

The Rathdrum Prairie Aquifer –
Current Status of IDWR's Ground Water
Monitoring Program



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Idaho Department of Water Resources
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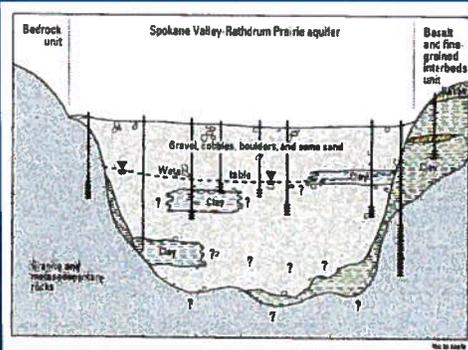
Main Points

- **Baseline data collection, 2004**
- **Ground water flow model, 2007**
- **First recognition of thermal signatures, 2008**
- **Enhanced monitoring, 2008-Present**
- **First attempt at thermal modeling in Farragut, 2010**

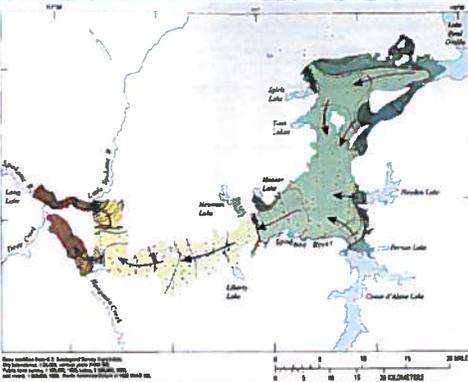
1. Baseline Data Collections, 2004



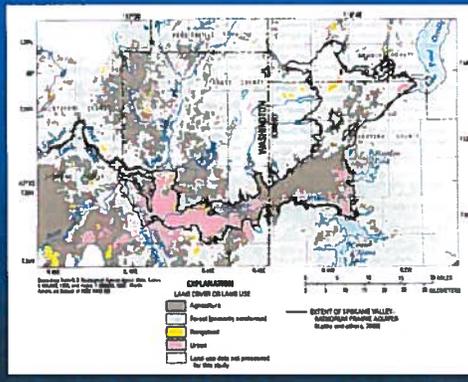
Hydrogeologic Cross Section

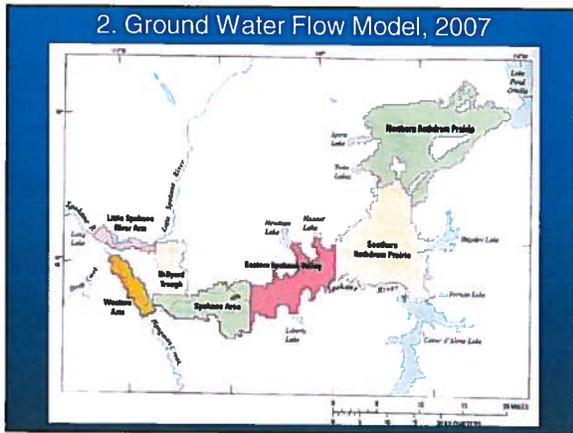


Ground Water Levels and Flow Direction, 2004



Land Cover





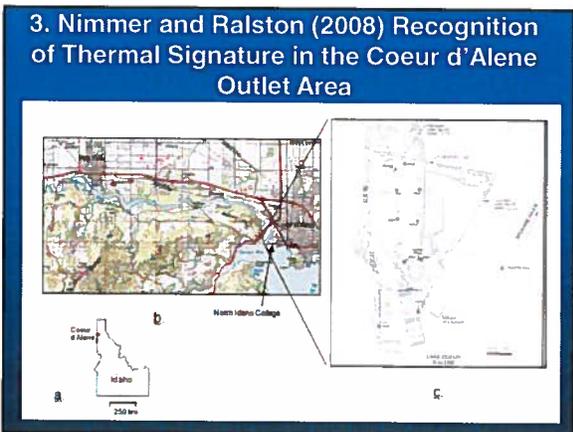
-What we learned from the modeling-

The model was constructed and successfully calibrated.

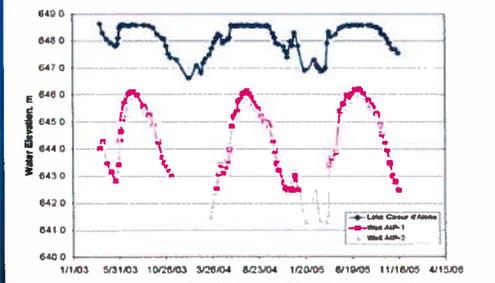
Simulated and modeled streamflow gains & losses and aquifer head were generally in agreement.

Spreadsheet tools were created to simulate various scenarios. These indicate that withdrawals from Idaho will affect the streamflow in the Lower Spokane River in Washington.

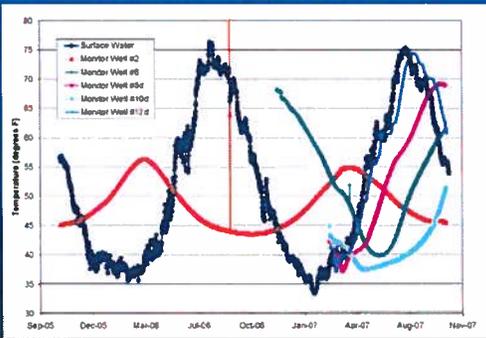
The model has some uncertainties concerning the fluxes from Lake Coeur d'Alene and Pend Oreille.



Water levels for Coeur d'Alene Lake and two NIC wells



Water temperatures for Coeur d'Alene Lake and Blackwell Island wells

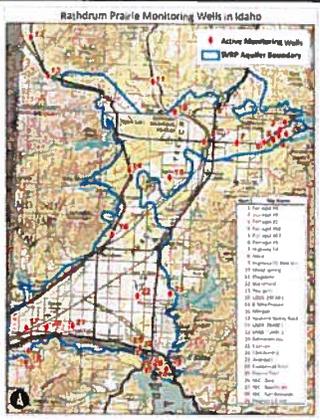


4. Monitoring, 2006 - Present

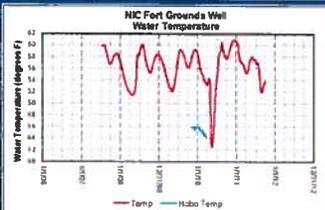
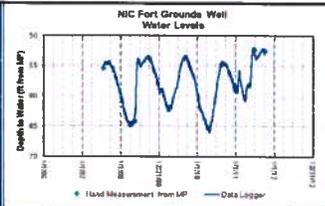


Insitu Troll 300 Water Level and Temperature Transducers
&
Hobo Temperature Transducers

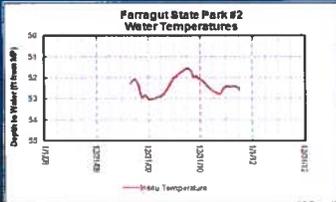
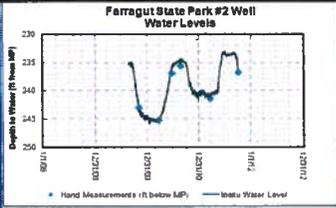




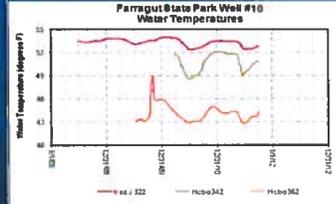
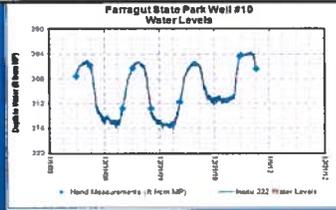
Lake Coeur d'Alene Outlet Area



Farragut State Park



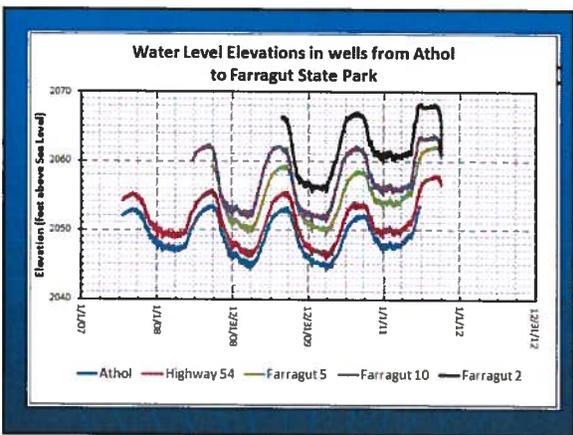
Farragut State Park

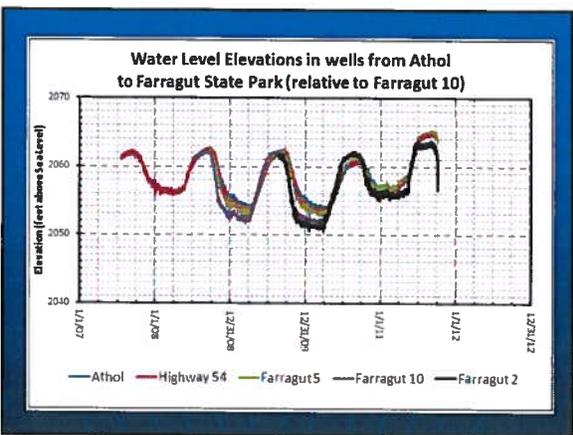


5. First Attempts at Thermal Monitoring in the Farragut State Park Area



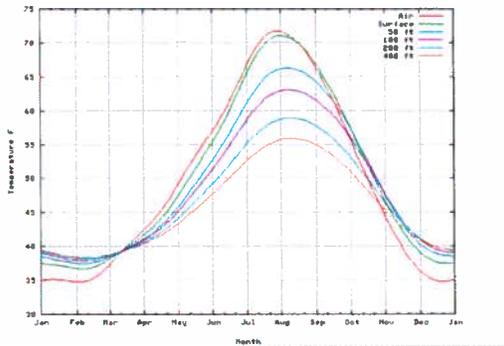




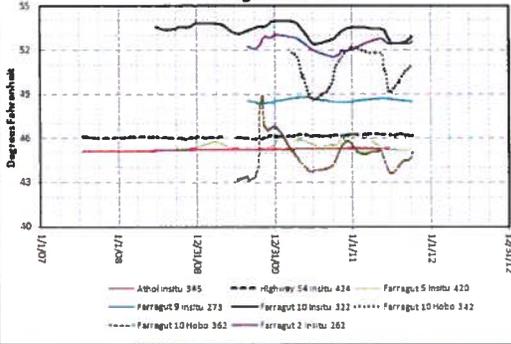


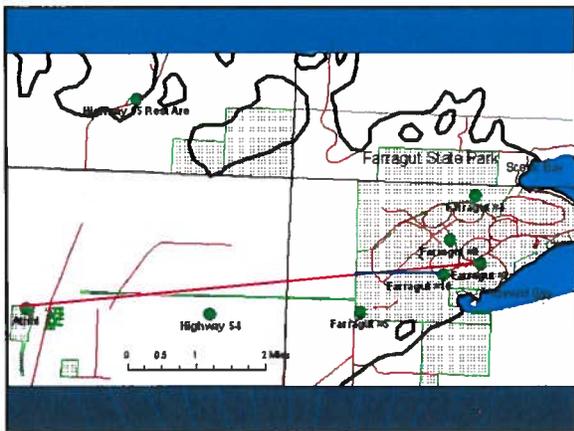
Lake Pend Oreille Water Temperatures

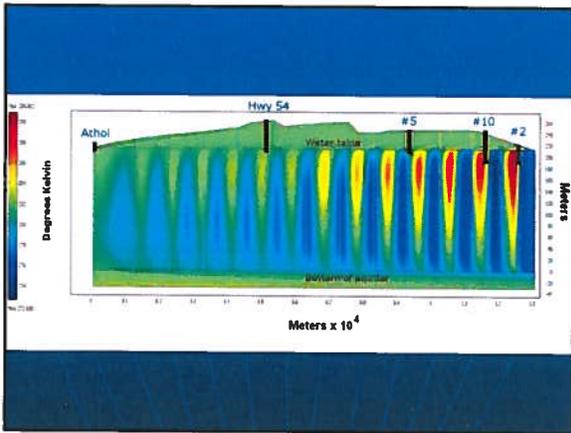
Monthly Average Temperatures



Water Temperatures in wells from Athol to Farragut State Park



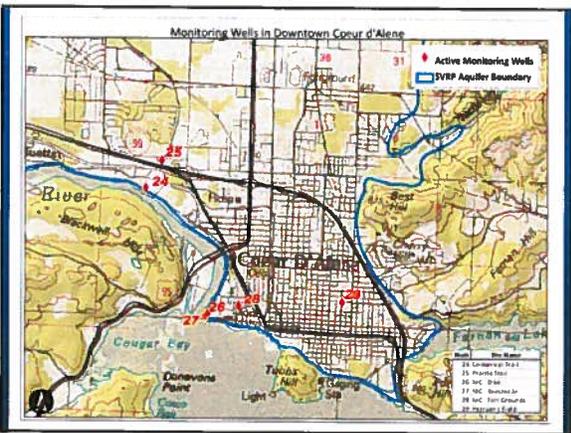


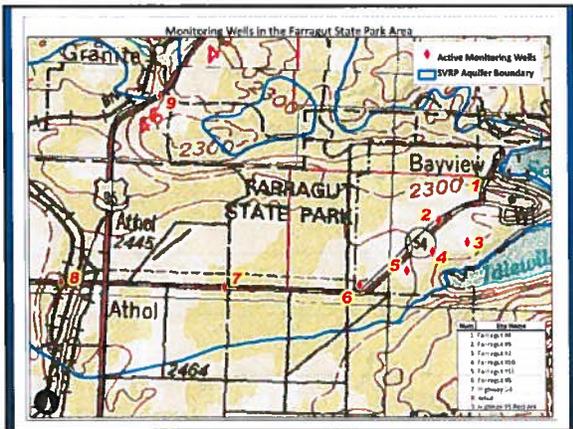


Recent Accomplishments & Into the Future...

Dec 2010 – Prairie Trail and Centennial Trail wells completed.

June 2011 – Farragut 11 completed.





More Technical Work Needed

- Enhanced data collection
- Thermal modeling
- Update ground water model and spreadsheet tools
- Model impacts of future withdrawals to protect Idaho's water interests
- Funding

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