



# City of Newcastle Plan Annex

## Introduction

The history of Newcastle is as rich as the veins of black coal and mines that lay beneath the City's ground. These mines, which were Seattle and King County's earliest large industry, formed the basis for transforming Seattle from a small but ambitious village in the 1860s into the dominant port city on Puget Sound by the 1880s. Prospectors and coal-miners worked the Newcastle Hills for 100 years, mining nearly 11 million tons of coal from under the surface of Cougar Mountain. As a result, two mining towns grew from rural, agricultural villages to bustling company towns almost overnight: Old Newcastle and Coal Creek. The present City of Newcastle sits directly on the site of Old Newcastle.

Between 1880 and 1890, the economy of Newcastle went the way of its mineral resource. The coal was relatively low quality compared with other coal producing areas of the United States and the Newcastle mines operated on a marginal economic basis throughout their history. Union confrontations between 1880 and 1890 and the breaking of the unions later resulted in the deterioration of the coal mining industry. When the Pacific Coast Coal Company left in 1929, the coal dependent towns disappeared too. Except for abandoned mines and one miner's residence that is in near-original condition, little evidence remains of the two colorful communities, which once had as many as 600 houses between them.

## Development Trends

Today, Newcastle functions as a "bedroom community" with its dominant land use being single-family housing. The City is situated between two existing employment centers, Renton and Bellevue to the south and north, and close to major metropolitan centers, Bellevue and Seattle. Interstate 405, at the western edge of the city, provides access to the adjacent urban centers and forms a strong barrier to Lake Washington. The eastern side of the City is unincorporated rural King County, primarily dedicated to open space as Cougar Mountain Regional Wildland Park. In the past five years, Newcastle has experienced significant growth. The population change from 21017 to 2018 was 10%. Most of the growth was realized in new multi-family housing concentrated in the Community Business Center area.

The City's setting in the relatively steep area east of Lake Washington has played a major role in how growth has evolved. There is little area left that is suitable for large-scale development. Several stream corridors form distinctive landscape formations with May Creek at the southern edge having a pronounced role in open space and separating Newcastle and Renton. The City consists primarily of small hills and valleys. Most development has occurred in the western half of the City. Over half of the total land area is constrained by critical areas.

### Jurisdiction Profile

Incorporated: 1994

Population: 14,410 (2018)

Location: 47°32'00" N, 122°10'20" W

Area: 4.2 square miles

City Manager: Rob Wyman

Website: [www.newcastlewa.gov](http://www.newcastlewa.gov)

The City of Newcastle is located in the Puget Sound region of Washington State on the east side of Lake Washington. The City abuts Bellevue to the north Renton to the south, Cougar Mountain Regional Wildland Park to the east and straddles a steep-sided valley with two major drainage basins, Coal Creek and May Creek.





Jurisdiction Point of Contact:

Name: Jeff Brauns, P.E.  
Title: Public Works Director  
Entity: City of Newcastle  
Phone: 425-649-4143 x124  
Email: jeffb@newcastlewa.gov

Plan Prepared By:

Name: Christina Wollman, AICP, CFM  
Title: Lead Planner  
Entity: Pertect  
Phone: 509-619-7031  
Email: christina.wollman@pertect.com

## City of Newcastle Risk Summary

### Hazard Risk and Vulnerability Summary

HAZARD	RISK SUMMARY	VULNERABILITY SUMMARY	IMPACT SUMMARY
<b>Avalanche</b>	N/A		
<b>Earthquake</b>	There are three active faults running through the City, all within the Seattle fault zone.	Approximately 79% of structures (2462 of 3105) with accessible data for Hazus assessment have an earthquake loss $\geq$ 10%.  There are no liquefaction zones within the City. However, portions of I-405 adjacent to the city are in liquefaction zones.	No known historical damage. No known damage resulting from the 2001 Nisqually quake event. 708 buildings within Newcastle were constructed prior to 1974 and are considered to be low-code structures. These buildings are most susceptible to damage. A M7.2 earthquake on one of the three Seattle faults that run through the city is estimated to cause from \$194-267 Million in damages.
<b>Erosion</b>	The rugged topography is an asset to the City as an amenity, but it is also fragile and subject to degradation. The steep slopes of Newcastle provide attractive	Approximately 30% of structures (1,063) are exposed in an erosion hazard area.	No known historic damages or events.



HAZARD	RISK SUMMARY	VULNERABILITY SUMMARY	IMPACT SUMMARY
	<p>development sites because they overlook the community, as well as provide views of distant features such as Seattle, the Cascade Mountains, and Lake Washington. Unfortunately, the steep slopes upon which these homes are built are often quite susceptible to erosion.</p>		
<b>Flood</b>	<p>The 100-year floodplain encompasses about 12 acres within the City of Newcastle, less than 1% of the land area. A very small area in the southwest portion of the City is located with a 100-year floodplain. The extent is located within undeveloped May Creek Park and is owned by the City of Newcastle. Another area of 100-year floodplain is located in the northeast portion of the city, within the Coal Creek Natural Area, and is owned by the City of Bellevue.</p> <p>Water levels in Lake Boren rise during periods of high rainfall.</p>	<p>No structures or personal property are located in or adjacent to the 100-year floodplain. All land is currently used as a park and there is no development potential within the 100-year floodplain.</p> <p>Approximately 5 homes on the north shore of Lake Boren are located close to high winter water levels.</p>	<p>No known historic flood damage.</p> <p>One home on the north shore of Lake Boren has experienced flooding in the crawlspace. Others have seen their docks under water.</p>
<b>Landslide</b>	<p>Numerous steep slopes are within city limits, most with houses above or below the slopes.</p>	<p>126 structures (3.9%) are located in an identified landslide hazard area.</p>	<p>Two known landslides include Lake Washington Blvd (1996) and Newcastle Golf Club Road (2010).</p>



HAZARD	RISK SUMMARY	VULNERABILITY SUMMARY	IMPACT SUMMARY
<b>Severe Weather</b>	<p>High summer temperatures combined with drought increase the risk for wildfire.</p> <p>Wind events often result in downed trees.</p>	<p>Many homes border native growth and/or natural areas that are densely wooded.</p> <p>Downed trees damages homes, result in power outages, and block lifelines and other roadways.</p>	<p>No known historical damage has occurred.</p> <p>Wind events that results in downed trees and/or power outages are a relatively frequent event, occurring every couple of years.</p>
<b>Severe Winter Weather</b>	<p>The eastern half of the City is located on hilly terrain.</p>	<p>Roads are extremely treacherous when icy or covered by snow. Terrain makes snow response more challenging.</p>	<p>During the 2019 series of winter storm events, many residents were unable to leave their homes for over a week.</p>
<b>Tsunami</b>	<p>N/A</p>	<p>There are no tsunami zones within the city.</p>	<p>N/A</p>
<b>Volcano</b>	<p>N/A</p>	<p>There are no lahar zones within the city.</p>	<p>N/A</p>
<b>Wildfire</b>	<p>Newcastle borders multiple wooded natural areas including Cougar Mountain Wildland Park, Coal Creek Natural Area, and May Creek Park. In addition, there are many natural wooded areas throughout the city limits. The City is at increasing risk due to global warming and its proximity to large wooded areas.</p>	<p>The entire city is considered at risk for wildfire due to the dense residential development within and adjacent to a wooded area.</p>	<p>No known historical events.</p>
<b>Civil Disturbance</b>	<p>Due to its small size, low-density, and suburban location, the City is unlikely to be directly targeted for civil disturbance. However, the Olympic Pipeline traverses the City, which may be a target.</p>	<p>The pipeline traverses primarily residential property, and City Hall is located adjacent to the pipeline. A targeted pipeline attack may be catastrophic, or at a minimum disrupt fuel distribution.</p>	<p>No known historical events.</p>
<b>Cyber Attack</b>	<p>The City is dependent on the use of computer networks and the internet.</p>	<p>A cyber incident could effectively shut down city operation if access to the network was blocked or held ransom. Data is backed up</p>	<p>No known historical events; neighboring communities have been targeted. Incidents have likely been avoided.</p>



HAZARD	RISK SUMMARY	VULNERABILITY SUMMARY	IMPACT SUMMARY
<b>Dam Failure</b>	<p>1) Newcastle Vista Pond 3 Dam</p> <p>2) Newcastle Railroad Embankment Dam</p>	<p>regularly, however it will take time to restore data.</p> <p>1) Downstream hazard classification of Hazard Class 1 A, High downstream hazard potential. The flood from a potential dam failure would travel for 800 feet from the dam to China Creek to Lake Boren, or directly overland to Lake Boren. This area is a highly developed, densely populated urban area with associated industry, property, transportation and community lifeline features, with an estimated population at risk of more than 300 people.</p> <p>2) At present, a downstream hazard classification of Hazard Class 2D, Significant downstream hazard potential is assigned to the Newcastle Railroad Embankment Dam. The flood from a dam failure would travel for 800 feet down Newport Hills Creek to May Creek, then along May Creek for 2.5 miles to Lake Washington. Honey Dew Creek joins May Creek 0.6 miles downstream from Newport Hills Creek. Below Honey Dew Creek, May Creek has a drainage area of 12 square miles. Downstream of Honey Dew Creek, there are several homes and other structures located near May Creek that might be impacted by a dam breach flood</p>	<p>1) No known historical issues. Although the dam is considered high hazard, the dam is actively maintained and in good condition.</p> <p>2) This structure is an abandoned railroad embankment and is considered to be in poor condition according to the Washington Dam Safety Office inspections. The interior of the embankment is unknown. Currently there is no control over water levels behind embankment or volume of discharge through culvert. An elevated pool could lead to seepage or washout. Because of the high level of concern, work is underway to remove the historic inlet control structure.</p>
<b>Hazardous Materials Incident</b>	<p>No hazardous material facilities are located within the City. Hazardous materials may be transported along Interstate 405</p>	<p>Residential homes border I-405 and may be impacted by a spill along the interstate. Transportation routes may be impacted if a spill happens on city streets.</p>	<p>No known historical events.</p>



HAZARD	RISK SUMMARY	VULNERABILITY SUMMARY	IMPACT SUMMARY
	which borders the western edge of the City, or along city streets for local deliveries (such as gasoline to a fueling station).		
<b>Public Health Emergency</b>	The city is at average risk for a public health emergency. The city considered the following types of health emergencies: infectious disease, bioterrorist attack, or catastrophic event.	The city has an average population of vulnerable persons and is generally developed at a low-density, which may reduce the city’s risk to a public health emergency.	No known historical events. The affected residents will require medical attention.
<b>Structure Fire</b>	The City is at average risk for structure fire.	Because there are no hazardous materials facilities, structure fires will generally be residential or commercial structures.	No known historical events beyond the average structure fires.
<b>Terrorism</b>	Due to its small size, low-density, and suburban location, the City is unlikely to be directly targeted by terrorism. However, the Olympic Pipeline traverses the City, and the City is adjacent to larger urban centers which may be a target.	Any impacts from a non-pipeline disturbance would likely be related to the regional transportation system. The pipeline traverses primarily residential property, and City Hall is located adjacent to the pipeline.	No known historical events.
<b>Coal Mines</b>	The northern and eastern portion of the City contains many abandoned historical coal mines. The City estimates approximately 420 acres of the city is impacted by coal mine hazards.	The coal mine hazard areas present long-term safety issues for the community. Abandoned subsurface mine workings leave large underground voids, which are hazardous in several ways. Gradual failure of the roof and sides of these voids may result in some subsidence of the ground surface over a large area overlying the mines. Catastrophic failure of the roof can produce sudden and unexpected cave-ins. Noxious gases and “dead air” (lacking oxygen) may also collect in these voids. In addition, animals or people may fall into surface openings, shafts, or tunnels.	No known historical issues. Most of the coal mine hazard area within the City is open space, park, or golf course.





### Hazard and Asset Overview Map

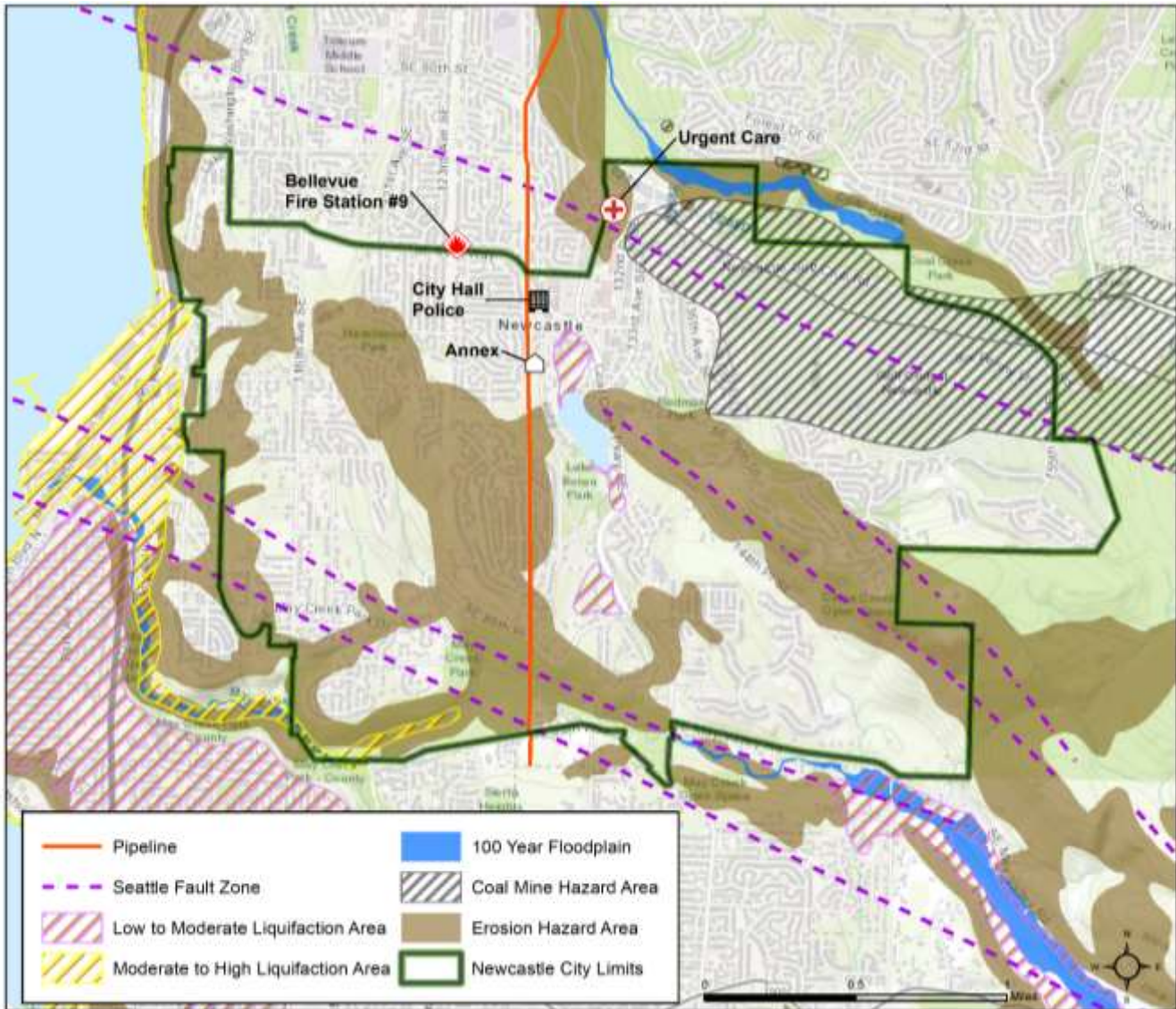


Figure 1: Mapped hazards within the City of Newcastle



### Assets at Risk

ASSET	VALUE (\$)	RISK SUMMARY	VULNERABILITY SUMMARY	IMPACT SUMMARY
City Hall	\$6,500,000	Adjacent to Olympic pipeline	Catastrophic event could result in moderate to significant damage	Severely limits ability for local government to function
City Hall	\$6,500,000	Earthquake	Structure was constructed in 2007 using current building code guidelines. Extent of vulnerability not known - may need to evacuate unable to re-occupy building until inspected.	Severely limits ability for local government to function
City Hall	\$6,500,000	Power outage	No operational systems or communications	Severely limits ability for local government to function
Annex Building	\$1,410,00	Earthquake	Structure unusable due to earthquake damage.	Unable to access tools & equipment
Annex Building	\$1,410,00	Power outage	Limited ability to use facility; no operational systems	Impacts operational ability
Annex Building	\$1,410,00	Adjacent to Olympic pipeline	Catastrophic event could result in moderate to significant damage	Severely limits ability for local government to function
Lifeline Routes	Unknown	Earthquake or severe weather or severe winter weather.	Earthquake may damage May Creek Bridge (Coal Creek Pkwy). Storms may cause fallen trees blocking road/ downing power lines, or snow and ice.	Lifeline disruption/blockage

### Plan Development Process

The City of Newcastle is concerned about future potential natural and manmade disasters. As a small community, the City has limited staff and capability to respond and recover from a disaster. The City recognizes that mitigating and reducing risk of known vulnerabilities will make the City stronger and lead to faster recovery after a disaster occurs.

Newcastle participated in the multi-jurisdictional planning process led by King County. The City’s planning process was led by Public Works Director Jeff Brauns, and supported by City Manager Rob Wyman and Community Development Director Steve Osguthorpe. A consultant familiar with the City supported the planning team.

While the City is vulnerable to many natural and manmade hazards, historically the City has not experienced any significant damage of assets from those hazards. The City identified three vulnerable assets, including City Hall, the City Hall Annex Building, and lifeline routes and associated infrastructure through the city. Other than surface water, the city does not manage any utilities for residents and depends on the Coal Creek Utility District for water and sewer, and PSE for power. In addition, the City recognizes the private residential and commercial structures of residents and landowners as assets to the community.





To develop strategies to protect these assets, existing documents were reviewed. The erosion reduction strategies for May Creek and Landcastle Creek are identified as capital projects within the City’s Comprehensive Surface Water Management Plan. The Railroad Embankment strategy was based on past coordination by the Department of Ecology, King County Emergency Management, and the City to develop a plan and secure funding for dam repairs. The wildfire strategy is based on recent information indicating increased risk of wildfire in Western Washington, and the changing climate leading to hotter and drier summers. The City Hall resiliency project is based on an analysis conducted as part of the City’s Preparedness Initiative which identified gaps in the City’s capabilities to respond and recover from a disaster or other incident which will interrupt normal city operations.

Public outreach was performed at the October 15, 2019 City Council meeting. During this regular business agenda item, City staff presented each mitigation strategy along with the process used to identify them. A public comment period was provided following City Council discussion.

### *Jurisdiction Planning Team*

NAME	TITLE	ORGANIZATION	CONTRIBUTION
Jeff Brauns, P.E.	Public Works Director	City of Newcastle	Attended planning meetings and prepared plan and strategies.
Community Development	Steve Osguthorpe, AICP	City of Newcastle	Plan Input
City Manager	Rob Wyman	City of Newcastle	Plan Approval

### *Plan Update Timeline*

PLANNING ACTIVITY	DATE	SUMMARY	ATTENDEES
Kickoff Meeting	11/28/2018	King County introduced the planning process.	Jeff Brauns, P.E.
Hazard Mitigation Introductory Meeting	4/11/2019	Met with Derrick to discuss and review the process and timeline for Newcastle’s Annex to the King County Hazard Mitigation Plan.	Jeff Brauns, P.E. Derrick Hiebert, King County
Mitigation Strategy Meeting	7/25/2019	King County provided a review of how to create good hazard mitigation strategies.	Jeff Brauns, P.E.
Hazard Mitigation Funding Workshop	8/22/2019	King County provided a review of funding strategies and the process of identifying sources for mitigation strategies. Reviewed specific details of successful grant applications.	Jeff Brauns, P.E.
Coal Creek Utility District Review Meeting	10/17/2019	The City and CCUD met to review strategies and identify opportunities for partnership. Attendees determine there is not opportunity for	Jeff Brauns, P.E. Steve Moye, CCUD Dan Gravelle, CCUD



PLANNING ACTIVITY	DATE	SUMMARY	ATTENDEES
		partnership in the City's identified strategies. However, there is partnership opportunity in a CCUD strategy related to retrofitting an old reservoir which may damage city infrastructure if failure occurs.	

Public Outreach

*Public Outreach Events*

EVENT	DATE	SUMMARY	ATTENDEES
<b>City Council Meeting</b>	10/15/2019	Identified risks along with mitigation strategies were presented for public comment and City Council discussion.	City Council, Rob Wyman, Jeff Brauns, Steve Osguthorpe, members of the public



## 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 in Newcastle were developed to reduce the risk to vulnerable assets and private property. They were developed using existing documentation of vulnerabilities and recommended actions to reduce or remove the risk.

### 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, the City of Newcastle agrees to convene their internal planning team at least annually to review their progress on hazard mitigation strategies and to update the plan based on new data or recent disasters. The City’s Public Works Director, or designee, will remain responsible for plan monitoring and updates.

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

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

### Continued Public Participation

The City of Newcastle maintains substantial public outreach capabilities, including focusing on personal preparedness and education. Information on ongoing progress in implementing the hazard mitigation plan will be integrated into public outreach efforts. This will provide Newcastle residents, already engaged in personal preparedness efforts, with context and the opportunity to provide feedback on the City’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.

#### 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



This outreach effort will also work with media and other agency partners to publicize mitigation success stories and help explain how vulnerabilities are being fixed.

## Hazard Mitigation Authorities, Responsibilities, and Capabilities

### Plans

PLAN TITLE	RESPONSIBLE CITY DEPARTMENT	POINT OF CONTACT	RELATIONSHIP TO HAZARD MITIGATION PLAN (HMP)
<b>Comprehensive Plan</b>	Community Development Department	Steve Osguthorpe, AICP	<p>The Comprehensive Plan provided general information about development trends and critical areas, such as erosion and coal mine hazard areas.</p> <p>The Comprehensive Plan and HMP can be aligned to direct future development out of hazard areas.</p>
<b>Comprehensive Emergency Management Plan (CEMP)</b>	Public Works Department	Jeff Brauns, P.E.	<p>The CEMP provided general information about risk and vulnerability to the community.</p> <p>The CEMP and HMP can be aligned to help emergency responders better understand and plan for emergency response.</p>
<b>Capital Facilities Plan (CFP)</b>	Public Works Department	Jeff Brauns, P.E.	<p>The capital facilities plan was reviewed to identify any projects which may mitigate an identified hazard.</p> <p>The CFP and HMP can be aligned through the inclusion of capital projects within both plans.</p>
<b>Comprehensive Surface Water Management Plan Update, 2017 (CSWMP)</b>	Public Works Department	Audrie Starsy	<p>The CSWMP was reviewed to identify any projects which may mitigate an identified hazard.</p>



			The CFP and HMP can be aligned through the inclusion of capital projects within both plans.
<b>Downtown Newcastle Strategic Plan</b>	Community Development Department	Steve Osguthorpe, AICP	Future plan updates can address hazards within the planning area and include a focus on ensuring the commercial area remains functional after an incident.
<b>Lake Boren Park Master Plan</b>	Public Works Department	Julie Cassata	Future plan updates can address high winter water levels.

*Programs, Policies, and Processes*

<b>PROGRAM/POLICY</b>	<b>RESPONSIBLE AGENCY</b>	<b>POINT OF CONTACT</b>	<b>RELATIONSHIP TO HAZARD MITIGATION PLAN</b>
<b>Building Codes</b>	Community Development	Steve Osguthorpe, AICP	Building codes increase resiliency of structures to hazard such as earthquakes and high winds.
<b>Emergency Management Program</b>	Public Works	Jeff Brauns, P.E.	CEMP includes procedures for managing and communicating during emergency incidents.
<b>Critical Areas Ordinance</b>	Community Development	Steve Osguthorpe, AICP	CAO restricts building in sensitive areas which are hazards, such as steep slopes.
<b>Public Works Standards</b>	Public Works	Jeff Brauns, P.E.	Ensures that adequate emergency access is provided.

*Entities Responsible for Hazard Mitigation*

<b>AGENCY/ORGANIZATION</b>	<b>POINT OF CONTACT</b>	<b>RESPONSIBILITY(S)</b>
<b>Public Works</b>	Jeff Brauns, P.E.	Public Works, Emergency Management
<b>Community Development</b>	Steve Osguthorpe, AICP	Land use and building
<b>City Manager</b>	Rob Wyman	City-wide oversight





## National Flood Insurance Program

### *National Flood Insurance Program Compliance*

<b>What department is responsible for floodplain management in your community?</b>	Community Development
<b>Who is your community's floodplain administrator? (title/position)</b>	Steve Osguthorpe, AICP
<b>What is the date of adoption of your flood damage prevention ordinance?</b>	2016 (Ordinance 2016-538)
<b>When was the most recent Community Assistance Visit or Community Assistance Contact?</b>	N/A (Newcastle does not participate in the National Flood Insurance Program)
<b>Does your community have any outstanding NFIP compliance violations that need to be addressed? If so, please state what they are?</b>	No
<b>Do your flood hazard maps adequately address the flood risk within your community? If so, please state why.</b>	Yes
<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. The community is not interested in joining as there are no structures within the floodplain.
<b>How many Severe Repetitive Loss (SRL) and Repetitive Loss (RL) properties are located in your jurisdiction?</b>	SRL: 0 RL: 0
<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 community is not interested.



## Hazard Mitigation Strategies

### *2020 Hazard Mitigation Strategies*

STRATEGY	LEAD AGENCY/POC	TIMELINE	PRIORITY
<b>S1 - City Resiliency</b>	City of Newcastle Jeff Brauns, P.E.	2-5 years	High
<b>S2 - Railroad Embankment Dam</b>	City of Newcastle Audrey Starsy	2-5 years	High
<b>S3 - Landcastle Creek Erosion Reduction</b>	City of Newcastle Jeff Brauns, P.E.	5 years	Medium
<b>S4 - Newcastle Fire Adapted Community</b>	City of Newcastle Jeff Brauns, P.E.	5 years	Medium



# S1 - City Government Resiliency Project

<b>Lead POC</b> Jeff Brauns	<b>Partner Points of Contact</b> <ul style="list-style-type: none"> <li>City of Bellevue Office of Emergency Management</li> <li>King County Sheriff's office</li> </ul>	<b>Hazards Mitigated / Goals Addressed</b> All hazards	<b>Funding Sources / Estimated Costs</b> \$ 200,000 (2-year) <ul style="list-style-type: none"> <li>PDM</li> <li>HMGP</li> <li>General Fund</li> </ul>
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**Strategy Vision/Objective**  
 Increase the resiliency of the City of Newcastle government operations to reduce vulnerability to natural and manmade hazards.

**Mitigation Strategy**  
 The City of Newcastle is a small community with limited facilities and staff. The city operates from two buildings: City Hall and the Annex. It is important that both structures and other critical infrastructure be resilient and city staff know their roles and responsibilities in the event of a disaster or other incident.  
 Currently, City Hall is located adjacent to the Olympic Pipeline. While it is newer construction (2007), the building lacks provisions to remain functional after a natural or manmade hazard occurs, such as power outage or pipeline explosion. The Annex building is also located adjacent to the William Pipeline. The structure is older construction (1983) and its vulnerability to earthquakes is unknown. Other critical city infrastructure has not been assessed for vulnerabilities to all hazards. City staff has received only limited direction on their roles and responsibilities after an incident, and the ability to work offsite is limited.  
 This strategy proposes installing backup power at City Hall, researching and installing blast proofing retrofitting at City Hall and the Annex, evaluating the seismic capacity of the Annex and performing retrofits if necessary, evaluating other critical infrastructure within the City for vulnerabilities, developing a Continuity of Operations Plan (COOP) and response plans for city staff, improve capabilities for teleworking, and reduce vulnerabilities and increase redundancy within the city's network.

<b>2-Year Objectives</b> <ul style="list-style-type: none"> <li>Purchase and install backup power source for City Hall.</li> <li>Develop a COOP and response plans.</li> <li>Implement network redundancy and telework improvements.</li> </ul>	<b>5-Year Objectives</b> <ul style="list-style-type: none"> <li>Evaluate Annex seismic capacity.</li> <li>Implement Annex seismic retrofits, if necessary.</li> <li>Research blast proofing retrofit improvements for City Hall and Annex.</li> <li>Install blast proof retrofits.</li> <li>Assess critical city infrastructure for vulnerabilities and identify mitigation actions.</li> <li>Continue network resiliency improvements and vulnerability reduction efforts.</li> </ul>	<b>Long-Term Objectives</b> <ul style="list-style-type: none"> <li>Implement actions to reduce vulnerability of critical city infrastructure to hazards.</li> <li>Explore options for locating a new City Hall in a less vulnerable location.</li> </ul>
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### **Implementation Plan/Actions**

- Secure grant funding to install a backup power source capable of supporting the essential functions at City Hall and to support emergency response efforts.
- Develop a COOP and response plans.
- Implement network redundancy and telework improvements.
- Research exterior retrofit requirements to protect the buildings from a pipeline explosion and determine cost-effectiveness.
- Implement cost-effective blast proofing retrofit projects at City Hall and Annex.
- Research and identify vulnerabilities in critical city infrastructure.
- Implement vulnerability reduction projects for critical city infrastructure.
- Continue long-term planning for new City Hall structure.

### **Performance Measures**

- Successfully install backup power.
- Develop and adopt COOP.
- Implement network redundancy projects.
- Improve telework capabilities.



## S2 - Newcastle Railroad Embankment Dam

<b>Lead POC</b> Audrey Starsy	<b>Partner Points of Contact</b> <ul style="list-style-type: none"> <li>• Dept of Ecology, Dam Safety Office</li> <li>• King County Emergency Management</li> </ul>	<b>Hazards Mitigated / Goals Addressed</b> Dam Failure	<b>Funding Sources / Estimated Costs</b> \$ 150,000 <ul style="list-style-type: none"> <li>• HHPD 2019</li> <li>• Dept of Ecology</li> <li>• City</li> </ul>
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**Strategy Vision/Objective**  
 Reduce the risk of dam failure by implementing recommended repairs to the Newcastle Railroad Embankment Dam.

**Mitigation Strategy**

The Railroad Embankment is an earthen embankment 55 feet high and 150 feet long, and was originally used for railroad transport. Newport Hills Creek flows through a 24” culvert pipe at the base of the embankment. A standpipe (the low outlet pipe) created the pool of water behind the embankment. At normal pool elevations, the reservoir has a surface area of 1.6 acres and a volume of 15 acre-feet. At dam crest elevation, the reservoir has a surface area of 5.4 acres and would hold a volume of 120 acre-feet at the dam crest.

As noted in an August 2018 Washington Dam Safety Office inspection, the embankment is in poor condition. The toe of the upstream slope was undercut 1 to 2 feet due to wave action and areas of sloughing and loose soil were observed on both the upstream and downstream slopes. The inlet pipe is severally obstructed. Restricting the flow to about 0.01 cubic feet per second. Severe erosion was also noted at the pipe outfall.

In response, the City has developed a two-phase approach to dam rehabilitation efforts. Phase 1 will consist of removing the existing standpipe to remove the impoundment and restore free-flow conditions . This phase includes a stream profile and bankfull width study for portions of Newport Hills Creek; design; permitting; and the replacement of the existing standpipe.

Phase 2 is a long-term solution. The project consists of removing a portion or the entire embankment to address the flood hazard as well as fish passage, sediment loading, and habitat restoration.

<b>2-Year Objectives</b> <ul style="list-style-type: none"> <li>• Implement Phase 1</li> <li>• Complete Phase 2 analysis</li> </ul>	<b>5-Year Objectives</b> <ul style="list-style-type: none"> <li>• Implement Phase 2</li> </ul>	<b>Long-Term Objectives</b> <ul style="list-style-type: none"> <li>• Maintenance and monitoring</li> </ul>
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**Implementation Plan/Actions**

- Secure grant funding to implement Phase 1 and Phase 2 analysis.
- Secure grant funding to implement Phase 2.
- Continue regular monitoring and maintenance.

**Performance Measures**

- Implement Phase 1 and 2.





### S3 - Landcastle Creek Erosion Reduction (CSWMP #5 and 6)

<b>Lead POC</b> Jeff Brauns	<b>Partner Points of Contact</b> <ul style="list-style-type: none"> <li>Department of Ecology</li> </ul>	<b>Hazards Mitigated / Goals Addressed</b> Erosion	<b>Funding Sources / Estimated Costs</b> \$ 882,000 <ul style="list-style-type: none"> <li>PDM</li> <li>HMGP</li> <li>Stormwater Utility</li> </ul>
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**Strategy Vision/Objective**  
 Reduce amount of maintenance needed at downstream facilities due to streambank erosion. Eroded materials clog downstream structures and inhibit flow causing increased maintenance needs.

**Mitigation Strategy**  
 Install a 36x12x8 vault within the right-of-way at 116th Ave SE and SE 72nd and a 34x12x8 vault at 116th Ave SE and SE 76th Aves to reduce flows discharging to Landcastle Creek.

<b>2-Year Objectives</b> <ul style="list-style-type: none"> <li>Design</li> </ul>	<b>5-Year Objectives</b> <ul style="list-style-type: none"> <li>Construction</li> </ul>	<b>Long-Term Objectives</b> <ul style="list-style-type: none"> <li>Maintenance and monitoring</li> </ul>
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**Implementation Plan/Actions**

- Conduct geotechnical investigation and design of vault installation.
- Construct project.
- Maintain and monitor.

**Performance Measures**

- Successfully construct project.
- Reduce streambank erosion and downstream maintenance.



## S4 - Newcastle Fire Adapted Community Project

<b>Lead POC</b> Jeff Brauns	<b>Partner Points of Contact</b> <ul style="list-style-type: none"> <li>• WAFAC</li> <li>• DNR</li> <li>• City of Bellevue Fire Department and Office of Emergency Management</li> </ul>	<b>Hazards Mitigated / Goals Addressed</b> Wildfire	<b>Funding Sources / Estimated Costs</b> \$ 50,000 <ul style="list-style-type: none"> <li>• General Fund</li> </ul>
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### Strategy Vision/Objective

Become a fire adapted community. Reduce wildfire risk and increase community awareness.

### Mitigation Strategy

The City of Newcastle’s location among heavily treed hills and valleys is one of the city’s greatest amenities. However, due to the changing climate and drier summers, the risk of a devastating wildfire occurring within the city is increasing. This strategy will support a goal of becoming a fire adapted community (FAC). The National Wildfire Coordinating Group defines a fire adapted community as “A human community consisting of informed and prepared citizens collaboratively planning and taking action to safely coexist with wildland fire.” These communities are “knowledgeable, engaged communities where actions of residents and agencies in relation to infrastructure, buildings, landscaping and the surrounding ecosystem lessen the need for extensive protection actions and enable the communities to safely accept fire as part of the surrounding landscape.” (<https://fireadapted.org/>)

The strategy includes assessment of risk, outreach and education, response and recovery planning, and fire risk reduction activities such as fuel reduction projects, wildland-urban interface code implementation, and other programs.

<b>2-Year Objectives</b> <ul style="list-style-type: none"> <li>• Risk assessment.</li> <li>• Outreach and education.</li> </ul>	<b>5-Year Objectives</b> <ul style="list-style-type: none"> <li>• Implement risk reduction programs identified by risk assessment.</li> <li>• Continue outreach and education.</li> </ul>	<b>Long-Term Objectives</b> <ul style="list-style-type: none"> <li>• Become a fire adapted community.</li> </ul>
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### Implementation Plan/Actions

- Conduct risk assessment to identify threats and mitigation actions.
- Develop and implement a public outreach and education program.

### Performance Measures

- Implement risk assessment process.
- Implement public outreach and education program.