

NAC TWG 4/17/08 Meeting Notes

Intro: Dennis O. and others:

1. House Bill 644 funded, 20 million total for studies. 1.71 million over 4 years period with \$270,000 to be set aside for 10 yr study/monitoring.
2. MODFLOW model U of I masters thesis in M3 area. Copy of thesis on website.
 - GW flow map of Pierce Gulch Sand Unit.
 - Stacy might come and present at the next meeting.
 - Recommendations: monitoring network, water budget, improve discharge estimates, seasonal fluctuations in water usage, long term aquifer study, storage estimates, investigate area near fault, obtain hydrogeologic data from layers above and below the Pierce Gulch Sand.
3. HydroLogic Pump/Aquifer Test:
 - 9 days, 916 gpm, SVR Well #7, 380 ft deep, constructed in 2004, observed 28 ft drawdown in well.
 - Discharge water flowed ~ 1 mile down Big Gulch channel and disappeared.
 - Majority of drawdown in initial 10 minutes as expected.
 - Stock well (~ 800 ft away and ~ 280 ft deep) after 9 days only 1 to 1 ½ ft of drawdown.
 - stratigraphy of alternating sand and clay layers dipping in area lead to discharge water traveling some distance and stopping for a time then traveling a significant distance further in a day.
 - 25-26 data loggers used in conjunction with manual water level measurements.
 - anticipate after subtract outside effects (barometric pressure, etc.) only see a couple of tenths of feet of drawdown at a distance.
 - no obvious aquifer boundaries have been identified yet.
 - as approach mountain front coarser material leads to higher transmissivities.
 - constructed well just into unsaturated zone up and down stream of pumping well, didn't see any indication of recharge from discharged water running down Big Gulch.
4. HydroLogic submitted updated potentiometric map of M3 area:
 - 2006 test shot gun approach, many wells. This time for 2008 study picked wells just in Pierce Gulch Aquifer.
 - 30-35 water level measurements used to develop general contour map.
 - Boise Rv to Payette Rv through foothills is general direction of flow.
 - gradients relatively flat in 2004 analysis. Better elevation data this time showed steeper gradient towards Payette.
 - left out wells if pumping or recovering when contouring.
 - south of Hwy 44 not many wells/data.

- as approach Emmett appears Pierce Gulch aquifer merges w/ Willow Creek (similar behavior), but in M3 area have distinct difference in aquifer properties/behaviors.
- report available on the website.

5. Jim w/ USGS:

- found water level data and stream stats, available on USGS website.

United Water Idaho (UWI):

- Not sure yet what areas UWI will serve in study area. Some developers plan to provide water service.
- Old Hwy 55 and Linder Rd north of Floating Feather to base of foothills UWI and City of Eagle serves. UWI has 2 wells in that area currently.
- UWI may drill 1 more well for 3 cfs west of Linder ½ way between Beacon Light and Floating Feather. Will apply for a new water right permit.
- East of Hwy 55 towards Dry Creek, planned community municipal 5 cfs mitigated by Ag rights came with Jager Land app.
- Avimor served by UWI from Boise side with water from surface water plants.
- May try ASR w/ surface water from Boise side.
- UWI doesn't have a lot planned for development other than 1 new water right permit app.
- Connelly and Kastera Developments: UWI has no plans to serve these developments, but City of Eagle might.
- Hwy 55 may become the boundary for UWI and City of Eagle's service area in the future, but now developers "shop around" to determine the best choice for their development.
- Some developers use local community well type water system during summer and UWI service in the winter.
- Kastera development (21 5 acre lots) with community water system.
- Property in area north of Beacon Light Rd has seen 1000 ft wells with production rates from 1-2 gpm at the boundary of the Kastera property.

Review of Current SOW:

1. Purpose/Extent of Study discussion and suggestions:

- purpose is to characterize the water resources in the area proposed for development.
- look at the City and/or county comprehensive plan may help determine land use proposes/planned for the future.
- Questions to consider when evaluating what the purpose should be; Is the purpose to aid in evaluation of current permit apps? Determine water availability currently? Determine water available from ground water only? Water available from ground water and other sources in the future? Should study include what are limits to ground water and what water supply alternatives there are/would be?

Should the study identify long term water supply for north Ada county needs with ground water as a part?

- look at TVHP purpose and see if it and this study can be incorporated together.
- study is driven by current applications, but the time frame for the study should include info on future supply not just for current apps.
- focus study on current conditions and gathering data in areas with little or no current data.
- focus on areas not yet investigated and determine how/if they interact with areas data is available on.

2. Discussed where monitoring is needed in area:

- July 1 IDWR will have funds for continuous data loggers to install, must determine where installation is possible and best sites (\$25,000 currently budgeted for data loggers).
- Eaglefield development to install 4 mw.
- There are 2 wells in Star, 1 City of Middleton well and 1 well in Notus Dept. is currently taking water level measurement of.
- opportunities with other large developments as they are built for accruing monitoring sites, sites with wells drilled specifically for monitoring.
- need additional data/monitoring near Black Canyon canal
- need to improve location including elevation data by surveying (or using more accurate GPS equipment) well sites.
- need to determine water use in area, include in water budget.
- focus on deeper wells and determine regional ground water levels.
- need to determine volume rates, discharge from domestic wells.
- try to talk to a driller, particularly a mud rotary driller, to see if he wouldn't mind notifying the Dept. when drilling a new well in the area prior to completion so the Dept. has an opportunity to do geophysical logging, etc. on well.

3. Discussed data sources:

- review all publications (TVHP, IDWR Tech reports, other agencies such as BOR and USGS reports, consultant reports, etc.) to gather data
- look at mw installation for subsurface sewage disposal systems (IDEQ)
- review public water supply well logs and monitoring info (IDEQ)

4. Surface Water monitoring:

- surface features in area are limited. 7 to 8 gauge stations budgeted for this project, may not have that many sites able to monitor.
- investigate canal flows and seepage rates further, possibly at Farmer's Union Canal

5. Determine/account for changes in volume and consumptive use relative to changes in diversion/use.

Ex. Does water use increase per irrigated acre for subdivision lawn vs. irrigated crop acre? Subdivision may use more water per acre 'cause of period of use

change, amount of water applied, etc. Does “over-irrigation” seep in or runoff into storm drains to surface water sources?

Closing Remarks (Dennis O.):

1. Next meeting mid/end of June, define study area boundary and monitoring well locations.