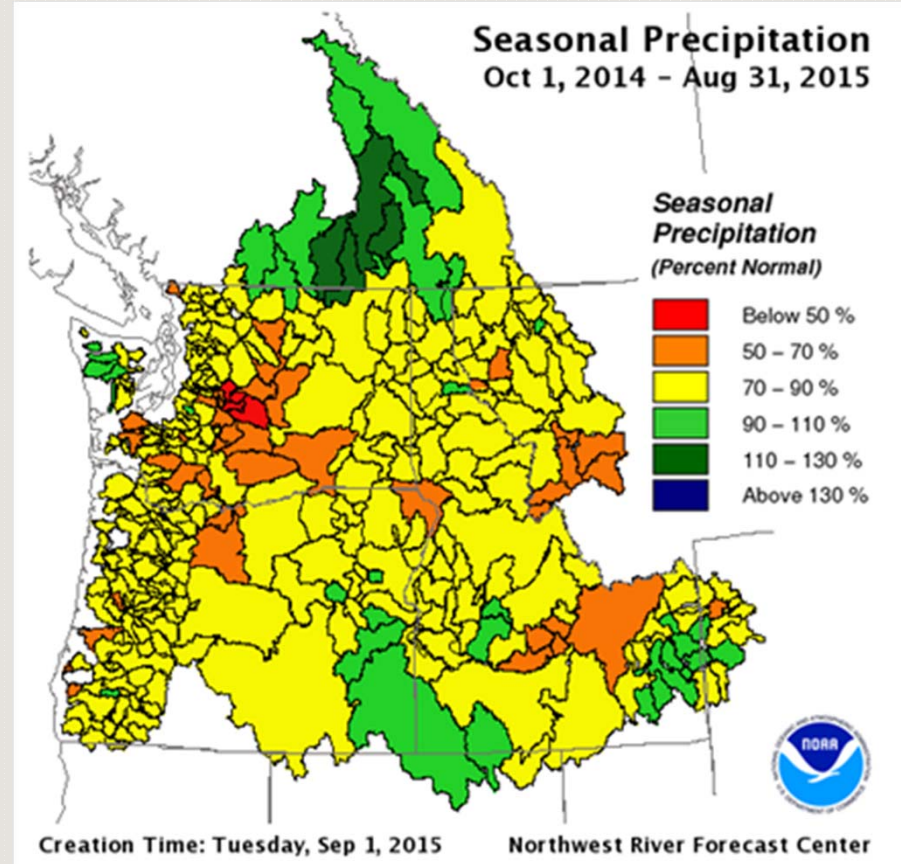
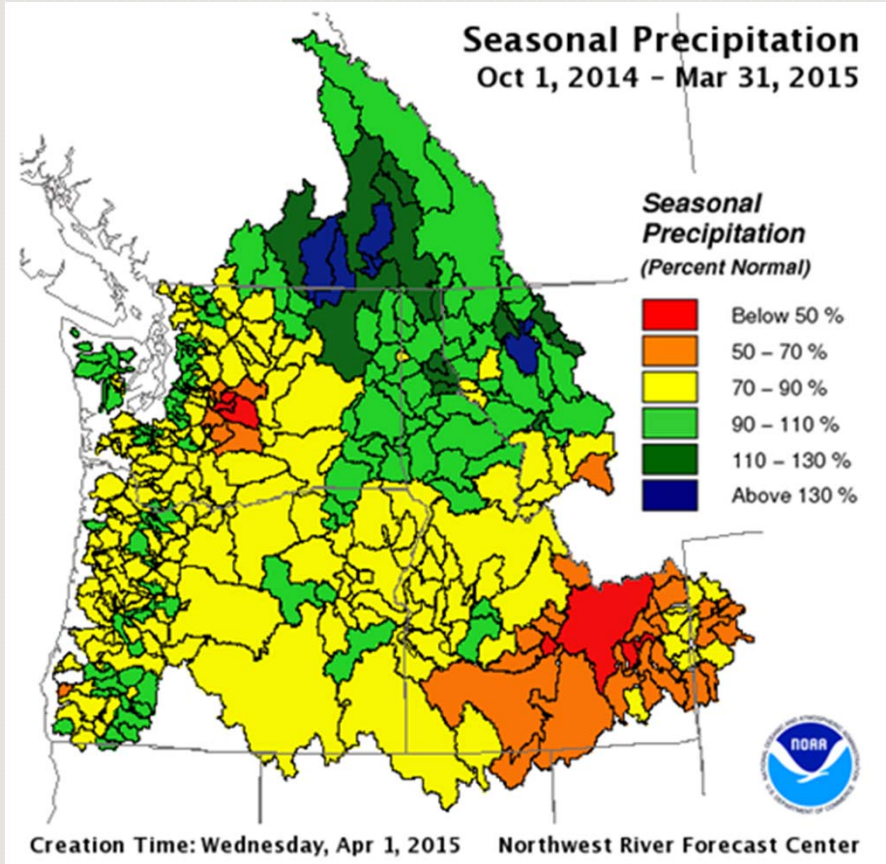


BONNEVILLE POWER ADMINISTRATION

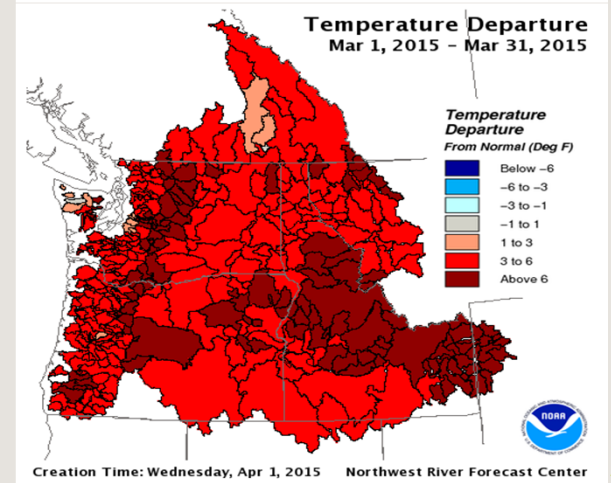
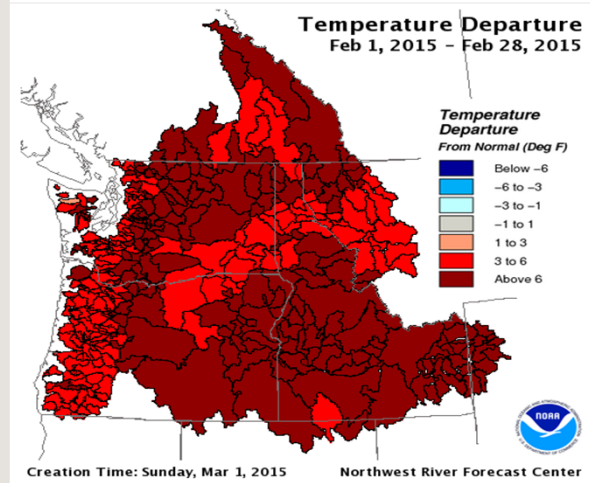
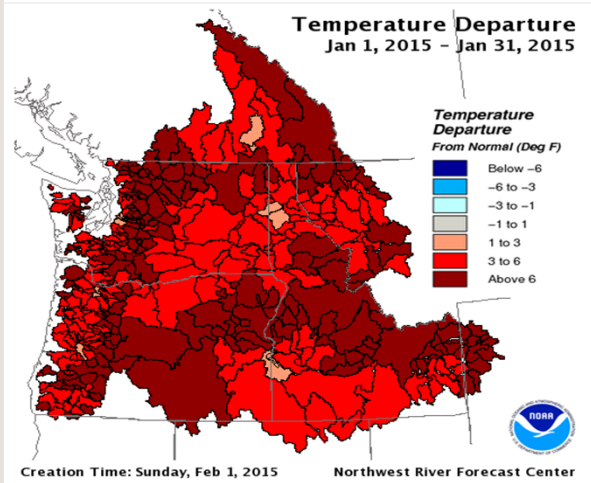
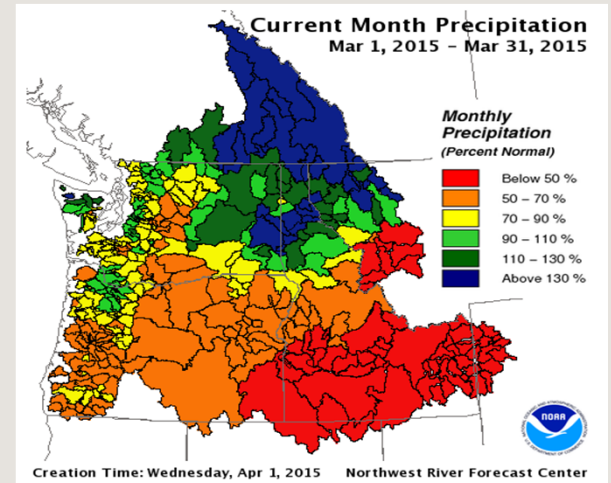
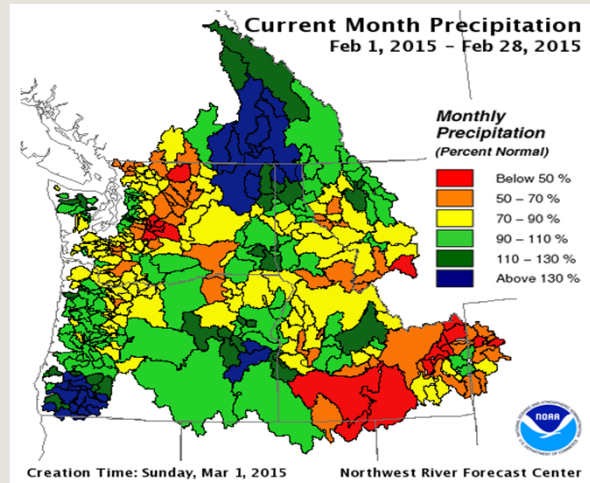
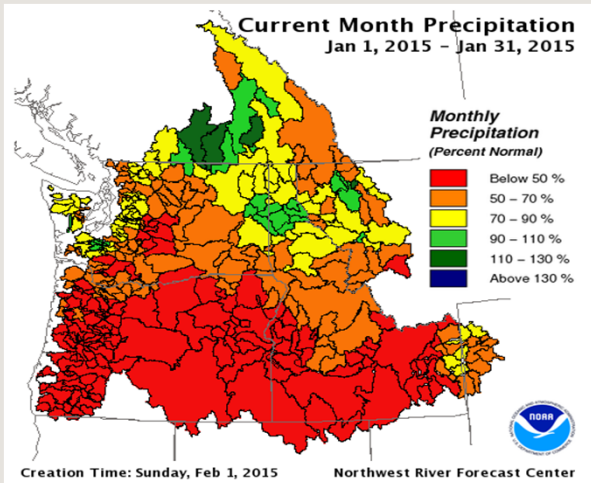
Water Year 2015 Overview

PRESENTED BY

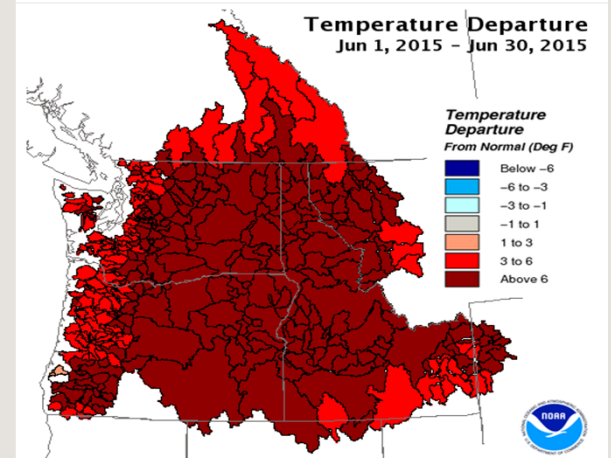
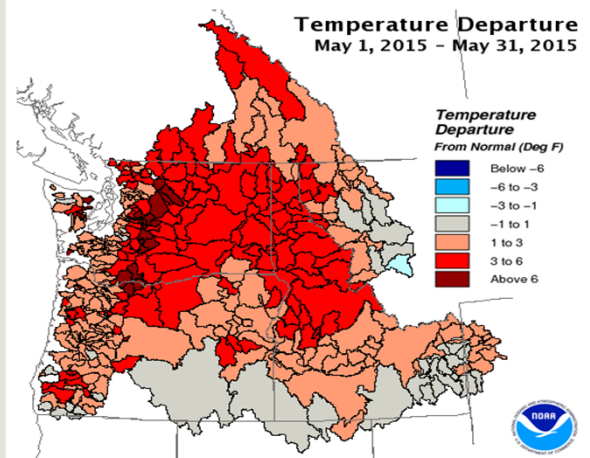
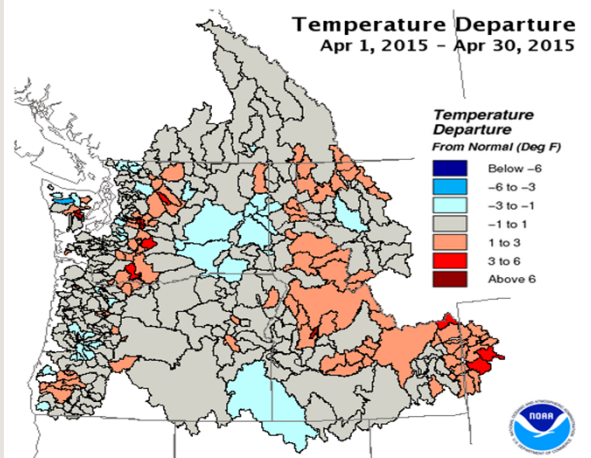
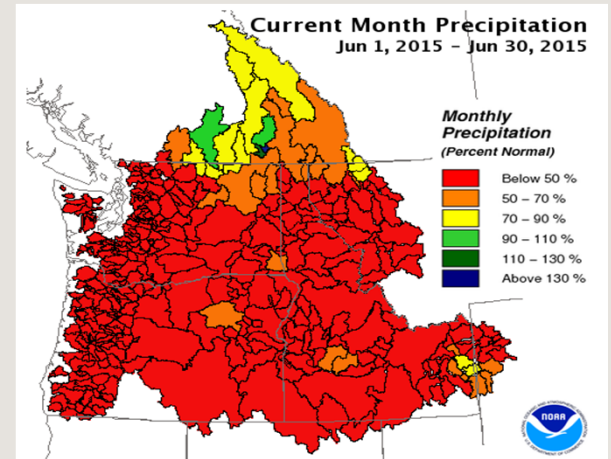
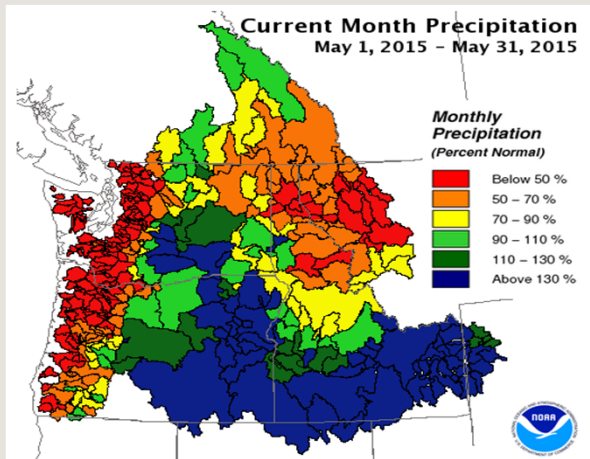
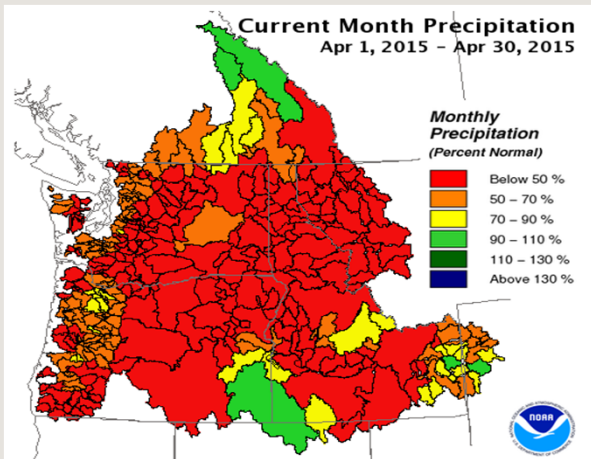
Tony Norris
Bonneville Power Administration



Precipitation and Temperature



Precipitation and Temperature



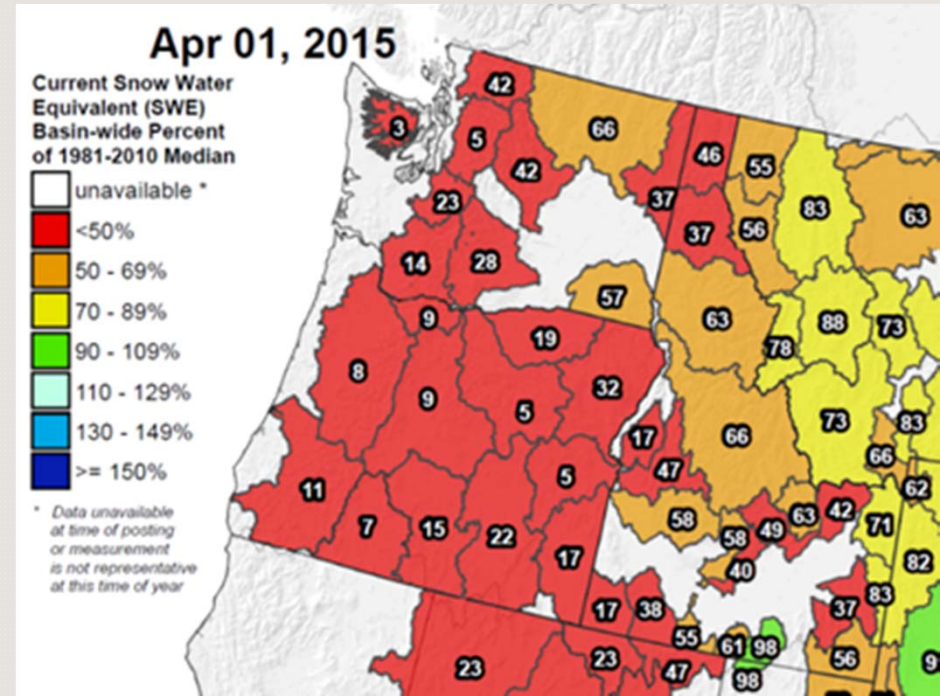
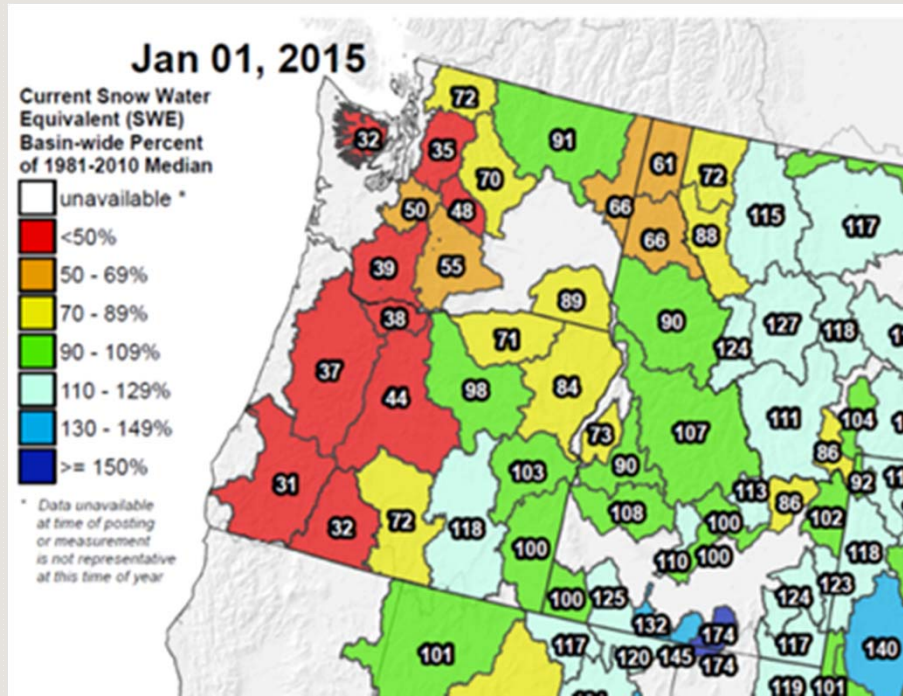
Basin Average Temperature Departures

Temperature Departure °F	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Avg °F	Avg °C
Arrow	4.3	-1.1	4.7	5.6	7.6	6.0	0.5	2.3	7.4	2.4	0.0	3.9	2.0
Grand Coulee	4.4	-2.2	3.2	5.5	6.2	4.6	0.2	2.7	6.4	2.4	1.5	3.2	1.8
Ice Harbor	4.4	-2.2	3.2	5.5	6.2	4.6	0.2	2.7	6.4	0.2	1.6	3.0	1.7
The Dalles	4.6	-1.4	4.0	5.9	7.0	5.6	0.4	2.9	7.4	1.9	1.9	3.7	2.0
Willamette	3.9	-0.1	2.8	5.1	5.0	4.6	-0.3	2.2	5.4	3.3	1.7	3.1	1.7

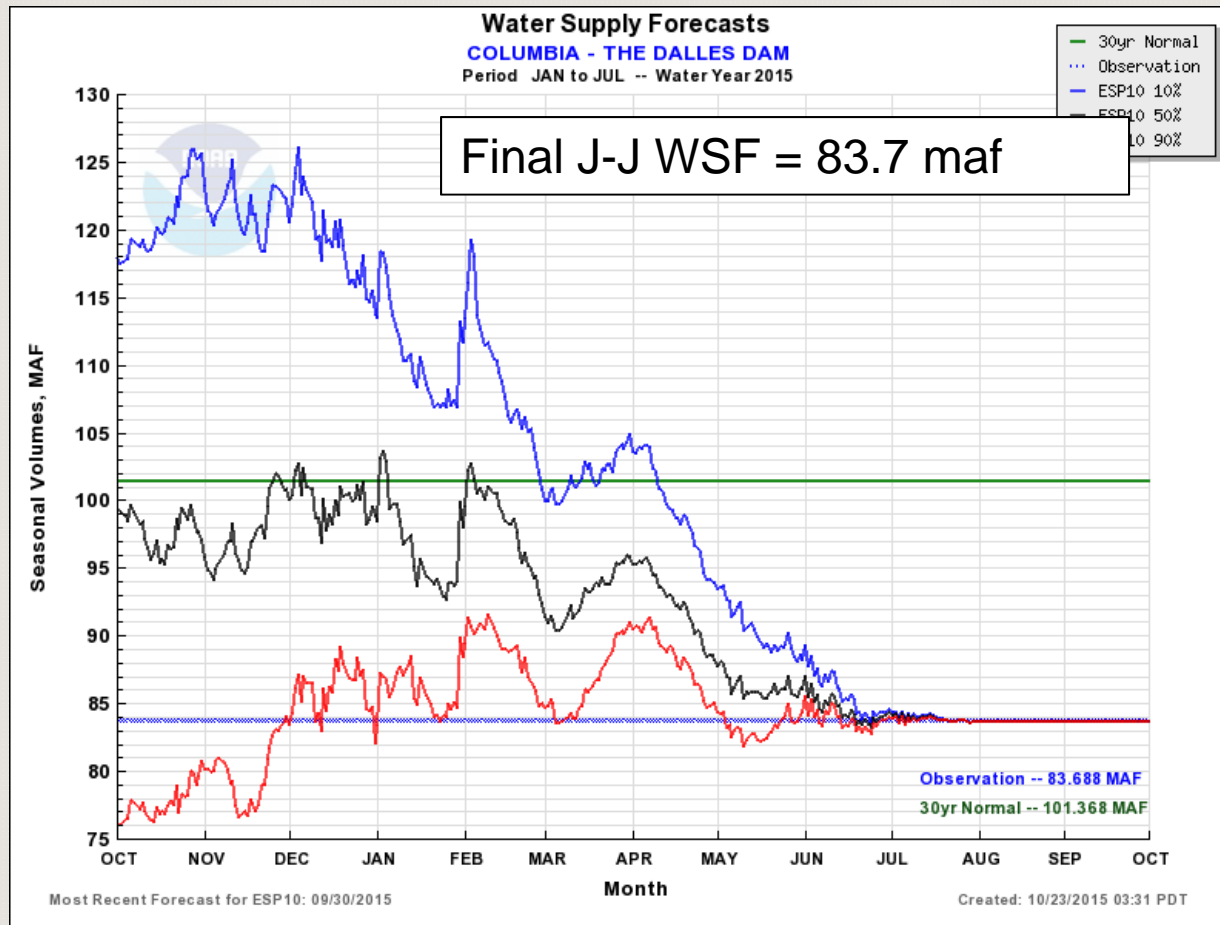
Basin Average Precipitation % of Ave

Temperature Departure °F	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Oct-Mar	Apr-Aug
Arrow	135	163	69	81	125	141	95	89	82	87	140	119	99
Grand Coulee	118	150	81	80	111	131	55	63	59	67	78	112	64
Ice Harbor	60	111	112	53	80	52	53	129	32	128	56	78	80
The Dalles	98	119	92	64	92	86	51	97	44	83	64	92	68
Willamette	163	80	105	41	92	76	60	57	19	24	65	93	45

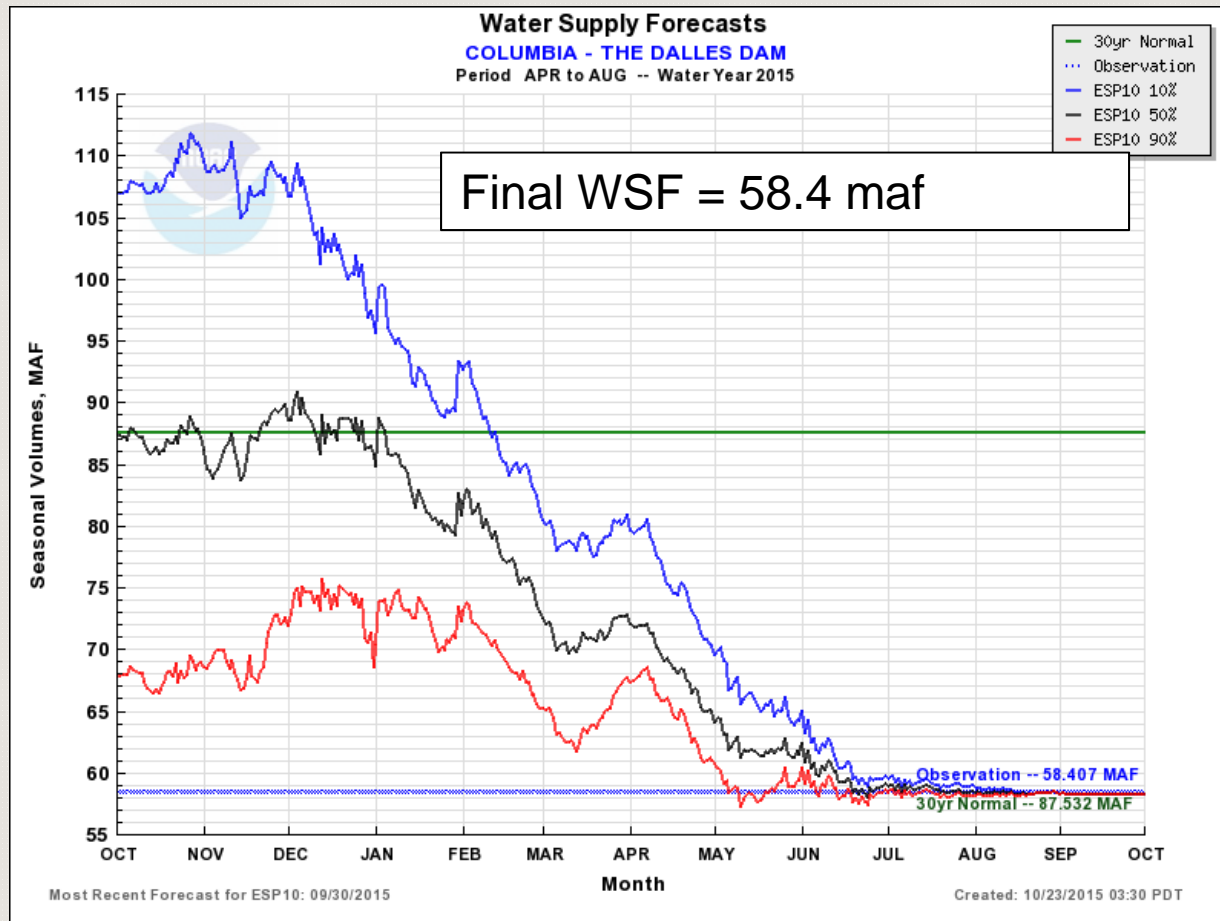
US Basin Snowpack



Columbia River Water Supply Forecasts

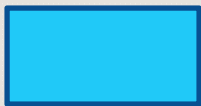


Columbia River Water Supply Forecasts

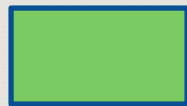


Unregulated Monthly Average Flows (kcfs)

Flows KCFS	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
GCL	51.9	65.2	58.2	50.4	103.9	115.8	116.3	200.9	210.9	100.0	64.5
LWG	20.4	25.2	31.8	33.9	57.4	49.0	49.1	68.6	39.5	18.0	13.7
TDA	80.7	106.4	116.3	116.9	204.3	194.5	193.3	298.2	265.6	122.8	82.3



Record High



Above Ave.



Near Ave.

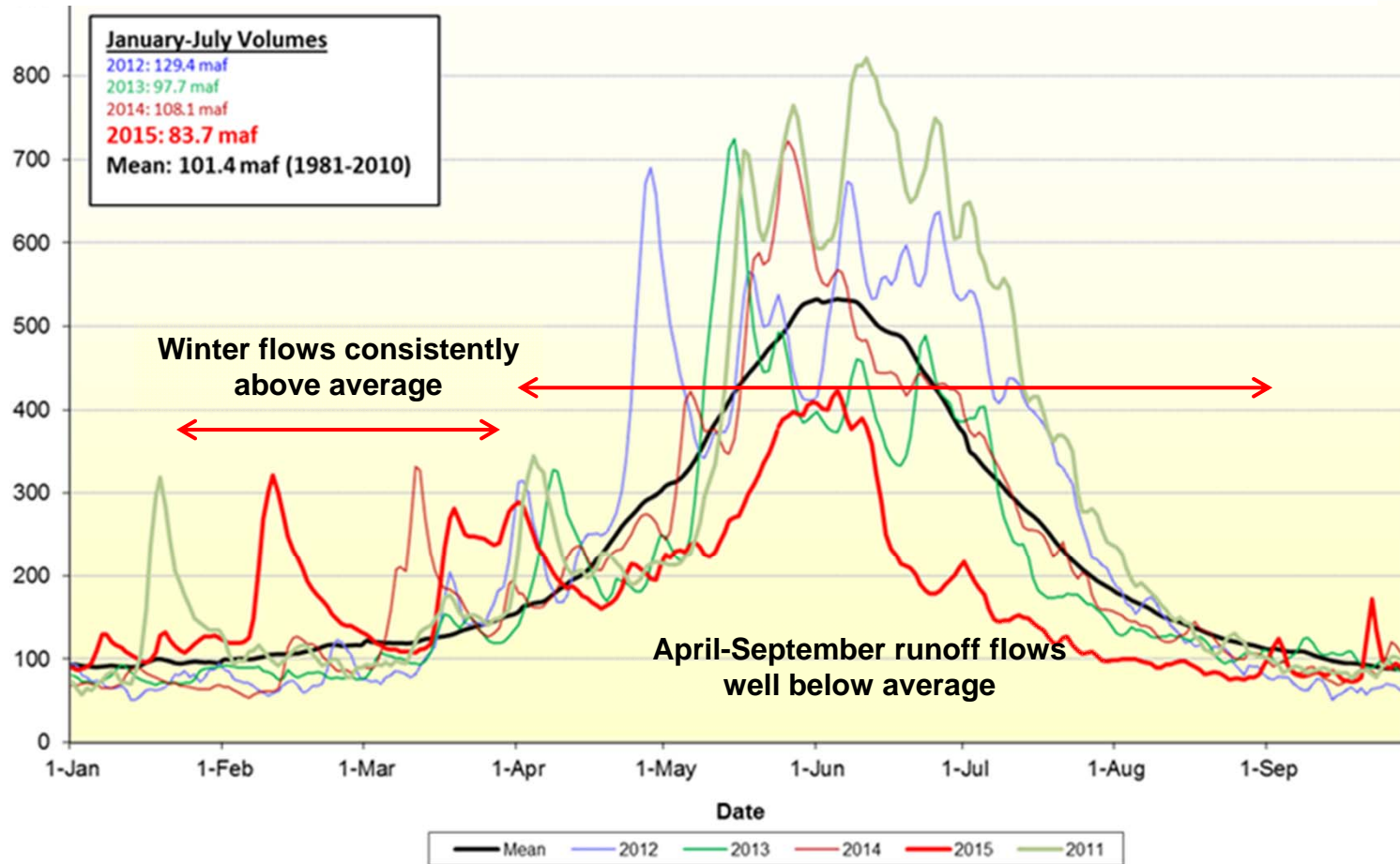


Below Ave.

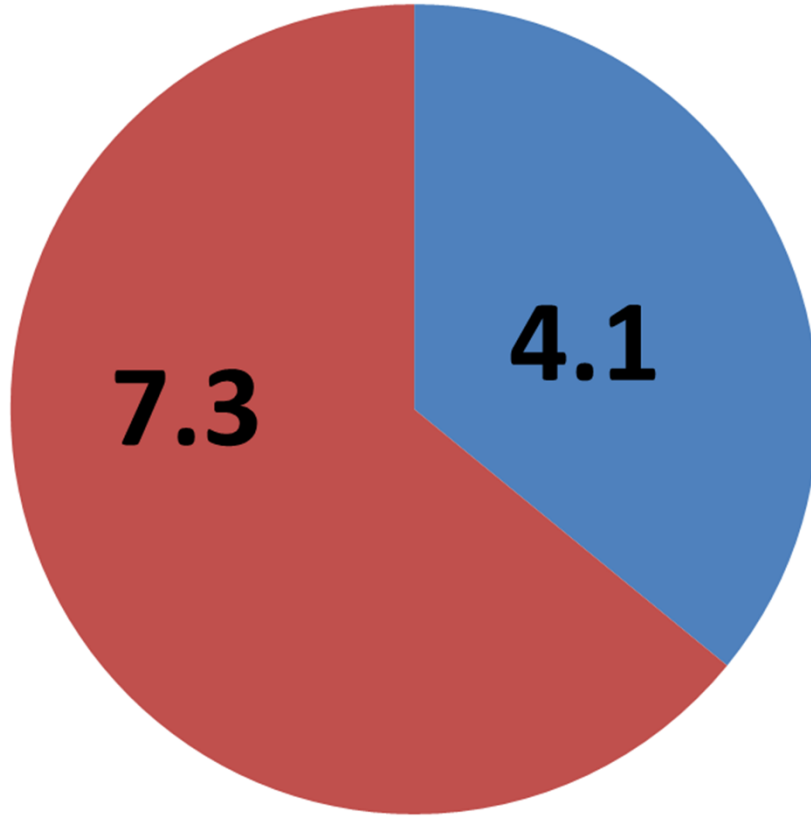


Record Low

Natural Flows at The Dalles – 2015



Aggregate 2015 May-Sep Storage Releases From US and Canada



**Total Storage Releases
= 11.4 maf**

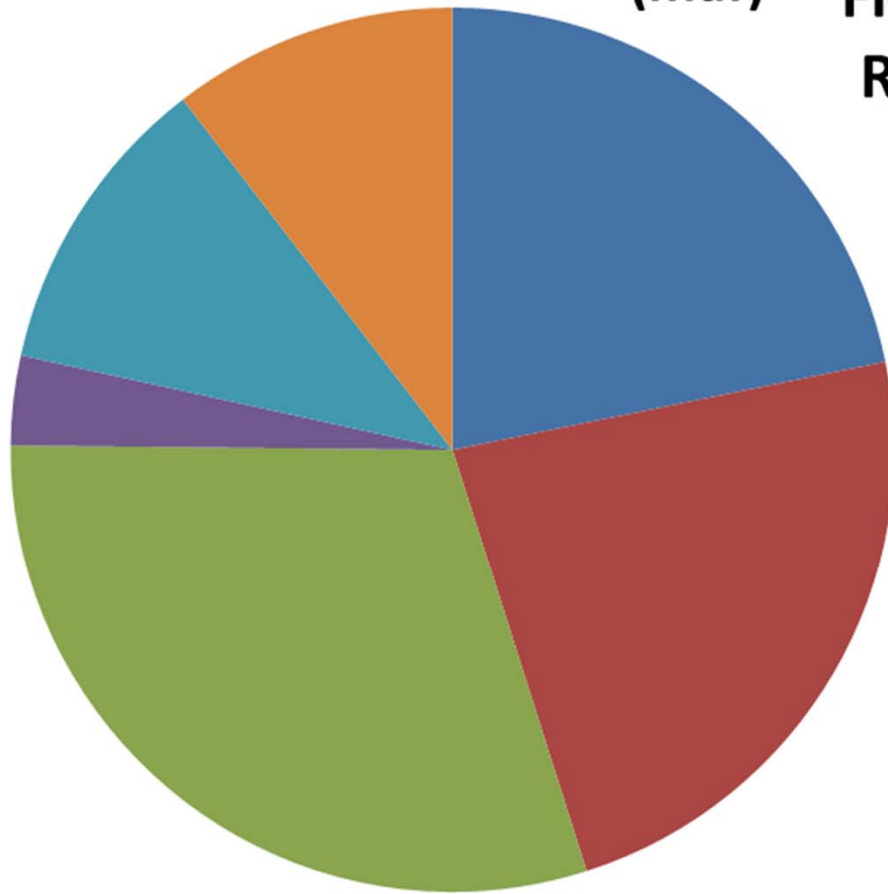
■ Portion from US Storage

■ Portion From Canadian Storage

2015 US Flow Augmentation Storage Releases

(maf)

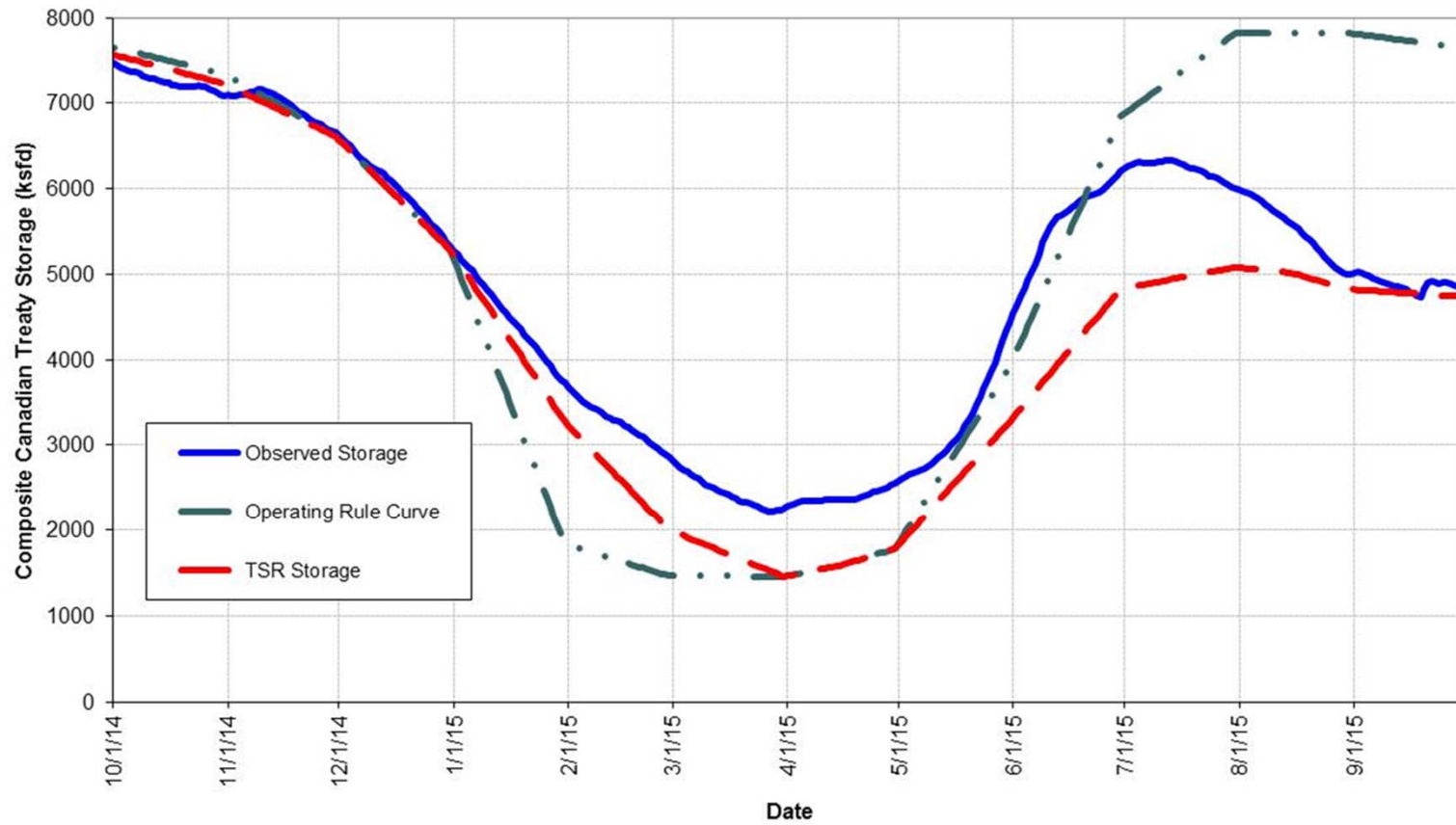
**Flow Augmentation
Releases = 4.1 maf**



- Libby
- Grand Coulee
- Dworshak
- Banks
- Hungry Horse
- Upper Snake Flow Aug

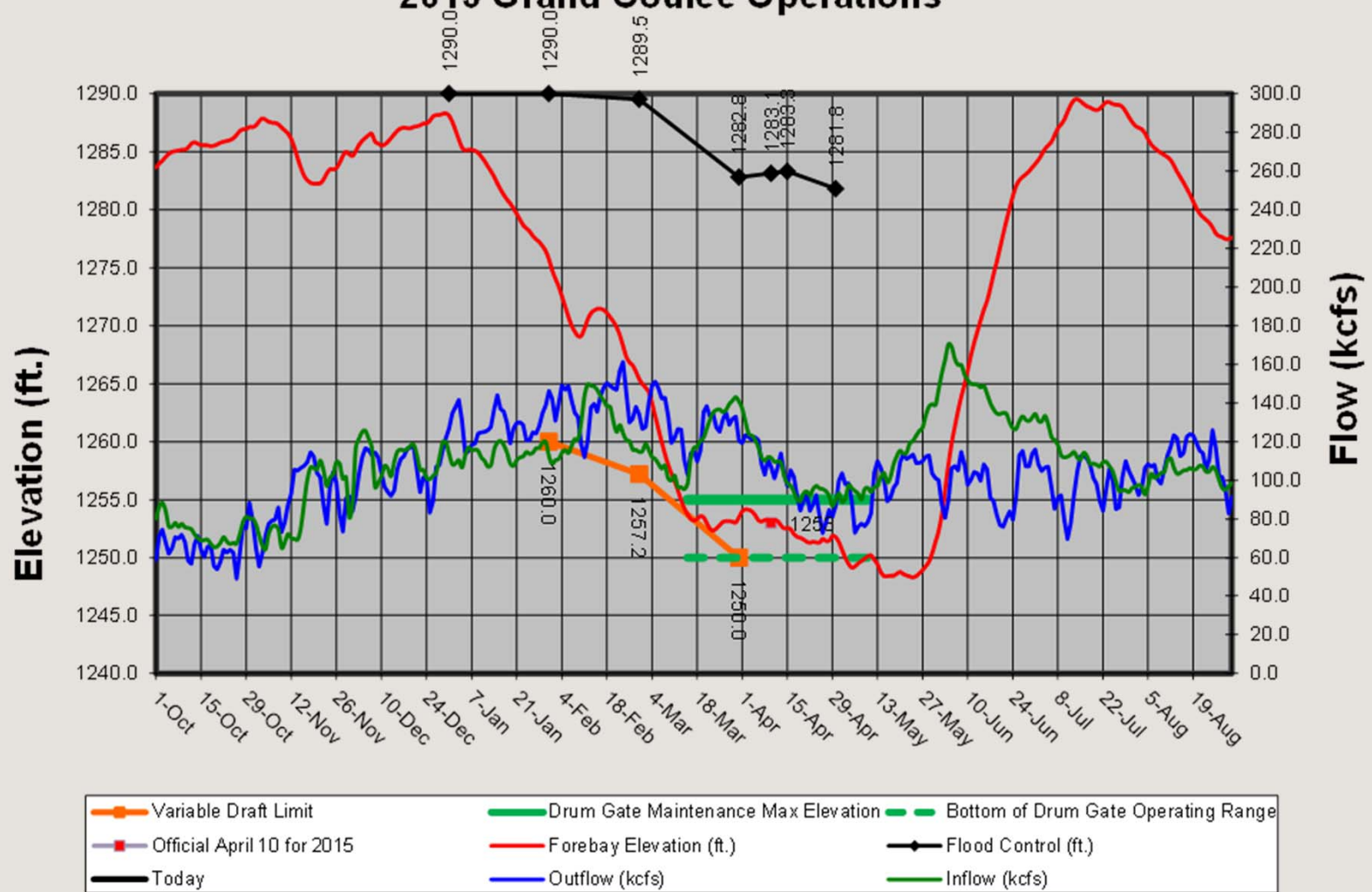
BONNEVILLE POWER ADMINISTRATION

Composite Canadian Treaty Storage
1 October 2014 through 30 September 2015



BONNEVILLE POWER ADMINISTRATION

2015 Grand Coulee Operations



Summary

- Average to above average precipitation through March at temperatures significantly above average produced a below average snowpack
- Sharp drop in precipitation with above average temperatures April - August
- Observed (unregulated) flows for April-August consistently tracked below the 10th percentile ESP traces (WY 2014 used 55 traces, WY 2015 will begin using 66 traces soon)
- Releases from storage helped hold regulated flows in the Lower Columbia River from reaching extremes