

Water Management in the Rogue Basin

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Alan Donner, Regulator

Portland District

22 May 2012



US Army Corps of Engineers
BUILDING STRONG®



Meeting Overview

- Introductions
- Project purposes and storage allocations
- Water management plan development
- Observed conditions
- Water supply forecast
- Proposed 2012 operating plan
- Comments or questions

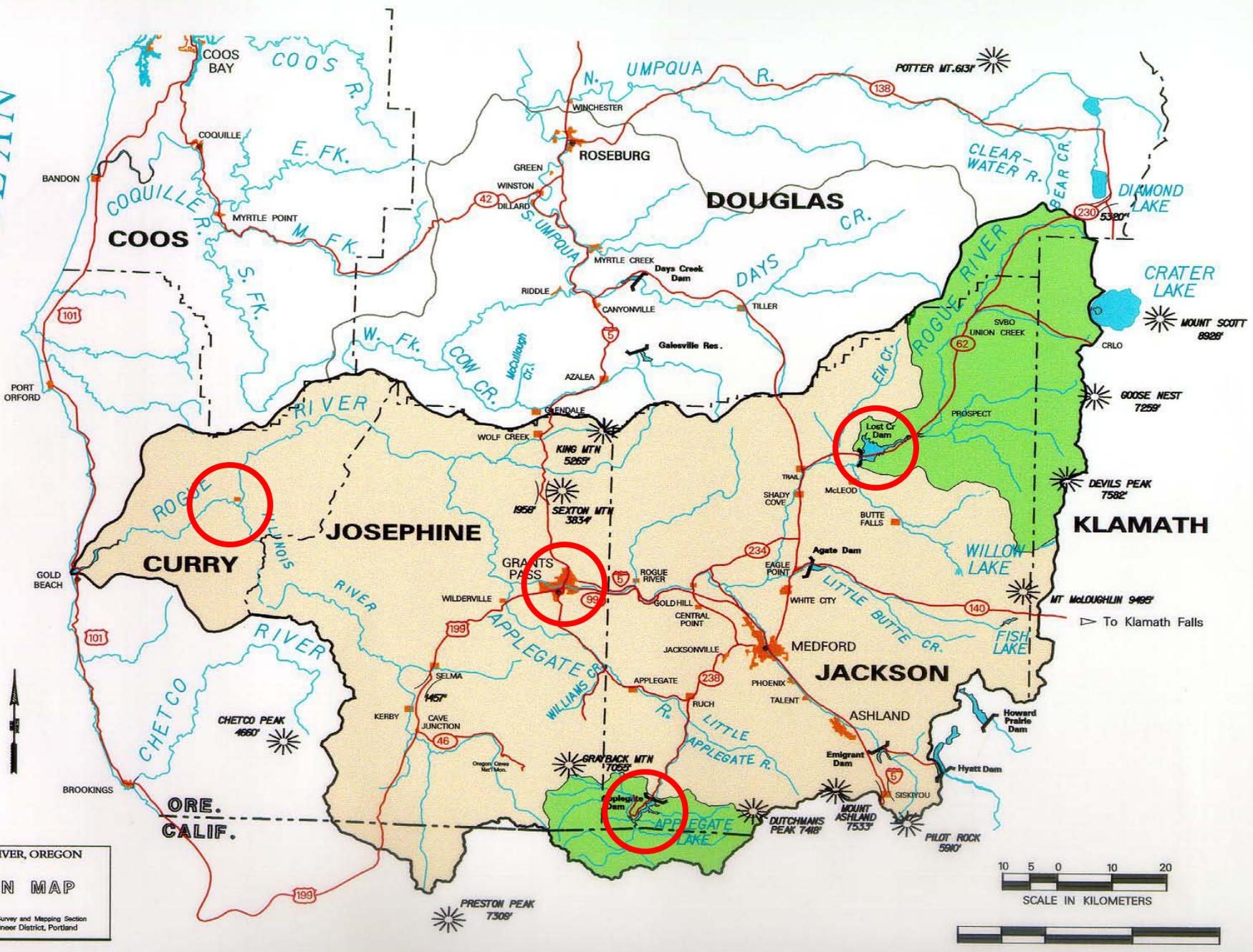


Purposes and Allocations



PACIFIC OCEAN

ROGUE RIVER, OREGON
BASIN MAP
Produced by GIS, Survey and Mapping Section
U.S. Army Engineer District, Portland



10 5 0 10 20
SCALE IN KILOMETERS

Congressionally Authorized Purposes

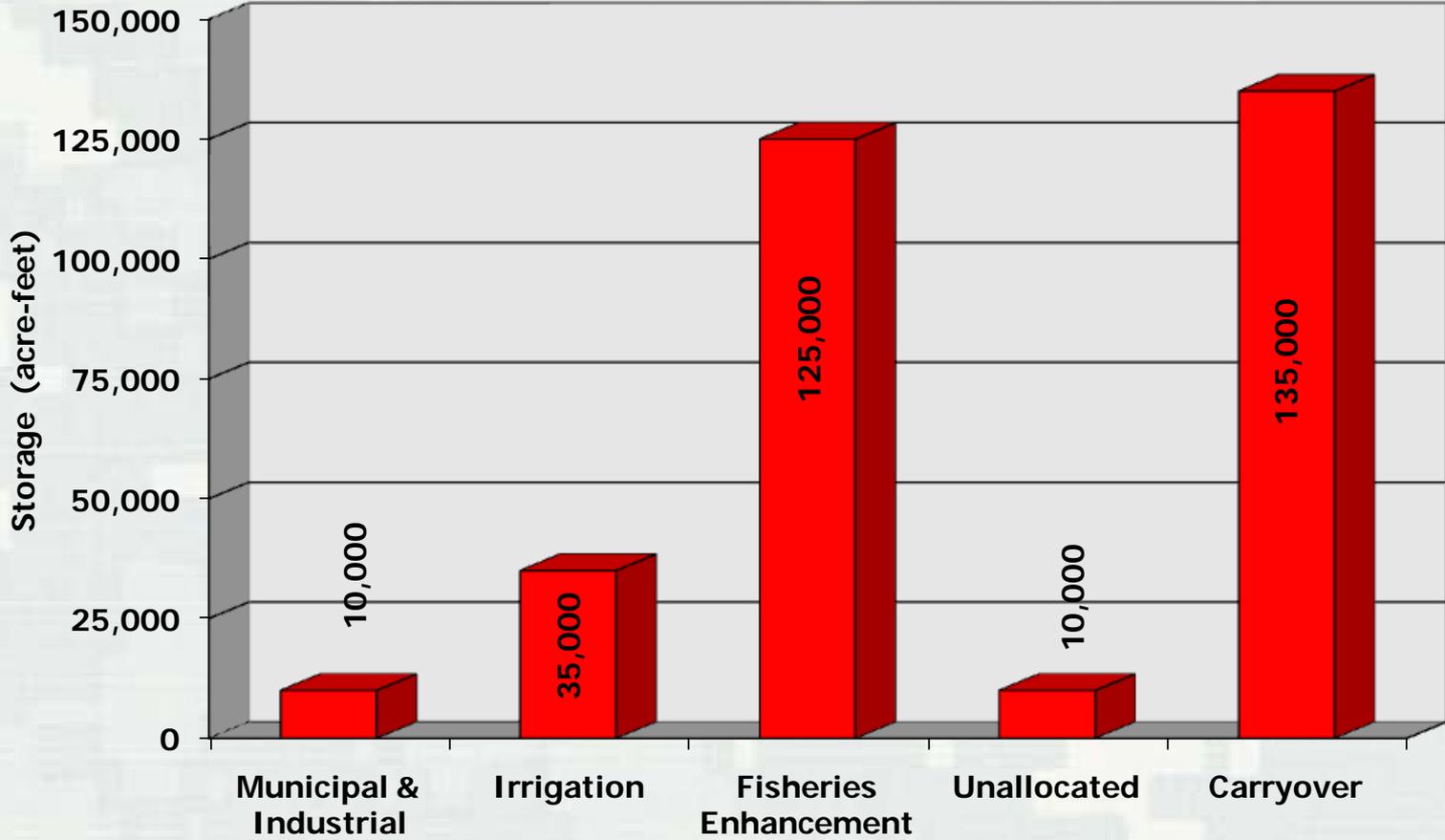
- Flood damage reduction ☆ *
- Fish & wildlife ☆ *
- Irrigation ☆ *
- Municipal & industrial water ☆
- Recreation ☆ *
- Water quality ☆ *
- Hydropower ☆



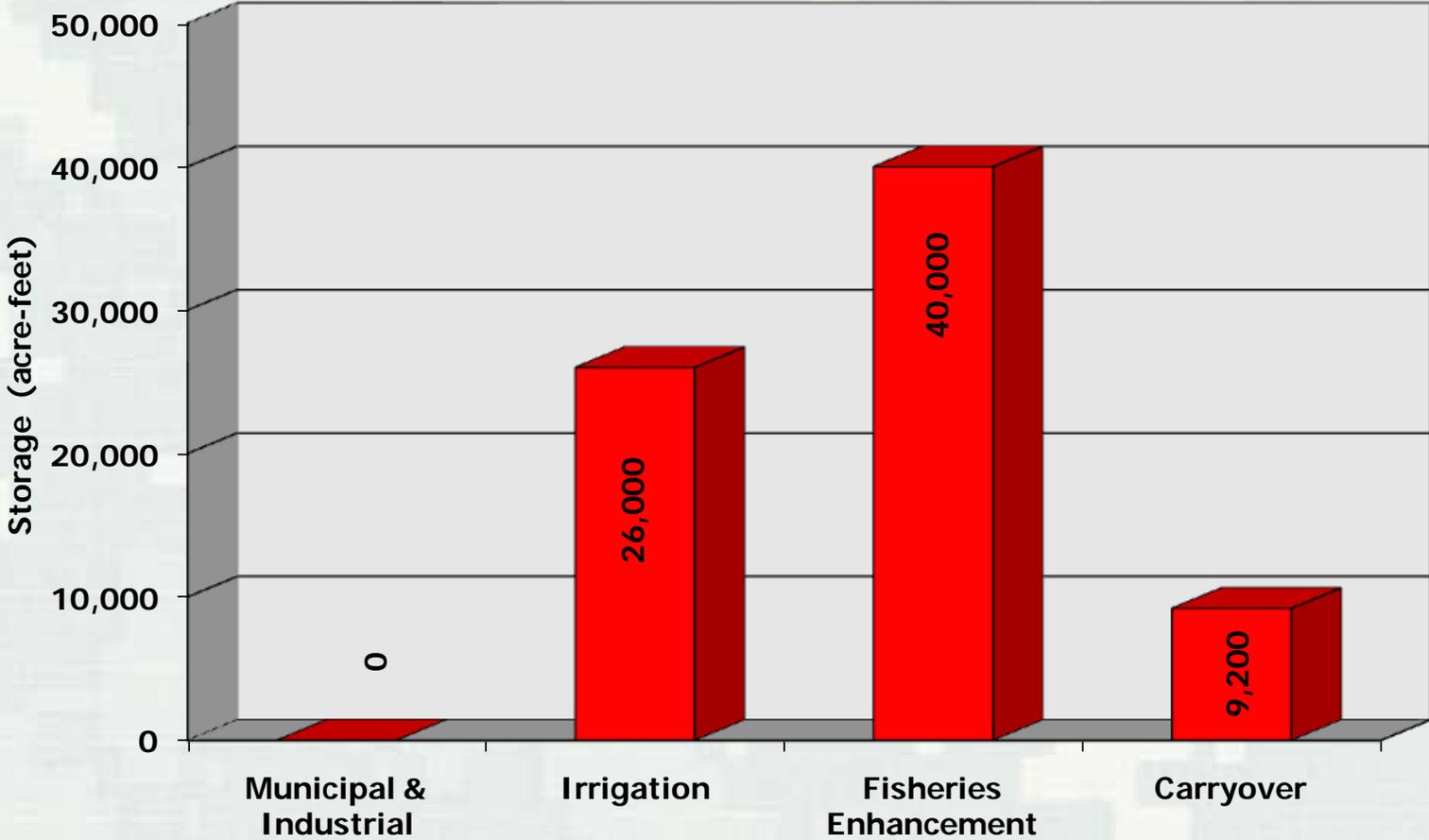
☆ William L. Jess (Lost Creek)
authorized purpose
* Applegate authorized purpose



Lost Creek Reservoir Seasonal Storage Allocations



Applegate Reservoir Seasonal Storage Allocations



Planning Process



Rogue Basin Water Management Team

District Engineer
Col John W. Eisenhower, PE

Operations Division
Chief – Jim Mahar

Engineering and Construction Division
Chief – Lance Helwig

Rogue River Basin Project
Manager – Jim Buck
541-878-2255
Jim.A.Buck@usace.army.mil
Operations – David Tucker

H & H Branch
Chief – Bob Buchholz

Fishery Biologist -
Greg Taylor

Operators - Robert Floyd, Marv Gentry,
Bruce McClamroch, John Funke, Bearl Jones
and Patrick Smith

Reservoir Regulation Section
Chief – Bruce Duffe
Regulator – Alan Donner
503-808-4891
Alan.D.Donner@usace.army.mil



Rogue Basin Water Management Advisory Group

- Oregon Water Resources Department
- Oregon Department of Fish and Wildlife
- Oregon State Marine Board
- Oregon Department of Environmental Quality
- National Marine Fisheries Service
- National Weather Service
- US Fish & Wildlife Service
- US Forest Service
- US Bureau of Land Management
- US Bureau of Reclamation
- US Geological Survey
- Counties



Water Management Planning Process

- FEBRUARY Review, Lessons Learned & Outlook
- MARCH Outlook
- APRIL Outlook & Pre-Plan
- MAY Draft Plan
- MAY Public Meeting
- JUNE Final Plan
- MONTHLY Evaluate & Adapt Plan

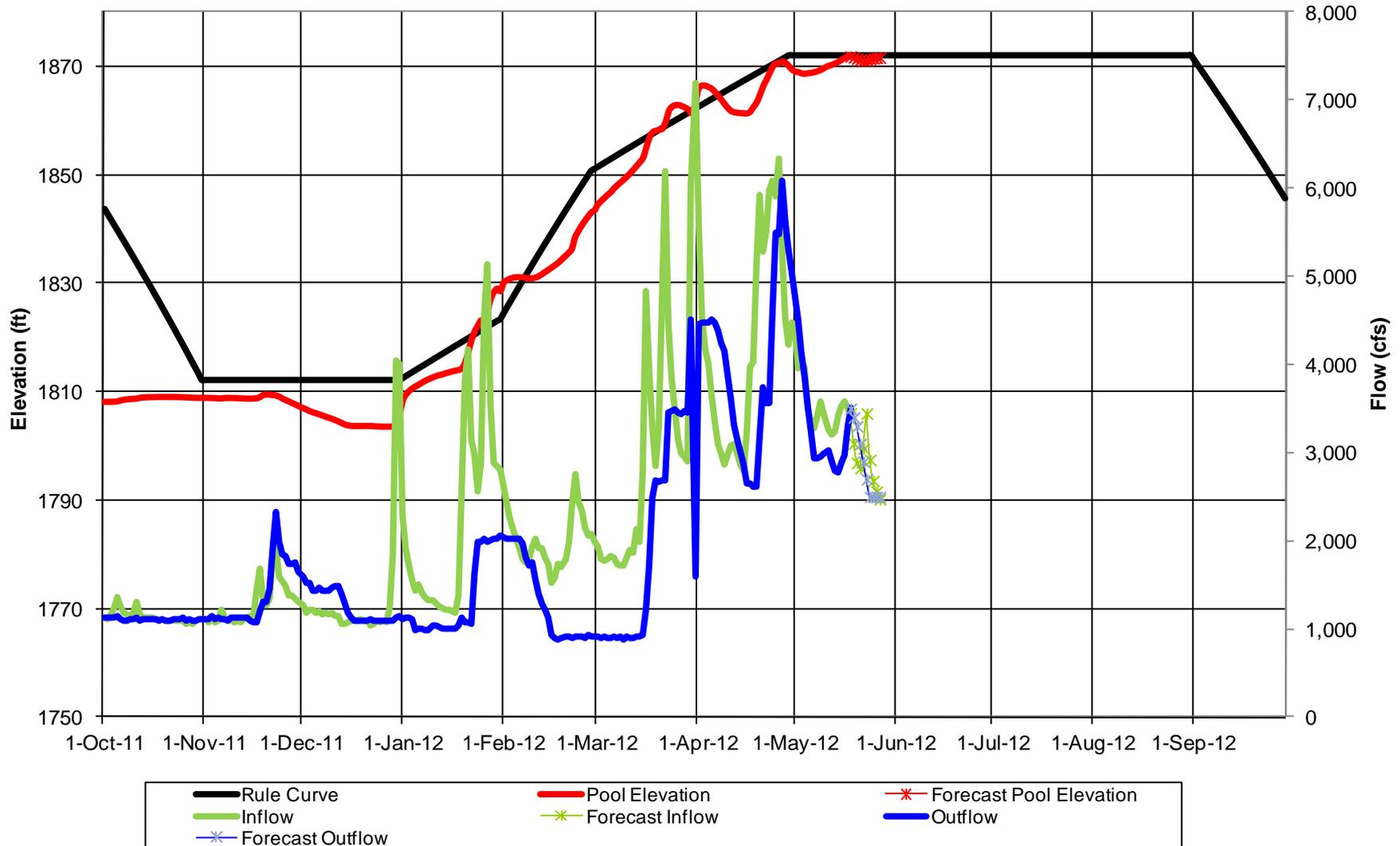


Observed Conditions



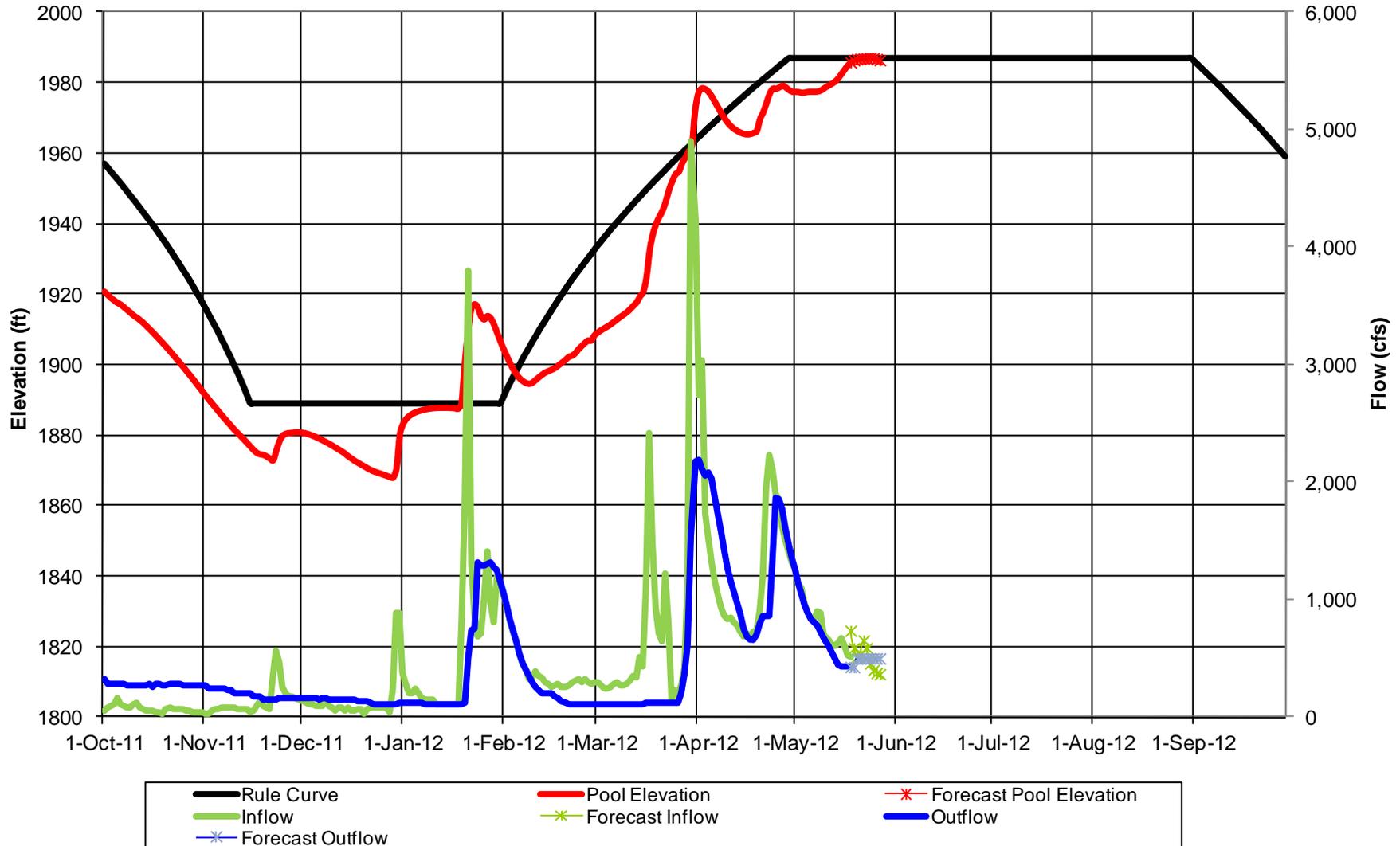
Lost Creek Reservoir Operations

Lost Creek Reservoir 2012



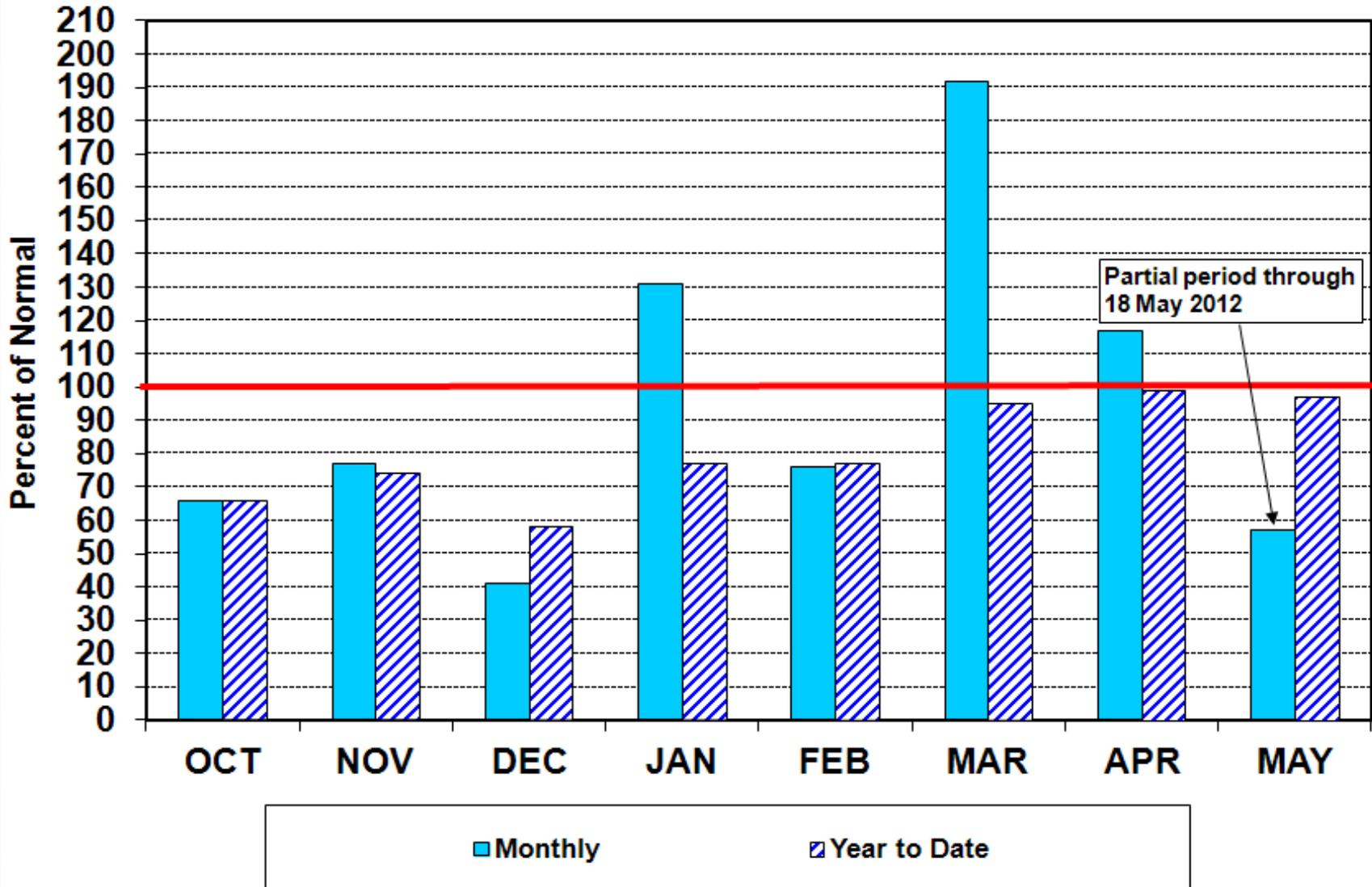
Applegate Reservoir Operations

Applegate Reservoir 2012



Rogue Basin Precipitation

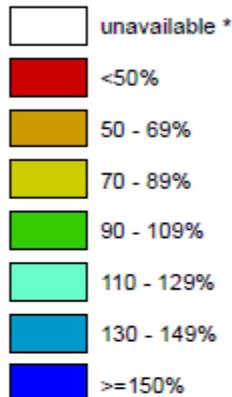
NRCS/NWS Reported Precipitation



Oregon SNOTEL Current Snow Water Equivalent (SWE) % of Normal

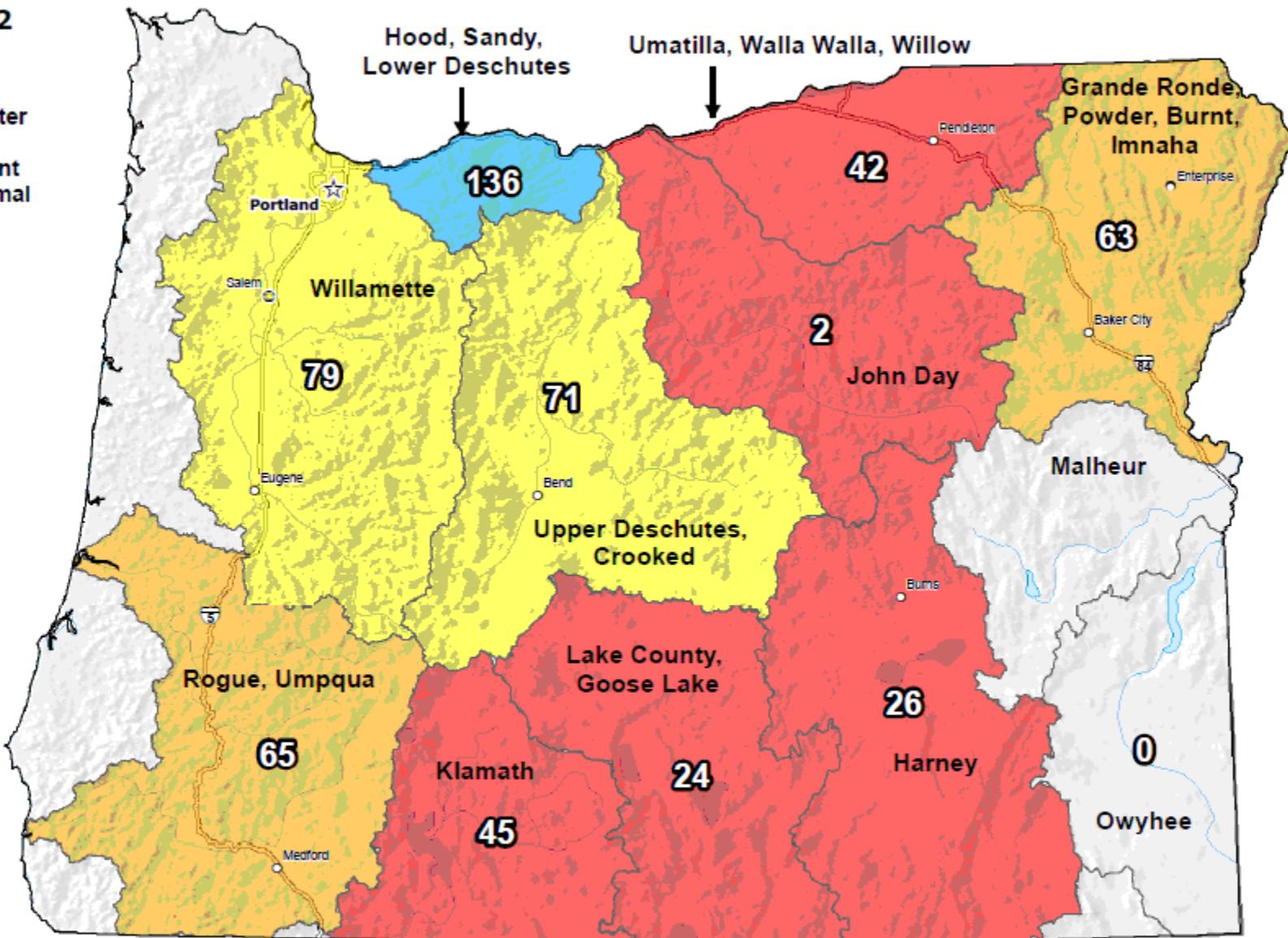
May 18, 2012

Current Snow Water Equivalent (SWE) Basin-wide Percent of 1971-2000 Normal

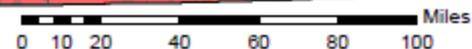


* Data unavailable at time of posting or measurement is not representative at this time of year

Provisional Data
Subject to Revision



The snow water equivalent percent of normal represents the current snow water equivalent found at selected SNOTEL sites in or near the basin compared to the average value for those sites on this day. Data based on the first reading of the day (typically 00:00).



Prepared by the USDA/NRCS National Water and Climate Center
Portland, Oregon <http://www.wcc.nrcs.usda.gov/gis/>
Based on data from <http://www.wcc.nrcs.usda.gov/reports/>
Science contact: Jim.Marron@por.usda.gov 503 414 3047

May Water Supply Forecast



Water Supply Outlook

USDA Natural Resources Conservation Service

Lost Creek Lake

May-Sep 2012

505,000 acre-feet*

98% of Average

*Estimate of the most probable runoff volume in acre-feet



Water Supply Outlook

USDA Natural Resources Conservation Service

Applegate Lake

May-Sep 2012

84,000 acre-feet*

108% of Average

*Estimate of the most probable runoff volume in acre-feet



Planned Operations



Lost Creek Planned Operations

- Maximize fisheries benefits
 - ▶ Adaptive refill
 - ▶ Lower ramping rates when reducing outflow
 - ▶ State flow and temperature recommendations
 - ▶ Operations for Agness
- No physical or operational constraints this year



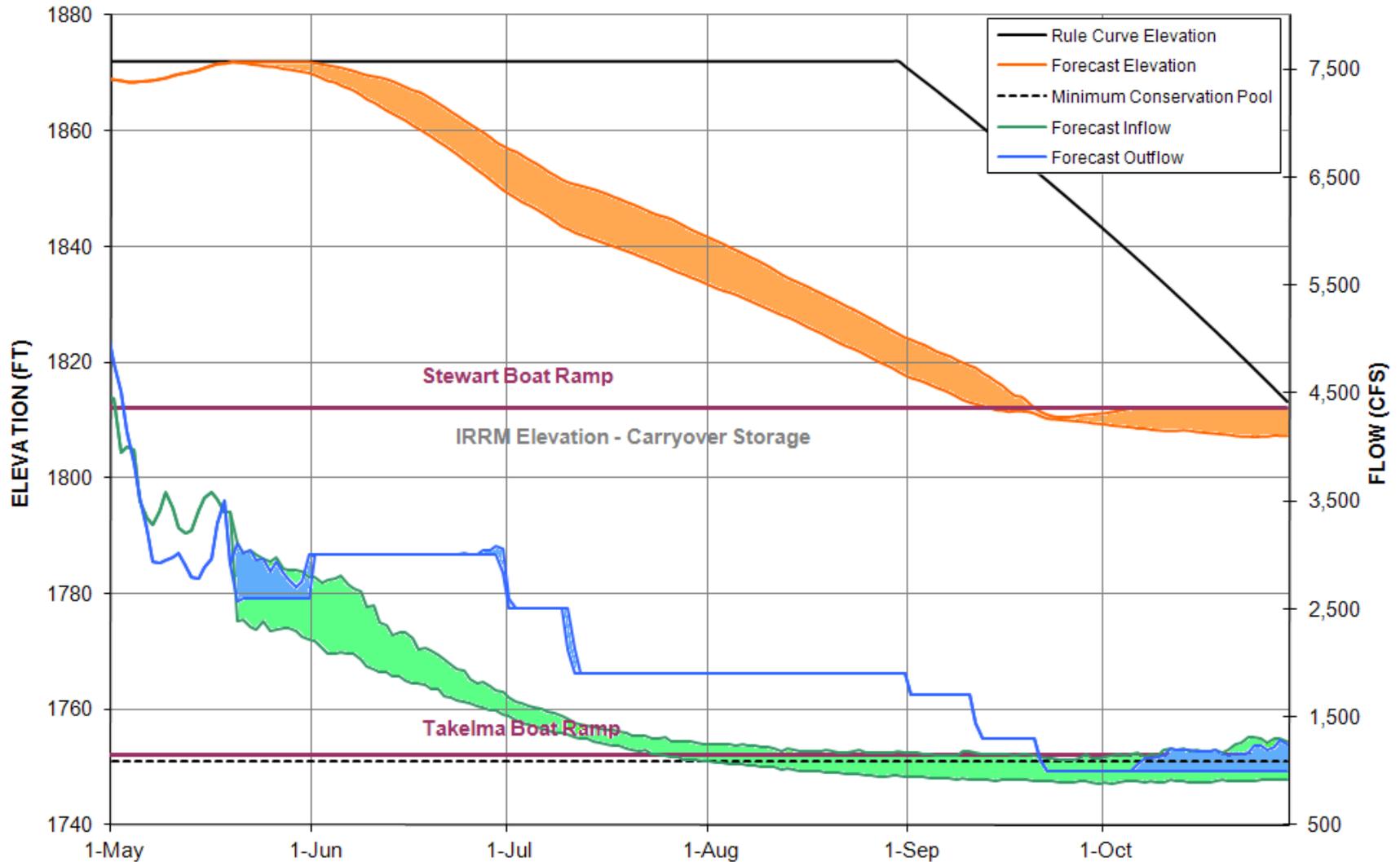
Lost Creek Release Recommendations from the State of Oregon

Date	Flow Requested
May 11 – May 20	Pass Inflow
May 21 – May 31	2,600 cfs
Jun 01 – Jun 30	3,000 cfs
July 01 – July 10	2,500 cfs
July 11 – Aug 31	1,900 cfs
Sept 01 – Sept 10	1,700 cfs
Sept 11 – Sept 20	1,300 cfs
Sept 21 – Oct 31	1,000 cfs



Forecast Reservoir Operations

LOST CREEK LAKE
2012 Planned Operations
May NRCs 50% Exceedance Forecast



Lost Creek Lake Holiday Pool Elevations

Year	Memorial Day	Fourth of July	Labor Day
2001	1841.0	1826.2	1792.8
2006	1871.9	1859.8	1823.0
2008	1866.8	1867.8	1824.0
2009	1872.0	1855.5	1819.3
2010	1871.8	1867.9	1821.4
2011	1869.6	1871.6	1813.8

2012 Estimated (50% Probability Range)

1871.0 – 1872.0

1847.7 – 1855.7

1817.0 – 1823.3



Applegate Planned Operations

- Maximize fisheries benefits
 - ▶ Lower ramping rates when reducing outflow
 - ▶ State flow and temperature recommendations
- Maintain constant outflow late spring into fall
- No physical or operational constraints this year



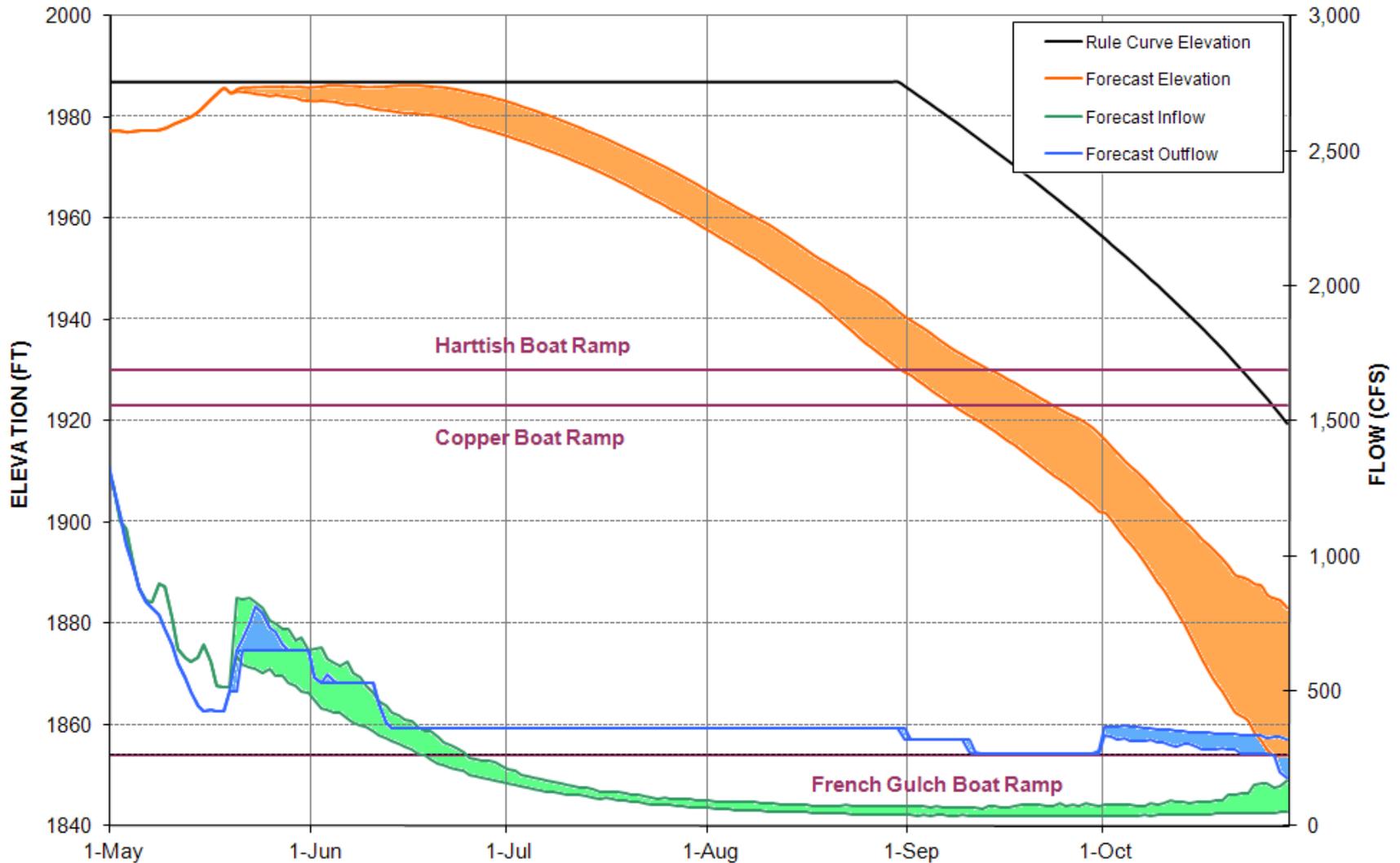
Applegate Release Recommendations from the State of Oregon

Date	Flow Requested
May 11 – May 21	500 cfs
May 21 – May 31	650 cfs
Jun 01 – Jun 10	530 cfs
Jun 11 – Aug 31	360 cfs
Sept 01 – Sept 10	320 cfs
Sept 11 – Nov 10	270 cfs
Nov 11 – Nov 20	210 cfs
Nov 21 – Nov 31	140 cfs



Forecast Reservoir Operations

APPLEGATE LAKE
2012 Planned Operations
May NRCs 50% Exceedance Forecast



Applegate Lake Holiday Pool Elevations

<u>Year</u>	<u>Mem. Day</u>	<u>July 4th</u>	<u>Labor Day</u>
2001	1904.3	1903.6	1894.1
2006	1986.5	1981.2	1940.6
2008	1984.5	1984.3	1950.8
2009	1986.7	1982.0	1949.4
2010	1986.8	1986.8	1937.9
2011	1985.3	1986.9	1945.5

2012 Estimated (50% Probability Range)

1986.0 – 1987.0

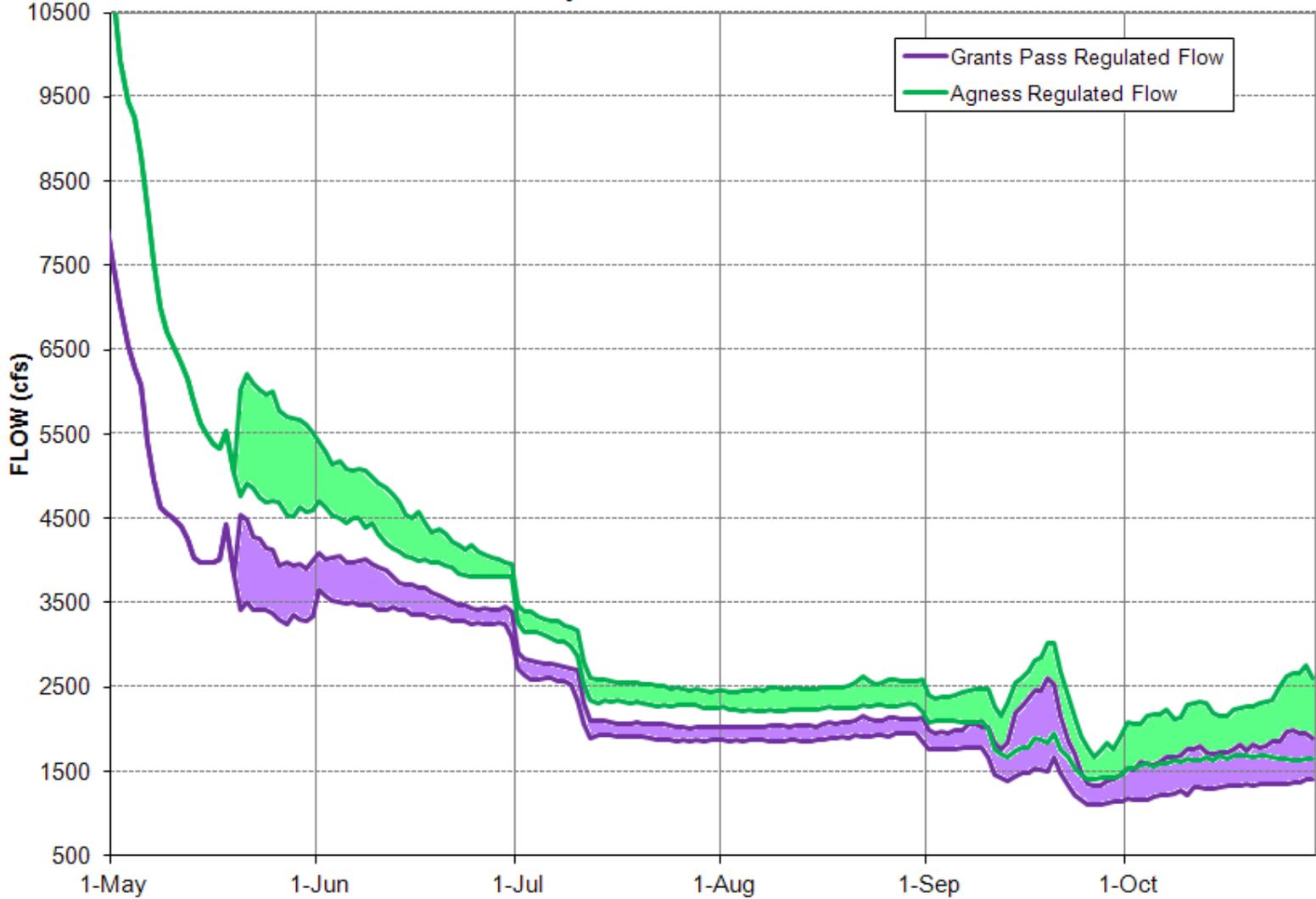
1975.3 – 1982.1

1928.3 – 1939.1



Forecast Downstream Flows

ROGUE RIVER
2012 Forecast Flows
May NRC S 50% Exceedance Forecast



Summary of Key Points

- Sufficient water to meet authorized purposes
- Lost Creek lake elevations will be lower than last year in the early summer, higher in late summer/early fall
 - ▶ Plan to have Lost Creek drawn down to about elevation 1812 ft by September 20th
 - ▶ Stewart S.P. boat ramp is projected to be usable to mid-September
 - ▶ Takelma boat ramp on Lost Creek lake will remain usable



Summary of Key Points (cont.)

- Lost Creek releases lower than last year
- Applegate lake elevations lower than last year



Useful links

- Rogue and Applegate flow information:

<http://waterdata.usgs.gov/or/nwis>

<http://www.nwrfc.noaa.gov>

<http://water.weather.gov/ahps2/index.php?wfo=mfr>

- Rogue weather information:

<http://www.wrh.noaa.gov/mfr/>

- Reservoir information:

<http://www.nwd-wc.usace.army.mil/nwp/teacup/rogue/>

<http://www.nwd-wc.usace.army.mil/nwp/>

- Presentation will be available at:

<http://www.nwp.usace.army.mil/>



Comments or questions?

