

Community Rating System (CRS) Activity 510

**ANNUAL FLOODPLAIN MANAGEMENT PLAN
PROGRESS REPORT**

City of Issaquah, Washington

Prepared by:

City of Issaquah Public Works Engineering Department

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PURPOSE

This progress report is submitted annually to the Federal Emergency Management Agency (FEMA) to document the City of Issaquah's progress in implementing its floodplain management plan. This documentation is a requirement of the Community Rating System (CRS), a voluntary FEMA program that reduces National Flood Insurance Program (NFIP) flood insurance premiums for local policy holders.

The City of Issaquah participated with King County and other governments in the development of the original Regional Hazard Mitigation Plan (RHMP), on a limited basis with the 2009 plan update, the 2015 plan update, and again for the latest (2020) plan update. The latest plan update reassesses risks and vulnerabilities to multiple hazards, including floods, and develops strategies to reduce risk from those hazards. In addition to a base plan covering King County as a whole, each participating jurisdiction including Issaquah developed a plan annex that independently meets most FEMA planning requirements. Each annex, plus this base plan, meets the planning requirements outlined in federal regulations.

In addition to King County, over 60 cities and special purpose districts developed plan annexes. The City participated in the multi-jurisdictional planning process led by King County. The City also had an internal Planning Team, led by the Emergency Management Director and consisting of staff from multiple City departments, which developed the City-specific risk-reduction strategies for Issaquah hazards included in our plan annex.

As documented in the Plan Annex, the planning process, including the City Council and public participation, began in late 2018. The Council Safety & Services Committee was provided an overview of the plan update in July, 2019. Public input was sought on the City's website, at the Farmer's Market, and National Night Out event in the summer of 2019. The planning process extended into the fall of 2019 when Issaquah's Plan was submitted to King County for review. Following King County review, the plan was forwarded to the State and to the Federal Emergency Management Agency (FEMA).

The City Council adopted the 2020 King County Regional Hazard Mitigation Plan and Issaquah's annex thereto, on June 15, 2020.

To meet the requirements of CRS Activity 510, this report documents floodplain-related mitigation objectives and actions contained in the 2020 Hazard Mitigation Plan (HMP). Having a current HMP also allows the City to receive FEMA grants for natural hazard mitigation projects.

This progress report summarizes the status of flood hazard reduction measures identified in the 2020 HMP, including:

- Maintain good standing under National Flood Insurance Program
- Continue Community Emergency Response Team (CERT) and Map your Neighborhood (MYN) programs
- Continue the identification, design, and completion of capital projects through a 6-year Capital Improvement Program to reduce the impacts of flooding damage and restore, as closely as possible, the pre-developed condition of the floodplain to convey floodwater
- Community Rating System
- Mitigation of flood-prone (repetitive loss) structures

REPORT PREPARATION AND DISTRIBUTION

This progress report was prepared by Public Works Engineering staff with assistance from the City's communications team and the City's Emergency Management Planning Group for its review and comment. The final report was provided to City Council, the Mayor's office, and City administration officials. A copy is also posted on the City's website for the public.

FLOODPLAIN MANAGEMENT PLANNING PROCESS

Floodplain management planning in Issaquah started with the Issaquah Creek Basin and Nonpoint Action Plan, adopted by both the City of Issaquah and King County councils in 1995, and approved by the Washington Department of Ecology in 1996. This plan recommended several actions to address flooding problems in the basin, including reducing flood hazards by removing homes from the stream corridor and floodplain, elevating existing homes, acquiring or obtaining easements on undeveloped property, and restoring channel and floodplain capacity. The City's 2002 Stormwater Management Plan reiterated these recommendations and provided a guide for planning, funding and implementing a comprehensive flood hazard management program. In January 2007, King County adopted the 2006 King County Flood Hazard Management Plan (amended in 2013). Issaquah city staff participated in preparing this plan. State law governing the preparation of comprehensive flood control management plans (RCW 86.12.210) requires these plans to be binding on each jurisdiction and special district that is located within an area included in the plan. As noted above, the City also adopted an updated 2020 Hazard Mitigation Plan, which mirrors these recommendations.

The City is in the process of preparing an update to the 2002 Stormwater Management Plan. The update, called the Storm and Surface Water Master Plan (Plan), will include a list of prioritized stormwater management options (projects and programs) within the City's six drainage basins to address localized flooding and flood reduction strategies within the floodplain. The Plan is scheduled for adoption in the 2nd quarter of 2022.

Additionally in 2021, in collaboration with the City, King County is embarking on an effort to conduct a flood study and channel migration study of Issaquah Creek. The results of the flood study will be used to update the FEMA flood maps of Issaquah creek within the City's jurisdictional boundaries as well as upstream in unincorporated King County. The study scope will include revised hydrology that will include future climate change participation modeling data. The study will also be used to inform future projects to reduce flood risk within Issaquah Creek.

2021 PROGRESS REPORT

National Flood Insurance Program (NFIP)

Flood hazard management is a critical element of reducing flood losses to properties and risks to public safety, and flood insurance is an effective tool because it requires rigorous building standards and other floodplain management requirements that are set by the Federal government in exchange for providing flood insurance to floodplain homeowners, commercial building owners and tenants. Flood insurance also provides significant relief to those who incur flood losses. Issaquah is one of 292 communities in the state, and 22,000 across the U.S., which participates in the NFIP.

As of July 31, 2019, there were 174 active NFIP policies in the City of Issaquah, providing a total of \$49.1 million in coverage for a written premium in force of approximately \$202,000. These policies cover buildings and contents for owner-occupied properties and building contents for rentals. The total FEMA payout for flood insurance claims within the City from 1/1/1978 through 6/30/2019 was approximately \$4 million. Nationally, the NFIP has paid approximately \$68 billion for flood insurance claims and related costs from since 1978 (the state of Washington represents less than 0.4% of the national total).

An important role for the City in this program is to provide and support floodplain mapping updates when either public or private development projects may contribute to changes in the performance of the floodplain and the degree of floodplain hazards. For public developments, these mapping updates are performed by the City Public Works Engineering Department when budget and staff resources permit. The typical practice of the City has been to bundle multiple project impacts into composite map revision requests for FEMA approval. In mid-2018, a Letter of Map Revision (LOMR) Application was submitted to FEMA; as of early October 2020, we are still working with FEMA Region 10 on the details of the LOMR application. For private development, the City Public Works Engineering and Development Services Departments provide technical advice and assistance to developers and/or property owners, and those map revisions typically focus on only single private property parcels.

CERT and MYN Programs

The Issaquah Citizen Corps Council has successfully implemented several emergency preparedness programs throughout the community, including a Community Emergency Response Team (CERT) and Map Your Neighborhood (MYN) program.

More than 850 citizens have been involved in Issaquah's CERT and Medical Reserve Corps (MRC) programs since the group started in 2005. Nearly 120 have applied to become credentialed Emergency Workers and active volunteers during incidents including flooding. In addition, more than 13 percent of residential parcels in Issaquah are MYN trained, meaning the neighbors have plans in place to help each other during emergencies and disasters.

Community Rating System

The CRS is a voluntary program under the NFIP that rewards improved floodplain management with reduced flood insurance premiums for residents and businesses. Under the CRS, the City in 2020 was approved at a Class 5 rating, which is unchanged from the previous cycle (recertification occurs annually). This class provides a 25% discount on flood insurance premiums. The CRS rating ranges from Class 10 (the lowest level of participation), to Class 1 (the highest). The maximum discount is 40% under Class 1.

Of the 37 cities, counties and tribes in Washington that participate in the CRS, 14 are currently rated Class 5 or better. This achievement supplements the City's continual efforts in reducing flood hazards through effective building and floodplain management standards; capital improvement projects and maintenance; flood hazard mitigation planning; and public outreach and flood warning to improve public safety and reduce property damage during flooding events.

Repetitive Loss Program

Repetitive loss (RL) properties are defined by FEMA as properties that had two or more flood insurance claims of at least \$1,000 within any 10-year period since 1978.

For the period 1980-2016, claims from RL properties amounted to 69% of all FEMA flood insurance claims in Issaquah. The commercial properties in the Gilman Square area (south of Gilman Blvd between 7th Avenue and Issaquah Creek) accounted for about 48% of the historical flood insurance claims (mainly from the 1996 and 2009 floods), while single-family residences accounted for about 42% and multi-family properties accounted for the remainder. It is noted that FEMA does not pay for property or landscaping damages, and not all buildings subject to flooding - including City-owned buildings - are insured by FEMA. Therefore, actual historic flood damage costs are likely higher.

The total number of properties on Issaquah's RL list as of September 2018 is 24, which include both mitigated and unmitigated properties. Properties are considered mitigated on the RL list only if they are fully mitigated: the structure is brought up to current flood code by elevating the first floor, flood protection is provided, or the structure is demolished. Properties that have been mitigated are summarized as follows:

- 5 houses demoed and converted to open space (buyouts)
- 4 home and commercial properties elevated using FEMA grants and owner funds
- 1 commercial redevelopment project (Gilman Square)

These mitigation projects have all occurred since 2012. The Gilman Square building demolished in 2014 was singularly responsible for 45% (\$1.8m) of all historic flood insurance claims in Issaquah. The new apartment buildings that replaced Gilman Square, completed in early 2017 and now named Atlas Apartments, are designed to be protective of flooding by raising the first floors to 1.0 foot above the 100-year flood elevation. Now that the final flood protection documentation has been submitted, reviewed, and approved by the City and FEMA, the Gilman property has been removed from the unmitigated property category of the RL list.

With the removal of the Gilman Square building, the RL list of unmitigated properties in the City totals 14. The City seeks to reduce the RL list of unmitigated properties to less than 10 within the next few years. The City will apply for a Flood Mitigation Assistance (FMA) sub-grant in late 2021, which would provide the opportunity of financial assistance to owners of RL and non-RL properties to elevate their structures to reduce risk.

Capital Infrastructure Improvements

A key, progressive, and proactive method to improve both flood conveyance capacities of local streams and/or provide flood damage reduction and mitigation is the identification, design, and completion of surface and storm water capital infrastructure improvement projects. In addition to infrastructure improvements, the City's capital program includes projects to restore and improve floodplain areas to an undeveloped, natural state; which are subsequently maintained in that condition by the City of Issaquah's open green space programs. Finally, the capital infrastructure improvement projects include stormwater conveyance rehabilitation and repair projects to maintain the design life and function of existing infrastructure and that infrastructure's role in reducing and mitigating flooding events and damage.

The City of Issaquah actively partners with state and federal agencies and the grant programs of those agencies to extend the effectiveness of floodplain management within the Issaquah Creek

Watershed and increase the City's capability for funding and completing flooding hazard and floodplain capital infrastructure projects. Funding programs include FEMA's Hazard Mitigation Grant Program, the King County Flood Control District's Sub-Regional Opportunity Fund Program, and the King County Flood Control District's Flood Reduction Grant Program. The City also supports efforts by the Washington State Parks Department in their efforts to improve floodplain performance and habitat restoration within Lake Sammamish State Park.

Recent project completions including the following:

- Salmon Run Nature Park Stream Restoration
Construction during 2016 and completed early 2017. This project provided floodplain restoration and bank stabilization on Issaquah Creek downstream of NW Juniper Street, connecting to the improvement efforts further downstream at Dogwood Street and through Confluence Park.



Expansion of Floodplain at Salmon Run Nature Park, including High Flow Bypass Channel

- Confluence Park Stream Restoration and Pedestrian Bridge projects
Construction during 2016 and early 2017. These concurrent projects both provided floodplain restoration, channel encroachment reduction, and bank stabilization on Issaquah Creek; and further added a pedestrian bridge designed to minimize debris blockage during flooding events.



Expansion of Floodplain at Confluence Park

- Anti-Aircraft Creek Culvert Replacement
This culvert on Newport Way NW was occasionally impacted by sediment plugging due to a 90-degree bend in the stream just upstream of the roadway, caused by an old subdivision development. Significant rainfall events on Cougar Mountain in the last few years have renewed interest in fixing this problem, which creates a significant hazard to motorists and costly cleanup by Public Works Operations. In 2014 the City was awarded a FEMA Hazard Mitigation Grant Program grant to replace this culvert. Design and permitting activities occurred throughout 2015 and 2016, and construction was completed by the end of 2017.



Anti-Aircraft Creek Culvert Located under Newport Way NW

- 62nd Street Extension
Project to implement riparian habitat improvements to approximately 10 acres located between Issaquah Creek and North Fork Issaquah Creek, converting previously-developed floodplain where buildings were removed after acquisition by City. This project included acquisition of a habitat mitigation area constructed by Costco in 2012, which is now incorporated in order to connect floodplain benefits. Construction began in 2017 and was completed by early 2019.



SE 62nd Street Extension, including stream, wetlands, and floodplain enhancement

- Lower Lewis Creek Large Woody Debris Repair
Large woody debris (LWD) installed as part of the Lower Lewis Creek Stream Restoration Project in 2015, came loose and shifted to the center of the channel during a series of high flow events in 2019 and 2020, creating a flood hazard to adjacent properties along the creek within the Meadowbrook Pointe community. In the fall of 2021, the LWD was strategically re-positioned along the creek to help stabilize portions of the channel bank and to reduce the chance of the LWD becoming mobile and increasing flood risk in the future.

The City will continue to implement flood mitigation projects identified from the Hazard Mitigation Plan and outlined in the City of Issaquah 2018-2022 Capital Improvement Program. Examples include:

- East Lake Sammamish Parkway and SE 51th Street Conveyance Improvements
This project will correct current and future flooding impacts along East Lake Sammamish Parkway that is prone to frequent flooding through existing stormwater conveyance infrastructure. Design has continued during 2020. This project is expected to be completed by 2022.
- Lower Issaquah Creek Stream and Riparian Improvements

This project will improve stream and riparian habitat along 1,200 feet of the main fork of Issaquah Creek, removing invasive species, and converting previously developed areas to floodplains where buildings were removed after acquisition by City. This project will connect and expand the floodplain areas of earlier City mitigation and habitat improvement areas (including the 62nd Street Extension project above). Design started in 2019. This project is expected to be completed by 2022.

- Annual Stormwater Rehabilitation

This ongoing project addresses stormwater conveyance problems within the City. Due to the Covid 19 crisis, activities were curtailed in 2020 but are scheduled to resume in 2022. During recent years, a portion of the scope of this program addressed localized flooding of City streets.

Property Acquisition

The City uses money from grants, bonds, and the Stormwater Fund to purchase both developed and undeveloped property in the floodplain, with a particular focus on unmitigated repetitive loss properties, in order to further mitigate flooding risks and also add to the City's permanent open green space. Properties acquired through these efforts are restored to improve natural habitat and flood conveyance. The acquisition program also supports habitat restoration efforts by the City for Issaquah Creek and its tributaries, which also supports Chinook salmon recovery (a listed species under the Endangered Species Act).

Currently, over 100 acres of the floodplain area in the City of Issaquah are preserved as undeveloped open green space, which is equal to 26% of the total floodplain area. The City continues to work with property owners on potential future acquisitions but offers are made only when funding is available. An area of particular interest has been expanding property acquisition, building demolition, and habitat restoration along Issaquah Creek, between I-90 and Lake Sammamish State Park. The goal of this focus is connected floodplain habitat, which has shown to be effective in reducing the potential damage to surrounding property during flood events.