



Cedar River Basin

**Progress Report – Accomplishments and Status
of Projects**

Joint Basin Technical Committee

May 8th, 2014

John Engel

Cedar Basin Supervising Engineer

2014 Cedar River Summary

Accomplishments:

- Land Acquisition
- 2013 Constructed Projects:
 - Belmondo
 - Rainbow Bend

On-going projects:

- Cedar Gravel Removal - Renton
- Willowmoor Project

Cedar River Corridor Plan

Acquisitions

- Acquire flood-prone homes and lands needed for levee setback projects
- Coordinating with habitat partners to fund acquisitions in Areas of focus
- Repetitive Loss Properties
- Completed three (3) in 2013 (including MHP), one (1) in 2014 year-to-date

Riverbend MHP



Riverbend Acquisition and Levee Setback Project

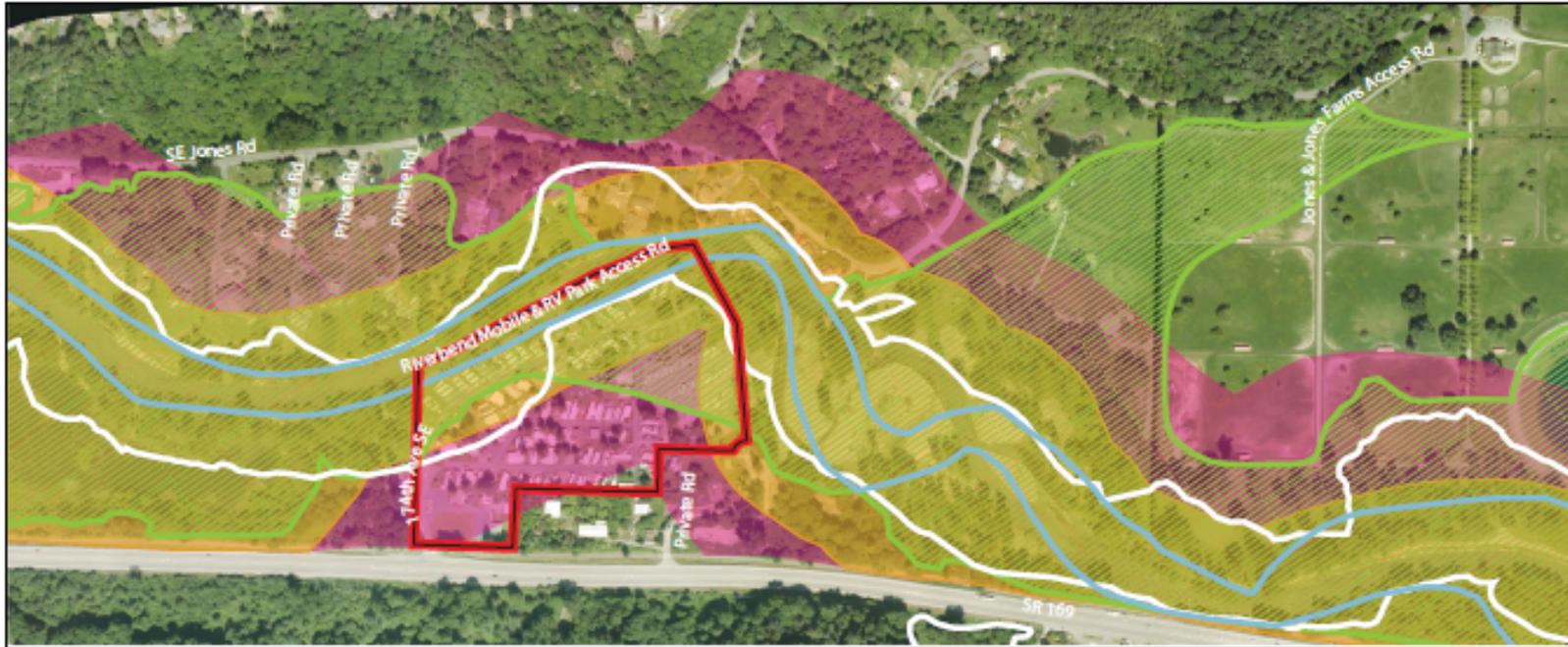
Severe flood, erosion and channel migration hazards



Acquired Park from willing seller
(2013)

- 87 Fixed Mobile Homes
- 55 RVs

Partnership with WRIA 8 and Basin
Stewards



HAZARD AREAS AT RIVERBEND MOBILE HOME PARK

-  Riverbend Mobile Home Park Parcel
-  Floodway Area
-  100-Year Floodplain Area
-  Historical Migration Zone (1936 - 2011)
-  Severe Channel Migration Hazard Area (Provisional)
-  Moderate Channel Migration Hazard Area (Provisional)



The information included on this map has been compiled by King County staff from a variety of sources and is subject to change without notice. It is not intended for use as a survey product.



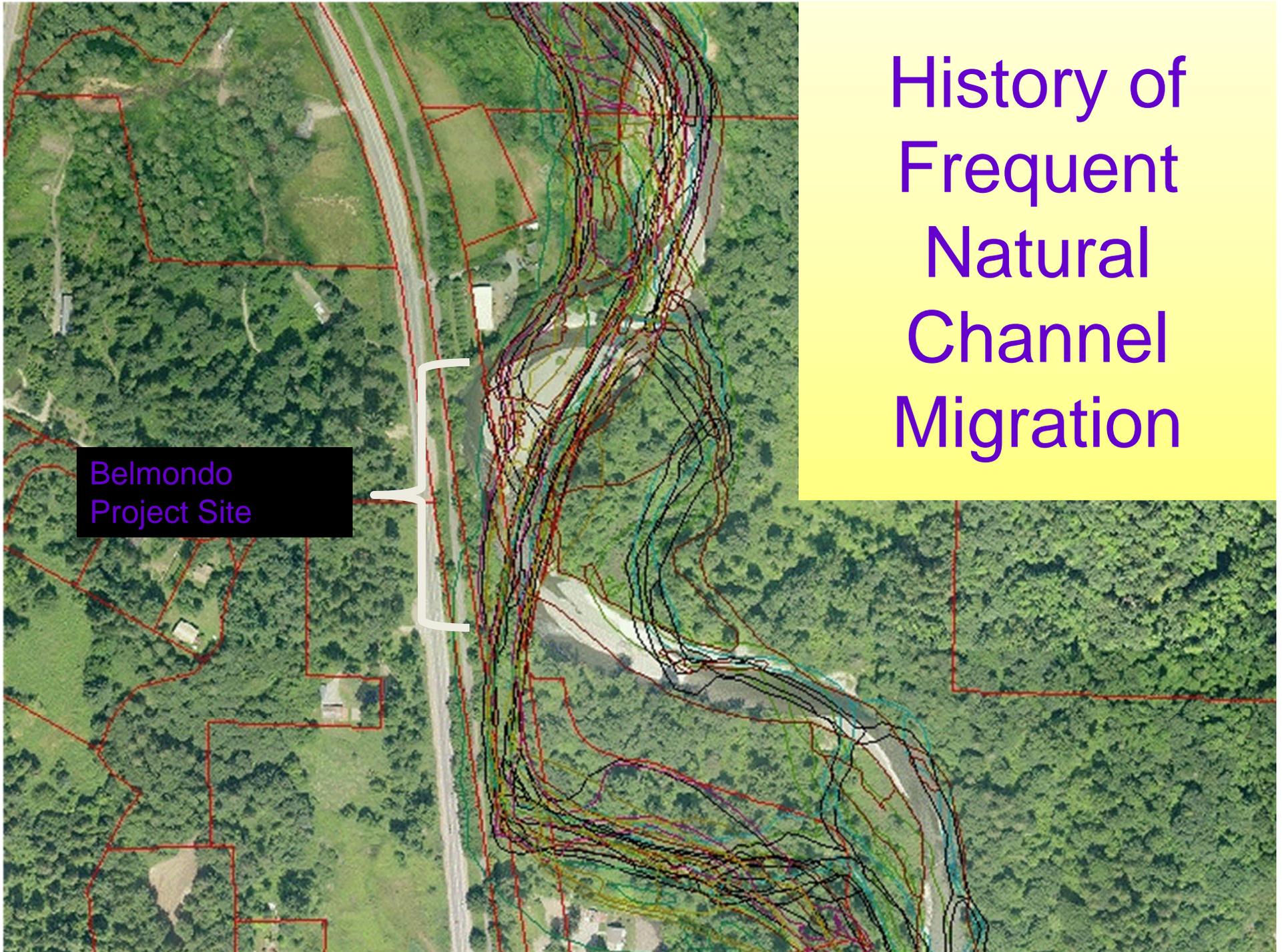
Relocation of Residents

- Outreach to resident of MHP
 - Initial public meetings
 - Bilingual information and presentations
 - On-site office for relocation consultant
 - Hosted flood preparedness meeting
- Relocating residents 2014-2016:
 - 13 of 87 Mobile Homes closed and relocated
 - 26 of 41 RV's moved

Belmondo Revetment Enhancement Project

- FEMA funded – to mitigate damages from emergency work in 2009
- Completed in phases from 2010 thru 2013
- Also provides mitigation for wood removal at Cedar Rapids
- Wood design with safety in mind

History of Frequent Natural Channel Migration



Belmondo
Project Site



Emergency Repair

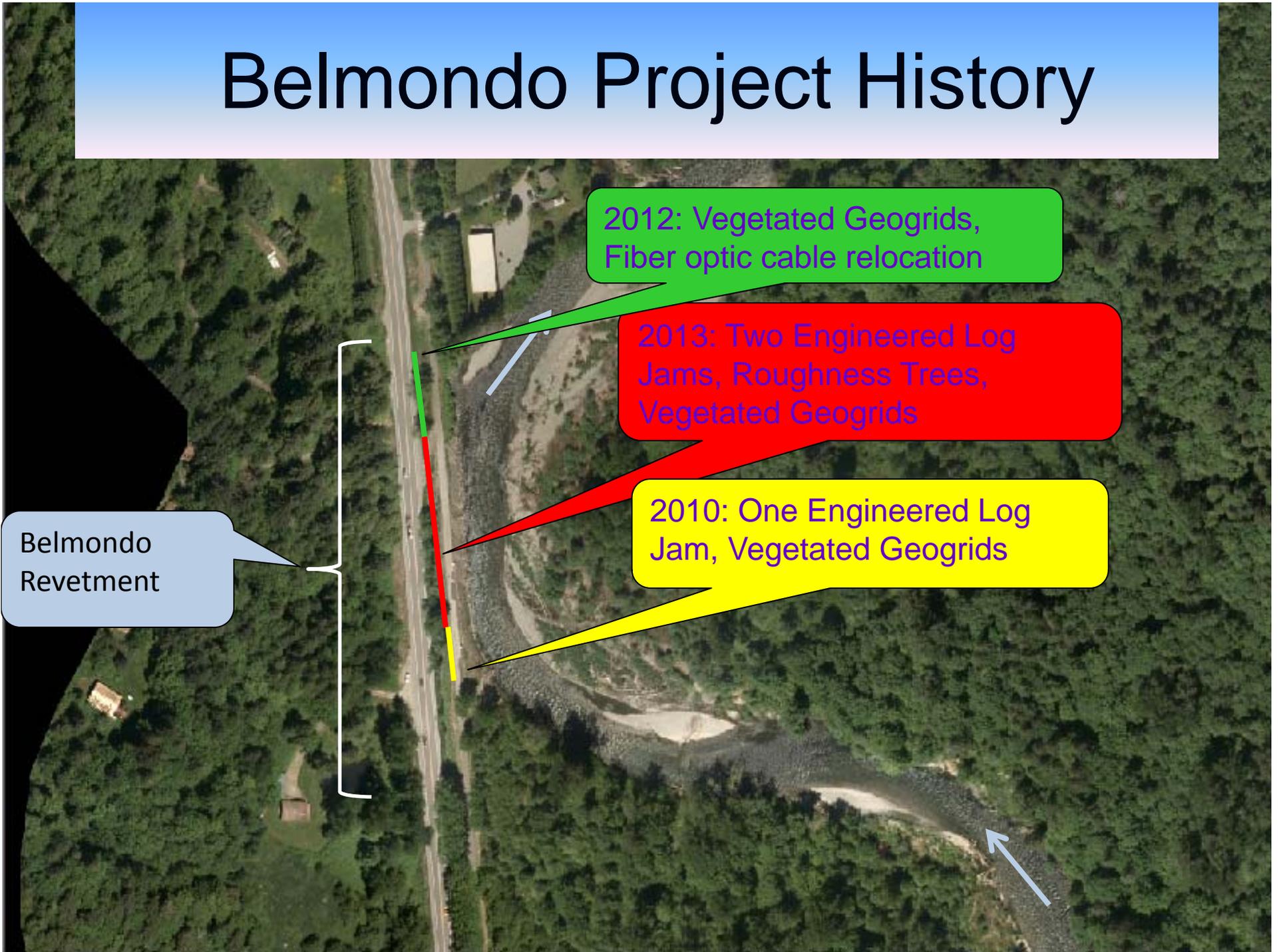
Belmondo Project History

2012: Vegetated Geogrids,
Fiber optic cable relocation

2013: Two Engineered Log
Jams, Roughness Trees,
Vegetated Geogrids

2010: One Engineered Log
Jam, Vegetated Geogrids

Belmondo
Revetment



Belmondo 2012 Repair



Belmondo 2013





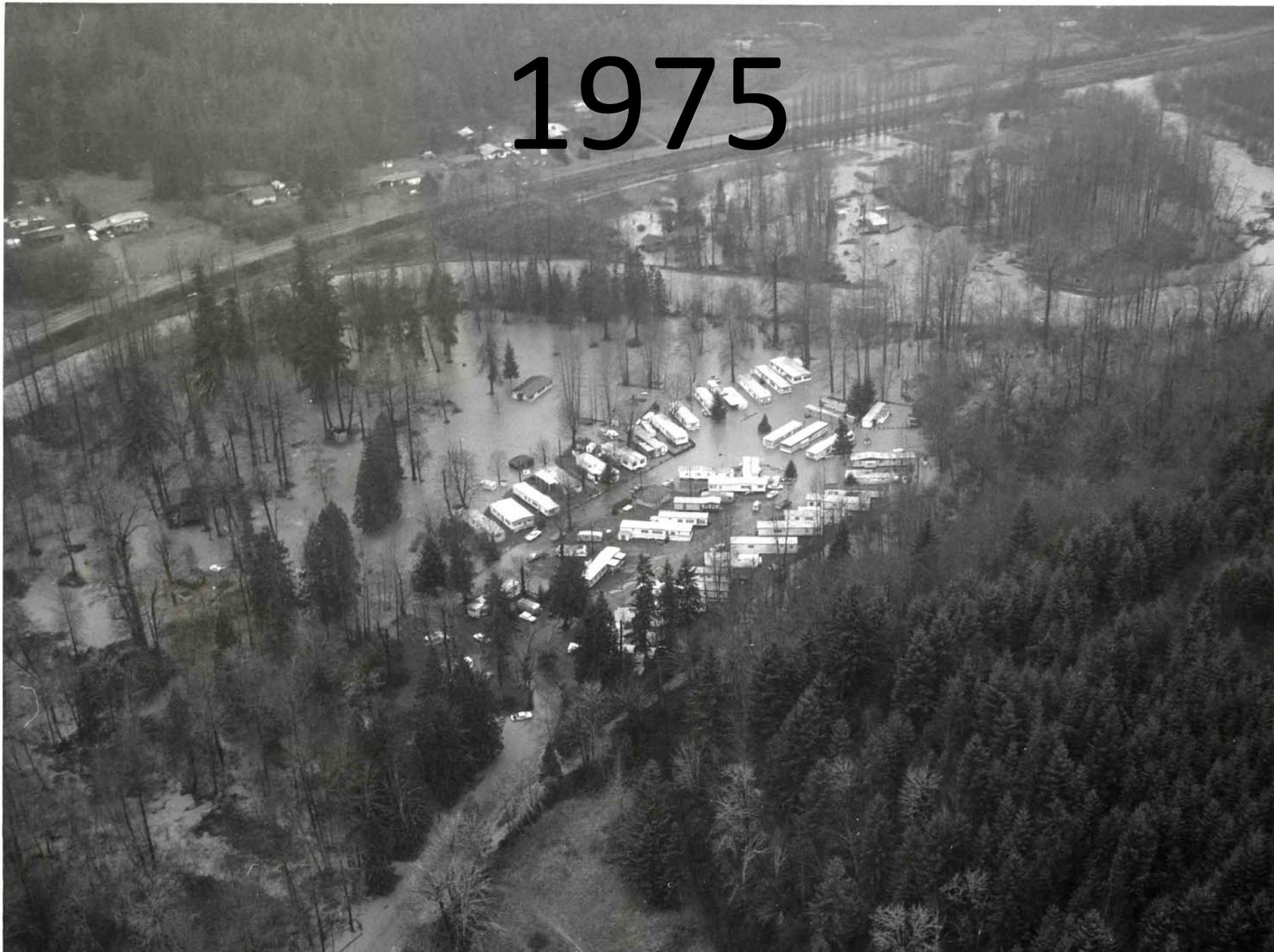
Rainbow Bend Levee Removal and Floodplain Reconnection Project

Rainbow Bend Levee Removal and Floodplain Reconnection Project



January 2011
4710 cfs @ Landsburg

1975



1990





January 2009

7870 cfs @ Landsburg

2013



Project Goals - Accomplishments

- ✓ Goal 1: Reduce flood risks to people and infrastructure.
- ✓ Goal 2: Reduce the need for future facility maintenance and emergency response
- ✓ Goal 3: Restore floodplain functions and processes that provide for natural development of riverine habitat and aid salmon recovery.
- ✓ Goal 4: Address impacts of the project on recreational safety.

October 2013



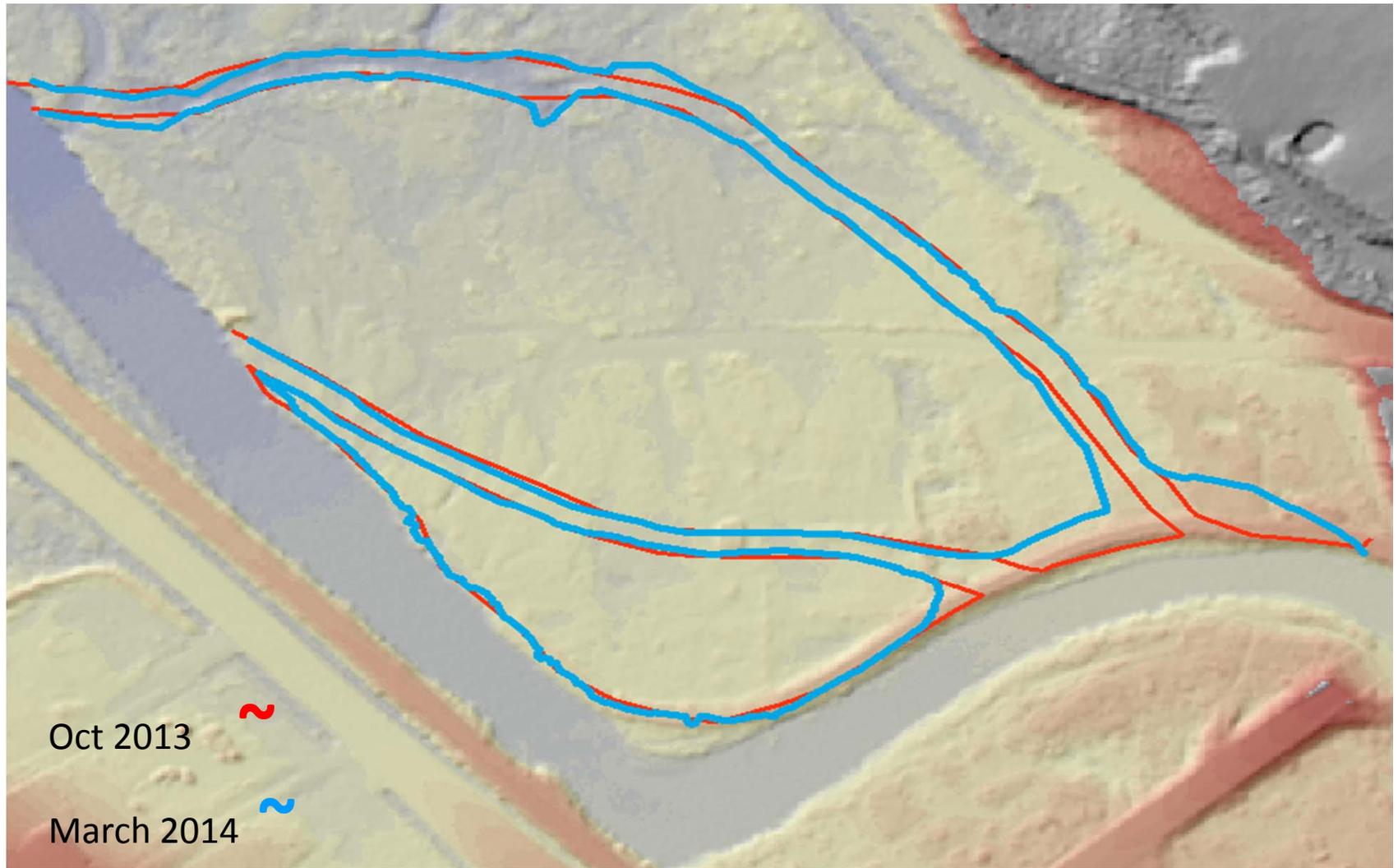
October 2013



October 2013



Channel Evolution



March 2014







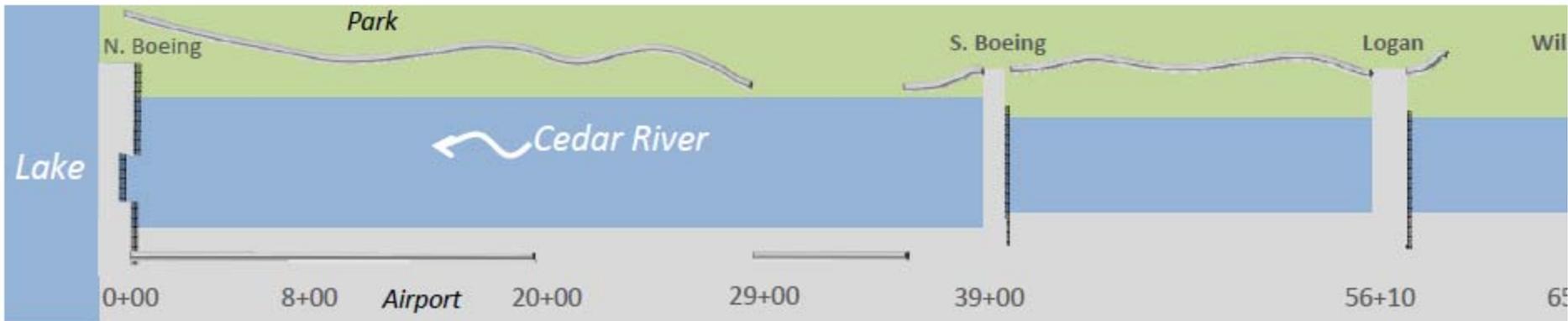
City of Renton

CEDAR RIVER MAINTENANCE DREDGE PRO



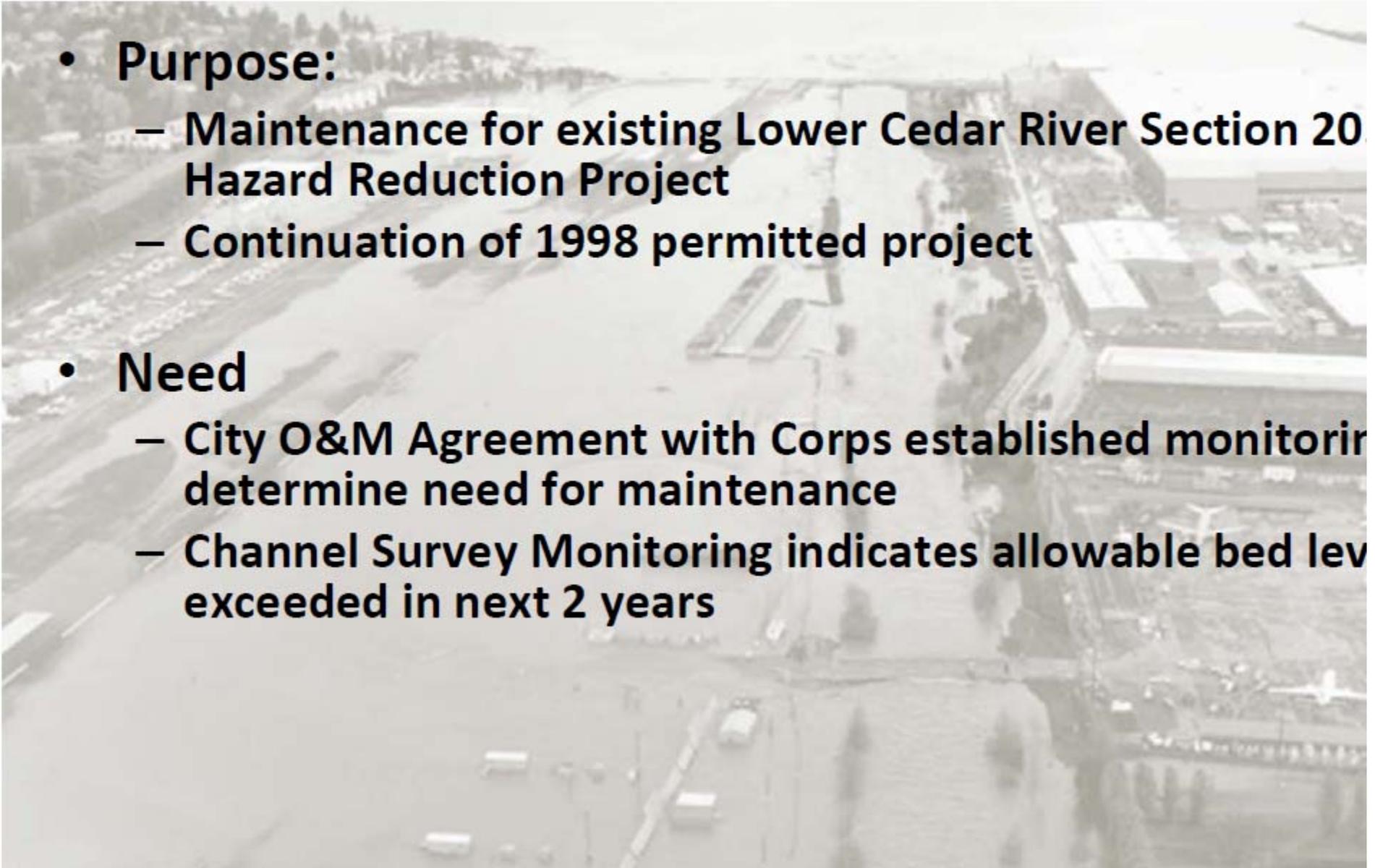
• Rectangular Slop

Project Area



Purpose and Need

- **Purpose:**
 - Maintenance for existing Lower Cedar River Section 20 Hazard Reduction Project
 - Continuation of 1998 permitted project
- **Need**
 - City O&M Agreement with Corps established monitoring determine need for maintenance
 - Channel Survey Monitoring indicates allowable bed level exceeded in next 2 years



Gravel Removal - Progress

- Agency Pre-Application meeting (Nov. 2013)
- Agency Site-Visit (May 2014)
- Draft 30% Plans, Quantities & Costs
- JARPA
- Technical Studies, Reports & Memos
 - 10 or so reports
- Anticipated Work in 2014:
 - Final Design, Specifications and Engineer's Cost Estimate and Bid Package
 - All permit applications submitted and regulatory consultation completed
 - Dredged Material Sampling and Analysis
- Anticipated Work in 2015:
 - Bid Solicitation and Selection
 - Gravel Removal and Bank Stabilization (Summer)
 - Mitigation Plantings (Fall)
-

Cedar River Corridor Plan

Cedar River Corridor Plan

Integrated Approach to:

- Flood Inundation, Erosion, and Channel Migration Risk
 - Infrastructure: Roads, Bridges, Trails, Flood Protection
 - Homes and Private Property
 - Businesses and Economic Drivers
- Ecological Problems/Habitat Limiting Factors
 - Floodplain and Side-Channel Connectivity
 - Riparian Function
 - Instream Diversity
- Human Uses and Dimensions
 - Land Use and Zoning
 - Recreation
 - Equity and Social Justice

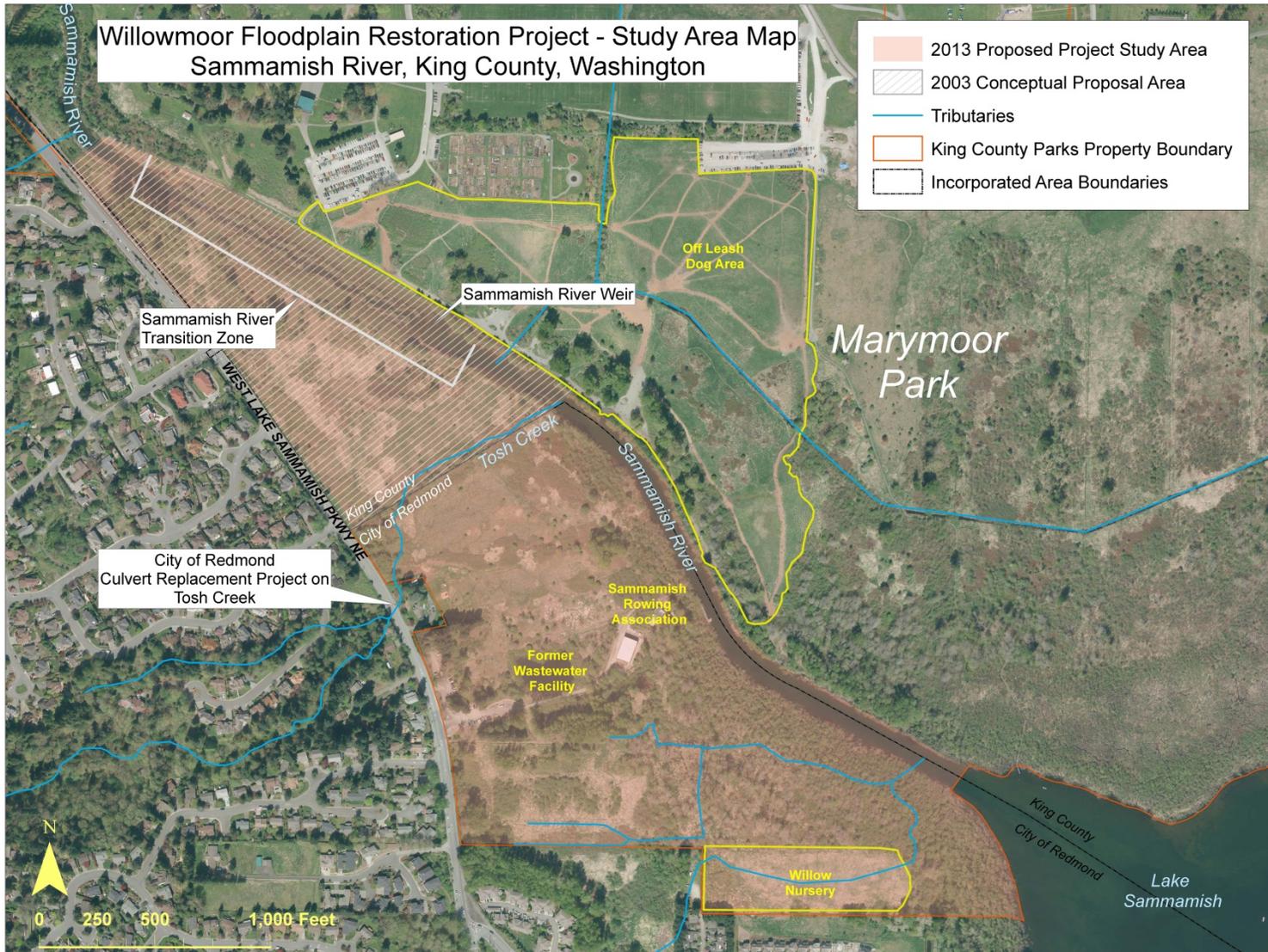
Plan Approach

- Use existing data, models, plans etc to develop information
- Public Involvement
 - Preliminary Meetings with Partners and Neighborhoods
 - Advisory Committee
 - Public Meetings
- Schedule
 - Consultant (June 2014)
 - Complete Report (December 2015)

Key Plan Products

- GIS map products – risks and opportunities
- Review severity of hazards and risk exposure
- ID habitat restoration opportunities
- Solutions and opportunities for Integration of multiple-objectives
- Develop list of prioritized and sequenced CIPs
- Conceptual designs and cost estimates
- Alternatives for decision makers, FCD Board

Willowmoor Floodplain Restoration Project



Willowmoor Project Goals

- Ensure TZ's capability to provide necessary lake level control, flow conveyance and downstream flood control;
- Reduce costs, complexity and ecological impacts of TZ maintenance;
- Enhance habitat conditions in the river channel, associated tributaries and adjacent wetlands for ESA listed Chinook and other species.

Willowmoor Accomplishments

- Stakeholder Coordination & Public Outreach
 - Project Kickoff Public Meeting, Project Website
 - Stakeholder Advisory Committee
 - OneHub Site
 - 5 meetings – Tech info, Design Objectives, Conceptual Alt's Development
 - Additional Coordination – MIT, Corps, Lakeside property owners
- Alternatives Development
 - Design Objectives and Criteria
 - 5 draft conceptual design alternatives (ongoing)
- Technical Studies, Reports, Memos & Analyses
 - Existing Habitat and Fish and Wildlife Report
 - Preliminary Groundwater Data Review
 - Hydrologic Characterization
 - Hydrologic Modeling & Analysis (HSPF) – Historic, Existing & Anticipated Future Conditions
 - Hydraulic Modeling & Analysis(Unsteady HEC-RAS)
 - Cold Water Supplementation Concepts Report
 - Water Temperature Modeling & Analysis
- Next Steps – evaluation and refinement of alternatives.

Questions?

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