

# RECLAMATION

*Managing Water in the West*

**October 2019**

**Upper Snake Advisory Committee**

**Bureau of Reclamation - Upper Snake Field Office**

**Water Supply and Operations Update**



**U.S. Department of the Interior  
Bureau of Reclamation**

Jeremy Dalling

# Presentation Outline

## Observed Conditions

- System Storage
- Reservoir Conditions

## Water Supply Indicators

- Antecedent Conditions*
- Soil Moisture*
- Baseflow Outlooks*

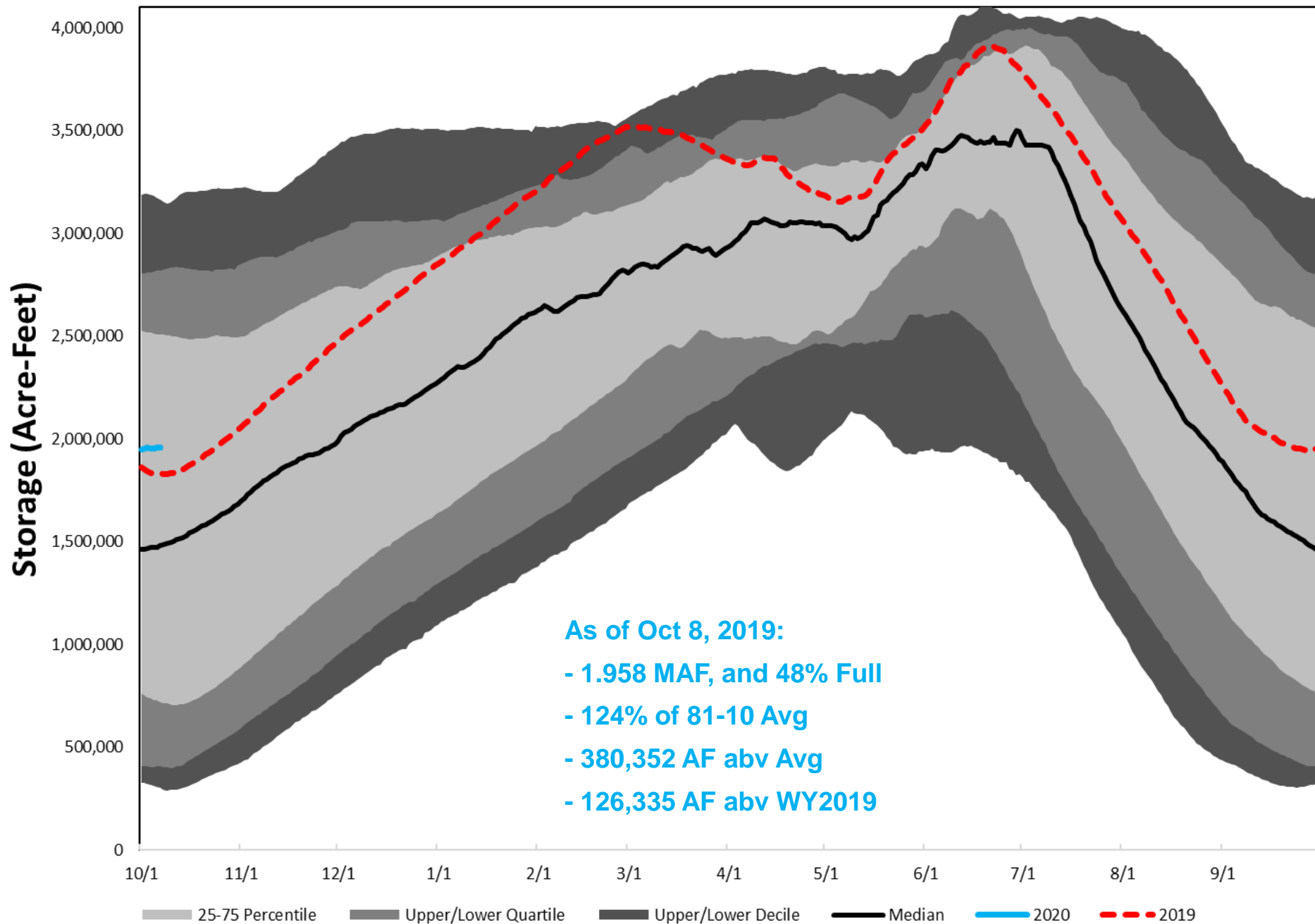
## Projected Reservoir Operations

- Short Term (Fall-Early Winter)*
- Medium Term (Winter-Early Spring)*

## Summary and Questions

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# Upper Snake Reservoir System Total Storage (Acre-Feet)



As of 10/7/2019:

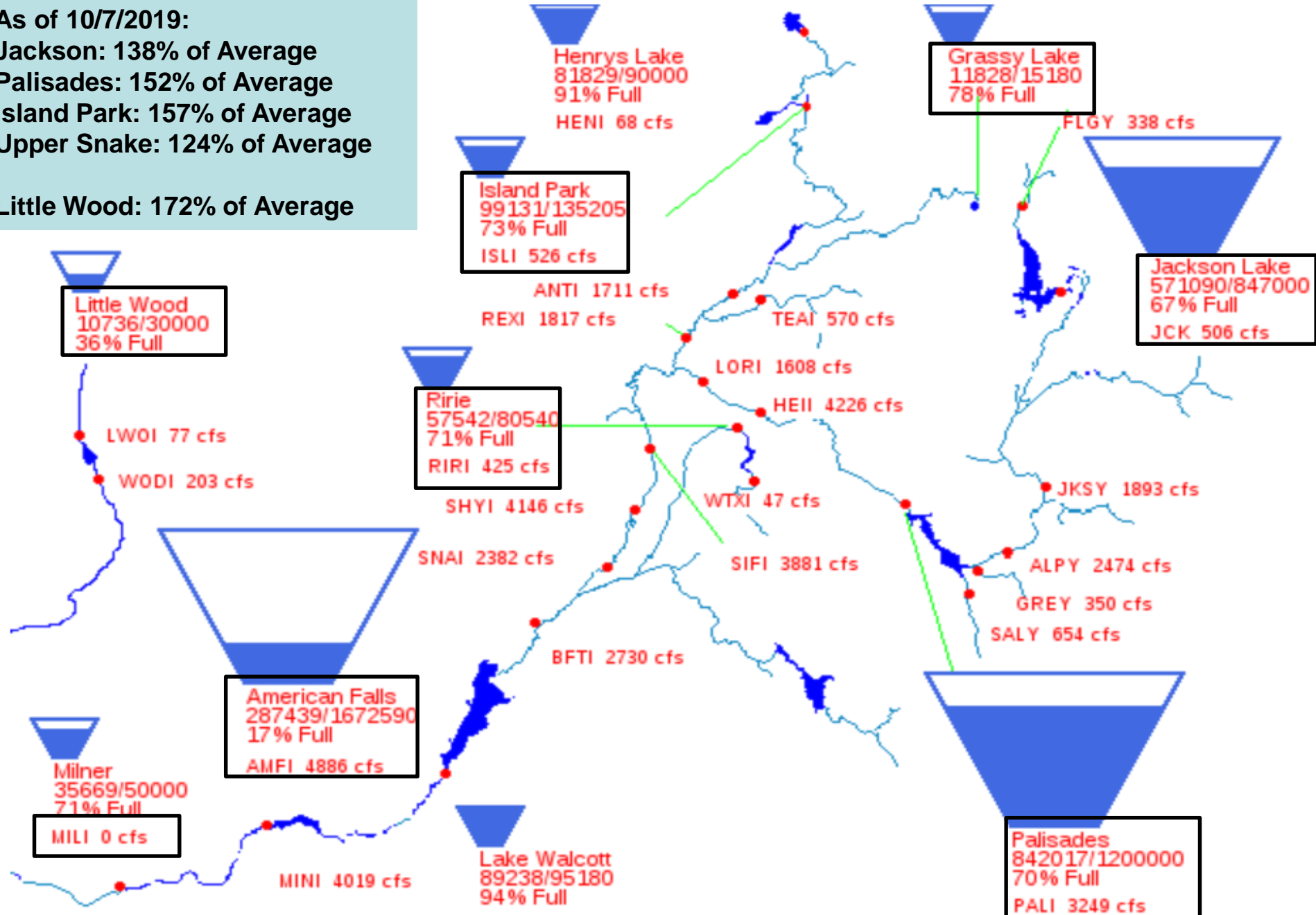
Jackson: 138% of Average

Palisades: 152% of Average

Island Park: 157% of Average

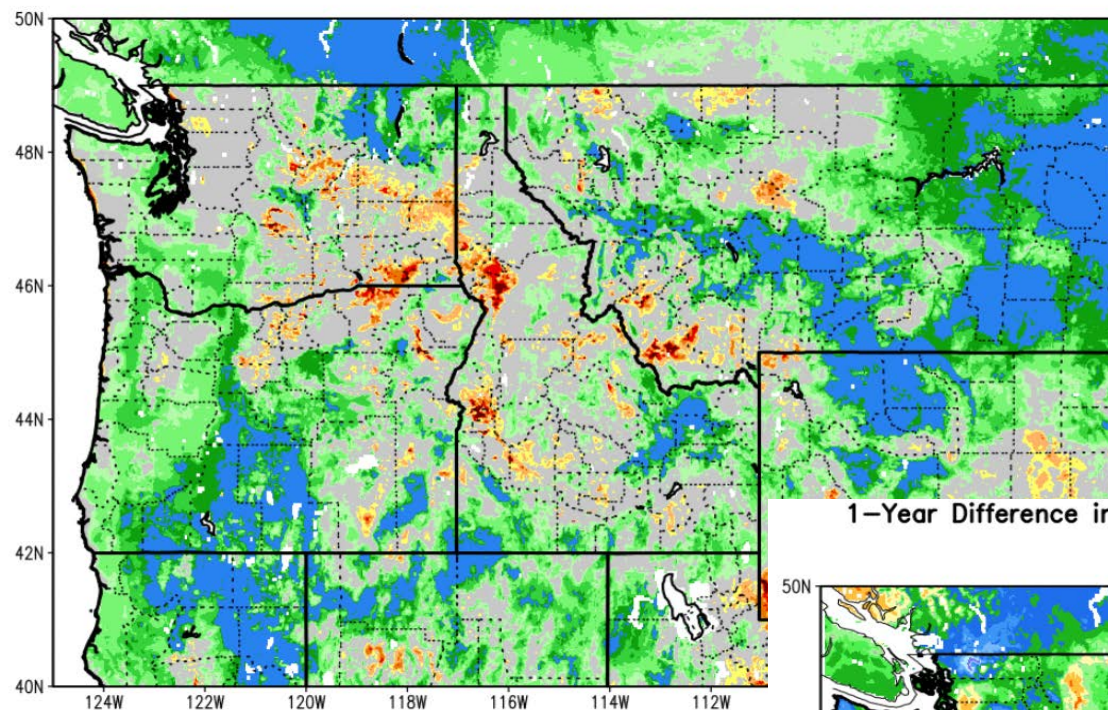
Upper Snake: 124% of Average

Little Wood: 172% of Average



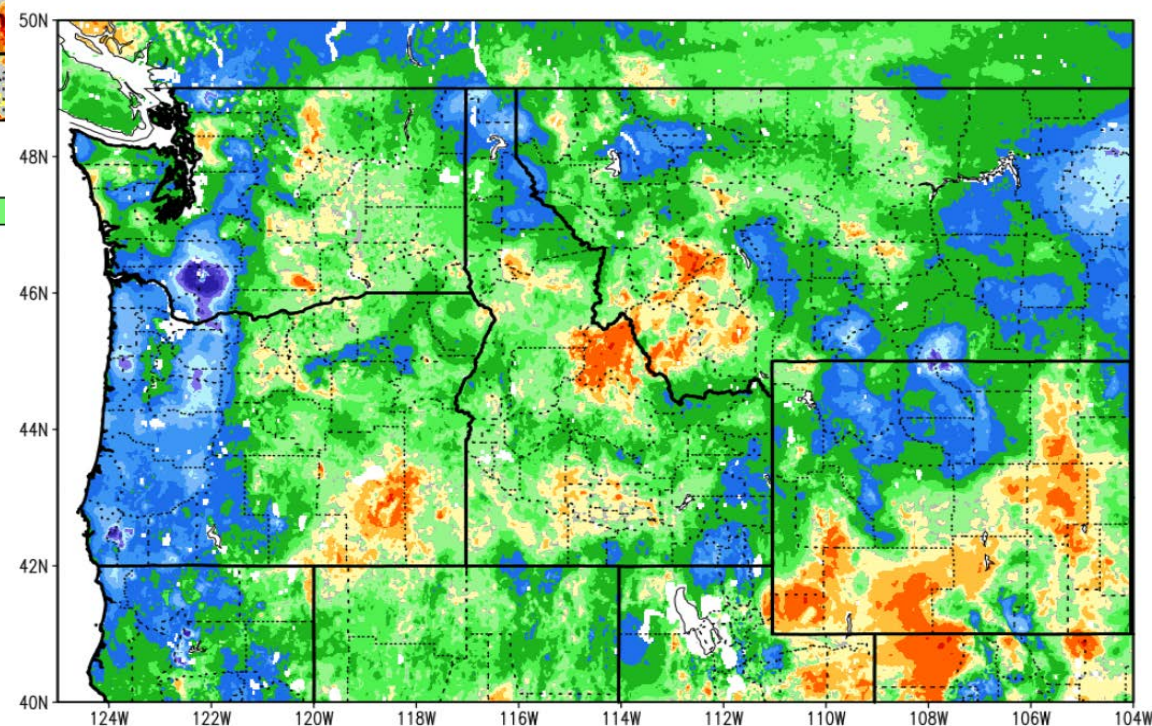
PROVISIONAL DATA - Subject to change





--Antecedent Conditions

1-Year Difference in Column Relative Soil Moisture (%) valid 12z 08 Oct 2019

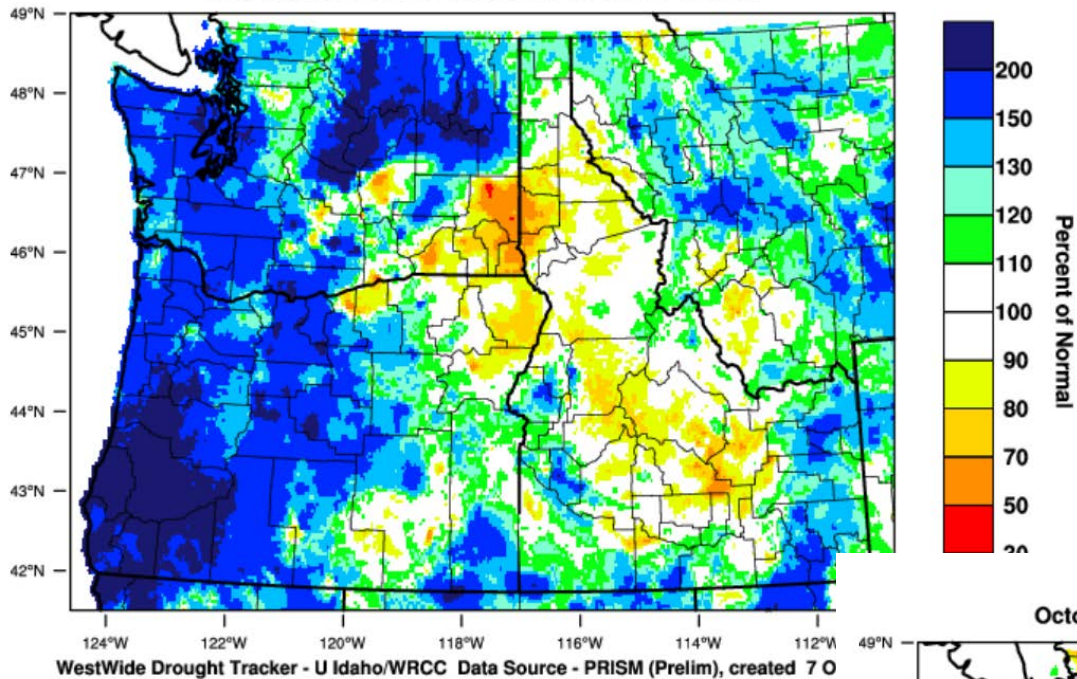


--SM has limited POR  
--Year-to-year Comparisons



## Pacific Northwest - Precipitation

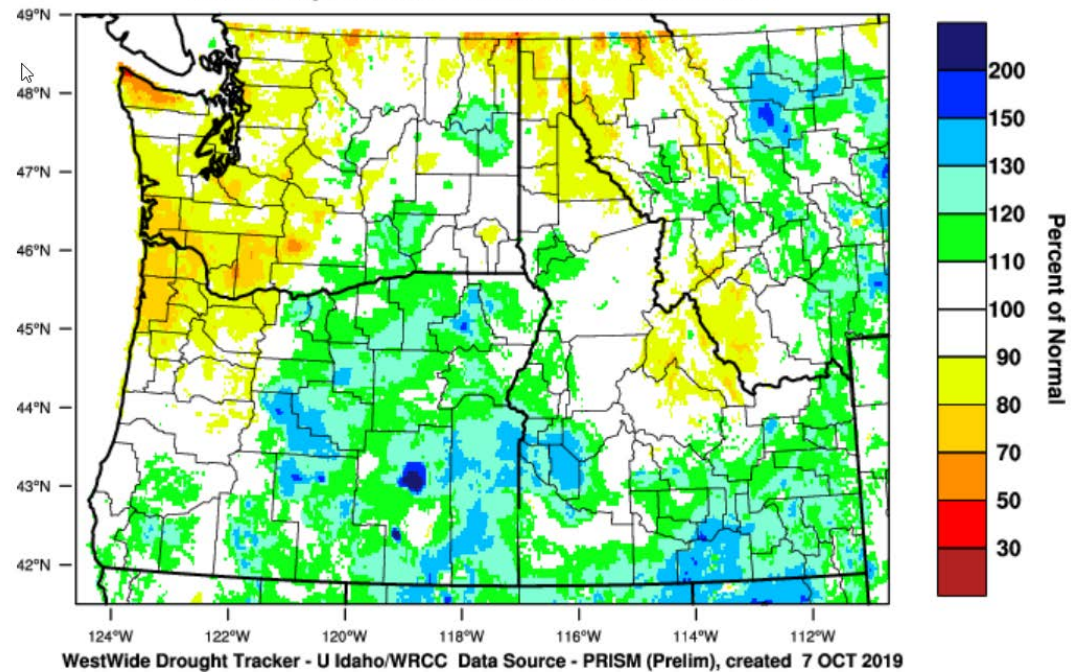
July-September 2019 Percent of 1981-2010 Normal



--Previous Three Months

## Pacific Northwest - Precipitation

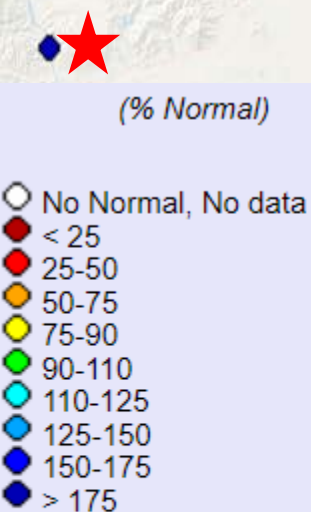
October-September 2019 Percent of 1981-2010 Normal



--Water Year Precipitation  
--West versus East Tetons

## Observed Streamflow Conditions

★ Parameter	September	Oct 1 - Oct 7
Palisades_Gains	98%	105%
Heise_QU	111%	116%
Island Park_QU	107%	98%
WTXI_QD	110%	128%
Little Wood_QU	197%	189%





# Short Term Fall Operations Outlook

## ➤ South Fork

- Jackson Lake – Decreasing to winter discharge of 280 cfs on Thursday
- Palisades – Waiting for recommendations from the river and reservoir sub-committee before finalizing the initial winter release. Reasonable expectation is for ~900 cfs during November with increases in December-January.
- Ririe – On track to achieve winter storage target of 40,500 AF

## ➤ Henry's Fork

- Island Park - Winter operations will be discussed at the upcoming drought management committee. Expectation is for similar operations to last year with reductions in Oct-Nov to maximize fill and then increasing to pass inflow December-March. Alternative would be to target a flow rate that projects a steady rate of fill through next March.

## ➤ Lower System

- American Falls – Will continue ramping down with irrigation. Initial winter flow will be the corresponding discharge of the minimum gate openings (350-400 cfs).
- Minidoka Dam/Lake Walcott – Similar schedule to American Falls. Winter operations will optimize hydraulic head for generation. Initial discharge is expected to be ~500-550 cfs.
- \*\*Milner – Will be lowered approximately 2 feet in November to facilitate inspection and maintenance



# Longer Term Winter Operations Outlook

(Statistical and ESP Projections)

**\*\*\*Preliminary - More details will be known in November**

## ➤ South Fork

- Jackson Lake – Median projections indicate filling to 647,000 AF in March, which is near reservoir levels observed in 2018 & 2019 during the same period.
- Palisades – Releases higher than 900 cfs are possible/likely beginning as early as December and will be determined by reservoir storage and the water supply outlook as the season progresses. November 1 storage is projected to be approximately 200 KAF higher than 2019.

## ➤ Henry's Fork

- Island Park – Baseflow lags precipitation by 2-3 years in the basin. Drainage basin has received above average water year precipitation each of the last three years.
- Adjusted streamflow data indicates baseflows are currently closer to 108% of normal. Baseflows are expected to be average to above average this winter.
- Maximum winter storage is approximately 120 KAF.

## ➤ Lower System

- American Falls – Above average upstream storage is accompanied by average to above average baseflow conditions on both the Henry's Fork and South Fork. Projections indicate similar conditions to those observed last year with physical fill (without QD adjustments) occurring in late February to early March.
- Rip-Rap Considerations
- Availability of Minidoka Units 8 & 9. No long term outages are expected for units 6 & 7.

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# For More Information

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## Snake River Operations Web Sites

- Upper Snake water information site -  
<http://www.usbr.gov/pn/hydromet/uppersnake/index.html>
- USBR HydroMet - <http://www.usbr.gov/pn/hydromet/>
- Northwest River Forecast Center - <http://www.nwrfc.noaa.gov/rfc/>
- NRCS SNOTEL Data - <http://www.id.nrcs.usda.gov/snow/>

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