Community KING COUNTY* State WA CID 530071

COMMUNITY RATING SYSTEM ANNUAL RECERTIFICATION

CRS Activity 510
Annual Progress Report on Implementation of Credited Plan

Which Plan is this for (use separate templates for each credited Plan):
☐ **Floodplain Management Plan (Hazard Mitigation Plan)**
☑ **Repetitive Loss Area Analysis**
☐ **Floodplain Species Plan**
☐ **Substantial Damage Plan**

Name of Community: King County

Date this Annual Progress Report was prepared (not the date of adoption of the credited Plan): October 16, 2023

Name of Plan: King County Repetitive Loss Area Analysis

Date of Adoption of Plan: September 6, 2022 by Motion 16199

5 Year CRS Expiration Date: September 5, 2027

1. How can a copy of the credited Plan be obtained:

   https://your.kingcounty.gov/dnrp/library/water-and-land/flooding/final-repetitive-loss-area-analysis-external-7-26-22.pdf

2. Describe how ***this annual progress report*** (not the credited Plan) was prepared and how it was submitted to the governing body, released to the media, and made available to the public:

   See attached report, Section 1.0 Background.

3. Provide a description of the implementation of each recommendation or action item in the action plan or area analysis report, including a statement on how the project was implemented or not implemented during the previous year:

   See attached report, Section 2.0 Mitigation Action Progress.

4. Discuss why any objectives were not reached or why implementation is behind schedule:
   See attached report, Section 2.0 Mitigation Action Progress.
5. What are the recommendations for new projects or revised recommendations?

   See attached report, Section 3.0 Proposed Modifications to Mitigation Actions or Recommendations.

King County

REPETITIVE LOSS AREA ANALYSIS

2023 Annual Report

PERTEET

King County, Washington

REPETITIVE LOSS AREA ANALYSIS

2023 Annual Report

October 16, 2023

King County Department of Natural Resources and Parks
Water and Land Resources Division

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1.0 BACKGROUND

In 2022, King County, Washington, completed a Repetitive Loss Area Analysis (RLAA). The RLAA identified and evaluated repetitive loss properties throughout the County. The RLAA identified 41 repetitive loss areas in King County located within 7 drainage basins, including the Cedar River Basin, Sammamish River Basin, Skykomish River Basin, Snoqualmie River Basin, Vashon Island, and Green River Basin. The RLAA was adopted by the County on September 6, 2022, by Motion 16199.

Within the 41 repetitive loss areas, there were 88 unmitigated repetitive loss properties and an additional 523 properties that have the same or similar flood conditions but have either been mitigated, constructed to higher standards, or do not have repetitive claims paid against the NFIP. The RLAA suggests methods to mitigate or reduce flood loss for each specific property, including elevate/replace/relocate, acquire/demolish, modify building utilities, capital projects, or drainage maintenance. Each property may have several possible mitigation options. Table 1 summarizes the possible mitigation actions in each repetitive loss area. The RLAA also identifies the capital projects proposed for the drainage basins which may reduce the risk of flooding for repetitive loss areas. Section 2 of this progress report describes the mitigation actions that have occurred in each repetitive loss area over the past year.

This RLAA was prepared as part of King County's participation in the FEMA Community Rating System (CRS) Program. Through participating in the CRS program, property owners within the County are provided flood insurance premium discounts on NFIP backed flood insurance policies. To retain CRS credit for the RLAA, the County must prepare an annual progress report on the various activities the County is performing as referenced in the RLAA. This report shall serve as King County's annual progress report for the period of October 1, 2022, through October 1, 2023. The report was prepared by Perteet and King County staff in collaboration with planning partners. King County staff reviewed permit applications and checked with program leads for updates related to the mitigation and capital projects identified within the RLAA. The annual report will be shared with the governing body in a public meeting, released to the media, and shared with the public by posting the report online.

The County performs annual outreach to repetitive loss area property owners. In December 2022, the County sent a repetitive loss letter to all 611 property owners and residents within the repetitive loss areas. The letter included information on flood risks, how to prepare property for flooding, types of mitigation actions, and available assistance. The 2023 repetitive loss letter is scheduled to be sent in November and will include a link to review the RLAA and annual report.

The RLAA can be accessed at: https://your.kingcounty.gov/dnrp/library/water-and-land/flooding/final-repetitive-loss-area-analysis-external-7-26-22.pdf

The annual progress report can be accessed at: https://kingcounty.gov/en/dept/dnrp/nature-recreation/environment-ecology-conservation/flood-services/flood-programs/community-rating-system

Table 1. Summary of Mitigation Actions Proposed in each Repetitive Loss Area.

Area	Possible Mitigation Options					
	Elevate/ Replace/ Relocate	Acquire/ Demolish	Modify (HVAC, etc.)	Capital Projects	Drainage Maint.	Other
Cedar 1	X	X		X		
Cedar 2		X		X		
Cedar 3						
Cedar 4	X	X				
Cedar 5		X		X		
Sammamish 1	X	X		X		
Sammamish 2			X	X		
Sammamish 3	X				X	
Skykomish 1	X			X	X	
Skykomish 2	X		X		X	
Skykomish 3	X		X		X	
Skykomish 4			X		X	
Snoqualmie 1-2	X		X	X	X	
Snoqualmie 3	X		X		X	
Snoqualmie 4	X	X	X		X	
Snoqualmie 5	X	X	X	X		
Snoqualmie 6	X	X				
Snoqualmie 7	X	X	X			
Snoqualmie 8	X	X	X			
Snoqualmie 9	X	X	X			
Snoqualmie 10	X	X	X			
Snoqualmie 11	X	X		X		
Snoqualmie 12	X	X				
Snoqualmie 13	X	X		X		
Snoqualmie 14-16	X	X	X	X		
Snoqualmie 17	X	X				
Snoqualmie 18	X		X			
Snoqualmie 19	X					
Snoqualmie 20	X					
Snoqualmie 21	X					
Snoqualmie 22	X	X				
Vashon Island 1	X		X			
Vashon Island 2	X		X			
Green River 1	X		X			
Green River 2	X	X				
Green River 3	X					
Green River 4			X		X	
Green River 5	X	X	X		X	

2.0 MITIGATION ACTION PROGRESS

2.1 Elevate/Replace/Relocate

2.1.1 Description

When the floor of a home is below the 100-year flood elevation, physically elevating the structure, relocating the structure, or demolishing and building a new structure is one of the most effective means to prevent flood damage. Financial assistance may be available for elevations or relocations. Since 2008, King County Flood Control District has provided financial assistance to 66 homeowners to elevate or relocate their homes. The County also requires all substantially damaged or improved structures to come into compliance with current regulations, which often includes elevation. A substantial improvement is any reconstruction, rehabilitation, addition, or other improvement of a structure, the cost of which equals or exceeds 50% of the market value of the structure before the "start of construction" of the improvement.

2.1.2 Where Mitigation is Proposed

Table 2 provides the number of properties in each basin identified for elevation, replacement, or relocation mitigation.

Table 2. Number of Properties Proposed for Elevate/Replace/Relocate Mitigation.

Snoqualmie River Basin	Sammamish River Basin	Cedar River Basin	Green River Basin	Skykomish River Basin	Vashon Island
258	1	5	5	18	12

2.1.3 Where Mitigation Occurred

In the Snoqualmie River Basin, two properties have received funding from the King County Flood Control District to elevate their structures. The structures are a home built in 1936 on a crawlspace foundation and a home built in 1916 also on a crawlspace foundation. The homeowners are in the process of obtaining permits for the work. King County's efforts to support homeowners through the process of elevating, replacing, or relocating properties are ongoing.

2.2 Acquire/Demolish

2.1.1 Description

The most effective approach to preventing further flood damage to a building is acquisition of the land and demolition of the structure. The property would then serve as open space or recreation area in perpetuity. Property owners retain the right to select this as a mitigation method and acquisitions are voluntary when possible. They may sell their property to King County or an agency dedicated to the preservation and management of local open space. Acquisition is a relatively expensive mitigation measure, but it provides the greatest benefit in that lives and property are protected from flood damage.

King County's program for land acquisition has been very successful, with the purchase of 215 flood-prone or repetitive loss properties since 2008 and several more in progress.

2.2.2 Where Mitigation is Proposed

Table 3 provides the number of properties in each basin identified for acquisition and demolition mitigation.

Table 3. Number of Properties Proposed for Acquire/Demolish Mitigation.

Snoqualmie River Basin	Sammamish River Basin	Cedar River Basin	Green River Basin	Skykomish River Basin	Vashon Island
149	1	48	2	0	0

2.2.3 Where Mitigation Occurred

Since October 2021, King County has acquired and demolished 11 buildings in the regulatory floodplain and 1 building outside of the regulatory floodplain. None of the demolished buildings, which included single family homes, mobile homes, and small business structures, were located in repetitive loss areas. In October 2022, the King County Flood Control District acquired a repetitive loss structure located in the FEMA Floodway within the Snoqualmie River Basin. Demolition permits have not yet been acquired. Upon demolition, this acquisition will provide multiple benefits, including permanent flood hazard risk reduction, open space, and recreational access opportunities for the community. King County continues to identify properties for voluntary acquisition to permanently reduce flood risk.

2.3 Modify (HVAC and Other Utilities)

2.3.1 Description

Modifying building utilities in a floodplain is essential to reduce the risk of damage during flood events and ensure the safety and functionality of these essential systems. Modification of heating, ventilation, and air conditioning (HVAC) systems and other utilities may include elevating equipment, waterproofing and sealing, installing sump pumps, providing backup power (such as generators), and installing flood sensors and alarms to provide early warning. Modifying HVAC and other utilities can be an affordable way for homeowners to protect their investment. Through these preventative measures, damage can be minimized and the utilities will remain functional.

2.3.2 Where Mitigation is Proposed

Table 4 provides the number of properties in each basin identified for modification mitigation. These properties had building utilities that were visible to the inspectors from the road or were identified in other plans or during landowner interviews. Because building utilities are often hidden from view, more properties than identified would likely benefit from this mitigation action.

Table 4. Number of Properties Proposed for Modify (HVAC and Other Utilities, etc) Mitigation.

Snoqualmie River Basin	Sammamish River Basin	Cedar River Basin	Green River Basin	Skykomish River Basin	Vashon Island
54	1	1	12	14	29

2.2.3 Where Mitigation Occurred

No known modifications occurred during the reporting period. Many of the modifications that protect building utilities from flooding can be implemented without a permit and are difficult for staff to track. The efforts to help repetitive loss area properties mitigate potential flood losses to building utilities are ongoing.

2.4 Capital Projects

2.4.1 Description

Capital projects can keep floodwaters away from an area through structural modification of the river system, such as with new levees, setback levees, reservoirs, or other flood control measures. They may increase safety by elevating roads or modifying critical facilities. Capital projects may also include implementing flood warning systems, updating floodplain mapping, and conducting public outreach to increase awareness of flood risk. King County Flood Control District generally leads capital projects within the floodplain. These projects are planned for and identified within each basin's Capital Investment Strategy and other planning documents. They include levee repairs and setbacks, elevating roads, and other capital projects. Capital projects aim to reduce the impact of flooding events, protect lives and property, and enhance the resiliency in the communities located within the floodplain.

2.4.2 Where Mitigation Activity is Proposed

Table 5 provides the number of properties in each basin that will benefit from capital projects.

Table 5. Number of Properties Proposed for Capital Projects Mitigation.

Snoqualmie River Basin	Sammamish River Basin	Cedar River Basin	Green River Basin	Skykomish River Basin	Vashon Island
12	2	42	12	7	0

2.4.3 Where Mitigation Occurred

Table 6 provides status updates of capital projects identified within the RLAA. Capital projects to reduce the flood losses within or adjacent to repetitive loss areas are ongoing and King County Flood Control District continues to identify potential new capital projects.

Table 6. Capital Project Status.

Location	Name of Project	Summary	Status
Cedar River Basin	Herzman to Camp Freeman Project	Flood and erosion risk reduction will be provided along the Cedar River, four miles east of Renton	Final design/permits, 2023 Construction contracting, 2024
	Jan Road Levee Setback Project	Jan Road will be raised to improve access, portions of the Jan Road Levee will be set back or removed, and at-risk homes will be acquired	Completed in 2022
	Maplewood Landslide and Flood Reduction Feasibility Study	Analyzes flood and landslide hazards in Maplewood neighborhood, which includes an analysis of existing levees	Development of potential risk mitigation solutions, pending funding, ongoing
Sammamish River Basin	Sammamish River Capital Investment Strategy	A capital investment strategy will be developed for the entire length of the Sammamish River from Lake Sammamish to Lake Washington	Plan development phase, 2022-2024
	Willowmoor Floodplain Restoration Project	The reconfiguration of the outlet from Lake Sammamish to the Sammamish River will maintain or reduce downstream flooding and flooding impacts and improve conditions for fish listed in the ESA	Preliminary design, stakeholder/community engagements, 2023
South Fork Skykomish River Basin	South Fork Skykomish Repetitive Loss Mitigation	This project funds elevation or buyout of structures in the basin, to eliminate flood risk or erosion damage during future flood events	Project is ongoing
	Timberlane Village Revetment Repair	The repair of the revetment will protect lives, the rivers, and aquatic species	Project completed
Snoqualmie River Basin	Residential Flood Mitigation-Property Acquisition	This project considers acquisition of properties that are at risk of severe channel migration hazards	Project is ongoing
	Circle River Ranch (South Fork Snoqualmie)	Evaluates actions to reduce long-term risks from channel migration in the Circle River Ranch neighborhood	Design and permitting, 2022-2024 Construction, 2024
	Reinig Road Revetment Repair	Short-term risk reduction measures and permanent repairs of damages to three sections of Reinig Road Revetment	Completed in 2022
	SR 203 Bridge Improvement Feasibility Study	Evaluates the opportunities, costs, and benefits of providing increased water flow through SR 203 Bridge and road.	Project report finalized, 2022, improvements to be part of Lower Frew Levee Setback project
	Tolt River Level of Service Analysis	Provides a technical analysis to determine levels of protection from new levee systems to maximize public protection and investigates project sequencing and the resulting flood effects	Alternative evaluations study, 2022 – briefing Flood Control District, 2023

Location	Name of Project	Summary	Status
	Tolt River Sediment Management Feasibility Study	Determines if sediment removal is a feasible and effective flood risk reduction tool for the lower two miles of the Tolt River. In addition, this study reviews and updates previous analysis of the sediment production in the upper Tolt River basin and sedimentation rates in the lower two miles of the Tolt River	Study completed, 2022 – briefing Flood Control District, 2023
Green River	Black River Pump Station Improvements	Includes a number of improvements to the pump station to ensure flood risk reduction benefits	Mechanical system repairs, 2021-2023, replace control building alternatives analysis, 2023, ongoing
	Galli's-Dykstra Levee Repair Project	Completes Phase 1 repair	Project completed
	Green River System-Wide Improvement Framework	Outlines prioritized strategy to address levee deficiencies. This framework optimizes flood risk reduction and addresses system-wide issues to maintain eligibility for the 17 miles of levee currently enrolled	SWIF implementation, ongoing
	Lower Russell Levee Setback Project	Removes and replaces existing flood containment system of levee and revetments to construct new flood prevention system	Completed in 2022

2.5 Drainage Maintenance

2.5.1 Description

Drainage maintenance for homes in a floodplain is critical to ensure effective functioning of drainage systems, reduce flood risk, and protect homes from water damage. In some cases, there are activities that the property owner can do on-site such as directing shallow floodwater away from flood-prone structures or cleaning on-site ditches. Shallow flooding can often be kept away from a structure if some simple improvements are made to the yard. For example, regularly removing debris such as leaves, branches, and trash from culverts and storm drains can prevent blockages that impede water flow. In addition, regularly inspecting the drainage infrastructure and managing vegetation in and around drainage channels can greatly reduce flood risk.

2.5.2 Where Mitigation is Proposed

Table 7 provides the number of properties in each basin identified for acquisition and demolition mitigation.

Table 7. Number of Properties Proposed for Drainage Maintenance Mitigation.

Snoqualmie River Basin	Sammamish River Basin	Cedar River Basin	Green River Basin	Skykomish River Basin	Vashon Island
34	1	0	6	13	0

2.5.3 Where Mitigation Occurred

King County Roads Services Division performs regular ditch maintenance within county road rights of way. Any ditch maintenance performed by the County within or nearby repetitive loss areas supports this mitigation action. No other drainage maintenance projects occurred during the reporting period within repetitive loss areas. The County will continue efforts to implement drainage maintenance projects within repetitive loss areas.

3.0 PROPOSED MODIFICATIONS TO MITIGATION ACTIONS OR RECOMMENDATIONS

No modifications to the mitigation actions are proposed at this time. The County continues to implement the identified mitigation projects on schedule.

During upcoming Hazard Mitigation Plan and Flood Management Plan update processes, the County should integrate the RLAA actions and strategies into the updated plans.