

## Pacific Northwest Region Water Supply Update June 15, 2011

A significantly wet and cool spring has led to an over abundant water supply for the PN Region. The combination resulted in record or near record snowpacks in some basins (Upper Snake and Flathead), and an extremely delayed melt. Snowpacks in headwater basins were at unprecedented levels entering June, providing a very large flood threat potential should a warm up occur (as would normally happen by June) or with continued precipitation. Reclamation reservoirs were well positioned for flood control by drafting deeply and maintaining space. Limited flooding has occurred in several basins, but severe flooding has thus far been avoided. Fortunately, the first half of June has been very cool and benign, allowing the snow to melt in an orderly fashion and reducing the threat with each passing day. We are not out of the woods yet, however, as significant snow still exists in the higher elevations. Temperatures in the next several weeks will be critical to operations, which will be very dynamic in response to changing conditions. Reservoir space will be maintained where needed to capture high inflows should a hot spell occur that quickens the pace of the remaining snowmelt.

	May 1 Snowpack % of avg	Water Year Precipitation % of avg	Forecasted Runoff % of avg	Reservoir Storage % full	Allocations
Yakima (WA)	122	120	135	99	100
Flathead/Hungry Horse (MT)	178	132	167	76	n/a
Crooked (OR)	157	118	140	100	n/a
Boise (ID)	121	120	124	81	n/a
Payette (ID)	137	113	122	85	n/a
Upper Snake (ID)	160	133	139	71	n/a
Columbia Basin (Columbia R at the Dalles)	191	122	136	n/a	n/a

# RECLAMATION Managing Water in the West

#### Pacific Northwest Region Water Supply Update May 19, 2011

The PN Region continued to see cool and significantly wet conditions continue in April and the first half of May. Snowpacks in the higher elevations continued to build and peaked in early May, nearly a month later than typical, with record or near record levels in the Flathead and Upper Snake headwaters. Combined with cool weather that has delayed the melt season, many mountain fed basins in the PN Region are facing potentially significant flood threats over the next month. Reservoirs are being operated to provide flood control space, but will require high releases that will cause downstream channels to run near to slightly above flood stage for an extended period, particularly in the Upper Snake, the Boise, and Flathead. Significant flooding is not anticipated, although it is certainly possible with a continuation of heavy precip or a sudden warm up, neither of which is predicted at this time. Conditions continue to be closely monitored. All reservoirs are expected to fill or nearly fill this year, and no water supply shortages should occur in 2011.

	Snowpack % of avg	Water Year Precipitation % of avg	Forecasted Runoff % of avg	Reservoir Storage % full	Allocations
Yakima (WA)	160	118	110	92	100
Flathead/Hungry Horse (MT)	188	128	153	56	n/a
Crooked (OR)	n/a	125	140	100	n/a
Boise (ID)	131	119	123	73	n/a
Payette (ID)	174	110	121	68	n/a
Upper Snake (ID)	195	128	142	63	n/a
Columbia Basin (Columbia R at the Dalles)	191	121	122	n/a	n/a



## Pacific Northwest Region Water Supply Update April 06, 2011

The PN Region is locked into an abundant water supply for 2011 as we head into spring, and appears to be locked into a seemingly never ending cool and wet pattern. After taking a month long hiatus in mid January, winter came roaring back and has not let up. March was a huge contributor in terms of water supply, with monthly precip approaching 200% of average in some basins. All longer term forecasts predict this pattern to continue in April. Attention is now shifting to flood control operations, as releases to draft or maintain flood control space are underway at many of the Reclamation reservoirs to make room for the upcoming snowmelt season. No significant flooding is anticipated at this time, but that outlook could change depending on weather patterns over the next couple months. Conditions continue to be closely monitored. All reservoirs are expected to fill or nearly fill this year, and no water supply shortages should occur in 2011.

	Snowpack % of avg	Water Year Precipitation % of avg	Forecasted Runoff % of avg	Reservoir Storage % full	Allocations
Yakima (WA)	105	110	104	90	100
Flathead/Hungry Horse (MT)	140	126	128	63	n/a
Crooked (OR)	124	125	140	89	n/a
Boise (ID)	99	109	105	78	n/a
Payette (ID)	106	107	107	69	n/a
Upper Snake (ID)	122	119	120	71	n/a
Columbia Basin (Columbia R at the Dalles)	120	116	107	n/a	n/a



## Pacific Northwest Region Water Supply Update March 09, 2011

The predicted effects of a La Nina pattern have been borne out this winter in the Pacific Northwest. With less than a month to go in the typical snow accumulation season, the PN Region is locked into an adequate or better watery supply for 2011. The positive trend was threatened by a dry pattern that persisted in much of the region from mid January to mid February; fortunately that pattern has changed back to wet and unsettled as we move into March. The forecast over the next two weeks calls for continued wet weather. The effects of the aforementioned dry trend are reflected in lower snowpack numbers in the Yakima basin and in southern Idaho, but trend near to above average elsewhere. One notable exception is in the Flathead Basin, which has accumulated a significant snowpack in 2011. Flood control drafts are already underway at Hungry Horse, and will soon commence in the Upper Snake projects, to make room for the upcoming snowmelt season. No significant flooding is anticipated at this time, and most reservoirs are expected to fill or nearly fill this year. Water supply shortages are very unlikely in 2011.

	Snowpack % of avg	Water Year Precipitation % of avg	Forecasted Runoff % of avg	Reservoir Storage % full	Allocations
Yakima (WA)	86	99	78	83	100
Flathead/Hungry Horse (MT)	128	118	121	71	n/a
Crooked (OR)	101	107	115	77	n/a
Boise (ID)	84	98	90	68	n/a
Payette (ID)	89	94	88	66	n/a
Upper Snake (ID)	111	113	108	68	n/a
Columbia Basin (Columbia R at the Dalles)	100	106	99	n/a	n/a



## Pacific Northwest Region Water Supply Update January 20, 2011

The 2011 Water Year has continued it positive trajectory toward an ample water supply. Winter got off to a robust start in mid November and continued strongly in December, although the pattern favored the southern half of the Pacific Northwest. The storm track has shifted more to the north in January, with a significant increase in snowpack in the Flathead basin. A potent warm rain event impacted much of the region over the MLK weekend and created flood conditions in many basins, both west and east of the Cascades. Reclamation reservoirs captured high inflows and prevented or reduced flooding; some higher releases are now being made to draft back to flood control levels. Despite the positive numbers, winter is still only about halfway done so much can still change. Forecasts call for dry and warm conditions over the next 2 weeks; longer term forecasts call for La Nina conditions to prevail with below average temps and above average moisture.

	Snowpack % of avg	Water Year Precipitation % of avg	Forecasted Runoff % of avg	Reservoir Storage % full	Allocations
Yakima (WA)	88	108	96	72	n/a
Flathead/Hungry Horse (MT)	124	117	106	84	n/a
Crooked (OR)	105	136	134	72	n/a
Boise (ID)	102	118	112	57	n/a
Payette (ID)	104	109	106	63	n/a
Upper Snake (ID)	125	121	111	65	n/a
Columbia Basin (Columbia R at the Dalles)	99	115	97	n/a	n/a



## Pacific Northwest Region Water Supply Update November 10, 2010

The 2011 Water Year is off to a hopeful start in the Pacific Northwest. Mostly sunny and warm weather has prevailed since it started on October 1, but a couple of significant rain producing storms moved through to provide the above average precipitation totals so far. Hopefully this trend will continue as we head into the snow accumulation season. These rains are beneficial in wetting the soil profile prior to the snow falling, leading to more efficient runoff next spring. Climactic forecasts for the upcoming winter call for a very strong "La Nina" condition to persist, which has a tendency for greater than average winter precipitation for the Northwest. Some of the wettest years on record have occurred during La Nina's similar to the current forecast. While the odds may be shifted toward wetter, the opposite is still possible however. But for now we'll go with the optimism of above average runoff.

	Snowpack % of avg	Water Year Precipitation % of avg	Forecasted Runoff % of avg	Reservoir Storage % full	Allocations
Yakima (WA)	n/a	109	Avg or above	44	n/a
Flathead/Hungry Horse (MT)	n/a	94	Avg or above	86	n/a
Crooked (OR)	n/a	127	Avg or above	60	n/a
Boise (ID)	n/a	153	Avg or above	44	n/a
Payette (ID)	n/a	126	Avg or above	58	n/a
Upper Snake (ID)	n/a	113	Avg or above	46	n/a
Columbia Basin (Columbia R at the Dalles)	n/a	118	Avg or above	n/a	n/a