VULNERABILITY SUMMARY	IMPACT SUMMARY
Booster Station 1	\$512,000	BS 1 has the potential for a fire or destruction of the electrical equipment in the event of an earthquake.	BS 1 was built in 1963, upgraded in 1992. It is located below ground, in the ROW, was not designed for current building codes and does not have back up power options.	This station can serve the entire district, specifically 615 and 590 pressure zones.
Booster Station 2	\$1,102,000	BS 2 has the potential for a fire or destruction of the electrical equipment in the event of an earthquake.	BS 2 was built in 1963, upgraded in 1992. It is located below ground, in the ROW, was not designed for current building codes and does not have back up power options.	This station can serve the entire district, specifically 615 and 590 pressure zones.
Sheridan Beach water main loop	\$2,200,000	The water main in the northern portion of the Sheridan Beach neighborhood is served by a single source. This area is also in a flood and liquefaction zones.	The water mains in this area were installed in 1952. The mains were connected to new water mains at a single location in 1966. Eleven hundred feet of the 4,360 main	This water main serves approximately 50 residences in high value homes. Many of these residences were impacted by the 2007 flooding event.

in this loop were replaced in 1995.

Plan Update Process

North City Water District participated in the King County Regional Hazard Mitigation Planning effort by having staff attend regional planning meetings and report at Board meeting, holding meetings with other local stakeholders, reviewing hazard potentials, preparing capital projects to address hazard potentials, including information in our quarterly newsletter and brochure, and educating the public during several of our summer public events about the ongoing planning efforts.

- **King County Planning meetings** – Staff attended regional meetings at the King County Emergency Management office on November 28 and December 13, 2018, June 27, July 25 and August 22, 2019.
- **Board meetings** – Staff discussed the King County Regional Planning Effort at the November 10, December 4 & 18, 2018, February 5 and July 16, 2019 Board meetings. Specific discussions regarding ShakeAlert program (a network of sensors spread through the west coast and has been approved for pilot testing in selected water and sewer utilities in Washington and Oregon) occurred at the May 7, July 16 and September 3 board meetings. The District is proactively looking at how the water within our system can be preserved in the event of an earthquake. Representatives of Shoreline Fire Department were in attendance for the update at the July 16 meeting and potential policy discussions about water availability in the major disaster were discussed but have not yet been finalized
- **Staff meeting** – the entire staff was briefed on the ShakeAlert program at the July 16 staff meeting and the hazard mitigation capital planning efforts at the July 25 staff meeting.

From our communications we have found the answers to the following questions:

1. **What is valued in our community?** Over and over again, staff and commissioners heard that the community values the great services that we provide. The District will continue to provide these services.
2. **What values are at risk or exposed to hazards?** There is some flooding and liquidfaction potential in one area of the District which could impact approximately 50 residences. The overall community could be impacted should an earthquake damage the regional water supply to the District or distribution mains within the District. Five projects were identified in the District’s 2003 Hazard Mitigation plan. Three of the projects have been completed with a fourth project, emergency power supply that has been completed for two of the three critical facilities. The fourth of which is currently underway and expected to be completed in 2020. The fifth project has been scheduled in the next six year Capital Improvement Budget. Three new projects/initiatives were proposed in the 2014 plan and will be included as part of this plan.
3. **How will we protect what we value?** With the Hazard Mitigation Plan updated in 2019 as well as the ShakeAlert project, three additional capital projects have been identified and included in the 2020-2040 capital facilities plan specifically to address impacts due to earthquakes. Two of the three projects are significant enough it will take more than a year’s capital budget. The District will be actively be looking for funding opportunities to assist with these projects.

North City Water District Planning Team

NAME	TITLE	ORGANIZATION	CONTRIBUTION
Diane Pottinger	District Manager	North City Water District	Lead
Denny Clouse	Operations Manager	North City Water District	
Amalia Mostrales	Finance Manager	North City Water District	

Plan Update Timeline

PLANNING ACTIVITY	DATE	SUMMARY	ATTENDEES
2018 Regional Hazard Mitigation Kick-off Meeting	11/28/2018	Identified goals of mitigation planning, outcomes of the last plan, differences for this plan update, requirements of Steering Committee members and requirements of Planning Partners	Representatives from many jurisdictions throughout King County
Regional Hazard Mitigation Planning Workshop	12/13/2018	Risk Assessments	Representatives from many jurisdictions throughout King County
Regional Planning meeting	2/27/2019	Discussed what the agencies were doing with regard to planning and addressing the different hazards and the capital budgets.	King County, City of Shoreline, Highlands Inc, Highlands Sewer District, NEMCO, Northshore Utility District, Ronald Wastewater District, Seattle Public Utilities, Shoreline Fire District.
Hazard Mitigation Technical Assistance Workshop	6/27/2019	Planning Process Webinar	Representatives from many jurisdictions throughout King County
Hazard Mitigation Strategy Workshop	7/25/2019	Mitigation Strategies	Representatives from many jurisdictions throughout King County
Hazard Mitigation Funding Workshop	8/22/2019	FEMA Mitigation Grants	Representatives from many jurisdictions throughout King County

Public Outreach

The following is a list of the District’s Outreach communications and events in 2019 as they relate to hazard mitigation in North City Water District.

North City Water District Initiates Proactive Emergency Planning Talks

On Wednesday February 27, our District organized a joint agency meeting to initiate a discussion about regional emergency planning efforts, as part of the King County Hazard Mitigation Planning effort.

Participants included representatives from Seattle Public Utilities, Ronald Wastewater, Northshore Utility District, Shoreline Fire Department, Northshore Emergency Management Coalition, The Highlands Homeowners Association, the Highlands Sewer District, and the City of Shoreline Sewer Utility, along with individuals from King County's Office of Emergency Management.



We began the meeting by discussing what each of our agencies are currently doing to address emergency planning, continued the conversation by exploring ways that we could work together to proactively anticipate potential problems, and wrapped up by identifying ways that we could cooperatively address problems that might arise from various emergencies and related hazards.

Over the coming months, each agency will gather input from the public; their information will be synthesized into our ongoing discussions in a follow-up meeting in September. Participation in this regional planning effort will help all of us be eligible for FEMA funding.

Public Outreach Efforts

EVENT	DATE	SUMMARY	ATTENDEES/DISTRIBUTION
1 st quarter Newsletter	March	Article discussing our local planning efforts ¹	10,212 dwelling units, 23,500 residents
2 nd quarter Newsletter	June	Article discussing ShakeAlert ²	10,212 dwelling units, 23,500 residents
Ridgecrest Ice Cream Social	August 15	Used the 3-D model to talk to residents about where their water comes from and that the District is looking at several projects to help to make sure they continue to get water in the event of an emergency	2,500 event attendees/gave away 400 water bottles at District booth
Celebrate Shoreline	August 17	Used the 3-D model to talk to residents about where their water comes from and that the District is looking at several projects to help to make sure they continue to get water in the event of an emergency	9,000 event attendees/gave away 400 water bottles at District booth
3 rd quarter Newsletter	September	Shared with the public the recent public outreach efforts ³	10,212 dwelling units, 23,500 residents

1st quarter 2019 newsletter article and website [post](#):

2nd quarter 2019 newsletter article

ShakeAlert

With all the talk about a “big one earth quake,” North City Water District is working with a local consultant to plan for any necessary measures to ensure ongoing water supply, should an earthquake cause our region to be without water for more than a couple days.

The Pacific Northwest Seismic Network (PNSN) at the University of Washington and the US Geological Survey (USGS) have developed a system to provide early warning of earthquakes referred to as “ShakeAlert.” Consisting of a network of sensors spread throughout the west coast, ShakeAlert has been approved for pilot testing in selected water and sewer utilities in Washington and Oregon.

The pilot system is designed to provide early warning alerts, which can be used to establish safety measures that protect people, equipment and facilities. The amount of time for early detection depends on the epicenter of an earthquake, which is expected to be between 0.5 and 4 minutes.

North City Water District will work with a local consultant to plan for and complete a predesign report, and a Pilot Application to participate in the regional program, along with the purchase of any necessary equipment. We look forward to keeping you updated as we have more information. Learn more about ShakeAlert on their website at: www.shakealert.org/

If you have any questions about these three new sections, or about our Water System Planning process in general, please don't hesitate to give us a call at 206.362.8100.

3rd quarter 2019 newsletter articles and website post

Ongoing Preparations for Natural Disaster Emergencies

As mentioned in our Spring newsletter, North City Water District is part of a multi-agency group working to identify emergency planning activities that will help all of us be more prepared and responsive.

In addition to working with King County to update their Regional Hazard Mitigation Plan (www.kingcounty.gov/hazardplan), we've signed up for ShakeAlert.org's early earthquake alert program (as mentioned recently in the Seattle Times), looked at projects that we can do now to better prepare us in the event of a natural disaster, communicated with local fire departments about the impacts to fire service after an earthquake, and are in the process of identifying additional methods to communicate with our customers after an emergency.

We Need Your Help...

If a natural disaster strikes our area, most of our water mains are made of cast iron, and some may break as the earth shifts. Where and how will you get water? In addition to announcements on our website, Facebook, and NextDoor.com, we are considering a One Call system, and/or an email blast to all ratepayers.

If you'd like to have your emergency contact information added to your account, email us at customerservice@northcitywater.org, or give us a call at 206.362.8100.



We also had booths at the Ridgecrest Ice Cream Social, Shoreline / Lake Forest Park Arts Festival at the community college, and Celebrate Shoreline, where we used a regional 3-D model of King County to demonstrate where our water comes from, how it gets to our community, and what we and the community can do in the event of an emergency.

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.

Hazard mitigation strategies annually include:

1. Identify key hazards and potential solutions
2. Identify capital funding sources – rates, grants, loans, bonds
3. Work with consultant to potentially secure funding sources for larger capital projects
4. Continue to annually review projects and funding opportunities

Goal 2 - Access to Health and Human Services

Goal 6 – Community and Public Safety

Goal 14 – Strong, vibrant neighborhoods.

Plan Monitoring, Implementation, and Future Updates

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

As part of leading a countywide planning effort, King County Emergency Management will send to planning partners any federal notices of funding opportunities for the Hazard Mitigation Assistance Grant North City Water District Hazard Mitigation Plan

Program. Proposals from partners will be assessed according to the prioritization process identified in this plan and the county will, where possible, support those partners submitting grant proposals. This will be a key strategy to implement the plan.

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

Continued Public Participation

King County and its partner agencies already maintain substantial public outreach capabilities, focusing on personal preparedness and education. Information on ongoing progress in implementing the hazard mitigation plan will be integrated into public outreach efforts at the county level. 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, public tours of mitigation projects will be organized to allow community members to see successful mitigation in action.

North City Water District will continue with its outreach efforts and seeking funding opportunities to complete the identified pre-disaster hazard mitigation projects.

Hazard Mitigation Authorities, Responsibilities, and Capabilities

The District is in the process of updating water system plan and expects to update the emergency response plan in 2020 upon the completion of the new Maintenance Facility in accordance with America’s Water Infrastructure Act (AWIA) of 2018. As North City Water District is its own Municipal Corporation, it is responsible for all hazard mitigation efforts within its water system’s corporate boundaries. The District has and will consider Hazard Mitigation projects each year as part of the yearly update to the capital improvement plan. All but one project identified in the District’s 2005 Hazard Mitigation plan will be completed later this year once the new maintenance facility is completed.

Plans and Agency Responsible for Hazard Mitigation Plan

PLAN TITLE (ADOPTION DATE)	RESPONSIBLE AGENCY	POINT OF CONTACT	RELATIONSHIP TO HAZARD MITIGATION PLAN (HMP)
Vulnerability Assessment Plan (2010)	North City Water District	District Manager	Evaluation of the District will operate in the event of a bioterrorism or other public health emergencies.
Water System Plan (WSP, 2013) – to be updated in 2019	North City Water District	District Manager	Information from the WSP is used in the HMP
Connection Charge Study (2017) – to be updated in 2020	North City Water District	Finance Manager	Capital projects identified in the WSP & HMP will need to be funded by existing and

			future customers. Options will be considered should funding become available prior to scheduled bond issuance.
Operating Budget (2019-2020) and 20 year Capital Budget - to be updated in 2019	North City Water District	Finance Manager	Day to day operations and training help to prepare staff for emergency efforts. With ongoing training, staff will be able to recognize potential hazard related problems that can be resolved before they become emergency.
Emergency Response Plan (2010) - to be updated in 2020	North City Water District	District Manager	In addition to capital projects, staff will be trained so as to better prepare for regional disaster responses

Programs, Policies, and Processes

PROGRAM/POLICY	RESPONSIBLE AGENCY	POINT OF CONTACT	RELATIONSHIP TO HAZARD MITIGATION PLAN
North City Water District Code	North City Water District*	Operations Manager	Ensures all new water system are designed to a consistent standard
Building Codes	Cities of Lake Forest Park and Shoreline	Building Official	District facilities will be built to current standards for an "essential" facility
Fire Flow Requirements	Shoreline and Northshore Fire Districts	Fire Chiefs; Fire Marshalls	Ensures all new facilities and improvements are designed to the same fire flow standards for that building type.

*North City Water District is responsible for the water system as well as all improvements identified in the Hazard Mitigation Plan

National Flood Insurance Program

The District does not participate as it is water utility only.

Hazard Mitigation Strategies

North City Water District will continue to complete projects that are identified as part of this plan. The District has seen a measurable improvement in the redundancy and resilience of the District, largely due to the ongoing capital improvement program and development infill. The regular hydraulic modeling effort and model calibration documents the improvements to our fire flow in our water system.

2015 Hazard Mitigation Strategy Status

STRATEGY	DESCRIPTION	PRIORITY	STATUS
NCWD D-1	Communications System Evaluation	High	Scheduled in the 2020-2026 Capital Budget
NCWD D-2	Emergency Power Supply for Maintenance Building, Booster Station 1 and 2	High	Completed for Administration Building and North City/Denny Clouse Pump Station. New Maintenance Facility is currently under construction and includes a new emergency power supply. Booster Stations 1 and 2 are below ground and do not have access to permanent back up power. Future projects consider relocating the stations to above ground stations with backup power capabilities.
NCWD D-3	Ongoing water conservation program	High	Completed
NCWD D-4	Support county-wide initiatives	High	Completed
NCWD D-5	Participation in plan maintenance strategy	High	Completed

2020 Hazard Mitigation Strategies

STRATEGY	LEAD AGENCY/POC	TIMELINE	PRIORITY
NCWD D-1 Communications System	North City Water District, Operations Manager	2020	High
NCWD D-6 Shunt-Trip Breakers for Booster Station 1 and 2	North City Water District, Operations Manager	2020-2021	High
NCWD D-7 Sheridan Beach Loop Seismic Upgrade Strategy	North City Water District, Operations Manager	2025-2029	High/Medium
NCWD D-8 Booster Station 1 Pipeline Replacement	North City Water District, Operations Manager	2025-2029	Medium
NCWD D-9 Relocated Booster Station 1 and new 1.5 M reservoir	North City Water District, Operations Manager	2025-2029	Medium