



**Lake Oswego · Tigard  
Water Partnership**  
*sharing water · connecting communities*

# Challenges and Opportunities Permitting a New or Modified Municipal Water Intake:

## Case Study

### Lake Oswego Tigard Water Partnership

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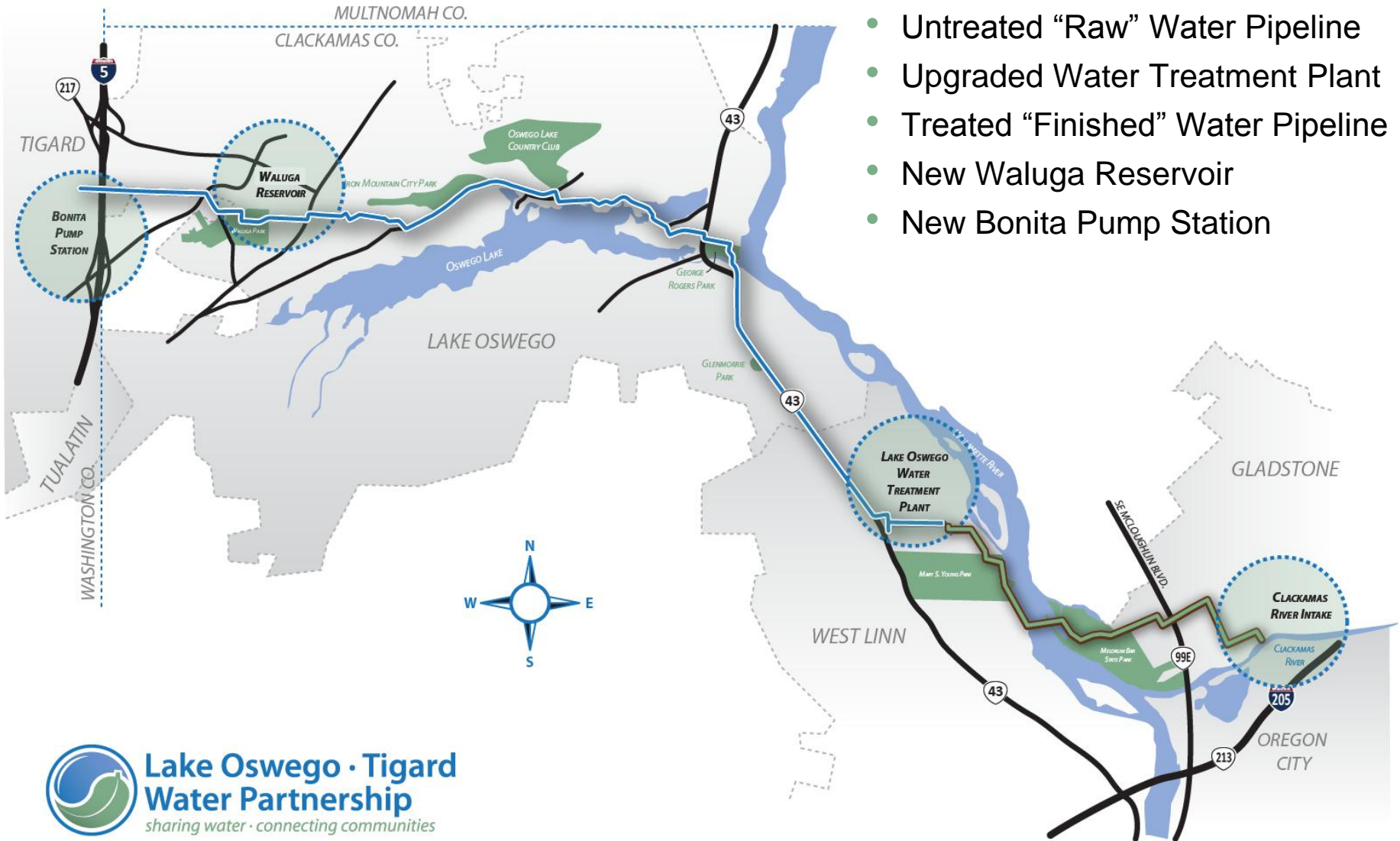


# Presentation Objectives

- Overview of the Lake Oswego –Tigard Water Partnership Project
- Understanding the Permitting Challenges & Opportunities
- Developing a Permitting Strategy
- Implementing and Adapting the Permitting Strategy
- Lessons Learned



# Water System Improvements



# Understanding the Permitting Challenges & Opportunities

- Identify Core Permitting Team (internal)
  - Project Sponsors
  - Environmental Specialists
  - Design Team
  - Construction Managers
  - Legal Counsel



# Understanding the Permitting Challenges & Opportunities

- Identify and Understand Permit Requirements
  - Project Objectives & Requirements
  - Environmental Baseline & Constraints
  - Applicable Federal, State, & Local requirements
  - Latest regulatory agency expectations
  - History of past actions



# Understanding the Permitting Challenges & Opportunities

Permit Acquisition Table

Potential Permits	Regulated Activity	Approval Timeline	Preliminary Permit Considerations and Issues	Project(s)
<b>FEDERAL</b>				
<b>US Army Corps of Engineers (USACE)</b> Section 404, Clean Water Act Individual Permit (Joint application with DSL)  <b>USACE Section 10 Rivers and Harbors Act</b>	Discharges of dredged or fill material associated with excavation, backfill, or bedding for utility lines, including intake and outfall structures.  Construction in, over or under a navigable waterway requires a Section 10 permit.  Section 404 and Section 10 permitting is combined under the joint permit application process.	Individual Permit (typically 120 days after complete application is submitted and subsequent to completion of ESA consultation and receipt of state water quality certification)	<ul style="list-style-type: none"> <li>Acquire Nationwide Permit for Pre-design borings across the Willamette River (up to 3 months for approval).</li> <li>The project will require an Individual Permit if more than 0.5 acres of impacts.</li> <li>A pre-application meeting with USACE and other permitting agencies will help determine what measures might need to be taken into consideration during project design.</li> <li>Delineations of wetlands and waters (streams and jurisdictional ditches) will need to be conducted as part of the permit application package.</li> <li>Compensatory mitigation will be needed to replace permanent lost aquatic resource functions and area per 33 CFR Parts 325 and 332 and 40 CFR Part 230.</li> <li>Permit is issued only after ESA consultation is complete (see below).</li> </ul>	Intake, Pumping Facilities, Raw Water Pipeline,
<b>National Marine Fisheries Service (NMFS) and US Fish and Wildlife Service (USFWS)</b> Section 7, ESA	Section 7 of the ESA requires all federal agencies to ensure that any actions they authorize are not likely to jeopardize a listed species or adversely modify its critical habitat. USACE must consult with NMFS and possibly USFWS for this project.	120 days or more after submittal to USACE, and typically 180 days or more after submittal to NMFS and USFWS	<ul style="list-style-type: none"> <li>The project will likely require a Biological Assessment (BA) addressing the project's impacts to anadromous fish, and threatened &amp; endangered plants.</li> <li>USACE is the lead agency that coordinates a review of the BA by the appropriate regulatory agency (NMFS and USFWS). Special provisions may be necessary for the project construction to avoid negative impacts on listed species.</li> </ul>	Intake, Pumping Facilities, Raw Water Pipeline



# Required Permits & Clearances

**Bonita Pump Station**  
 SHPO Clearance  
 ODEQ NPDES 1200-C  
 City of Tigard Permits  
 Easements

Bonita Pump Station (BPS)

**Waluga Reservoir**  
 SHPO Clearance  
 ODEQ NPDES 1200-C  
 City of Lake Oswego Permits  
 Easements

Waluga Reservoir 2 (WR2)

**Finished Water Pipeline**  
 USACE Section 404/10 & ODSL Removal Fill  
 Federal Endangered Species Act Consultation  
 NMFS Magnuson Stevens Act  
 ODEQ 401 Certification  
 ODEQ NPDES 1200-C  
 ODFW Mitigation Policy  
 ODOT X-Permit  
 SHPO Clearance  
 Cities of Lake Oswego, Tigard & West Linn Permits  
 Lake Corporation Easement  
 UPRR Encroachment Permit  
 Easements

**Clackamas River Intake**  
 USFWS Migratory Bird Treaty Act  
 USACE Section 404/10 & ODSL Removal Fill  
 Federal Endangered Species Act Consultation  
 NMFS Magnuson Stevens Act  
 OWRD Water Rights  
 ODEQ 401 Certification  
 ODEQ NPDES 1200-C  
 ODFW Mitigation Policy  
 SHPO Clearance  
 City of Gladstone & Clackamas County Permits  
 Easements

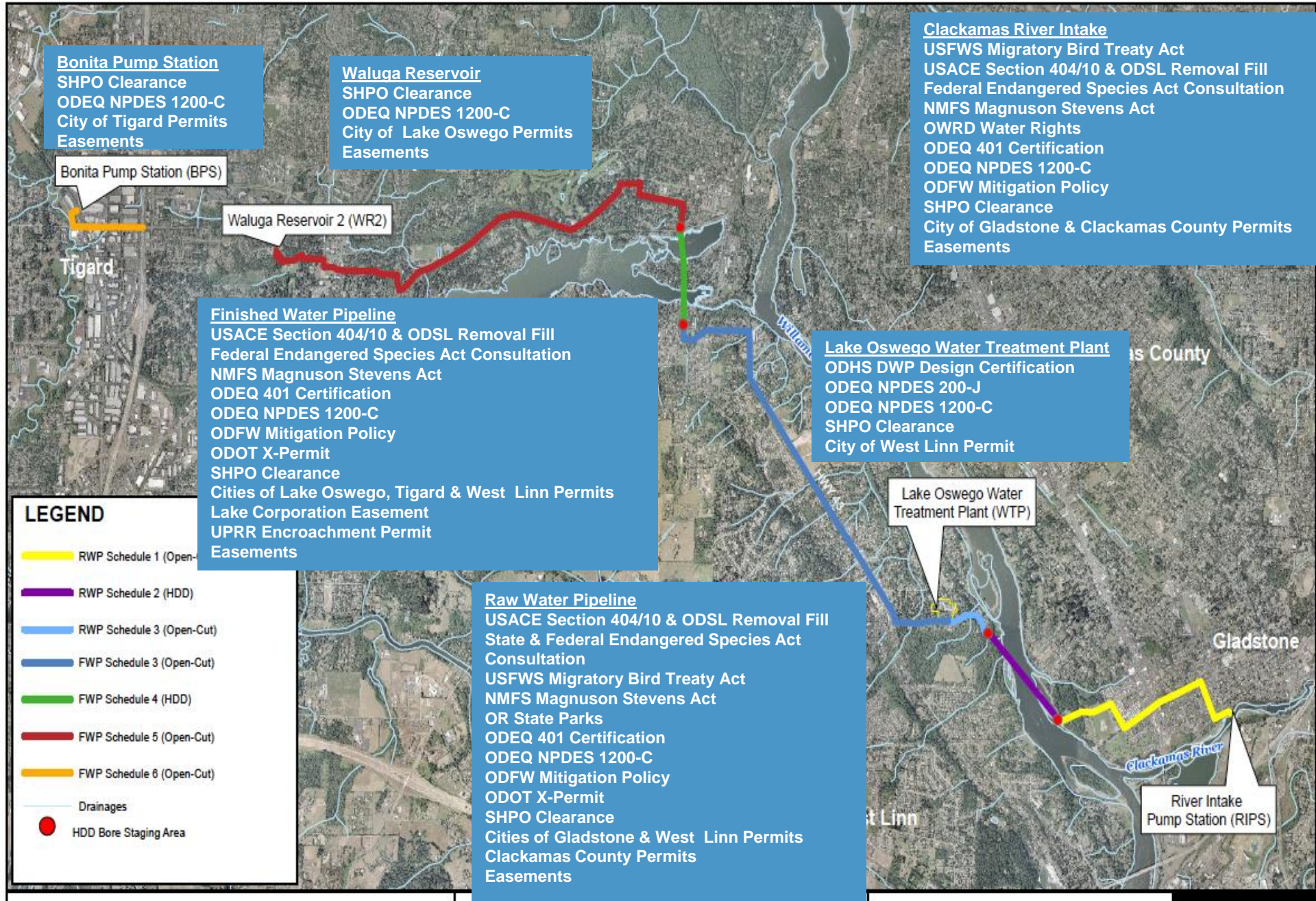
**Lake Oswego Water Treatment Plant**  
 ODHS DWP Design Certification  
 ODEQ NPDES 200-J  
 ODEQ NPDES 1200-C  
 SHPO Clearance  
 City of West Linn Permit

Lake Oswego Water Treatment Plant (WTP)

**Raw Water Pipeline**  
 USACE Section 404/10 & ODSL Removal Fill  
 State & Federal Endangered Species Act Consultation  
 USFWS Migratory Bird Treaty Act  
 NMFS Magnuson Stevens Act  
 OR State Parks  
 ODEQ 401 Certification  
 ODEQ NPDES 1200-C  
 ODFW Mitigation Policy  
 ODOT X-Permit  
 SHPO Clearance  
 Cities of Gladstone & West Linn Permits  
 Clackamas County Permits  
 Easements

## LEGEND

- RWP Schedule 1 (Open-Cut)
- RWP Schedule 2 (HDD)
- RWP Schedule 3 (Open-Cut)
- FWP Schedule 3 (Open-Cut)
- FWP Schedule 4 (HDD)
- FWP Schedule 5 (Open-Cut)
- FWP Schedule 6 (Open-Cut)
- Drainages
- HDD Bore Staging Area



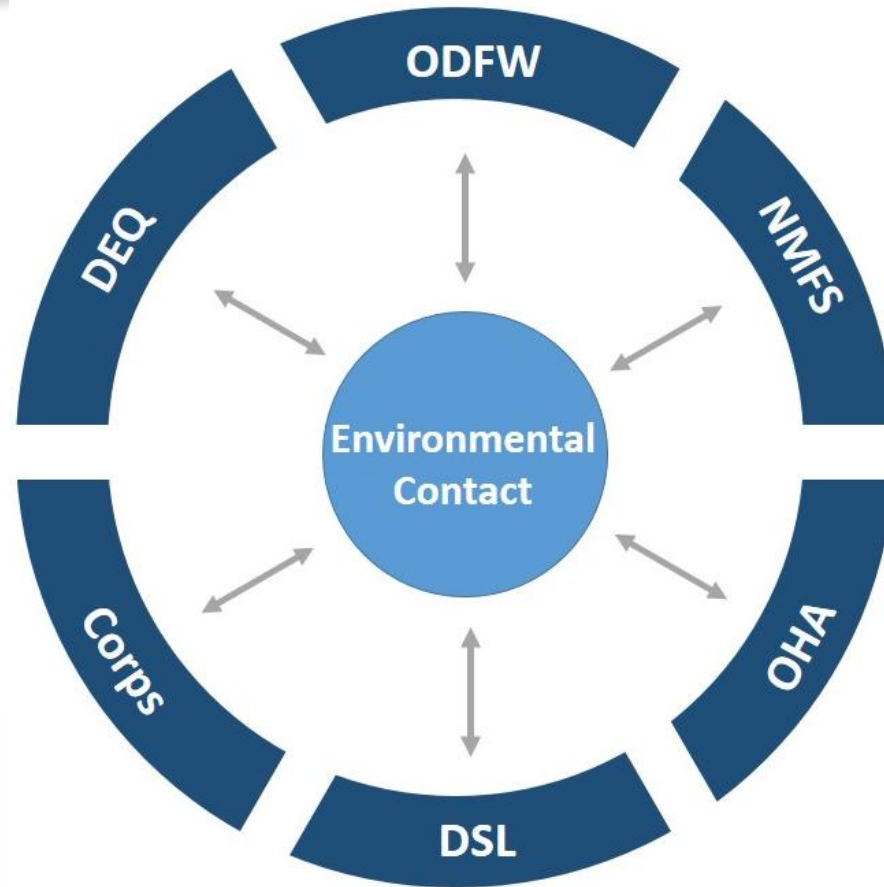
# Understanding the Permitting Challenges & Opportunities

- Know the Players (external)
  - Regulatory agency contacts/leads
  - Political Interests (elected officials and decision-makers)
  - Other Local Governments
  - Local Landowners
  - NGOs
  - Potential Litigants





# Traditional Permit Acquisition Process



# Developing a Permitting Strategy

- Communicate early & often with regulatory agencies
- Develop permitting objectives
- Identify potential permitting scenarios
- Forecast potential litigation (sponsor & regulatory agency)
- Develop comprehensive & inclusive strategic communication plan
- Establish communication protocols for sharing sensitive information & work products



# Developing a Permitting Strategy

- Develop a strategic plan & detailed schedule
  - Integration of project/program components
  - Plan for worst case scenarios
- Communicate and vet the strategy
  - Extended Project Team
  - Legal Counsel
  - Decision Makers



# Implementing and Adapting the Permitting Strategy

- Develop project predesigns
  - Project Purpose & Need
  - Design Objectives & Constraints
  - Incorporate NMFS/State Fish Screening & Passage Requirements
  - Alternative Analysis





Beatrice Avenue

Arlington Street

Clackamas Boulevard

Portland Avenue

Clackamas River


Clackamette Cove


Existing Raw Water Intake


Tri-Cities WPCP  
(Outfall to Willamette River)


Rossman Landfill

Future Cove Development

 Intake Site Alternatives

 Existing 27" Raw Water Main

 City of Lake Oswego Property

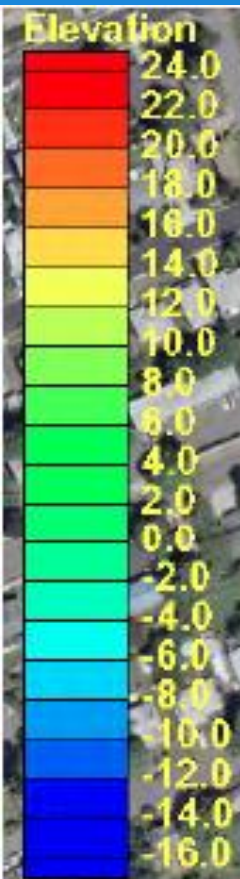
 Taxlots

0 450 900 Feet

N

# Implementing and Adapting the Permitting Strategy

- Develop environmental studies using scientifically sound, unbiased data
  - Characterization of river hydrology & hydraulic
  - Instream Flow Incremental Methodology Study
  - Fish Presence Surveys



New Intake

Existing Intake

Rock Outcrop

Top of Riffle

Middle of Riffle

Bottom of Riffle

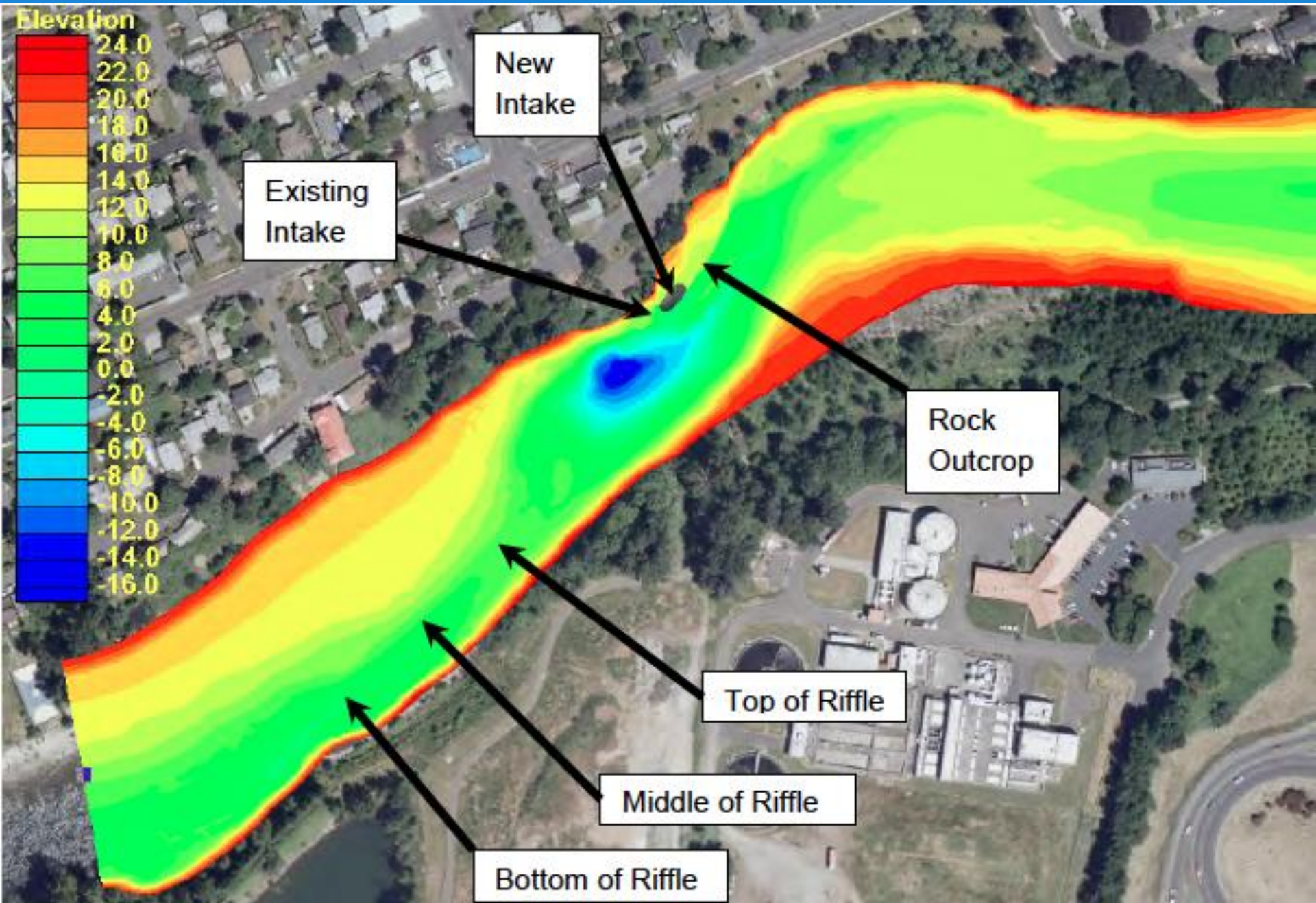


Table 1 – Summary of Model Results

Model Run	Bathymetry	Flow (cfs)	% Excd	Intake Conditions			Withdraw Rate (cfs)	
				WSE (ft)	Depth (ft)	Sweeping Vel (ft/s)		
1	Existing	660	95%	9.5	Low	6.8	-0.20	59
2	Existing	660	95%	11.3	High	8.6	0.04	59
3	Proposed	660	95%	8.1	Low	7.6	0.51	53
4	Proposed	660	95%	12.0	High	11.5	0.49	53
5	Existing	1,050	25% <sup>(1)</sup>	10.0	Obs <sup>(1)</sup>	6.9	-0.20	10
6	Proposed	1,050	25% <sup>(1)</sup>	10.8	Typ <sup>(2)</sup>	10.3	1.29	59
7	Existing	15,790	5%	21.7	Typ <sup>(2)</sup>	16.7	6.01	59
8	Proposed	15,790	5%	21.7	Typ <sup>(2)</sup>	21.2	7.15	59



# Implementing and Adapting the Permitting Strategy

- Review & refine predesigns w/regulatory agencies
  - Permitting Norms & Procedures do change
  - Get concurrence on scientific studies
  - Know your negotiating strategy
  - Document all communication
  - Assume the permit will be challenged in court



# Implementing and Adapting the Permitting Strategy

- Develop Design Package for Permitting
  - 18 – 36 months prior to construction
  - Communicate the specifics (memo & example)
  - Allow time for coordination, refinement, reviews
  - Meet with regulatory agencies to review and confirm designs



# Implementing and Adapting the Permitting Strategy

- Submit Permit Packages
- Check-in with regulatory agencies
  - Within 2-4 weeks: Package completeness
  - Monthly: Questions & additional information
  - Educate new agency staff
  - Elevation strategy



# Implementing and Adapting the Permitting Strategy

- After Permits are Issued
  - Review all permit conditions
  - Develop a plan to ensure that permit conditions are met during & following construction
    - Clearly communicate permit conditions
    - Regular meetings
    - Monitoring
    - Reporting
- Project Close-out

Existing river intake pump station:



Proposed river intake pump station:



# Lesson Learned

- Document every meeting and conservation with regulatory agencies
- Coordination & collaboration has to be a way of business
- Development of a Permitting Strategy will be a key to a successful project



# Lesson Learned

- Be strategic – use the best available science & engineering and consider the political environment
- What regulatory agencies accepted 5-10 years ago probably isn't applicable today and tomorrow
- Expect everything to be challenged and maybe even litigated



# Questions?



## Lake Oswego · Tigard Water Partnership

*sharing water · connecting communities*

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