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Comprehensive Flood Hazard Management Plan

Executive Summary

The purpose of this plan is to create a comprehensive document that describes flood-related issues and proposes a variety of flood hazard management strategies. The CFHMP embodies the tenets of Flood Hazard Management which looks at the opportunities and constraints created by the unique conditions at a given watershed scale. This includes taking a holistic view of all the activities taking place within a basin implying that they cumulatively have an impact on flooding events. Specifically the benefits of a CFHMP are as follows:

- Presents a coordinated and comprehensive implementation strategy for activities and projects that reduce public exposure to flood risk;
- Organizes an inventory of all flood-related issues into a “catch all” product that the community can agree on;
- Identifies all the flood related policies at the federal, state, and local level;
- Characterizes the historical and current variables affecting flooding in the watershed;
- Provides a watershed-based plan that formulates multiple solutions to mitigate flood hazards;
- Recommends early implementation projects to provide flood control and habitat benefits;
- Provides a template for developing funding proposals using State and Federal Funds for on the ground projects.

A. Project Method and Participants

Recognizing the need for decreasing flood hazard risk, Wahkiakum County contracted the Columbia River Estuary Study Taskforce (CREST), a local council of governments to initiate local watershed based discussions on flood related issues. CREST staff facilitated this discussion through meetings with individual landowners, district members, County staff and through the establishment of a Steering Committee. During this process, overall goals and objectives were defined to give direction to the plan based on existing flood related topics. These were reviewed by the project committee and eventually presented at a countywide River Summit. Plan drafts were submitted to local, regional, and state representatives to alert them of the process and allow them to comment on how the plan fits within the agency's mission.

B. Flood Hazard Management Goals

Goal 1: *Reduce the Amount of Flood Hazard Risk to Public Infrastructure, Citizens and their Property.*

Goal 2: *Propose Flood Hazard Mitigation Projects that Protect or Enhance Fish Habitat and Habitat for other Species.*

Goal 3: *Increase the Level of Coordination and Dialogue among Community Members and Interests of the State that Promotes Effective Floodplain Management Strategies.*

Goal 5: *Enhance Public Awareness about Activities that Increase Flood Risk to Existing and Future Development.*

Goal 6: *Protect and Enhance Productive Lands and the Rural Character of Wahkiakum County*

The types of flood hazards that are within the scope of this plan include and are defined as follows:

- ✓ Shoreline and Streambank Erosion
- ✓ High flood elevations resulting from river-tidal interactions;
- ✓ High water tables in poorly drained lower valley areas;
- ✓ Sedimentation trends that limit conveyance capacity of channels;
- ✓ Structures in high-risk areas in the floodplain;
- ✓ Flooding events that sever access to services, private property, and public facilities.

C. Short Term Flood Hazard Management Objectives

Short Term Objective 1:

Use Flood Plan to identify funding sources for early implementation/pilot projects in each basin.

Short Term Objective 2:

In concert with the County, develop a list of potential structural and non-structural (Chapter 4) activities that reduce private property risk while increasing the County's ranking under FEMA's Community Rating System (CRS).

Short Term Objective 3:

Continue to develop local capacity to coordinate with ongoing studies related to sediment delivery dynamics in Wahkiakum County's watersheds and siltation trends of Grays Bay.

Short Term Objective 4:

Inventory opportunities for land restoration and/or acquisition in the floodplain to reconnect areas of floodplain habitat while providing flood mitigation benefits in the form of slowing stream energy, sediment delivery, and creating areas for storing discharge.

Short Term Objective 5:

Sponsor forums to better coordinate local project and permitting requirements with State and Federal entities.

Short Term Objective 6:

Maintain and expand membership of the "Stakeholders Group" to serve as a coordinating body among groups conducting flood hazard reduction projects in the County.

D. Long Term Flood Hazard Management Objectives

Long Term Objective 1:

Expand existing County capacity to support both programmatic and on the ground projects to implement actions identified (Chapter 6) in the CFHMP.

Long Term Objective 2:

Support ongoing and future studies that contribute to the planning and design of future floodplain mitigation projects in the County.

Long Term Objective 3:

Work with forest management agencies and private companies to prioritize areas for forest road improvement and/or closures to reduce sediment delivery into Wahkiakum's watersheds.

Long Term Objective 4:

Adopt additional land use measures to further reduce risk of flooding for development activities in the floodplain in concert with County Comprehensive Plan.

Long Term Objective 5:

Install long term mechanisms for public involvement to engage and better coordinate with the community in discussing flood related issues through workshops, mapping exercises, and field visits.

Long Term Objective 6:

Develop an ongoing education program to inform citizens about the principles of floodplain dynamics and flood mitigation project alternatives for addressing issues such as erosion, siltation, and streambank protection.

Long Term Objective 7:

Reduce the recurrence and amount of frequently flooded areas that continually isolate access to public roads and safety

Long Term Objective 8:

Obtain sufficient scientific and mapping data to support flood reduction strategies.

E. Recommended Plan of Action

Programmatic/Capacity Action Items (P/C)

P/C Action Item #1: Reduce flood insurance premiums by participating in the National Flood Insurance Program's (NFIP), Community Rating System (CRS)

P/C Action Item #2: Develop a comprehensive flood hazard mitigation education program

P/C Action Item #3: Expand the capacity of groups like the Stakeholders Group, Grays River Habitat Enhancement District and other Special Districts in the County.

Structural Recommendations (SR)

SR Action Item #1: Implement innovative streambank protection structures incorporating designs that slow down erosion-causing velocities

SR Action Item #2: Inventory existing tidegate structures and prioritize them for potential retrofits

SR Action Item #3: Explore projects that increase water storage and conveyance capacity in both fluvial and tidal areas of the Grays River Watershed.

SR Action Item #4: In conjunction with local groups and the County, develop a riparian planting program that identifies areas to enhance riparian areas to reduce flow velocities, store sediment, and protect streambanks from erosion.

SR Action Item #5: Seek funding to support the planning, engineering, and design of measures protecting public infrastructure (i.e. roads, bridges, facilities)

Future Studies (FS)

FS Action Item #1: Re-install stream gauges in all of the major watersheds of Wahkiakum County

FS Action Item #2: Support studies that provide information on sediment sources and transport capacity for Wahkiakum Counties' Watersheds

FS Action Item #3: Recommend a Flood Insurance Re-Study for Priority Areas for the Watersheds of Wahkiakum

Watershed Management Considerations (WM)

WM Action Item #1: Work with multiple interests of the watershed to develop a variety of sediment reducing strategies for each of Wahkiakums' watersheds.

WM Action Item #2: Work with federal action agencies to develop long-term strategies to address erosion areas on Puget Island Shoreline

WM Action Item #3: Strengthen Land Use Planning Policies relevant to development in the floodplain.