

Spokane River Dissolved Oxygen TMDL – Post Falls Update

Presented to DO TMDL Annual Meeting
Presented by John Beacham
May 21, 2015

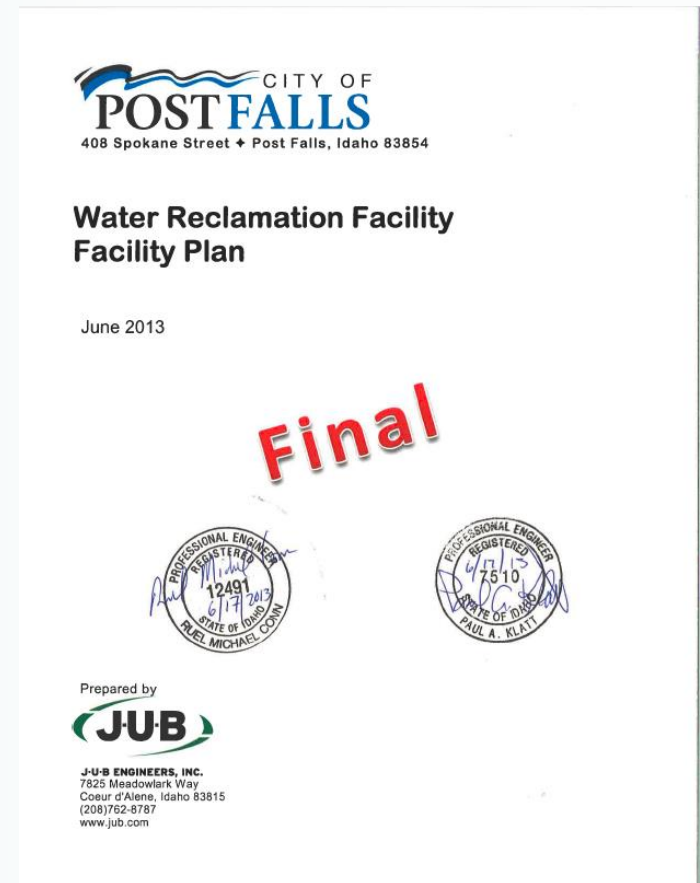
Existing Facility

- Influent
- Headworks
- Secondary
- Clarifiers
- Solids
- Solids Storage
- UV Disinfection



2013 Facility Plan

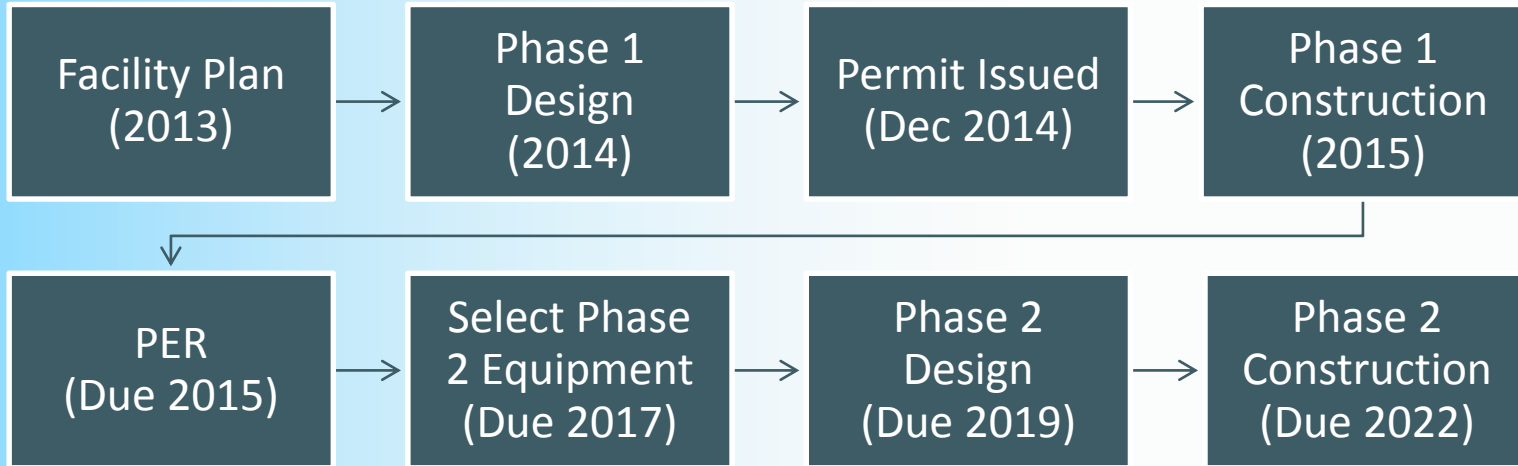
- Finalized June 2013
- Toward compliance with expected NPDES Permit
- Effective December 2014
- Includes Financial Model from FCS



Final Permit Phosphorus Limit

- Phosphorus
 - 3.19 lbs / day
 - Seasonal Average
 - February to October
- 2015 Average
 - 8.34 lbs / Day
 - 2.5 MGD
 - 400 $\mu\text{g} / \text{L}$

Compliance Path



Phase 1 - Flow Equalization

- Goals
 - Better Biological Treatment
 - Decrease peak flows
 - Peak Hour mitigated to Peak Day
- Cost Benefit
 - Size Decrease of Tertiary Treatment
 - 8.76 MGD vs 12 MGD
 - 25% Lower Peaks
 - \$26.4M vs \$19.3M

Phase 1 - Flow Equalization Project Budget

- Construction Bid - \$12M
- Engineering and Contract Admin - \$2M
- Contingency - \$0.6M

- Financing - \$10.8M at 2.25% Interest
 - State Revolving Fund Loan

Phase 1 - Flow Equalization Project Timeline

- Design – Feb 2014
- Bid Award – May 2015
- Notice to Proceed – June 2015
- Substantial Completion – Dec 2016
- Closeout – Early 2017

Project Effects

- Modeled Idaho DO Depletion: 0.15 mg/L
- Approximate Post Falls Portion: 0.05 mg/L
- Assume Proportional Response:
 - 8.34 lbs P decreases to 3.91 lbs P
 - 55% reduction from current operations
- Linear response DO Improvement: 0.025 mg/L
- Cost: \$34.1M for Phase 1 and 2
- Unit Cost: \$1.364 Billion per mg/L DO

Questions?