

RECLAMATION

Managing Water in the West

Fontenelle Working Group Meeting

August 22, 2013



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Upper Colorado Region
Hydraulic Engineer



U.S. Department of the Interior
Bureau of Reclamation

Fontenelle Reservoir Current Status

As of 8/20/13

Storage

Live Capacity	345,000 AF
Capacity on 8/20/13	<u>310,869 AF</u> (68% full)

Pool Elevation

Reservoir Elev. (Max)	6506.00 ft
Elevation on 8/20/13	<u>6491.21 ft</u>
Elevation below (Max)	14.80 ft

Inflow and Release

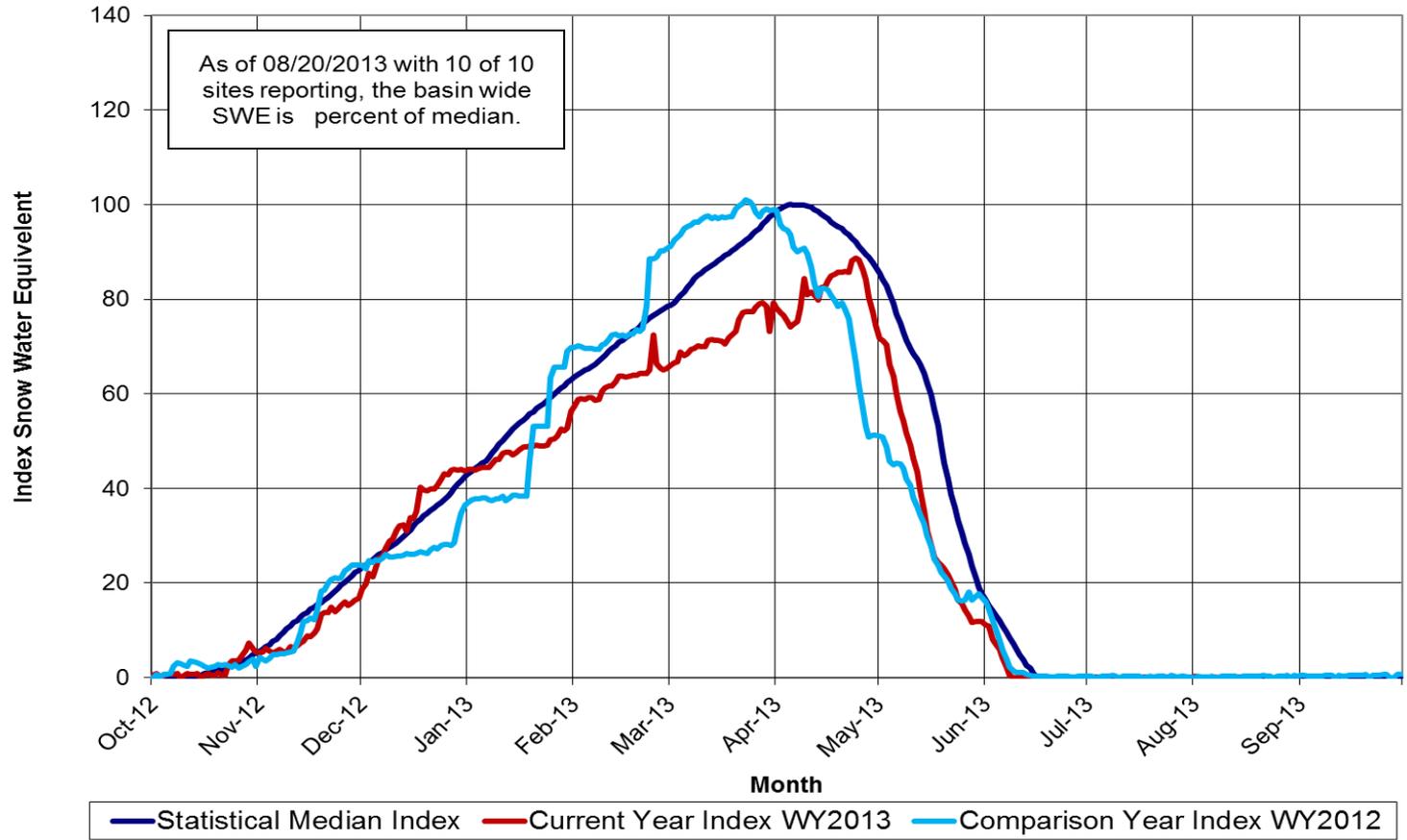
Average Inflow on 8/20/13	450 cfs
Current Release on 8/20/13	700 cfs

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Observed Snowpack

Water Year 2013

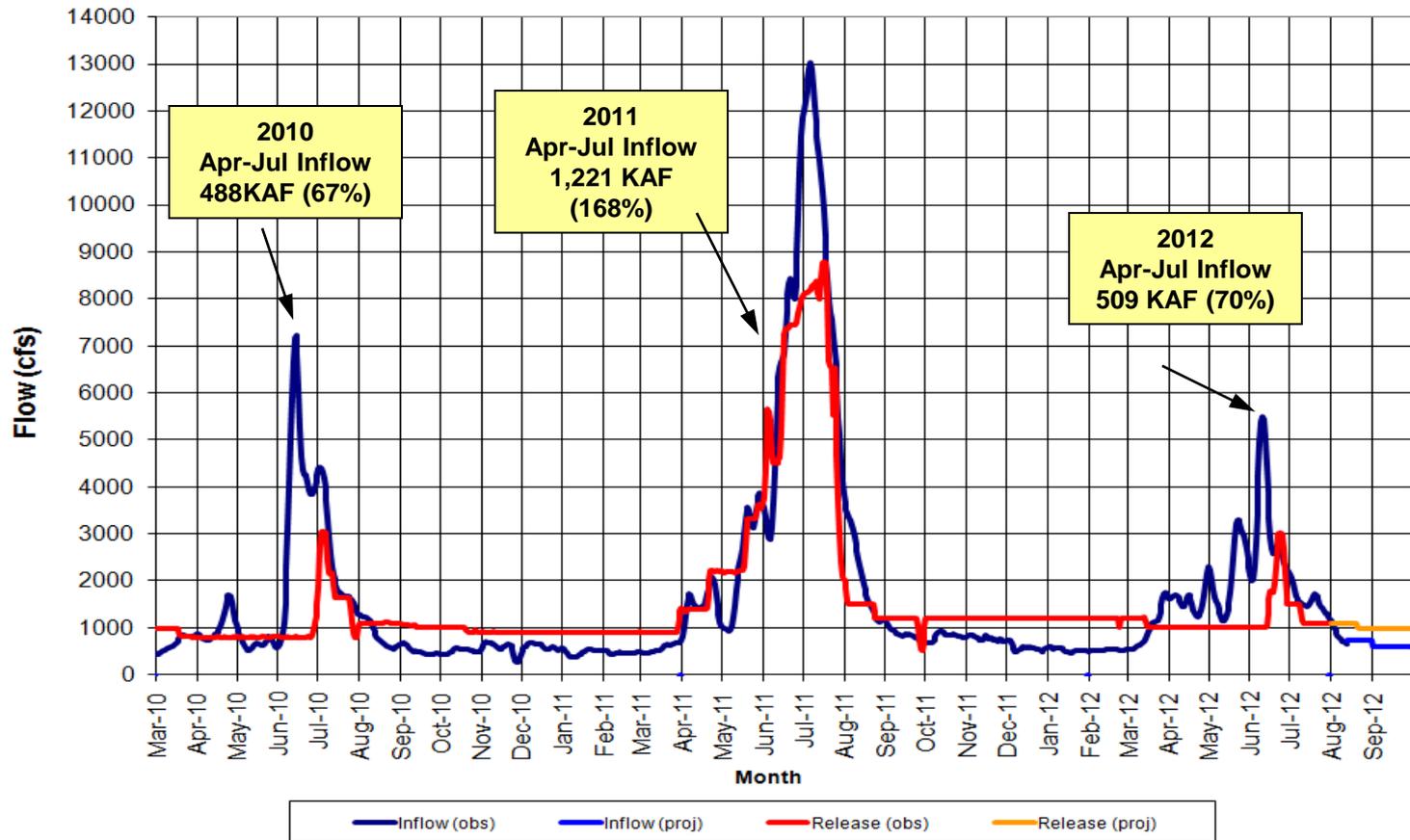
Upper Green River Basin Snotel Tracking
Aggregate of 13 Snotel Sites above Fontenelle Reservoir



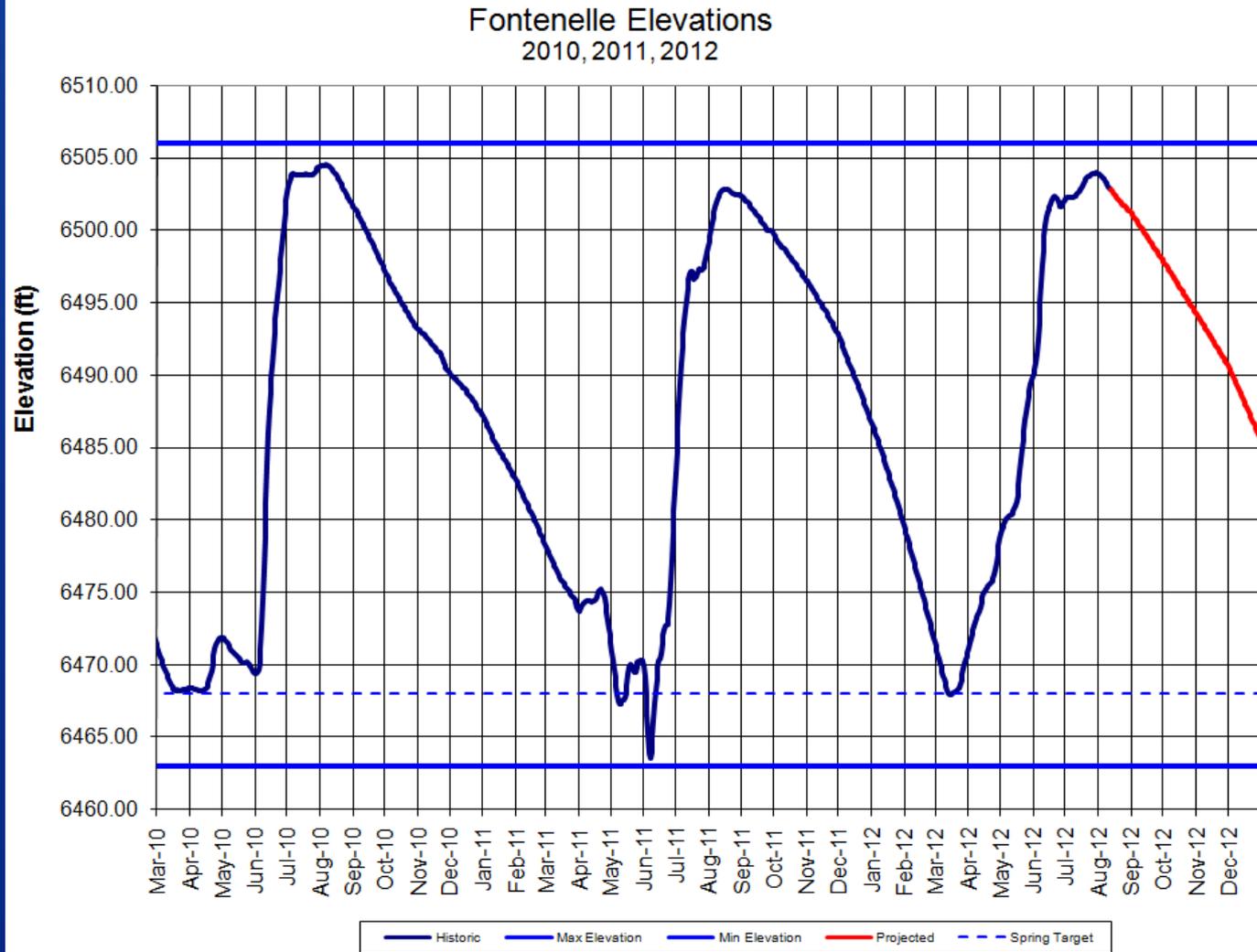
Data Provided by the Natural Resource Conservation Service

Observed Inflow and Release

Fontenelle Inflow and Release
2010, 2011, 2012



Observed Reservoir Elevation

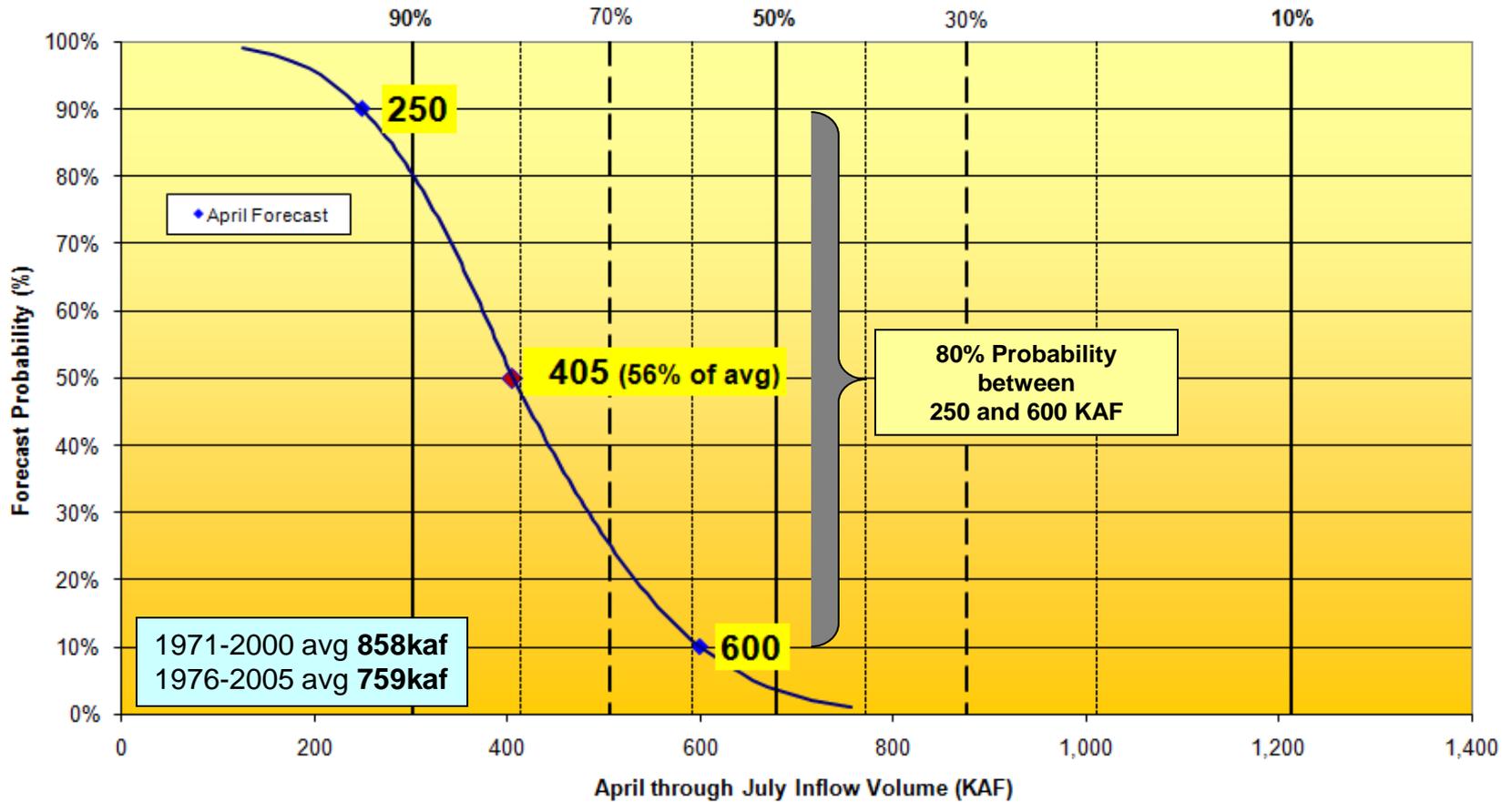


Water Year 2012 Operations Review

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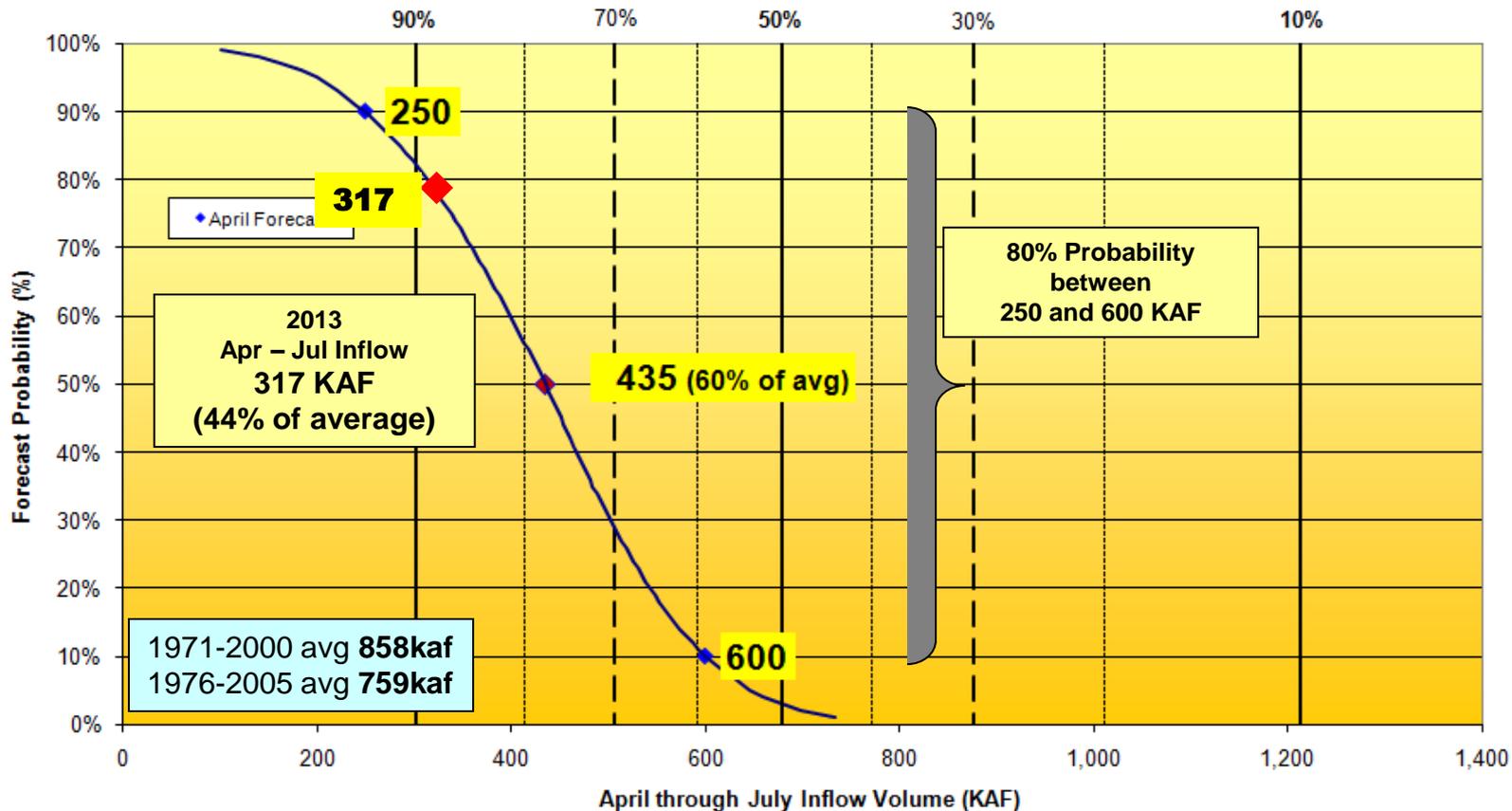
April Official Forecast

Fontenelle Reservoir
April - July Forecasted Inflow
Related to Exceedance Percentages for Historic Period (1981-2010)



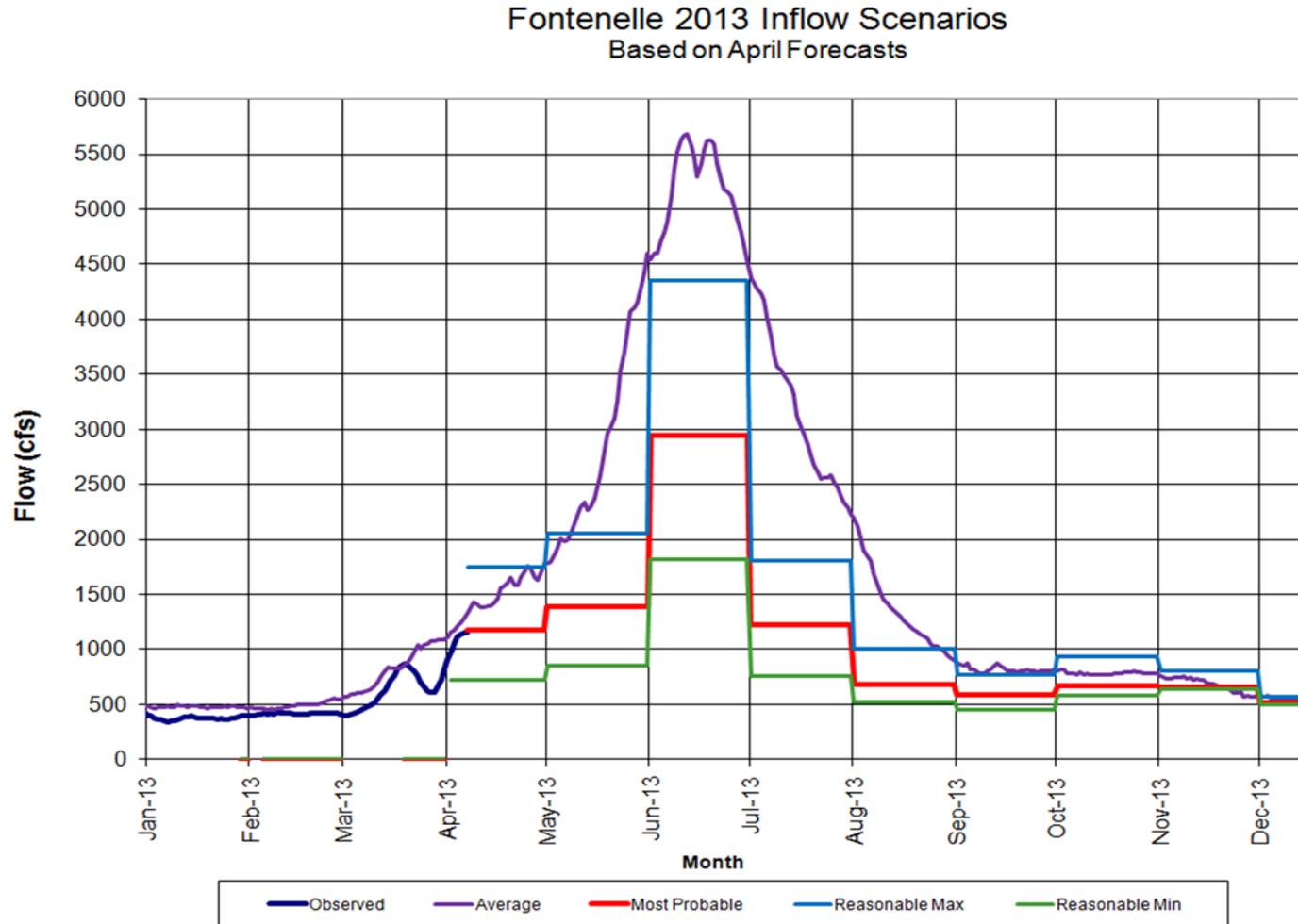
April 15th Forecast

Fontenelle Reservoir
April - July Forecasted Inflow
Related to Exceedance Percentages for Historic Period (1981-2010)



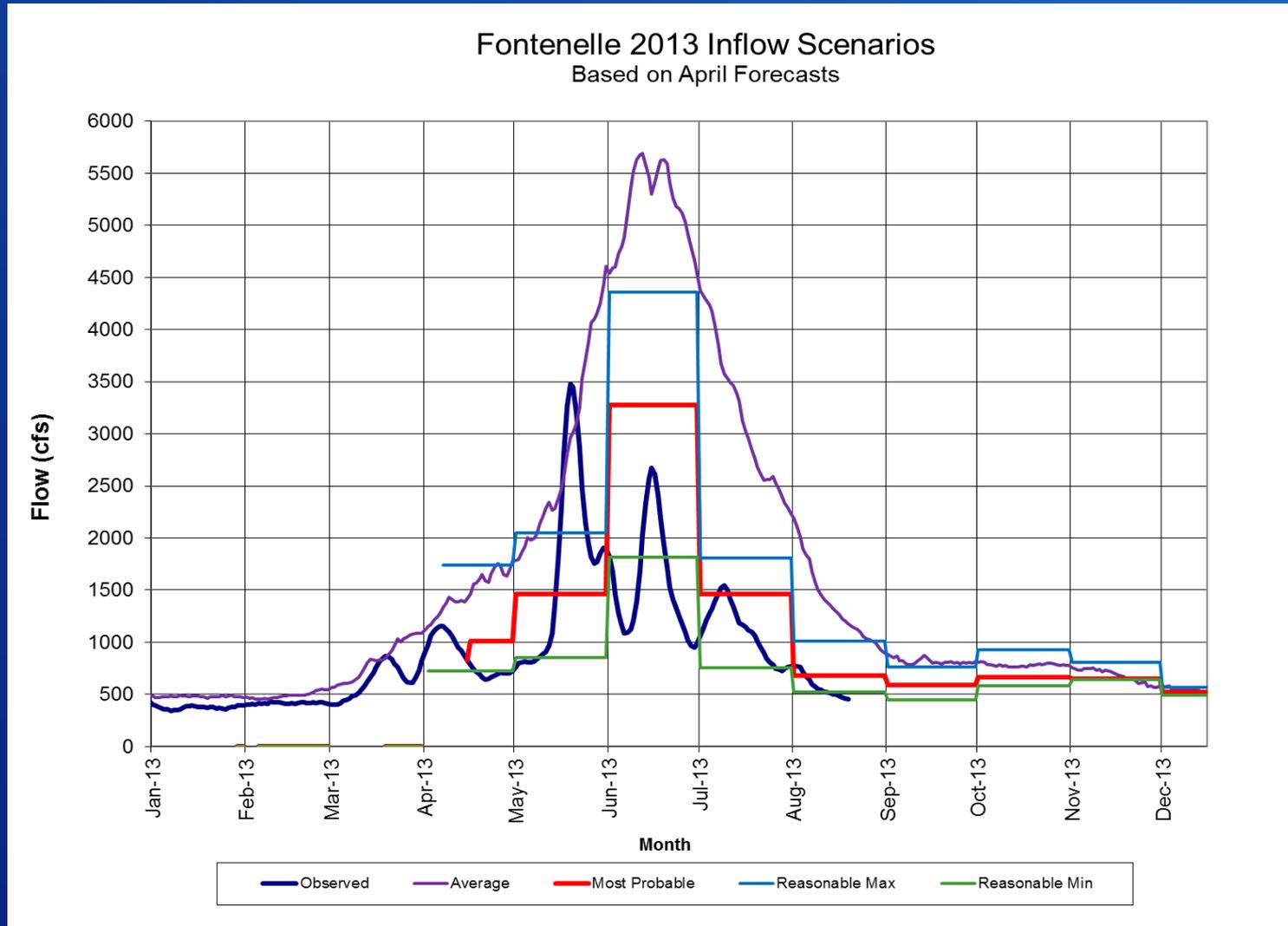
Projected 2013 Inflow Scenarios

Presented at April Working Group Meeting



Observed 2013 Inflow

As of Aug 19, 2013

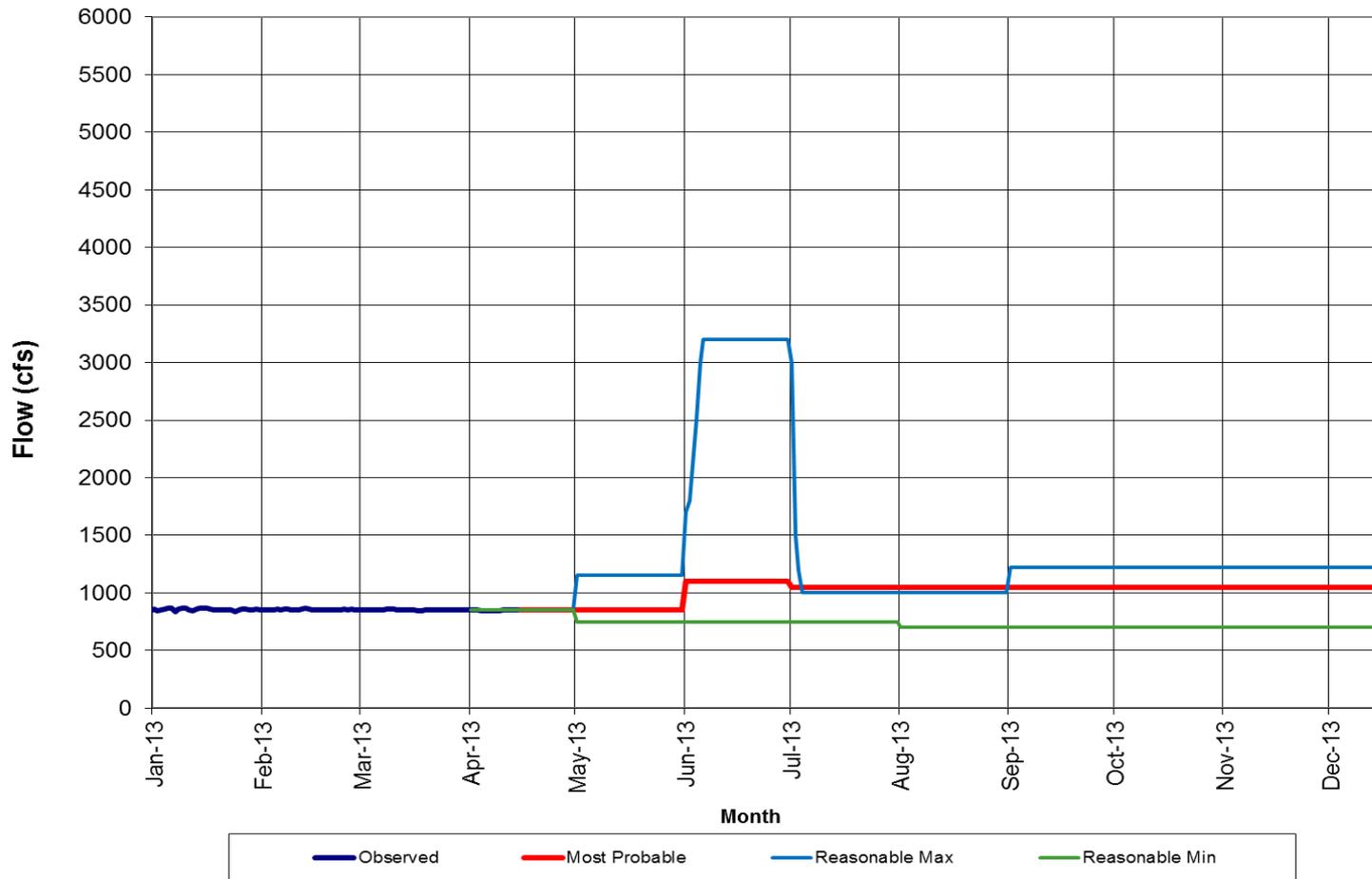


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Projected 2013 Release Scenarios

Presented at April Working Group Meeting

Fontenelle Release Scenarios
Based on April 1 Forecasts

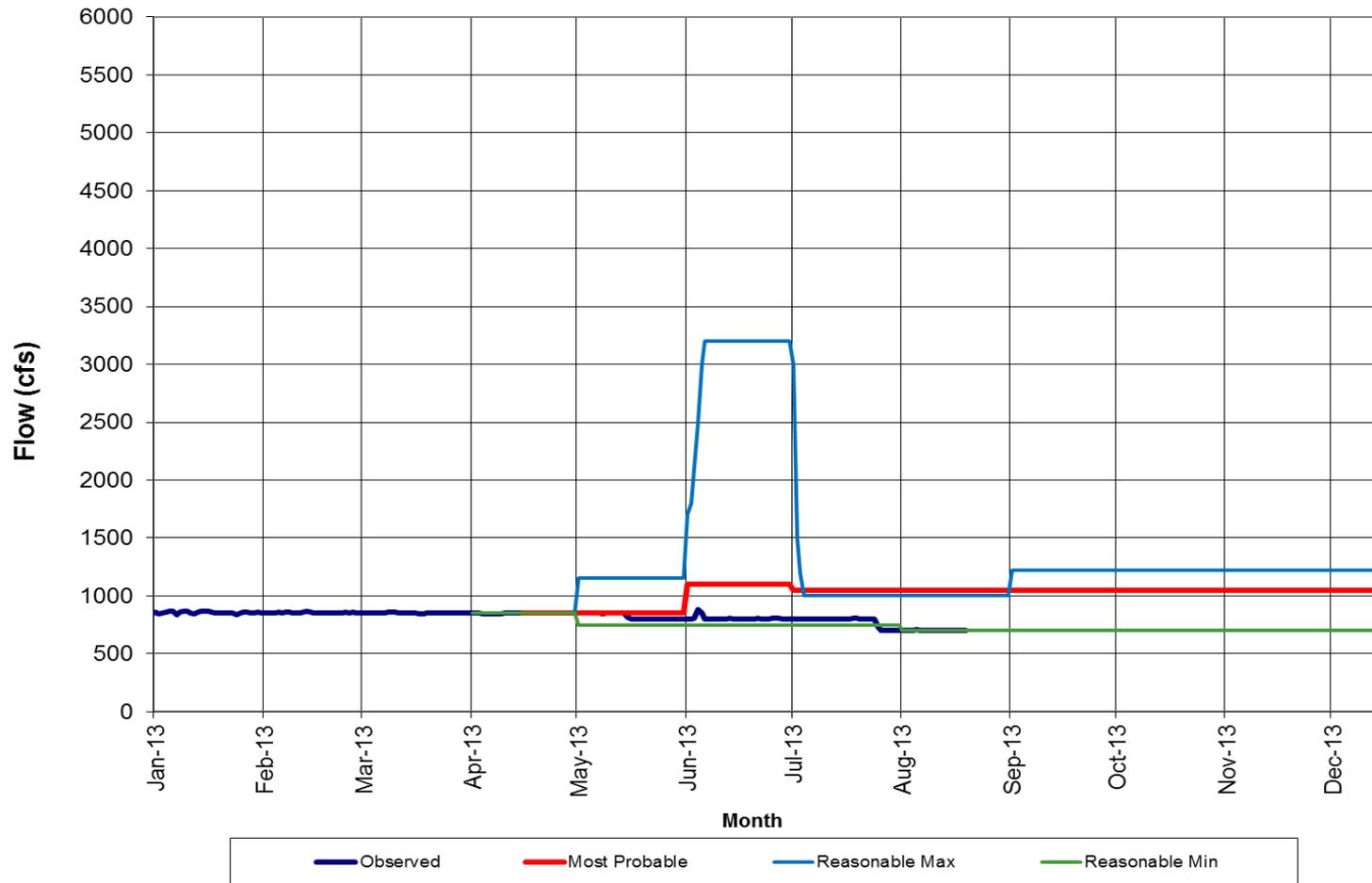


Observed 2013 Release

As of Aug 19, 2013

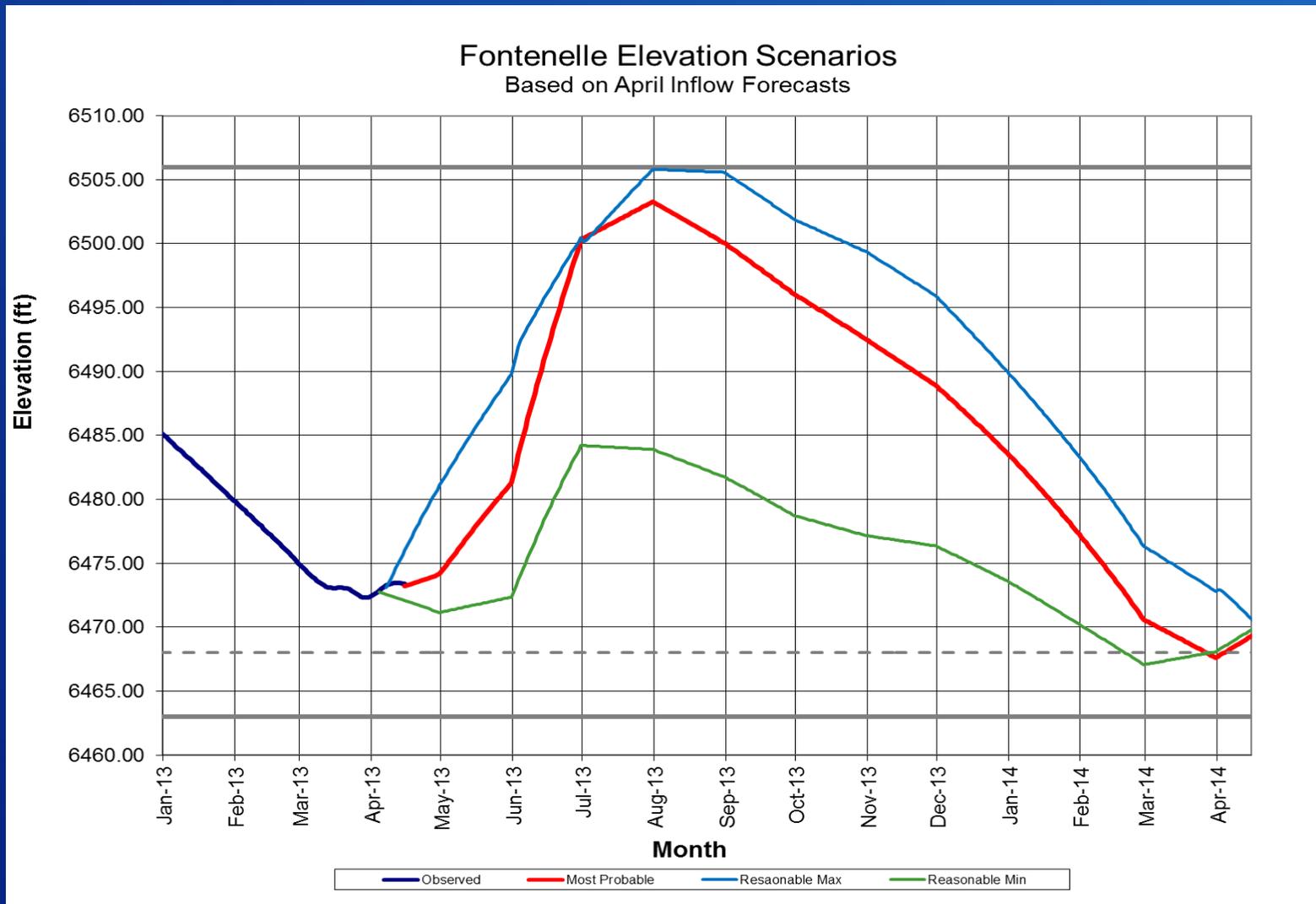
Fontenelle Release Scenarios

Based on April 1 Forecasts



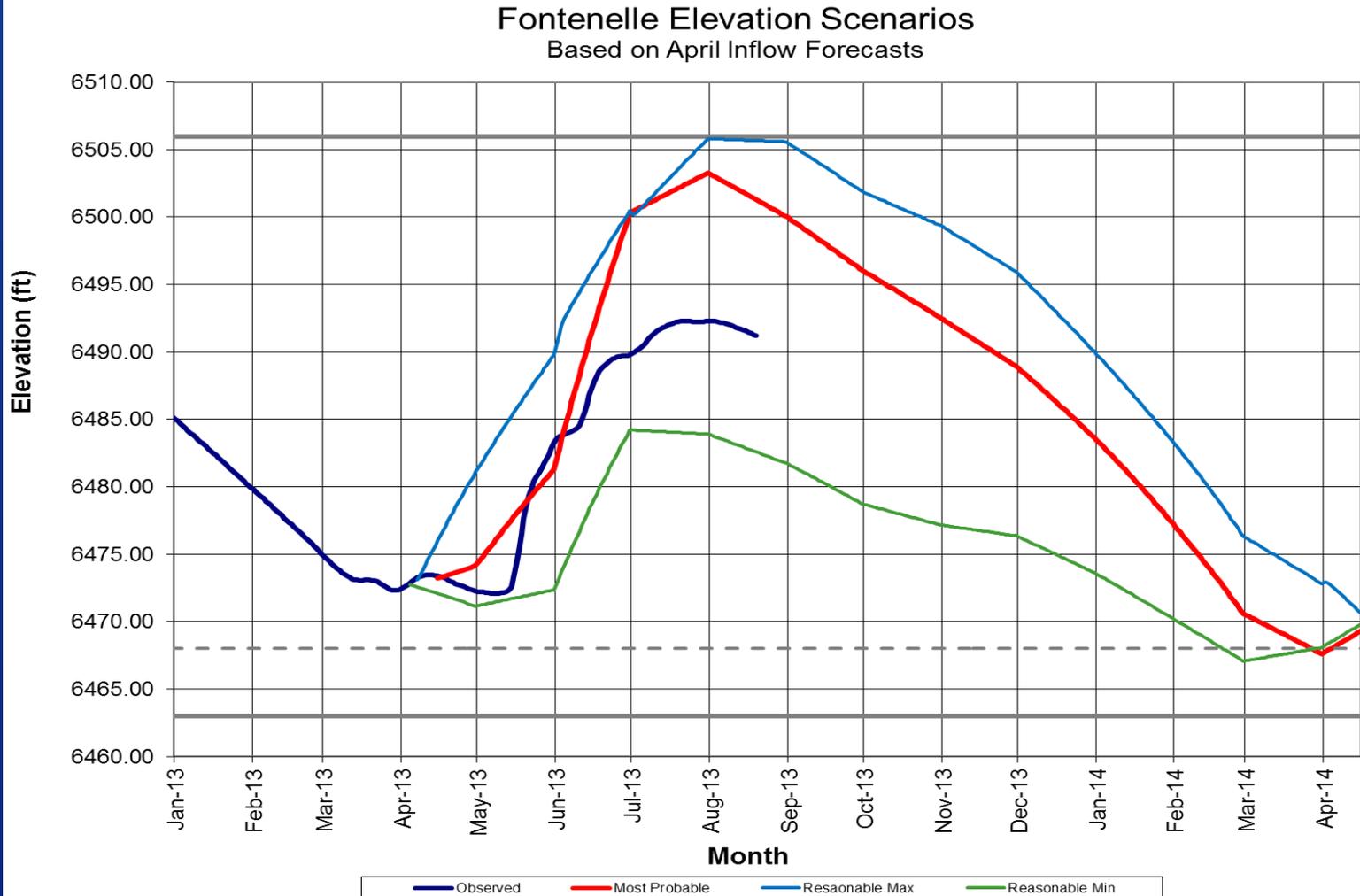
Projected Elevation Scenarios

Presented at April Working Group Meeting



Observed Elevation

As of Aug 19, 2013



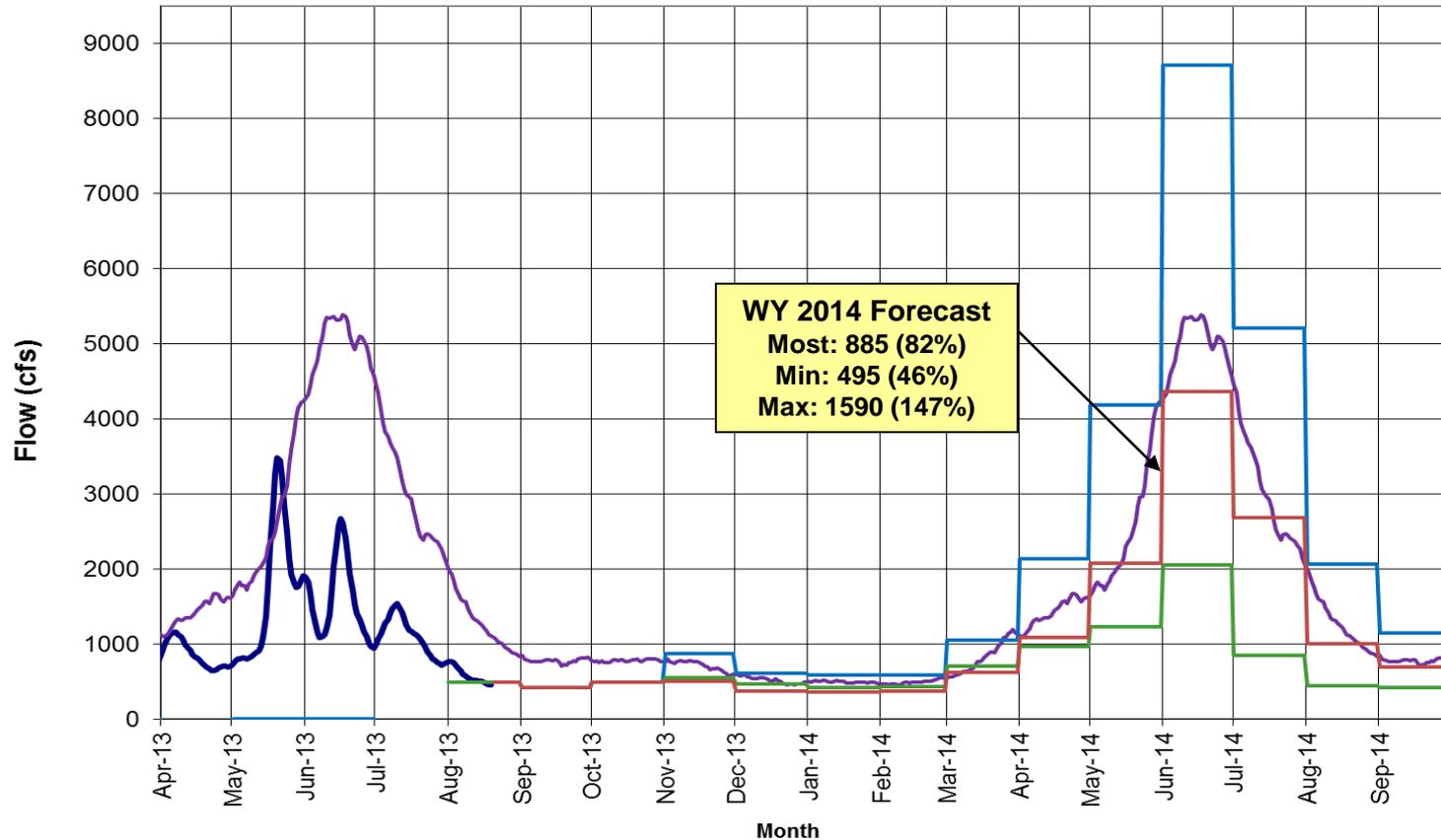
Water Year 2013 Projected Operations

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Inflow Scenarios

Water Year 2014

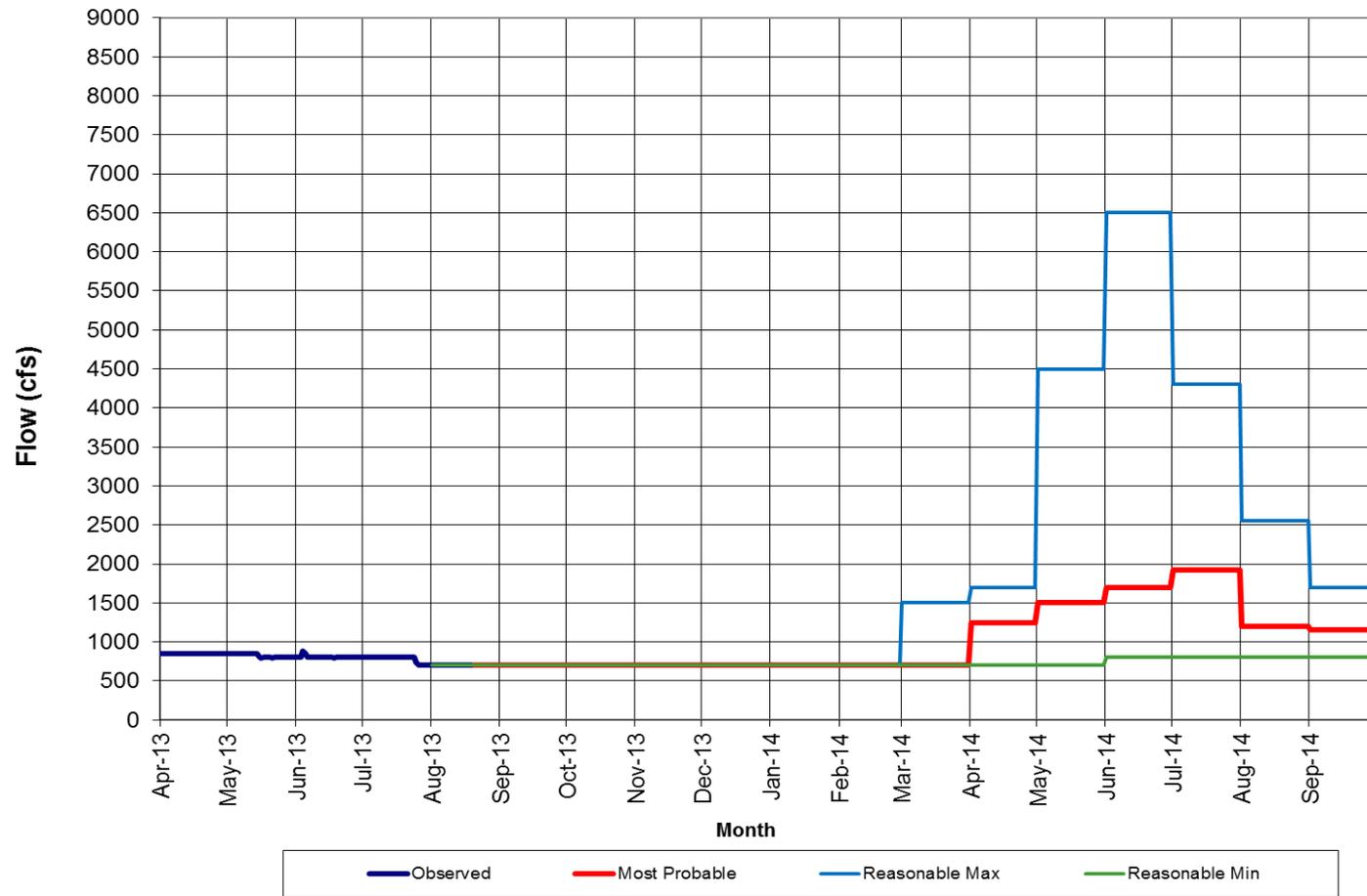
Fontenelle 2014 Inflow Scenarios
Based on August Inflow Forecasts



Release Scenarios

Water Year 2014

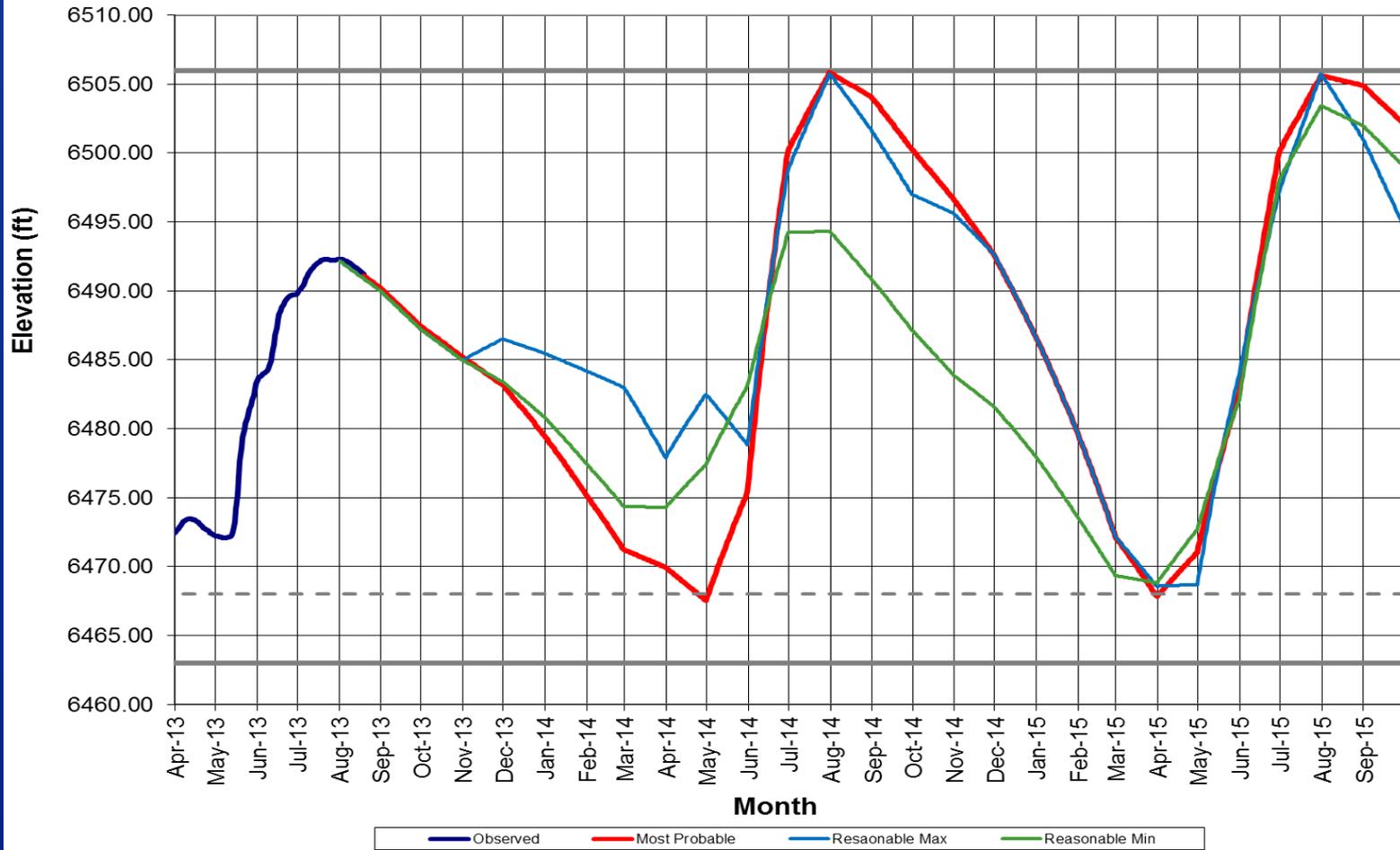
Fontenlle 2014 Release Scenarios
Based on August Inflow Forecasts



Elevation Scenarios

Water Year 2013

Fontenelle 2014 Elevation Scenarios
Based on Aug '13 Inflow Forecasts



Other Topics for Discussion

1. Fontenelle Reservoir Maintenance

- Annual maintenance Oct 15-Oct 23
 - Annual inspections, will be bypassing water during this time
- Stilling basin work

2. Other Items?

Fontenelle Working Group Meeting August 2012



Green River at La Barge, WY 6/20/2009

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Extra Slides Follow

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Historic Inflow Statistics

Period of Record 1981-2010

ANNUALIZED MONTHLY INFLOW VOLUME(THOUSAND-ACRE-FEET)

Month	95%	90%	80%	75%	70%	60%	50%	40%	30%	25%	20%	10%	5%	Average
OCT	28	31	34	36	37	41	44	49	54	57	60	71	81	49
NOV	28	32	37	38	40	42	44	45	47	48	49	51	53	42
DEC	27	28	30	30	31	32	32	33	34	35	35	37	38	32
JAN	23	25	28	28	29	30	31	32	33	34	34	36	37	30
FEB	22	24	26	26	27	28	29	29	30	30	31	32	33	28
MAR	39	42	46	47	49	51	53	55	58	59	60	64	68	53
APR	55	56	62	65	68	74	81	88	97	102	108	126	142	85
MAY	47	74	105	116	128	147	164	182	201	212	224	255	282	164
JUN	93	120	162	180	198	234	271	311	358	389	419	514	601	299
JUL	26	51	85	99	112	137	162	189	220	240	259	318	371	178
AUG	17	27	41	47	52	62	72	83	94	101	107	126	141	77
SEP	20	25	31	33	36	40	44	49	54	57	59	68	75	46
ANNUAL	424	535	686	746	806	917	1,028	1,146	1,279	1,363	1,446	1,697	1,921	1,082
APR-JUL	220	301	414	460	506	592	678	770	876	943	1,010	1,213	1,396	726

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Historic Inflow Statistics

Period of Record 1971-2000

ANNUALIZED MONTHLY INFLOW VOLUME(THOUSAND-ACRE-FEET)

Month	95%	90%	80%	75%	70%	60%	50%	40%	30%	25%	20%	10%	5%	Average
OCT	41	49	57	59	62	66	71	75	80	82	84	90	92	49
NOV	41	51	61	63	65	68	70	70	70	69	68	65	61	42
DEC	39	45	49	50	51	52	52	51	51	50	49	47	44	32
JAN	34	40	46	47	48	49	50	50	49	48	48	45	42	30
FEB	32	38	42	43	44	45	45	45	45	44	43	40	38	28
MAR	57	67	76	78	81	83	85	85	85	85	84	81	77	53
APR	55	56	62	65	68	74	81	88	97	102	108	126	142	85
MAY	47	74	105	116	128	147	164	182	201	212	224	255	282	164
JUN	93	120	162	180	198	234	271	311	358	389	419	514	601	299
JUL	26	51	85	99	112	137	162	189	220	240	259	318	371	178
AUG	24	42	67	77	86	102	115	128	139	144	149	158	161	77
SEP	29	39	51	55	59	65	71	75	79	81	83	85	85	46
ANNUAL	517	673	863	933	1,002	1,123	1,236	1,350	1,473	1,546	1,619	1,824	1,995	1,243
APR-JUL	220	301	414	460	506	592	678	770	876	943	1,010	1,213	1,396	726

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