

Oregon's Water Supply Availability Committee

March 16, 2016 Meeting Notes



Attendees:

Kathie Dello, OCCRI, OCS	Alyssa Mucken, OWRD
Ken Stahr, OWRD	Scott Oviatt, NRCS
Ken Smith, OWRD	Erik Rau, OEM
Kristen Powers, USACE (phone)	Andy Bryant, NWS
Terrence Conlon, USGS	Marc Stewart, USGS
Diana Enright, OWRD	Brenda Bateman, OWRD

Welcome and Introductions:

Ken Stahr welcomed everyone and made some announcements:

- Brenda Bateman is now co-chairing the Drought Readiness Council with Matt Marheine of the Office of Emergency Management.
- Ken will now be chairing this Water Supply Availability Committee.
- The Bureau of Reclamation will be joining this committee in the future.

Reviewing the Committee's Objective:

- Ken asked committee members to review a draft objective and offer any suggested changes.
 - Add "and make available" or "share."
 - Add "prepare".
 - Final version: "The objective of Oregon's Water Supply Availability Committee is to establish and share the scientific foundation decision-makers need to identify, prepare, and respond appropriately to drought."

Update on Water Conditions—

NRCS Update:

- Statewide, snowpack saw a major improvement during the last 7 days, accumulating some low and mid-elevation snow. That will come to an end this week. Some stabilization throughout the rest of the state. Owyhee is the exception.
- Statewide snowpack is 99 percent of normal, with gains in many locations, except Owyhee and Malheur.
- Precipitation is 120 percent of normal. March 1 forecast is near normal. There were some reductions because of recent warmer conditions.
- Surface Water Supply Index (SWSI): March 1 shows very little change. All values are near average. Exceptions: Removed Fern Ridge and Cougar reservoirs in the Willamette Valley from the SWSI, because they are undergoing maintenance right now and would skew the data.

NWS & OCS Update:

- Oregon has been on the warm side, but not extremely warm.
- Global temperatures in February 2016 much warmer than average.
- December was very wet. January and February were closer to average.
- Southwest Oregon has been very wet this water year.
- Observed runoff is well above average in Oregon, so far.
- 6- to 10-Day Outlook: We are going to have a dry period of a few days. By Sunday or Monday, we'll be back into a pattern of active precipitation.
- April -May-June Outlook: no signal on precipitation, but above average temperatures.
- El Nino and the blob are on their way out.

OWRD Update:

- Our streamflow data matches up well with snowpack and precipitation data.
- We started the water year with a streamflow deficit.
- December streamflow was very high. January was average. February streamflows were also high.
- When flows drop back this year, they'll drop back to looking like average years, not low flows like last year.
- Streamflow have been above average in the last 7 days.

Corps Update:

- Cougar and Fall Creek maintenance operations on are track.

Soil Moisture:

- There is no ready-made data set; OCCRI models soil moisture. It worked pretty well last year.
- NRCS has 12 sites across the state; there aren't any valley sites.
- AgriMet is often associated with irrigated lands.
- Soil moisture is point data; a county or grid-like pattern of monitoring stations would help.
- USGS has some test sites in Portland near Johnson creek.
- Soil moisture hasn't been reported on in the past, except on an ad hoc basis.
- Dept. of Forestry typically looks at fuel moisture, not so much soil moisture.
- USFS doesn't do much soil moisture monitoring.

Groundwater:

- Groundwater conditions haven't been reported as part of this committee.
- Both OWRD and USGS maintain groundwater monitoring networks.
- The USGS wants to place water level data into a national network, using wells that aren't affected by pumping, so it can show climate.
- We should also combine data in one portal. Most of OWRD wells are in places that are affected by pumping. We've done a lot of work in the Klamath; you can look at change maps of the aquifers, the resource managers are using that to determine how much surface water can be pumped in a dry year. But we've never really looked statewide; can it be done by basin? You'd have to establish monitoring wells in areas where there isn't pumping.

Developing an Oregon-Specific Index to Assess Water Conditions—

Index Example—Montana's Approach:

- Scientists met monthly to develop a water conditions index, with the Lieutenant Governor chairing that meeting. Previously, scientists got together on a teleconference as agencies & extension reps, looked at temperature, precipitation, soil moisture, etc. Although Extension went out and probed the soil that might not work as well here. Montana is mostly dryland wheat, Oregon is more variable.

Developing an Oregon Index:

- Want to avoid subjectivity and make sure this is defensible data.
- Start with the SWSI basins first; it's more important to settle on the regions first.
- How would this compare to the U.S. Drought Monitor? Oregon tool would have finer resolution.
- Kathie will share some of the drought monitor inputs with the group. We can mirror or mimic much of it.
- Would you weight indicators differently, based on location? East of the cascades we are more reliant on snowpack, so yes, we would need to account for that.
- We could pull in temperature and precipitation data from the Northwest River Forecast Center.
- Give it a consumer reports look. Use maps and graphics / visuals to help illustrate confidence levels.
- Consider streamflow forecasts, not just the current snapshot.
- The Committee will start working on an Oregon-based composite index in the next few weeks. Start with last year's data (2015) to beta test the product.
- Put together a focus group of emergency managers to test the report out, to see if it makes sense.

Potential Indicators:

- Temperature: Usually report it as a departure from average. The distribution will be different west of the cascades vs. east of the cascades.
- Streamflow: Right now, OWRD is going through its database to categorize the types of streamgages in place. We can easily tease out some of those more natural indicators. Spring Creek, a groundwater dominated stream, flows are relatively constant. So, that might be a more long-term look, and use the flashier streams to show response. Forecasts should cover what period? April through September. Characterize water year volume. 50 percent as baseline percentile.
- Snowpack: 30-year average.
- Snow Water Equivalent: 30-year median.
- Surface Water Supply Index: This is the current snow and precipitation method.
- Reservoir Storage: 30-year average.
- Soil Moisture: Start with the modeled data, see how it could work.
- Fuel Moisture: It's a late-in-the-season, or result-type indicator. May not be able to use it. Andy can talk to the fire forecasters at the NWS, to get more of a sense of how it's used, where it's available, etc.

Next Meeting:

- Ken asked the group about participating on a more consistent basis, possibly meeting monthly and longer into the year. The group agreed to meet monthly, and for a longer duration.
- Hold April 13th for a full day workshop.