



May 7th Meeting Summary For the Treasure Valley Comprehensive Aquifer Management Plan Advisory Committee

On May 20, 2010, the Treasure Valley CAMP Advisory Committee met in Idaho Association of Realtors' Conference Room at their downtown Boise facility on the corner of Front and Capitol. The objectives of this meeting were to

1. Develop a shared understanding of the basin water supply; from rainfall, source through storage, deliver and return flow. Determine what additional data we need on this topic.
2. Consider the Advisory Committee's ("Advisory Committee") data needs for its upcoming work and develop plans to obtain the data/expert input.
3. Begin an ongoing dialogue on the implications on future water supply of the land use conversions that the Treasure Valley may incur in the period 2010 through 2060.
4. Review the draft decision criteria developed in April.
5. Review and refine the Advisory Committee's Work Plan.

List of Participants

(Forthcoming when Helen emails the sign-in sheets)

Introduction, Groundrules, and CAMP Scope

Meeting opening. The Facilitation Team, the Advisory Committee and the public observers all introduced themselves. Joe McMahon reviewed the meeting goals and agenda for the day.

Helen Harrington, IDWR, described the online mechanism that is currently being developed to accept public comment. Once complete, anyone who would like to provide comment or feedback to the Advisory Committee will be able go to the Treasure Valley CAMP page of the IDWR website and provide comments. As comments are received, they will be collected and distributed to Advisory Committee members prior to or at the next scheduled meeting.

Groundrules. The Advisory Committee reviewed the changes to the groundrules from the last meeting and approved the new version of the groundrules. The Advisory Committee agreed that the ground rules can be changed to accommodate situations that could not be foreseen during the drafting.

CAMP Scope. The question of CAMP scope was discussed at several points during the meeting. During the meeting opening, Helen Harrington and Joe McMahon discussed the CAMP goals set forth by legislation and the Idaho Water Resource Board ("IWRB"). These goals can be found on the IDWR website in the CAMP webpage. Helen Harrington explained that the scope of CAMP is not limited to topics or actions that are included in IDWR mandate. The IWRB is responsible for the development of the State Water Plan. All state agencies that take actions affecting the water resource must follow the guidance provided by the State Water Plan. Because the CAMP will become part of the State Water Plan, the

Advisory Committee may chose to provide recommendations that will help the IWRB realize the goals described in legislation, no matter what the actions are, or what agency seems most appropriate to carry out those actions. There will be an implementation phase following the development of the CAMP. During that phase, the appropriate actions and agencies will be identified. The Advisory Committee is responsible only for general recommendations – not the details of how those recommendations are implemented.

Joe McMahon reviewed the list of topics selected by the Advisory Committee during the first meeting. Those topics were identified as issues that the Advisory Committee suggested they would like to address in this CAMP. Joe McMahon explained that list can be changed (and a conflict prevention topic has been added from this meeting), and the list is one of the first steps toward building a scope of work for the Committee. **The Advisory Committee will discuss all of these ideas as a group before making any recommendations to the IWRB.**

One general suggestion regarding scope is to identify the things that are and are not working now, and the things that may not continue to work in the next 50 years.

Water Supply Presentations – Technical Overview

The Advisory Committee had asked in Meeting #1 to have a panel of experts share information on the technical overview of water supply in the basin. The following speakers gave presentations, which were all followed by questions from the Advisory Committee and discussion. If presenters used PowerPoint presentations, those presentations can be found on the IDWR website.

1. Ron Abramovich, forecasting and Snotel data.
2. Dennis Owsley, IDWR Hydrogeologist, TV Aquifer system and water budget.
3. Ken Neeley, IDWR Hydrogeologist, will provide an overview of the geothermal system.
4. Brian Sauer, Bureau of Reclamation, Storage Systems Operations overview.

The following comments arose during Q&A:

Surface water shortages. Shortages forecasted: April 1.5 MAF, May 1.3 MAF, June 1.1 MAF. The shortages are based on actual need, not water right (paper right) claims. The presentation showed data that suggested there might have been calls on water shortages during certain time periods in the past, but natural flow shortages are supplemented with stored water so there might not have been calls.

Recharge. In the Treasure Valley, approximately 90% of aquifer recharge results from irrigation practices. Flood irrigation infiltration is responsible for 30%, and seepage from canals is responsible for 60% of the recharge.

Whether the current amount of storage in the deeper aquifer is sufficient to meet Treasure Valley long-term water needs depends on the amount of recharge that gets to the deeper aquifer.

Data quantifying recharge to the deeper aquifer has been difficult to gather.

The upper Boise Basin has a lot of granite and much of the precipitation in that area either runs off to surface water streams or is lost to evapotranspiration. Recharge in the lower Boise Basin results from precipitation that runs off in the upper Boise Basin.

Recharge from irrigation practices have resulted in increased water levels in some areas, and other areas have reduced water levels due to pumping and the lack of surface water irrigation practices. Some members of the Committee asked (1) Are there opportunities to enhance recharge in those areas where the water levels have dropped? (2) Is there available natural storage?

Generally, shallow systems have a more direct response to recharge resulting from irrigation infiltration and canal seepage. Deeper systems have a less direct response. There are many questions on recharge, but there is general agreement among hydrogeologists on the foregoing.

Does data from municipal wells show trends in recharge of the deep aquifer? Water level data show ground water levels are generally stable in the long term but show seasonal fluctuations from pumping.

Land Use. The Advisory Committee may want to discuss the implications of development in areas where there is a decline in available water or where there is no water available at all.

Cones of depression. Currently, data doesn't show localized drawdown in shallow areas.

Geothermal. Geothermal temperatures are greater than 212°. Water temperatures greater than 85° are considered low geothermal. The Treasure Valley geothermal temperatures are considered "low," but they are regulated like regular geothermal sources.

The system temperatures are stable. Injections wells that are adequate distance from geothermal pumping can inject cooled water back into the aquifer without lowering the temperature at the pump.

The geothermal water in the Treasure Valley is not hot enough for electricity generation, and there is no source of cool water to utilize for temperature differential.

The depth of injection of cooled geothermal water appears to have little effect on recharge. Water can be injected a little above or below the depth where the water is extracted. The amount of injection is almost 100% of what was originally pumped.

There is interest to expand geothermal use, but the moratorium has ceased new geothermal production for the moment. AT the same time, the City has expanded to more customers. Every 5 years, the moratorium is up for review. So far, the moratorium has been reinstated each time.

Water Supply Presentations – Management and Distribution

The Advisory Committee asked for a panel of experts share information on the management and distribution of water supply in the basin. The following speakers gave presentations, which were all followed by questions from the Advisory Committee and discussion. If presenters used PowerPoint presentations, those can be found on the IDWR website. Discussion is summarized following the list of presenters.

1. Rex Barrie, Watermaster WD#63, how water is administered, the Stewart and Brian decrees
2. Jeff Scott, Pioneer Irrigation, use of delivered water
3. Alan Funkhauser, Drainage Dist. #2, operation of drainage systems
4. Paul Devau, Boise Project, Project operations

Boise River Water District. At what point do return flows become jurisdiction of the Boise River Water Master? Before the water goes into a drain, it is the jurisdiction of the Boise River Water Master, but users still need a water right to divert from a drain.

There is a limited amount of water to work with in the Treasure Valley. That will likely limit a more robust future water market.

Pioneer Irrigation District. There are many areas in the Treasure Valley where water is recycled as it moves through the watershed. The cycle begins when water is diverted from the Boise River, and it continues as it moves from canals, to crops, to drains, to canals, to crops, and so on. A few of the areas where this cycle exists are: Elijah, Indian Creek, Wilson Drain.

The irrigation districts have multiple water rights for diversions from the river and other rights with different dates for other diversion points; they have more than one right for the water they deliver. Water that has been recycled, or has already been distributed over crops and collected in drains has accompanying water rights.

Pioneer Irrigation distributes water to a large part of the Valley including, but not limited to: the City of Nampa; the southern part, as well as other parts, of Caldwell; and Green leaf to the Boise River.

The business operations at Pioneer Irrigation District send a bill to municipalities. The municipalities deliver water and bill users for that water. Agricultural users are on a rotation basis.

Pressurized irrigation systems present some management challenges. It is difficult to maintain canals at appropriate levels. The irrigation pumps are activated on demand, and the District doesn't control them. There is ample coordination between the ditch rider and the District to drain excess water until the gate can be closed.

Drainage District #2. Sprinkler irrigation uses a small portion of the water that is used in flood irrigation. Flood irrigation supports seed crops in a way that sprinkler irrigation

cannot. The shift from flood irrigation to sprinklers has created a shift from seed crops to alfalfa.

Storm water does go into drainage canals. Some drains don't accept storm water runoff because sometimes there is no place for that water to go. Upstream portions of drains are wide, and as one follows the drain downstream, the distance across the drain gets narrower, sometimes down to a few feet.

Water Supply Pending Questions and Data Needs

Aquifer Strata. There may not be agreement on the depths of the specific levels where various aquifers occur (shallow vs. deep). The Treasure Valley Hydrological Project may have better information that the Committee can agree on.

Deep aquifer. There are many questions about the nature and function of the deep aquifer. The Committee is specifically interested in the storage capacity and rates of recharge of the deep aquifer. When the Committee asks about recharge, they are referring to natural recharge and not artificial or engineered recharge options.

There may be existing sources of data to address questions regarding the deep aquifer. Pam Alman does some work associated with the measurement of wells, and municipal wells that utilize the deep aquifer may have data to share that reflects aquifer fluctuations. Those fluctuations may indicate what kind of recharge is or is not occurring.

Demand. The Advisory Committee recognizes that there are two seasons of water use, and each season has a distinctly different demand. There are also geographic distinctions in water use. For example, the areas above and below Star have different needs. Data is needed to provide recommendations on how to address those differences in demand.

Natural Sources and Storage. Can high groundwater areas be used to recharge other areas? Can other areas that have had historically higher levels of water be used as storage to meet aquifer needs?

Geothermal Aquifers. Is there a larger geothermal aquifer beyond the foothills? What percent of wells tap into "geothermal" groundwater?

History and Trends. Are there trends in the groundwater aquifers since the 1950's? Christian Petrich or Roy Mink may be helpful in determining whether this information is available and how one might study this.

Implications for Changes in Land Use. The Advisory Committee has several questions regarding the implications for changes in land use, specifically the change from agriculture to urban.

1. One of the overarching questions is what is being consumed by subdivisions? Specifically, what is the difference between subdivisions located within and outside of irrigation district boundaries? (Potable water and non-potable water)

- a. Subdivisions outside irrigation districts are pumping groundwater for all needs/uses.
 - b. Subdivisions inside irrigation districts are utilizing water from canals **and** using other sources (city water or groundwater).
 - c. Subdivisions above the canals are using United Water for drinking and irrigation.
 - d. Differences between metered and non-metered.
2. Also, how do you quantify use of water from canals in subdivisions, and how does that compare to municipal data describing subdivision water use in winter versus summer?
 3. What are the economic consequences of transferring water use from agriculture to urban uses?
 4. How can the Committee address the possibility of growth and development on previously un-irrigated land?
 5. What are the implications to land and water use as the price of water increases?

There is an Idaho Water Users Association study that might provide helpful information on this topic. Warren Stewart and Scott Rhead will also provide data that may be a good start for addressing some of the subdivision questions.

The Advisory Committee would like the Future Demand Study to explain what geographic areas will have shortages and surpluses, in terms of land uses and how they may change in the future.

Implications for Changes in Land Use

Much of the Advisory Committee's discussion on the implications for changes in land use have been captured in the preceding section on water supply data needs.

As the Advisory Committee moves forward on this topic, they would like to consider addressing development on lands that aren't currently being irrigated. These lands do not have water delivery or management infrastructure in place, and this Committee may want to provide recommendations to address future planning for those areas.

Technical Input/Expert Panels

The Lower Boise Interim Feasibility Study and the Treasure Valley Hydrological Project are two reports that the Committee would like to review. The Advisory Committee would like to have a presentation on the Treasure Valley Hydrological Project.

The Committee would also like to consider adding conflict prevention and the role of conservation to meet future demand to the list of topics that they discuss.

There may be success stories that the Advisory Committee would like to review. Examples are the Southeast Boise Groundwater Management Area and successful geothermal system examples outside the Treasure Valley. Lon Stewart has a list of resources he would like to share with the Committee.

The Advisory Committee would like to better understand the “use it or lose it” scenarios of water use. There may be other entities interested in obtaining unused water in the Treasure Valley, and the Committee would like to understand what this could mean for CAMP and this 50-year planning process.

There is a paper, with some focus on the Rathdrum Prairie Aquifer in the northern part of the state, that addresses challenges with managing multijurisdictional resources.

This paper, *Interstate Water Allocation: The Law and Its Implications for the Pacific Northwest*, by Christopher Meyer can be found on the IDWR website at http://www.idwr.idaho.gov/WaterBoard/WaterPlanning/CAMP/RP_CAMP/PDF/2010/05-21-2010_InterstateWaterAllocation.pdf

Decisional Criteria

The Facilitation Team presented the set of Decision Criteria developed during the last Advisory Committee meeting. The list of Decision Criteria is attached to this summary as Attachment A.

Workplan and Next meetings

Please see the work plan for more detail on upcoming meeting topics and objectives. Along with topics considered at the first meeting, the Advisory Committee would like to consider inviting a speaker or panel on the potential for conflict over water issues and the use of conservation in the Treasure Valley.

The scheduled meeting dates are listed below.

June 10

July 30

No August meeting

September 29

October 20

(Tentatively scheduled) November 10



Attachment A

Decisional Criteria to Evaluate Potential Recommendations

Draft of 1 June 2010 Ver 3

This list builds upon comments from Advisory Committee Meeting No. 1 and guidance from the CAMP brochure as it paraphrases the Committee's assignment.

1. Does the proposed recommendation advance the four CAMP goals?
 - 1.1. Provide reliable sources of water projecting 50 years into the future.
 - 1.2. Avoid conflict (e.g., the experience in the Eastern Snake River Plain Aquifer).
 - 1.3. Prioritize future water investments.
 - 1.4. Bridge the gaps between future water needs and supply.

Source: IDWR CAMP Brochure

Does the (Is the) recommendation:

2. Have appropriate cost and cost-benefit ratio?
3. Avoid a taking, diminishment, or modification of existing property rights (land and water rights, contractual rights)?
4. Comply with laws or within reasonable changes in laws?
5. Meet future needs?
6. Reliable/sustainable?
7. Do we adequately understand the impacts of any proposed change: impacts to environment, hydrological system, economics, and other parties' expectations?
8. Contributes to increased knowledge of the aquifer/basin?
9. Consider consequences to other parts of the hydrological system?
10. Recognize and deal with uncertainty?
11. Support informed land use decisions?
12. Fair and equitable in its application?
13. Incent the best management practices of industry, agriculture, and land use planning?
14. Does the recommendation have irreversible consequences?

Viewing the Recommendations as a whole

15. Viewing the Recommendations as a whole, do the Advisory Committee's recommendations:
 - 15.1. Appropriately address the management of ground and surface water resources into the future?

15.2. Guide IDWR's technical and management actions?; and

15.3. Permit State agencies to exercise their duties in a manner consistent with the CAMP?

Source: IDWR CAMP Brochure