

# King County Flood Hazard Management Plan Update

## White River Basin Overview

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Public Meeting  
December 6, 2012



# White River Basin

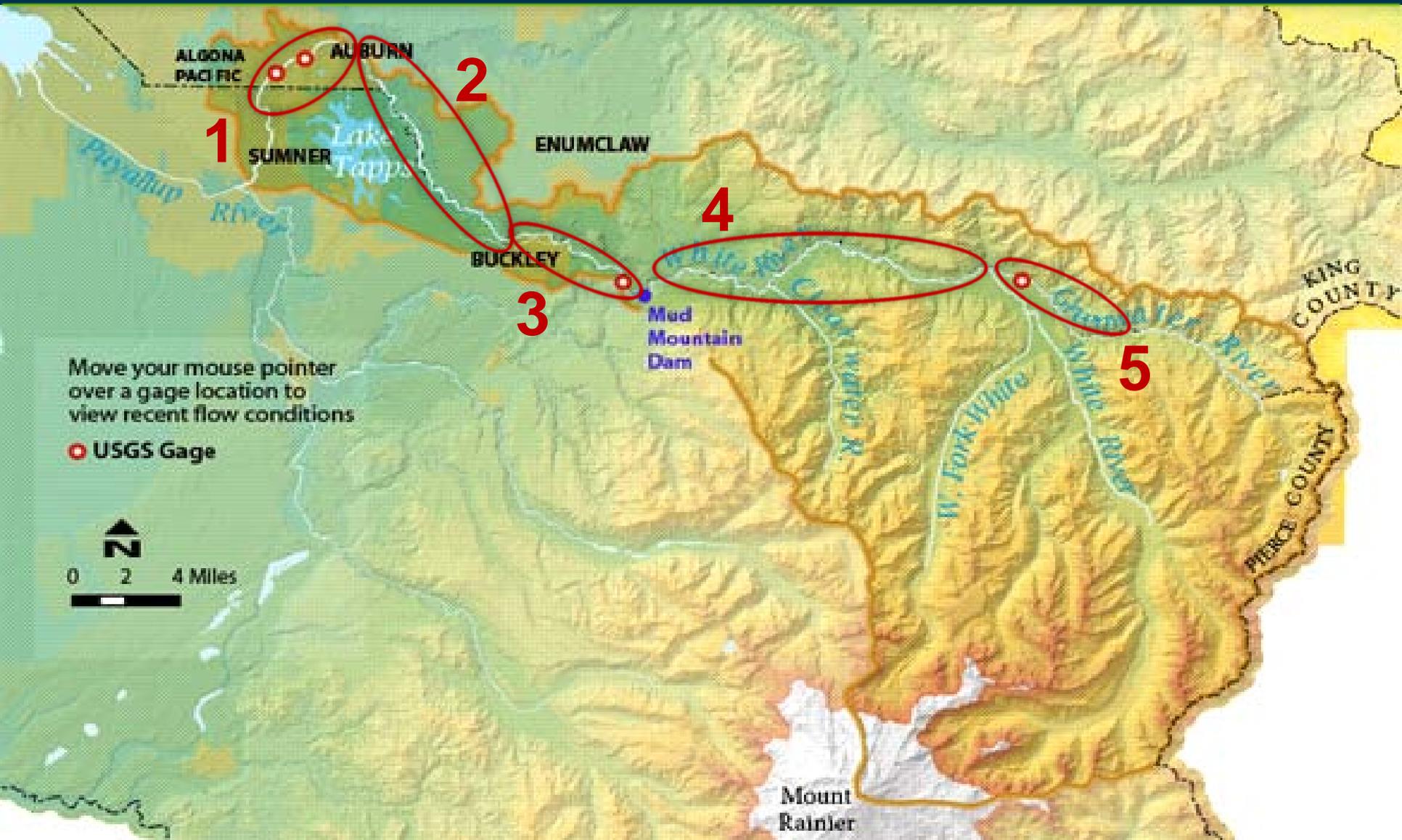
-  River/Stream
-  Other Basin Boundaries
-  Lake
-  Incorporated Area
-  White River Basin

Prepared by King County Water  
 2011 Water Conservation & Policy Unit  
 File Name: 2011\_WaterBasins\_1011



# White River Basin

## 5 segments



# Accomplishments since 2006

- Technical studies (2006 – present)

*Directly supports capital project design development*

- Stuck River Drive revetment repair (2008)
- Temporary HESCO flood barrier (2009)
- Flood Hazard Maps (2009)

*Auburn/Pacific and Enumclaw segments*

- TransCanada Levee Setback Feasibility (2011)
- Capital Project Design and Planning
- USGS Radar gages installed (2012)
- Public Outreach



# Conditions and Risks

## Segment 1



### 8<sup>th</sup> Street – RM 10

- Highly modified
- Constricted channel
- Aggrading
- Bank overtopping risks
- Channel migration risks
- High groundwater table
- Accelerated bank erosion

# White River Flooding 2009

## Segment 1: 8th Street – RM 10

- Depositional reach in sediment-rich basin
- January 2009 flooding
  - Right (east) bank areas in City of Pacific
  - Left (west) bank into City of Sumner
- Flooding was exacerbated by sedimentation



# Proposed Flood Risk Reduction Strategy

## Segment 1: 8th Street – RM 10

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- Improve flow conveyance
- Remove artificial fill
- Build setback levees
- Continue to monitor channel conditions

# Proposed Strategy Implementation

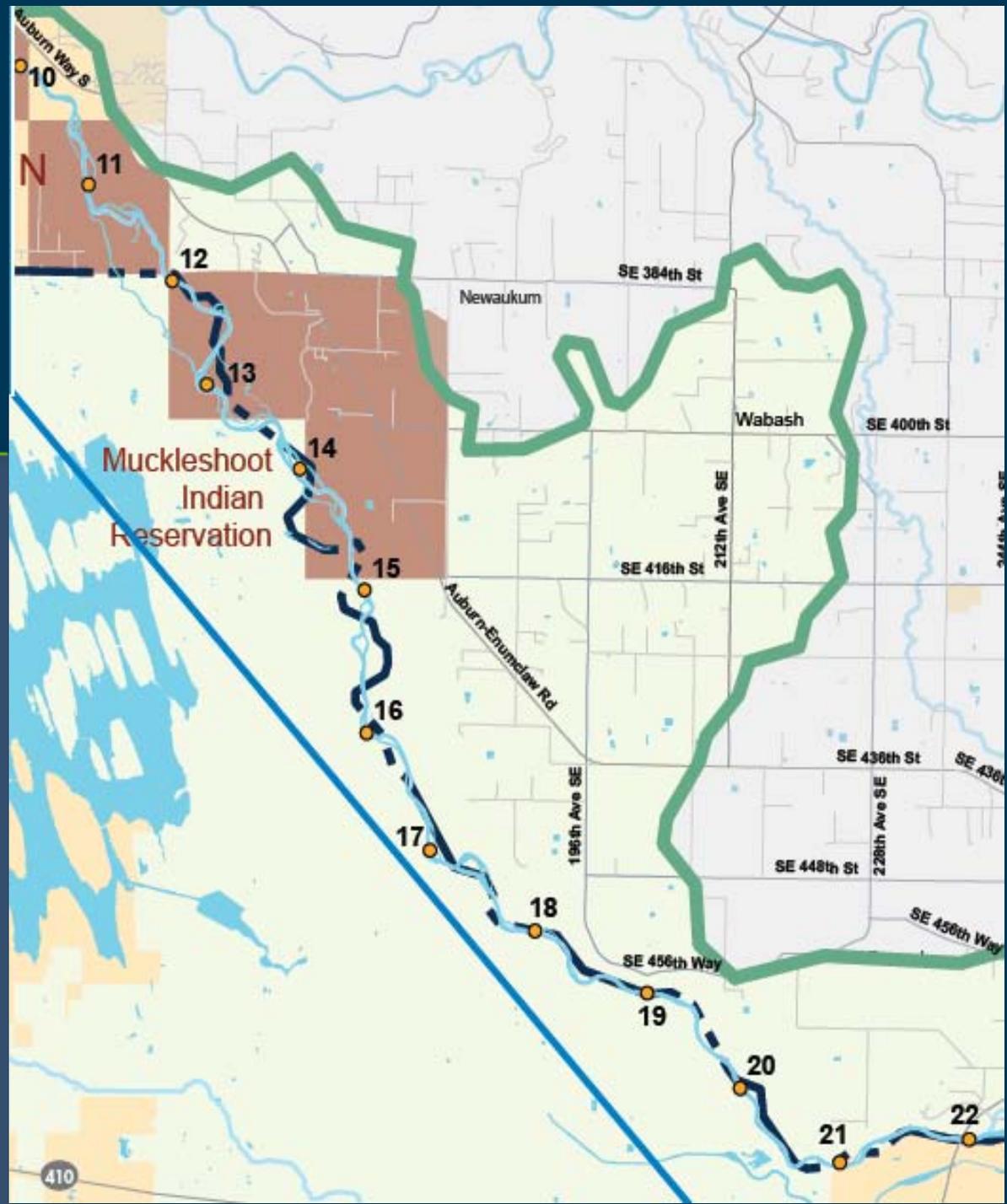
## Segment 1: 8th Street – RM 10



# Conditions and Risks Segment 2

## RM 10 – SR 410

- Natural system
- Actively migrating
- Undeveloped character
- Minimal existing risks



# Proposed Flood Risk Reduction Strategy

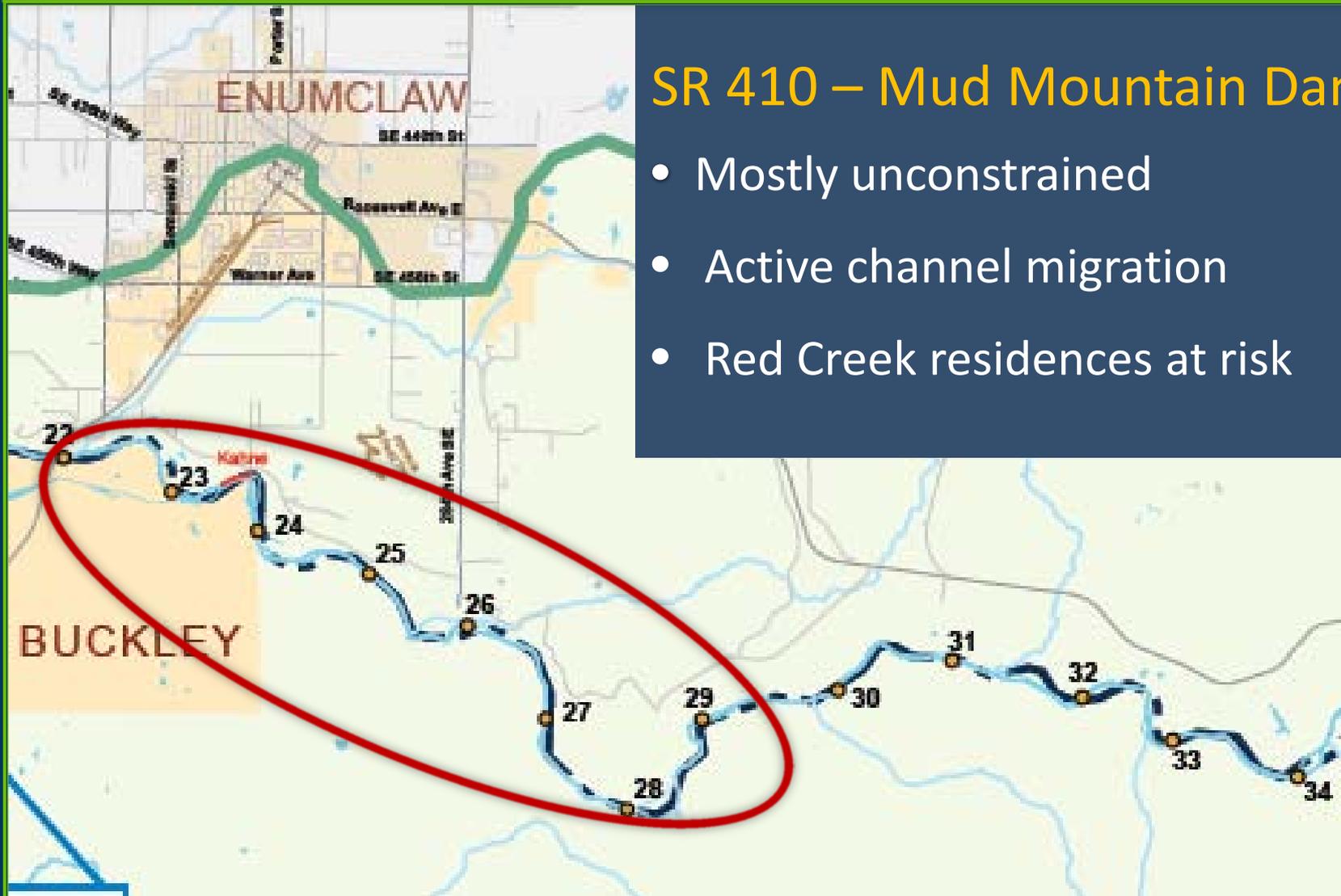
## Segment 2: RM 10 – SR 410

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- Continue to support naturally functioning river and floodplain system
- Flood hazard study and mapping
- Channel migration hazard study and mapping

# Conditions and Risks

## Segment 3



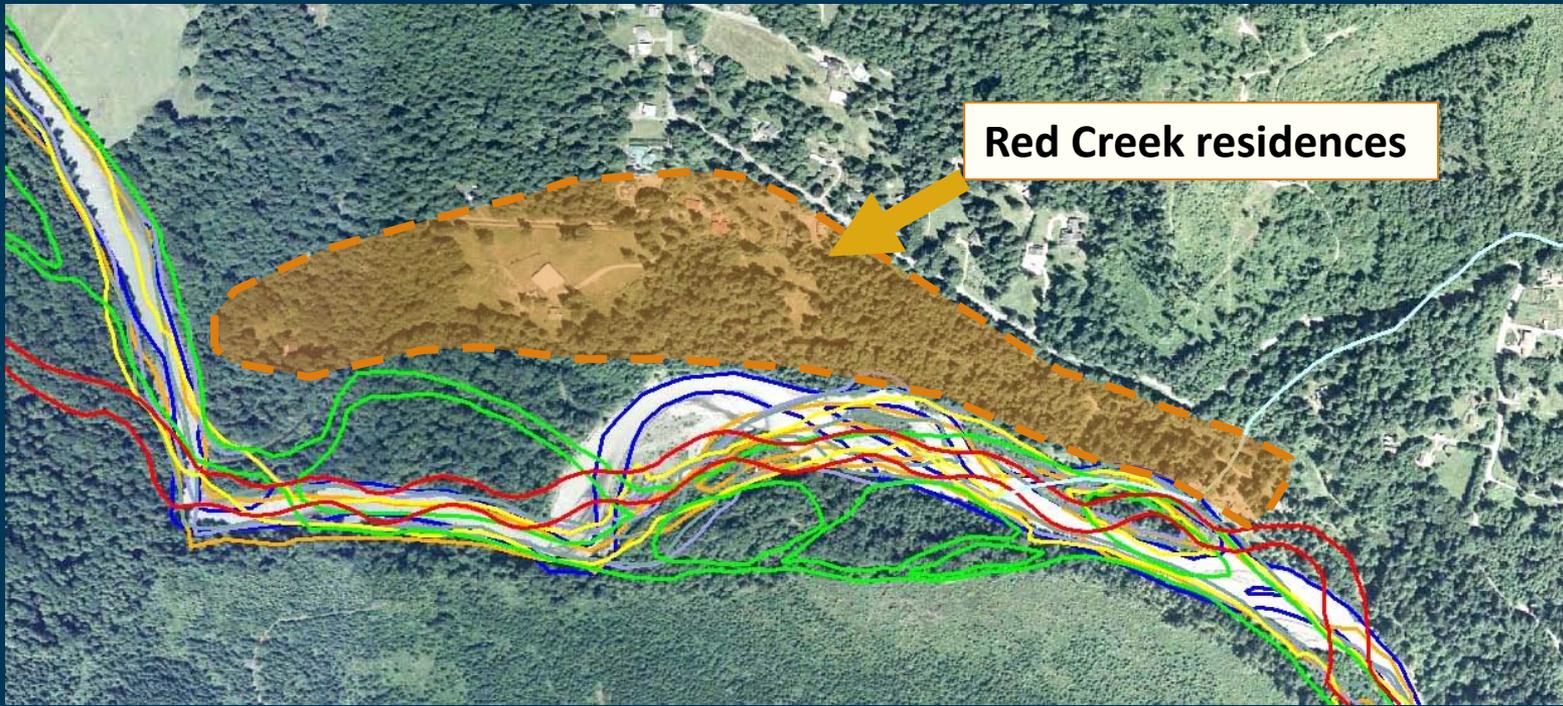
### SR 410 – Mud Mountain Dam

- Mostly unconstrained
- Active channel migration
- Red Creek residences at risk

# Proposed Flood Risk Reduction Strategy

## Segment 3: SR 410 – Mud Mountain Dam

- Channel migration hazard mapping
- Acquire at-risk residential properties



# Conditions and Risks

## Segment 4

### Mud Mountain Dam – Greenwater

- Mostly undeveloped
- Active channel migration hazards
- Small residential community at RM 44.2
- Risks to State Route 410



# Proposed Flood Risk Reduction Strategy

## Segment 4: Mud Mountain Dam – Greenwater

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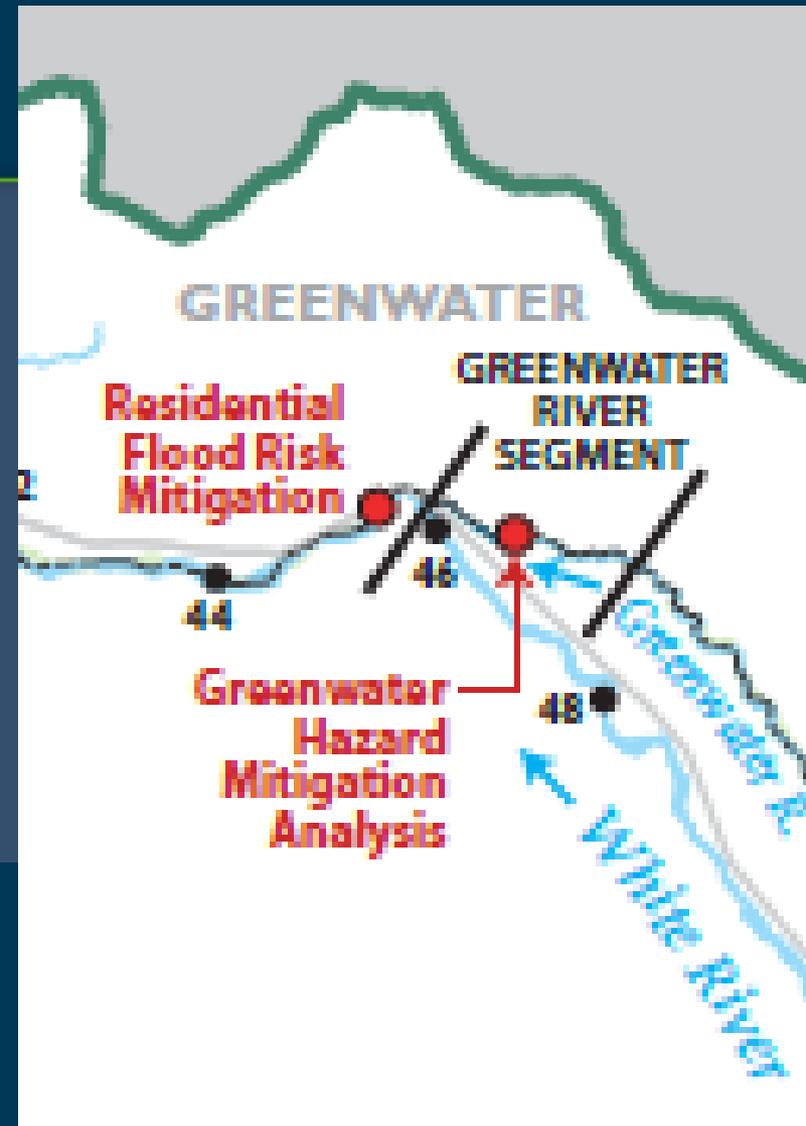
- More clearly identify hazard areas
- Mitigate residential flood risks through acquisition
- Partner to mitigate flood risk to critical highway infrastructure

# Conditions and Risks

## Segment 5

### Greenwater River

- Recovering forested watershed
- Altered hydrology
- Somewhat constrained lower reach
- Mostly undeveloped
- Small residential communities



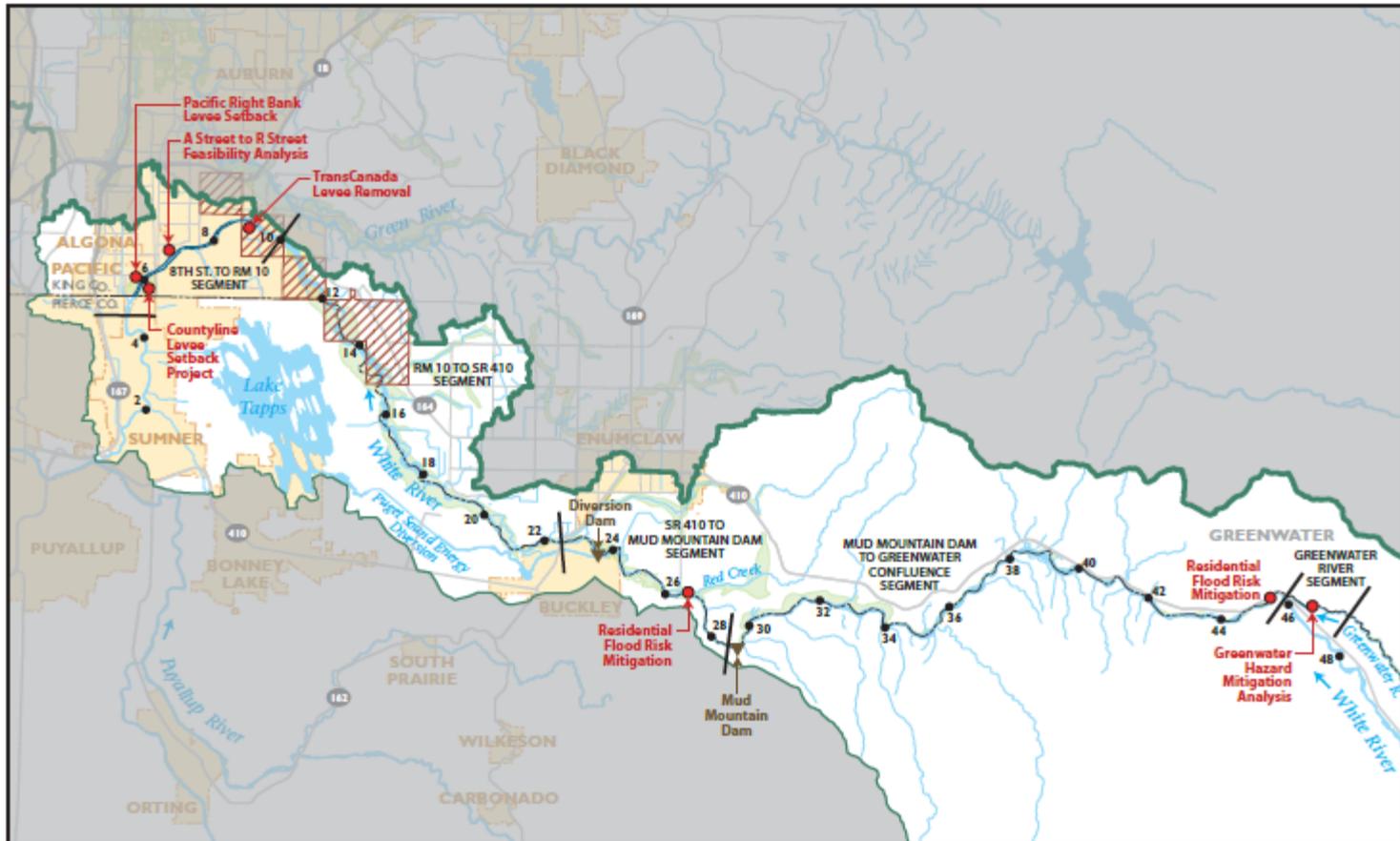
# Proposed Flood Risk Reduction Strategy

## Segment 5: Greenwater River

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- Channel migration hazard study & maps
- Flood hazard study & maps
- Mitigate residential flood risks

# Summary of Action Plan – White River



## ACTION PLAN BY SEGMENT

### 8TH ST. TO RM10

- Feasibility studies
- Recreational study
- Channel migration study
- Capital projects
- Support partnerships to address 8th St. Bridge flood risk

### RM10 TO SR 410

- Flood study
- Channel migration study

### SR 410 TO MUD MOUNTAIN DAM

- Channel migration study
- Residential flood risk mitigation

### MUD MOUNTAIN DAM TO GREENWATER CONFLUENCE

- Flood study
- Channel migration study
- Support partnerships to address SR 410 flood risk
- Residential flood risk mitigation

### GREENWATER RIVER

- Flood study
- Channel migration study
- Flood hazard mitigation study