

2018 TMT YEAR END REVIEW SPRING 2018 FLOW CONDITIONS

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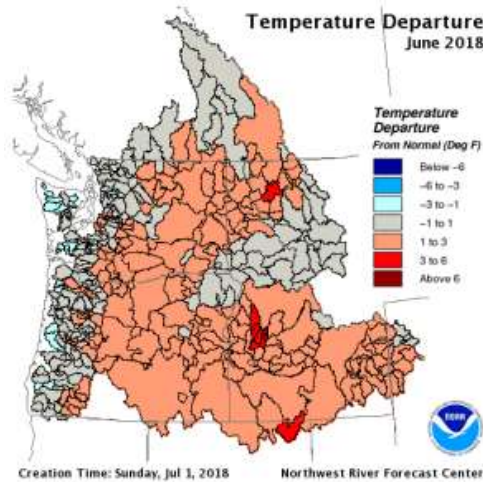
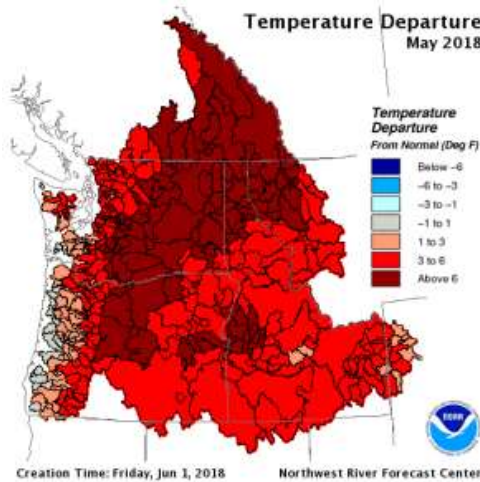
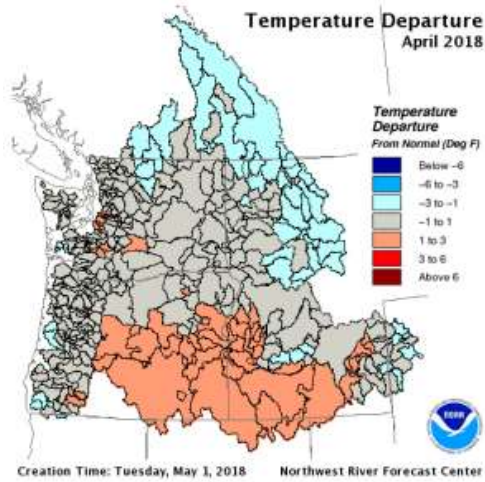
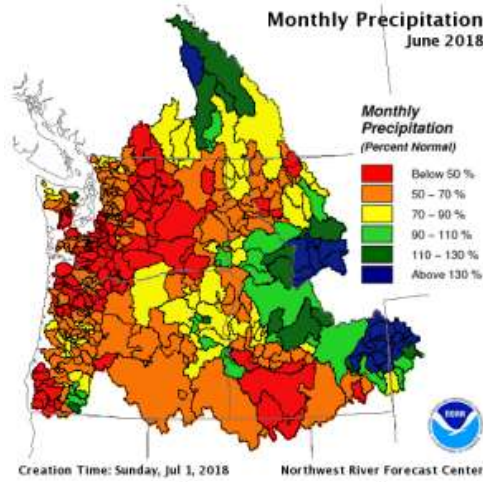
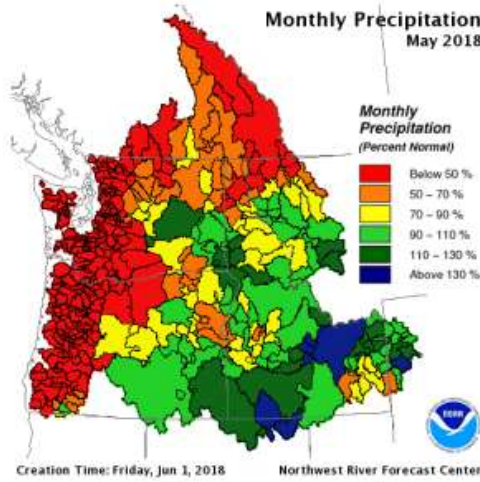
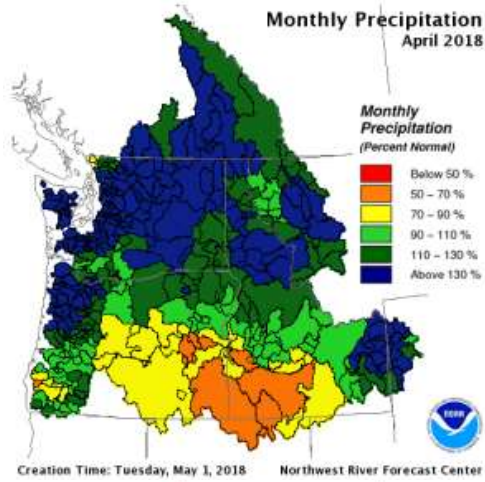
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WEATHER CONDITIONS – SPRING 2018



APRIL

- Wet!
- Precipitation above normal in headwater basins
- Normal to below normal temps in headwater basins

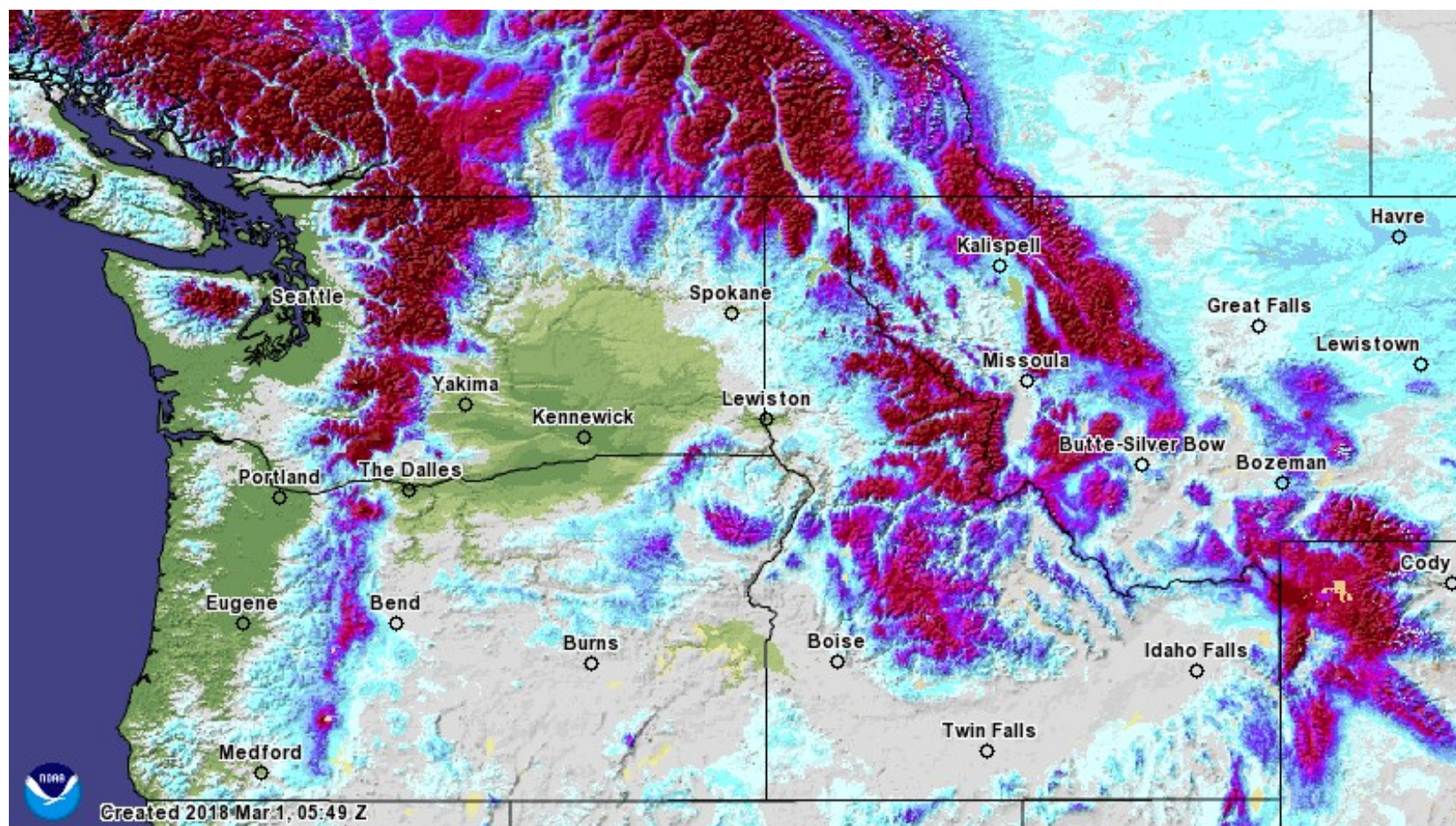
MAY

- Hot!
- Temperatures well above normal throughout Columbia Basin
- Rapid snowmelt

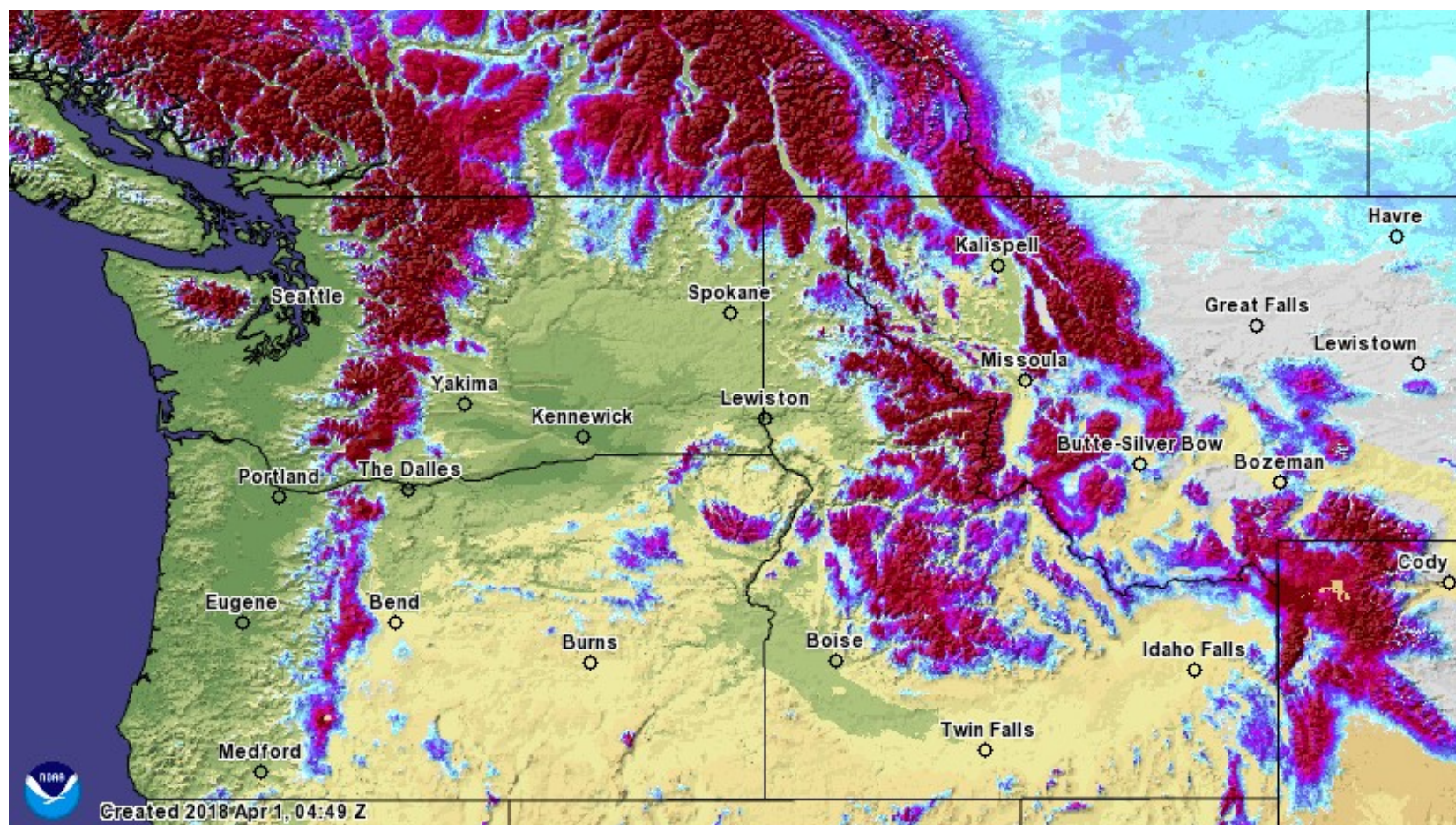
JUNE

- Warm and dry
- Snowpack depleted

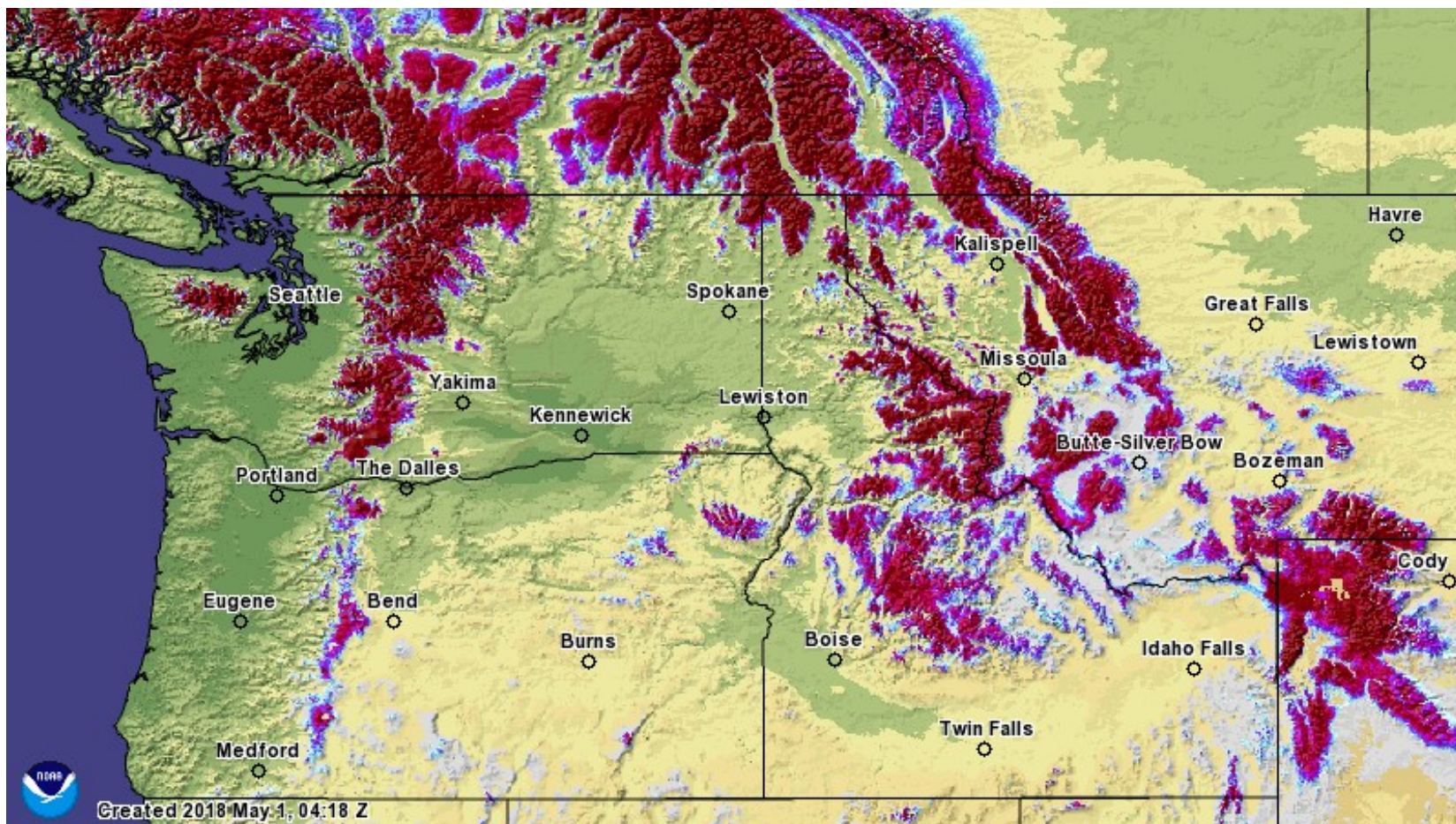
SNOW WATER EQUIVALENT – MARCH 1



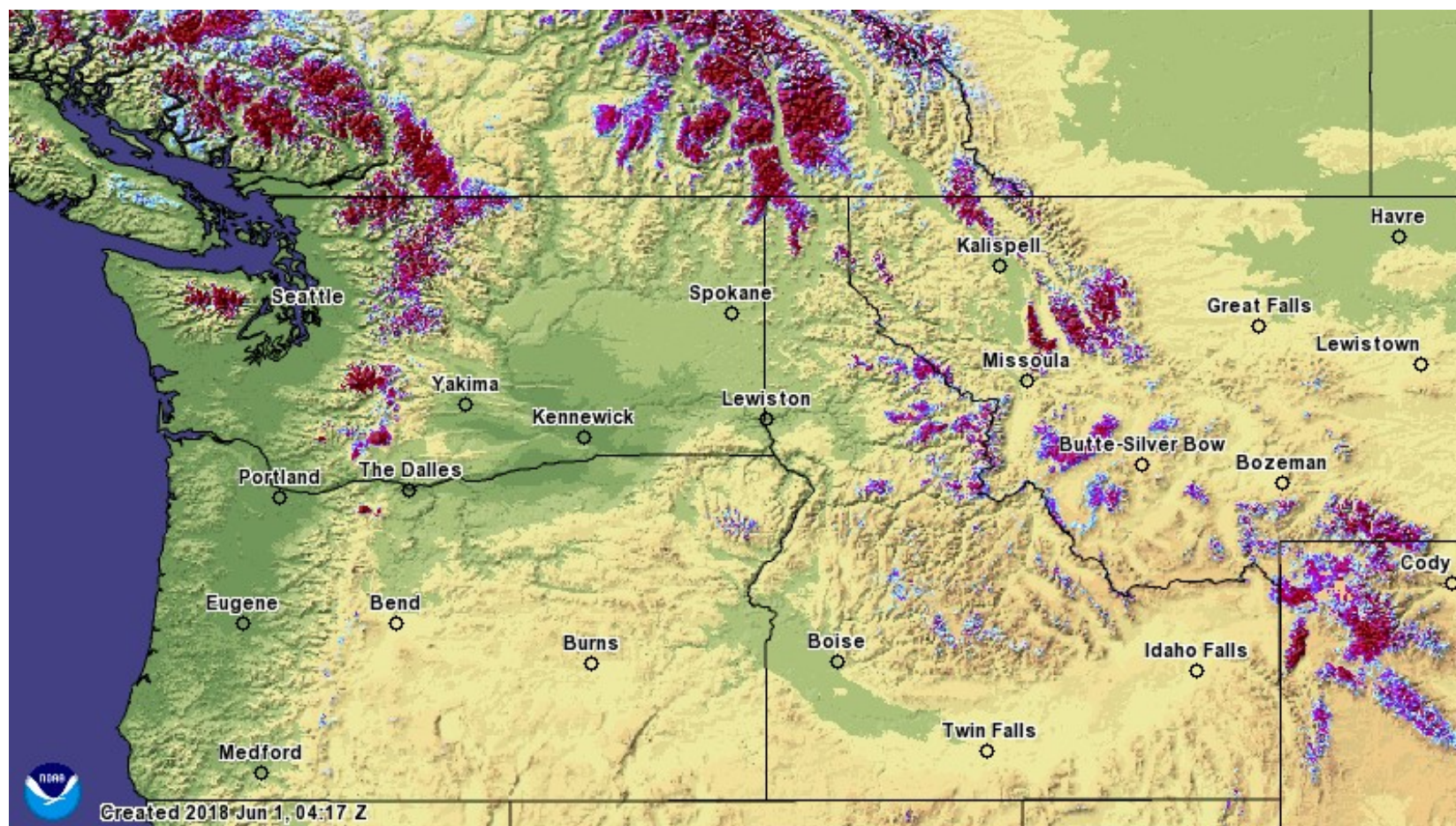
SNOW WATER EQUIVALENT – APRIL 1

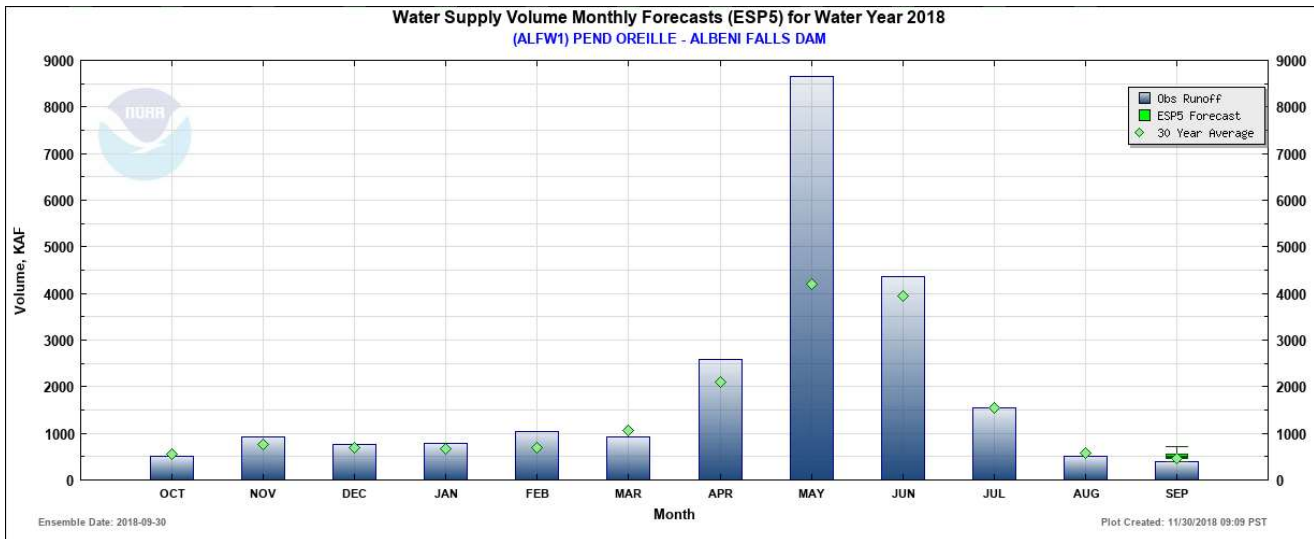


SNOW WATER EQUIVALENT – MAY 1



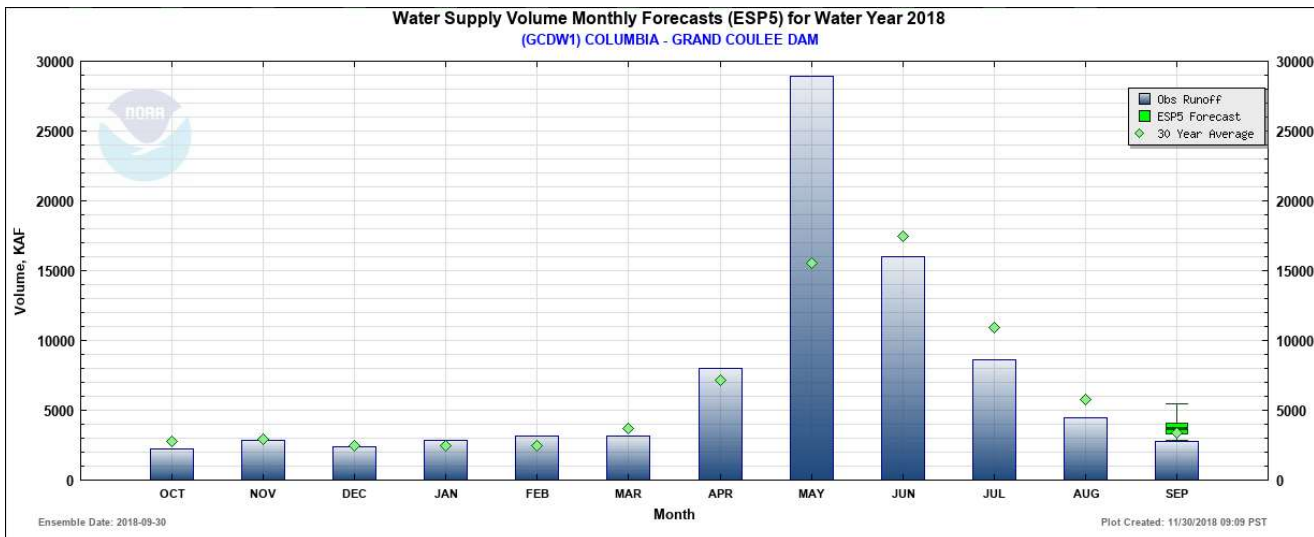
SNOW WATER EQUIVALENT – JUNE 1





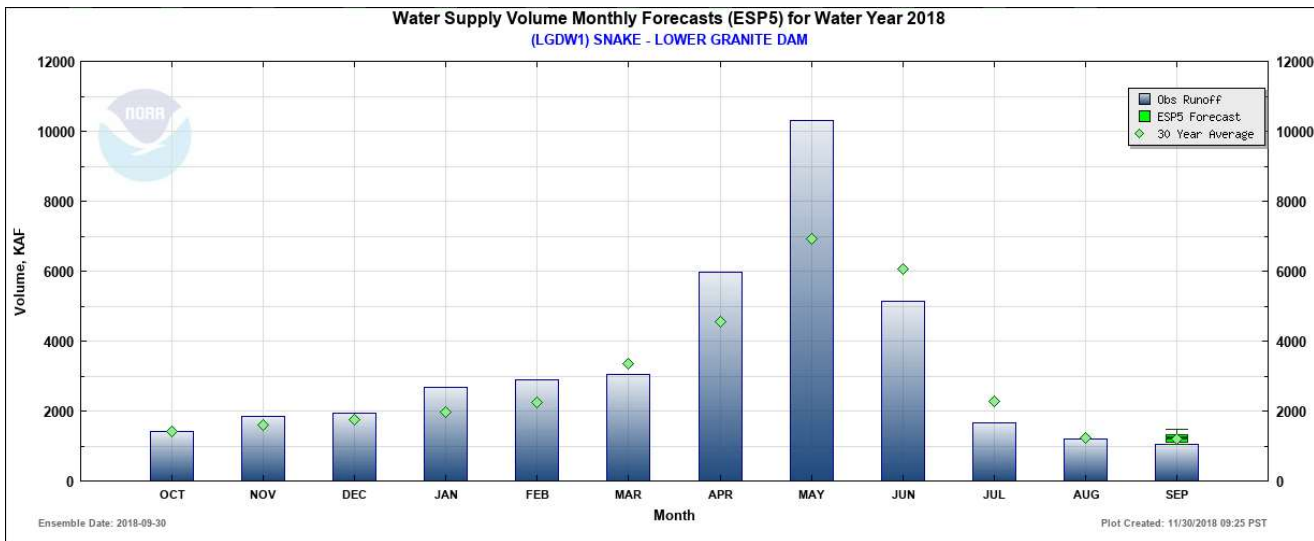
ALBENI FALLS

- Runoff in May 206% of normal
- April-July total 17.1 MAF, 146% of normal
- Lake Pend Oreille peak 2064.3 feet on May 30, flood level is 2063.5 feet
- Peak outflow 119 kcfs, flood flow is 95 kcfs
- Project operated on freeflow from April 29 – June 6



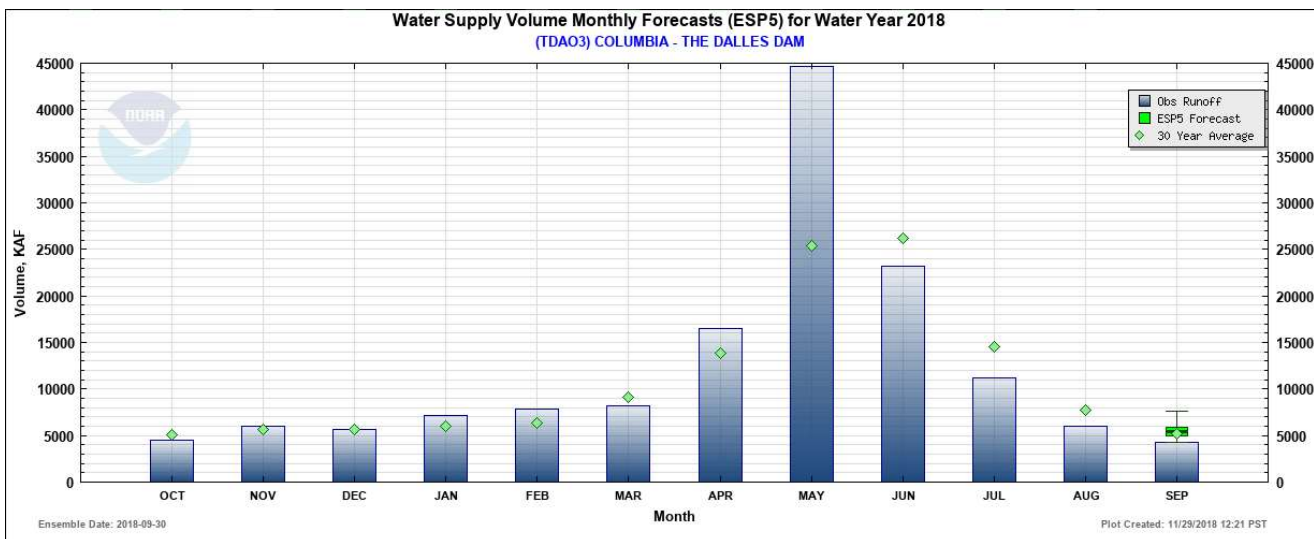
GRAND COULEE

- Runoff in May 187% of normal
- April-July total 61.6 MAF, 121% of normal
- Drafted to seasonal minimum elevation of 1221.5 ft in early May for flood risk management
- Peak inflow 331 kcfs on May 19
- Peak outflow regulated to 280 kcfs to reduce downstream flood impacts



LOWER GRANITE

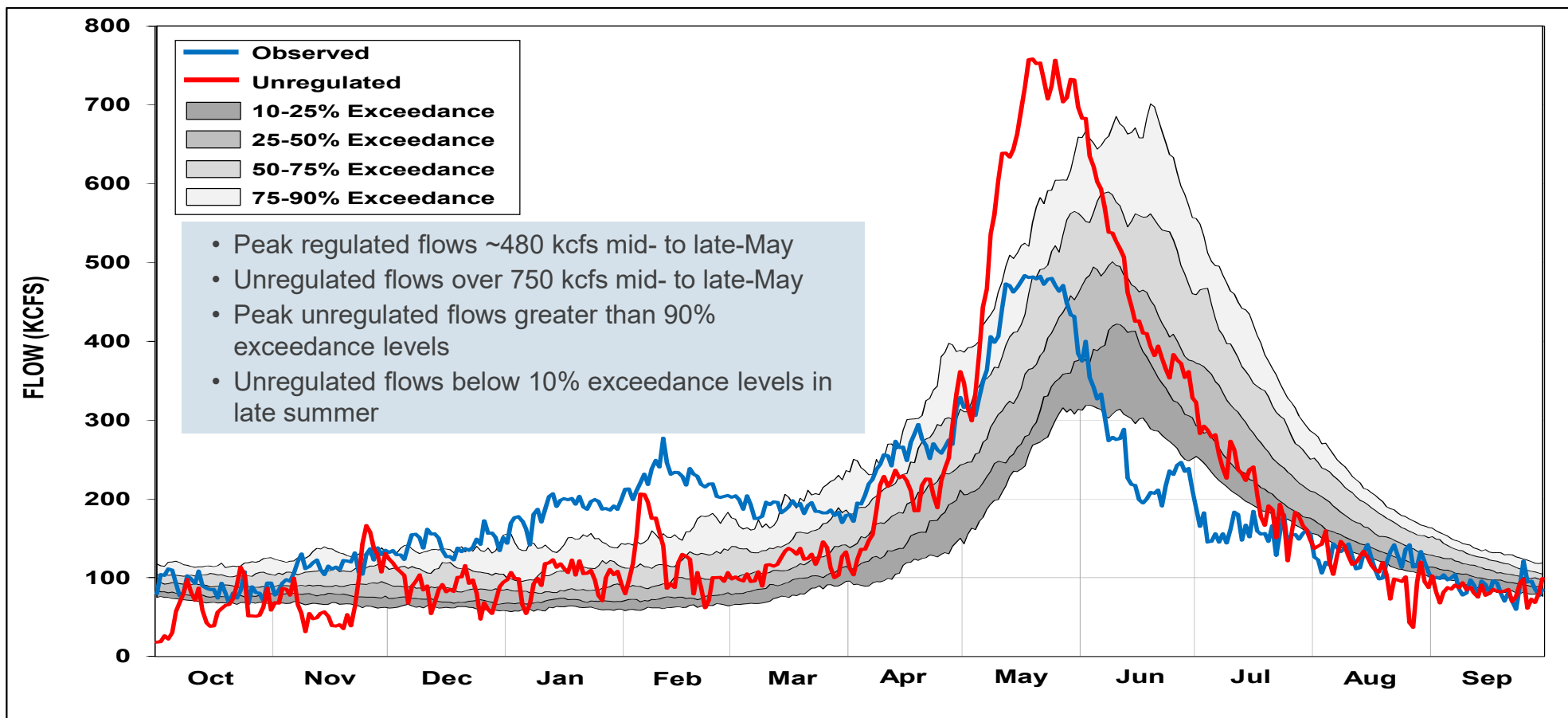
- Runoff in May 149% of normal
- April-July total 23.1 MAF, 116% of normal
- Peak inflow 176 kcfs on May 26
- Project held in bottom 1 foot of normal operating range May 7 – June 3 for flood risk management near Lewiston



THE DALLES

- Runoff in May 176% of normal
- April-August total 101 MAF, 116% of normal
- Peak inflow 484 kcfs on May 17
- Bonneville Dam peak outflow 496 kcfs on May 16
- Columbia River at Vancouver peak 16 feet in mid-May, minor flood stage is 16 feet

COLUMBIA RIVER AT THE DALLES – WY2018



NOTES:

- Unregulated data period of record: 1928-2018
- 10, 25, 50, 75, 90% exceedance levels represent the percentage of time the unregulated flow is exceeded on that particular day