

#### Pacific Northwest Region Water Supply Update September 19, 2007

The PN Region is finally seeing a shift to more fall like weather with cooler temps and precipitation. Higher elevations even saw some slushy snow. The 6 to 14 day forecast calls for this pattern to continue. A wet period before the winter snow arrives would definitely help, since soil moisture is extremely low coming out of this long hot summer. Irrigation releases are beginning to decrease as the growing season starts to wrap up, or in some cases as reservoirs near or hit minimum levels. The Region will be heavily reliant on next winter's precipitation to avoid a repeat or worsening of drought impacts in 2008.

	Water Year Precipitation % of avg	WY 2007 Runoff % of avg	Reservoir Storage % full	Allocations
Yakima (WA)	107	112	36	full
Flathead/Hungry Horse (MT)	90	89	86	n/a
Crooked (OR)	91	59	53	n/a
Boise (ID)	75	60	29	n/a
Payette (ID)	77	66	49	n/a
Upper Snake (ID)	78	66	13	n/a
Columbia Basin (Columbia R at The Dalles)	92	89	n/a	n/a



#### Pacific Northwest Region Water Supply Update September 6, 2007

August remained hot and dry in the Pacific Northwest. Temperatures thus far in September have dropped down closer to normal, but precipitation is spotty at best (thunderstorms) and this dry trend is forecast to continue over the next 10 days. Irrigation releases are beginning to decrease as the growing season starts to wrap up, or in some cases as reservoirs near or hit minimum levels. Reservoirs in the Malheur basin in eastern Oregon are essentially empty, as are several other smaller projects in southern Idaho. No specific monetary damages are reported at this time, although reduced crop yields are likely. The Upper Snake system will continue to meet irrigation demands but at a reduced rate, and carryover levels will approach the near record lows experienced in the 2001-2004 period. Elsewhere, adequate supplies mostly exist to get through the end of the irrigation season. The Region will be heavily reliant on next winter's precipitation to avoid a repeat or worsening of drought impacts in 2008.

	Water Year Precipitation % of avg	WY 2007 Runoff % of avg	Reservoir Storage % full	Allocations
Yakima (WA)	108	112	44	full
Flathead/Hungry Horse (MT)	91	89	88	n/a
Crooked (OR)	91	59	59	n/a
Boise (ID)	75	60	35	n/a
Payette (ID)	77	66	53	n/a
Upper Snake (ID)	79	66	17	n/a
Columbia Basin (Columbia R at The Dalles)	93	89	n/a	n/a



## Pacific Northwest Region Water Supply Update August 1, 2007

There has been no let up from the above normal temperatures in the Pacific Northwest region. July 2007 will go down as the hottest month on record for Boise, with an average daily temperature of 83.1 degrees; records go back 141 years. Average high and low temps (98.6 and 67.5) set records as well. Interestingly, the second hottest July since 1874 was last year. It is likely records were set in many other areas in the region as well. Adequate supplies will exist to meet most demands, although specific shortages are likely and will be reported on as they occur. Carryover storage at the end of this year will be very low in most systems, and critically low in the Upper Snake basin and eastern Oregon. The Region will be heavily reliant on next winter's precipitation to avoid a repeat or worsening of drought impacts in 2008.

	Water Year Precipitation % of avg	WY 2007 Runoff % of avg	Reservoir Storage % full	Allocations
Yakima (WA)	106	115	74	full
Flathead/Hungry Horse (MT)	94	90	95	n/a
Crooked (OR)	91	58	70	n/a
Boise (ID)	76	60	56	n/a
Payette (ID)	78	67	75	n/a
Upper Snake (ID)	75	65	38	n/a
Columbia Basin (Columbia R at the Dalles)	92	91	n/a	n/a



## Pacific Northwest Region Water Supply Update July 11, 2007

The Pacific Northwest region has been under a very dry and hot temperature regime for the last two weeks, with temperatures 10 to 15 degrees above normal and many locations over 100 degrees. Reclamation reservoirs are playing a crucial role in supplying water for the high irrigation demands, along with flow augmentation releases designed to benefit ESA listed anadromous fish in the lower Snake and Columbia Rivers. Adequate supplies will exist to meet most demands, although specific shortages may occur and will be reported as they appear. Carryover storage at the end of this year will be very low in most systems, and critically low in the Upper Snake basin. The Region will be heavily reliant on next winter's precipitation to avoid a repeat or worsening of drought impacts in 2008.

	Water Year Precipitation % of avg	WY 2007 Runoff % of avg	Reservoir Storage % full	Allocations
Yakima (WA)	111	116	91	full
Flathead/Hungry Horse (MT)	94	94	98	n/a
Crooked (OR)	91	59	77	n/a
Boise (ID)	76	61	71	n/a
Payette (ID)	79	69	87	n/a
Upper Snake (ID)	75	67	53	n/a
Columbia Basin (Columbia R at the Dalles)	94	92	n/a	n/a

Note: Runoff percentages now reflect observed runoff since October, rather than forecasted runoff.



## Pacific Northwest Region Water Supply Update June 20, 2007

The Pacific Northwest region remained under a warm and dry pattern for the first four days of June with near record setting high temperatures. Runoff continued in the basins that still had snow. Normal temperatures returned to the region the second week bringing streamflow recessions and a trend towards base flows for the summer months. Most reservoirs are drafting to meet demands. Hungry Horse Reservoir is expected to reach full capacity in the next week before beginning its draft for summer fish flow augmentation. Adequate supplies will exist to meet demands, but carryover at the end of this year will likely be very low in most systems.

	Snowpack % of avg	Water Year Precipitation % of avg	Forecasted Spring Runoff % of avg	Reservoir Storage % full	Allocations
Yakima (WA)	n/a	113	88	100	full
Flathead/Hungry Horse (MT)	n/a	99	68	99	n/a
Crooked (OR)	n/a	91	50	84	n/a
Boise (ID)	n/a	77	50	86	n/a
Payette (ID)	n/a	81	60	98	n/a
Upper Snake (ID)	n/a	76	52	74	n/a
Columbia Basin (Columbia R at the Dalles)	n/a	96	87	n/a	n/a



## Pacific Northwest Region Water Supply Update May 30, 2007

The Pacific Northwest region remained under a warm and dry pattern during most of May, with one pronounced cold snap last week that led to sharp streamflow recessions. Near record heat later this week will wring out any remaining snowmelt from the highest elevations. Most reservoirs filled or nearly filled this year, with the primary exception of several in Eastern Oregon, and are beginning to draft to meet demands. Hungry Horse Reservoir and the Payette basin reservoirs are expected to reach full capacity over the next couple weeks. Adequate supplies will exist in 2007 to meet demands, but carryover at the end of the year will likely be very low in most systems.

	Snowpack % of avg	Water Year Precipitation % of avg	Forecasted Spring Runoff % of avg	Reservoir Storage % full	Allocations
Yakima (WA)	n/a	114	88	100	full
Flathead/Hungry Horse (MT)	n/a	100	78	94	n/a
Crooked (OR)	n/a	91	50	93	n/a
Boise (ID)	n/a	76	55	92	n/a
Payette (ID)	n/a	80	62	98	n/a
Upper Snake (ID)	n/a	76	67	84	n/a
Columbia Basin (Columbia R at the Dalles)	n/a	97	90	n/a	n/a



## Pacific Northwest Region Water Supply Update May 16, 2007

The Pacific Northwest region has mostly remained under a warm and dry pattern in May, with a similar forecast for the next two weeks. Snow melt is occurring early this year, with only the highest elevations still holding snow. Near record temperatures later this week should produce the final peak flows for the year, which may not exceed peaks that have already occurred earlier this month. Most reservoirs will fill or nearly fill this year, with the primary exception of several in Eastern Oregon. The Upper Snake reservoir system (above Milner) has likely reached its maximum for the year (at 92% of capacity) and is beginning to draft. Both Palisades and American Falls reservoirs will be near minimum contents by the end of the irrigation season. Adequate supplies will exist in 2007 to meet demands, but carryover at the end of the year will likely be very low in most systems.

	Snowpack % of avg	Water Year Precipitation % of avg	Forecasted Spring Runoff % of avg	Reservoir Storage % full	Allocations
Yakima (WA)	n/a	114	88	99	full
Flathead/Hungry Horse (MT)	77	100	78	90	n/a
Crooked (OR)	n/a	91	50	98	n/a
Boise (ID)	n/a	78	55	91	n/a
Payette (ID)	n/a	81	62	95	n/a
Upper Snake (ID)	n/a	78	67	90	n/a
Columbia Basin (Columbia R at the Dalles)	54	98	90	n/a	n/a



# Pacific Northwest Region Water Supply Update May 2, 2007

Erratic swings in the weather continue in the Pacific Northwest region. The second half of April saw a sudden shift from cool and blustery to near record warm temperatures leading to very pronounced increases in snow melt and streamflows. Snow melt is occurring early this year, with many Snotel stations at the mid and high elevations indicating that melt out will occur nearly a month earlier than normal. The low snowpack percentages in the Snake River basins are indicative of this, and peak inflows for the season may be occurring this week on the Boise and Payette basins, along with other rivers draining the mountains of western and central Idaho. A strong cold front with limited precipitation is currently impacting the Region and will slow the melt rates; a return to dry and mild conditions is forecast for next week. Most reservoirs will fill this year, with the primary exception of several in Eastern Oregon. Adequate supplies will exist in 2007 to meet demands, but carryover at the end of the year will likely be very low in most systems.

	Snowpack % of avg	Water Year Precipitation % of avg	Forecasted Spring Runoff % of avg	Reservoir Storage % full	Allocations
Yakima (WA)	73	115	88	92	full
Flathead/Hungry Horse (MT)	76	98	81	86	n/a
Crooked (OR)	n/a	91	50	100	n/a
Boise (ID)	47	79	55	88	n/a
Payette (ID)	44	82	62	84	n/a
Upper Snake (ID)	48	80	67	92	n/a
Columbia Basin (Columbia R at the Dalles)	68	100	92	n/a	n/a



## Pacific Northwest Region Water Supply Update April 18, 2007

The first half of April has brought typical spring weather to the PN Region: a little bit of everything. The unseasonably warm March has been replaced with more normal temps along with occasional blustery winds and showers. A strong winter-like storm is currently impacting much of the interior of the region with cold temperatures and moderate snow in the mountains. The current weather helps to reduce irrigation demands and/or maintain them at normal levels, but a continuation of wet weather into May would be needed to materially affect the water supply. Most reservoirs will fill this year, with the primary exception of several in Eastern Oregon. Adequate supplies will exist in 2007 to meet demands (including those in Eastern Oregon), but carryover at the end of the year will likely be very low in most systems.

	Snowpack % of avg	Water Year Precipitation % of avg	Forecasted Spring Runoff % of avg	Reservoir Storage % full	Allocations
Yakima (WA)	82	118	88	90	n/a
Flathead/Hungry Horse (MT)	78	100	81	84	n/a
Crooked (OR)	n/a	91	50	100	n/a
Boise (ID)	55	80	55	87	n/a
Payette (ID)	60	83	62	80	n/a
Upper Snake (ID)	62	80	67	90	n/a
Columbia Basin (Columbia R at the Dalles)	74	102	92	n/a	n/a



## Pacific Northwest Region Water Supply Update April 4, 2007

Dry and warm conditions returned to the PN Region during March. The combination provided a double hit to the water supply conditions: March provides roughly 15% of the typical annual snowfall in the mountains, which did not materialize for the most part; and the warm temps began to melt the existing snowpack roughly three weeks early. Mountain snowpack typically peaks near April 1, but this year many (most?) sites reported more snow water on March 1. The forecasted runoff for the remainder of spring reflects the March conditions. The good news is that much of this runoff was captured in project reservoirs, many of which are now approaching full. Most reservoirs will fill this year, with the primary exception of several in Eastern Oregon. Adequate supplies will exist in 2007 to meet demands (including those in Eastern Oregon), but carryover at the end of the year will likely be very low in most systems. A wet spring could still help improve the runoff picture.

	Snowpack % of avg	Water Year Precipitation % of avg	Forecasted Spring Runoff % of avg	Reservoir Storage % full	Allocations
Yakima (WA)	87	119	88	85	n/a
Flathead/Hungry Horse (MT)	75	100	81	84	n/a
Crooked (OR)	55	91	50	98	n/a
Boise (ID)	59	81	55	84	n/a
Payette (ID)	68	84	62	77	n/a
Upper Snake (ID)	69	82	67	88	n/a
Columbia Basin (Columbia R at the Dalles)	78	102	93	n/a	n/a



## Pacific Northwest Region Water Supply Update March 7, 2007

February saw a return to near normal precipitation in the PN Region following an extremely dry January. Snowfall was not enough to make up for the dearth of precipitation in January, but it was enough to prevent a future slide toward drought conditions. Most snowpack and forecast percentages remain close to those reported last month. March has started out with near normal precipitation, and the current 14 day forecast calls for a continuation of showery weather. Good reservoir carryover levels from 2006 will assure adequate supplies even with a return to drier conditions; a wet spring would likely require minor flood control releases from many of the larger projects. Weather over the next two months will be critical in determining the final outcome for 2007.

	Snowpack % of avg	Water Year Precipitation % of avg	Forecasted Spring Runoff % of avg	Reservoir Storage % full	Allocations
Yakima (WA)	110	121	109	67	n/a
Flathead/Hungry Horse (MT)	86	100	97	81	n/a
Crooked (OR)	95	103	78	74	n/a
Boise (ID)	74	87	72	67	n/a
Payette (ID)	81	91	87	70	n/a
Upper Snake (ID)	76	85	81	77	n/a
Columbia Basin (Columbia R at the Dalles)	93	104	95	n/a	n/a



## Pacific Northwest Region Water Supply Update January 31, 2007

January has been a very dry month in the Pacific Northwest; there has been essentially no new precipitation since the last update on January 9. January is a crucial snow accumulation month, and the lack of new snow results in a dramatic drop in the snowpack percentages, by as much as 30% in some basins. The only basin which remains above average is the Yakima at 116%. New runoff forecasts are yet to be calculated, but are expected to drop by at least 10% to 15% in all basins. The forecasts percentages listed are estimates reflecting this drop; actual values will be available by early next week. Weather models are finally forecasting an end to the dry pattern beginning next week. The winter snow accumulation season is now about 65% complete. Good reservoir carryover levels from 2006 will assure adequate supplies even with a continuation of drier conditions, although reservoir levels at the end of the summer could be quite low without a return to wetter conditions.

	Snowpack % of avg	Water Year Precipitation % of avg	Forecasted Spring Runoff % of avg	Reservoir Storage % full	Allocations
Yakima (WA)	116	132	109	60	n/a
Flathead/Hungry Horse (MT)	82	102	89	84	n/a
Crooked (OR)	80	85	82	60	n/a
Boise (ID)	72	86	85	59	n/a
Payette (ID)	76	76	90	68	n/a
Upper Snake (ID)	70	83	80	70	n/a
Columbia Basin (Columbia River at the Dalles)	91	108	91	n/a	n/a



# Pacific Northwest Region Water Supply Update January 9, 2007

For the PN Region, December continued the trend of near normal conditions for most basins, with snowpacks typically ranging in the 90% to 110% of average range. The exception is the Yakima basin, which continues to accumulate heavy snowpack in its headwaters, currently at 154% of average. The first week of January produced moderate snowpack gains throughout the Region, but forecasts for the next two weeks call for very cold and dry conditions. The coldest temps so far this winter are about to hit; hydroelectric projects are poised well to respond. The winter snow accumulation season is only about 40% complete, so much will depend on the following two months for determining supplies in 2007. However, good reservoir carryover levels from 2006 will assure adequate supplies even with a change to drier conditions.

	Snowpack % of avg	Water Year Precipitation % of avg	Forecasted Spring Runoff % of avg	Reservoir Storage % full	Allocations
Yakima (WA)	154	156	119	56	n/a
Flathead/Hungry Horse (MT)	92	114	99	86	n/a
Crooked (OR)	112	132	92	62	n/a
Boise (ID)	97	111	96	57	n/a
Payette (ID)	105	115	109	67	n/a
Upper Snake (ID)	87	101	90	66	n/a
Columbia Basin (Columbia R at the Dalles)	113	127	98	n/a	n/a



#### Pacific Northwest Region Water Supply Update November 29, 2006

November was an extremely wet month for the northern and western portions of the PN Region, with various monthly total precipitation records likely exceeded. Most of the rain fell in the first week, and primarily on November 6 and 7. Total rain amounts exceeded 10" to 15" in many locations of western Washington and Oregon. Keechelus Reservoir in the Yakima basin recorded over 7" of rain on November 6 alone. Widespread flooding occurred, with extreme floods in western Washington. The affected Reclamation basins were the Tualatin, Yakima, and to a lesser degree the Flathead in Montana. However, all reservoirs had sufficient space to capture inflows and provided significant flood control benefits, particularly on the Yakima project. Elsewhere in region, November precipitation was closer to average and early season snowpacks are just beginning to accumulate. High pressure is currently anchored over the Region with no significant storms forecasted in the next 10 days. It is still too early to establish meaningful trends from the snow data; the percentages will fluctuate significantly over the next couple months before meaningful trends are established. The first runoff forecasts will be available after January 1.

	Snowpack % of avg	Water Year Precipitation % of avg	Forecasted Spring Runoff % of avg	Reservoir Storage % full	Allocations
Yakima (WA)	153	184	n/a	47	n/a
Flathead/Hungry Horse (MT)	89	140	n/a	87	n/a
Crooked (OR)	132	130	n/a	59	n/a
Boise (ID)	85	116	n/a	50	n/a
Payette (ID)	90	124	n/a	63	n/a
Upper Snake (ID)	79	110	n/a	57	n/a
Columbia Basin (Columbia R at the Dalles)	118	147	n/a	n/a	n/a



## Pacific Northwest Region Water Supply Update November 2, 2006

Water Year 2007 started on October 1, and most reservoirs across the PN region entered the new year with higher carryover volumes than last year. Irrigation season is complete and most reservoir releases are now down to winter minimums. No significant precipitation events occurred in October, but November is forecast to start out wet with a series of storms impacting the region over the next week. Significant precip may occur in western Oregon and Washington, with lesser amounts inland. The long range forecast through January calls for increased chances for above normal temperatures and below normal precipitation over the region. The precip and runoff data on the following table only account for the first month of WY 2007 and do not yet reflect the true condition of the basins. The percentages will fluctuate significantly over the next several months before meaningful trends are established.

	WY 2007 Precip to Date % of avg	WY 2007 Runoff to Date % of avg	Reservoir Storage % full
Yakima (WA)	32	62	25
Flathead/Hungry Horse (MT)	82	48	87
Crooked (OR)	33	50	63
Boise (ID)	72	94	46
Payette (ID)	46	78	58
Upper Snake (ID)	114	101	42
Columbia Basin (Columbia R at the Dalles)	68	68	n/a



## Pacific Northwest Region Water Supply Update October 11, 2006

Water Year 2007 started on October 1, and most reservoirs across the PN region were entering the new year with higher carryover volumes than last year. Irrigation season is nearly complete and most reservoir releases will be down to minimums within the next couple weeks. No significant precipitation events have occurred so far in October and this trend is forecasted to continue in the short term with only minor amounts of precipitation expected. The long range forecast through December calls for above normal temperatures and below normal precipitation over the region. The precip and runoff data on the following table only account for the first 10 days of WY 2007 and do not yet reflect the true condition of the basins. The percentages will fluctuate significantly over the next several months before meaningful trends are established.

	WY 2007 Precip to Date % of avg	WY 2007 Runoff to Date % of avg	Reservoir Storage % full
Yakima (WA)	11	60	25
Flathead/Hungry Horse (MT)	18	42	87
Crooked (OR)	33	193	63
Boise (ID)	153	105	46
Payette (ID)	54	89	58
Upper Snake (ID)	194	111	42
Columbia Basin (Columbia R at the Dalles)	30	75	n/a