

**HYDROLOGIC OUTLOOK
NATIONAL WEATHER SERVICE Portland OR
1250 PM PDT FRI APR 10 2009**

Oregon Water Supply and Spring Flood Potential Outlook as of April 10th 2009

An active and cool storm track during much of March brought near-normal precipitation and major increases in snowpack to most of Oregon, resulting in significantly-higher water supply forecasts for many basins. Most basins in the northern half of Oregon are expected to have near-normal water supply, with somewhat below-normal water supply for most basins in the southern half. Based on the current snowpack conditions, the spring flood potential for central and eastern Oregon is average to below-average, and snowmelt-related flooding is unlikely.

The U.S. drought monitor currently shows a small area of severe drought in south-central Oregon, with a larger area of moderate drought in south-central and southeast Oregon. Visit drought.unl.edu/dm/monitor.html for more information.

Near-normal precipitation and temperatures are likely for the spring. For more information on seasonal outlooks, visit the climate prediction web page at <http://www.cpc.ncep.noaa.gov>.

*****Please note that NWS Portland is assessing the usefulness of the text-based water supply outlook. If you use this product, please contact Andy Bryant, service hydrologist as NWS Portland, via email at andy.bryant@noaa.gov. Your input and comments would be greatly appreciated.*****

The next update of this outlook will be issued by May 11th.

Snowpack across Oregon

Snowpack increased significantly during March across the high terrain in Oregon, with the exception of southeast and south-central Oregon. As of April 1st, snowpack was above-normal in the north Oregon Cascades and Blue and Willowa ranges in northeast Oregon, near-normal in the southern Oregon Cascades and central Oregon mountains, and below-normal in the south-central and southeast Oregon mountains. The following table shows percent of normal snowpack. Data is provided by the Natural Resources Conservation Service, and is based on SNOTEL and snowcourse reports.

LOCATION	PCT OF NORMAL	CHANGE
...Central and Eastern Oregon...		
KLAMATH BASIN	98	+10
LAKE COUNTY/GOOSE LAKE BASINS	79	-3
HARNEY COUNTY BASINS	78	+7
OWYHEE AND MALHEUR BASINS	90	0
GRANDE RONDE, POWDER, BURNT AND IMNAHA	109	+26
UMATILLA, WALLA WALLA, WILLOW, ROCK, AND LOWER JOHN DAY BASINS	123	+33
UPPER JOHN DAY BASIN	101	+26
UPPER DESCHUTES AND CROOKED BASINS	106	+22
LOWER DESCHUTES AND HOOD BASINS	131	+31
...Western Oregon...		
SANDY BASIN	141	+35
WILLAMETTE BASIN	128	+36
ROGUE AND UMPQUA BASINS	99	+16

Precipitation across Oregon

Precipitation totals for March were above-normal in northeast Oregon and near-normal elsewhere. The table below shows precipitation totals in terms of percent of normal for March and the 2009 water year thus far, along with the

change in the water year total from the previous month.

BASIN	PERCENT OF AVG FOR	MAR	OCT-MAR	CHANGE
...Central and Eastern Oregon...				
KLAMATH (OREGON ONLY)		115	86	+5
LAKE COUNTY/GOOSE LAKE		98	73	+5
HARNEY/MALHEUR BASIN		79	83	-1
OWYHEE/MALHEUR		91	96	-2
GRANDE RONDE/BURNT		129	100	+5
UPPER JOHN DAY		113	92	+4
UMATILLA/LOWER JOHN DAY		176	113	+12
UPPER DESCHUTES/CROOKED		132	93	+5
HOOD/LOWER DESCHUTES		134	108	+3
...Western Oregon...				
WILLAMETTE VALLEY		99	81	+3
ROGUE/UMPQUA		114	86	+4

Major Irrigation Reservoirs

At the close of March, 1,866,000 acre-feet of water were stored in 26 major irrigation reservoirs in Oregon, an increase of about 370,000 acre-feet during the month. The current storage represents 75 percent of average and is 58 percent of holding capacity. The current storage is 103 percent of storage for this same time last year. Reservoir data is provided courtesy of the Natural Resources Conservation Service.

Observed and Forecast Streamflow

Streamflow in March was near-normal across most of the state, except for below-normal streamflow on some rivers in south-central and southeast Oregon. No flooding occurred during March.

Forecast streamflow volumes for the Spring and Summer are generally below-normal in southern and central Oregon and near-normal in northern Oregon. Many of the updated forecasts show an increase over the previous month's forecast due to the abundant high elevation snowfall across much of the state in march. The forecast for the Columbia River at The Dalles, which is a good index of conditions in the Columbia basin, is 86% of average, an increase of 6% from a month ago.

The following table summarizes the forecasts for selected rivers, updated April 7th. These forecasts are based on observed precipitation and streamflow and assume normal precipitation for the remainder of the forecast period.

WATER SUPPLY FORECASTS

...FORECAST AND AVERAGE ARE IN THOUSANDS OF ACRE-FEET...
 ...`%` IS PERCENT OF AVERAGE BASED ON 1971 - 2000 NORMALS...
 ...`CHANGE` IS CHANGE IN PERCENT OF AVERAGE FROM LAST MONTH...

STREAM AND STATION	PERIOD	FORECAST	%	CHANGE	AVERAGE
COLUMBIA RIVER					
THE DALLES	JAN-JUL	92000.0	86	+6	107300.
OWYHEE RIVER					
OWYHEE RES INFLOW	MAR-JUL	400.0	65	-13	613.
MALHEUR RIVER					
NEAR DREWSEY	MAR-JUL	73.0	66	+18	110.
N.F. MALHEUR RIVER					
BEULAH RES INFLOW	MAR-JUL	60.0	74	+22	81.

BURNT RIVER						
NEAR HEREFORD	MAR-JUL	36.0	71	+10		51.
POWDER RIVER						
NEAR SUMPTER	MAR-JUL	57.0	81	+12		70.
IMNAHA RIVER						
IMNAHA	MAR-JUL	255.0	85	+12		301.
GRANDE RONDE RIVER						
LA GRANDE	MAR-JUL	235.0	94	+14		249.
TROY	MAR-JUL	1520.0	96	+13		1578.
UMATILLA RIVER						
NEAR GIBBON	APR-JUL	84.0	115	+11		73.
PENDLETON	APR-JUL	170.0	114	+9		149.
S.F. WALLA WALLA RIVER						
NEAR MILTON	APR-JUL	54.0	102	+6		53.
M.F. JOHN DAY RIVER						
RITTER	APR-JUL	115.0	93	+15		123.
N.F. JOHN DAY RIVER						
NEAR MONUMENT	MAR-JUL	545.0	91	+13		597.
JOHN DAY RIVER						
SERVICE CREEK	MAR-SEP	1050.0	91	+10		1153.
DESCHUTES RIVER						
BENHAM FALLS	APR-SEP	500.0	95	+8		528.
CROOKED RIVER						
PRINEVILLE RES INFLOW	MAR-JUL	136.0	74	0		184.
OCHOCO CREEK						
OCHOCO RES INFLOW	MAR-JUL	26.0	72	0		36.
MCKENZIE RIVER						
NEAR VIDA	APR-SEP	1150.0	96	+7		1201.
S. SANTIAM RIVER						
WATERLOO	APR-SEP	615.0	105	+16		587.
N. SANTIAM RIVER						
MEHAMA	APR-SEP	850.0	102	+14		834.
WILLAMETTE RIVER						
SALEM	APR-SEP	4810.0	100	+14		4804.
CLACKAMAS RIVER						
ESTACADA	APR-SEP	800.0	107	+11		748.
N. UMPQUA RIVER						
LEMOLO LK INFLOW	APR-SEP	145.0	96	+7		151.
ROGUE RIVER						
RAYGOLD	APR-SEP	780.0	88	+5		889.
CHEWAUCAN RIVER						
NEAR PAISLEY	MAR-JUL	69.0	78	+8		89.
SILVIES RIVER						
NEAR BURNS	APR-SEP	85.0	86	+12		99.
WILLIAMSON RIVER						
BELOW SPRAGUE	APR-SEP	305.0	79	+6		385.
SPRAGUE RIVER						
NEAR CHILOQUIN	APR-SEP	160.0	70	+9		230.
KLAMATH RIVER						
UPPER LAKE INFLOW	APR-SEP	400.0	78	+7		515.

These forecasts are selected from those prepared by: National Weather Service, Natural Resource Conservation Service, and B.C. Hydro and Power Authority. For various project inflows, the forecasts have been coordinated with the U.S. Army Corps of Engineers and the U.S. Bureau of Reclamation. Visit www.nwrfc.noaa.gov/water_supply/water_supply.cgi and www.cnrfc.noaa.gov/water_supply.php for more details.

Spring Snowmelt Flood Potential and Peak Flow Forecasts

Even with the increased snowpack during March, there is only a minor risk of Spring snowmelt flooding in eastern Oregon, with the most significant risk along rivers draining the Blue and Willowa ranges. Note that Spring snowmelt

flooding only occurs east of the Cascade crest in Oregon, although flooding caused by a combination of snowmelt and rainfall is a slight possibility into April west of the Cascades.

The table below shows forecast peak stage and flow for several rivers in Oregon. Forecasts include the most probable (`mid`) and values minus (`low`) and plus (`high`) one standard deviation. These forecasts are provided by the NOAA/NWS Northwest River Forecast Center and were updated April 7th.

	FLOOD STAGE	STAGE IN FEET			FLOW IN KCFS		
		LOW	MID	HIGH	LOW	MID	HIGH
MALHEUR R NR VALE	9.5	5.3	7.5	9.8	1.7	3.5	5.4
IMNAHA R AT IMNAHA	5.5	3.2	4.2	5.1	1.2	2.5	3.8
GRANDE RONDE R AT LAGRANDE	10.0	6.2	7.9	9.5	2.2	4.2	6.2
GRANDE RONDE R AT TROY	10.0	7.2	7.8	8.4	8.8	11.4	14.0
UMATILLA R AT PENDLETON (FLOOD FLOW IS 6.6 KCFS)		5.7	5.8	5.9	2.5	3.2	4.0
JOHN DAY R AT SERVICE CREEK	11.5	7.5	9.0	10.6	6.8	11.1	15.4
WILLAMETTE R AT PORTLAND	18.0	7.5	8.5	10.5			
COLUMBIA R AT VANCOUVER WA	16.0	8.0	9.0	11.0			