

# **Water Supply Conditions Update**

Water Resources Business Area  
Seattle Public Utilities

April 1, 2010

# Seattle's Water Supply Status

April 1, 2010

**Our overall water supply situation and outlook is good.**

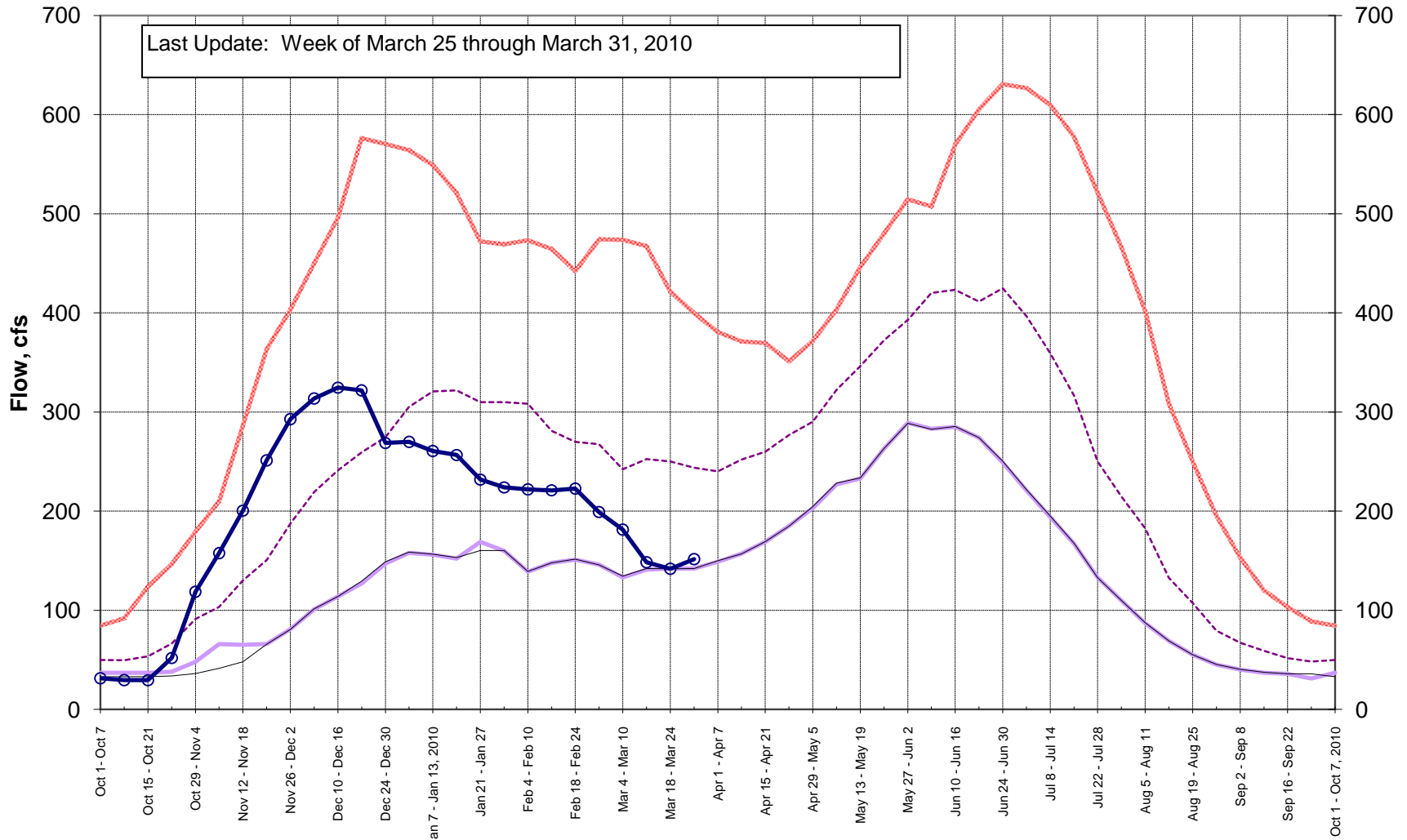
Seattle Water Supply Indicators		
Reservoir Storage	●	
Reservoir Inflows	●	
Snowpack	●	
Customer Use	●	
Overall	●	
● Good ● Fair ● Poor For more information, visit <a href="http://www.savingwater.org">www.savingwater.org</a>		



Masonry Pool Reservoir taken on March 21, 2010

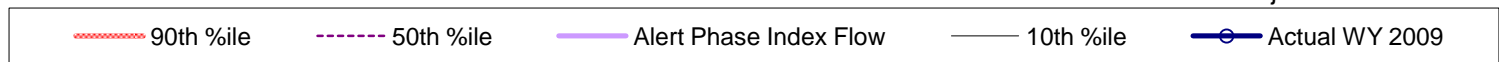
Photo Credit: Lloyd Buster

**WY 2010 USGS Gage 12115000, Cedar River Near Cedar Falls, 8-Week Moving Average Flows  
Percentiles Calculated from WY 1929-1993 Historical Record**



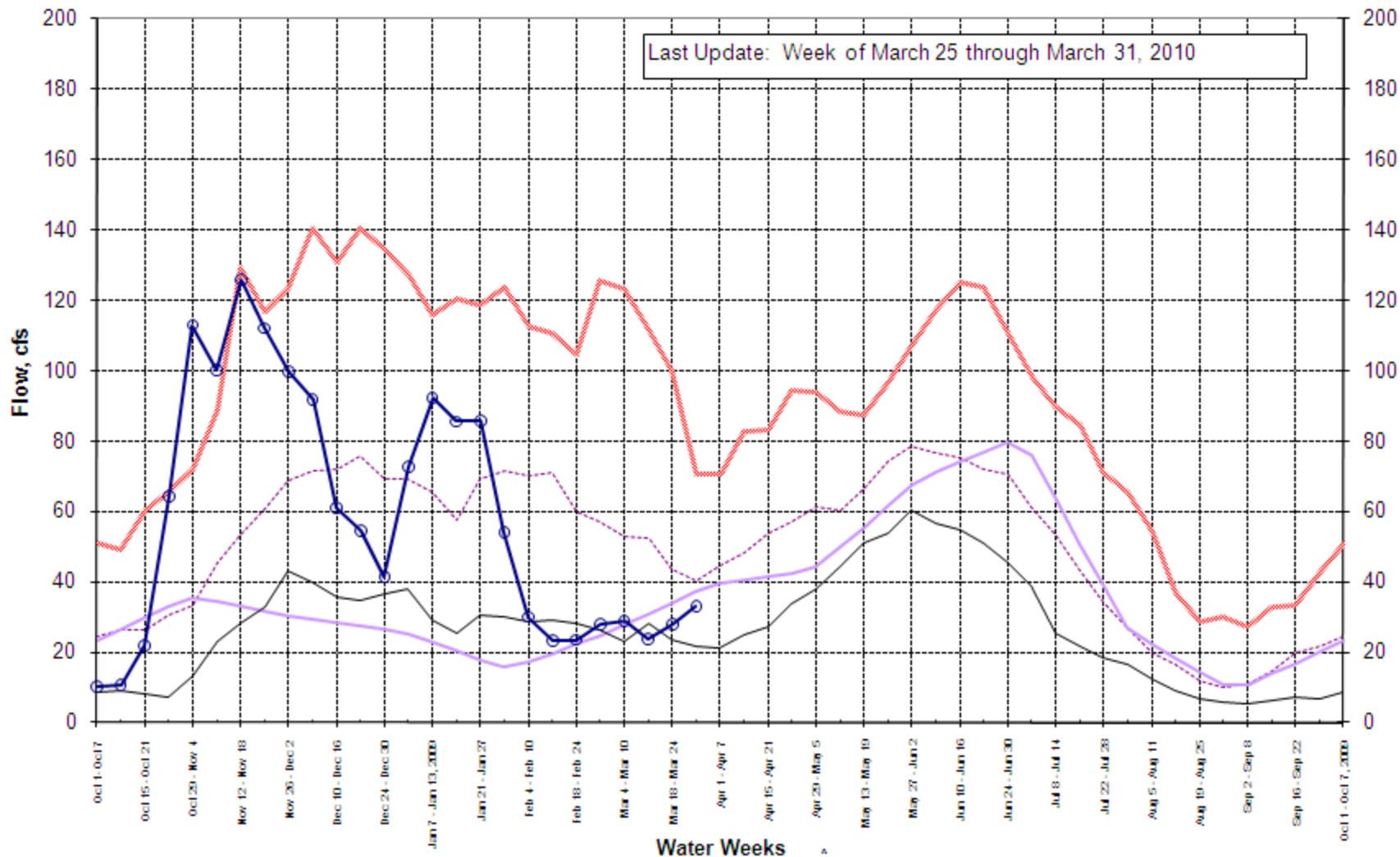
**Water Weeks**

All Data is Provisional and Subject to Revision

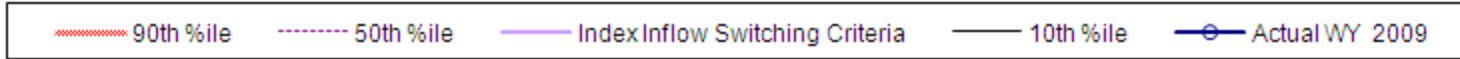


WY 2010 USGS Gage 12147600, South Fork Tolt River Near Index, 4-Week Moving Average Flows  
 Percentiles Calculated from WY 1960-1993 Historical Record

Last Update: Week of March 25 through March 31, 2010

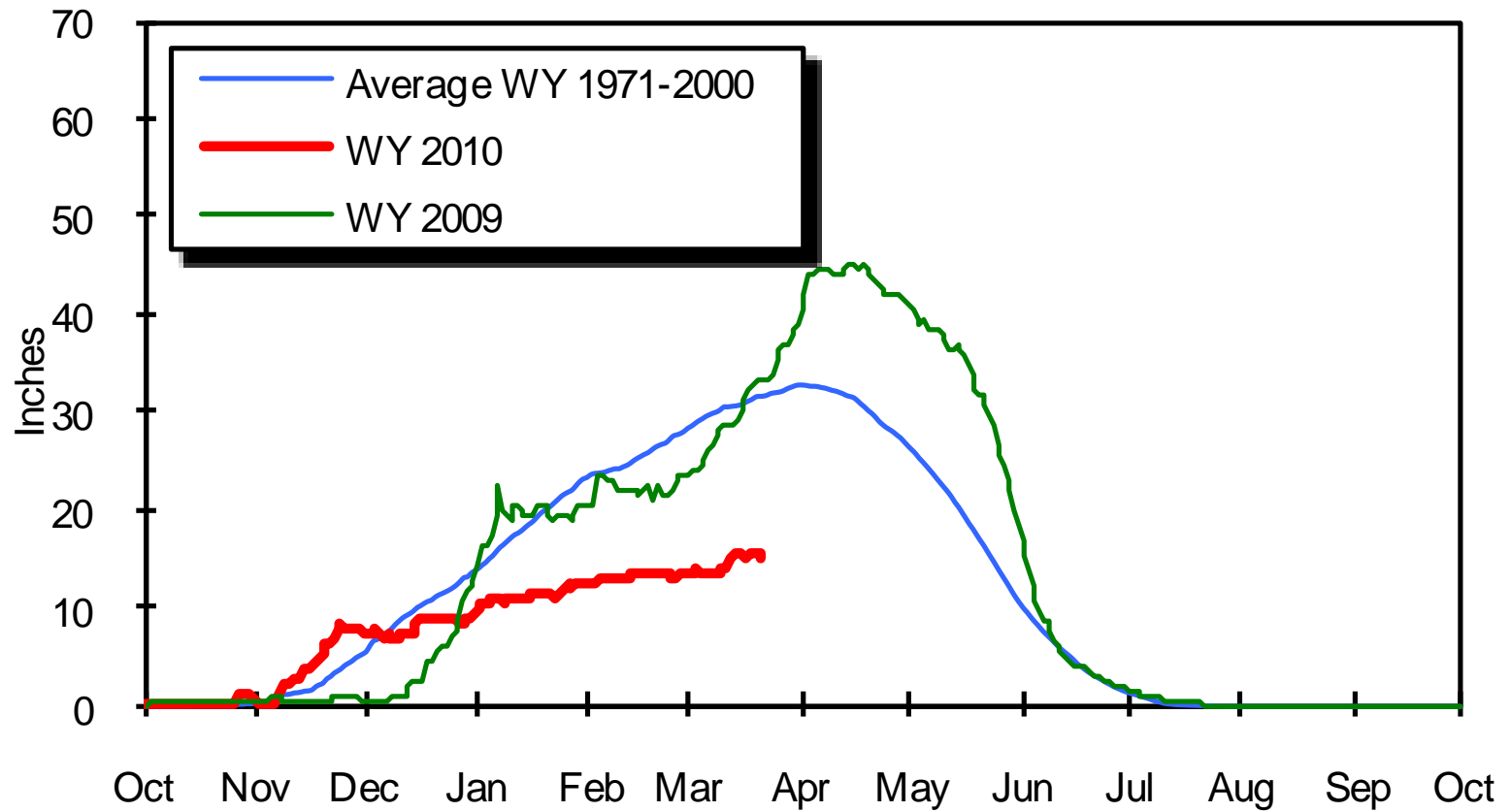


All data is provisional and subject to revision.



As of March 21, 2010

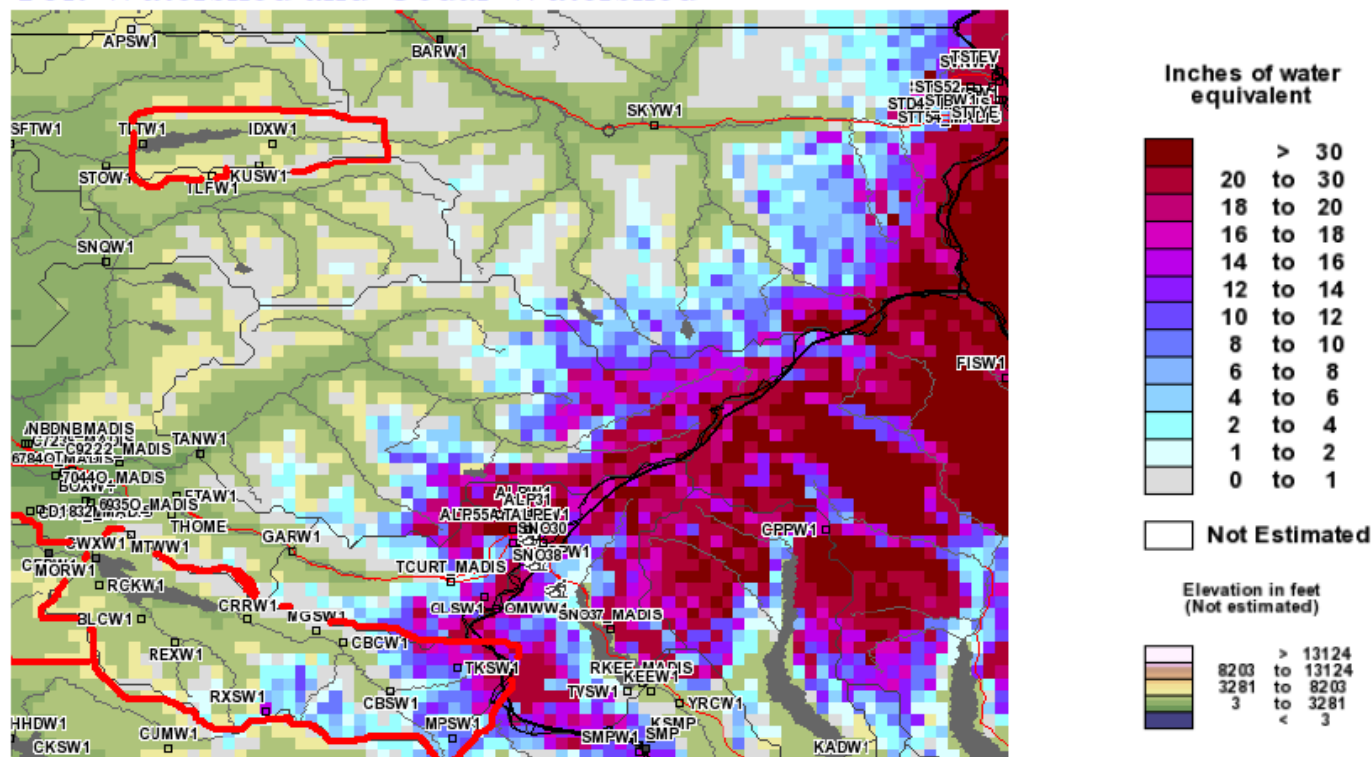
### Cumulative Snowpack (Snow Water Equivalent) Weighted Average Cedar/Tolt



# Experimental Snow Water Equivalent Map – March 23, 2010



## Tolt Watershed and Cedar Watershed



Snotel Station ID:

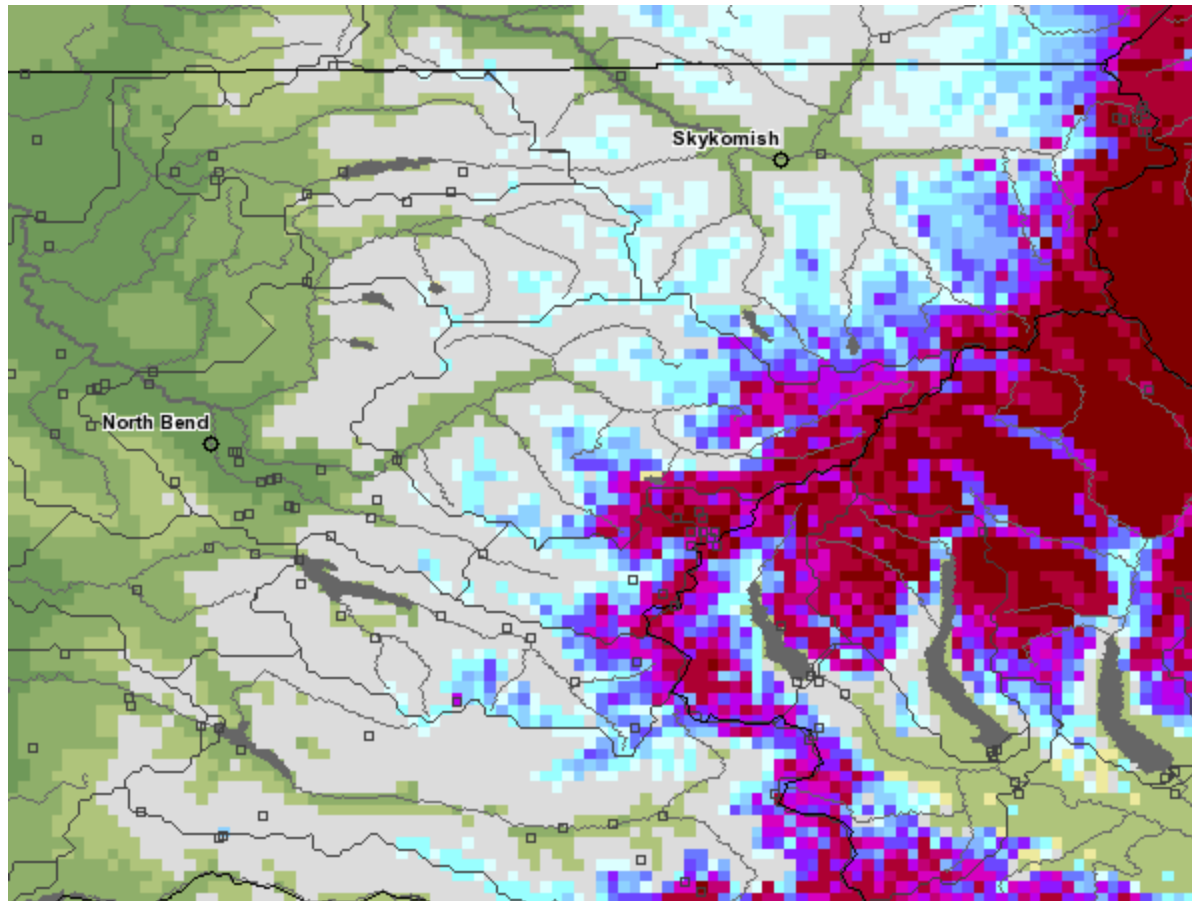
- KUSW1\* = Skookum, elevation 3920 feet
- APSW1 = Alpine Meadows, elevation 3500 feet
- SVNW1 = Stevens Pass, elevation 4070 feet

Snotel Station ID:

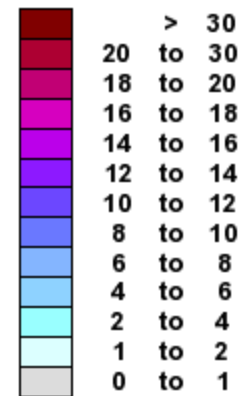
- RXSW1\* = Rex River, elevation 4000 feet
- MGSW1\* = Mount Gardner, elevation 3000 feet
- MPSW1\* = Meadows Pass, elevation 3500 feet
- TKSW1\* = Tinkham Creek, elevation 3070 feet
- CUMW1 = Cougar Mountain, elevation 3200 feet
- OMWW1 = Olallie Meadows, elevation 3700 feet
- SMPW1 = Stampede Pass, elevation 3860 feet

\* Snotel Station is located within the watershed.

March 31, 2010

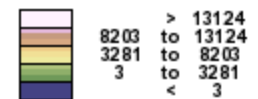


**Inches of water equivalent**

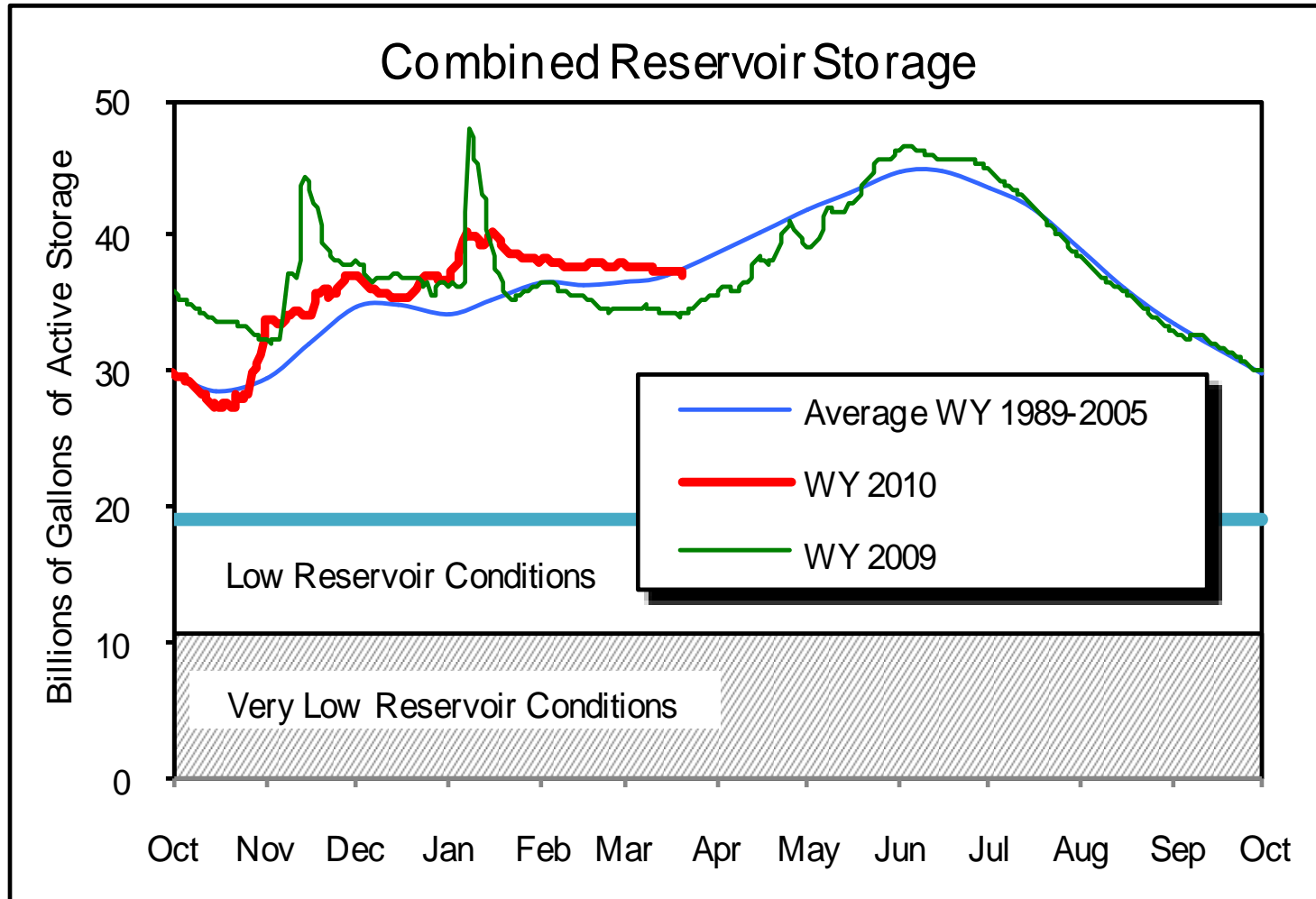


Not Estimated

**Elevation in feet  
(Not estimated)**



As of March 21, 2010



Low Reservoir Conditions : CML=1541.5, MP=1528', LY=497.4', SFT=1710'. Water is available below this level. Additional operational steps are taken when at this level.

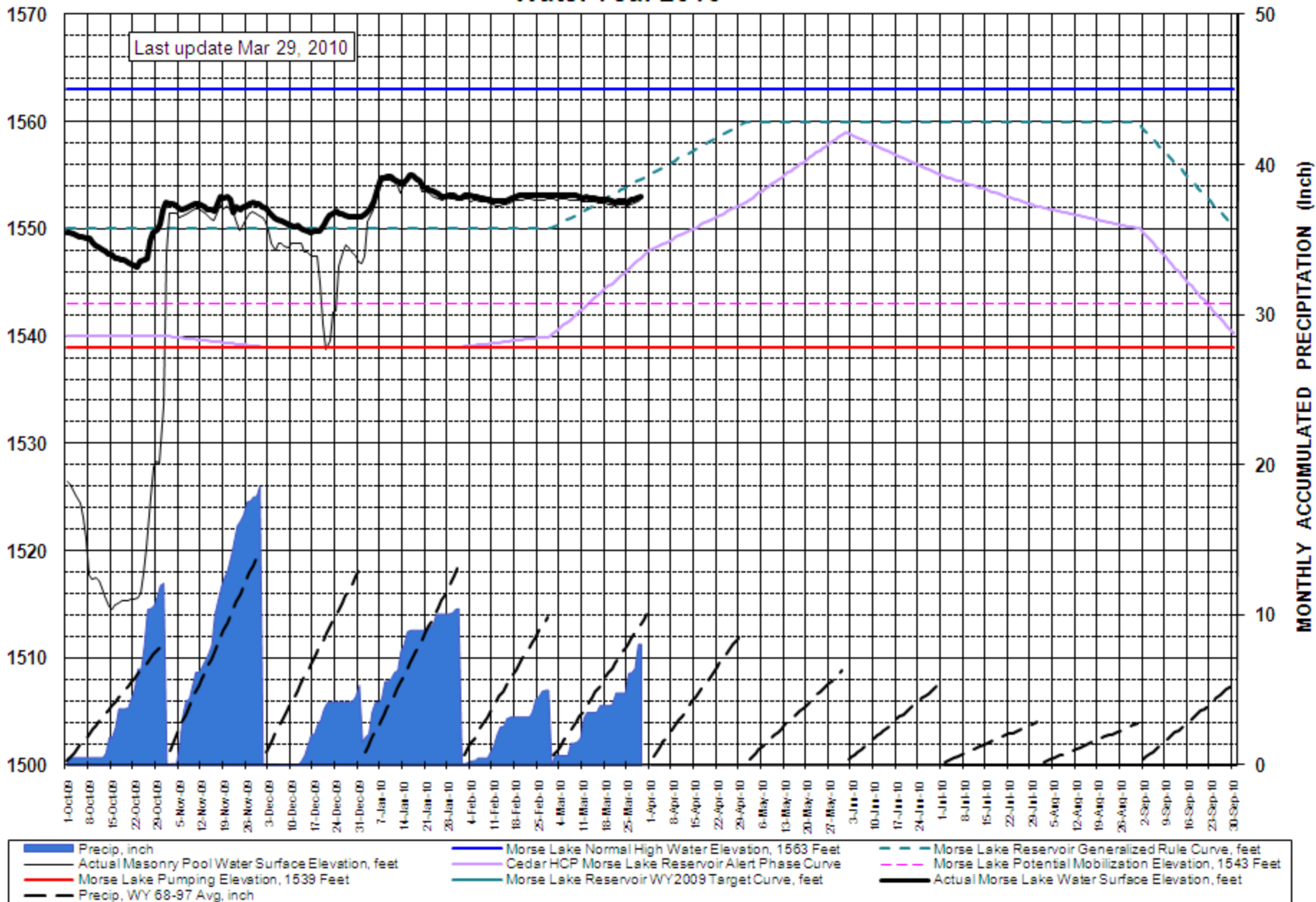
Very Low Reservoir Conditions : CML=1532', MP=1510', LY=479.4', SFT=1710'. More water is available. Additional operational steps are taken when at this level.

Zero Baseline for this Graph : CML=1515', MP=1510', LY=479.4', SFT=1670'.



# CEDAR RIVER AT RESERVOIR

Water Year 2010

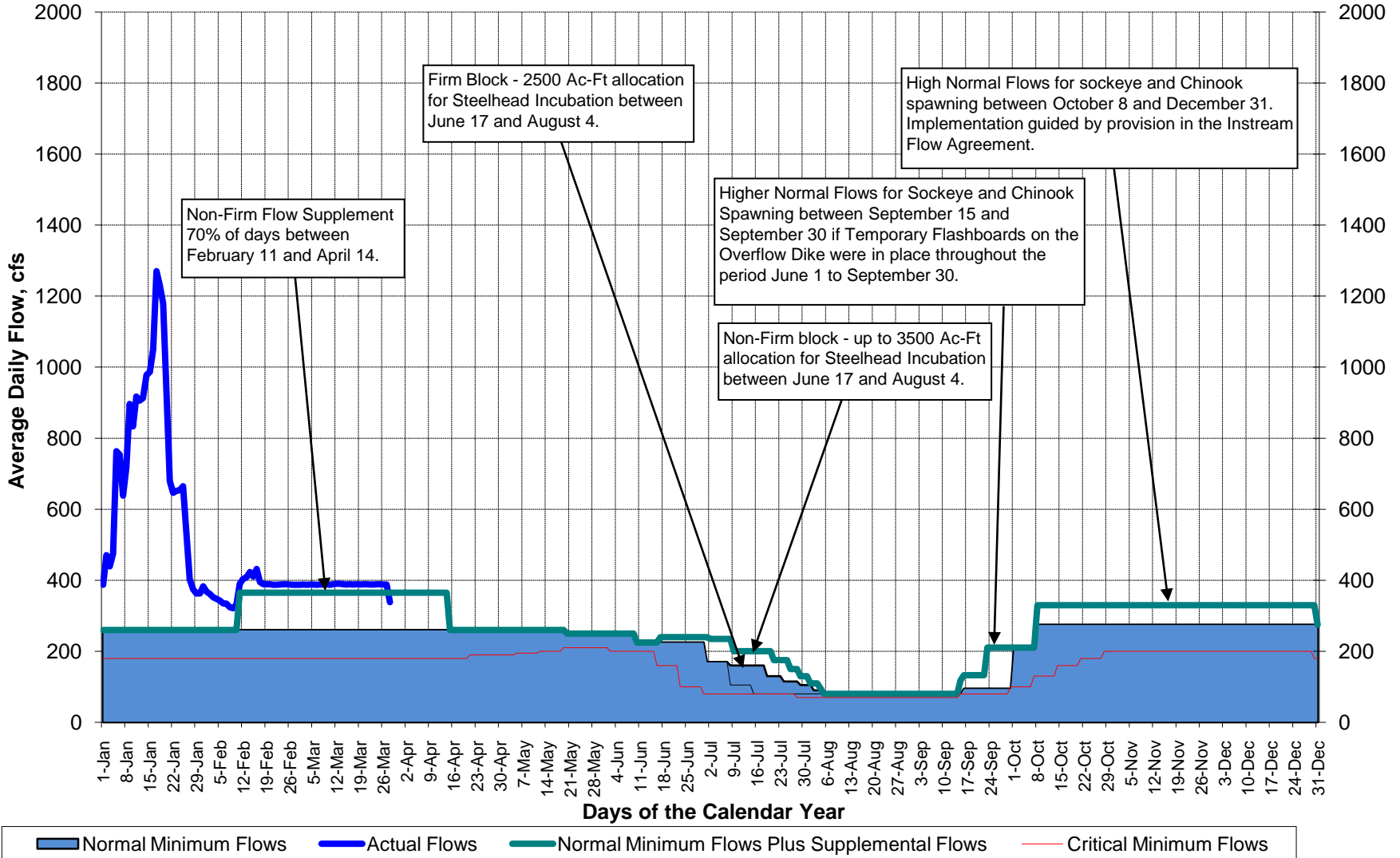


Last Update: 3/28/2010

# Calendar Year 2010

## Cedar River Instream Flows Measured at USGS Stream Gage No. 12117600

All Data is Provisional and Subject to Revision

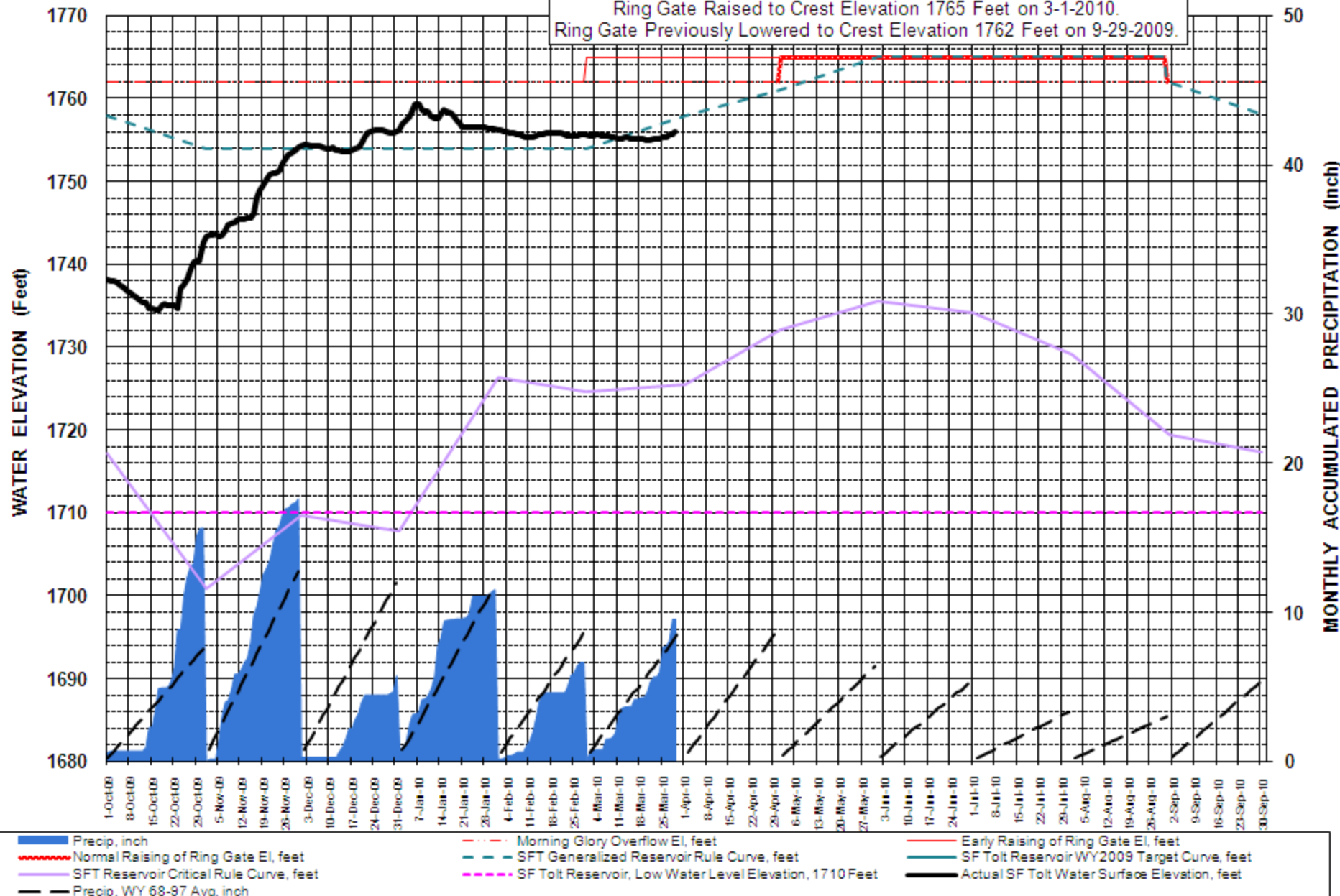


# SOUTH FORK TOLT RIVER AT RESERVOIR

Last update Mar 29, 2010

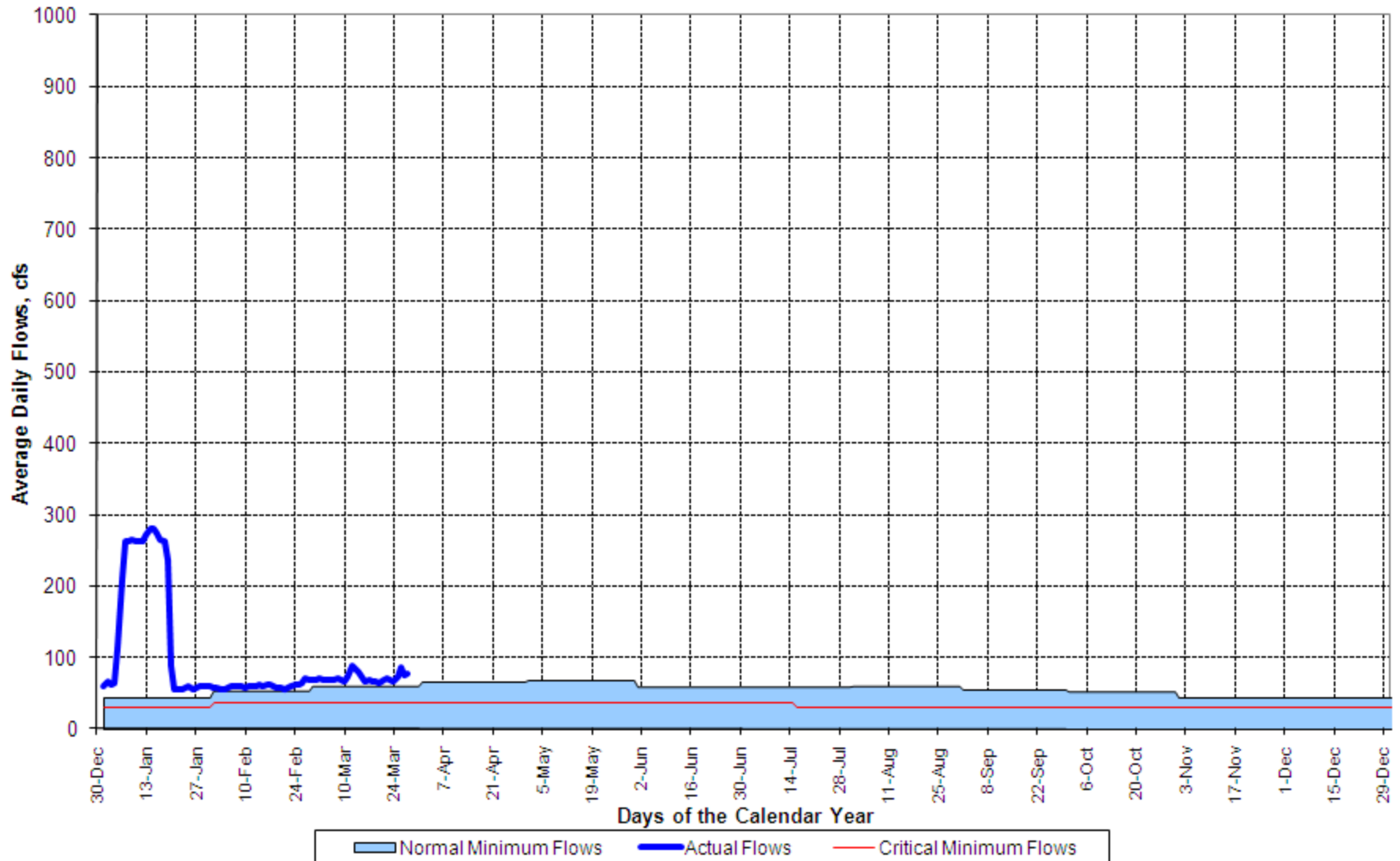
## Water Year 2010

Ring Gate Raised to Crest Elevation 1765 Feet on 3-1-2010.  
Ring Gate Previously Lowered to Crest Elevation 1762 Feet on 9-29-2009.



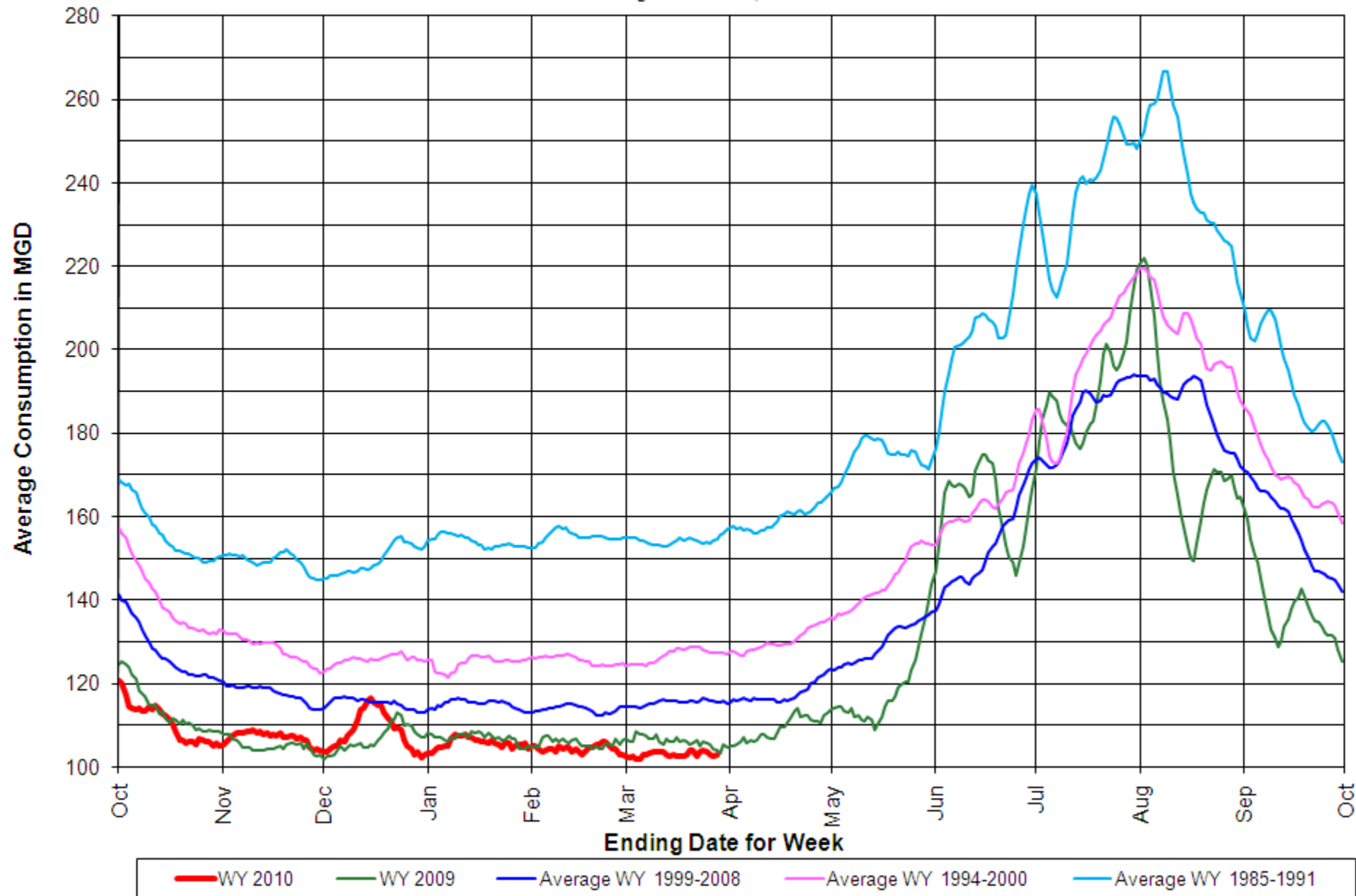
Last Updated: 3/28/2010

### Calendar Year 2010 South Fork Tolt River Instream Flows Measured at USGS Stream Gage No. 12148000 All Data is Provisional and Subject to Revision



# 24-hr Consumption, 7-Day Moving Average

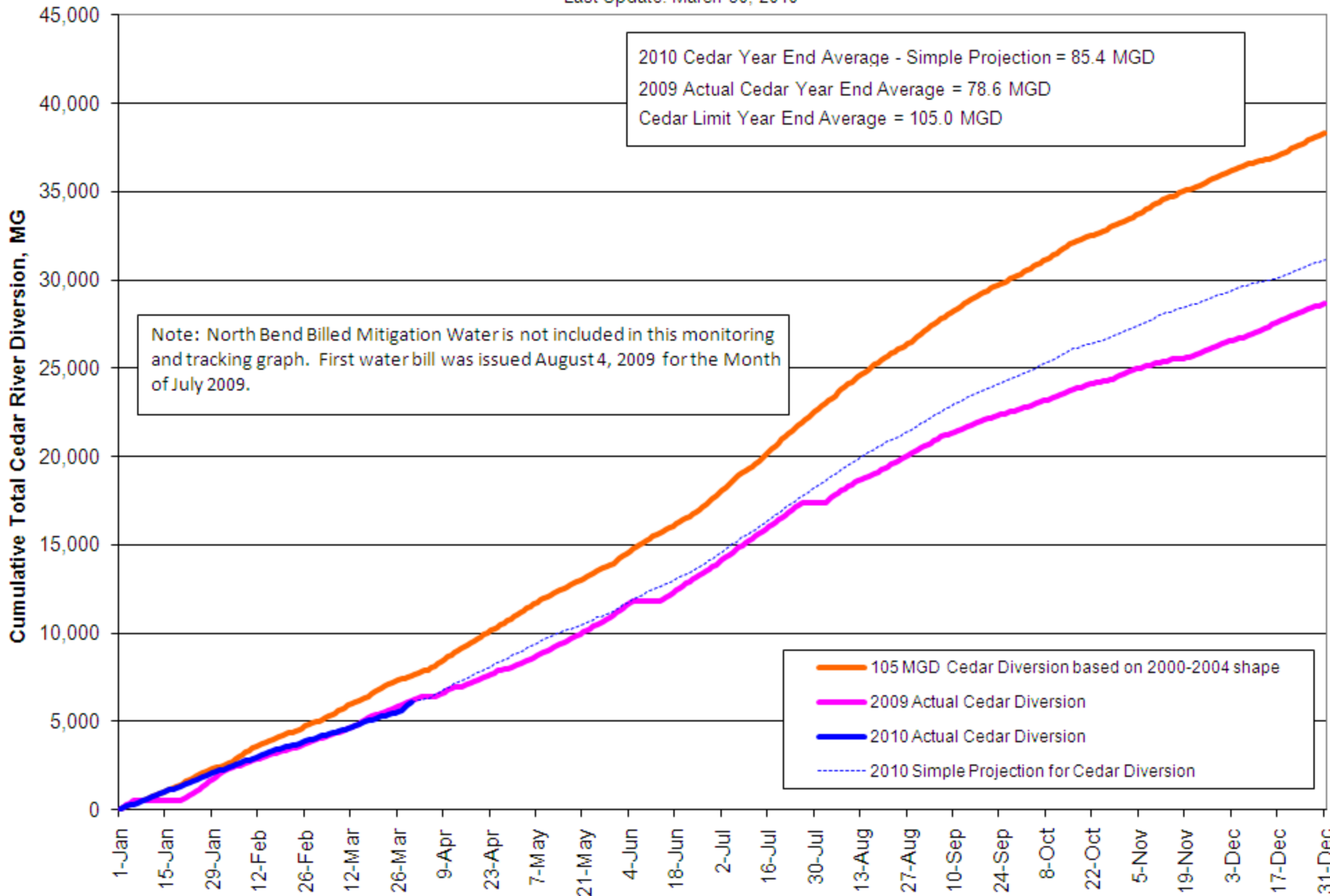
Through March 29, 2010



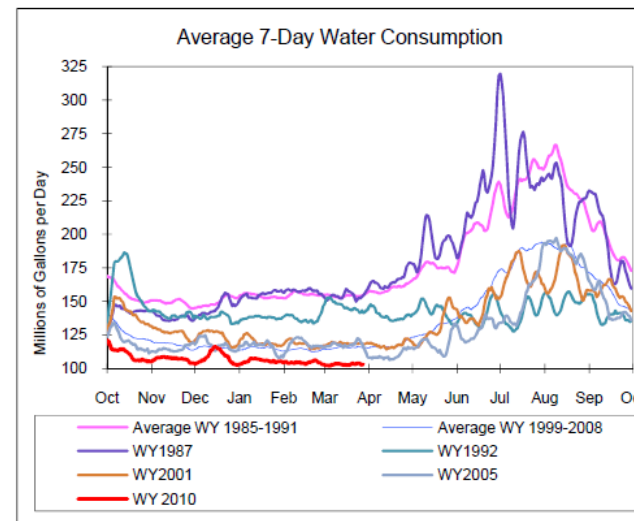
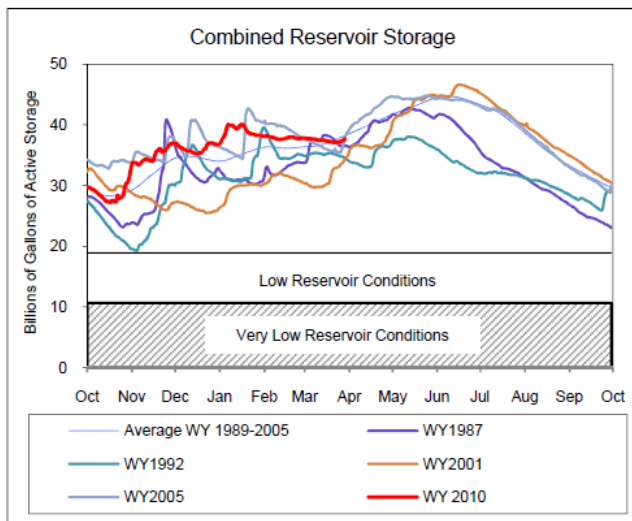
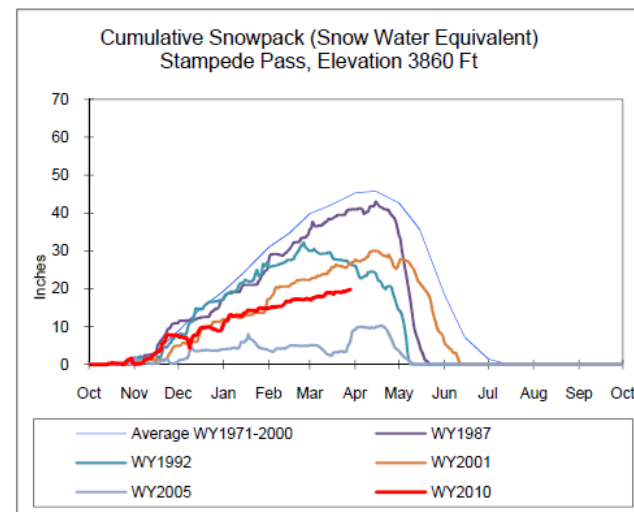
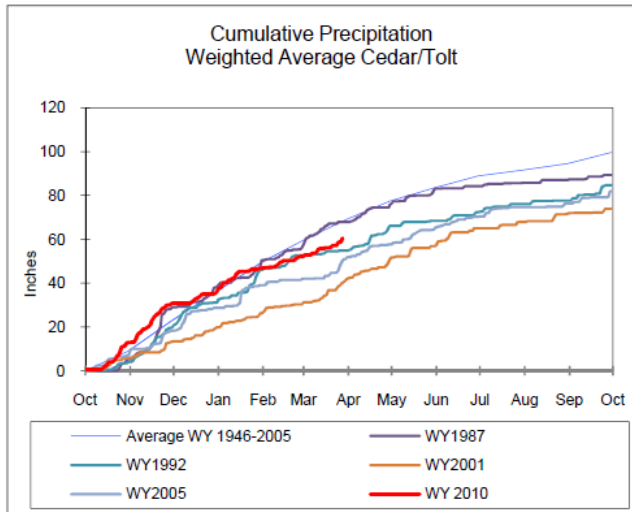
Notes: A 7-day moving average is calculated using data from the day of and the previous 6 days.  
All Data is Provisional and Subject to Change

# Cumulative Total Cedar River Diversion Calendar Year 2010 Monitoring and Tracking Graph

Last Update: March 30, 2010



# Seattle Public Utilities Water System Synopsis - Comparisons

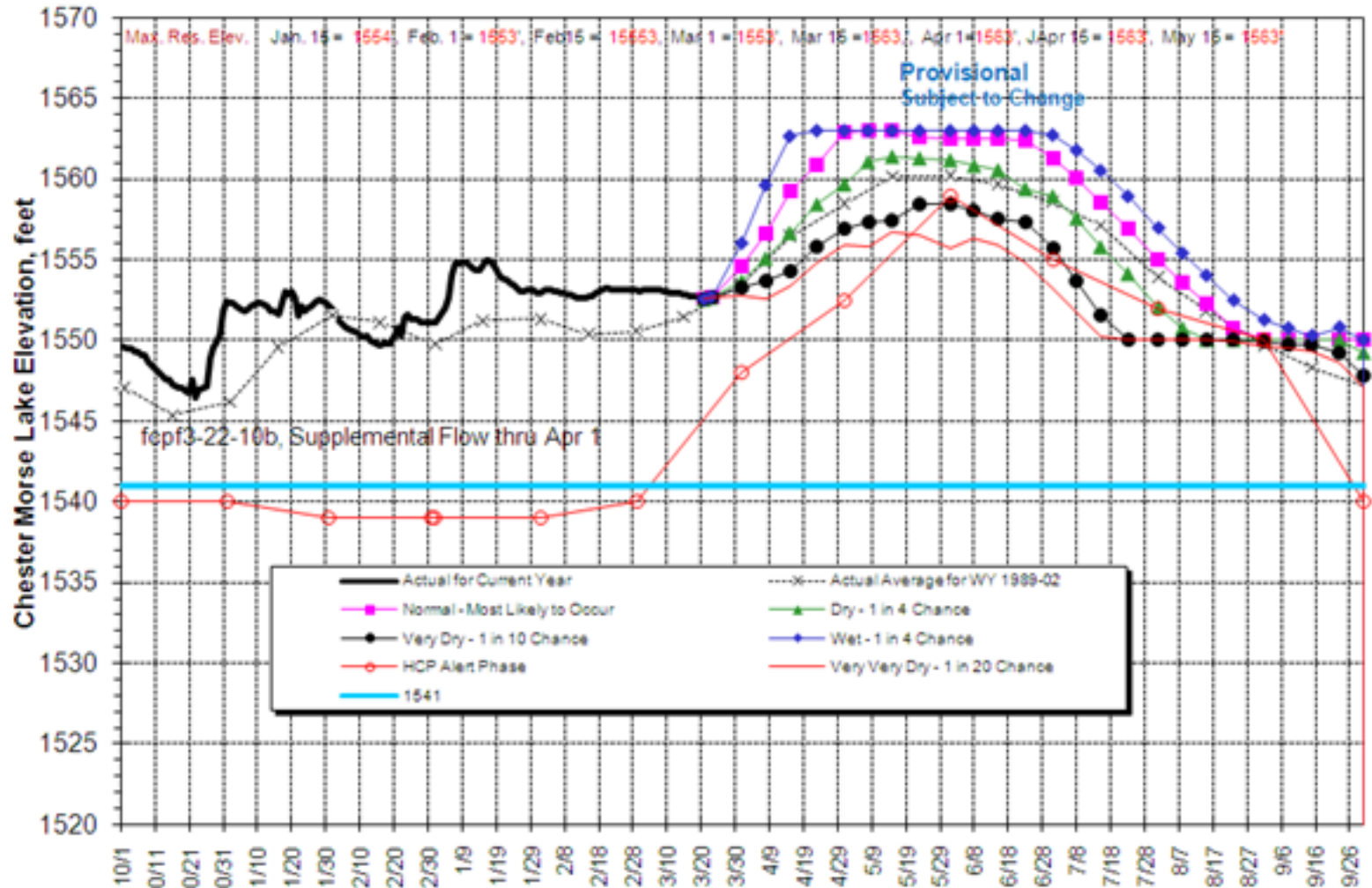


Low Reservoir Conditions : CML=1541.5, MP=1528', LY=497.4', SFT=1710'. Water is available below this level. Additional operational steps are taken when at this level.

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Zero Baseline for this Graph : CML=1515', MP=1510', LY=479.4', SFT=1670'.

**SCENARIO: Forecast of Chester Morse Lk Elev**  
**Actual Reservoir Elevation on 3/22/2010, Forecast thru 3-24, Hist. Data 3-25 thru 9-29**  
**Flashboards 1550', Min. Pool 1515'**



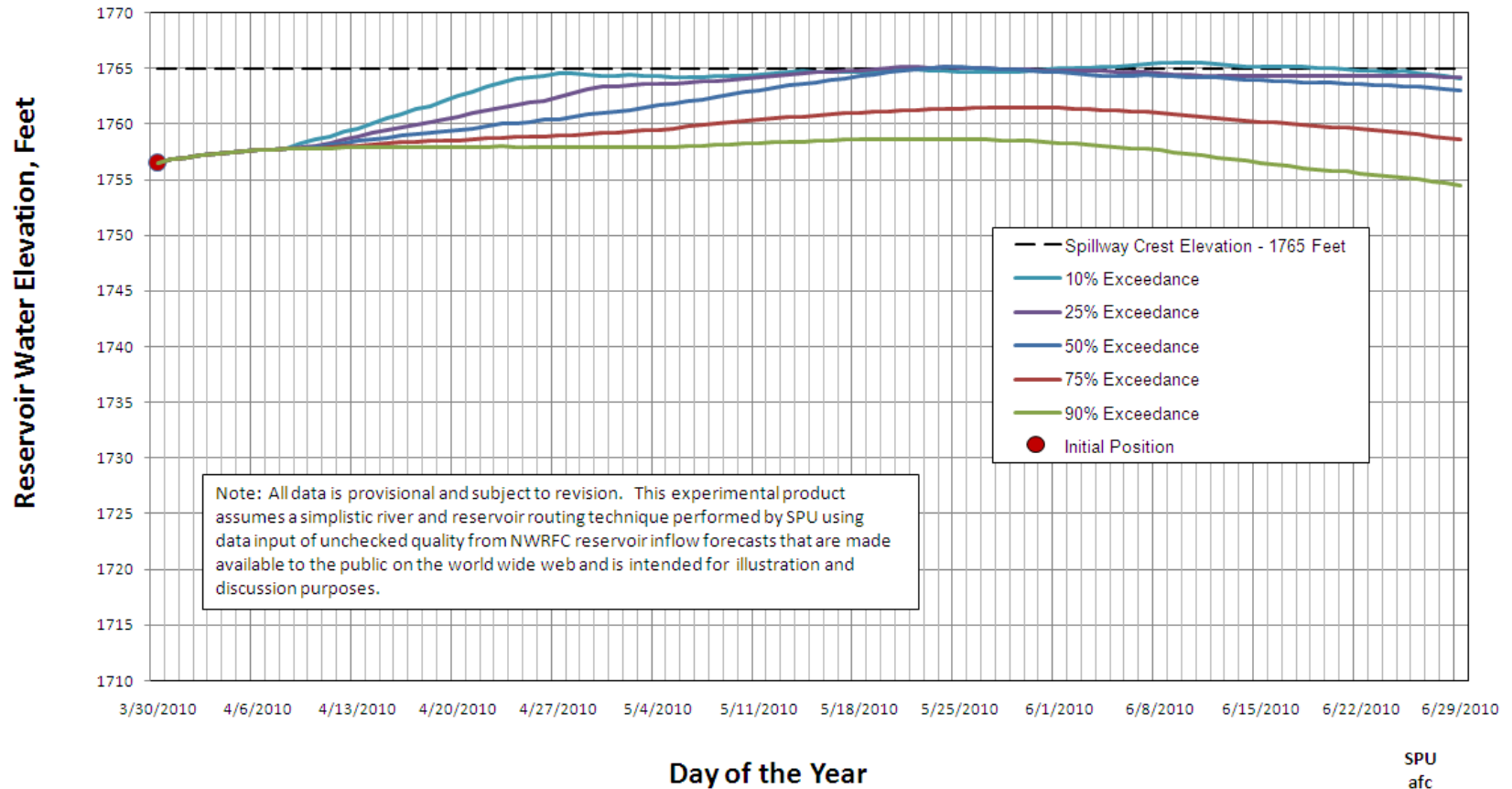
Almost 13 billion gallons are stored between elevations 1539.2 and 1562 feet and more than 3.4 billion gallons between elevations 1532 and 1539.2 feet.



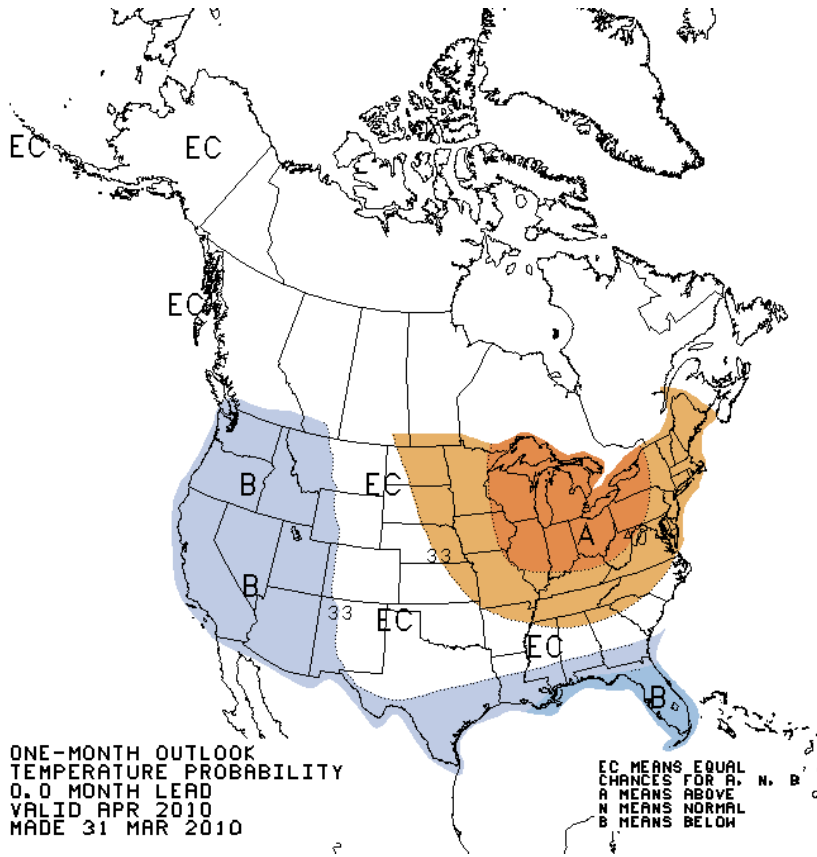
Seattle Public Utilities - Preliminary Draft for Discussion Purposes Only

SPU Experimental Probability Forecast - South Fork Tolt Reservoir Water Level

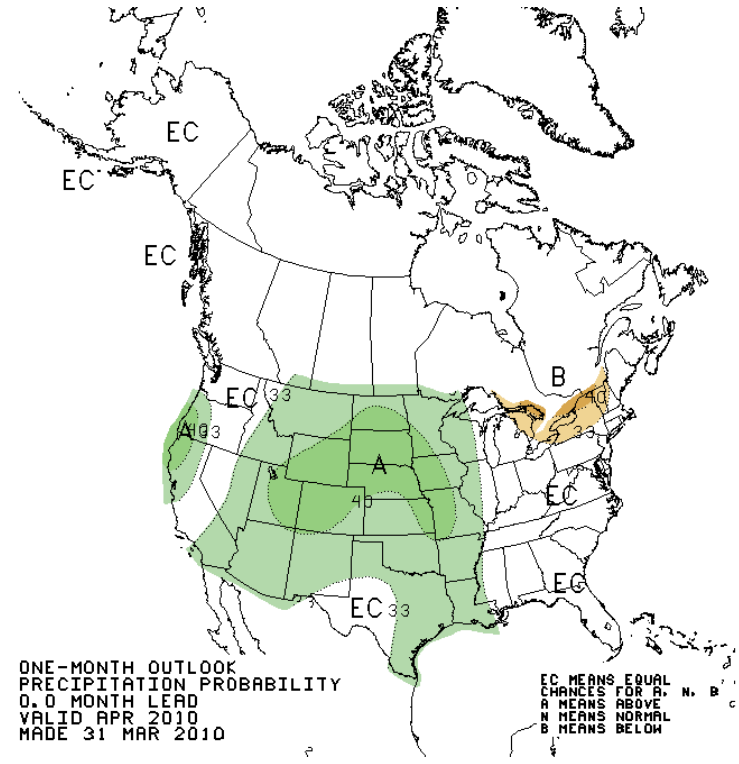
Calculations using NWRFC Extended Streamflow Prediction Model Probabilistic Reservoir Inflow Forecasts for SF Tolt Reservoir and Initial Conditions on March 30, 2010



# One Month Climate Forecast

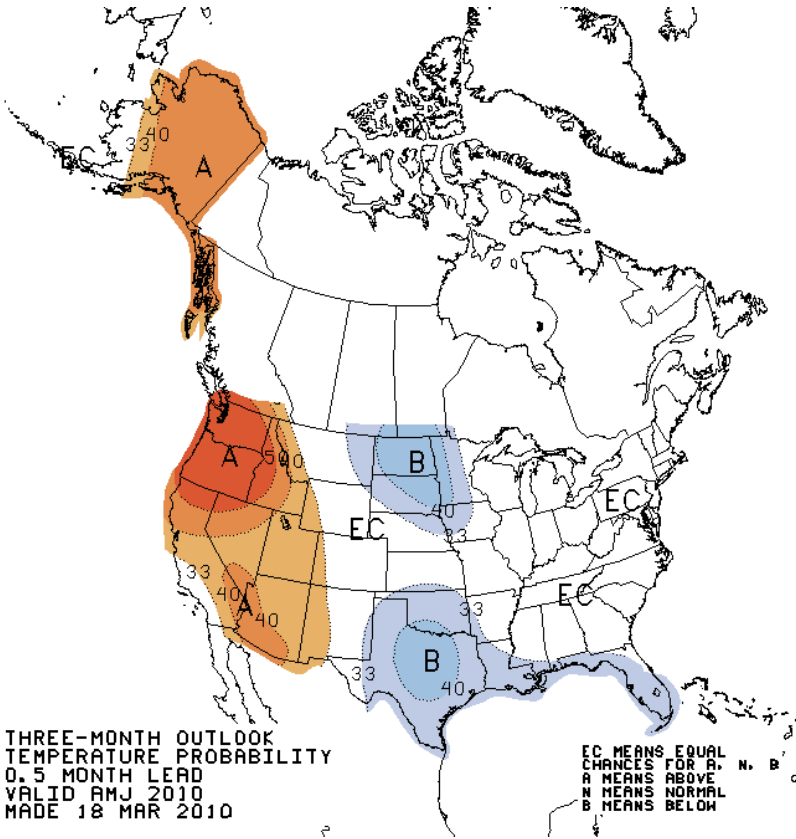


Temperature

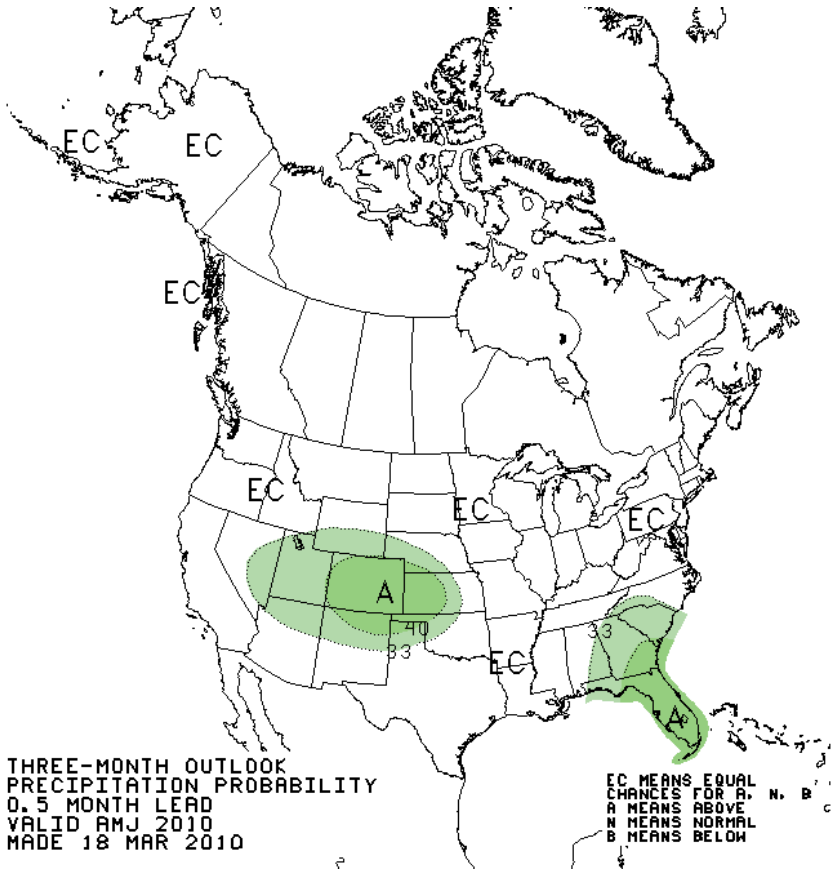


Precipitation

# Three Month Climate Forecast



Temperature



Precipitation



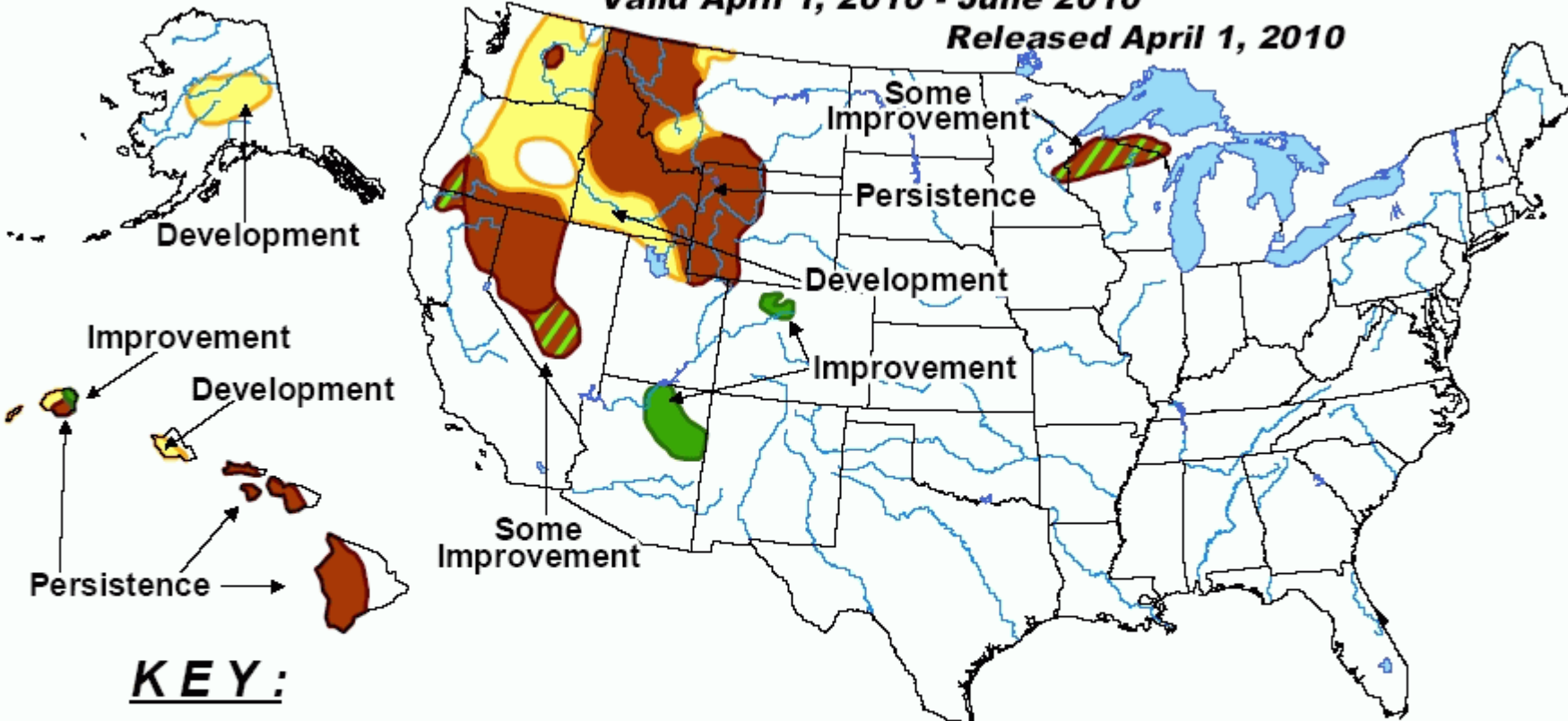
# U.S. Seasonal Drought Outlook

## Drought Tendency During the Valid Period





Valid April 1, 2010 - June 2010


Released April 1, 2010





### KEY:

 Drought to persist or intensify

 Drought ongoing, some improvement

 Drought likely to improve, impacts ease

 Drought development likely

No Drought Posted/Predicted 

Depicts large-scale trends based on subjectively derived probabilities guided by short- and long-range statistical and dynamical forecasts. Short-term events – such as individual storms – cannot be accurately forecast more than a few days in advance. Use caution for applications – such as crops – that can be affected by such events. "Ongoing" drought areas are approximated from the Drought Monitor (D1 to D4 intensity). For weekly drought updates, see the latest U.S. Drought Monitor. NOTE: the green improvement areas imply at least a 1-category improvement in the Drought Monitor intensity levels, but do not necessarily imply drought elimination.

Questions?