The background image shows a rural landscape. In the foreground, there's a green field with some utility poles. A large body of water, possibly a reservoir or a wide river, occupies the middle ground. On the left side of the water, there's a barn and a tall, cylindrical silo. The background is filled with a dense forest of trees, some of which are bare, suggesting a cooler season. The sky is overcast. The text is overlaid on this image.

# Potential Outcomes for Local Actions Program

Chehalis Basin Board Meeting  
September 3, 2020

# Presentation Objectives

To aid the Board in:

- Making decisions on measurable flood damage reduction outcomes for local actions
- Responding to Governor's letter by end of September

# Governor's letter to Board

JAY INSLEE  
Governor



STATE OF WASHINGTON  
Office of the Governor

July 22, 2020

Dear Members of the Chehalis Basin Board:

I value the important work that you do to advance consensus-based, win-win solutions for flooding and fish in the Chehalis Basin. The complex challenges facing our communities require science, collaboration, and innovative thinking to forge lasting solutions.

Recent work evaluating a proposed large-scale flood retention project in the upper Chehalis River has brought additional and significant questions and concerns about impacts and alternatives. In light of these concerns, I am requesting that the board work together to:

- Define a process and timeline for developing and evaluating a basin-wide non-dam alternative to reducing flood damage.
- Continue evaluating the issues raised regarding the retention project and other flood risk reduction projects and the potential to avoid, minimize, and mitigate the identified impacts.
- Deliver a consensus recommendation on the process back to me no later than the end of **September 2020** that will lead to a long-term strategy for consideration by me and the legislature in the first quarter of 2021.

# Recommendations for Local Actions Program Outcomes

## **The Board should:**

1. Consider a timeframe of 20 years to implement the actions necessary to achieve outcomes.
2. Utilize future flood conditions that are predicted for the late-century.
3. Require projects funded through the Local Actions Program to be designed, implemented, and mitigated to avoid making flood damage worse in other areas.

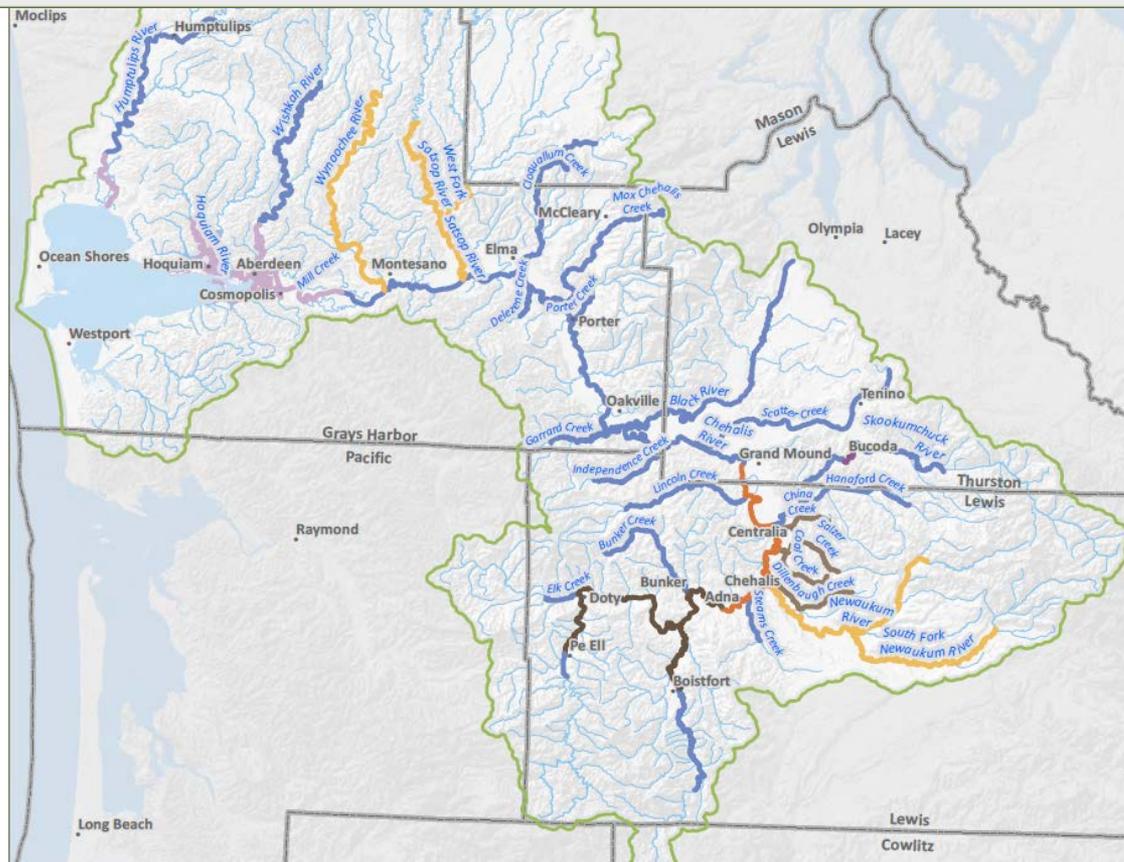
# Potential Measurable Flood Damage Reduction Outcomes

1. Valuable structures protected from mainstem, catastrophic flooding
2. Homes & businesses protected from seasonal urban flooding
3. Lower basin properties & businesses protected from coastal storm surges
4. Farmland and rural structures protected
5. Critical facilities protected
6. Transportation routes protected
7. Environmental justice advanced
8. Prevent new at-risk development

 Chehalis River Basin

**Potential Flood Damage**

-  Tidal Flooding and Internal Drainage Issues
-  Largely Rural Areas with Agricultural Damage and Some Residential/Commercial Structures
-  Town of Bucoda Flooding from Skookumchuck River
-  Intensively Developed Areas with Extensive Flood Damage
-  Significant Loss of Property from Channel Migration in Largely Rural Areas with some Residential and Commercial Structures
-  Significant Flood Damage to Agriculture and Rural Structures
-  Centralia/Chehalis Vicinity Streams with Flooding from Undersized Culverts and Chehalis River Backwater



# 1. Valuable Structures, Mainstem

- **1.A.** X percent [50% - 70% - 90%] of all structures in each [county/local jurisdiction] that could be flooded by the 2080 predicted 100-year flood levels would no longer be vulnerable to flood damage, because they are protected by localized infrastructure, flood-proofed/elevated, or the structure has been removed.
- **1.B.** X percent [70% - 85% - 100%] of all structures in each [county/local jurisdiction] that could be flooded by the 2080 predicted major flood levels would no longer be vulnerable to flood damage, because they are protected by localized infrastructure, flood-proofed/elevated, or the structure has been removed.
- **1.C.** The number of valuable structures vulnerable to flooding by the 2080 predicted 100-year flood levels for each sub-basin would be the same or less than the number of structures damaged in those sub-basins by peak flood levels in the 1990's.

## 2. Homes/Businesses, Urban Flooding

- Municipal stormwater systems in all basin cities and towns would be capable of adequately accommodating stormwater runoff levels and protecting homes and businesses from seasonal flood damage.

# 3. Coastal Storm Surge

- The Cities of Aberdeen and Hoquiam will complete construction and certification of the North Shore Levee and obtain a letter of map revision removing at least 3,100 properties and 990 businesses from the FEMA Special Flood Hazard Area designation.

# 4. Farmland & Rural Structures

- **4.A.** The number of locations where migrating river channels and bank erosion pose a high risk of near-term damage to valuable structures or loss of economically productive land uses would be reduced by an average of X [1 – 3 – 5] per year over 20 years.
- **4.B.** Protective measures keep peak flood levels in each sub-basin with commercial agriculture operations at or below the peak flood levels experienced in those sub-basins in the 1990's.

# 5. Critical Facilities

**5.A.** X percent [70% - 85% - 100%] of all critical facilities that could be flooded by 2080 predicted **100-year flood levels** would no longer be vulnerable to flood damage, because they are protected by localized infrastructure, elevated/flood-proofed, or relocated.

**5.B.** X percent [70% - 85% - 100%] of all critical facilities that could be flooded by 2080 predicted **major flood levels** would no longer be vulnerable to flood damage, because they are protected by localized infrastructure, flood-proofed/elevated, or the facility has been relocated.

# 6. Transportation Routes

## 6. Transportation routes protected

- The overtopping and closure of I-5 would be reduced to no more than X [1-2] days in a major or 100-year flood event at the predicted 2080 levels.

Additional outcomes could be:

- Key county and city intersections and interchanges would not be closed due to flooding and for major or 100-year flood events that result in short-term closures, alternative routes would be available to ensure emergency services are not interrupted.
- State Highways 6 and 12 would not be closed due to major flooding, closures due to 100-year flood events would be reduced to no more than X [1-2] days; and alternative routes would be available to ensure emergency services are not interrupted.

# 7. Environmental Justice

- Communities with environmental justice concerns would suffer less hardship and damage from flooding, would not be economically disadvantaged by displacement or otherwise disproportionately adversely affected by actions to reduce flood damage, and would be improved by flood solutions.

# 8. Prevent At-Risk Development

- No new structures have been developed that will be vulnerable to channel erosion or 100-year flooding from the mainstem or basin tributaries that is predicted by late century, because all basin local governments have adopted model floodplain management ordinances that exceed the State and National Flood Insurance Programs' minimum requirements; all local government construction and building code standards support flood damage risk reduction through measures such as subdivision set-asides, filling restrictions, freeboard height of new buildings, critical facility placement and protection, and non-conversion agreements; and incentives direct future development out of harm's way.

# Next Steps

- Questions
- Small group discussion – 30 minutes
- Board decisions on recommendation and outcomes

# Breakout Session Questions

1. Do you support the 3 staff recommendations as presented or with modifications?
2. Should the outcomes be focused on the 100-year flood, major flood, or both?
3. Do you support the 8 measurable outcomes as presented or with modifications?

# Breakout Session Questions

- What are your perspectives on having a steering committee of Board members or non-board members to guide the work and resolve differences of opinion of advisory group(s)?
- Do you think the proposed organizational structure can adequately evaluate technical information and achieve community engagement necessary for what the Board needs to make a decision?