



Update on Groundwater Model Development for the Wood River Valley

Presented by Sean Vincent, P.G.
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Talking Points

- Why a groundwater flow model?
- Roles and responsibilities
 - USGS, IDWR, IWRB, MTAC
- Project timeline
- Milestones
- Model design objectives

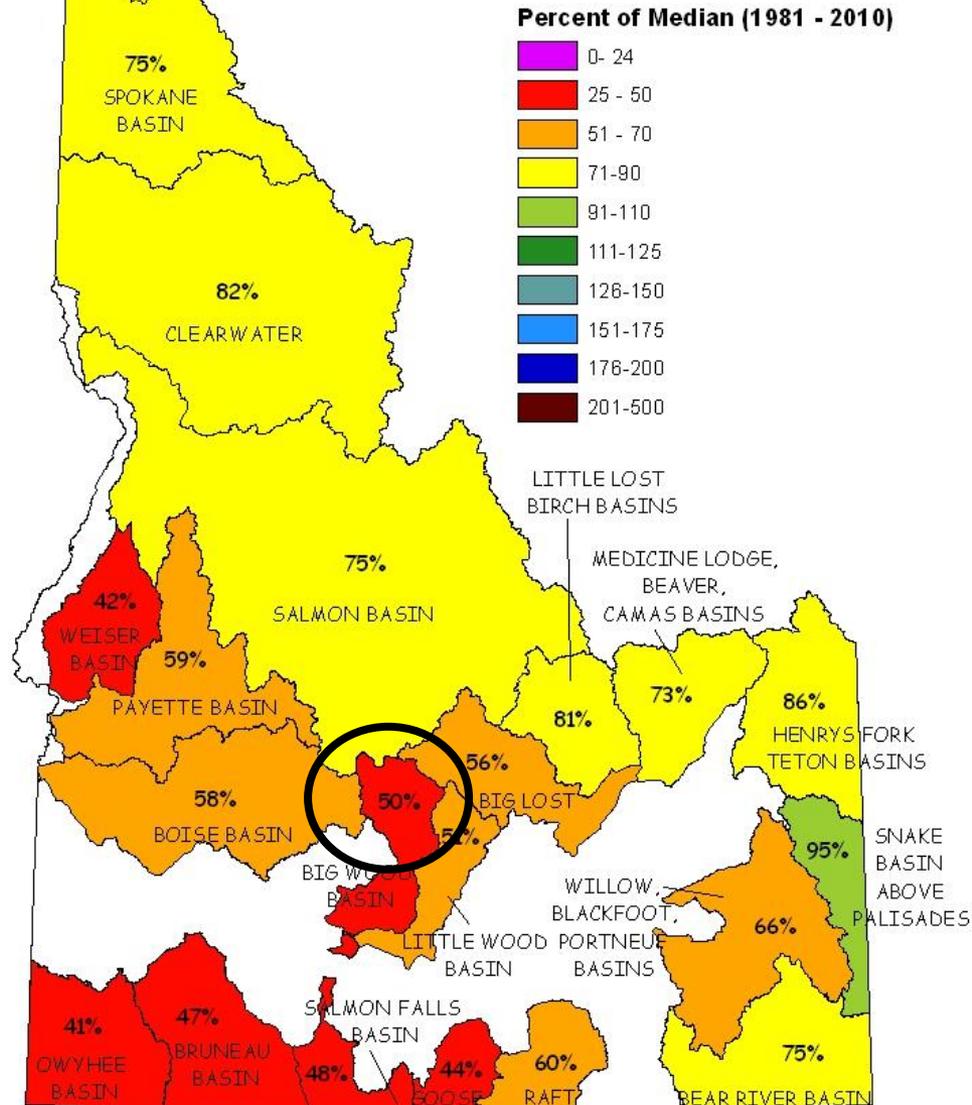
Why a groundwater flow model?

- Big Wood River upstream from Magic Reservoir fully appropriated (1980)
- Groundwater and surface water are hydraulically connected (1991)
- Need to be able to evaluate gw/sw interaction
- GW flow model is tool of choice for planning, water resource management, & conjunctive administration

Mountain Snow Water Equivalent

As of Monday, January 27, 2014.

Idaho Snow Survey SNOTEL Data



Roles and Responsibilities

- USGS primarily responsible for model construction and report preparation
 - Jim Bartolino, Ph.D. = lead investigator
 - Jason Fisher, Ph.D. = lead modeler
- IDWR is leading the calibration effort using PEST and providing modeling support
 - Mike McVay, P.E, P.G., Jennifer Sukow, P.E., P.G. and Allan Wylie, P.G., Ph.D. = modelers
 - Neeley Miller (IWRB staff) = project coordinator
 - Project planning, public outreach, & meeting notes

USGS/IDWR modeling team



Jason Fisher
USGS



Mike McVay
IDWR



Jennifer Sukow
IDWR



Allan Wylie
IDWR



Jim Bartolino
USGS



Neeley Miller
IDWR



Sean Vincent
IDWR

Roles and Responsibilities (cont'd)

- IWRB is anticipated end user of model and is providing project financing via the Aquifer Planning and Management Fund

Roles and Responsibilities (cont'd)

- MTAC
 - Stakeholder group representatives
 - Vehicle for technical stakeholder input
 - Data sharing
 - Input on modeling methodology
 - Peer review of work products
 - Exchange of data/ideas provides for transparency

Project timeline

- Kickoff meeting - March 2013
- First bimonthly MTAC meeting - April 2013
- Initial model construction - April 2014
- Model calibration - April 2015
- Model rollout - end of 2015

Milestones

- Project webpage
 - Presentations
 - Design documents
 - Fact sheet in February 2013
- PEST workshop in October
- Constructed preliminary model → Jim
- MTAC
 - Meetings in Apr, Jun, Aug, Oct, Dec
 - 2-day fieldtrip in October
 - Model Design Objectives



Pat McMahon, SVWSD,
Trail Creek well,
05Oct2013

Model Design Objectives

- Aquifer models built for a variety of reasons
 - Water quality/contaminant transport
 - Water temperature
 - Groundwater flow (e.g., assess well-to-well impacts, delineate wellhead protection areas, evaluate water management alternatives)
- Definition of model objectives necessary to build the right tool for the job
- Need to consider scale when designing model

Tool designed for a different scale than the problem



WRV Model Design Objectives

- Provide a basis for conjunctive admin/management
 - Quantify effects on surface water of groundwater withdrawals, curtailment, & POD transfers
 - Quantify mitigation credits
- Represent/quantify aquifer recharge, groundwater flow, and aquifer discharge
- Improve understanding of river/aquifer system and guide future investigations
- Provide tool for long-term planning (50 yrs)
- Be accessible, well documented, and defensible in litigation



Wood River Valley Groundwater Model Project Webpage

<http://www.idwr.idaho.gov/WaterInformation/Projects/woodriver/>

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