



# Eastern Idaho Regional Wastewater System

**FORSGREN**  
*Associates Inc.*



## Formation of EIRWWA

- Shelley lagoons at capacity and periodically violate their NPDES permit
- Shelley initiated evaluation of their system
- Shelley informally vetted regionalization with neighboring municipalities
- January 2000 – Invitations extended to participate in exploring regionalization
- August 2000 - Committee formed to apply for matching grant funds from DEQ



## Selection of Consultant

- July 2000 - DEQ Clean Water Planning Grant of \$100,000 obtained for completing FPS, \$100,000 matching required
- December 2000 - RFP issued, proposals received, Forsgren selected as consultant
- January 2001 – Agreement approved for planning effort
- Matching funds solicited from participants
- Collaboration between counties, cities, districts, and private enterprise



## Original EIRWWA Participants

• City of Shelley	\$17,000
• City of Ammon	\$17,000
• IBSD	\$17,000
• Bonneville County	\$17,000
• Bingham County	\$17,000
• Andrus Trucking	\$5,000
• <u>Melaleuca</u>	<u>\$10,000</u>
• TOTAL	\$100,000



## EIRWWA Motivating Factors

- Manage high growth in unincorporated counties,
- Provide geographical alternatives for economical development,
- Develop long-range planning tool to better protect the ground water and surface water resources; reuse of effluent integral to water conservation,
- Increase reliability of compliance with Federal and State regulations,
- Eliminate political barriers restricting opportunities available to various entities, and
- Increase environmental protection for each participating entity as well as those non-participating entities in the surrounding region.



# Facilities Planning Study

- Evaluate treatment alternatives
  - One treatment plant located in Shelley
  - Two treatment plants; Shelley & Ammon
- Conclusion: One WWTP in Shelley was best alternative considering all factors
- Sept 2001 – Draft submittal to DEQ
- April 2002 – Draft submittal to DEQ
- July 2003 – Draft submittal to DEQ
- Dec 2003 – Final submittal to DEQ



## Continued Significant Events

- 2004 - Joint powers agreement developed and EIRWWA officially formed
- 2004 – Revised FPS submitted to DEQ
- 2004 IBSD formally withdrew from EIRWWA
- 2004 EPS grant secured from EPA for preliminary design tasks
- 2005 DEQ approval of FPS
- 2006 ACOE money authorized for project



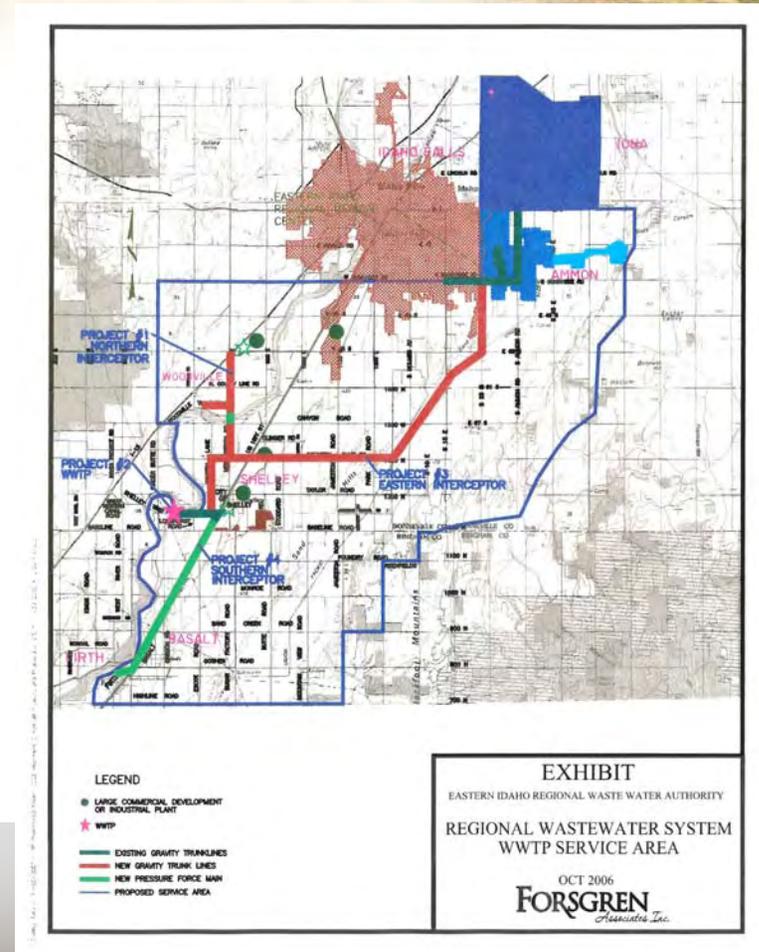
# Joint Powers Agreement

- Each participating entity will have one vote
- EIRWWA will own and operate the transmission lines and WWTP
- Participating entities may own and operate their own collection systems
- Fees from EIRWWA will be assessed based on proportionate flow volumes
- Participating entities may bill their own customers for collection, transmission and treatment



# EIRWWA System Components

- **Project 1**
  - N. Interceptor
- **Project 2**
  - Oxbow WWTP
- **Project 3**
  - E. Interceptor
  - Oxbow WWTP Exp.
- **Project 4**
  - S. Interceptor
- **Project 5**
  - Industrial Pretreatment
  - W. Interceptor





# Project 1 – Northern Interceptor

- Public/Private Partnership
- 24” pipeline from City of Shelley to Exit 113
- Funding from ED grant and private sector
- Designed, constructed and operational





## Project 1 Expansion – Exit 113 ED

- Public/Private Partnership
- Extend collection system north and east
- Funding from ED grant and private sector
- Designed, constructed, and operational





# Oxbow Regional WWTP



- Designed anticipating reuse customers
- Bids received 22 month Construction
- Operation will commence in 2009/2010

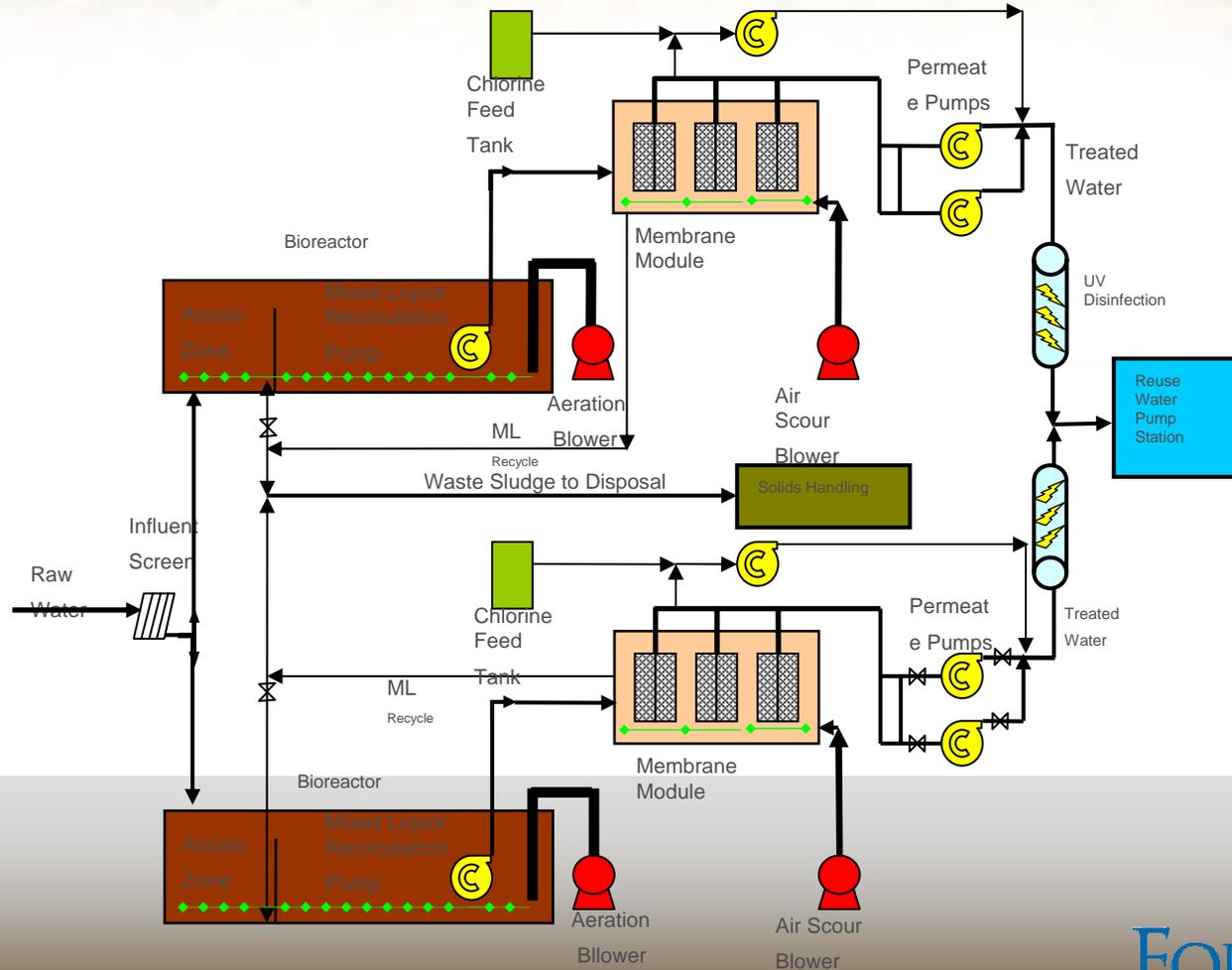


## Oxbow WWTP Design

- Headworks – JWC Bandscreen Monster, Smith & Loveless PISTA grit
- Primary Lift Station - Submersible
- Secondary – BNR with Siemens MemJet MBR
- Disinfection – Trojan Ultraviolet Disinfection
- Reuse Pump Station
- Solids Dewatering – BDP 2 meter belt filter press



# Oxbow WWTP Process





# Oxbow WWTP Capability-Reuse

Parameter	Oxbow Design	Class A Standards
BOD	< 5 mg/l	5 mg/l recharge 10 mg/l irrigation
TSS	< 5 mg/l	N/A
Nitrogen	<10 mg/l	10 mg/l recharge 30 mg/l irrigation
Phosphorous	< 1 mg/l < .03 mg/l	N/A
Total Coliform	< 2.2 cfu/100 ml	2.2 cfu/100 ml
Turbidity	< .05 NTU	0.2 NTU 0.5 NTU



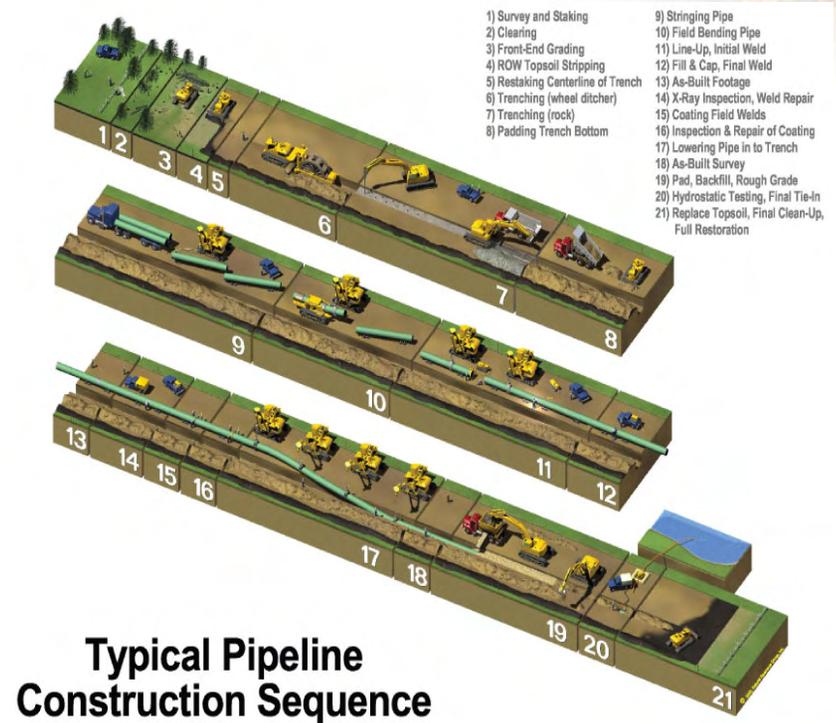
# Integrated Water Management

- Industrial Reuse – Biodiesel plant, treat 0.5 MGD of industrial effluent and return 1.2 MGD of process water.
- Municipal Reuse – North Bingham County Park irrigation
- Municipal Reuse – Shelley City Park System, secondary irrigation
- Municipal Reuse – Groundwater recharge
- Agricultural Reuse – Seasonal crop irrigation



# Eastern Interceptor

- Design funded by EIRWWA and ACOE
- Design initiated spring 2008
- Construction will begin Spring of 2009
- Operational in 2010 following completion of WWTP





## Sewer Development Fee

- EOPC for Projects 2 through 4 = \$45M
- Capacity of WWTP is 4 MGD
- FPS suggests each ERU is 320 GPD
- WWTP then supports 12,500 ERUs
- Cost per ERU is \$3,600.
- Monthly cost for 20 years @ 2% per ERU = \$18.21 for debt service



# Conclusion

- Questions