

Water Supply Availability Committee/Drought Readiness Council Meeting – February 15, 2023

Phone Conference – Meeting Notes

Attendees

Ryan Andrews – OWRD (Chair)	Andy Bryant – NWS
Curtis Peetz – OEM	Matt Warbritton – NRCS
Marc Stewart – USGS	Peter Cooper – USBR
Henry Pai – NWRFC	Jim Johnson – ODA
Chantal Wikstrom – OHA	Andy Martin – USACE
Larry O’Neill – OCCRI/OSU	Steve Parrett – ODEQ

Presentations – update on water supply conditions

Matt Warbritton

- SWE in Central Cascades benefitted from recent storm
- SWE at 108% of normal statewide
 - Hook-Sandy-Lower Deschutes at 113% likely a bit lower since some sites aren't factored in
 - Willamette bumped up a bit
 - Umatilla-Walla Walla-Willow saw significant increase
 - Weird spikes in data attributed to changes in data that's incorporated into plots
 - Owyhee and Harney just below typical peak snow accumulation
 - Klamath accumulation been minimal since mid-January
- Precipitation at 91% of normal statewide
 - Persistent deficits along Cascades and central OR, expanding into eastern OR as well
 - Significant persistent deficits in Wallowas
- Soil moisture
 - Snow Mountain in central OR near record low; likely some frozen ground
 - Quartz Mountain in Klamath faring well since atmospheric river events at end of December
 - Silvies measuring well below average
 - Clackamas Lake trending near normal; fairly responsive to storm events
 - High Ridge well below average; didn't respond to recent storm event
 - Mt Howard in Wallowas below to well below average
- Streamflow forecasts
 - Published February 1st
 - Most declined since last report
 - Noticeable declines in Upper Deschutes basin and Umatilla
 - Lake County sites improved to well above normal
 - SW Rogue-Umpqua basin showed increases to above average since Jan 1st
 - Oregon Snow Survey planning for network expansion across the west
- Seeking feedback for increased monitoring or expansion of SNOTEL or SNOLITE sites; put together proposals for sites in particular basins (have proposals in by April)

Andy Bryant

- Some decline in water year precipitation in terms of % of average in Deschutes County (increasing deficits)
 - How does significant deficit in central Cascade crest impact conditions in Deschutes County moving forward - SWE deficit?
- Linn and Lane Counties showing significant deficits over past 60 days
- Notable deficits in accumulated precipitation in Bend since October 1
- Above average January temperatures in much of northern OR
- 10-day precipitation forecast well below average (essentially nothing) east of Cascades with exception of NE
 - Some above average along central Cascades
- Cooler temperatures expected over next 8-14 days; higher elevation precipitation falling as snow
- In the midst of transitioning from La Nina to neutral conditions; expected to happen later this spring
 - Some potential for El Nino conditions in fall
 - ENSO forecasts most uncertain in January/February - springtime barrier
- Three-month outlook for February through April indicates slight potential for below average temperatures statewide and near average precipitation for majority of state, some exception in eastern OR
 - Summer (June through August) outlook indicates probabilities favoring above average temperatures statewide

Henry Pai

- Observed runoff to date has been well below average statewide
- Forecasts incorporating 10-day forecasts and then historical pairs beyond that
- Natural volume forecast for Crooked near Prineville declining since mid-January
 - Currently at 62% of average
 - Precipitation hasn't materialized
 - February, March, April, May all forecast below average
- Willamette R at Salem
 - December and January saw well below average due to lack of precipitation
 - Snowpack bolstering some potential rebound in spring, but still forecast below average
- Rogue R near Raygold
 - Forecasts showing well below average due to somewhat below average snowpack
- Umatilla nr Umatilla
 - Snow dominated runoff basin
 - Dry soil conditions driving below average forecasts
- Rudimentary evapotranspiration model
 - Vegetation fractions don't vary month to month
 - Cooler months in winter - lack of solar radiation potentially not factored in and so soil buckets potentially lower than actual soil moisture conditions
- Owyhee at Owyhee Dam
 - Typically low runoff up to this point in year with bump up starting in March
 - Near normal expected for remainder of water year

Larry O'Neill

- Some improvements in SE OR on most recent drought monitor
 - Degrations in western OR - D1 expanding to south Willamette Valley and north Cascades
 - Increasing pressure from national authors to pare down D3 and D4 in central OR
 - Partly due to Ochoco Mountain SNOTEL showing near normal wy precip and SWE
 - Area of D3 in Harney County may get trimmed back in coming weeks due to decent precip
- Accumulated precipitation deficits during last 3 water years
 - 6.1% of OR missing one year's worth precipitation over last 3 years
 - 21.9% of OR missing 80% of one year's worth precipitation
 - Even though any given individual year may not have been driest on record
- Deschutes County water year precipitation below average over last three years
 - 4 out of 5 last years as well
 - 17 out of last 23 have been below average
 - Trend is true for many or most counties in OR
- SPEI 12-month ending in December
 - Last three years well below average
 - 24-month ending in December indicating long-term drought
 - 36-month near worst on record
 - Longstanding drought conditions
- Redmond Airport 2023 ranks as fourth driest start to calendar year since 1949
 - Observed 0.31" observed so far compared to average of 1.35" calendar year to date
 - Worst on record is 1977
- Discrepancy in PRISM and NWS data show major difference in SE OR
 - Under 75% of normal compared to above 130% of normal
 - Challenging to communicate was exact drought conditions are like

Marc Stewart

- 28-day average streamflow below to well below average throughout nearly all western OR
 - Some improvement over 7-day
- John Day R at Service Creek below average trending downwards
- Meacham Cr in lower normal range
- Jefferson County gages showing below to well below average
 - Metolius R
 - Deschutes R nr Culver
 - Deschutes R nr Madras
- NW OR
 - Wilson R barely average
 - Long Tom R trending well below average
- SW OR
 - Chetco below average
 - Big Butte Cr well below average (similar to 2022)

- Klamath
 - Klamath R at Keno well below average
 - Sprague R nr Chiloquin
 - Klamath Falls regulating to keep lake level somewhat elevated although began flatlining recently
- SE OR
 - Donner Und Blitzen well below average
 - Owyhee below average
- Statewide 7-day average below average

Ryan Andrews

- Jefferson and Crook County drought declarations forwarded to Governor's Office
- Deschutes County discussing declaration – word of mouth; no local declaration in place
- January streamflow well below average statewide, with some exception in southwestern OR (Curry, Coos, and Josephine Counties)
- Streamflow over water year to date is well below average
 - Min = Malheur Lake Basin at 41%
 - Max = Powder Basin at 91%
- Streamflow percentiles show some improvement in northwestern OR from 28-day average to 7-day average
 - Flows range from well below average to average statewide, but still very low
- North Yamhill flowing at record low since early January – checking in to see about verification
- Flows in Lane County at Mohawk R still well below average and trending downwards
- S Fk Necanicum in Clatsop County showing some improvement after well below average start
- Whychus Cr in Deschutes County measuring about average
 - Deschutes County measuring 88% of average over water year to date

Peter Cooper

- Reservoirs releasing winter minimums to continue filling
 - Even in Scoggins
- No flood risk management operations currently
- Inflows fallen back to very low levels with dry conditions following wet weather in late December/early January
 - Statistically inflows typically start to increase as we head into March, peaking at most locations in late March to early April
- Much below normal storage contents in southern, central, and southeastern basins (Rogue, Deschutes, Crooked, Malheur, Powder, Owyhee)
 - Near normal in northern basins (Unity, McKay, Scoggins)
- February forecasts generally saw around 5-20% of average reduction compared to January forecasts
- Refill unlikely at many facilities
- Owyhee storage below 10th percentile
 - Very low inflows
 - Would take about 160% of average streamflow to fill

- Warm Springs near historical low contents
- Beulah has decent chance of filling
- Crane Prairie + Wickiup + Crescent Lake just about the 10th percentile, a little better than last year
- Prineville Reservoir setting record low content this year, extremely low inflows - runoff forecast dropped from 85% to 79%
 - Very dry soil moisture and SWE deficit in lower elevations
- Ochoco just above 10th percentile, inflows below sensor so using manual measurements
 - Runoff forecasts decreased from 88% to 57%
- Rogue basin improved due to early January atmospheric rivers
 - Hyatt + Howard Prairie + Emigrant well below 10th percentile
- Umatilla - McKay slightly below average
- Scoggins likely to fill around April/May
- Storage allocations not likely available until peak storage contents later in spring

Andy Martin

- Very beginning of refill season for Willamette basin
- Refill operations
 - Early fill status of two reservoirs to understand potential of reservoirs to support summer flows
- Lookout Point Reservoir
 - Southern Willamette Valley
 - Largest flood space and conservation storage space on middle fork
 - Supplies to support minimum flows on middle fork in all seasons
- Blue River Reservoir
 - On McKenzie tributary
 - Used to regulate wintertime floods and support flows on Willamette Mainstem in late summer/fall
- Refill season starts early spring in February until June in both reservoirs
 - Generally follow same rule curve
 - Trying to capture large inflows as long as below rule curve
- Current fill
 - Lookout Point 1600 cfs minimum release
 - Still supporting flows on Middle Fork and Mainstem, so haven't really begun refill
 - Blue River 50 cfs minimum release
 - Not currently supporting minimum flows
 - Minor inflows are being captured - close to rule curve at this point
 - What to expect if this doesn't change
 - Deficit to supply to rest of system in spring and early summer, but other reservoirs that are filling and not supporting minimum flows will be available to support flows later on in season
 - May need to draw on supplies from refilling reservoirs later in season
- In 2022
 - Lookout Point didn't begin to fill until March/April
 - Blue River filled on schedule even with dry early spring

- Outlook for 2023
 - Still in good shape even considering low streamflows
 - Expect some of positive snowpack to help refill
 - Hope for rainy spring - if does not materialize then limited ability to keep pools high and maintain minimum flows

Discussion

- Next meeting proposed March 15th