

### Permitting the Obvious? A Recycled Water Success Story in Hermiston, Oregon

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Idaho Water Reuse Conference  
April 17-18, 2012



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### Presentation Overview

- Project History
- Regulatory Drivers
- Getting to a Solution
- Solution
- *Screeching Halt*
- Solution
- Questions

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### Acknowledgements

- Ed Brookshier, City of Hermiston
- Al Shewey, Kennedy/Jenks
- Brad Bogus, Tetra Tech

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### Project History



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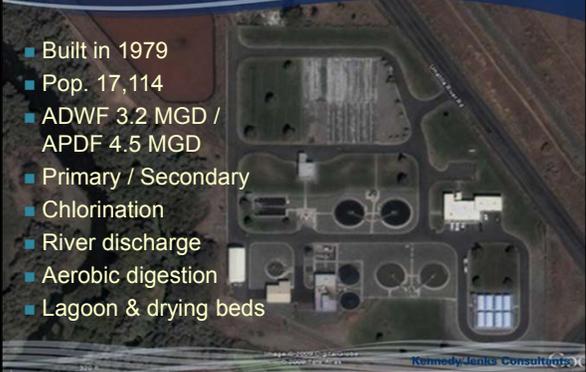
### Project History



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### Project History - Existing Plant

- Built in 1979
- Pop. 17,114
- ADWF 3.2 MGD / APDF 4.5 MGD
- Primary / Secondary
- Chlorination
- River discharge
- Aerobic digestion
- Lagoon & drying beds



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### Project History - Existing Discharge

**Summer**

- Class C Recycled Water
- LGW Ranch

**Winter**

- Umatilla River



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### Regulatory - TMDL

**Umatilla River TMDL**

- Established in 2001
- Temperature, sediment, aquatic weeds, algae, pH, ammonia, bacteria

**Meet all permit conditions except:**

- Ammonia
- Temperature (TMDL & WQ Standard)

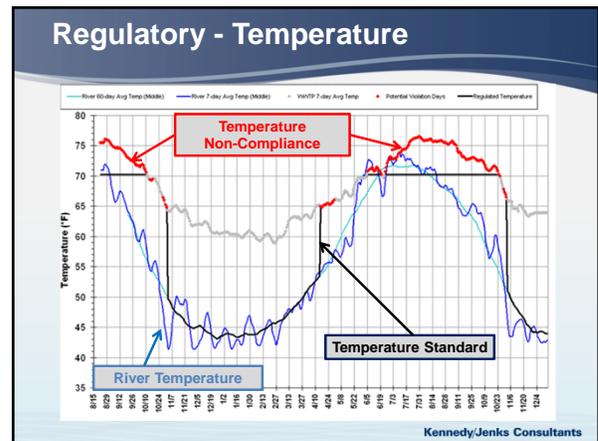


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### Regulatory - Ammonia

- Current outfall location does not provide enough flow or dilution to meet new stringent permit limits
- Ammonia standard for Umatilla River is the lowest in the State of Oregon
- Fish Use drives compliance in the Umatilla River

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### Regulatory - Future Regulations

**The City is planning ahead in anticipation of future water quality regulations to protect salmon fisheries**

- Fish consumption rate increase
- Senate Bill 737
- Turbidity
- Nutrient standards
- Mixing zone challenges



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### Getting to a Solution

<p><b>Challenges</b></p> <ul style="list-style-type: none"> <li>● TMDL</li> <li>● Ammonia</li> <li>● Temperature</li> <li>● Future Regulations</li> <li>● 'Hot bed' of tribal, regulatory, political influences</li> <li>● Costs</li> </ul>	<p><b>Potential Solutions</b></p> <ul style="list-style-type: none"> <li>● Facility upgrades</li> <li>● MBR technology</li> <li>● Minimize discharge</li> <li>● Class A Recycled Water</li> <li>● Forge new partnerships</li> </ul>
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### Getting to a Solution – NPDES Permitting

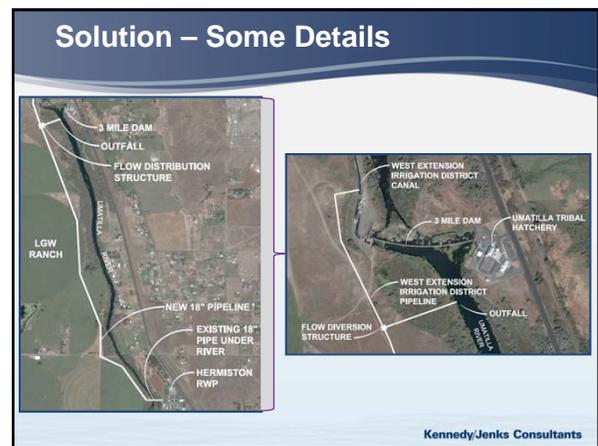
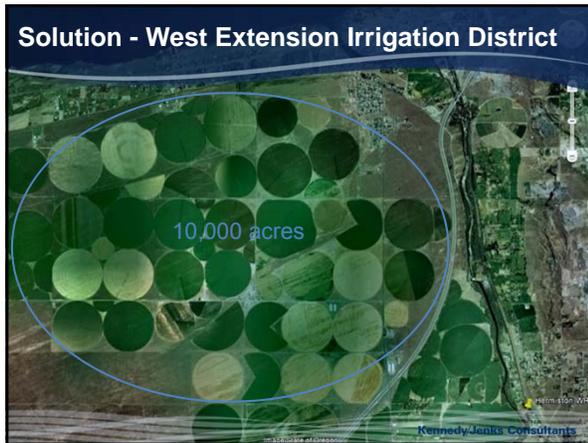
- 2006 – Proposed LGW Ranch and Hyporheic Discharge
- 2007 – Revisions to Recycled Water Regulations
- 2007 – Discussions with DEQ on Recycled Water
- 2007 – Discussions with WEID, USBR and other stakeholders
- 2008 – Proposed WEID Discharge to Oregon DEQ
- 2008 – Title XVI Recycled Water Grant
- 2009 – Established NPDES Approach
- 2011 – Additional NPDES requirements

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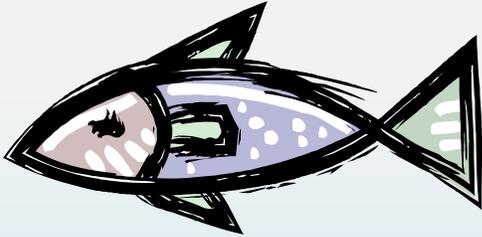
### Getting to a Solution - Stakeholders

- ▼ West Extension Irrigation District
- ▼ CTUIR (tribes)
- ▼ Hermiston
- ▼ Umatilla County
- ▼ Oregon Farm Bureau
- ▼ Oregon Tilth
- ▼ Oregon DEQ
- ▼ Oregon DOJ
- ▼ Oregon DF&W
- ▼ Oregon DSL
- ▼ Oregon SHPO
- ▼ U.S. NOAA
- ▼ U.S. EPA
- ▼ U.S. Corps of Engineers
- ▼ U.S. Bureau of Reclamation
- ▼ Congressman Walden
- ▼ Senator Wyden

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### Solution – Screeching Halt



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### Solution – UAA

#### Use Attainability Analysis

- Regulatory process that authorizes changing designated uses that in State water quality standards
- ~200 since the CWA was promulgated
- 10 related to temperature
- None in the Pacific Northwest
- Can take 2-4 years to complete!

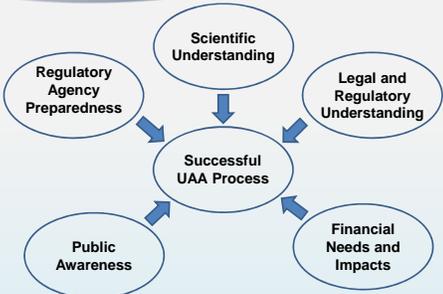
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### Solution – UAA



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### Solution – Help Make UAA Successful



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graph TD;
    A[Regulatory Agency Preparedness] --> C[Successful UAA Process];
    B[Scientific Understanding] --> C;
    D[Legal and Regulatory Understanding] --> C;
    E[Public Awareness] --> C;
    F[Financial Needs and Impacts] --> C;
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Adapted from WERF, 2007

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**Solution – Help Make UAA Successful**

**Fish**

- Fish Screens of intake and Pump Stations
- Fish Passage Barrier at outlet to Columbia River
- No Fish Present in Canal

**Drinking Water**

- Prohibited By Law

**Contact Recreation**

- Prohibited

**Existing NPDES**

- Herbicide applications – Acrolein

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**Solution – Help Make UAA Successful**

**NPDES Approach based on Irrigation Beneficial Use**

- Establish Beneficial Use in the Evaluation Report
- Document Oregon DFW support for no fish
- Establish WEID/USBR policies on water use

**Establish Mixing Zone in the Canal**

- Over 2 Miles to First Withdrawal Point Fish

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**Solution – Success...Almost There**

- **One additional & existing stakeholder**
- **Recycled Water in Summer**
  - Drought proof supplemental supply for WEID
  - Approximately 600 acres (1,800 Acre-Feet)
  - Reduced pumping costs & energy savings
  - Establishes Precedent with USBR, EPA, DEQ
- **High Quality Winter Discharge**
  - Protects cold water habitat
  - Highest quality recycled water
  - Proactive – Anticipates futures toxics reduction regulations

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Questions?

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