



## 2015 Drought and Start of 2016

Presented by: David Hoekema, Hydrologist

Date: 1/15/2016



# 2015 Year in Review

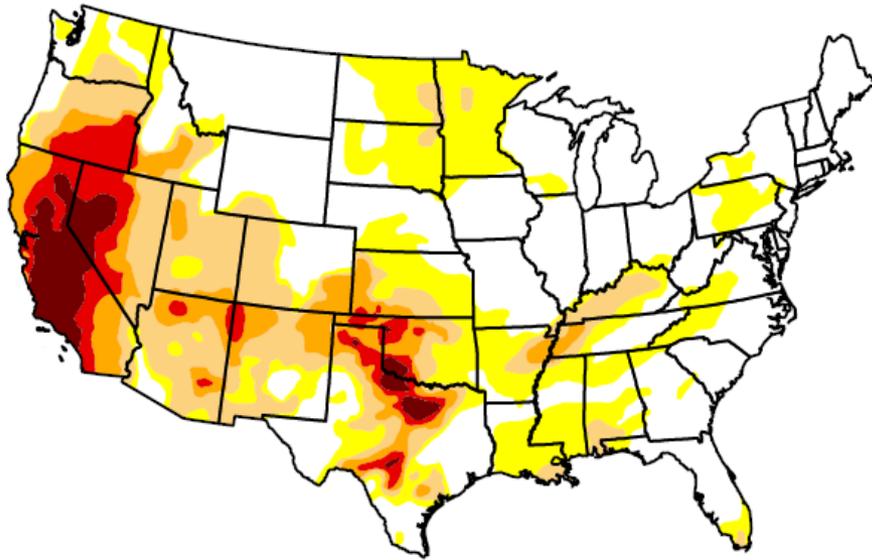
- 1) Management Challenges
  - a. Drought
  - b. Surface Water Call
  - c. Swan Falls Minimum Streamflow
  - d. East Snake Plain Aquifer Recharge
  - e. Priest Lake

# 2015 Water-Year: Drought

**February 17, 2015**

*(Released Thursday, Feb. 19, 2015)*

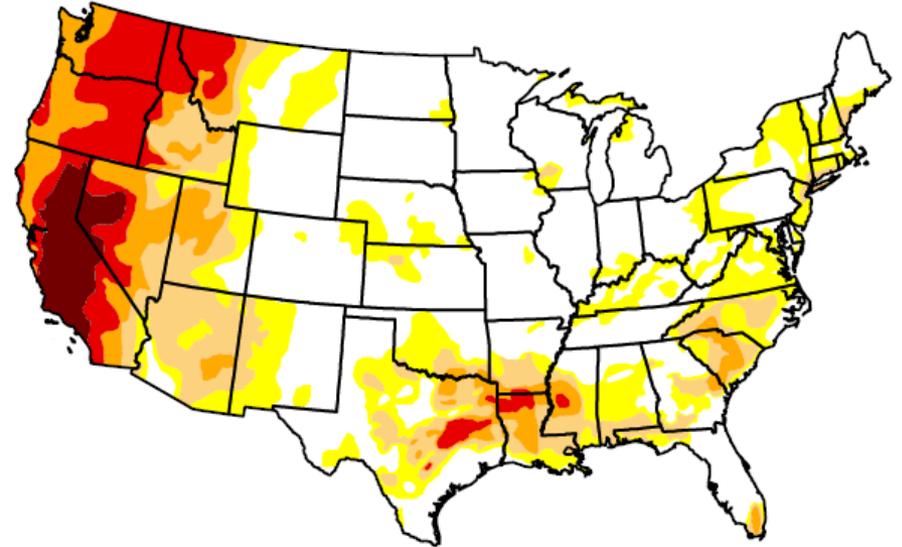
Valid 7 a.m. EST



**September 15, 2015**

*(Released Thursday, Sep. 17, 2015)*

Valid 8 a.m. EDT



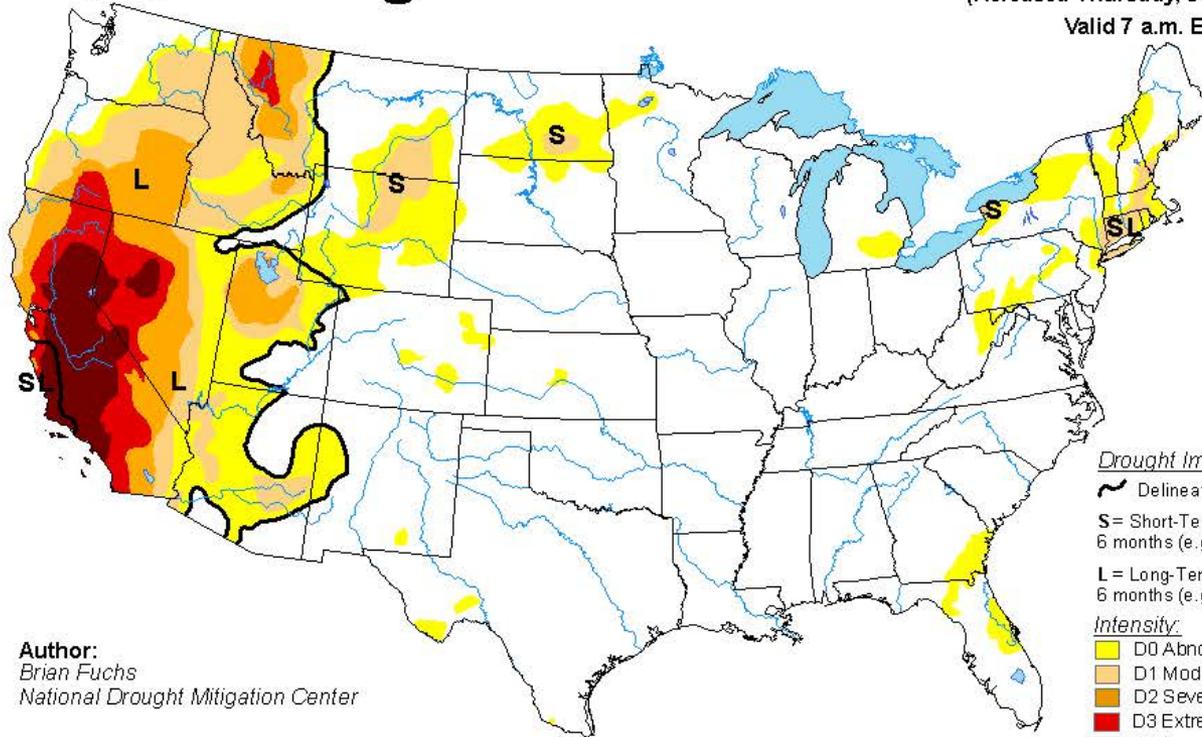
# 2016 Start of Year: January

## U.S. Drought Monitor

January 12, 2016

(Released Thursday, Jan. 14, 2016)

Valid 7 a.m. EST



Author:  
Brian Fuchs  
National Drought Mitigation Center

### Drought Impact Types:

~ Delineates dominant impacts

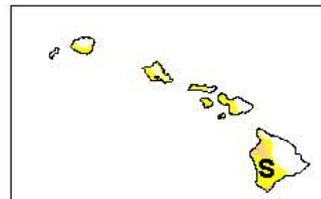
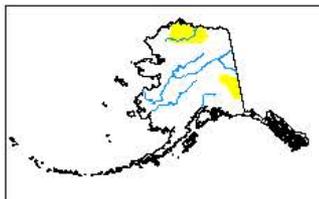
S = Short-Term, typically less than 6 months (e.g. agriculture, grasslands)

L = Long-Term, typically greater than 6 months (e.g. hydrology, ecology)

### Intensity:

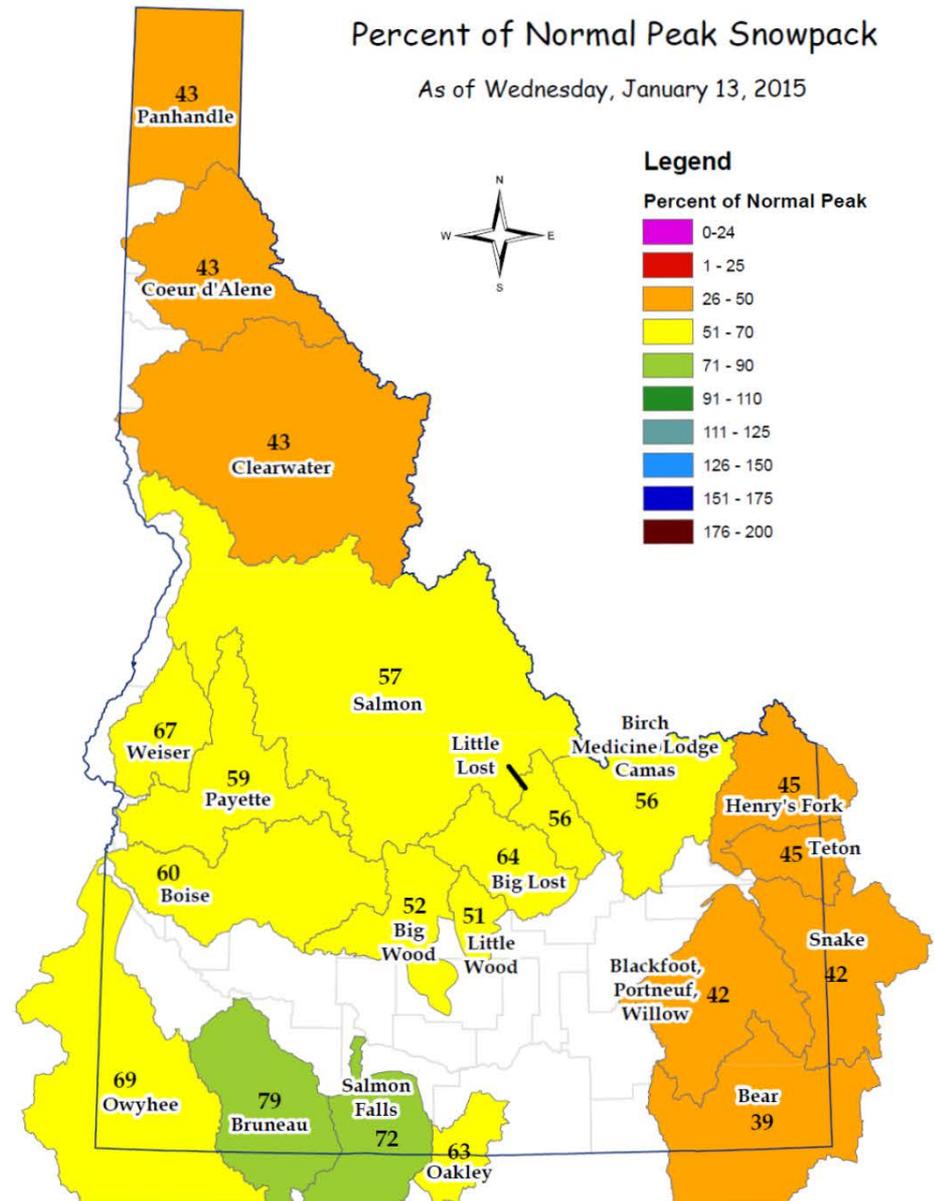
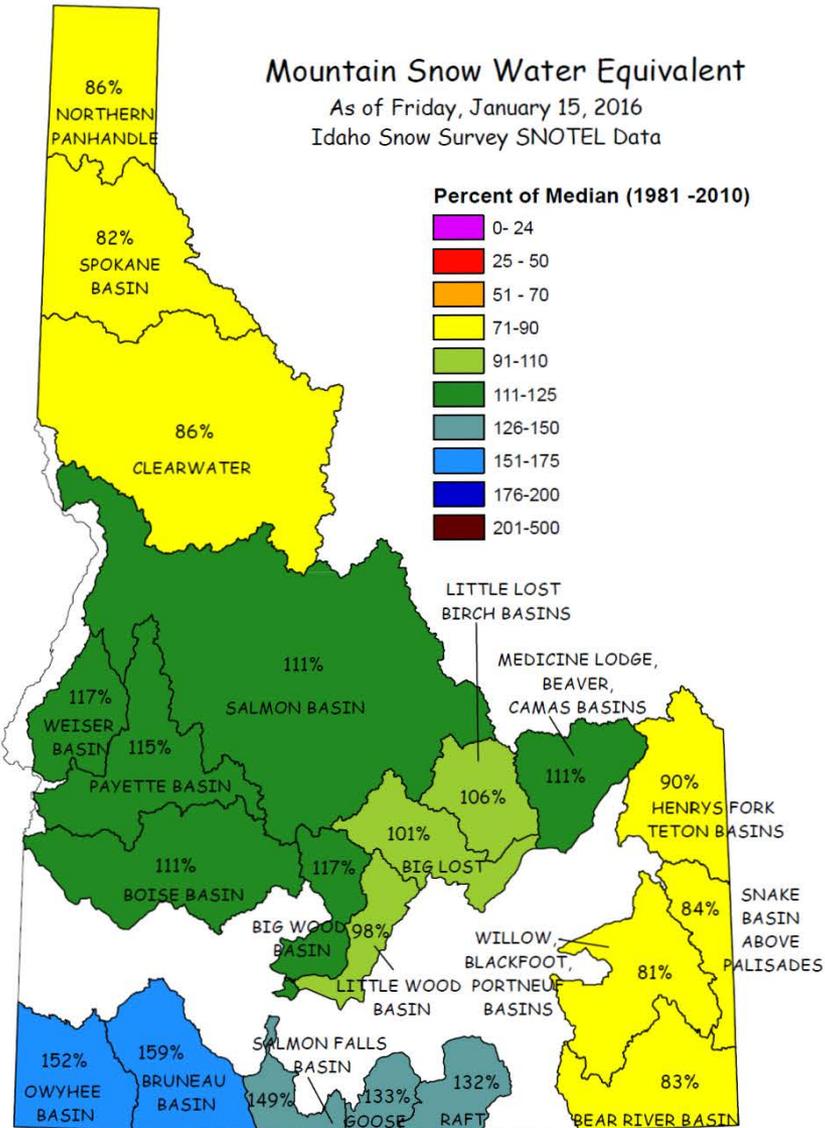
- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.



<http://droughtmonitor.unl.edu/>

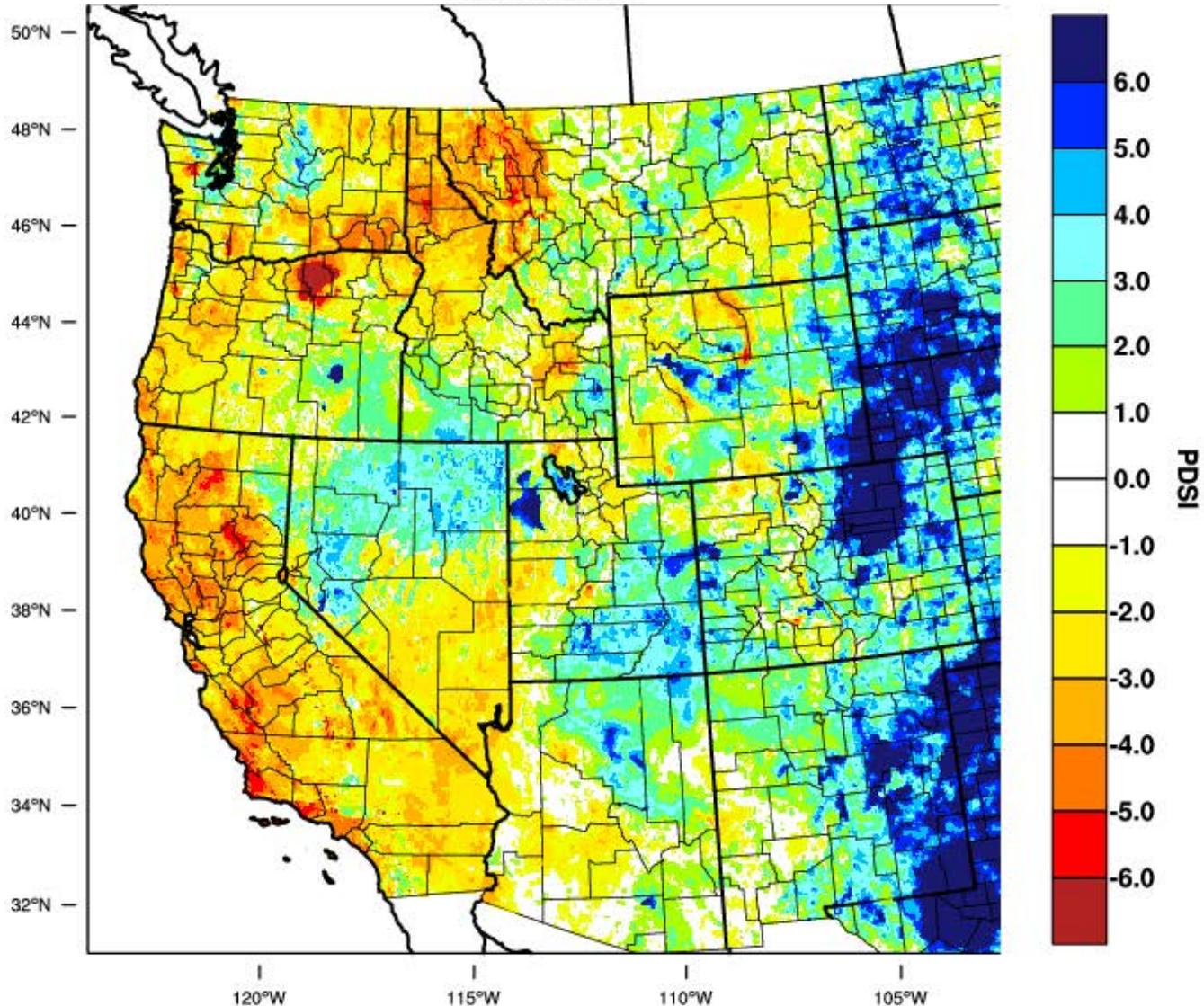
# 2016 Current Conditions



# 2016 Current Conditions

Western United States - PDSI

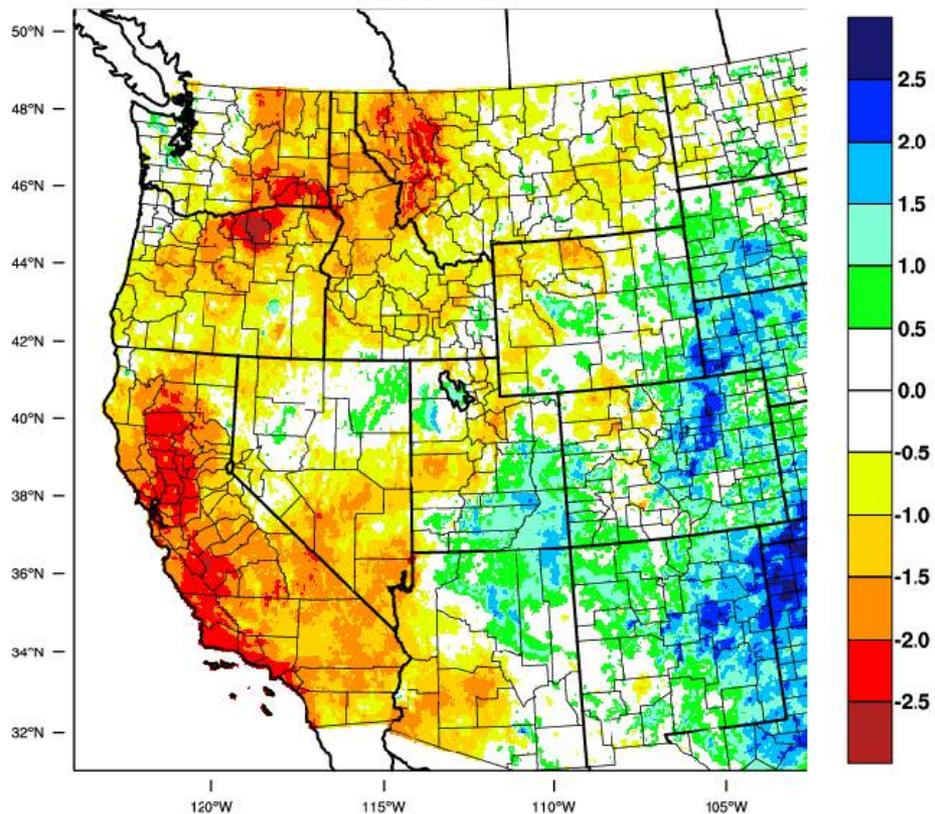
December 2015



# 2016 Current Conditions

Western United States - 12 month SPEI

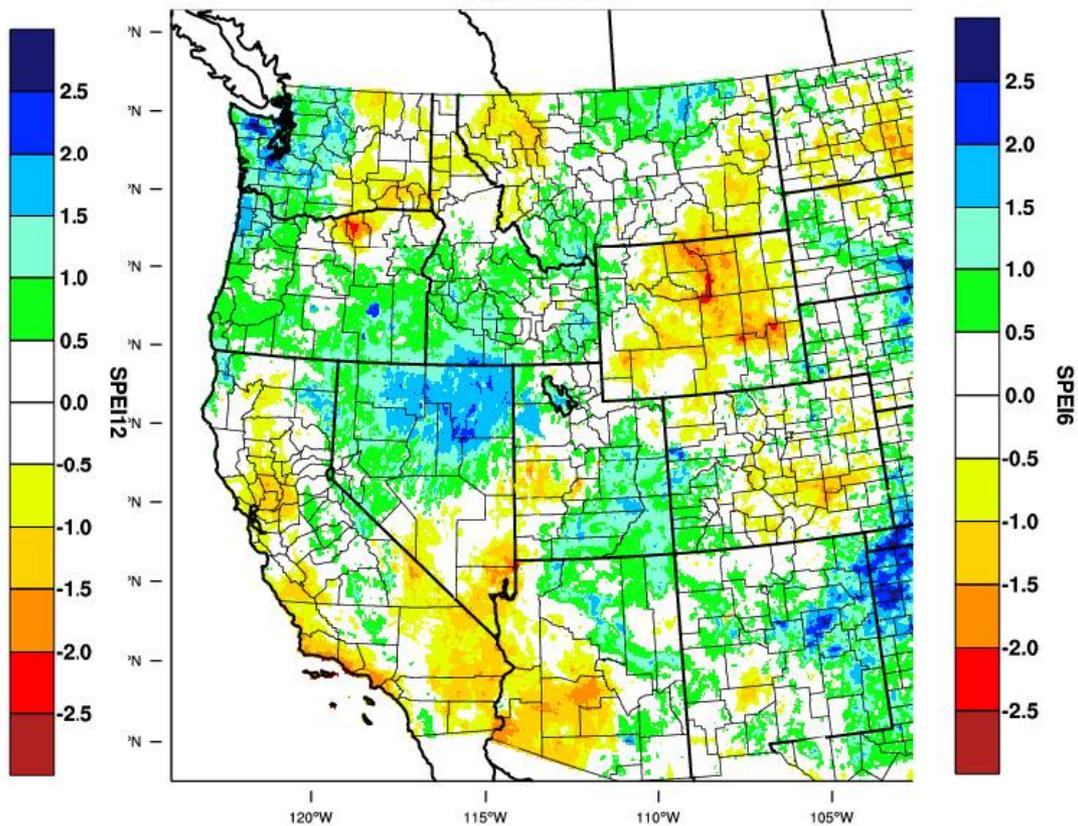
December 2015



WestWide Drought Tracker - Uldaho/WRCC Data Source - PRISM (Prelim), created 7 JAN 2016

Western United States - 6 month SPEI

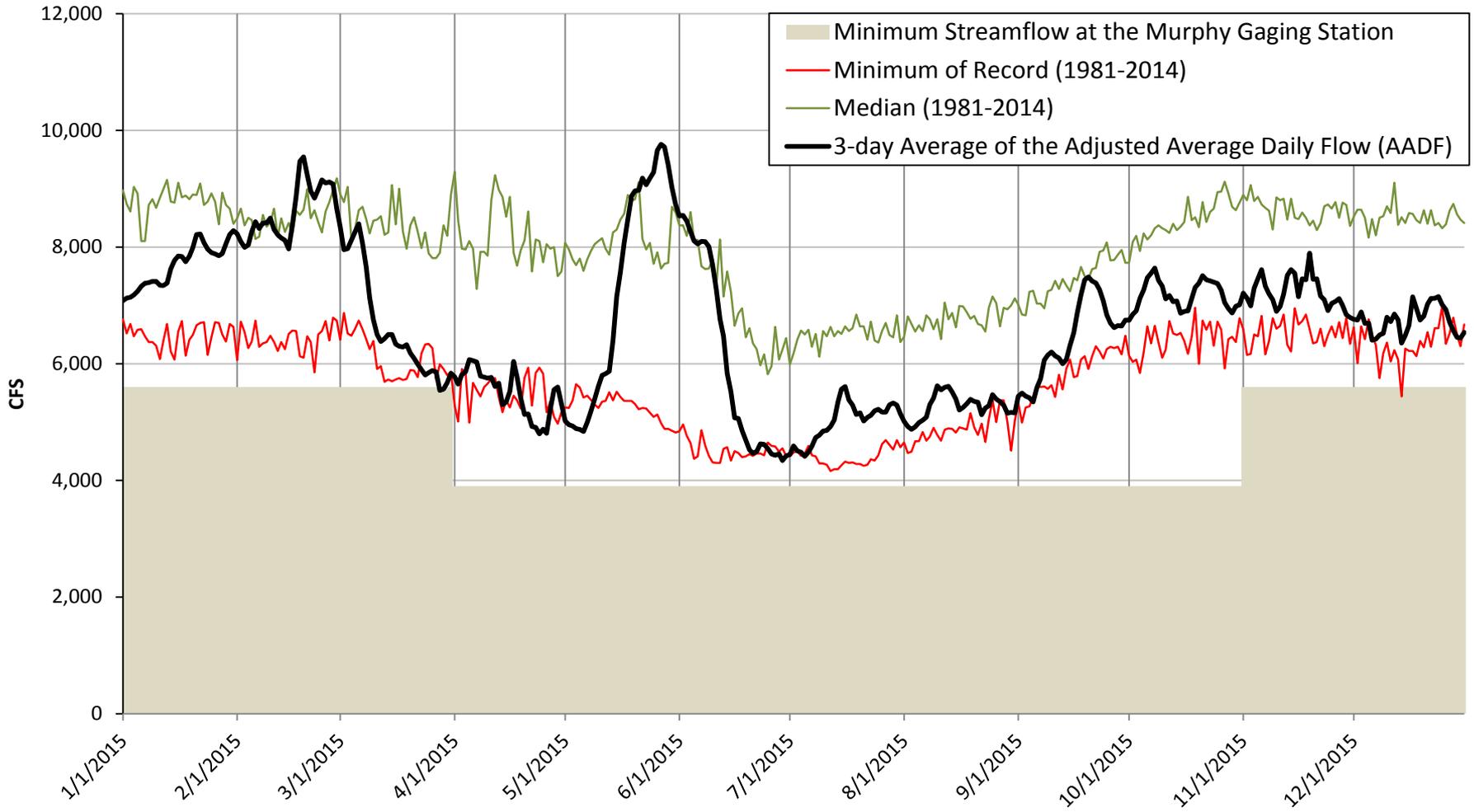
December 2015



WestWide Drought Tracker - Uldaho/WRCC Data Source - PRISM (Prelim), created 7 JAN 2016

# 2015 Water-Year: Swan Falls Minimum Streamflow

SUMMARY HYDROGRAPH SNAKE RIVER NR MURPHY 1981-2015



# Questions?

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# 2015 Water-Year: Management Challenges

## Priest Lake

- In 1951, the State of Idaho constructed the Outlet Dam at the mouth of Priest Lake to stabilize the summer lake levels of Priest and Upper Priest Lakes for recreational use.



- The outlet dam regulates the lake level between 0 and 3.0 ft on the USGS Priest Lake Outlet Gage providing an additional 72,000 AF of storage at 3.0 ft.

# 2015 Water-Year: Management Challenges

## Priest Lake

### Normal Operation

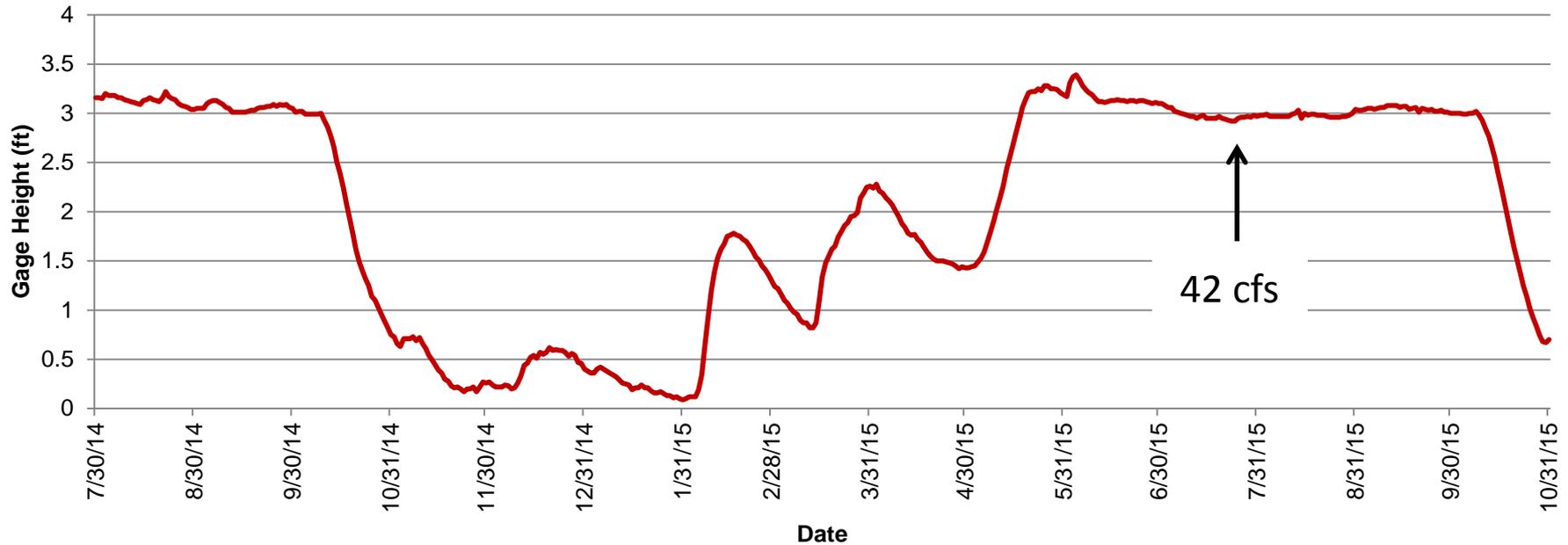
- Idaho Code § 70-507 regulates lake levels
  - The lake level is allowed to exceed 3.0 ft on the Outlet Gage during spring runoff.
  - After runoff the lake level must be 3.0 ft until the close of the main recreation season (early October).
  - At other times of the year the lake level must be maintained between 0.1 and 3.0 ft on the Outlet Gage
  
- From 1952-2006, a minimum discharge of 60 cfs was always maintained from the Outlet Dam during the summer recreation season.

# 2015 Water-Year: Management Challenges

## Priest Lake

### Operation in 2015

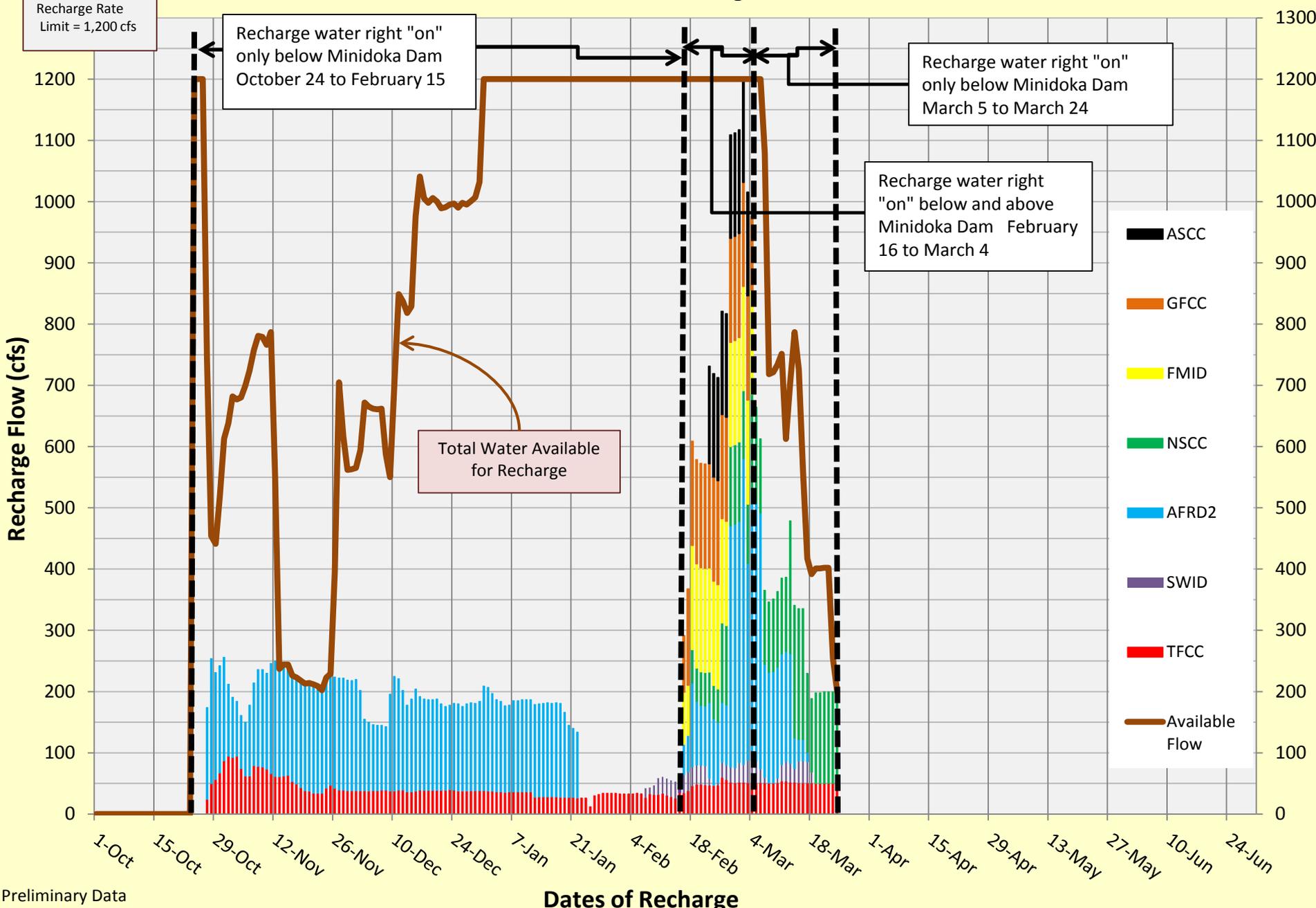
#### 2015 Priest Lake Elevation (USGS Gage 12393000)



- Reduced discharge to 42 cfs on July 28.
- Maintained lake level at 3.0.

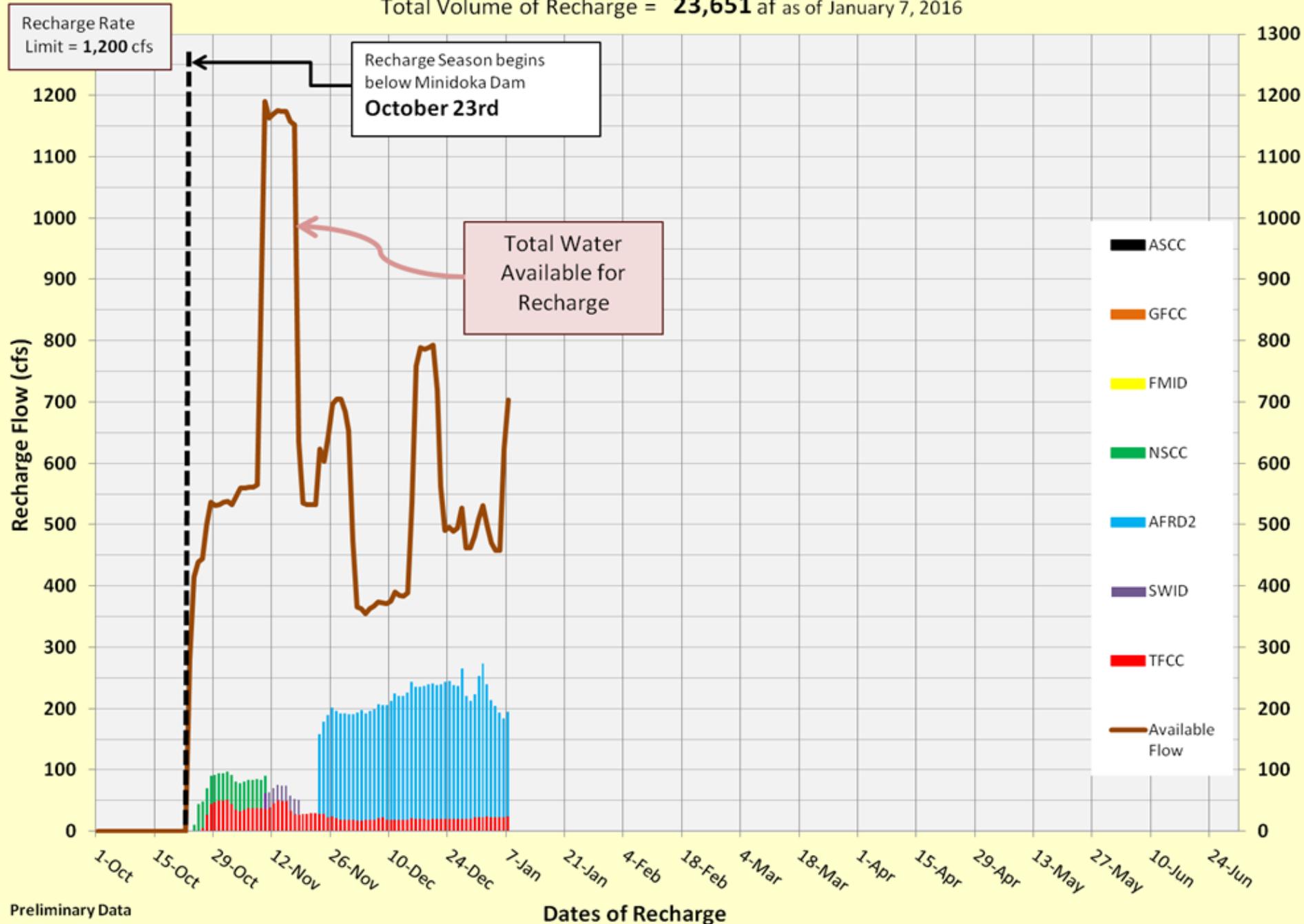
# Total Water Board Recharge Rates During 2014 - 2015 Season

Total Volume of Recharge = 75,505 ac-ft



# Total IWRB Managed Recharge Rates During 2015 - 2016 Season

Total Volume of Recharge = **23,651** af as of January 7, 2016



Preliminary Data

# Flow Past Milner Dam

## 13088000 Snake R below Milner – Combined

