

RECLAMATION

Managing Water in the West

Fontenelle Working Group Meeting

April 26, 2012



U.S. Department of the Interior
Bureau of Reclamation

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Upper Colorado Region
Hydraulic Engineer

Fontenelle Reservoir Current Status

As of 4/25/12

Storage

Live Capacity	345,000 AF
Capacity on 4/25/12	<u>146,200 AF</u>
	(42% full) <i>typical for April</i>

Pool Elevation

Top of reservoir	6506.0 ft
Elevation on 4/25/12	<u>6476.0 ft</u>
Elevation below top	30.0 ft

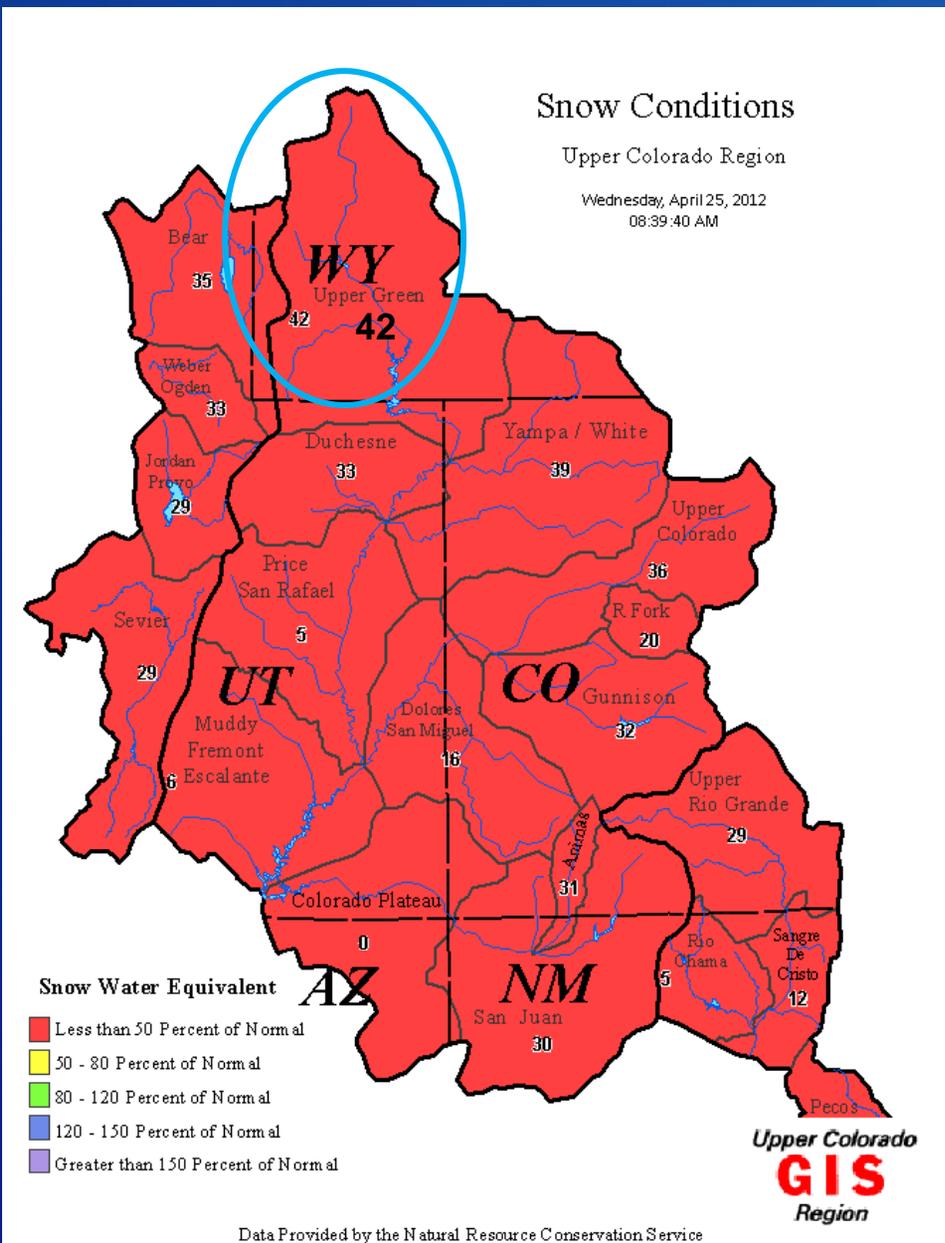
Inflow and Release

5 Day Average Inflow	1,280 cfs
Current Release on 4/25/12	1,000 cfs

* *Expect increased releases early May and later in the season*

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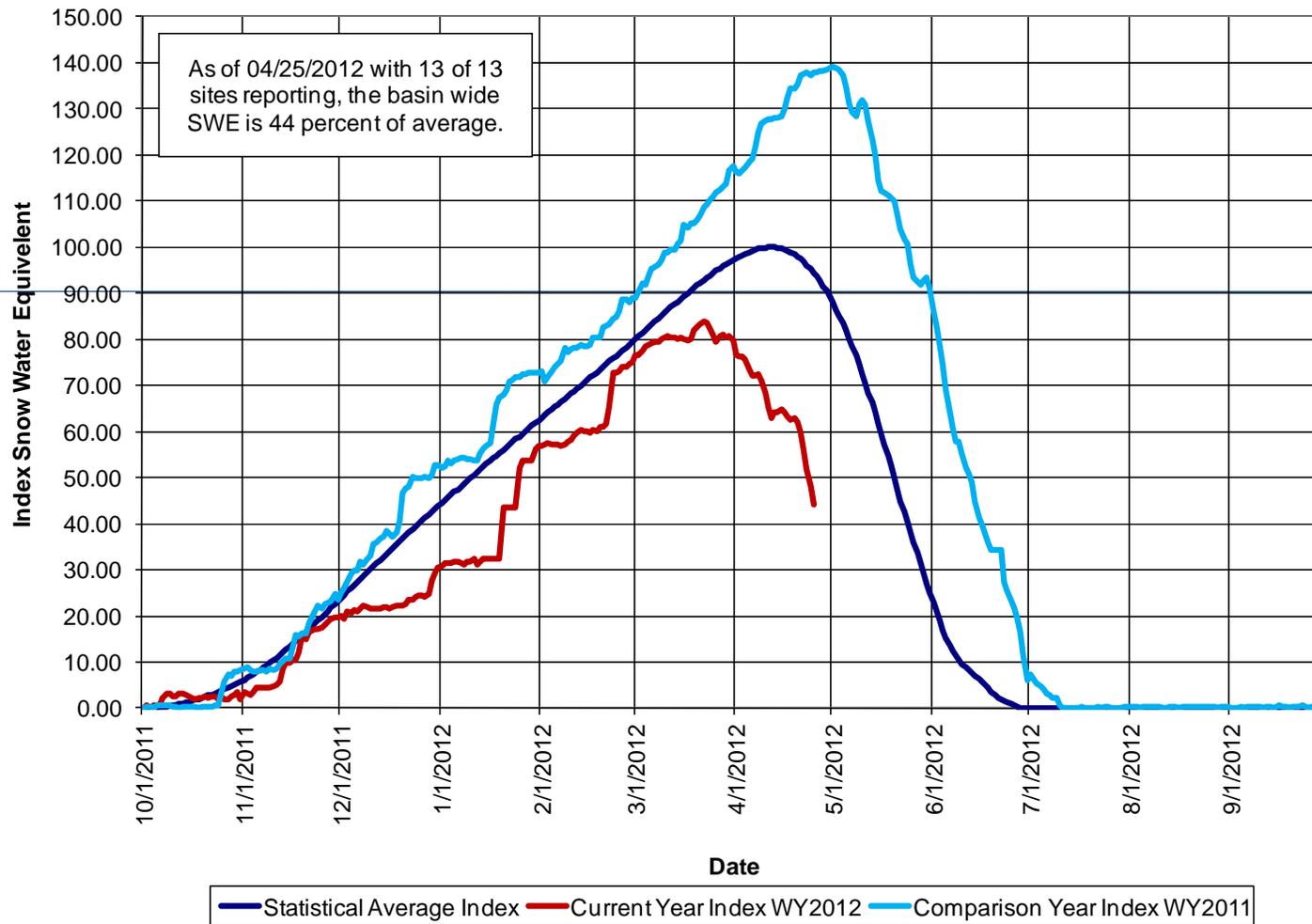
Snow Water Equivalent (SWE) Current Conditions



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Current Snowpack

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



Drought Conditions

U.S. Drought Monitor

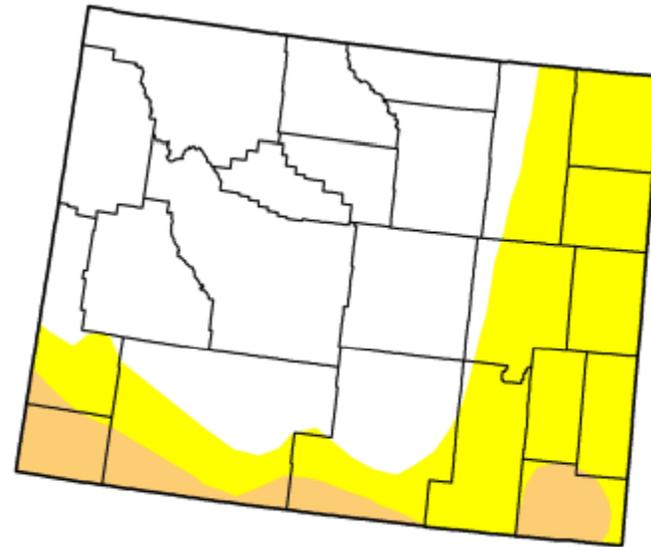
April 17, 2012

Valid 7 a.m. EST

Wyoming

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	60.74	39.26	7.53	0.00	0.00	0.00
Last Week (04/10/2012 map)	60.74	39.26	5.40	0.00	0.00	0.00
3 Months Ago (01/17/2012 map)	86.48	13.52	0.00	0.00	0.00	0.00
Start of Calendar Year (12/27/2011 map)	99.84	0.16	0.00	0.00	0.00	0.00
Start of Water Year (09/27/2011 map)	98.26	1.74	0.00	0.00	0.00	0.00
One Year Ago (04/12/2011 map)	86.72	13.28	0.00	0.00	0.00	0.00



Intensity:

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

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

<http://droughtmonitor.unl.edu>

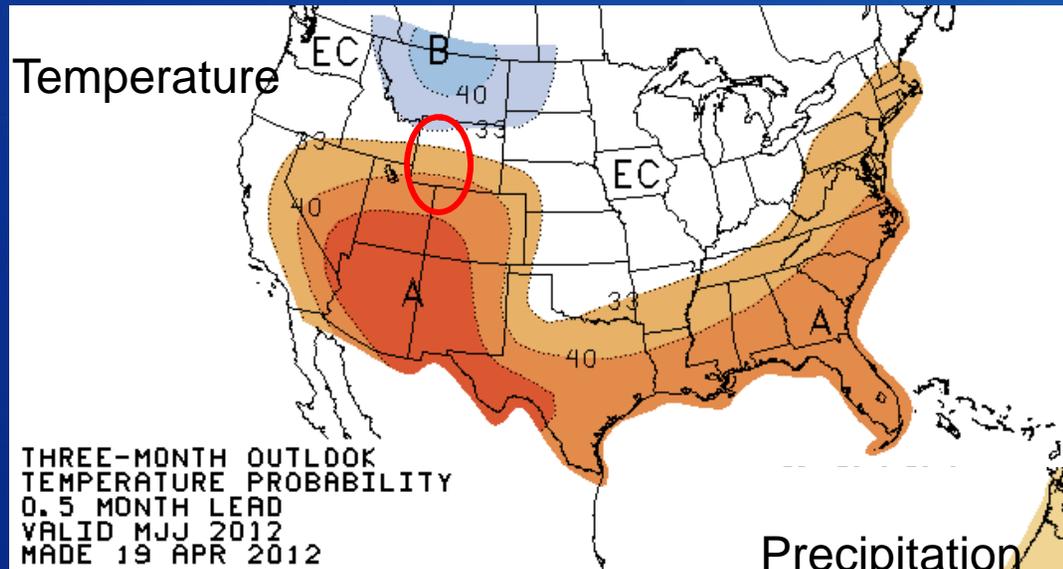


Released Thursday, April 19, 2012

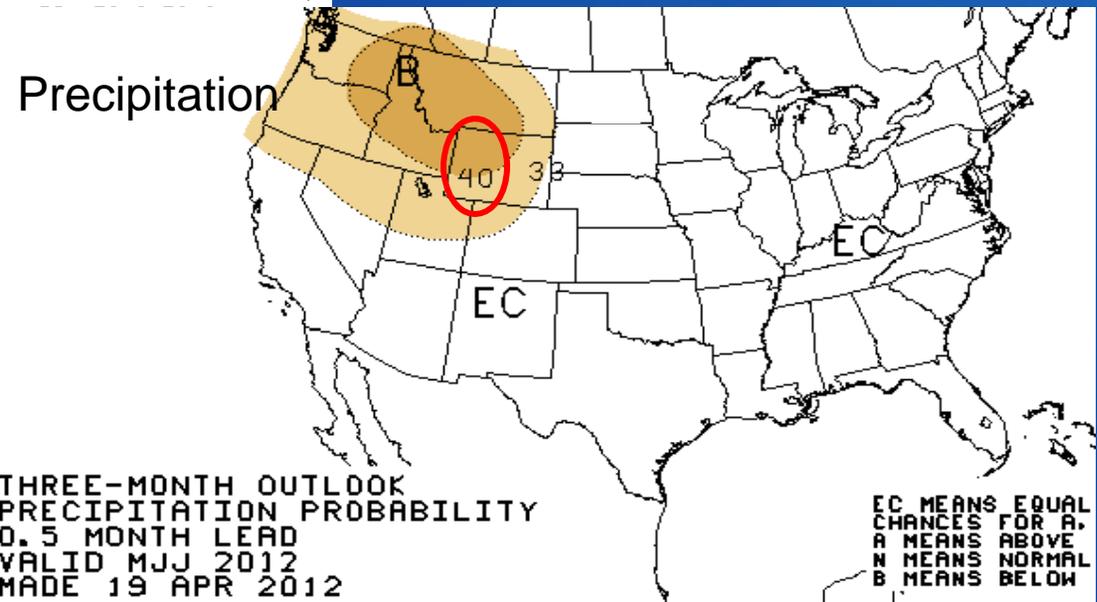
Anthony Artusa, Climate Prediction Center/NCEP/NWS/NOAA

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3-Month Climate Outlook

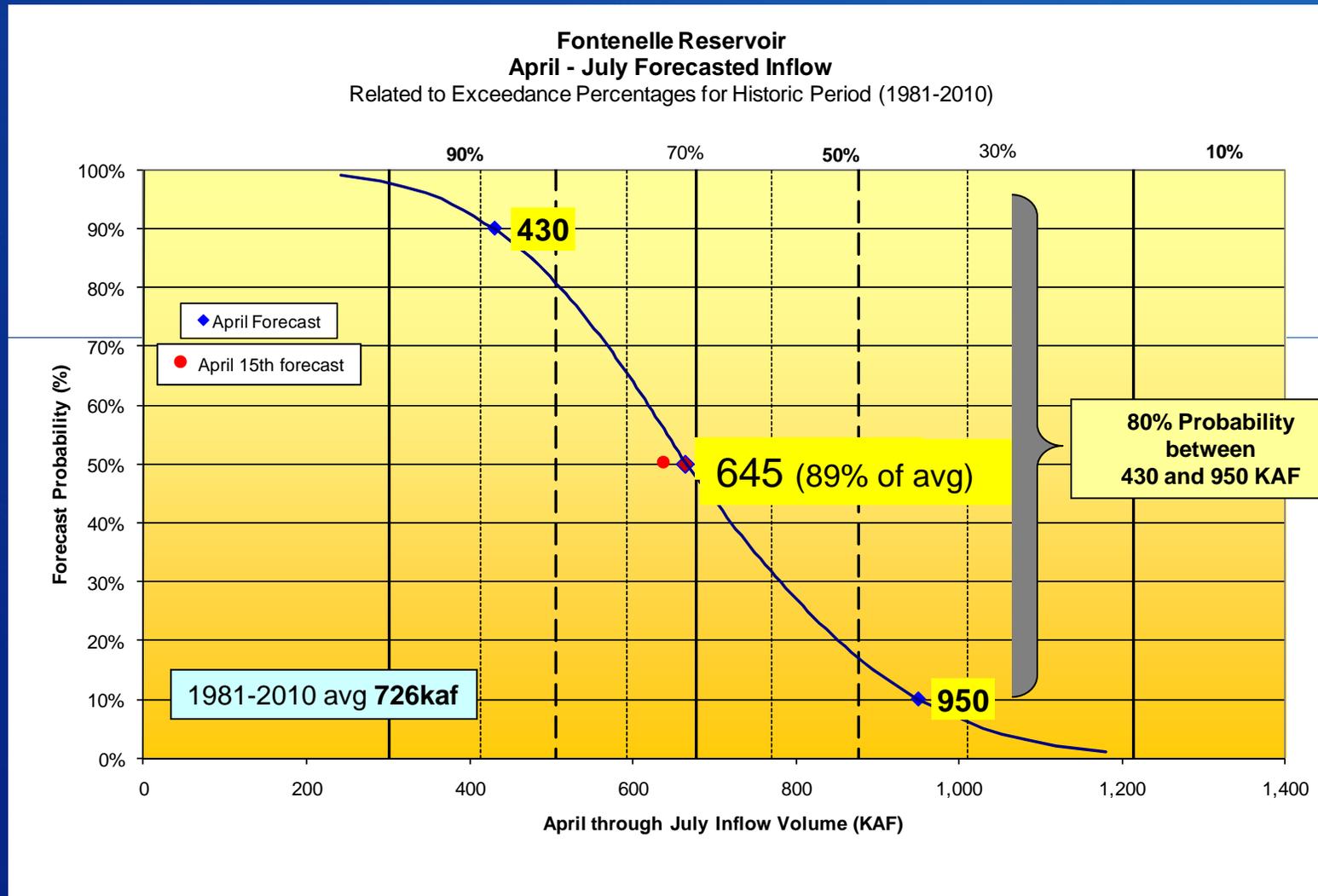


Images courtesy of National Weather Service Climate Prediction Center



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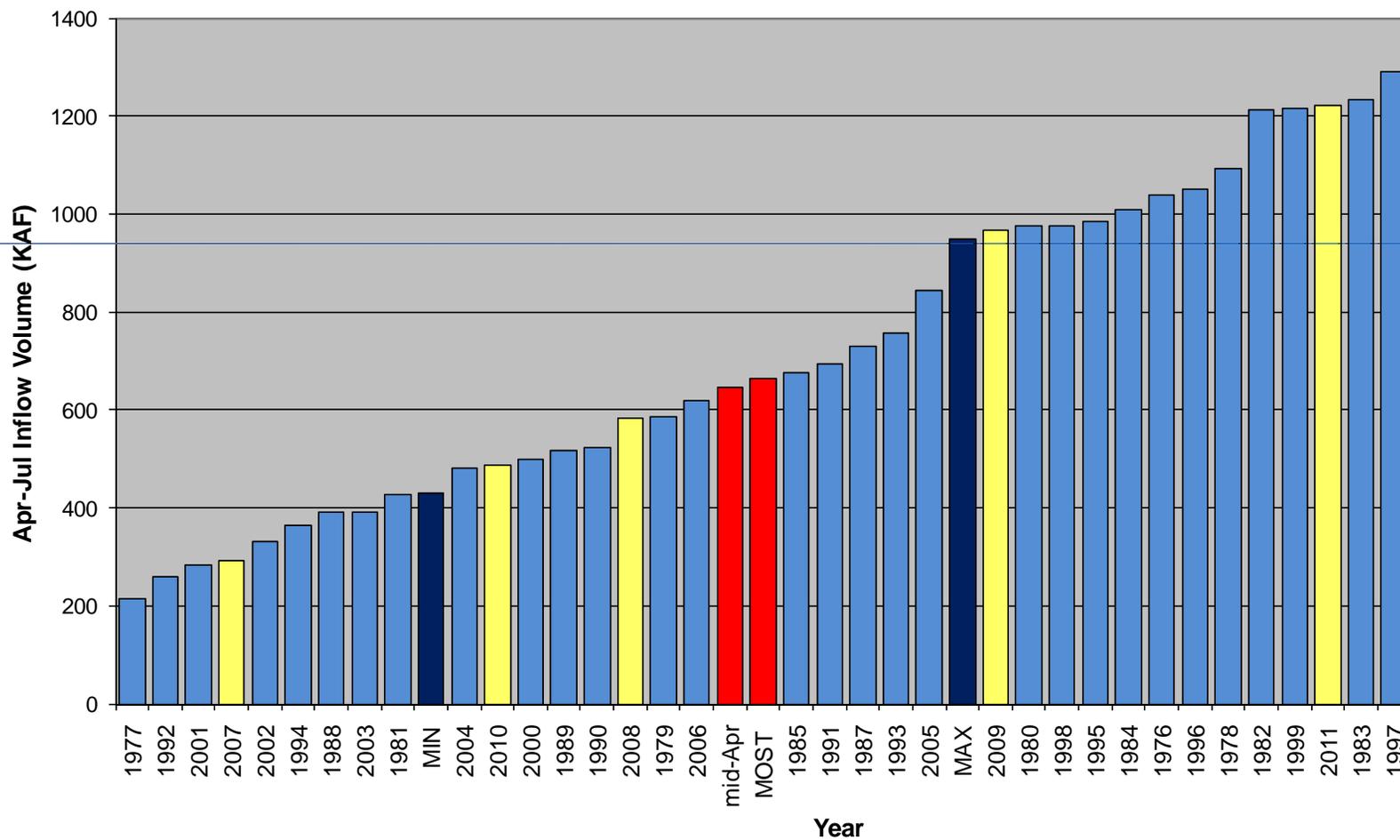
April Official Forecast



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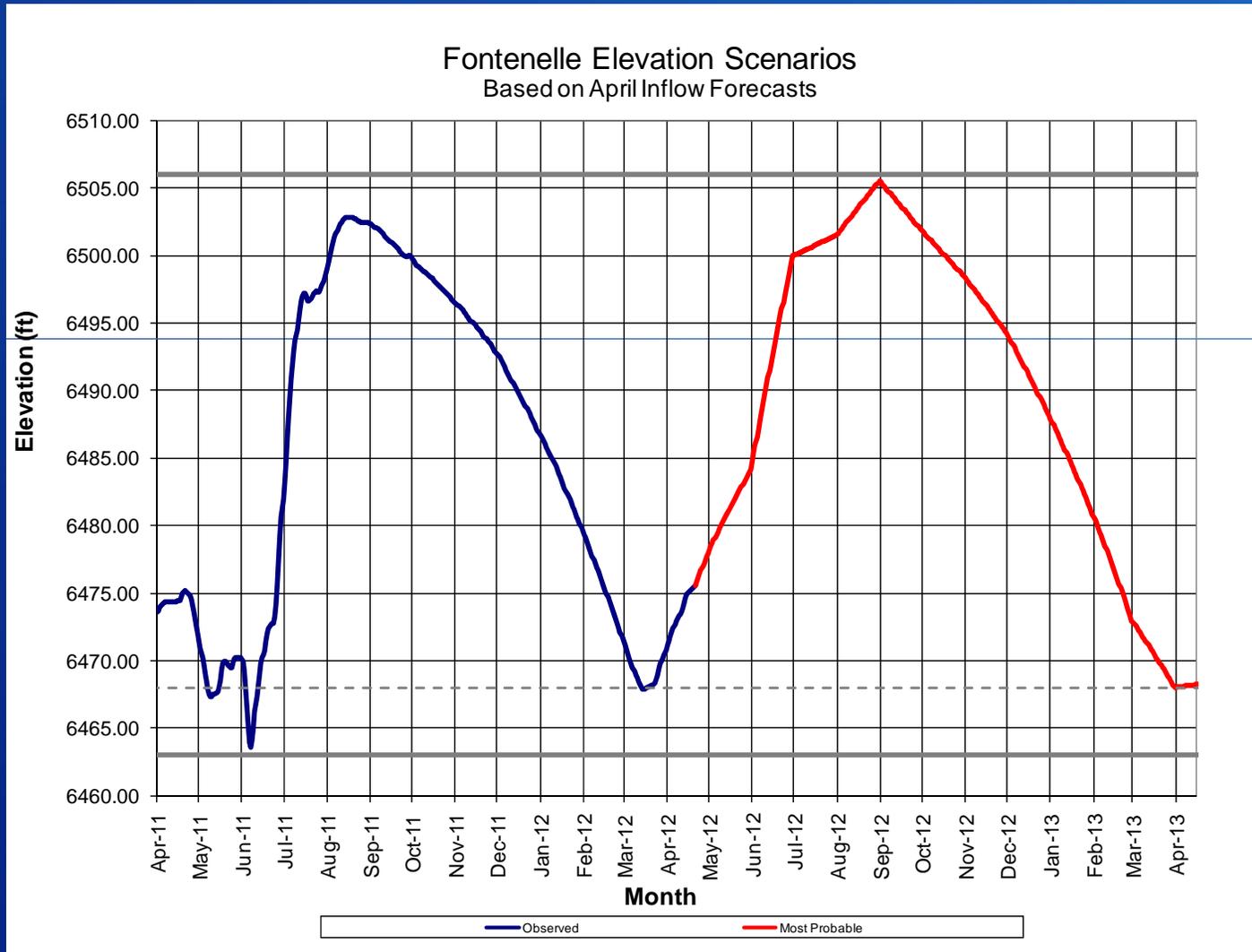
2012 Forecast

Fontenelle Apr-Jul Forecast 2012
Comparison with History



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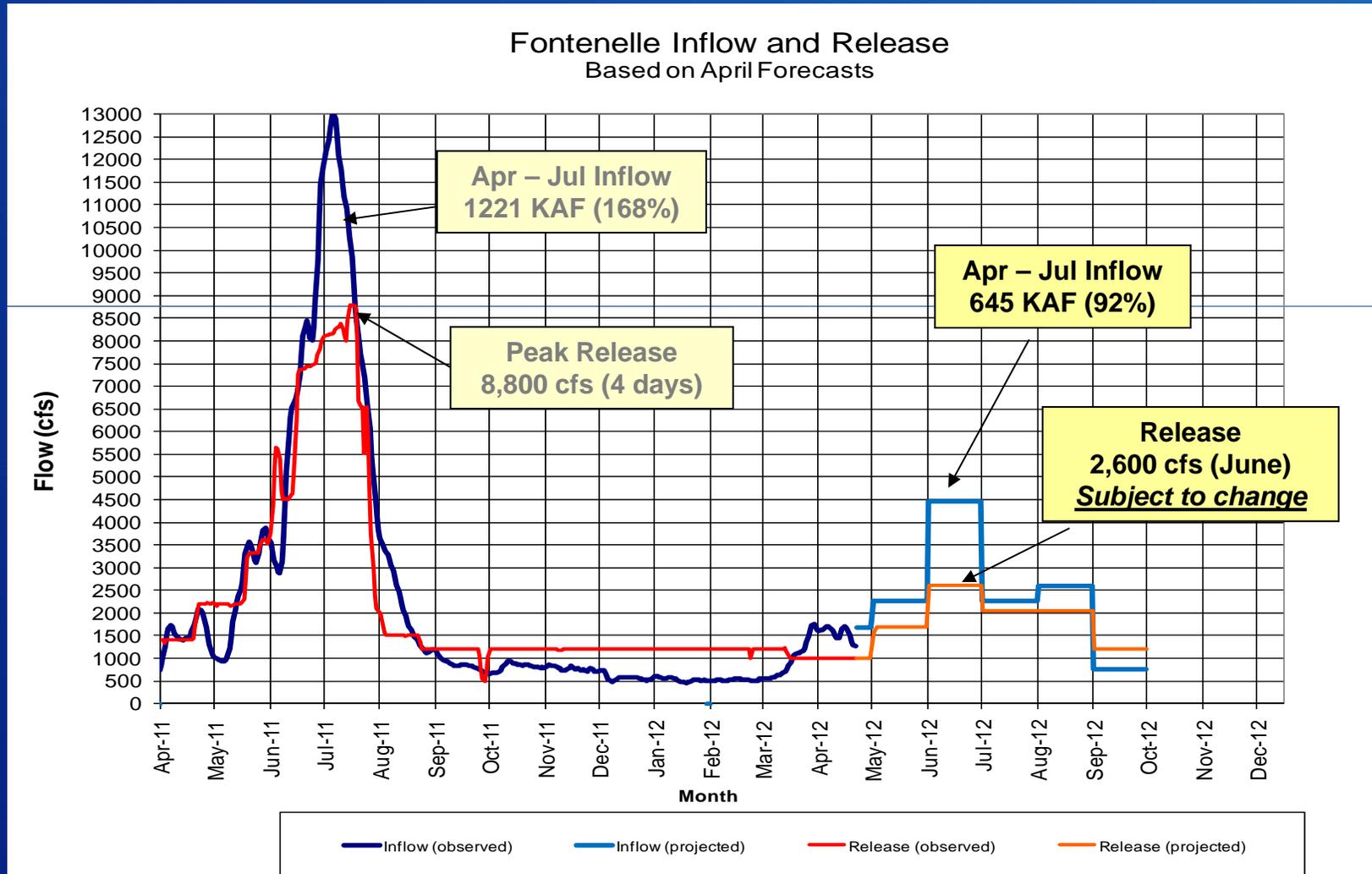
Projected Reservoir Elevation Based on April 15th Forecast



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Projected Inflow and Release

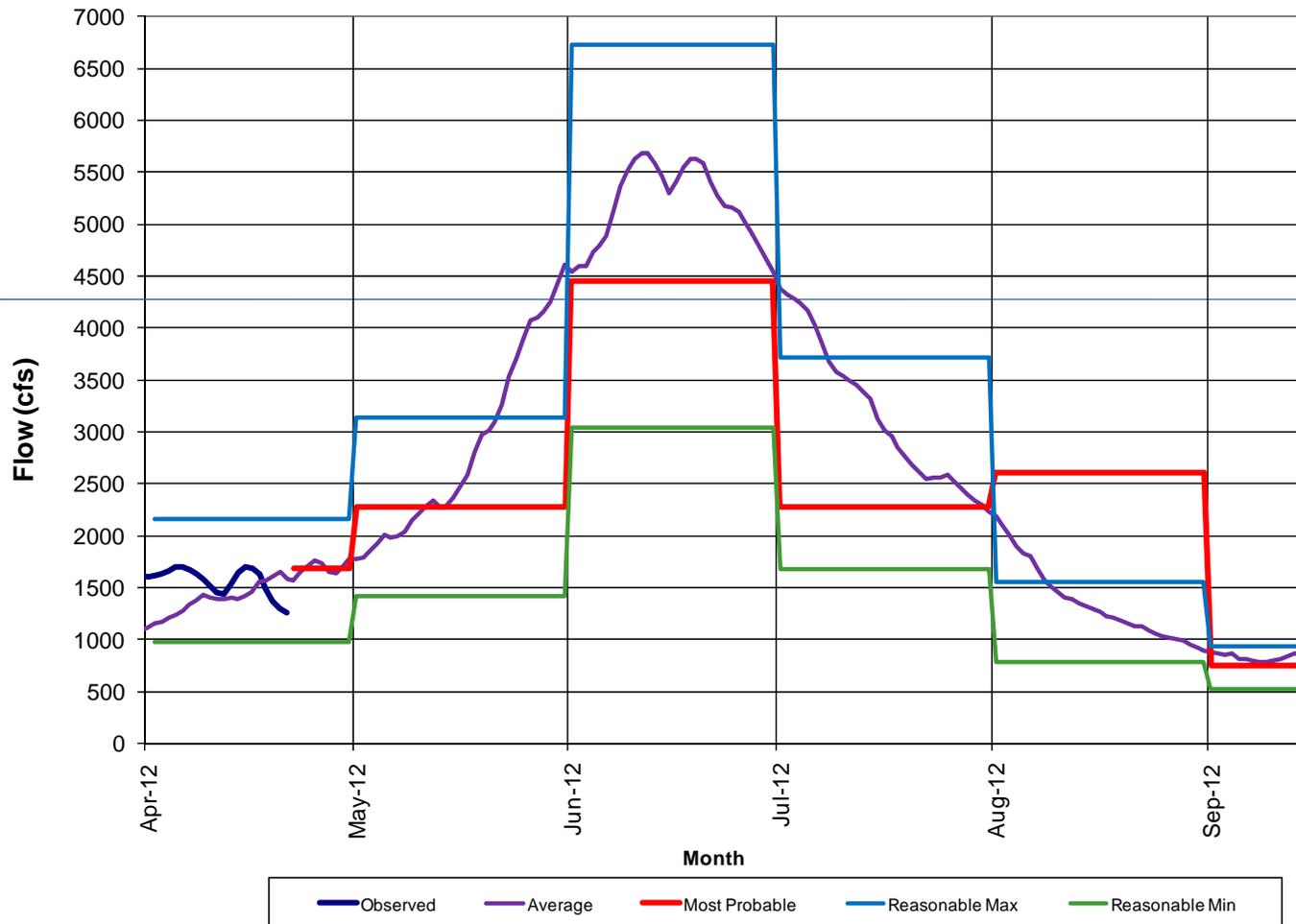
Based on April 15th Forecast



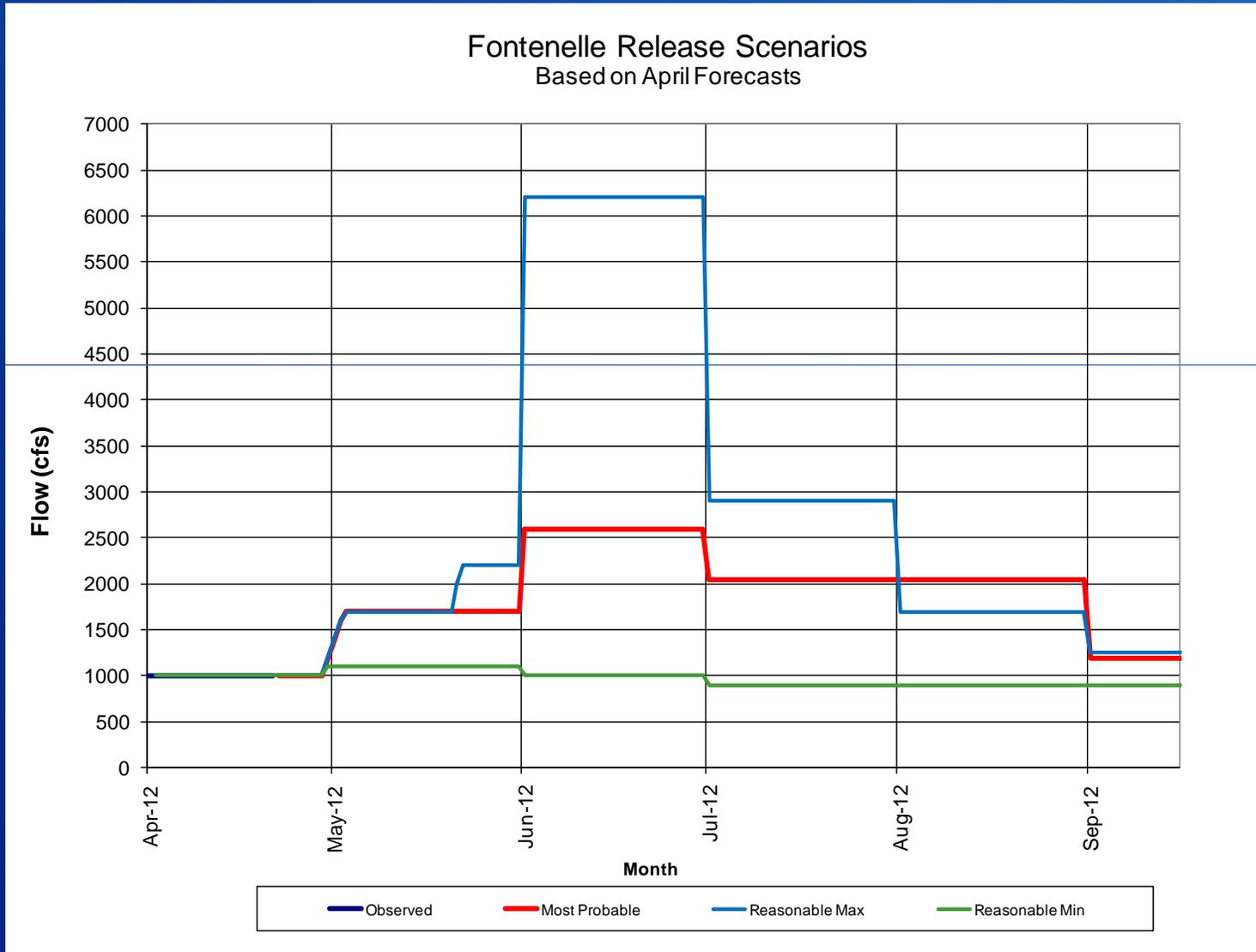
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Inflow Scenarios

Fontenelle 2012 Inflow Scenarios
Based on April Forecasts

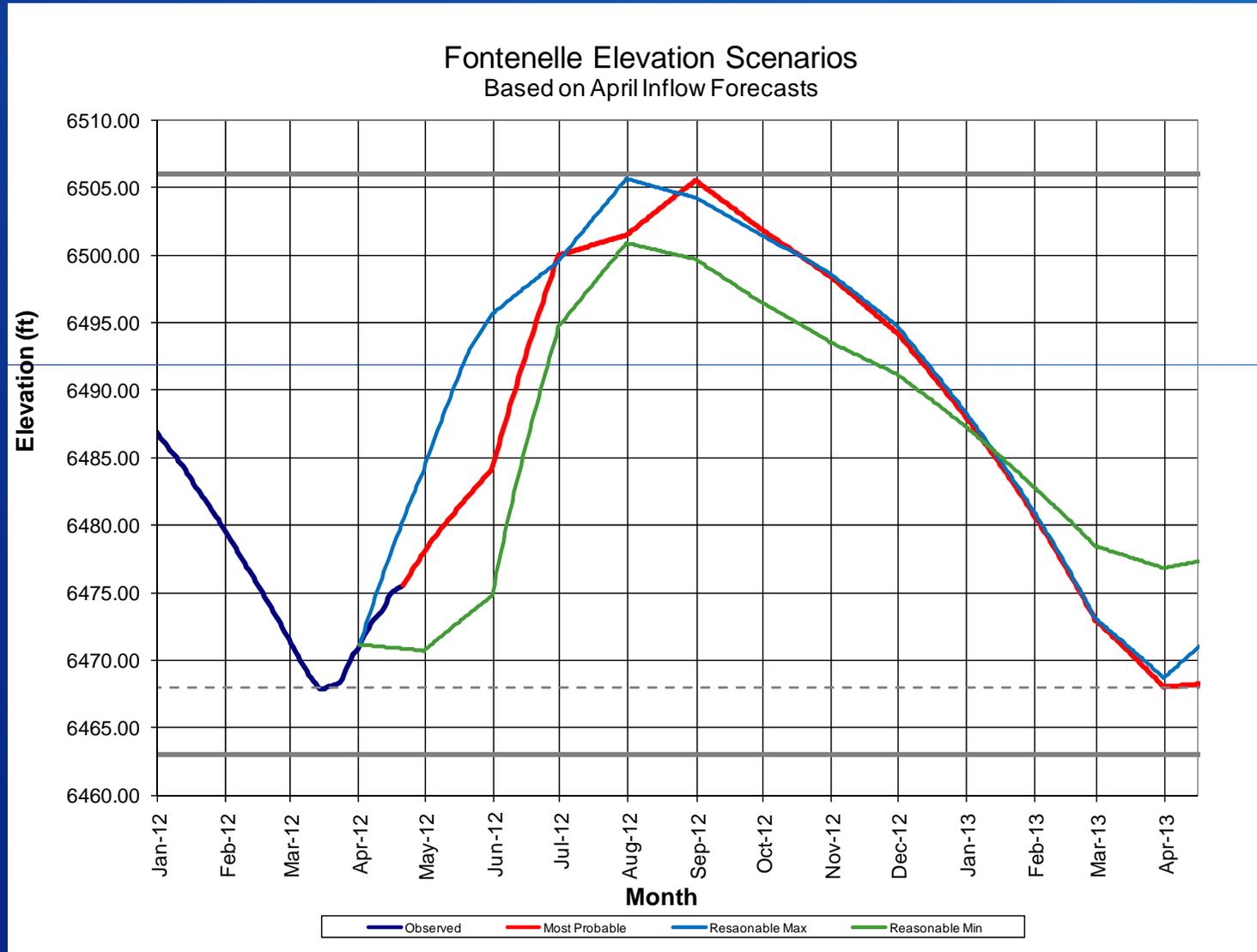


Release Scenarios



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Elevation Scenarios



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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

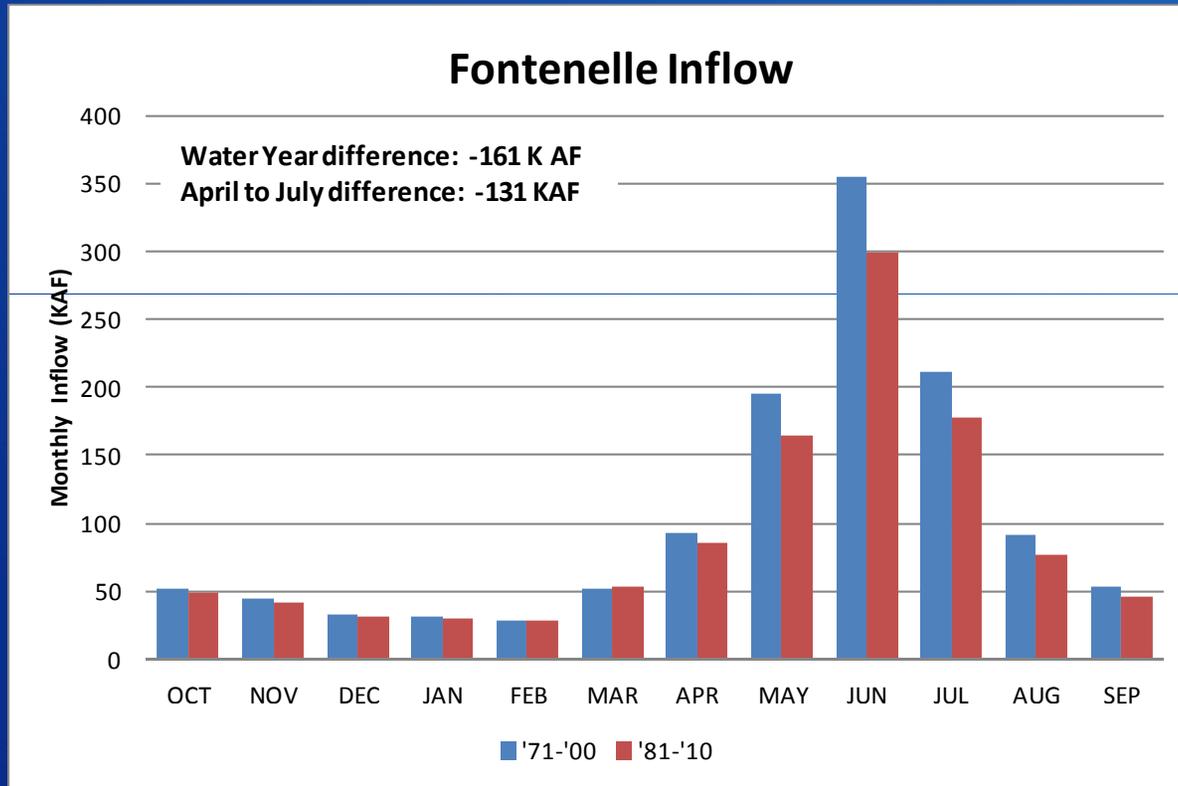
Period of Record 1971-2000

ANNUALIZED MONTHLY INFLOW VOLUME(THOUSAND-ACRE-FEET)														
Month	95%	90%	80%	75%	70%	60%	50%	40%	30%	25%	20%	10%	5%	Average
OCT	36	37	39	40	42	44	48	51	56	59	62	71	80	52
NOV	33	36	40	41	42	44	45	47	48	49	49	51	52	44
DEC	29	30	32	32	33	33	34	35	36	36	37	38	39	33
JAN	27	28	30	30	31	32	32	33	34	34	34	35	36	31
FEB	25	27	28	29	29	30	30	31	32	32	32	33	33	29
MAR	42	43	45	46	47	49	51	53	56	57	59	64	68	52
APR	60	64	73	76	79	86	92	99	107	111	116	129	141	93
MAY	69	104	143	156	169	189	207	223	240	248	257	280	296	196
JUN	98	148	212	236	261	304	345	388	434	463	491	571	640	355
JUL	38	74	119	135	151	180	207	234	264	282	300	350	393	212
AUG	34	47	62	68	73	83	91	99	108	113	117	130	140	91
SEP	29	34	41	43	46	50	53	57	61	63	65	71	75	53
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	264	391	546	603	660	758	851	944	1,045	1,104	1,164	1,331	1,471	857

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Inflow Statistics

1970-2000 vs 1981-2010



Fontenelle Working Group Meeting April 2012

<http://www.usbr.gov/uc/water/crsp/cs/ftd.html>

<http://www.usbr.gov/uc/water/crsp/wg/ft/ftcurrnt.html>



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