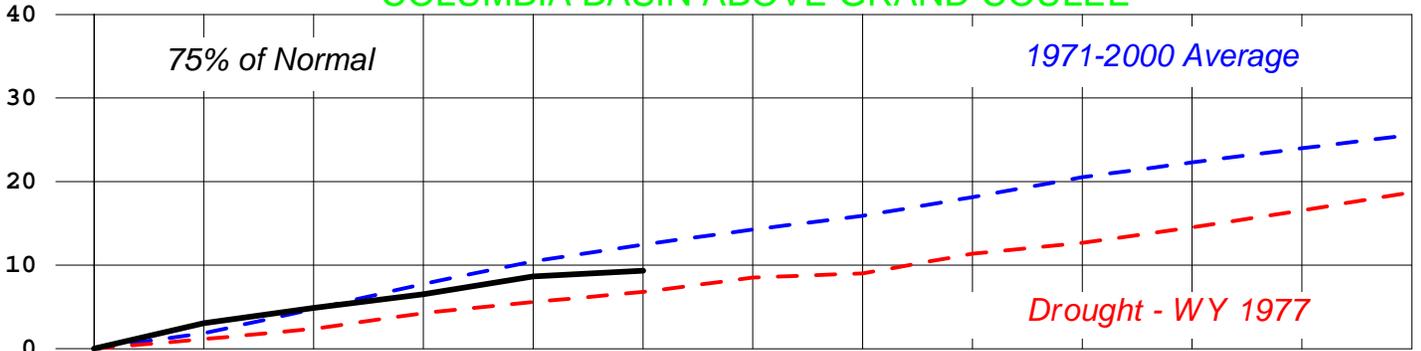
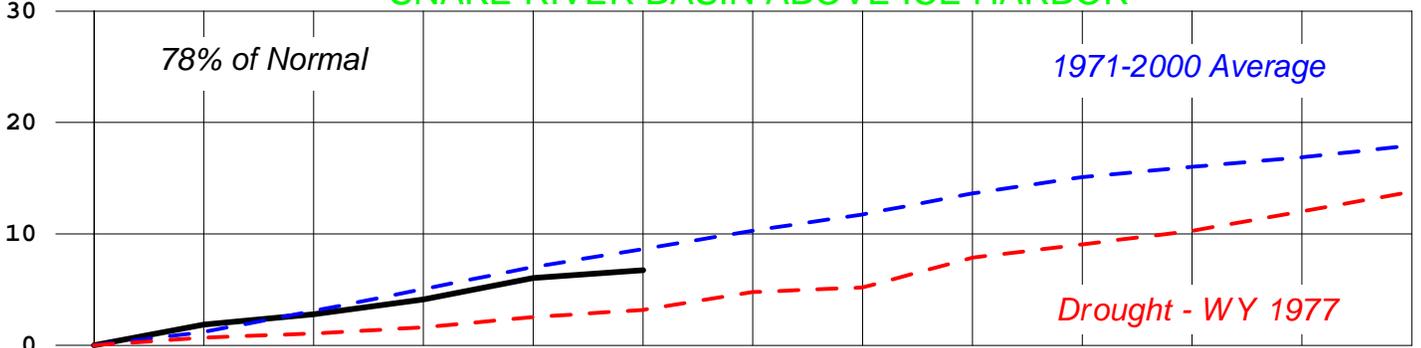


CUMULATIVE PRECIPITATION WATER YEAR 2010

COLUMBIA BASIN ABOVE GRAND COULEE



SNAKE RIVER BASIN ABOVE ICE HARBOR



COLUMBIA BASIN ABOVE THE DALLES



WILLAMETTE BASIN



ACCUMULATED PRECIPITATION IN INCHES

Columbia Basin Seasonal Precipitation Division Averages
Northwest River Forecast Center

(Monthly Summary - feb 2010)

DIVISION	..FEB TO DAY 28..		OCT - FEB....			
	OBSD	DEP	PCT AV	OBSD	DEP	PCT	AV
COLUMBIA ABOVE COULEE	0.69	-1.31	34.	9.33	-3.13	75.	
SNAKE RV AB ICE HARBOR	0.72	-0.89	45.	6.74	-1.90	78.	
COLUMBIA AB THE DALLES	1.00	-1.11	48.	9.77	-2.60	79.	
COLUMBIA AB CASTLEGAR	0.82	-2.01	29.	13.27	-4.69	74.	
KOOTENAI	0.71	-1.23	37.	10.00	-2.81	78.	
CLARK FORK	0.40	-0.91	30.	5.28	-2.51	68.	
FLATHEAD	0.68	-1.08	39.	8.24	-2.31	78.	
PEND OREILLE/ SPOKANE	1.51	-1.53	50.	12.83	-4.59	74.	
NORTHEAST WASHINGTON	1.15	-0.44	72.	8.64	-0.56	94.	
OKANOGAN	1.05	-0.32	77.	6.87	-0.99	87.	
EAST SLOPES WASH CASC.	2.33	-2.60	47.	20.79	-7.37	74.	
CENTRAL WASHINGTON	0.65	-0.21	76.	4.44	-0.64	87.	
UPPER SNAKE	0.81	-0.95	46.	6.91	-2.70	72.	
SNAKE RIVER PLAIN	0.48	-0.40	55.	3.99	-0.99	80.	
OWYHEE/ MALHEUR	0.57	-0.43	57.	4.84	-0.58	89.	
SALMON/ BOISE/ PAYETTE	0.87	-1.19	42.	8.81	-2.02	81.	
BURNT/ GRANDE RONDE	0.71	-0.69	51.	6.88	-1.34	84.	
CLEARWATER	1.30	-1.57	45.	11.54	-4.27	73.	
SOUTHEAST WASHINGTON	0.90	-1.05	46.	7.51	-3.06	71.	
UPPER JOHN DAY	0.82	-0.39	67.	6.61	-0.68	91.	
UMATILLA/ LWR JOHN DAY	0.98	-0.59	63.	8.71	-0.02	100.	
UPR DESCHUTES/ CROOKED	1.03	-0.49	68.	8.20	-0.38	96.	
HOOD/ LOWER DESCHUTES	2.15	-1.28	63.	17.60	-1.23	93.	
NW SLOPE WASH CASCADES	4.55	-5.24	46.	47.78	-9.03	84.	
SW WA CASCADES/COWLITZ	4.67	-3.74	56.	37.17	-9.22	80.	
WILLAMETTE VALLEY	4.15	-3.10	57.	30.56	-8.32	79.	
ROGUE/ UMPQUA	2.67	-1.85	59.	18.61	-5.08	79.	
KLAMATH BASIN	1.38	-0.76	65.	9.54	-2.07	82.	
LAKE COUNTY-GOOSE LAKE	0.58	-0.63	48.	5.33	-1.02	84.	
HARNEY/ MALHEUR BASIN	0.75	-0.23	77.	5.43	-0.02	100.	

Columbia River Basin division values are computed by utilizing un-weighted precipitation amounts from key stations in each area.

Precipitation normals are based on 1971-2000 historical data.

Please contact NWRFC for further information: (503) 326-7291.

NORTHWEST RIVER FORECAST CENTER PORTLAND OR

PRECIPITATION, TEMPERATURE, SNOW, AND STREAMFLOW SUMMARIES

FEB 10

WEATHER SUMMARY

A SPLIT FLOW IN THE JET STREAM CARRIED MOST OF THE WEATHER DISTURBANCES TO THE NORTH AND SOUTH OF THE PACIFIC NORTHWEST THROUGH THE FIRST THREE WEEKS OF FEBRUARY. THIS KEPT TEMPERATURES WARMER THAN NORMAL...AND CONDITIONS DRIER THAN NORMAL THROUGH THE COLUMBIA BASIN. A SERIES OF STRONGER LOW PRESSURE SYSTEMS MOVED THROUGH THE NORTHWEST AT THE END OF THE MONTH...THOUGH TEMPERATURES REMAINED SLIGHTLY ABOVE NORMAL AND PRECIPITATION CONTINUED TO BE BELOW NORMALS.

PRECIPITATION SUMMARY

FEBRUARY PRECIPITATION WAS: 34 PERCENT OF NORMAL (1971-2000) AT COLUMBIA ABOVE COULEE, 45 PERCENT OF NORMAL AT THE SNAKE RIVER ABOVE ICE HARBOR, AND 48 PERCENT OF NORMAL AT COLUMBIA ABOVE THE DALLES.

SEASONAL (OCTOBER THROUGH FEBRUARY) PRECIPITATION WAS: 75 PERCENT OF NORMAL (1971-2000) AT COLUMBIA ABOVE COULEE, 78 PERCENT OF NORMAL AT THE SNAKE RIVER ABOVE ICE HARBOR, AND 79 PERCENT OF NORMAL AT COLUMBIA ABOVE THE DALLES.

TEMPERATURE SUMMARY

THE 37 STATION TEMPERATURE INDEX FOR THE PACIFIC NORTHWEST DEPARTED +2.7 DEGREES FROM NORMAL RELATIVE TO THE 1971-2000 NORMALS. MEAN TEMPERATURE DEPARTURES RANGED FROM -2.4 TO 5.6 DEGREES.

GENERAL SUMMARY

THE SPLIT FLOW PATTERN CONTINUES TO IMPACT OUR AREA WITH MOST OF THE STORM ENERGY GOING SOUTH INTO CALIFORNIA. THE EL NINO PATTERN CAUSED MORE WARM TEMPERATURES AND LIMITED THE SNOW ACCUMULATIONS DURING FEBRUARY. THE LOWEST MONTHLY PRECIPITATION WAS IN THE NORTHERN PORTION OF THE COLUMBIA-SNAKE BASIN WHICH PROVIDES TWO-THIRDS OF THE STREAMFLOW AT THE DALLES. BECAUSE OF THESE CONDITIONS A WEIGHT OF 75 PERCENT WAS APPLIED TO THE PRECIPITATION DURING THE MONTH OF MARCH. CONSEQUENTLY THE STREAMFLOW FORECASTS HAVE DROPPED 7 TO 9 PERCENT FROM THE FEBRUARY 1ST LEVELS.

SNOW SUMMARY

WARM CONDITIONS DURING FEBRUARY PREVENTED THE NORMAL SNOW ACCUMULATIONS OVER MOST OF THE THE COLUMBIA-SNAKE BASIN. MARCH 1ST SNOW WATER EQUIVALENTS (SWE'S) ARE BEST IN THE UPPER COLUMBIA IN CANADA AT 70 TO 100 PERCENT AND IN THE NORTH CASCADES IN WASHINGTON AT 80 PERCENT OF AVERAGE. LOWEST MARCH 1ST SWE'S ARE NEAR 50 PERCENT OF AVERAGE ON THE CLARK FORK-BITTERROOT RIVERS IN MONTANA AND IN THE UPPER AND MIDDLE SNAKE AREAS INCLUDING THE SALMON AND CLEARWATER BASINS. WEST OF THE CASCADES MARCH 1ST SWE'S ARE MOSTLY AT 50 TO 60 PERCENT. THE LOWEST MARCH 1ST SWE'S ARE IN THE WILLAMETTE RIVER BASIN AT 39 PERCENT.

STREAMFLOW SUMMARY

STREAMFLOW IN FEBRUARY WAS BELOW AVERAGE IN THE ENTIRE DRAINAGE AREA. STREAMFLOWS FOR THE MONTH ARE MOSTLY IN THE 40 TO 70 PERCENT RANGE. THE BEST STREAMFLOW DURING FEBRUARY WAS IN THE UPPER SNAKE AND SALMON RIVER BASINS AT 70 TO 85 PERCENT. LOWEST STREAMFLOWS WERE IN THE SPOKANE DRAINAGE AND IN NORTHEAST OREGON AT 30 TO 45 PERCENT.

THE STREAMFLOW FORECAST FOR MARCH 1ST DROPPED 7 TO 9 PERCENT FROM FEBRUARY 1ST VALUES. SPLIT FLOW PATTERNS WITH STORMS DIVERTED INTO CALIFORNIA AND WARM CONDITIONS DUE TO EL NINO PRODUCED DRIER CONDITIONS AND LESS THAN AVERAGE SNOW ACCUMULATIONS IN FEBRUARY. THIS CAUSED A DROP OF 7 TO 9 PERCENT FROM FEBRUARY 1ST. THE FORECAST FOR THE COLUMBIA RIVER AT THE DALLES IS NEAR 67 PERCENT OF THE 30-YEAR AVERAGE. THIS RANKS AS THE FOURTH LOWEST STREAMFLOW SINCE 1961.

SEE [HTTP://WWW.NWRFC.NOAA.GOV/WATER_SUPPLY/WS_FCST.CGI](http://www.nwrfc.noaa.gov/water_supply/ws_fcst.cgi) FOR DETAILED WATER SUPPLY FORECASTS.

MONTHLY PRECIPITATION AND TEMPERATURE RECORDS

PARTIAL LIST OF RECORD HIGH AND LOW TEMPERATURES IN DEGREES (F) ARE LISTED BELOW. PRECIPITATION IS REPORTED IN INCHES. PLEASE SEE THE COMPLETE LIST OF RECORDS AT THE NATIONAL WEATHER SERVICE FIELD OFFICES CLIMATOLOGY WEB PAGES.

02/05 RECORD HIGH TEMPERATURE OF 62 DEGREES WAS SET AT SALEM OR

02/22 RECORD LOW TEMPERATURE OF 27 DEGREES WAS SET AT PORTLAND OR

RECORD LOW TEMPERATURE OF 21 DEGREES WAS SET AT OLYMPIA WA

RECORD LOW TEMPERATURE OF 12 DEGREES WAS SET AT REDMOND OR

02/26 RECORD RAINFALL OF 0.46 INCHES WAS SET AT YAKIMA WA

02/27 RECORD PRECIPITATION OF 0.44 INCHES WAS SET AT MOSES LAKE WA

US Dept of Commerce
National Oceanic and Atmospheric Administration
National Weather Service
Northwest River Forecast Center (NWRFC)
5241 NE 122nd Avenue
Portland, Oregon 97230-1089
Telephone: 503-326-7401

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