



*Tualatin Basin
Water Supply Project and
Tualatin Project Title Transfer*

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Tualatin Basin Water Supply Partners**

Presentation Review

- ☰ **Cost & Schedule Update**
- ☰ **Dam Facility Assessment**
- ☰ **Hagg Lake Property Acquisition**
- ☰ **Joint Funding Agreement**
- ☰ **Title Transfer**



Cost & Schedule Evaluation Scope of Work

- **Updated project costs and schedule for:**
- **Scoggins Dam raise**
 - **25' and 40' raises**
 - **Single and multiple-level intakes**
 - **With and without title transfer**
- **Raw water pipeline & pump-back system**
- **JWC water treatment plant expansion**

Cost and Schedule Evaluation Study Scope and Objectives

- **Provide independent cost and schedule opinion**
 - **Similar level of detail – Planning Level Estimates**
 - **2006 USBR Appraisal Level Design for Dam raises**
 - **RWP based on pre-design report**
 - **Pump-back based on conceptual design information**

- **Use same approach as on the similar projects**
 - **Support “apples to apples” comparison**

- **Multi-disciplined cost estimating team**
 - **Engineers - Carollo, Black&Veatch, Otak, MSA, S&W**
 - **Estimators - Pinnell-Busch w/ Larson, David Place**
 - **Contractors - Kerr Constructors, Barnard Construction**

- **Title transfer opportunities and constraints**

Dam Raise Cost Validation Results

☰ **Cost estimates & schedules**

☰ **4 alternative dam scenarios**

- **25 & 40 ft. raise options**
- **Multi-Level and single level intake structures**

☰ **Roadway & recreation (40 ft. raise)**

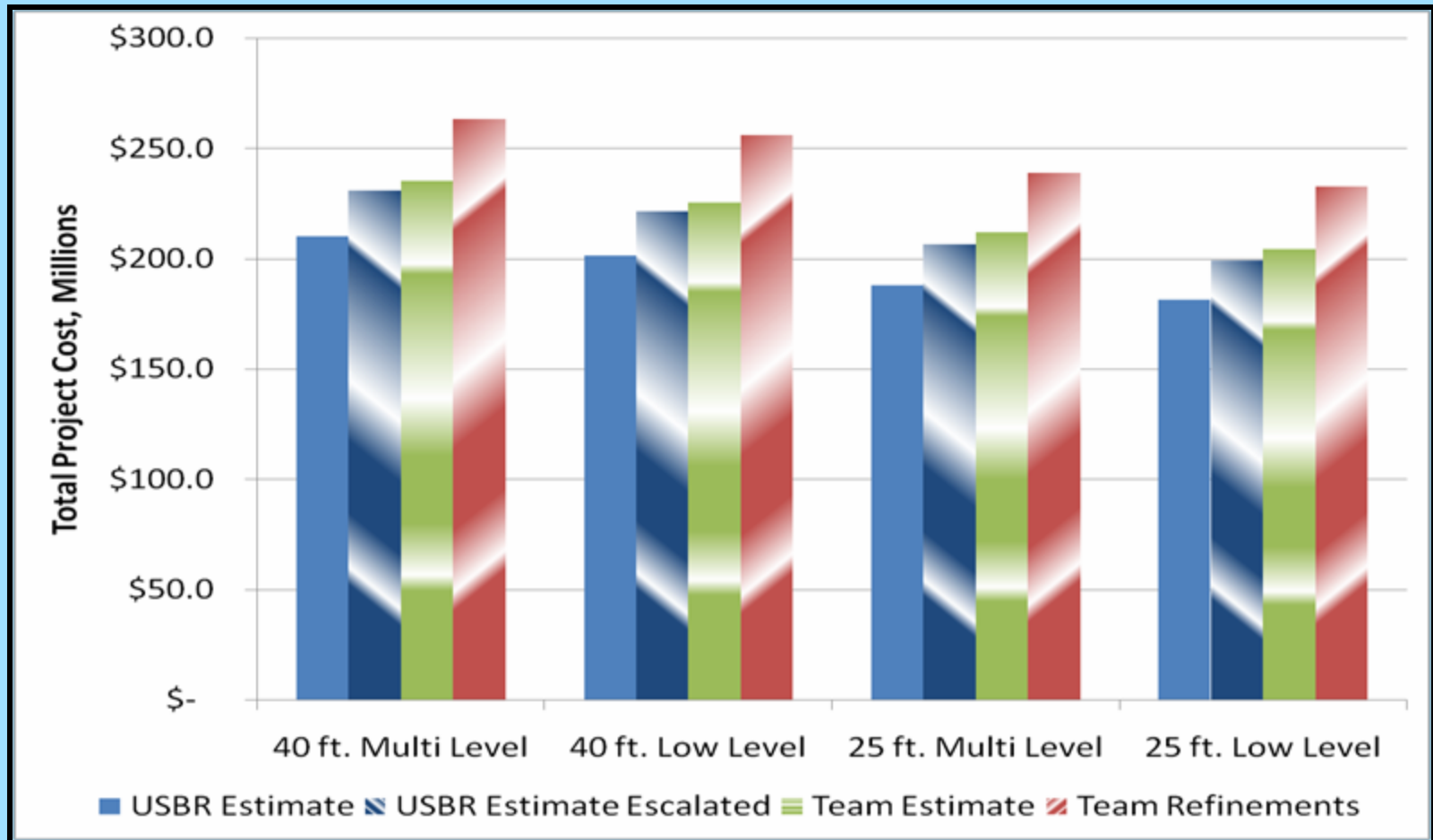
☰ **Design and permits**

☰ **“Team estimate” & “team refinements”**

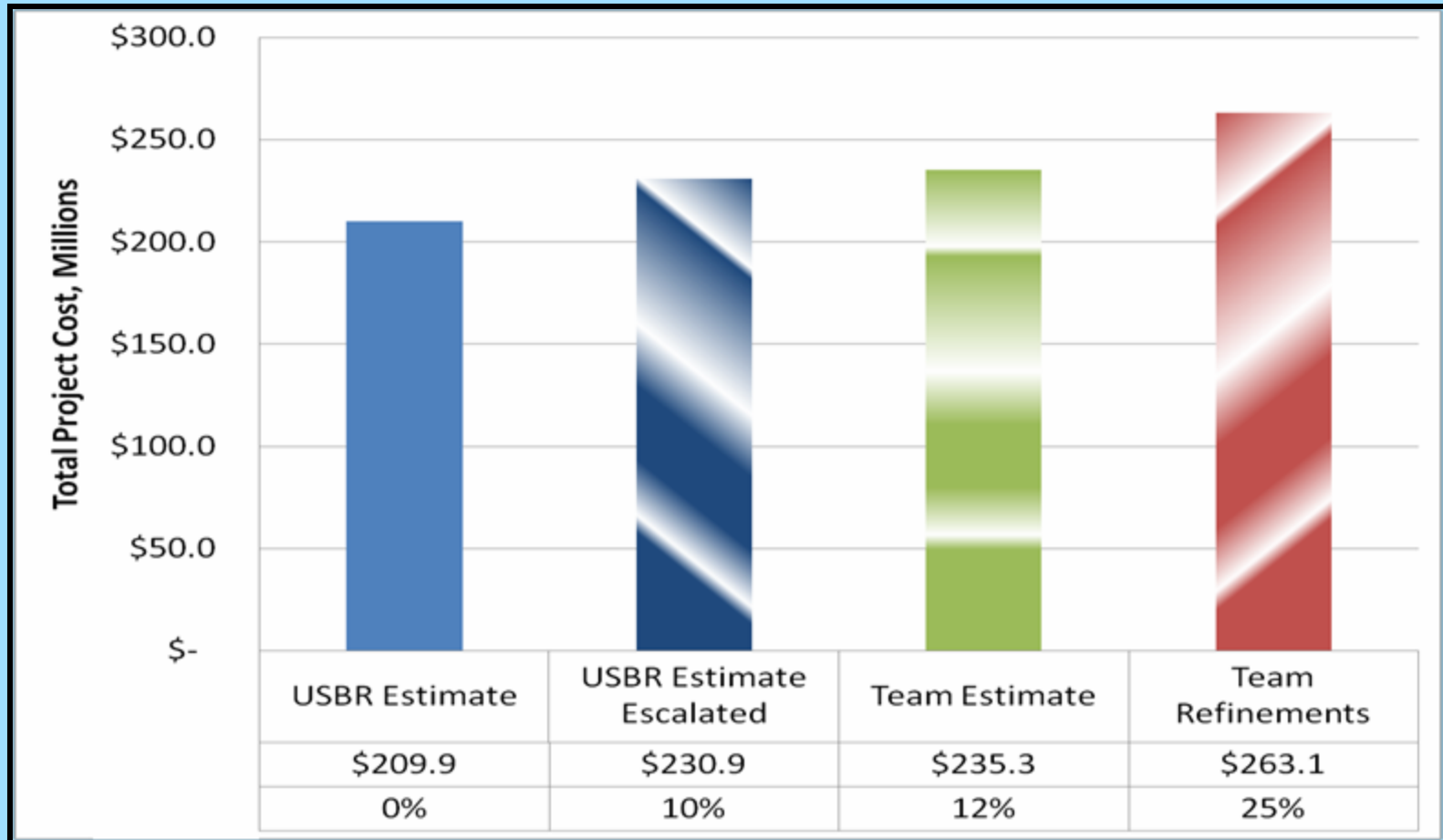
☰ **Schedules for each alternative**

☰ **Clarified title transfer opportunities & issues**

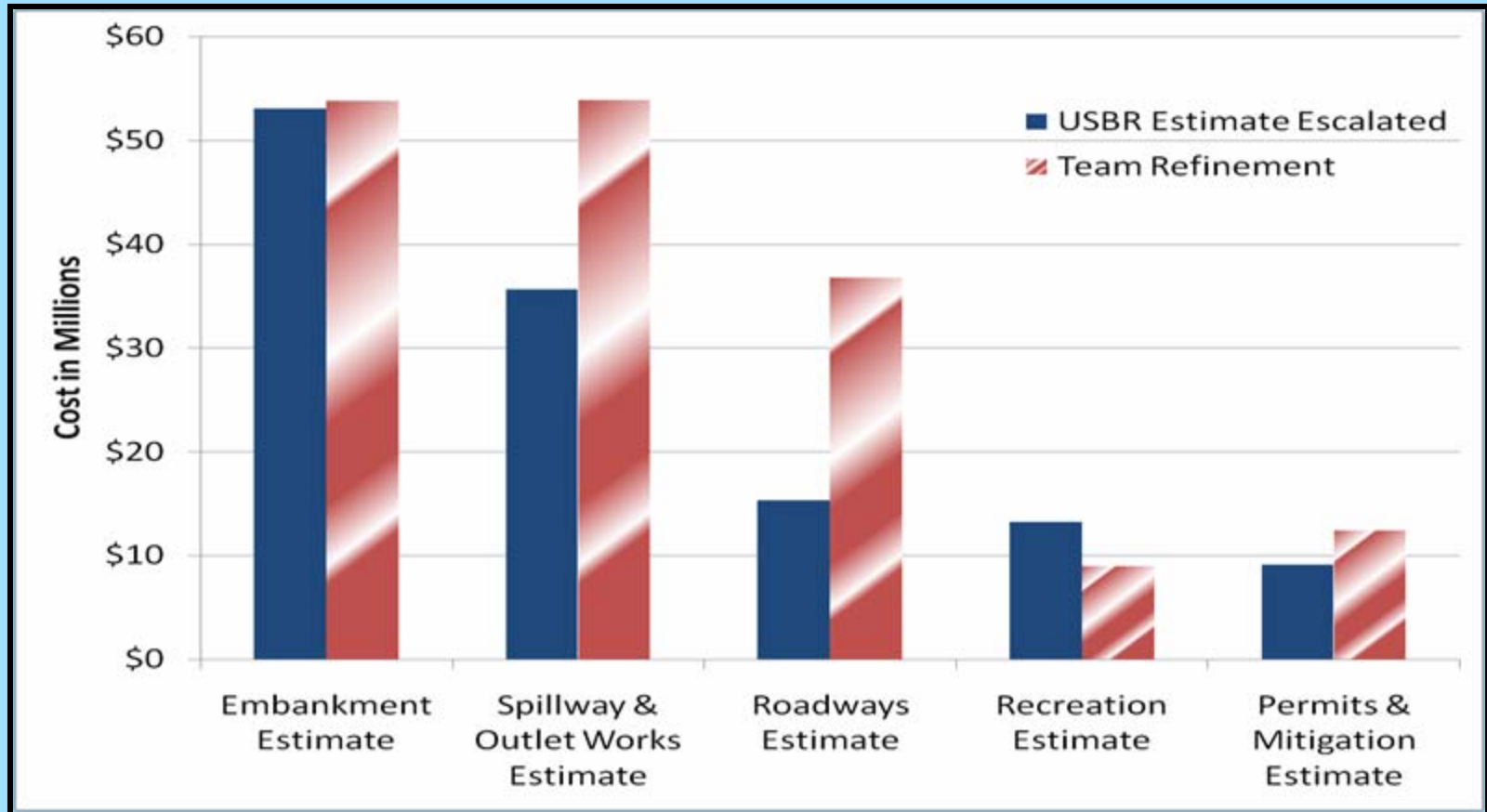
Dam Alternatives Comparative Costs



Comparative Cost Dam – 40 ft. w/Multi Level Intake



Construction Cost Summary by Element 40 ft. w/Multi-Level Intake



Raw Water Pipeline Overview

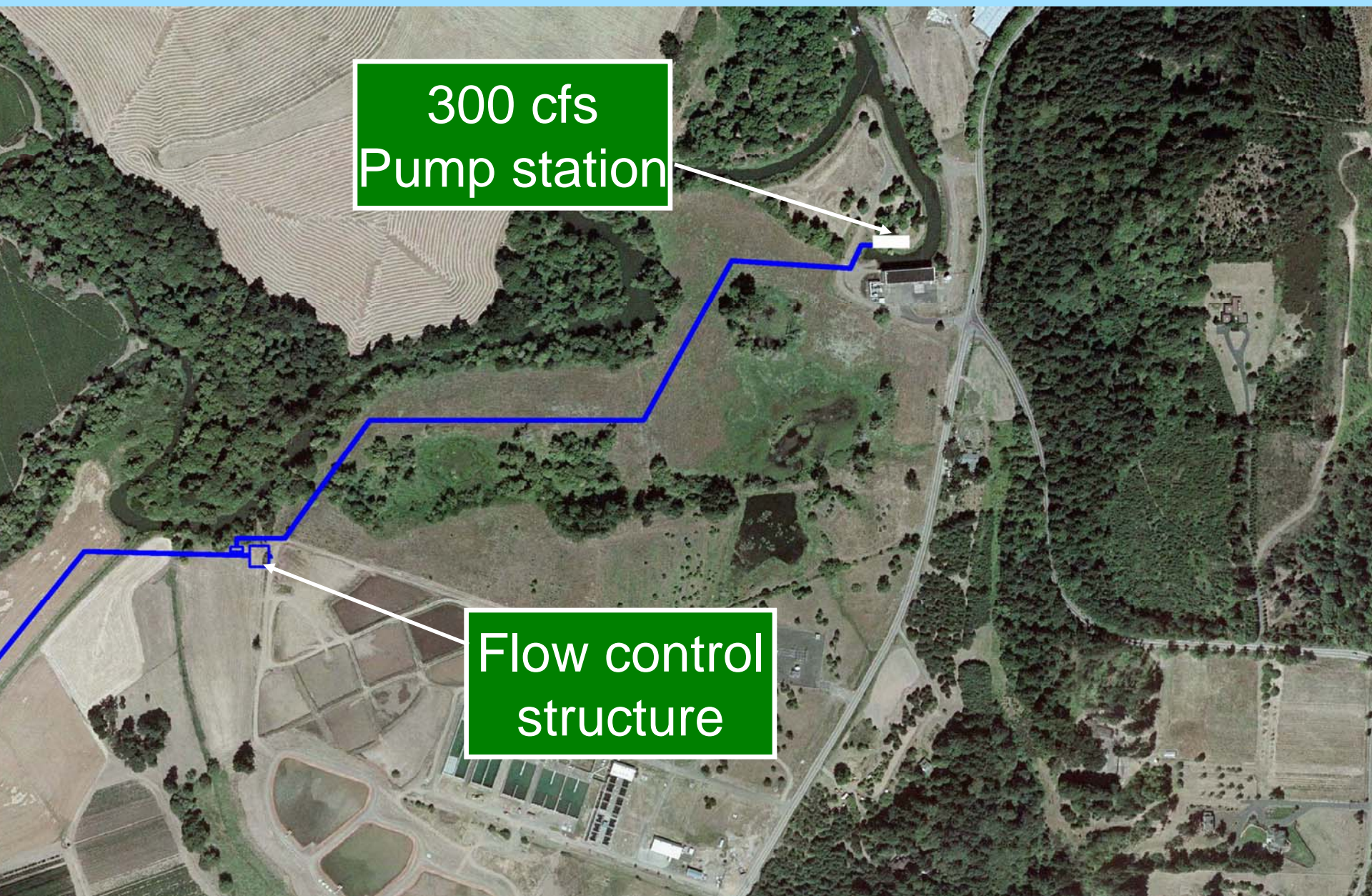
35,000 lf 96" WSP

JWC WTP
Flow Control
Structure

Hagg Lake



Pump-Back Facility Overview



300 cfs
Pump station

Flow control
structure

Cost Summary Review



☰ Dam Raise Option

- 40' raise = \$263.6 M
 - Raw Water Pipeline = \$115.6 M
 - Pump Back = \$49 M
- Total = \$428.2 M**

☰ Multiple Source Option

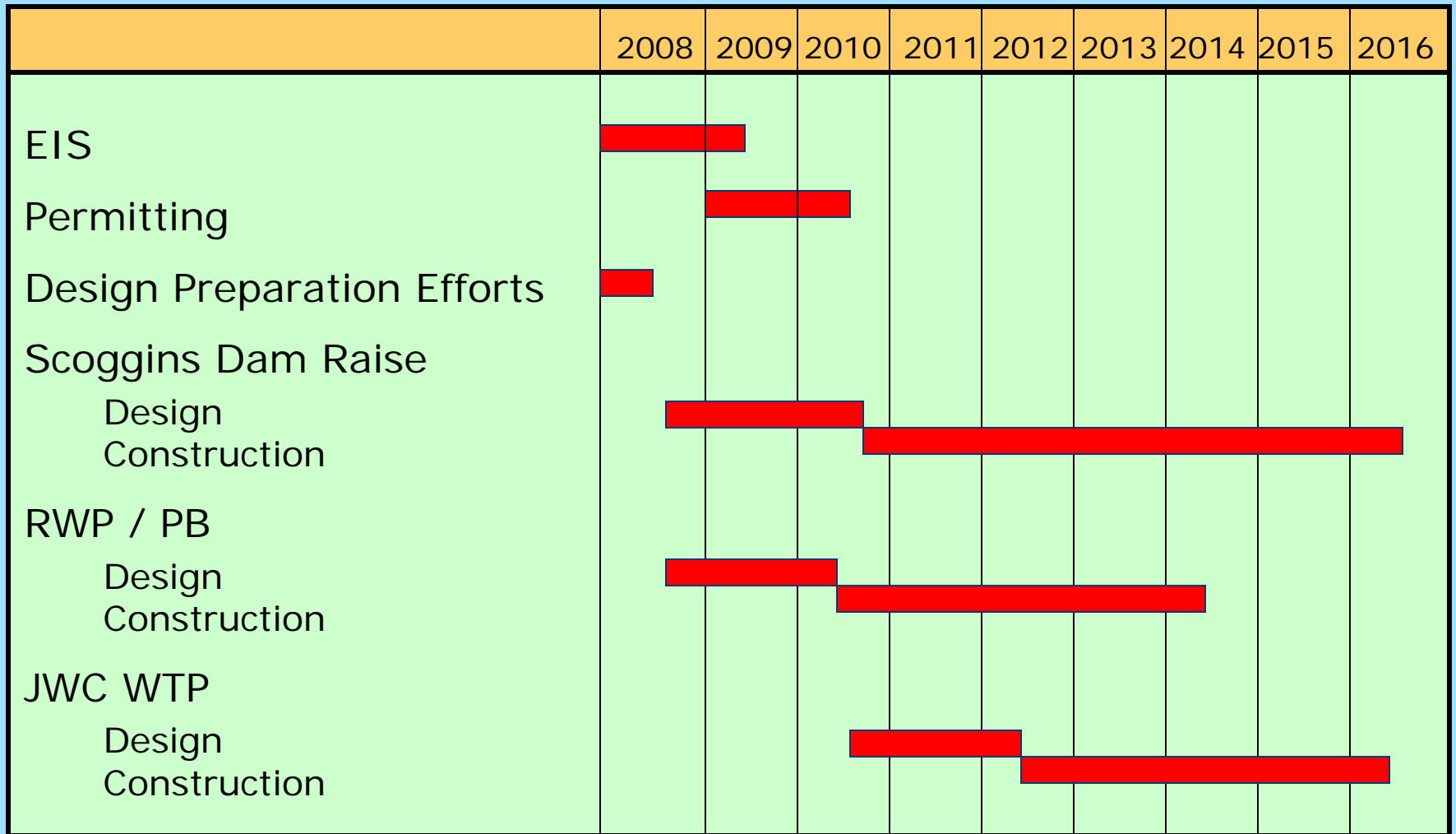
- 25' raise = \$237 M
 - Raw Water Pipeline = \$90 M
 - Pump Back = \$40 M
 - Willamette Pipeline = \$285 M
- Total = \$652 M**

Other Cost Summary Information

☰ **Cost Summary for other elements**

- **Title Transfer – \$6 M - \$11.3 M**
- **JWC Water Treatment Plant Expansion –**
 - **120 MG - \$104.5 M**
 - **Deferred Capital - \$20.2 M**

Overall Schedule



Effects of Title Transfer on Construction Costs/Schedule

☰ **Potential changes/opportunities to save money:**

- Intake location and design
- Outlet design and crest elevation

☰ **Potential issues related to ownership:**

- Project delivery
- Maintenance requirements and strategies
- Automation
- Water Quality

☰ **Permitting and environmental studies**

Review of Title Transfer Findings

Benefits could include:

- **Cost savings through design changes**
- **Reduced schedule**
 - **quicker design phase**
 - **more control over schedule**

Challenges could include:

- **Greater risk and responsibility**
- **Costs associated with ownership**

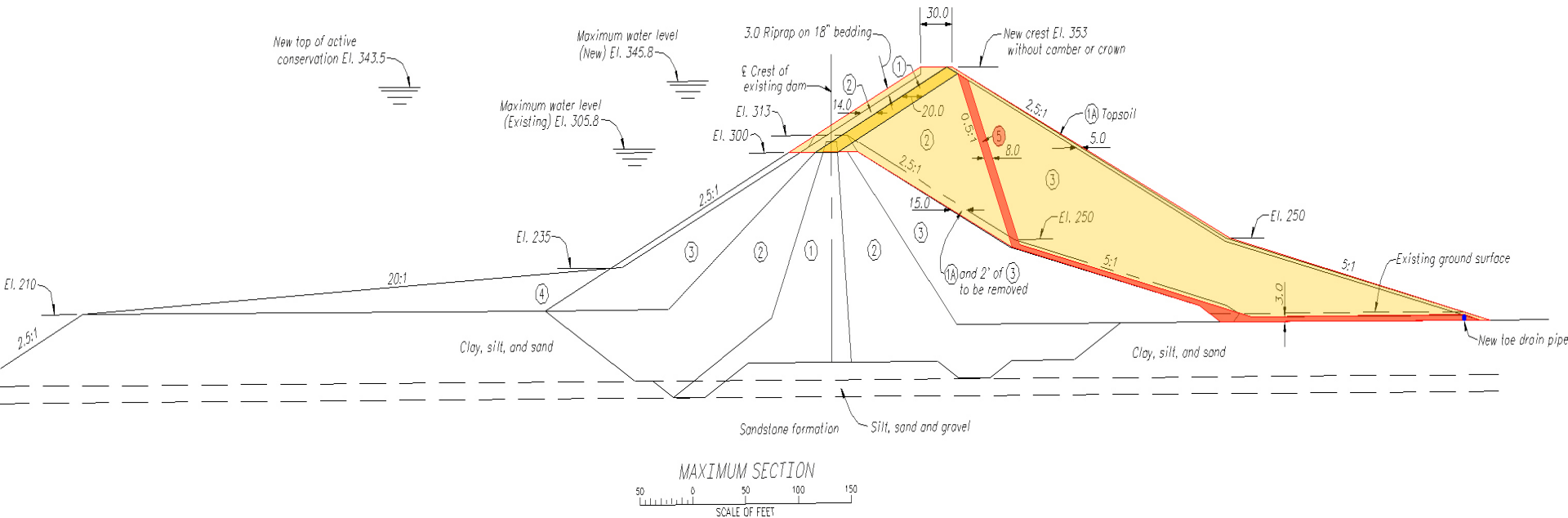
Scoggins Dam Assessment

- **Title Transfer and Water Supply Project**
- **Reclamation's Comprehensive Facilities Review (CFR)**
 - **Safety is the top priority**
 - **Reclamation is a recognized leader for their Dam Safety Program**
 - **Review of existing dam based on updated earthquake information**
 - **New dam will require to meet updated data**

Scoggins Dam Reviews

- ✓ **Original Dam Constructed in 1974-76**
- ✓ **Ongoing Dam Safety Reviews**
 - **1990's Dam Safety Reviews**
 - **1999 Review of 1994 Seismic analysis and new standards**
 - **2003 Safety of Dams Recommendations**
 - **2004 Updated Information from USGS**
 - **2006 Dam Raise Design and new study**

Conceptual Dam Design



Maximum Section – 40 foot raise

Scoggins Dam Assessment

Next Steps

- **Dam site investigation coordination**
- **Revised Dam Engineering Concepts**
- **Emergency preparedness review**
- **Update Draft Planning Report/EIS elements**
- **Ongoing coordination with Reclamation**

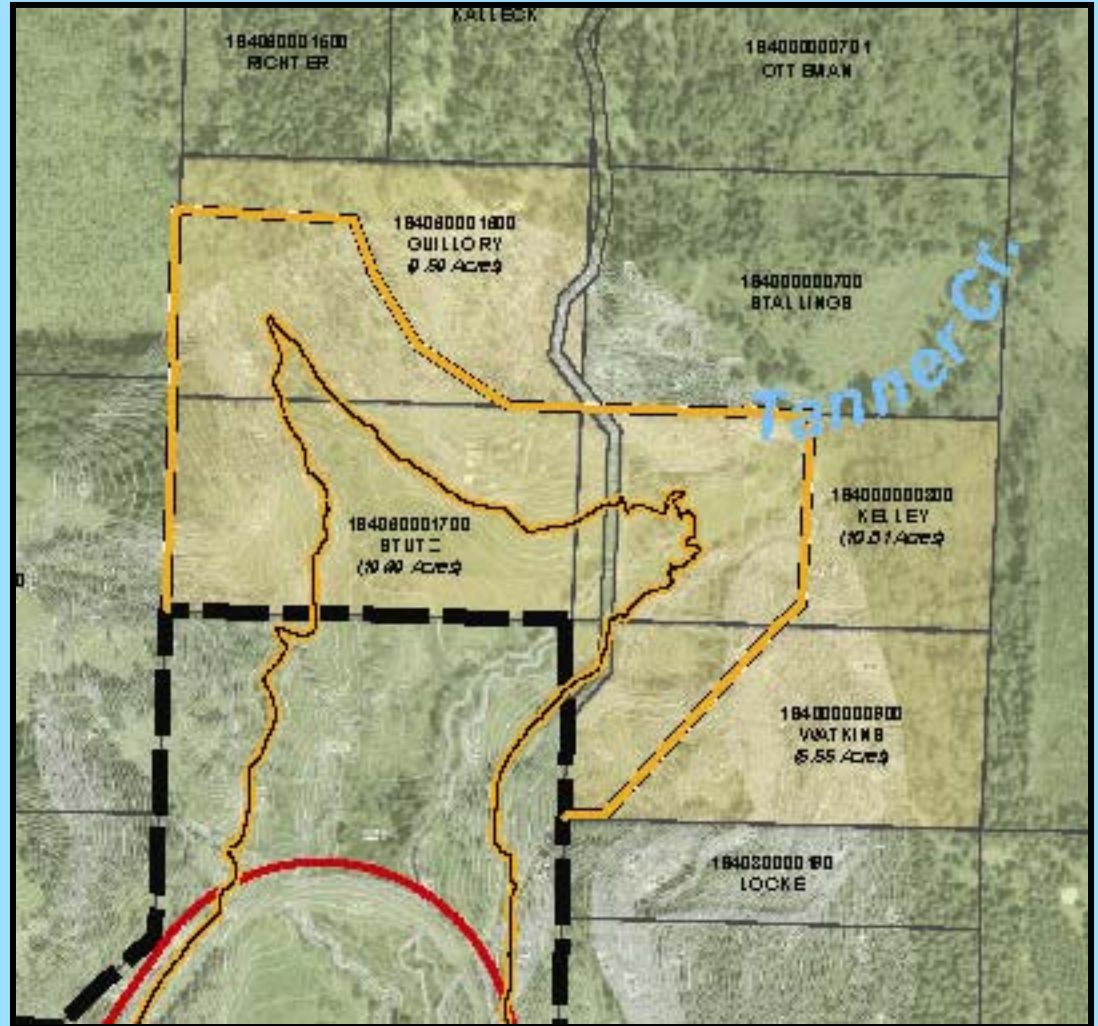
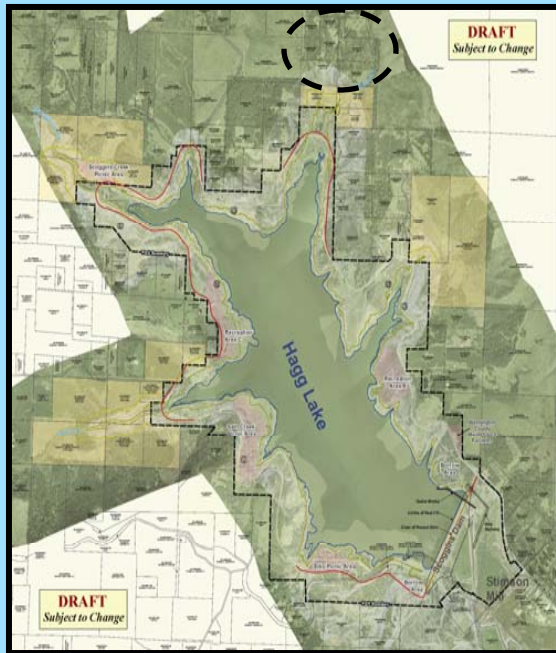
Hagg Lake Property Acquisition

☰ **One of the most impacted Property**

- **Impacted by both 40 and 25 ft dam raises**
- **Approached by landowner**
- **Tanner Creek Area**
- **15 Acres with home and outbuildings**
- **Property purchased by Partners**
- **Relocation costs**

40 foot raise Alternate 2

Tanner Creek



Joint Funding Agreement 4th Amendment

☰ Partnership Review

☰ Estimated Budget – \$21.6M

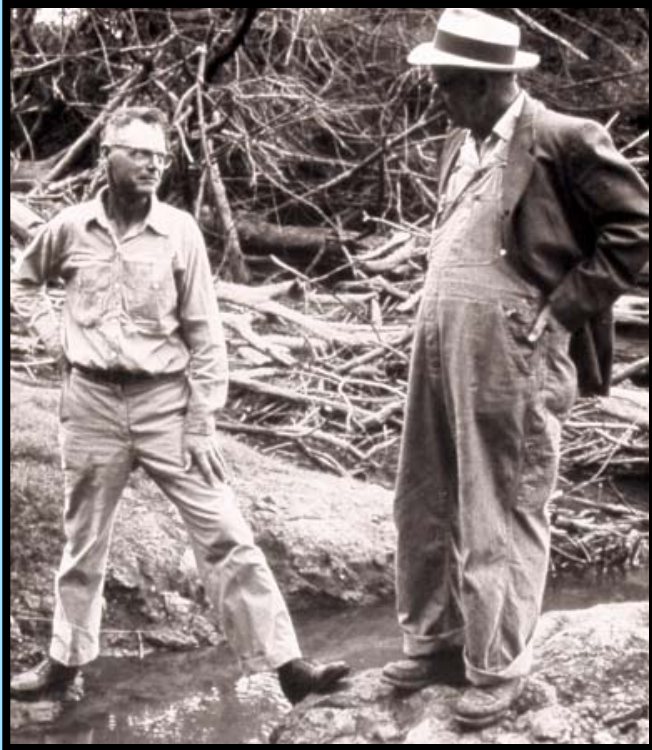
☰ Scope of Work Elements

- Final EIS, Permitting and Mitigation Plans (\$3.6M)
- Property Acquisition Process (\$2M)
- Interim and Long term Program Management (\$750K)
- Site Investigations and Pre-design (\$11.1M)
- Recreational Master Plan (\$250K)
- Title Transfer (\$1M)
- Other costs (Project Management, Legal, etc.) (\$2.9M)

☰ Partners Construction Agreement

- Commitment through the project

Joint Funding Agreement 4th Amendment



Partners Shares

- TVWD – \$9.37 M (43.4%)
- CleanWater Services – \$6.74 M (31.1%)
- City of Hillsboro – \$4.69 M (21.7%)
- City of Beaverton – \$815K (3.8%)
- (*Cities of Forest Grove and Tigard)

Title Transfer Update

- **Reclamation MOA and Policy Review**
- **Approval of MOA on Governance by Partners**
- **Development of IGA for Partnership Organization**
- **Review of key contracts**
 - **Tualatin Valley Irrigation District**
 - **Washington County Facilities**
 - **Lake Oswego Corporation**

Questions?

