RECLAMATION

Managing Water in the West

Navajo Unit Operations
January 26, 2010
Coordination Meeting

U.S. Department of the Interior
Bureau of Reclamation

Agenda

- Welcome
- Special Presentation – Colorado River 24-mo Study
- Review of Water Year 2009 Operations
- Water Year 2010 Conditions
- Water Year 2010 Forecasts & Proposed Operations
- Current Reservoir Status
- Recommendations for San Juan River Administration and Operation
- Navajo Dam Maintenance Activities
- Fish & Wildlife Service/San Juan RIP Update
- Reports from other Agencies
- Questions from Audience
- How To Access Information
- Close

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Review of 2009
Operations
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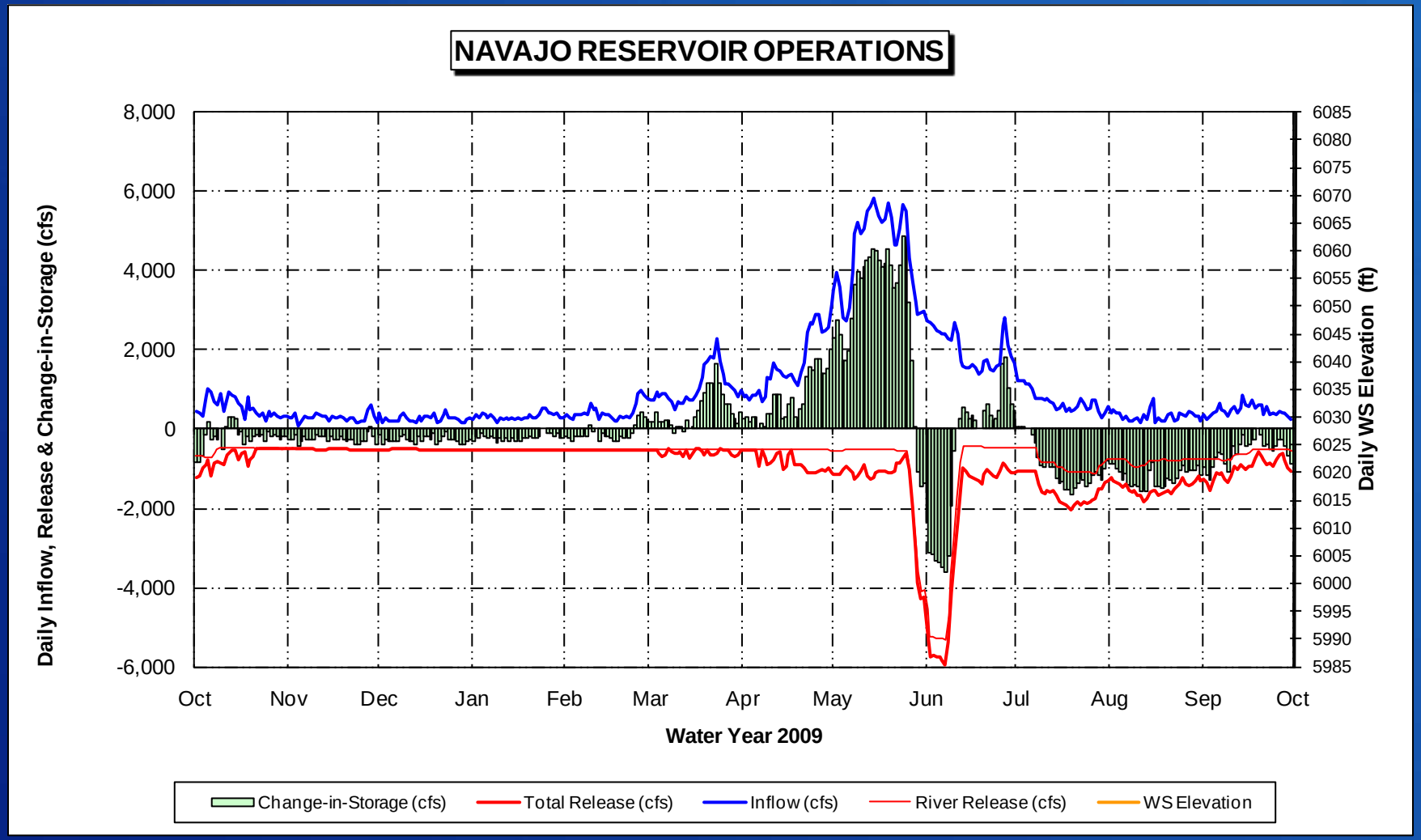

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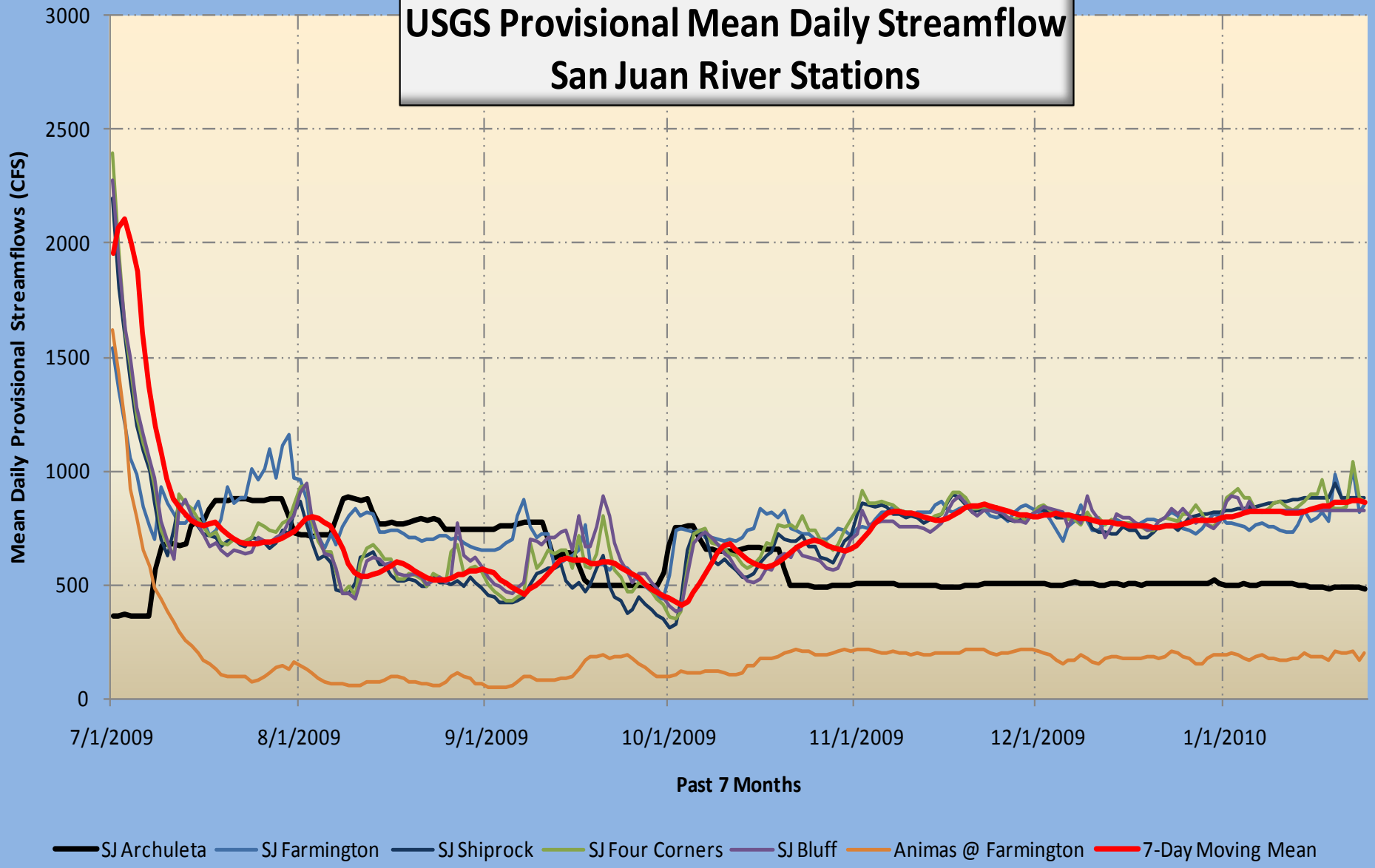
Chasing the Target Base Flow

6/12 – 7/8	500 cfs Base
7/8 – 7/14	800 cfs
7/14 – 7/30	1000 cfs
7/30 – 8/7	900 cfs
8/7 – 8/13	1100 cfs
8/13 – 9/11	900 cfs
9/11 – 9/17	650 cfs
9/17 – 9/30	500 cfs
9/30 – 10/20	600 cfs
10/20 - current	500 cfs Base

USGS Provisional Mean Daily Streamflow
San Juan River Stations



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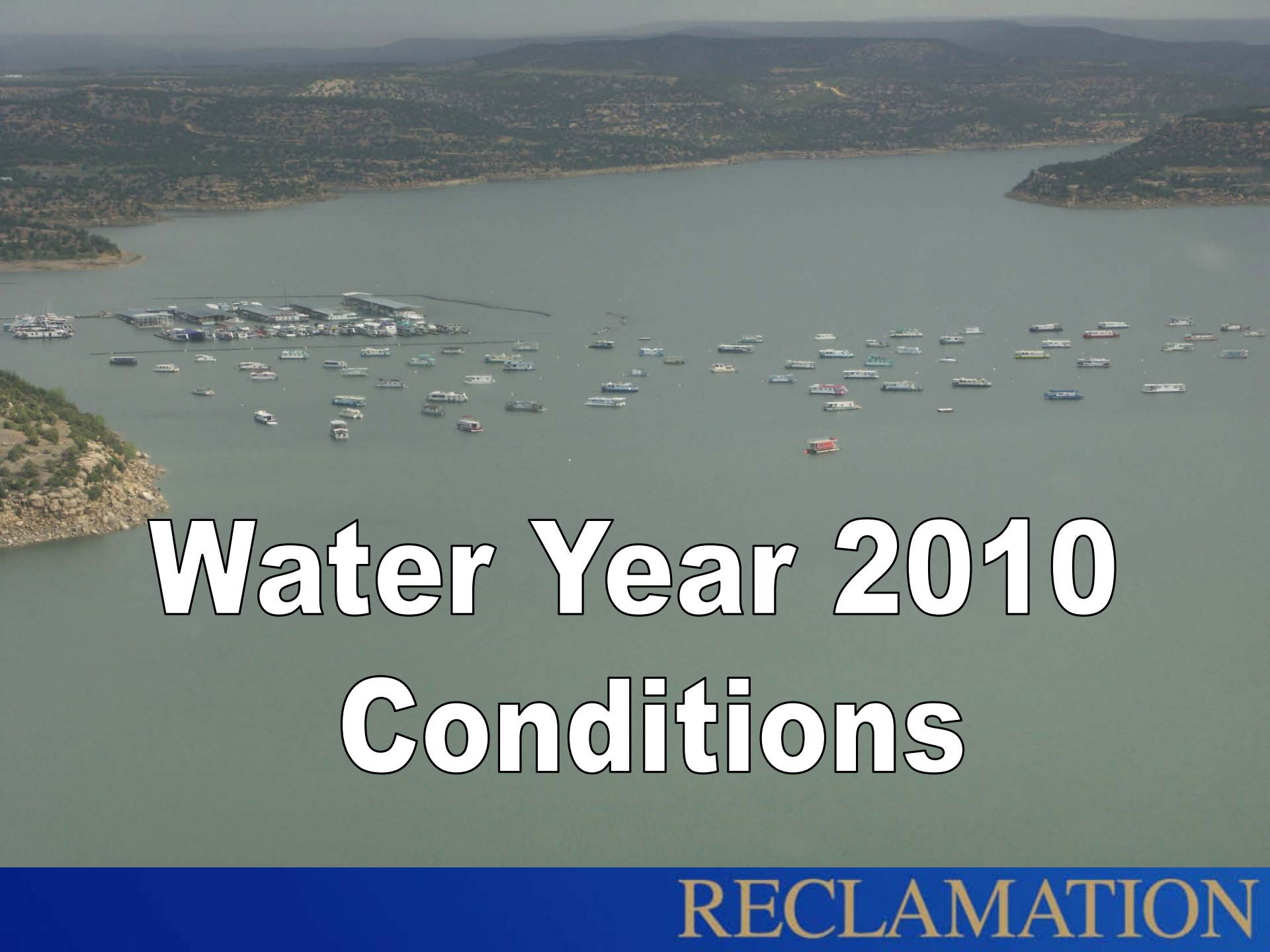

Water Year 2010 Conditions

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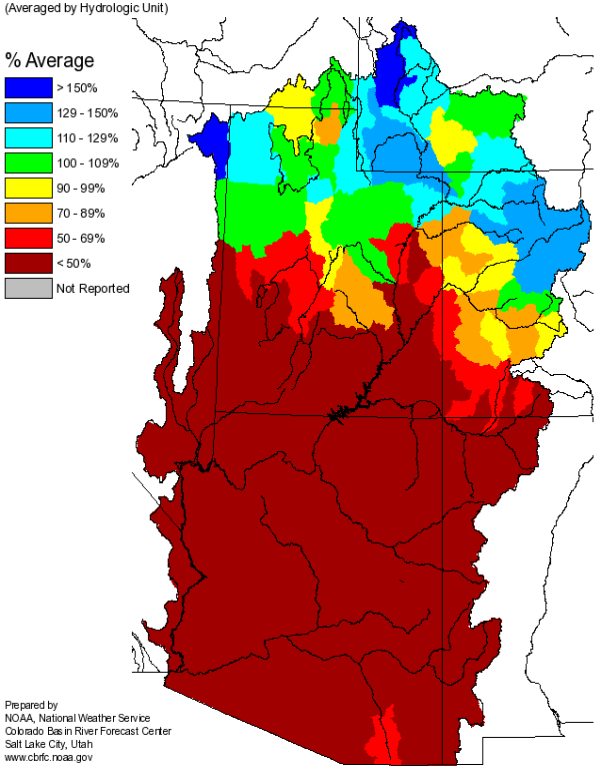
Monthly Precipitation for October 2007

(Averaged by Hydrologic Unit)



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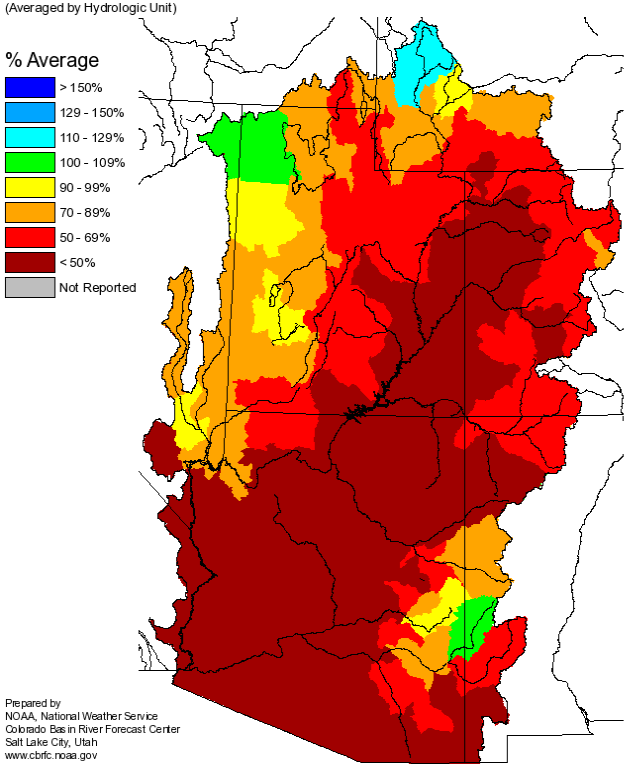

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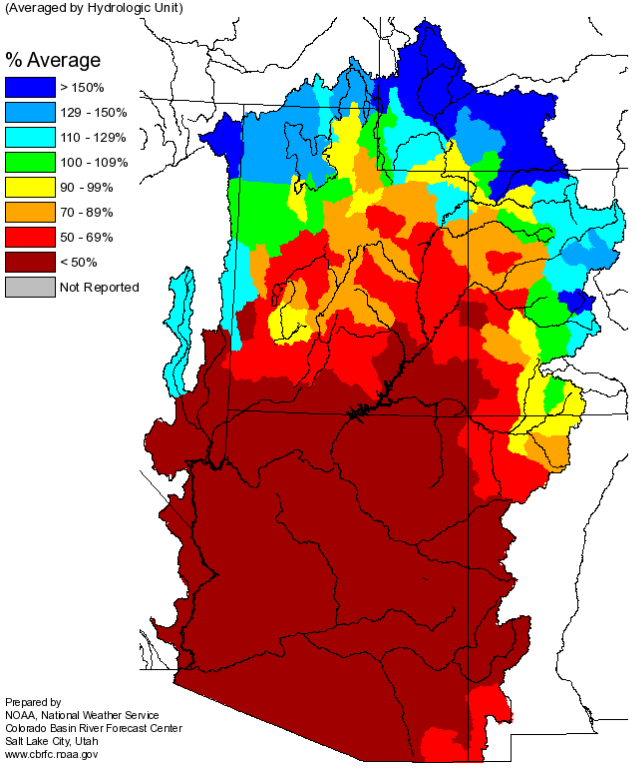
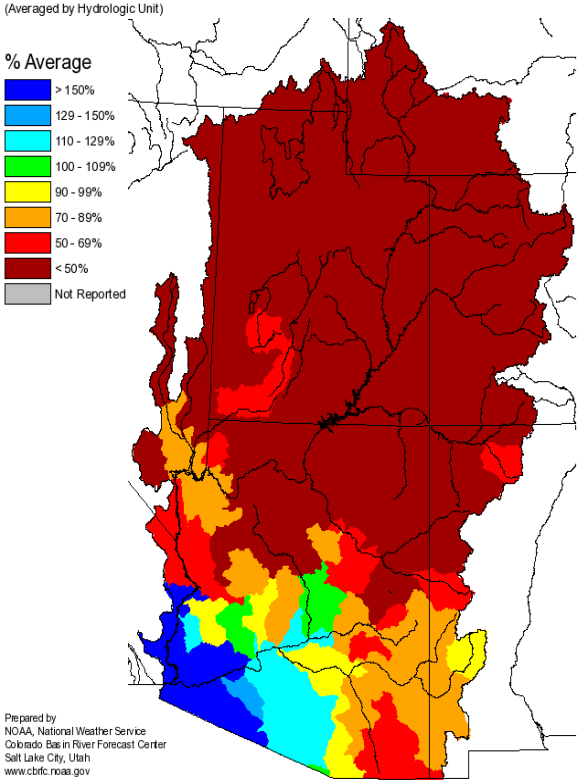


Monthly Precipitation for November 2007

(Averaged by Hydrologic Unit)



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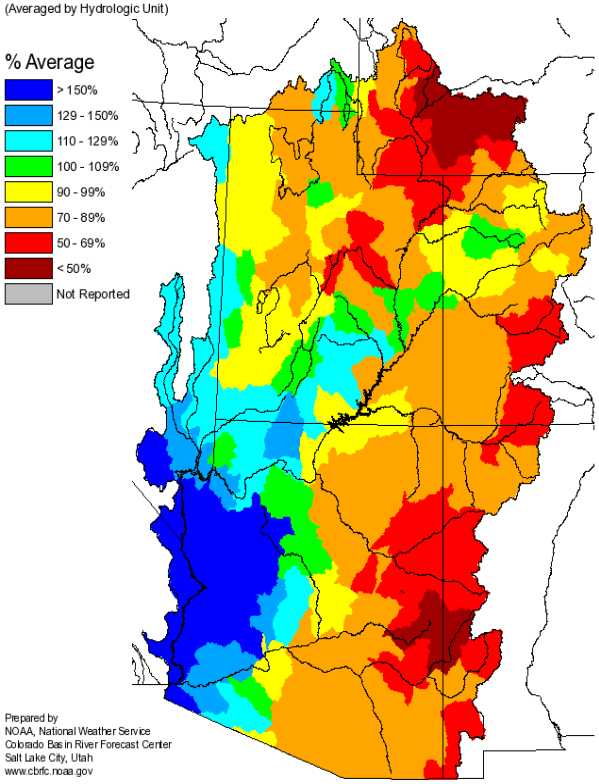

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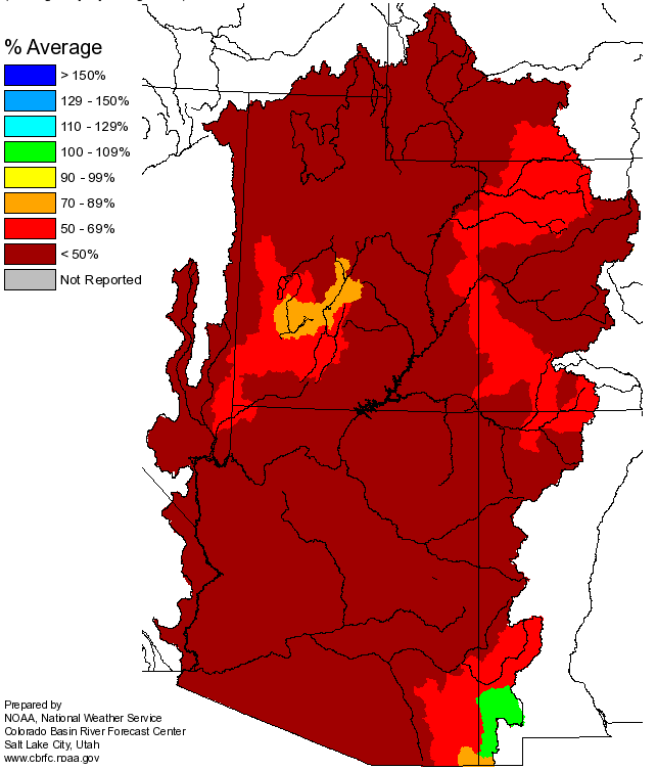

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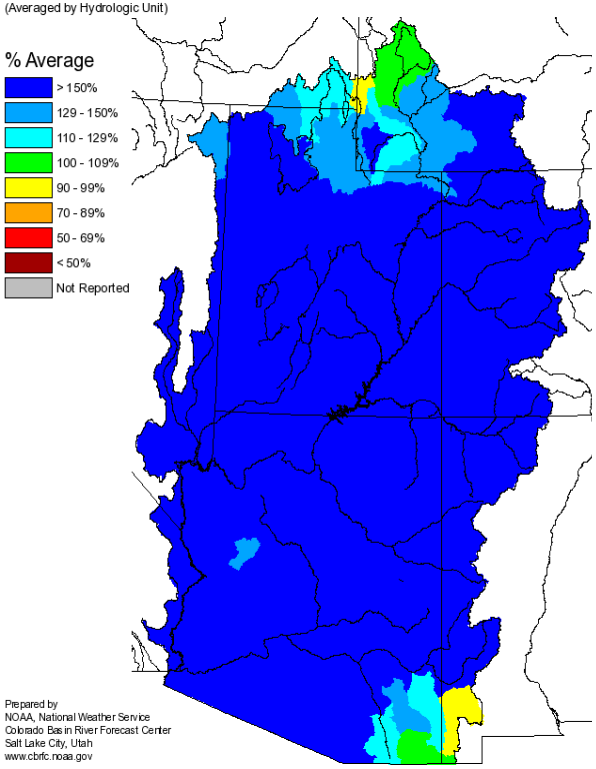

Monthly Precipitation for December 2008

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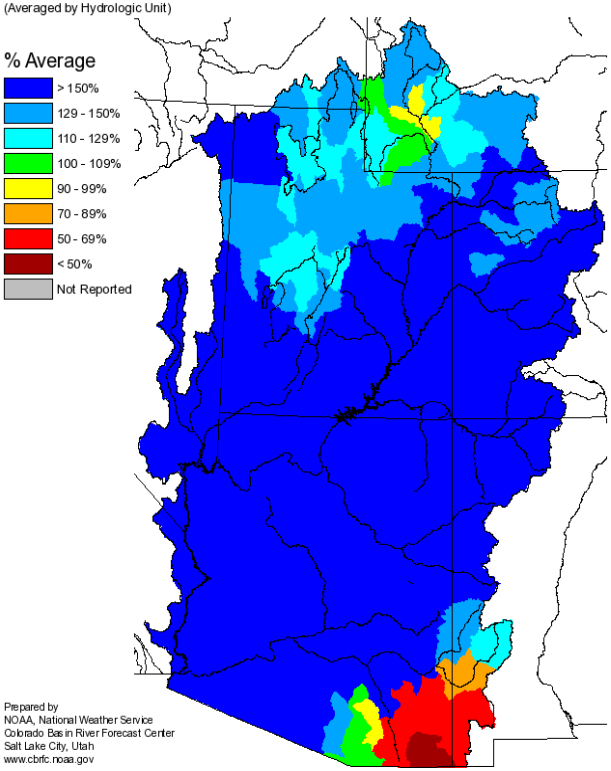

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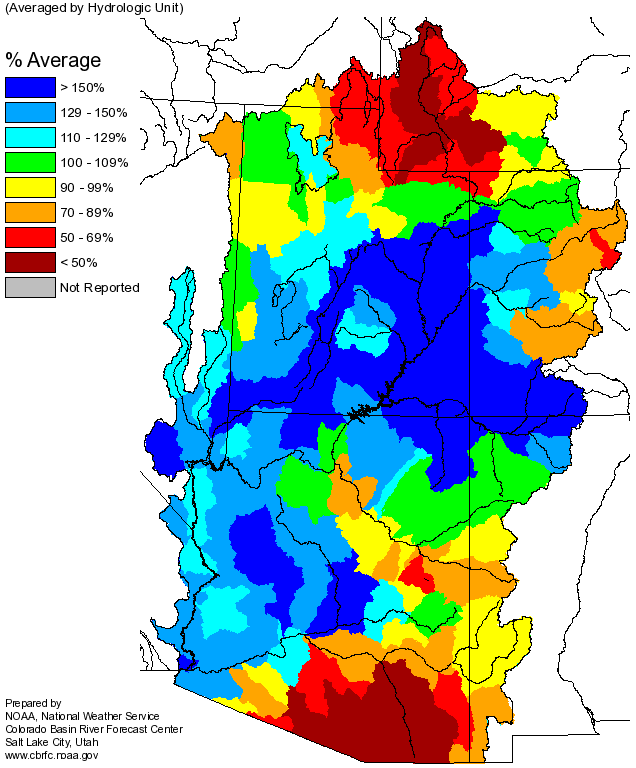

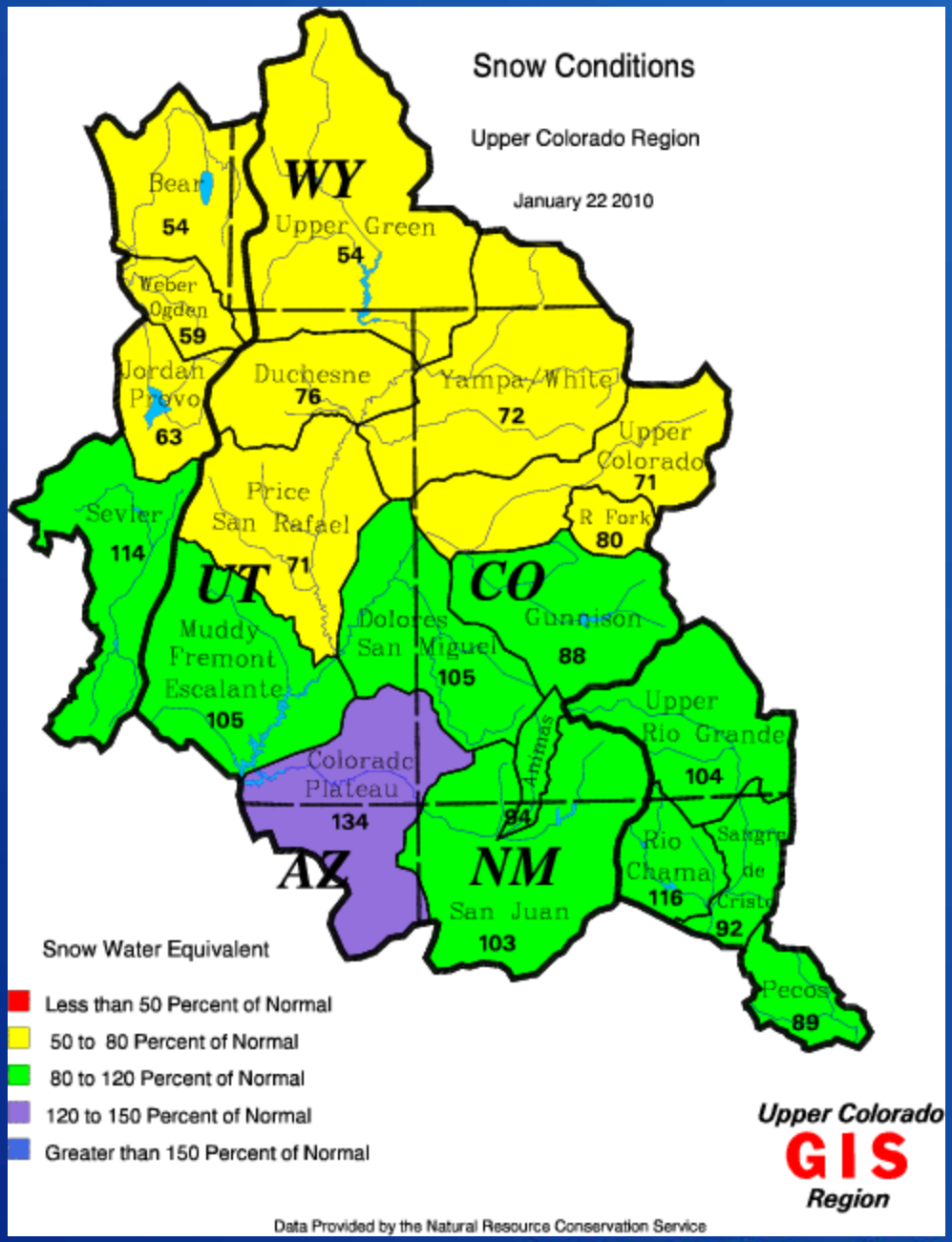

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Water Year 2010
San Juan Basin Snowpack Summary
(as of 1/25/2010)

Locations	Average of Applicable SNOTEL Stations (SWE – inches)	% Average
San Juan (Bluff)	12.3	108%
Navajo Reservoir	12.8	109%
Vallecito Reservoir	10.2	84%
Animas @ Durango	11.9	104%

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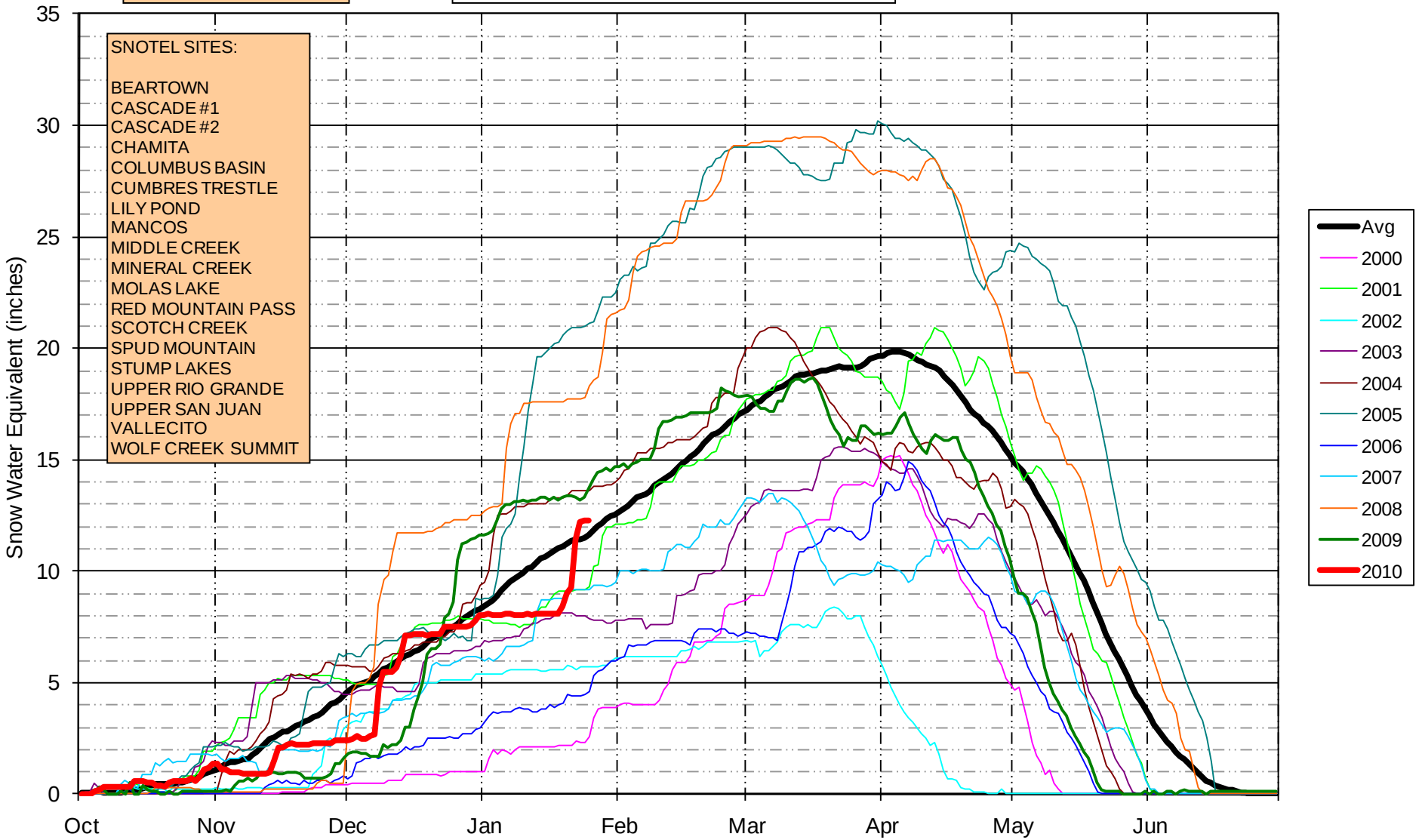
San Juan Basin Multiple Station Snotel Plot

January 25, 2010

Current Snowpack is (12.3/11.4) = 108% of Average



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Water Year 2010 (as of 1/25/2010)
Navajo Inflows & San Juan Basin Snowpack

EOM	Inflow (af)	% Average	SJ SWE (in.)	% Average
October	20,511	40%	1.7	94%
November	12,550	38%	2.7	48%
December	9,601	39%	8.5	96%
January (Current)	9,047	58%	12.8	109%

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Mid-January 2010 Forecast
Navajo Reservoir
Modified Unregulated
April-July Inflow Volume

	Inflow (af)	% of Average	2009 Forecast
Most Probable	700,000	93%	900,000 (117%)
Minimum Probable	400,000	53%	540,000 (70%)
Maximum Probable	1,120,000	148%	1,390,000 (180%)

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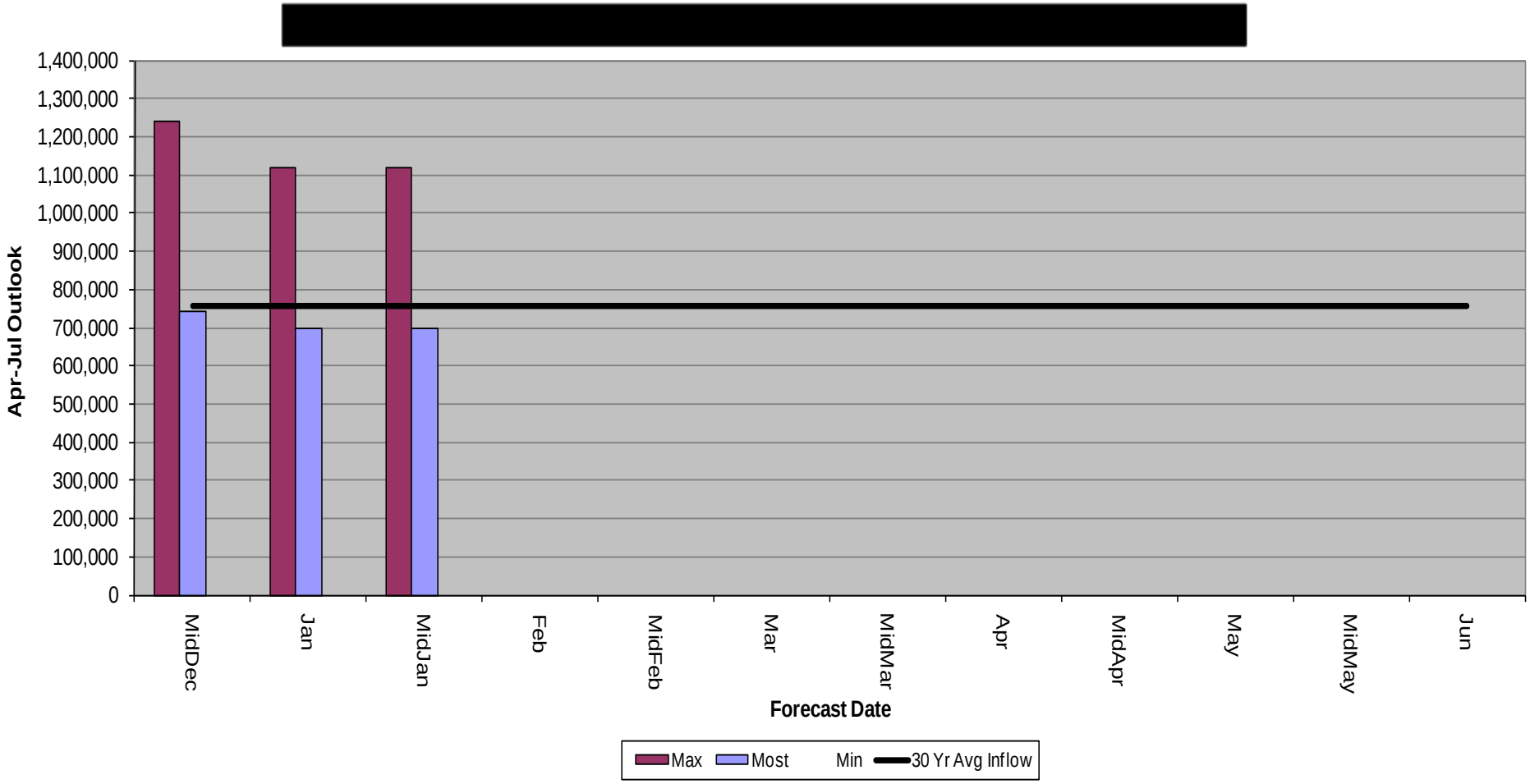
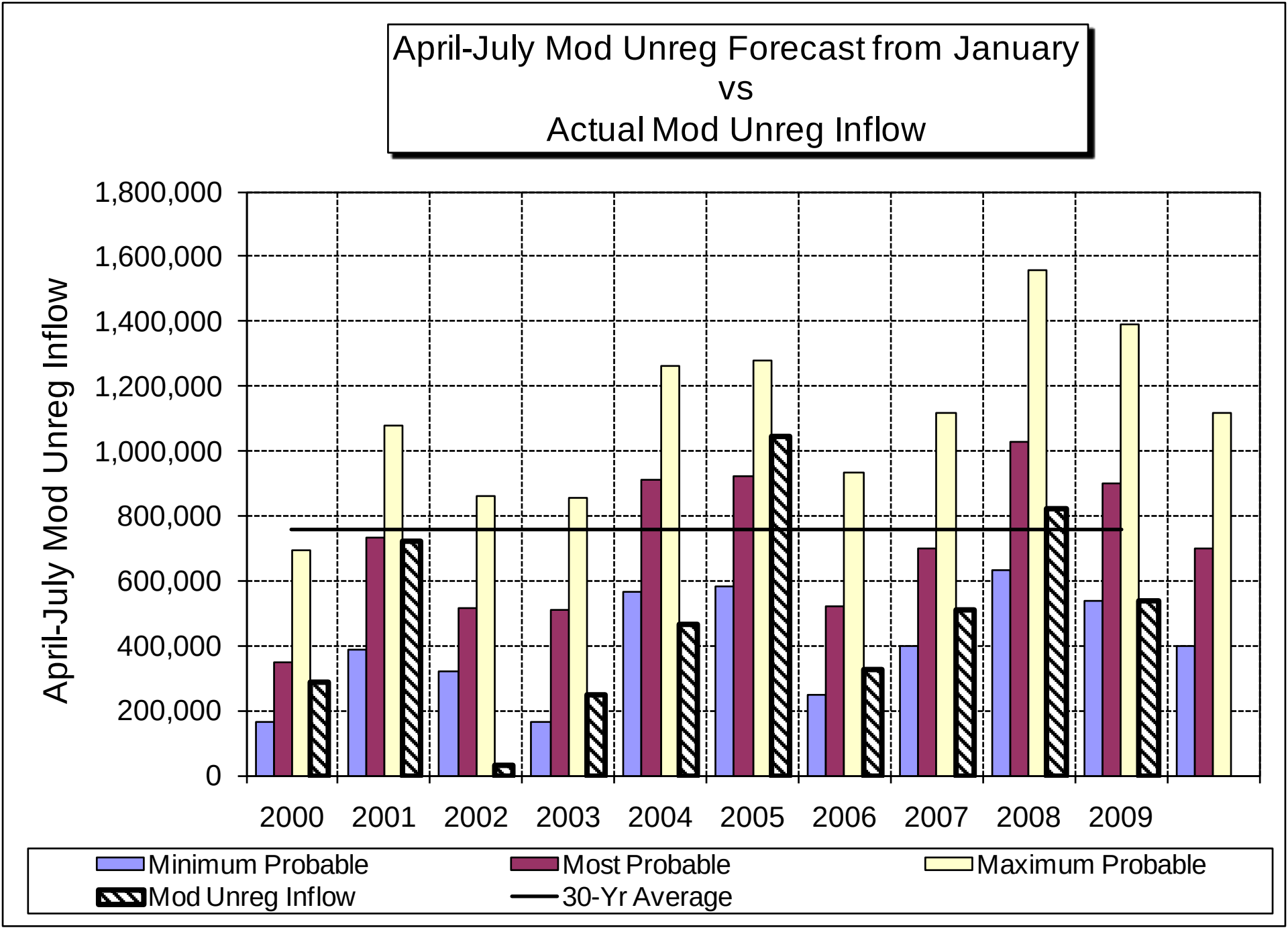
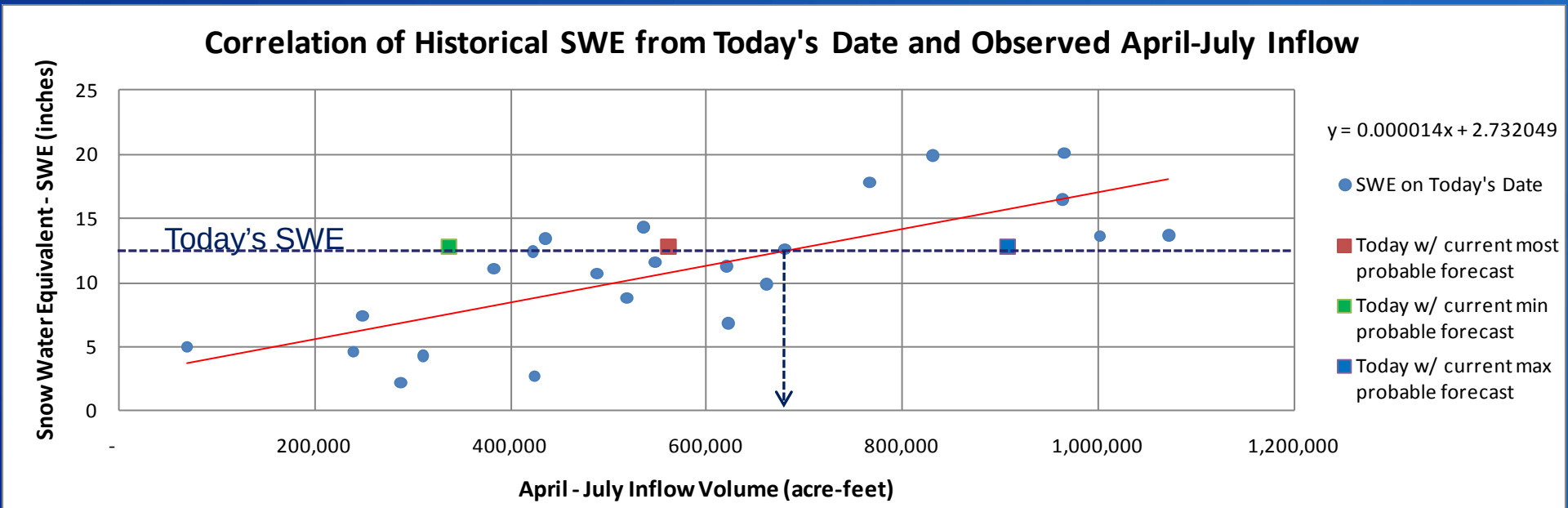
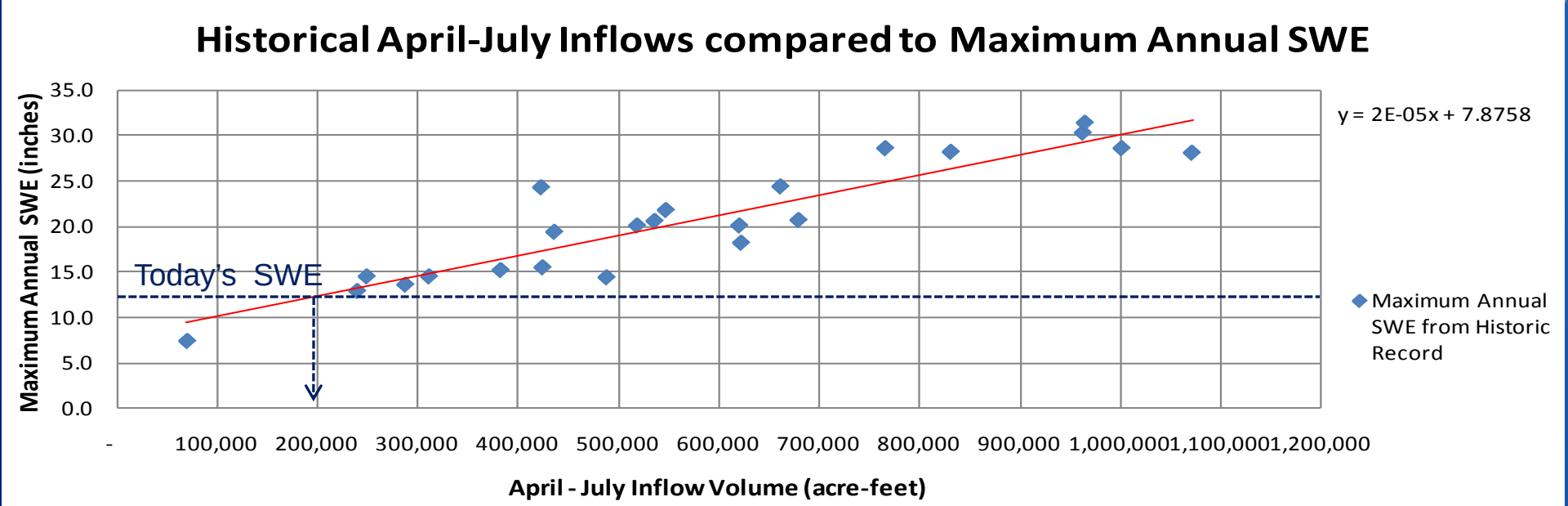
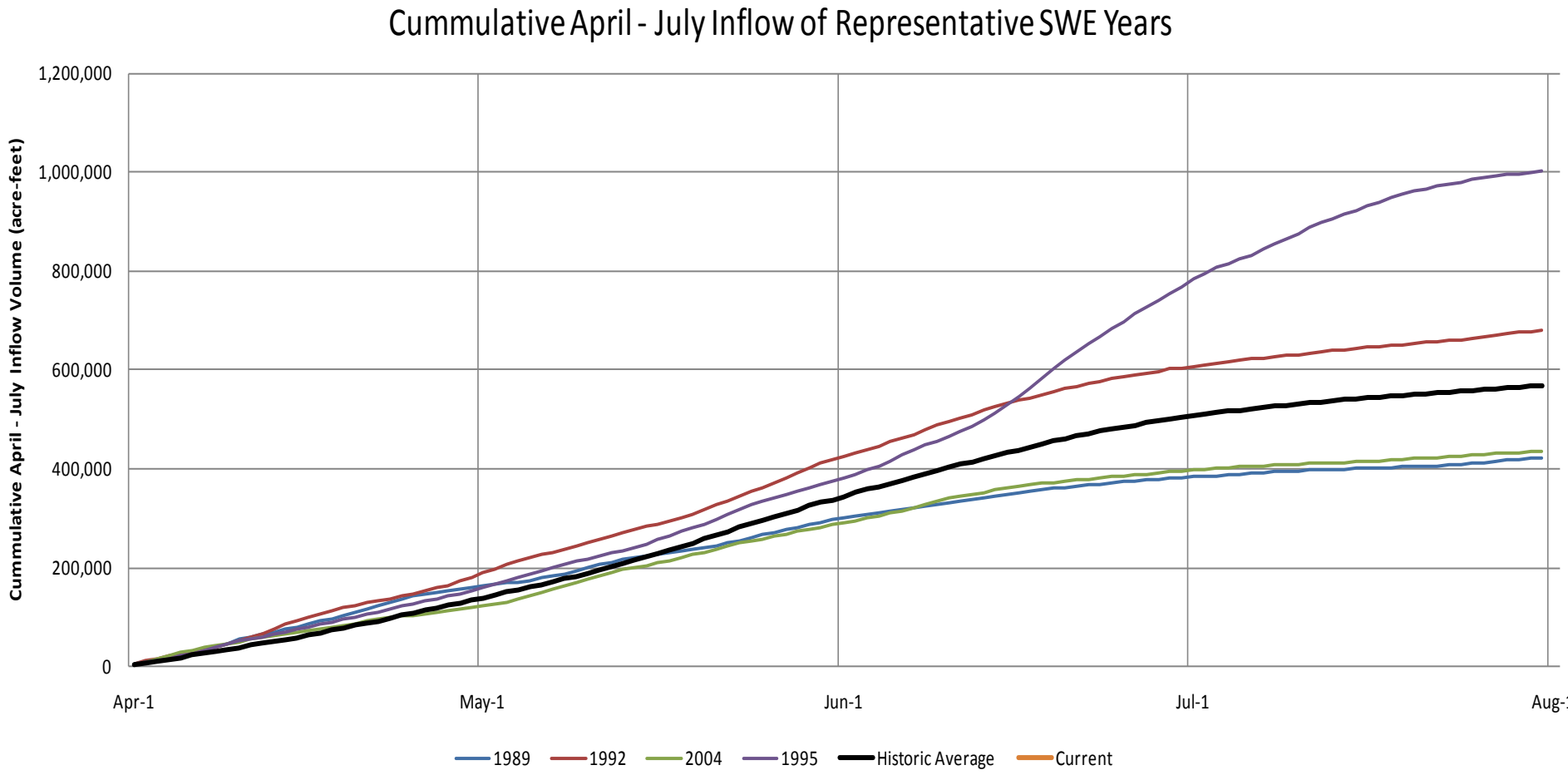

[redacted]
1,400,000
1,300,000
1,200,000
1,100,000
1,000,000
900,000
800,000
700,000
600,000
500,000
400,000
300,000
200,000
100,000
0
Apr-Jul Outlook
MidDec
Jan
MidJan
Feb
MidFeb
Mar
MidMar
Apr
MidApr
May
MidMay
Jun
Forecast Date
Max
Most
Min
30 Yr Avg Inflow


April-July Mod Unreg Forecast from January
vs
Actual Mod Unreg Inflow
April-July Mod Unreg Inflow
1,800,000
1,600,000
1,400,000
1,200,000
1,000,000
800,000
600,000
400,000
200,000
0
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
Minimum Probable
Most Probable
Maximum Probable
Mod Unreg Inflow
30-Yr Average

SNOTEL above Navajo vs. Inflow Forecast







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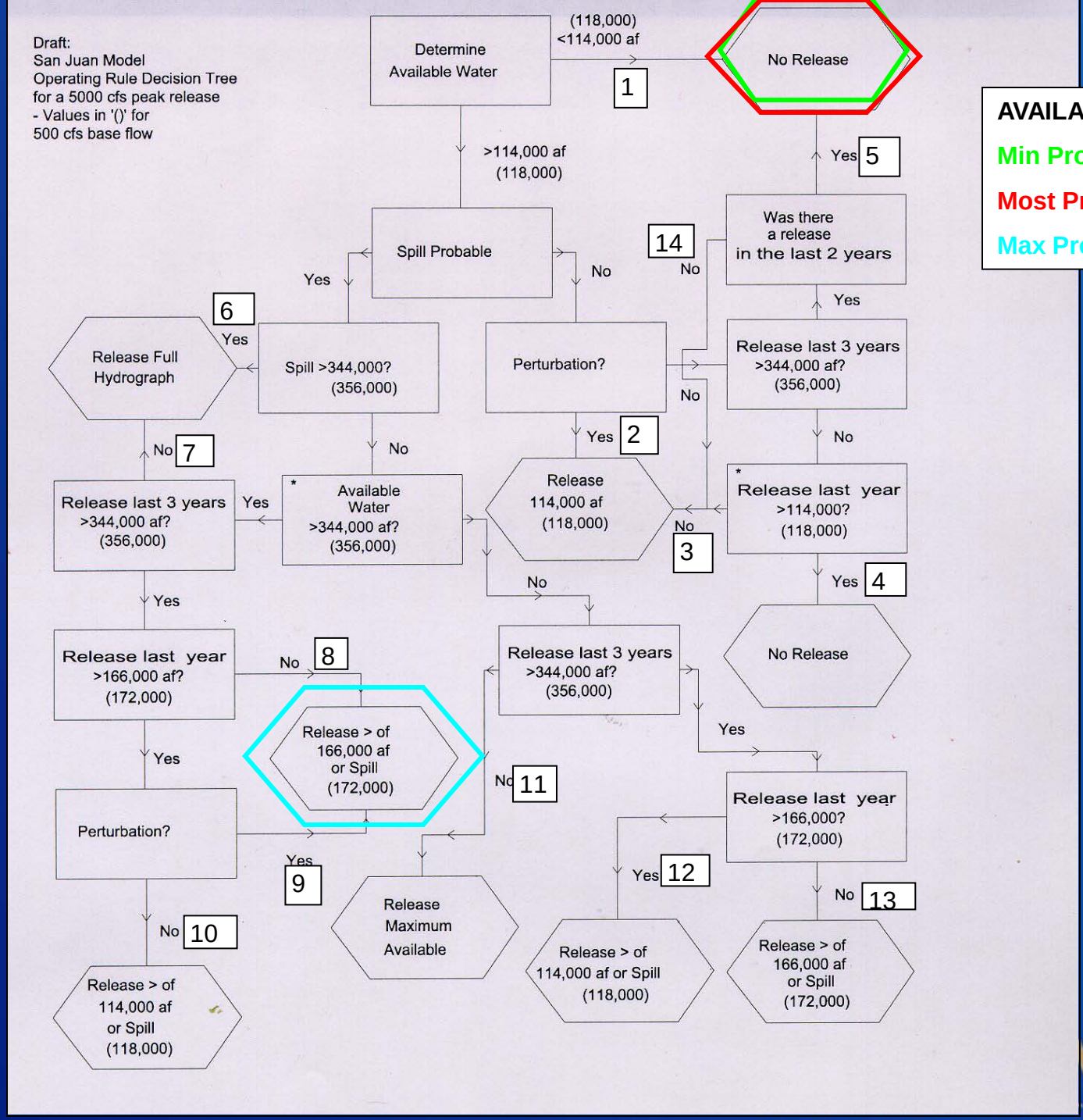
Water Year 2010
Proposed Operations

- Navajo Reservoir is at a manageable elevation
- 500 cfs base release
- Under the current Most Probable Forecast, there will be no spring peak release.
- It is only January, and a lot can still change!



AVAILABLE WATER		PATH
Min Prob:	199,000 af	#5
Most Prob:	533,000 af	#5
Max Prob:	929,000 af	#8

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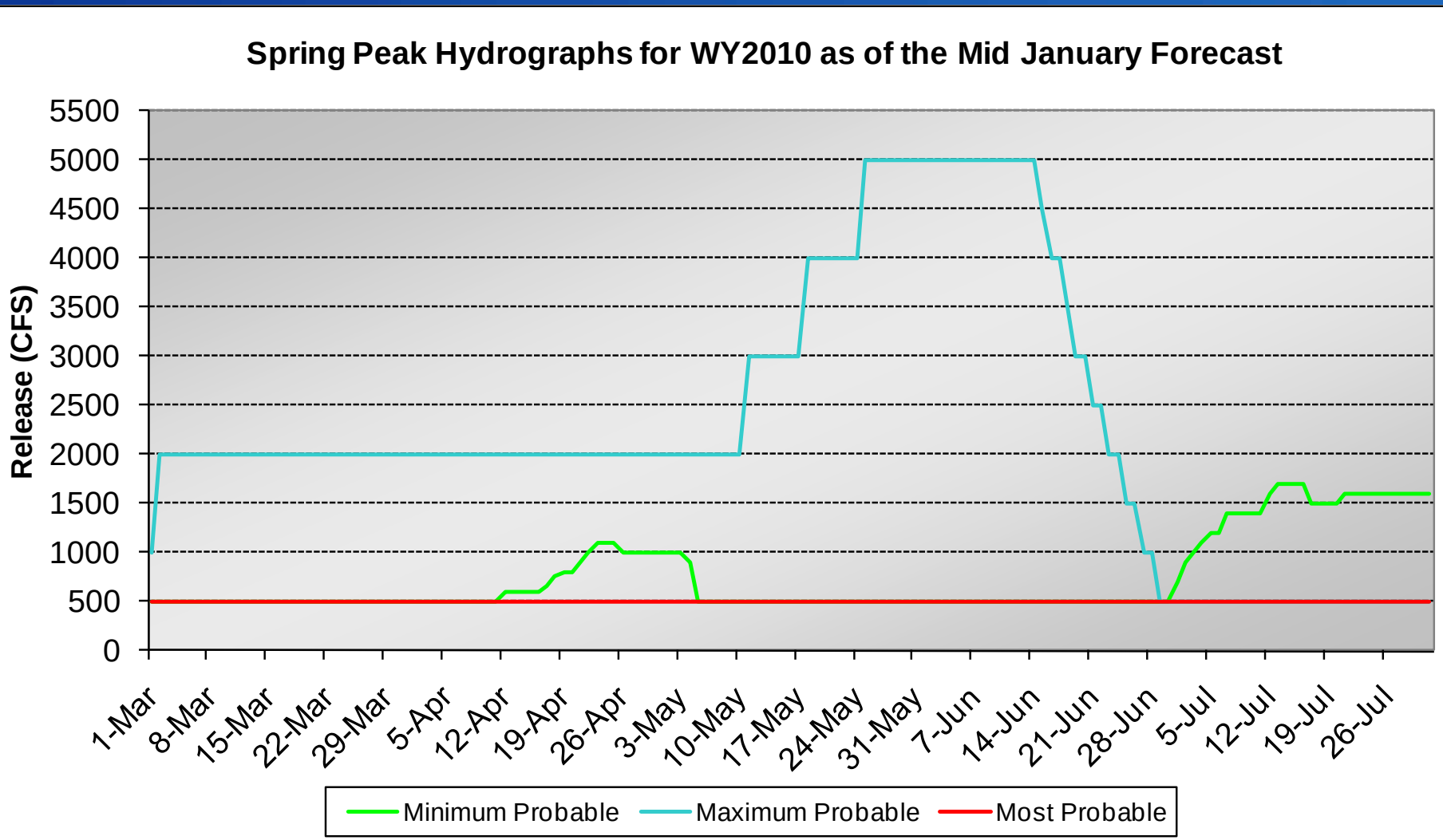

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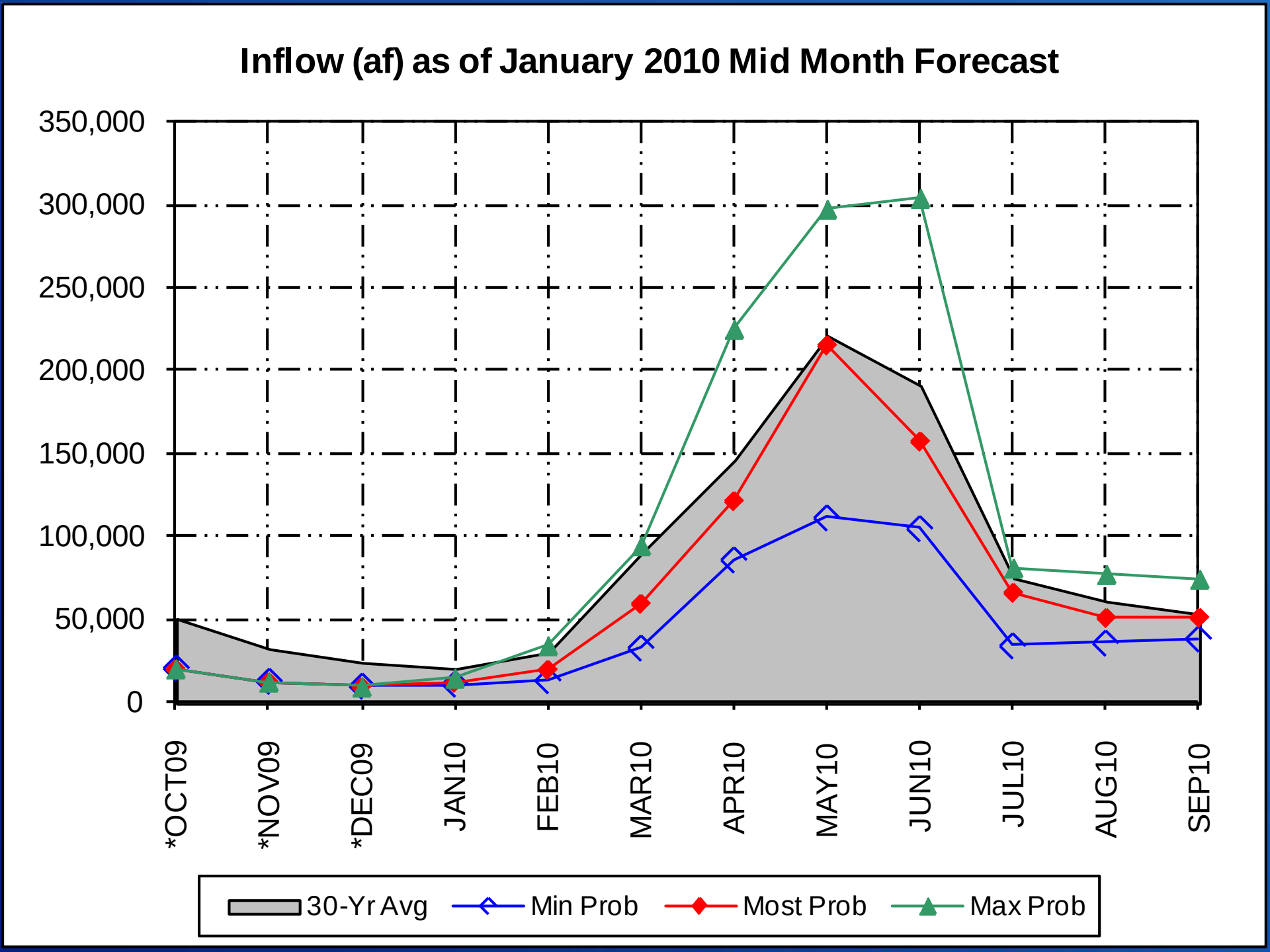
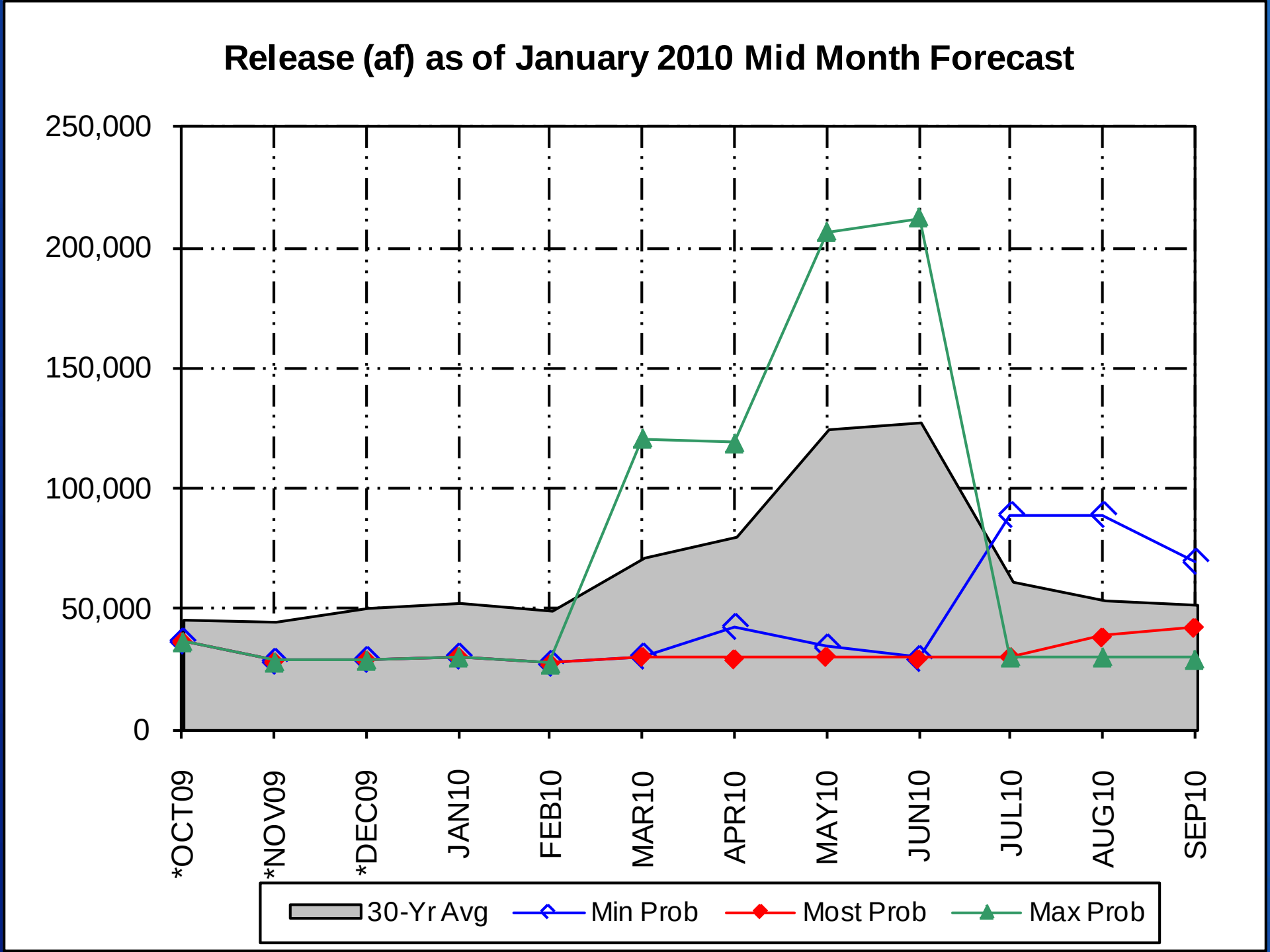
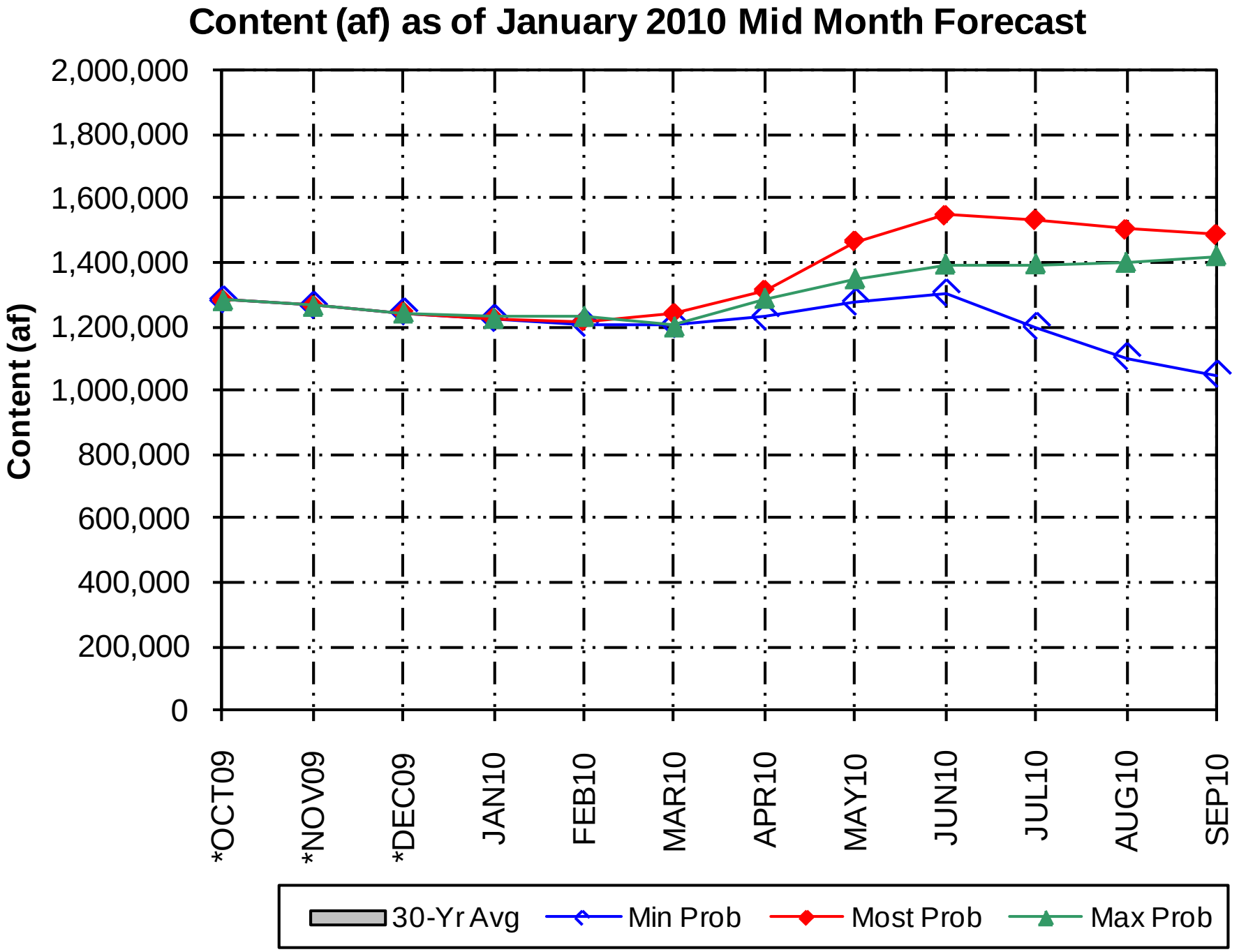
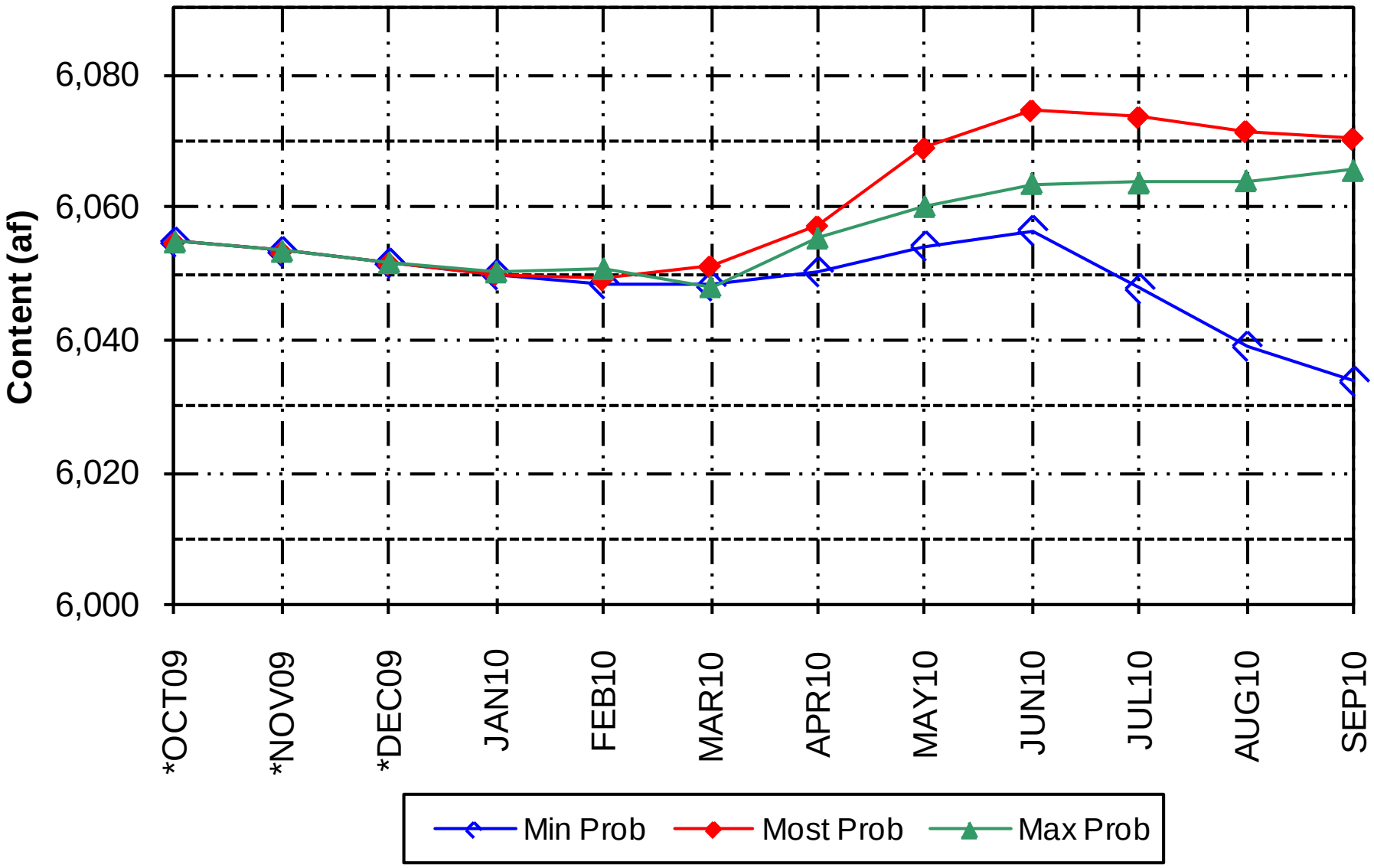

Inflow (af) as of January 2010 Mid Month Forecast
350,000
300,000
250,000
200,000
150,000
100,000
50,000
0
*OCT09
*NOV09
*DEC09
JAN10
FEB10
MAR10
APR10
MAY10
JUN10
JUL10
AUG10
SEP10
30-Yr Avg
Min Prob
Most Prob
Max Prob

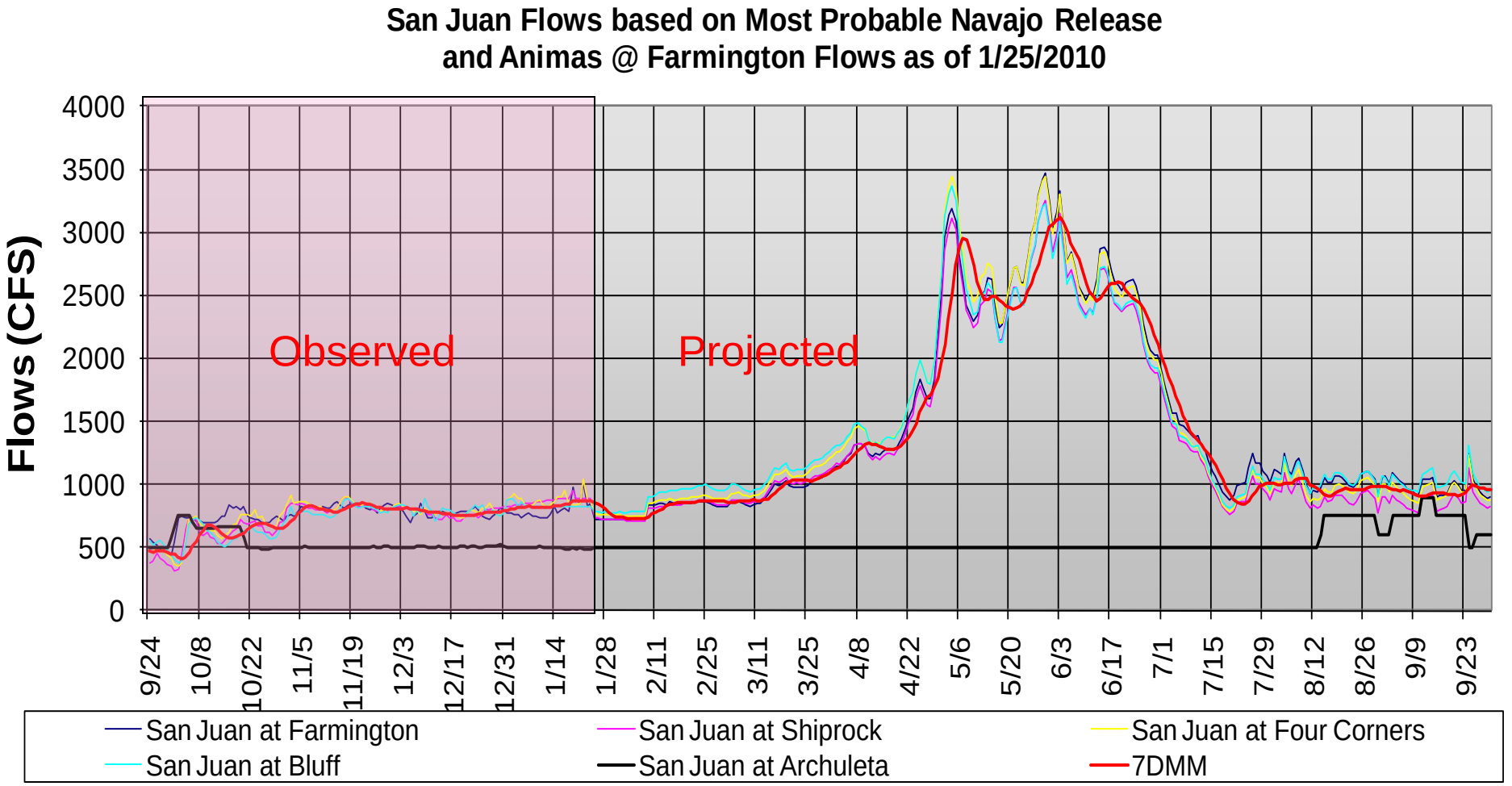

Release (af) as of January 2010 Mid Month Forecast
250,000
200,000
150,000
100,000
50,000
0
*OCT09
*NOV09
*DEC09
JAN10
FEB10
MAR10
APR10
MAY10
JUN10
JUL10
AUG10
SEP10
30-Yr Avg
Min Prob
Most Prob
Max Prob


Content (af) as of January 2010 Mid Month Forecast
Content (af)
2,000,000
1,800,000
1,600,000
1,400,000
1,200,000
1,000,000
800,000
600,000
400,000
200,000
0
*OCT09
*NOV09
*DEC09
JAN10
FEB10
MAR10
APR10
MAY10
JUN10
JUL10
AUG10
SEP10
30-Yr Avg
Min Prob
Most Prob
Max Prob

Elevation as of January 2010 Mid Month Forecast



San Juan River Downstream Flows



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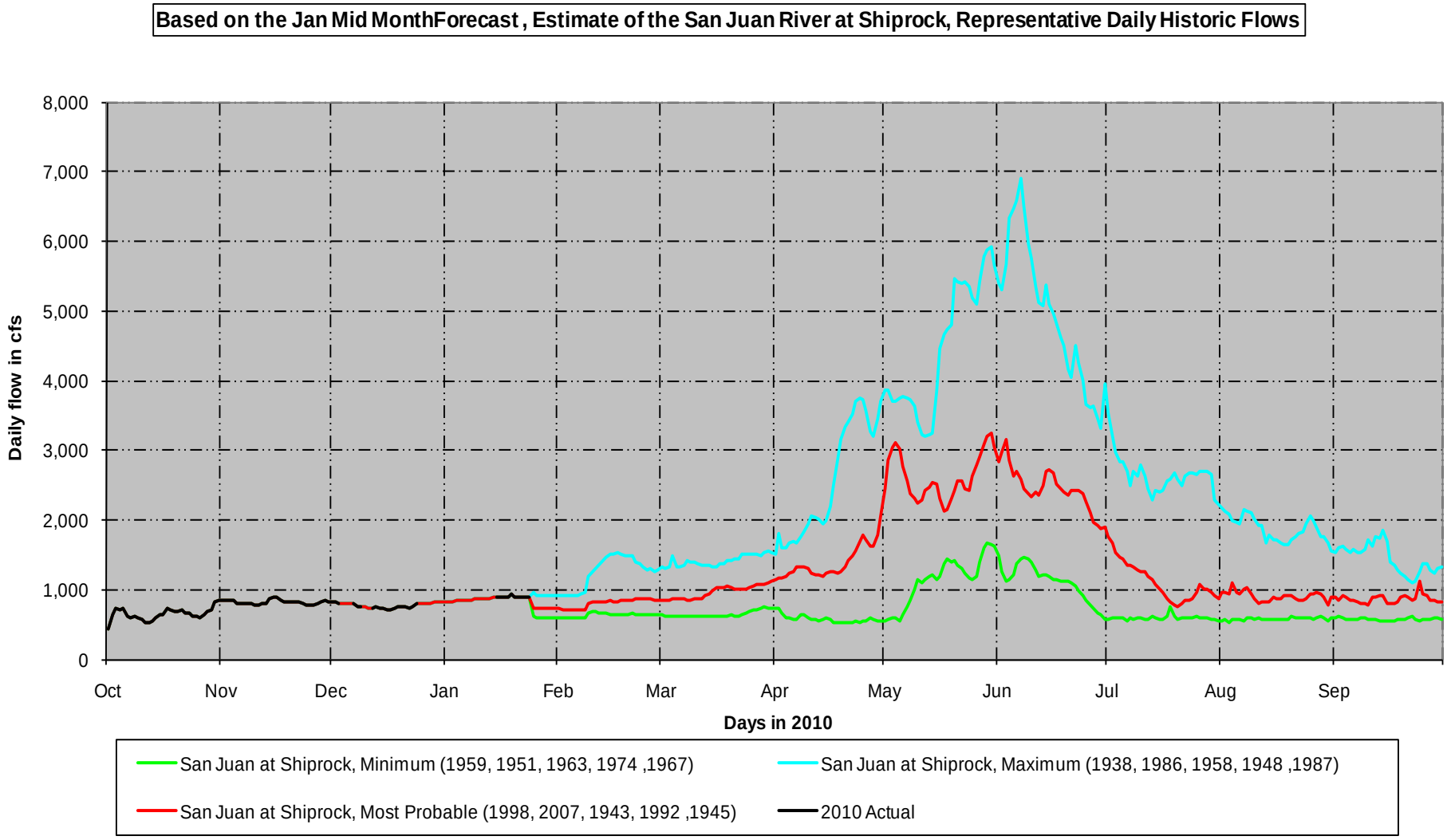
San Juan River at Shiprock



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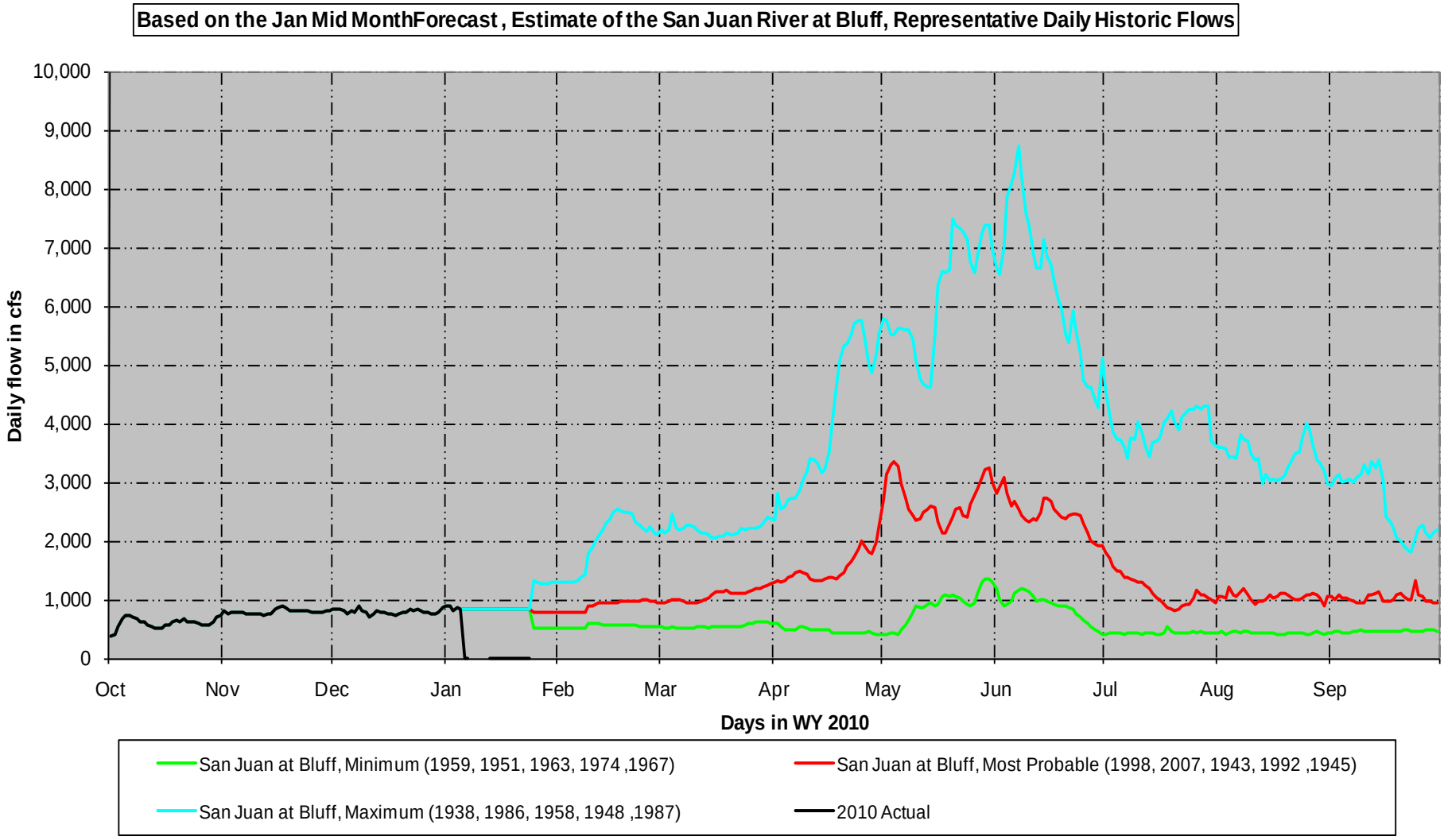
San Juan River at Bluff



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Current Reservoir
Status

Navajo Current Conditions

(as of 1/25/10)

Elevation = 6050.34 (94% of Average)

Storage = 1,229,550 af (72% Full)

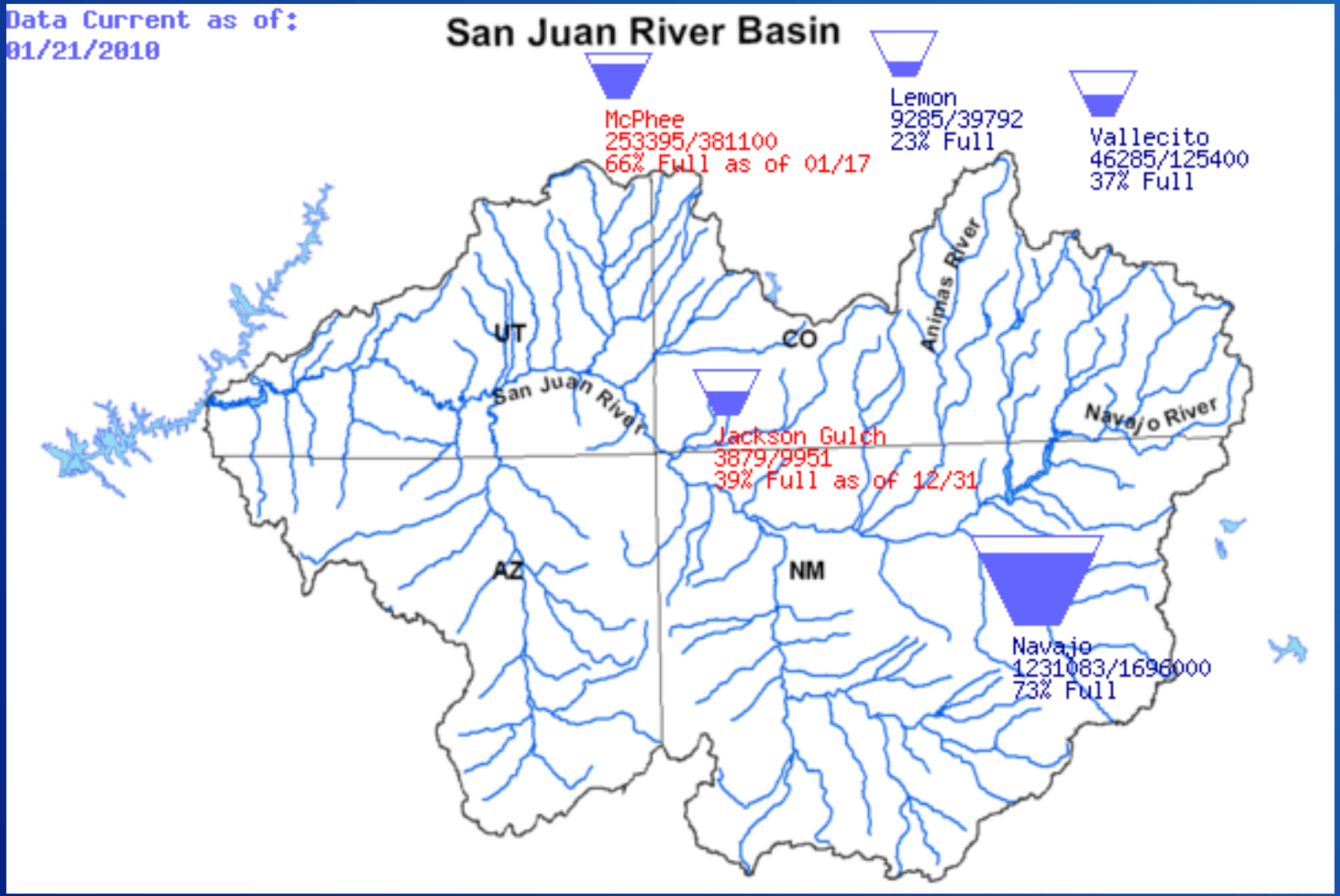
Inflow = 190 cfs (January Average)

Release = 500 cfs

NIIP = Not currently diverting water

San Juan-Chama Diversion = None

Nearby Reservoirs



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Nearby Reservoirs

(1/25/2010)

Vallecito

- Elevation = 7631.0 (37% Full, 73% of average)
- Storage = 46,483 af
- Release = 30 cfs
- Inflow = 67 cfs

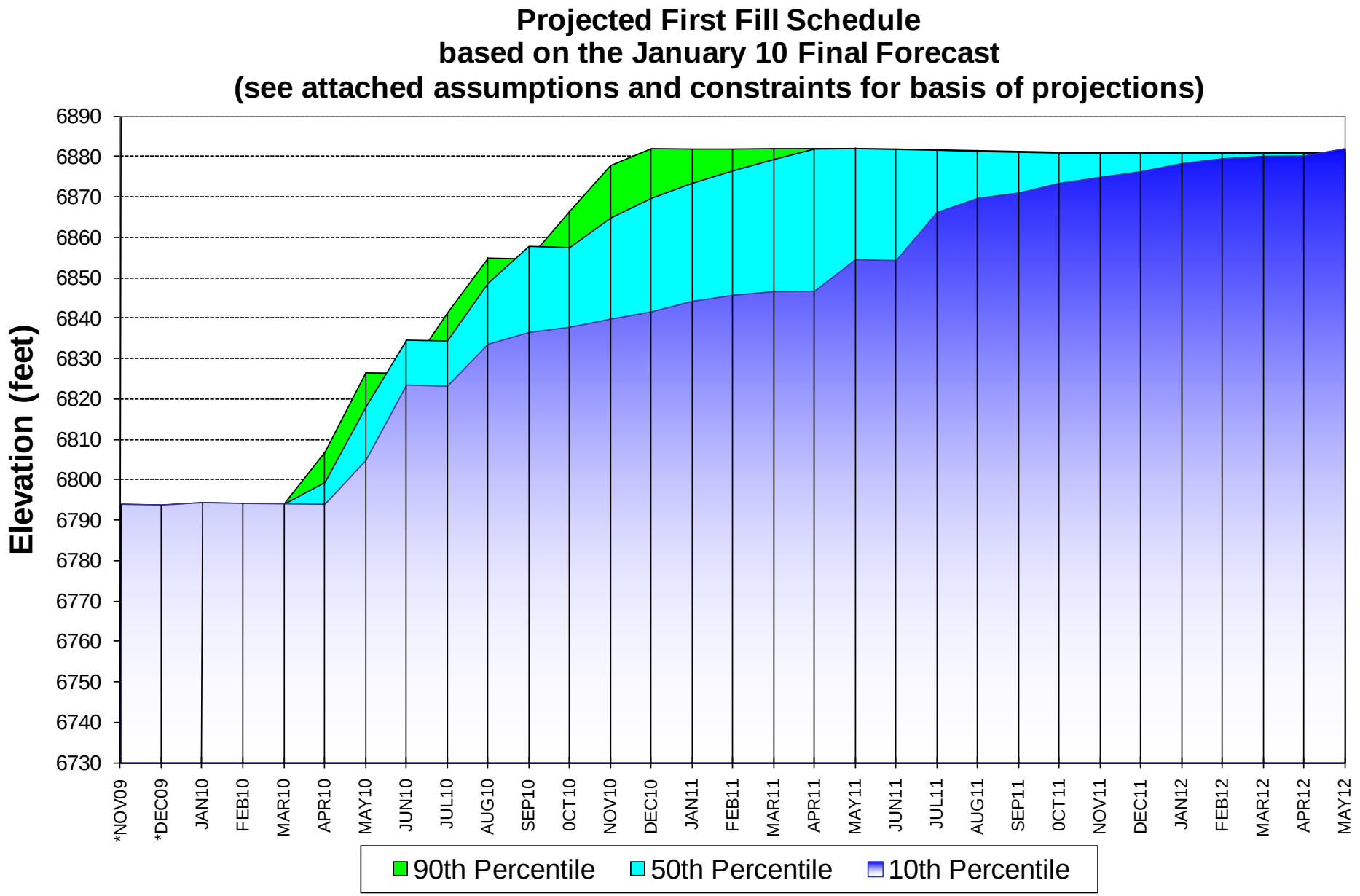
Lemon

- Elevation = 8078.6 (23% Full, 44% of average)
- Storage = 9,292 af
- Release = 9 cfs
- Inflow = 9 cfs

Animas-La Plata Project

- No pumping since the end of July
- Continuation of pumping is expected in March
- Reservoir is 21% Full (25,521 af stored)
- Navajo Nation Municipal Pipeline is currently under construction

Animas-La Plata Project



Recommendations for the San Juan River Operation and Administration

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Navajo Dam
Maintenance Activities

Future Navajo Dam Maintenance Activities:

Muck-out Stilling Basin
Replace Bolts on Penstocks
Quagga Mussels
Auxiliary Outlet Works Gates

Public Law 111-11

- Non-Navajo ditch improvements

Fish & Wildlife Service
San Juan RIP Update

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Reports from other Agencies

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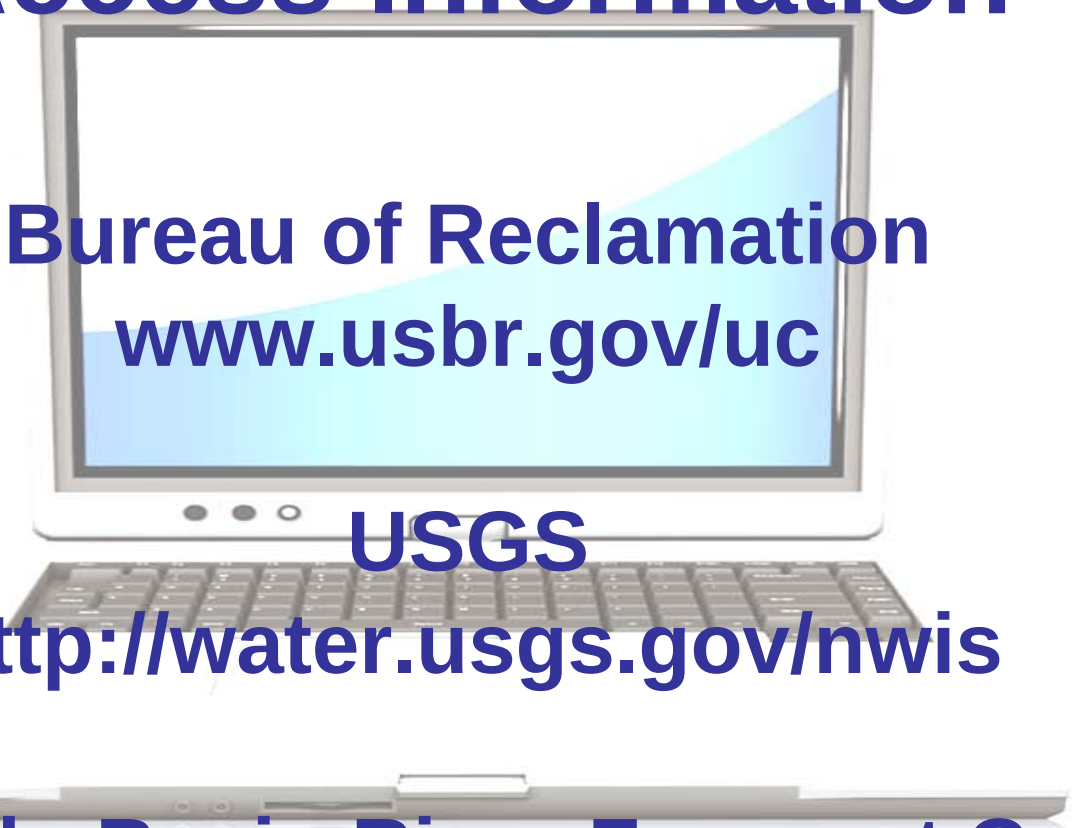
Questions from
the Audience

How You Can Access Information



Bureau of Reclamation
www.usbr.gov/uc

USGS
http://water.usgs.gov/nwis

Colorado Basin River Forecast Center
www.cbrfc.noaa.gov

Reclamation Contacts:

Pat Page
970-385-6560, ppage@usbr.gov

Ryan Christianson
970-385-6590, rchristianson@usbr.gov

Ruth Swickard
970-385-6523, rswickard@usbr.gov

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Summary

- WY2009 had highly variable conditions again (dry/wet/dry)
- After very dry fall, snowfall in December and January have helped bring snowpack to average.
- Forecasts are very preliminary!
- Most Probable April – July Inflow Forecast is 93% of average
- No spring peak release is currently scheduled based on the most probable forecast
- Downstream river flows are forecasted to be lower
- Likely Minimum (Base) Release = 500 cfs
- Target Baseflow is 500 -1000 cfs in Critical Habitat

- Next Operations Meeting: April ?, 2010

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Thanks For Coming!