



June 10th Meeting Summary For the Treasure Valley Comprehensive Aquifer Management Plan Advisory Committee

On June 10, 2010, the Treasure Valley CAMP Advisory Committee met in the training room in the basement of the Syringa Bank building. Due to space limitations, the meeting was moved from the original location at the state Department of Environmental Quality offices. The objectives of this meeting were to

1. Continue to develop a shared understanding of hydrology of the Treasure Valley Basin. Determine what additional data we need on this topic.
2. Continue the 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. *(This goal was expanded to allow for a more general conversation regarding options for providing a reliable water supply.)*
3. Review our list of topics for dialogue or expert presentation and set priorities.
4. Review and refine the Advisory Committee's list of data needs and work plan.

List of Participants

| | | |
|-------------------|-----------------|----------------|
| Ron Abramovich | Gary Duspiva | Scott Rhead |
| Brent Adamson | Mike Echieta | Jayson Ronk |
| Doug Amick | Stephen Goodson | Bob Schmillen |
| Michelle Atkinson | Matt Howard | Jeff Scott |
| Rex Barrie | Chris Jones | Gary Shoemaker |
| Gayle Batt | Bill Larson | Lon Stewart |
| Ellen Berggren | Lynn McKee | Warren Stewart |
| Jon Bowling | Greg Nelson | John Thornton |
| Barry Burnell | Brian Patton | Paul Woods |
| Russ Dane | Kathy Peter | Janice Yerton |
| Paul Deveau | Clinton Pline | |
| Dave Dixon | John Prigge | |

Introduction and review of where we are to date

Meeting opening. The Facilitation Team, the Advisory Committee and the public observers all introduced themselves. The Idaho Water Resource Board added eight new members to the Committee: Brent Adamson, Doug Amick, Jamie Anderson, Ellen Berggren, Mike Echieta, Allen Funkhouser, Bob Schmillen, and Craig Telford. Matt McKinney reviewed the meeting goals and agenda for the day.

Matt McKinney reviewed the work the Advisory Committee has completed to date. The Advisory Committee has:

- Clarified the purpose and scope of CAMP.

- Adopted groundrules.
- Agreed on preliminary list of issues to address in CAMP.
- Agreed on criteria to evaluate options to address each issue.
- Developed a common understanding of water supply in the basin.
- Reviewed preliminary findings of future water demand study.

The Committee would like more notice prior to conference calls, and they would like more time to review documents prior to the meetings.

Treasure Valley Hydrological Project

The Advisory Committee asked Christian Petrich to present information from the Treasure Valley Hydrological Project. Please see the handout Christian provided with his presentation for more details. Those handouts will be posted on the Treasure Valley CAMP Documents page of the IDWR website. Christian presented information about the bulleted points below.

Water Supply

- The Treasure Valley has an abundant water supply (although not unlimited).
- Treasure Valley does not currently have a water shortage.
- Approximately 2 million acre feet flow into the valley.
- Approximately 1 million acre feet flow out of the valley.
- The Valley has greater flows in some years, less in others.

Aquifer Characteristics

- Treasure Valley Aquifer System extends throughout valley
- Aquifer extends several thousand feet deep, although upper 400 to 800 feet are generally most productive
- Shallow and deeper aquifers have varying degrees of hydraulic connection
- Recharge occurs primarily as infiltration from flood irrigation and canal seepage

The “Carrying capacity” of the aquifer is difficult to define

- The best way to assess pumping increases is to pump and monitor
- Can continue to increase pumping (in some areas) until aquifers no longer discharge to drains
- Ground and surface water is likely ample for very large increase in population
- In gross numbers, existing water supplies could provide for more people than we currently envision

Ground water levels are stable in most areas

- Historic declines have been observed in some local areas. Water levels have stabilized which is a tribute to successful management
- Modest declines have been observed in other areas, but some drawdown is necessary for water to flow to wells
- Ground water levels have increased in some areas

- Some areas will not support large increases in ground water pumping

Future Groundwater Development

- There is abundant ground water in western portion of valley
- Some areas have more limited water availability
 - Eastern areas
 - Southern areas
 - Portions of foothills
- Increased pumping is possible in many areas and will likely cause groundwater levels to reach a new equilibrium
 - New pumping may result in (1) increased recharge from river or shallow aquifers; (2) decreased discharge to surface channels; or (3) both

Other sources of water supply could be utilized from the following management actions or existing water sources:

- Targeted efficiency improvements
- Improved water management
- Changes in existing water use
- Snake River or Payette River
- Aquifer storage and recovery

Christian answered Advisory Committee questions following the presentation. Answers to questions or general points made during that discussion are provided below.

Increase in pumping. Christian pointed out that a reduction in flows to drains would occur with an increase in pumping. He described a varying threshold of impact on other users that would be determined by specific local conditions.

Deep aquifer. When asked about the effect of sloping zones, Christian described how dissolved solids increase with depth. The water in the deep aquifer has fewer dissolved solids, which suggests that the deeper water comes in from the basin margins. Further west, there is a higher hydraulic gradient, and great pumping could induce greater recharge in this area.

When asked directly if the deep aquifer can be quantified, Christian said “yes and no.” He pointed out that the size of the “bathtub” is not useful. Some of the deep aquifer is warm and not as useful for some of the potential needs. Christian added that while it is difficult to measure the amount available in the deep aquifer, it is possible to measure the stress of additional pumping.

Agricultural irrigation recharge. Christian mentioned that the shallow zones see the most response from agricultural irrigation recharge. He also said that 95% of recharge comes from agricultural irrigation activity, including seepage from canals.

Is there enough water? Christian said that the aquifer is sufficient for the current needs, and there is likely enough to move forward. Uses are changing, and the Valley needs

infrastructure or a market that will reflect those changes. He also suggested that we might use more surface water in the future in new ways, for a variety of uses including urban, industrial, and commercial. There may be opportunities to increase “the size of the pipe,” like the Snake and the Payette, or ways to increase groundwater available through ASRs or other options.

Even though there is enough water to move forward as a region, Christian also described areas in the foothills where use could exceed recharge on a local basis. He said it is also possible that there will be a visible decline at a regional level, but there’s a fair amount of water to work with.

Lower Boise Interim Feasibility Study Update

Cynthia Bridge Clark, IDWR, described how the Lower Boise Interim Feasibility Study is part of a larger effort across the state to study additional water storage projects. Cynthia shared two reasons why the State wants to look at additional storage: (1) Idaho stores only 25% of its annual average runoff, while other western states store several times their average annual runoff; and (2) there is potential for Idaho to capture additional water in storage and use it to meet traditional and emerging water needs.

Cynthia said that the purpose of the study is to explore the potential to store more surface water should those decisions be made. She described the states goal to identify sites that can be built in a safe, environmentally sound, and economical manner, as well as provide significant local, regional, and state, long-term benefits.

Cynthia said that the Lower Boise Interim Feasibility Study will evaluate 12 previously identified potential sites, which include raising existing dams, off-stream storage sites, and on-stream sites. Cynthia added that the 12 sites will eventually be narrowed to a short list of the 3 more promising sites for detailed engineering, environmental, and cost analysis. Cynthia also mentioned that the Lower Boise Interim Feasibility Study will not look at underground storage, but underground storage for the Treasure Valley CAMP is being studied through a contract with the University of Idaho.

For more information on legislation that provides for the study, specific sites included in the study, upcoming public meetings, or other details, please see Cynthia’s presentation located on the Documents page in the Treasure Valley CAMP section of the IDWR website.

United Water Data

During the discussion of the implications of transitioning from agricultural uses to urban uses at the prior meeting, the Committee asked for data to quantify water use on lands that have been taken out of production and developed. Scott Rhead followed up on that request and presented data from United Water showing use trends seasonally and over long periods of time. For more detail, please see Scott’s presentation posted on the Documents page in the Treasure Valley CAMP section of the IDWR website.

During the discussion that followed, Clinton Pline offered to bring information for water use on crops. Warrant Stewart also offered to send information via email after the meeting.

Reliable Future Water Supply

The Advisory Committee is tasked by the IWRB with providing recommendations that address four goals:

1. Provide reliable sources of water, projecting 50 years in to the future
2. Develop strategies to avoid conflicts over water resources
3. Prioritize future state investments in water
4. Bridge the gaps between future water needs and supply

The Committee decided to discuss the first of the CAMP goals. Each Advisory Committee member provided potential options to achieve the goal for providing a reliable future water supply. After providing a list of 20+ options, the Committee merged some options and provided more detail on most of the options.

The Facilitation Team will present the Committee with an online survey to further refine these options. The list of options and results from the study will be on the agenda for the next meeting on July 30th. Please see Attachment A for the list of options.

Workplan and Next meetings

The Committee decided that the next agenda needs to include (1) a discussion on the future water demand study; (2) a review and further refinement of the options to provide for reliable water supply; and (3) a discussion to identify likely conflicts and options to address those conflicts.

The Committee also identified interstate management and conjunctive management as issues that they may need more information on. The agenda for the next meeting will include time to revisit how these issues fit within the CAMP scope and time for the Committee to decide what experts may be helpful for the Committee as they develop their recommendations.

The scheduled meeting dates are listed below.

| | | |
|--------------|------------|--|
| June 10 | July 30 | No August meeting |
| September 29 | October 20 | November 10 (Tentatively scheduled) |



Attachment A

Preliminary List of Options to Provide a Reliable Water Supply

Draft of 10 June 2010 Ver 1

The Committee elaborated on some of these options. That information will be included, and further refined, during the upcoming online survey.

1. Capture water at the end of the basin through pumpback
2. Reduce future demand through land use planning
3. Improve or continue to study future demands
4. Explore feasibility of interbasin transfers/exchanges
5. Improve groundwater modeling
6. Utilize cloud seeding
7. Move water to where it is needed
8. Improve cooperative measurement and management (consistent data-collection) to increase efficiencies
9. Improve efficiency of water delivery system
10. Reuse water treatment plant water
11. Improve streamflow forecasting to identify excess water for various uses
12. Increase reuse
13. Utilize underground storage
14. Continue to study and monitor groundwater system to increase knowledge and adjust actions as needed
15. Explore strategies for storage that utilize surface and ground opportunities
16. Protect and maintain existing irrigated agriculture infrastructure
17. Focus on conjunctive management
18. Explore the cost to meter non-agricultural, non-metered uses of water
19. Review legal impediments to more efficient water use
20. Recognize and adhere to contractual obligations
21. Encourage effective use of geothermal resources as technologies evolve, including reinjection
22. Optimize operations of existing reservoirs
23. Match supply with demand at specific locations
24. Use and improve existing irrigation delivery system for recharge and flood control
25. Water conservation within all use types
26. Increased surface water storage
27. Protect against claims from entities outside Idaho
28. Improve the market system