

Cascade Water Connections Working Group Meeting #5

April 15, 2010, 8 am – 11:30am
Bellevue City Hall
450 110th Ave. NE, Room 1E 108, Bellevue

Welcome

The Cascade Water Connections Working Group convened for its fifth meeting on April 15, 2010. Lewis Michaelson, Katz and Associates welcomed everyone.

Chuck Clarke, CEO, Cascade Water Alliance provided an update to the group regarding Cascade's current planning. Cascade Water Alliance now officially owns Lake Tapps. It does not have the water right yet for Lake Tapps, but it is working on operational refinements to managing the lake. It has been very challenging this year filling Lake Tapps. The White River experienced historic lows in March which delayed reaching recreational lake levels by about 10 days from the April 15 target date.

There are ongoing conversations with Tacoma and Seattle on additional surplus water that might be available and if so, at what price. Water demand continues to soften across the region. The softening of demand is due both to a weakened economy and by changes in customer behavior. Even with the new demand forecast models, Chuck Clarke believes the region has overestimated the demand, but others might believe we have underestimated demand.

Chuck Clarke stated the Water Connections Working Group has been helpful in validating the weighting and ranking criteria. All of the input provided by the Water Connections Working Group will be presented to the Resource Management Committee and the Board.

Questions and comments directed at Chuck Clarke included:

Q: What is the decrease in water demand?

A: Approximately 1–2% gross decrease in water demand annually. Over the past 25 years Seattle water use is down 27%, with a population increase of 25%. That results into a 40–50% decrease in per capita demand.

Q: Are the decreases in water demand sustainable because of plumbing codes and other changes?

A: That becomes an interesting question as you try to forecast. There are definitely passive and active forms of conservation that reduce water demand. In this past legislature there was a bill that included language that would require all new toilets sold to have a maximum

of 1.28 gallons per flush. This is an example of passive conservation that does have a real effect on demand. In the current stimulus plans there are lots of rebates for switching to more efficient appliances. The new appliances are much more efficient so this too has a real effect on water. What is challenging is how you forecast out 30 years. Seattle's model assumes no new conservation past 2030 and Cascade's model assumes only a small amount of new conservation past 2030.

When planning far into the future it is important to look at portfolios of projects. Portfolios help you spread risk. Then it becomes a question of how much you want to spend on "insurance" to manage that risk. A portfolio of different resources can buy you time and flexibility when making decisions ten, twenty, thirty, or forty years out. As an example, Seattle last year used about 130 million gallons of water a day. If you went back to forecasts made in the 1960's, estimates for present day use were about 300-450 million gallons of water per day. The same thing could happen if 20 years from now, demand continues to decrease. If that is the case, then Cascade might be able to maximize existing resources and Lake Tapps just becomes an insurance asset for the region against climate change.

Review of December Meeting Summary

Lewis asked the group if there were any questions or comments regarding the summary of the fourth meeting, sent after the meeting.

There were no questions or comments, and the summary was approved as final.

Presentation

Michael Gagliardo, Cascade Water Alliance, began the presentation by providing an update of where Cascade is in assembling and assessing the portfolios of projects.

In February, Cascade signed an agreement with Auburn, Buckley, Bonney Lake and Sumner in relationship to the Lake Tapps project. Cascade agreed to assist those four cities in meeting their future water needs in two ways. 1) Cascade will sell any of those cities a certain amount of water that Cascade currently has contracted from Tacoma. 2) Cascade also will request that up to 7 CFS of White River flow be reserved to potentially mitigate any effect the future development of groundwater rights, by those four cities, has on the White River (this amount is available since Cascade reduced its water right request from 100 cfs to 75 cfs).

The five supply portfolios reviewed in December have been consolidated into three portfolios. Cascade is currently in negotiations with Seattle and Tacoma, and the results of these negotiations will affect what the portfolios ultimately look like.

Andrew Graham, Planning Lead, HDR, continued the presentation with a review of the supply portfolios. For a detailed look at each portfolio including comparisons, risk assessments and financial assessments please refer to the accompanying presentation. Highlights of his presentation include the following.

Cascade has constructed three supply portfolios. None of the dates or quantities, referenced in the presentation graphs, is fixed in stone. The “Small Sources” referenced in the slide include: expanded conservation, reclaimed water, aquifer storage and recovery and development of deep aquifers. Aquifer storage and recovery is storing excess water underground in the winter and then tapping that water, when needed, in the summer. The “Small Sources” will be used to fill in gaps as needed. “Small Sources” may be developed and come online quicker than larger sources such as Lake Tapps so they provide a measure of flexibility. The three supply portfolios vary considerably in terms of when Lake Tapps starts supplying water. The three portfolios are:

- Portfolio 2 – Lake Tapps begins supplying water in 2030
- Portfolio 4 – Lake Tapps begins supplying water in 2045
- Portfolio 5 – Lake Tapps begins supplying water in 2060

All the portfolios are basically the same until the year 2030. The portfolios are numbered 2, 4, and 5 because portfolios 1 and 3 were dropped from further analysis.

Cascade has always envisioned that Lake Tapps would be developed in multiple phases in order to spread costs. In the portfolios Cascade has assumed two phases of development. It could also be done in three phases. However in all portfolios the transmission pipeline for Lake Tapps is built in the first phase.

Portfolios 4 and 5 have excess water supply fifty years into the future. In fifty years, if demand continues to increase, Portfolio 2 does not have excess supply.

The use of reclaimed water from King County is assumed to be a closed system that is used for watering and irrigation. It does not mix with the potable water system.

The discussion about which sources might work and which might not is exactly what the Cascade staff and Board will have to weigh. They must decide how comfortable they are relying on each supply and how much insurance they want and ultimately, what does that cost. What mitigates this risk is that Cascade is planning for 30–50 years into the future so it allows time to be flexible and make changes as needed.

The risk analysis tries to boil the risks down to show the Board the difference between portfolios. To a large extent, however, there is not much difference between the risks of the three portfolios.

In looking at the criteria of control of a supply source, a little more weight was given to supply sources that were owned by Cascade over sources that were contracted from other regional suppliers.

Questions and comments regarding the presentation included:

Q: Why is there an increase shown to the members' supply over time?

A: This is primarily due to an increase usage by Covington Water District of its share of supply from Tacoma.

Comment: There can be very different financial situations when you wait to build infrastructure such as key transmission pipelines.

Response: This is correct. The financial analysis takes into account what information is already known and then makes assumptions regarding other costs and then assigns a contingency range. The more information known– the less of a contingency range that is needed for forecasting.

Q: When are the negotiations going to be completed with both Seattle and Tacoma?

A: The negotiations are ongoing now and we anticipate they can be concluded in mid – late 2010.

Comment: The development and use of aquifer storage and recovery might work in some areas but will not in others.

Response: This is true. That is why Cascade is considering four “Small Sources” so there can be a combination of sources. It might be that some sources supply more than others. Obtaining water from deep aquifers is probably more uncertain than the other small sources.

Q: How much water is supplied by “Small Sources?”

A: In Portfolio 2 “Small Sources” provides a maximum day quantity of 10 million gallons per day (MGD). In Portfolio 4 “Small Sources” provides a maximum of 14 MGD. In Portfolio 5 “Small Sources” provides a maximum of 20 MGD.

Comment: Other jurisdictions are also looking at tapping some of those “Small Sources” in the future.

Q: If Lake Tapps is used as an emergency supply source for the region, would you need all the transmission built out early?

A: No, if Lake Tapps is used as insurance for the region against climate change, then you could monitor and build out transmission at some time in the future. If you wanted Lake Tapps as emergency supply in case of large scale supply disruption to other sources, then the transmission would need to be built well before the emergency occurs.

Q: What is already in existence in case of sabotage to the current system?

A: Seattle has aquifers and other supplies that can be tapped. Tacoma has lots of excess groundwater and one customer (Simpson) that uses 25% of Tacoma’s water, could be shut down during a really bad emergency.

Q: Does the quantity of water shown for supply from Tacoma account for water that Cascade has committed to the “four Cities”?

A: Yes, we have subtracted the four Cities’ water out.

Comment: The degree of control over watershed conditions is different for Lake Tapps compared with the Seattle and Tacoma source watersheds. That should be considered.

Response: There is an item in the risk assessment addressing potential degradation of water quality due to watershed conditions, and Lake Tapps was rated higher risk on that item.

Comment: For Portfolio 2, you almost need to add a hypothetical supply source, at the end of the timeline, to meet the demand.

Response: Cascade’s financial consultant has made a similar suggestion. We do have sources like the OASIS ASR project, which will be added to Portfolio 2 in order to make the three portfolios consistent in this regard.

Q: Is it proper to score Lake Tapps higher for environmental? Aren't the environmental effects of Lake Tapps already included in the issuance of the water right and will therefore happen no matter what?

A: Lake Tapps received a higher score on the environmental criterion because of the various commitments to flow maintenance and habitat restoration that Cascade has made. However it is true that most of these benefits will occur under current agreements and do not depend on whether the Lake Tapps supply is developed for municipal use. Cascade will take another look at how the environmental effects of Lake Tapps were scored, and will change its score if appropriate.

Adjourn and Next Steps

Cascade will meet with the Working Group at least once, maybe twice more.

Cascade is currently looking at the uncertainty analysis for financials. The biggest adjustment over the next couple of months will come from negotiations with Seattle and Tacoma. The results of these negotiations could have a significant effect on our financial assumptions or the quantity of water we expect to receive. Also, Cascade hopes to finalize the Lake Tapps water right soon, which will affect some of the analysis. The Working Group was the first to see the results of the Criterium Decision Plus model analysis. Cascade will show this analysis to the Board and other committees over the coming month.

Tentatively the next Working Group meeting will take place sometime in July or August.

Final comments included:

Comment: It seems that usually the concept of risk changes over time.

Comment: Thank you for the overall transparency of the process and involving the group.

Public Comment

There was no public comment.

Attendees

Working Group Members

Walt Canter

Bob James

Michael Johnson

Joan Kersnar
Ralph Mason
Linda McCrea
Dave Monthie
Anna Rising
Denise Smith
Sharon Steinbis
Sheila Strehle
Dr. Leon Stucki
Jeannie Summerhayes
Don Wright

Board and Staff

Chuck Clarke, Cascade Water Alliance
Michael Gagliardo, Cascade Water Alliance
Elaine Kraft, Cascade Water Alliance
Andrew Graham, HDR

Facilitation Team

Lewis Michaelson, Katz & Associates
Bryan Jarr, Katz & Associates

Material promised the Group:

- Portfolio Tables
- Risk Assessment