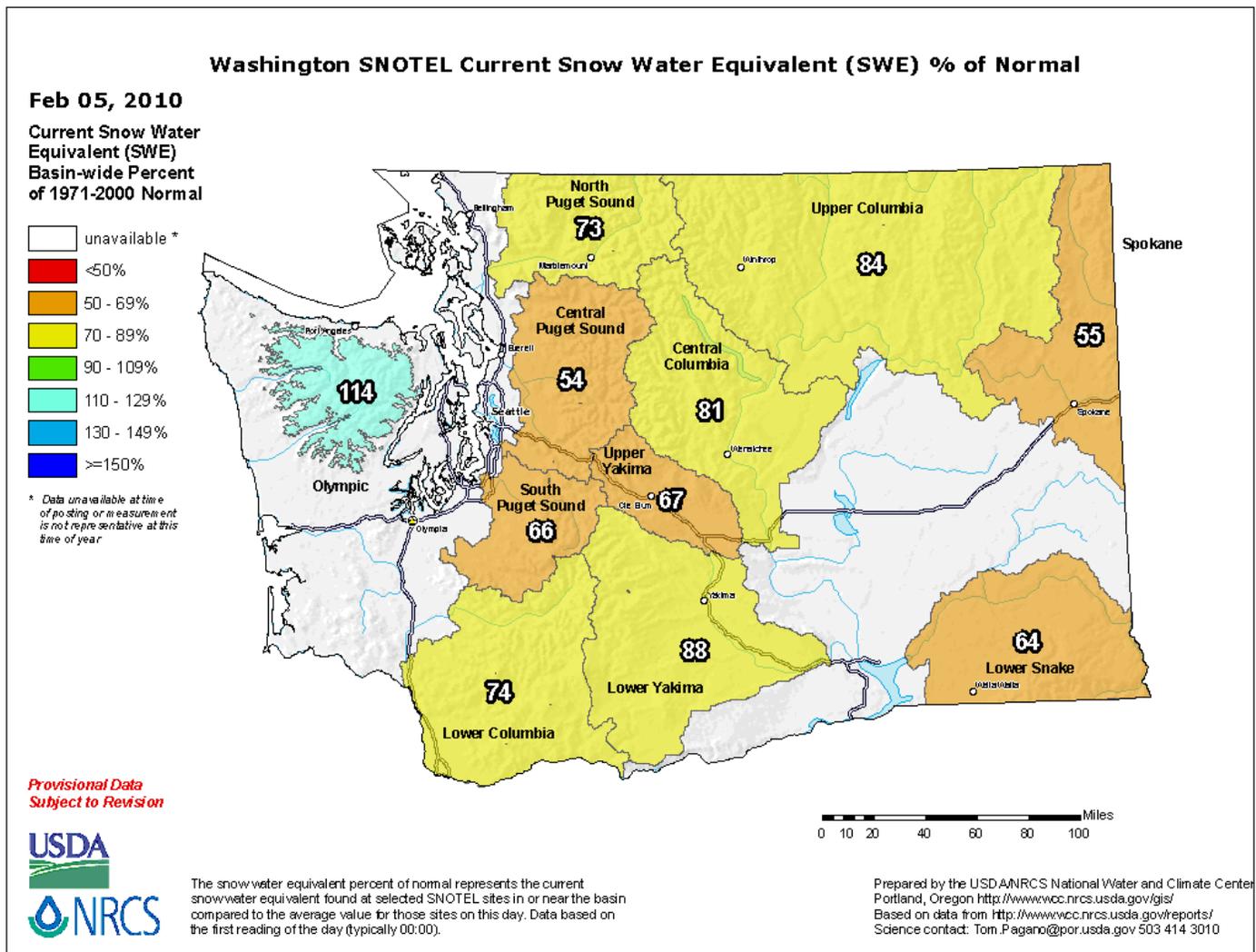


Washington Water Supply Outlook Report February 1, 2010



Water Supply Outlook Reports and Federal - State – Private Cooperative Snow Surveys

For more water supply and resource management information, contact:

Local Natural Resources Conservation Service Field Office

or

Scott Pattee
Water Supply Specialist
Natural Resources Conservation Service
2021 E. College Way, Suite 214
Mt. Vernon, WA 98273-2873
(360) 428-7684

or

Ron Nichols
Public Affairs Specialist
Natural Resources Conservation Service
316 W. Boone Ave., Ste 450
Spokane, WA 99201
(509) 323-2912

How forecasts are made

Most of the annual streamflow in the western United States originates as snowfall that has accumulated in the mountains during the winter and early spring. As the snowpack accumulates, hydrologists estimate the runoff that will occur when it melts. Measurements of snow water equivalent at selected manual snow courses and automated SNOTEL sites, along with precipitation, antecedent streamflow, and indices of the El Niño / Southern Oscillation are used in computerized statistical and simulation models to prepare runoff forecasts. These forecasts are coordinated between hydrologists in the Natural Resources Conservation Service and the National Weather Service. Unless otherwise specified, all forecasts are for flows that would occur naturally without any upstream influences.

Forecasts of any kind, of course, are not perfect. Streamflow forecast uncertainty arises from three primary sources: (1) uncertain knowledge of future weather conditions, (2) uncertainty in the forecasting procedure, and (3) errors in the data. The forecast, therefore, must be interpreted not as a single value but rather as a range of values with specific probabilities of occurrence. The middle of the range is expressed by the 50% exceedance probability forecast, for which there is a 50% chance that the actual flow will be above, and a 50% chance that the actual flow will be below, this value. To describe the expected range around this 50% value, four other forecasts are provided, two smaller values (90% and 70% exceedance probability) and two larger values (30%, and 10% exceedance probability). For example, there is a 90% chance that the actual flow will be more than the 90% exceedance probability forecast. The others can be interpreted similarly.

The wider the spread among these values, the more uncertain the forecast. As the season progresses, forecasts become more accurate, primarily because a greater portion of the future weather conditions become known; this is reflected by a narrowing of the range around the 50% exceedance probability forecast. Users should take this uncertainty into consideration when making operational decisions by selecting forecasts corresponding to the level of risk they are willing to assume about the amount of water to be expected. If users anticipate receiving a lesser supply of water, or if they wish to increase their chances of having an adequate supply of water for their operations, they may want to base their decisions on the 90% or 70% exceedance probability forecasts, or something in between. On the other hand, if users are concerned about receiving too much water (for example, threat of flooding), they may want to base their decisions on the 30% or 10% exceedance probability forecasts, or something in between. Regardless of the forecast value users choose for operations, they should be prepared to deal with either more or less water. (Users should remember that even if the 90% exceedance probability forecast is used, there is still a 10% chance of receiving less than this amount.) By using the exceedance probability information, users can easily determine the chances of receiving more or less water.

"The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer."

Washington Water Supply Outlook

February 2010

General Outlook

Record breaking temperatures and below average precipitation have water managers concerned that there will not be enough runoff to fill reservoirs and supply irrigation and municipal systems to adequate levels this summer. With temperatures averaging up to 8 degrees above normal recreationists and spectators are looking at the potential of a dismal season for winter sports, including the upcoming winter Olympics just to the north of us in Vancouver, British Columbia. Sea Tac Airport set a new record average temperature at 47.0°F. Seven other cities in WA had temperatures that either tied records or fell within the top 12 since records have been kept. Long-lead forecasts are still calling for below average precipitation and above average temperatures. We may be looking to break even more records if these conditions persist.

Snowpack

The February 1 statewide SNOTEL readings were 74% of average, down from 84% a month ago. The Green River SNOTEL data reported the lowest readings at 33% of average. Readings from the Olympic Peninsula reported the highest at 106% of average. Westside averages from SNOTEL, and February 1 snow surveys, included the North Puget Sound river basins with 72% of average, the Central Puget Sound river basins with 50%, and the Lewis-Cowlitz basins with 76% of average. Snowpack along the east slopes of the Cascade Mountains included the Yakima area with 77% and the Wenatchee area with 87%. Snowpack in the Spokane River Basin was at 57% and the Walla Walla River Basin had 73% of average. Maximum snow cover in Washington was at Brown Top SNOTEL near Ross Lake, with water content of 46.4 inches. Brown Top is a new SNOTEL just installed last fall so an average has not been developed. However the adjacent snow course has a 30-year average of 42.5 inches.

BASIN	PERCENT OF LAST YEAR	PERCENT OF AVERAGE
Spokane	63	57
Newman Lake	40	73
Pend Oreille	81	71
Okanogan	121	87
Methow	145	86
Conconully Lake	326	111
Wenatchee	114	79
Chelan	115	80
Upper Yakima	97	70
Lower Yakima	108	84
Ahtanum Creek	125	92
Walla Walla	84	73
Lower Snake	79	72
Cowlitz	84	75
Lewis	90	76
White	107	84
Green	51	33
Puyallup	79	78
Cedar	49	50
Snoqualmie	50	51
Skykomish	54	63
Skagit	100	78
Baker	76	64
Nooksack	96	73
Olympic Peninsula	180	106

Precipitation

During the month of January, the National Weather Service and Natural Resources Conservation Service climate stations mostly reported below average precipitation except in the Upper Columbia and Olympic Peninsula which both received above average. The highest percent of average in the state was at Dungeness SNOTEL near Sequim which reported 253% of average for a total of 14.7 inches. The average for Dungeness is 5.8 inches for January. The wettest spot in the state was reported at Buckinghorse SNOTEL with a January accumulation of 27.4 inches. Buckinghorse is a new station located in the headwaters of the Elwha River and does not have an average developed yet.

RIVER BASIN	JANUARY PERCENT OF AVERAGE	WATER YEAR PERCENT OF AVERAGE
Spokane	61	71
Pend Oreille	71	80
Upper Columbia	101	90
Central Columbia	84	85
Upper Yakima	75	80
Lower Yakima	84	90
Walla Walla	80	86
Lower Snake	75	78
Lower Columbia	83	89
South Puget Sound	70	84
Central Puget Sound	75	89
North Puget Sound	89	106
Olympic Peninsula	184	154

Reservoir

Seasonal reservoir levels in Washington vary greatly due to specific watershed management practices required in preparation for irrigation season, fisheries management, power generation, municipal demands and flood control. Reservoir storage in the Yakima Basin was 388,000-acre feet, 87% of average for the Upper Reaches and 104,000-acre feet or 85% of average for Rimrock and Bumping Lakes. Storage at the Okanogan reservoirs was 63% of average for February 1. The power generation reservoirs included the following: Coeur d'Alene Lake, 55,000 acre feet, 47% of average and 23% of capacity; Chelan Lake, 404,000-acre feet, 128% of average and 60% of capacity; and the Skagit River reservoirs at 78% of average and 109% of capacity. Recent climate impacts and management procedures may affect these numbers on a daily or weekly basis.

BASIN	PERCENT OF CAPACITY	CURRENT STORAGE AS PERCENT OF AVERAGE
Spokane	23	47
Pend Oreille	32	66
Upper Columbia	44	63
Central Columbia	60	128
Upper Yakima	46	87
Lower Yakima	45	85
Lower Snake	62	93
Lower Columbia	N/A	N/A
North Puget Sound	78	109

For more information contact your local Natural Resources Conservation Service office.

Streamflow

Forecasts vary from 100% of average for the Elwha River to 49% of average for Spokane River. April-September forecasts for some Western Washington streams include the Cedar River near Cedar Falls, 65%; White River, 79%; and Skagit River, 77%. Some Eastern Washington streams include the Yakima River near Parker, 71%; Wenatchee River at Plain, 70%; and Spokane River near Post Falls, 49%. Volumetric forecasts are developed using current, historic and average snowpack, precipitation and streamflow data collected and coordinated by organizations cooperating with NRCS. Caution should be used when using early season forecasts for critical water resource management decisions.

Statewide January streamflows were mostly below average due to lack of precipitation. Above average temperatures undoubtedly helped supplement streamflows with melting snow. The Dungeness River had the highest reported flows with 215% of average. The Stehekin River with 36% of average was the lowest in the state. Other streamflows were the following percentage of average as reported by the River Forecast Center: the Cowlitz at Castle Rock, 97%; the Spokane at Spokane, 59%; the Columbia below Rock Island Dam, 78%; and the Cle Elum near Roslyn, 72%.

BASIN	PERCENT OF AVERAGE (50 PERCENT CHANCE OF EXCEEDENCE)
Spokane	49-82
Pend Oreille	70-73
Upper Columbia	76-88
Central Columbia	74-88
Upper Yakima	72-74
Lower Yakima	68-77
Walla Walla	79-82
Lower Snake	64-81
Lower Columbia	68-77
South Puget Sound	79-67
Central Puget Sound	63-75
North Puget Sound	77-89
Olympic Peninsula	97-100

STREAM	PERCENT OF AVERAGE JANUARY STREAMFLOWS
Pend Oreille Below Box Canyon	71
Kettle at Laurier	78
Columbia at Birchbank	85
Spokane at Long Lake	60
Similkameen at Nighthawk	99
Okanogan at Tonasket	85
Methow at Pateros	89
Chelan at Chelan	83
Wenatchee at Pashastin	90
Yakima at Cle Elum	76
Yakima at Parker	71
Naches at Naches	80
Grande Ronde at Troy	54
Snake below Lower Granite Dam	67
SF Walla Walla near Milton Freewater	50
Columbia River at The Dalles	77
Lewis at Ariel	107
Cowlitz below Mayfield Dam	102
Skagit at Concrete	116
Dungeness near Sequim	215

For more information contact your local Natural Resources Conservation Service office.

BASIN SUMMARY OF
SNOW COURSE DATA

FEBRUARY 2010

SNOW COURSE	ELEVATION	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 1971-00	KLESILKWA SNOW COURSE	CAN. ELEVATION	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 1971-00
							KRAFT CREEK SNOTEL	3450	1/27/10	11	3.3	9.8	7.6
								4750	2/01/10	29	6.9	9.5	10.9
AHTANUM R.S.	3100	1/29/10	20	6.1	3.0	7.1							
ALPINE MEADOWS	3500	2/01/10	24	11.3	33.2	--							
ALPINE MEADOWS SNTL	3500	2/01/10	26	16.1	35.7	29.2	LAMB BUTTE		1/27/10	41	11.6	6.0	--
ASHLEY DIVIDE	4820	1/27/10	13	2.7	5.8	5.1	LOLO PASS SNOTEL	5240	2/01/10	46	11.6	18.7	20.9
BADGER PASS SNOTEL	6900	2/01/10	57	18.8	16.5	22.3	LONE PINE SNOTEL	3930	2/01/10	52	20.8	21.8	24.1
BAIRD #2	3220	1/28/10	15	4.8	6.6	--	LOOKOUT SNOTEL	5140	2/01/10	41	11.5	16.3	21.5
BARKER LAKES SNOTEL	8250	2/01/10	46	11.4	10.8	9.2	LOST HORSE MTN CAN.	6300	2/01/10	14	4.8	--	6.5
BARNES CREEK CAN.	5320	2/01/10	---	12.0E	16.6	14.4	LOST HORSE SNOTEL	5120	2/01/10	38	12.0	7.5	13.1
BASIN CREEK SNOTEL	7180	2/01/10	19	4.4	4.9	4.9	LOST LAKE SNOTEL	6110	2/01/10	65	21.9	32.9	40.6
BEAVER CREEK TRAIL	2200	1/31/10	18	6.6	13.2	10.3	LOST LAKE	4070	1/26/10	24	5.2	--	--
BEAVER PASS	3680	1/30/10	49	18.2	17.0	19.3	LOUP LOUP CAMPGROUND		1/25/10	34	7.1	1.8	--
BEAVER PASS SNOTEL	3630	2/01/10	63	21.5	18.7	26.2	LUBRECHT FOREST NO 3	5450	1/29/10	12	2.2	4.2	4.6
BLACK PINE SNOTEL	7100	2/01/10	26	5.4	9.1	8.0	LUBRECHT FOREST NO 4	4650	1/29/10	6	1.4	2.6	2.5
BLACKWALL PILL CAN.	6370	2/01/10	60	20.7E	17.9	23.8	LUBRECHT FOREST NO 6	4040	1/29/10	10	1.9	2.8	2.8
BLEWETT PASS#2SNOTEL	4240	2/01/10	35	10.8	7.7	12.4	LUBRECHT HYDROPLOT	4200	1/29/10	12	2.5	3.7	4.2
BRENDA MINE CAN.	4450	1/27/10	27	7.2	6.4	8.9	LUBRECHT SNOTEL	4680	2/01/10	13	3.1	4.6	4.2
BROWN TOP AM	6000	2/01/10	108	41.6	31.0	42.5	LYMAN LAKE SNOTEL	5980	2/01/10	113	34.7	30.1	43.4
BROWNS PASS	1/28/10	13	3.5	2.7	--	--	LYNN LAKE	4000	2/01/10	---	5.0e	22.4	14.5
BUMPING LAKE (NEW)	3400	1/27/10	34	10.0	11.5	13.3	MARIAS PASS	5250	1/31/10	26	6.7	10.7	11.7
BUMPING RIDGE SNOTEL	4610	2/01/10	58	16.1	19.5	19.4	MARTEN LAKE AM	3600	1/26/10	73	31.4	36.4	46.8
BUNCHGRASS MDWSNOTEL	5000	2/01/10	56	17.1	14.5	18.6	MARTEN RIDGE SNOTEL	3520	2/01/10	69	31.0	36.2	--
BURNT MOUNTAIN PIL	4170	2/01/10	6	4.3	15.3	9.0	MAZAMA		1/25/10	22	5.7	3.6	--
BUTTERMILK BUTTE	5250	1/25/10	45	11.0	7.0	--	MCCULLOCH CAN.	4200	1/29/10	17	3.9	4.4	4.9
CAYUSE PASS SNOTEL	5240	2/01/10	90	30.2	26.5	--	MEADOWS CABIN	1900	1/28/10	0	.0	7.5	5.0
CHAMOKANE 2	3520	1/28/10	11	3.3	5.7	--	MEADOWS PASS SNOTEL	3230	2/01/10	35	8.8	18.1	19.1
CHESSMAN RESERVOIR	6200	1/25/10	17	2.3	3.0	2.5	METEOR		1/27/10	11	3.3	5.8	--
CHEWALAH #2	4930	2/01/10	36	11.0	9.4	--	M F NOOKSACK SNOTEL	4970	2/01/10	60	28.4	30.6	39.4
CHICKEN CREEK	4060	1/28/10	31	8.7	10.2	11.5	MICA CREEK SNOTEL	4510	2/01/10	41	11.3	15.2	18.3
CHIWAUKUM G.S.	2500	2/03/10	20	6.8	7.5	8.6	MINERS RIDGE SNOTEL	6110	2/01/10	97	28.5	31.5	36.2
CITY CABIN	2390	2/01/10	0	.0	10.1	--	MISSION CREEK CAN.	5840	2/01/10	37	10.7E	10.5	13.6
COLD CREEK STRIP	6020	1/27/10	26	6.0	4.0	--	MISSION RIDGE	5000	2/03/10	37	10.7	7.8	11.9
COLOCKUM PASS	5370	2/02/10	37	9.7	--	11.7	MORRISSEY RIDGE CAN.	6100	2/01/10	---	15.1	13.2	18.6
COMBINATION SNOTEL	5600	2/01/10	14	3.1	3.7	3.4	MORSE LAKE SNOTEL	5410	2/01/10	99	34.9	21.5	36.9
COPPER BOTTOM SNOTEL	5200	2/01/10	17	4.2	5.4	8.0	MOSES MOUNTAIN (2)	4800	1/29/10	35	10.0	4.1	12.0
COPPER MOUNTAIN	7700	1/28/10	25	6.0	5.3	7.0	MOSES MTN SNOTEL	5010	2/01/10	32	8.1	4.6	10.4
CORRAL PASS SNOTEL	5800	2/01/10	52	16.2	20.8	22.1	MOSES PEAK	6650	1/29/10	50	16.3	6.8	9.6
COUGAR MTN. SNOTEL	3200	2/01/10	4	1.5	13.7	13.7	MOSQUITO RDG SNOTEL	5200	2/01/10	---	18.0	17.7	24.6
COX VALLEY	4500	1/30/10	59	23.6	14.6	24.2	MOULTON RESERVOIR	6850	1/29/10	18	4.1	4.9	5.2
COYTE HILL	4200	1/27/10	18	4.3	7.9	7.3	MOUNT BLUM AM	5800	1/26/10	58	24.9	35.5	37.6
DALY CREEK SNOTEL	5780	2/01/10	23	5.2	7.1	7.4	MOUNT CRAG SNOTEL	3960	2/01/10	63	22.4	8.2	19.3
DEER PARK	5200	1/28/10	36	13.8	8.7	12.2	MT. KOBAU CAN.	5500	1/30/10	34	9.5	4.8	7.9
DEVILS PARK	5900	1/29/10	66	21.0	24.3	30.7	MOUNT TOLMAN	2000	1/25/10	1	.3	3.1	3.6
DISAUTEL PASS		1/25/10	12	3.4	3.1	--	MOWICH SNOTEL	3160	2/01/10	0	.0	4.6	1.2
DISCOVERY BASIN	7050	1/25/10	25	5.2	6.4	6.6	MOUNT GARDNER	3300	2/01/10	14	6.5	12.8	--
DIX HILL	6400	1/31/10	22	5.1	8.8	7.6	MOUNT GARDNER SNOTEL	2920	2/01/10	11	3.6	13.8	12.0
DOCK BUTTE AM	3800	1/26/10	42	18.1	31.9	37.2	MUTTON CREEK #1	5700	1/28/10	43	10.7	3.6	9.4
DOMMERIE FLATS	2200	1/28/10	12	4.9	7.3	6.4	N.F. ELK CR SNOTEL	6250	2/01/10	22	5.2	7.8	8.0
DUNCAN RIDGE	5370	1/27/10	23	4.6	1.5	--	NEVADA RIDGE SNOTEL	7020	2/01/10	35	7.9	10.5	10.1
DUNGENESS SNOTEL	4010	2/01/10	16	4.5	4.1	5.9	NEW HOZOMEEN LAKE	2800	1/30/10	0	.0	7.4	7.8
EASY PASS AM	5200	1/26/10	96	41.3	37.7	46.2	NEZ PERCE CMP SNOTEL	5650	2/01/10	29	6.0	10.9	9.9
ELBOW LAKE SNOTEL	3200	2/01/10	32	15.4	20.8	24.5	NOISY BASIN SNOTEL	6040	2/01/10	84	24.3	23.9	27.0
EMERY CREEK SNOTEL	4350	2/01/10	29	8.0	--	10.5	OLALLIE MDWS SNOTEL	4030	2/01/10	71	29.1	26.7	39.2
FARRON CAN.	4000	1/28/10	27	7.2	8.0	8.7	OPHIR PARK	7150	1/31/10	31	8.6	11.8	10.6
FISH CREEK	8000	1/29/10	26	6.2	7.8	5.8	OYAMA LAKE CAN.	4100	1/29/10	15	3.4	--	5.0
FISH LAKE	3370	1/28/10	54	17.9	18.2	24.5	PARADISE SNOTEL	5130	2/01/10	85	37.2	39.6	48.1
FISH LAKE SNOTEL	3430	2/01/10	50	16.7	17.2	24.7	PARK CK RIDGE SNOTEL	4600	2/01/10	90	31.1	19.1	35.0
FLATTOP MTN SNOTEL	6300	2/01/10	90	25.8	21.1	31.8	PETERSON MDW SNOTEL	7200	2/01/10	26	5.7	6.9	6.1
FOURTH OF JULY SUM	3200	1/28/10	0	.0	7.0	7.1	PIGTAIL PEAK SNOTEL	5800	2/01/10	73	27.7	38.2	34.3
FREEZEOUT CK. TRAIL	3500	1/30/10	19	6.0	9.9	8.8	PIKE CREEK SNOTEL	5930	2/01/10	28	7.9	11.2	17.8
FROHNER MDWS SNOTEL	6480	2/01/10	22	4.5	4.6	5.0	PIPESTONE PASS	7200	1/28/10	14	2.6	2.1	3.2
FROST MEADOWS	4630	2/01/10	37	9.7	--	--	POPE RIDGE SNOTEL	3590	2/01/10	48	12.5	9.3	14.9
GOAT CREEK	3600	1/29/10	23	5.4	4.2	5.1	POSTILL LAKE CAN.	4200	1/29/10	13	3.9	5.3	5.8
GOLD MTN LOOKOUT		1/27/10	34	9.5	5.8	--	POTATO HILL SNOTEL	4510	2/01/10	61	18.5	18.2	18.5
GRASS MOUNTAIN #2	2900	1/30/10	3	.9e	12.2	7.5	QUARTZ PEAK SNOTEL	4700	2/01/10	39	11.3	13.4	15.4
GRAVE CRK SNOTEL	4300	2/01/10	32	9.2	8.7	11.7	RAGGED MOUNTAIN	4200	1/31/10	36	11.1	16.3	14.1
GREEN LAKE SNOTEL	5920	2/01/10	53	14.7	15.8	15.4	RAGGED MTN SNOTEL	4210	2/01/10	34	8.1	15.2	--
GROUSE CAMP SNOTEL	5390	2/01/10	43	12.1	11.1	14.0	RAGGED RIDGE	3330	1/27/10	1	.2	10.2	--
HAND CREEK SNOTEL	5030	2/01/10	24	5.9	10.0	8.6	RAINY PASS SNOTEL	4890	2/01/10	59	22.4	19.6	30.2
HARTS PASS SNOTEL	6490	2/01/10	69	23.5	21.4	31.3	RAINY PASS	4780	1/29/10	66	21.2	19.4	27.6
HARTS PASS	6500	1/29/10	81	29.1	20.4	29.5	REX RIVER SNOTEL	3810	2/01/10	31	12.3	22.4	21.7
HELL ROARING DIVIDE	5770	1/29/10	53	17.2	18.6	20.7	ROCKER PEAK SNOTEL	8000	2/01/10	35	8.3	11.5	9.1
HERRIG JUNCTION	4850	1/28/10	45	13.7	14.3	18.1	ROCKY CREEK AM	2100	1/26/10	32	14.4	24.0	20.2
HIGH RIDGE SNOTEL	4920	2/01/10	47	13.6	15.7	16.9	ROUND TOP MTN	4020	1/27/10	19	5.8	11.7	--
HOLBROOK	4530	2/01/10	---	4.3E	7.7	7.2	RUSTY CREEK	4000	1/28/10	23	5.2	1.3	4.9
HOODOO BASIN SNOTEL	6050	2/01/10	55	15.2	23.9	30.1	SF THUNDER CK AM	2200	1/26/10	6	2.6	18.6	5.9
HUCKLEBERRY SNOTEL	2250	2/01/10	0	.0	7.5	2.0	SADDLE MTN SNOTEL	7900	2/01/10	40	9.6	17.1	17.3
HUMBOLDT GLCH SNOTEL	4250	2/01/10	---	5.0	8.8	9.5	SALMON MDWS SNOTEL	4460	2/01/10	33	8.2	2.5	7.5
HURRICANE	4500	1/30/10	24	8.9	6.0	11.7	SASSE RIDGE SNOTEL	4340	2/01/10	63	16.6	13.6	23.8
INTERGAARD	6450	1/25/10	12	2.0	3.0	4.8	SATUS PASS	4030	1/28/10	22	6.6	9.0	8.7
IRENE'S CAMP	5530	1/27/10	29	6.5	4.8	--	SAVAGE PASS SNOTEL	6170	2/01/10	45	10.4	17.0	17.6
ISINTOK LAKE CAN.	5100	1/28/10	17	4.0	3.5	5.2	SAWMILL RIDGE SNOTEL	4640	2/01/10	67	28.5		

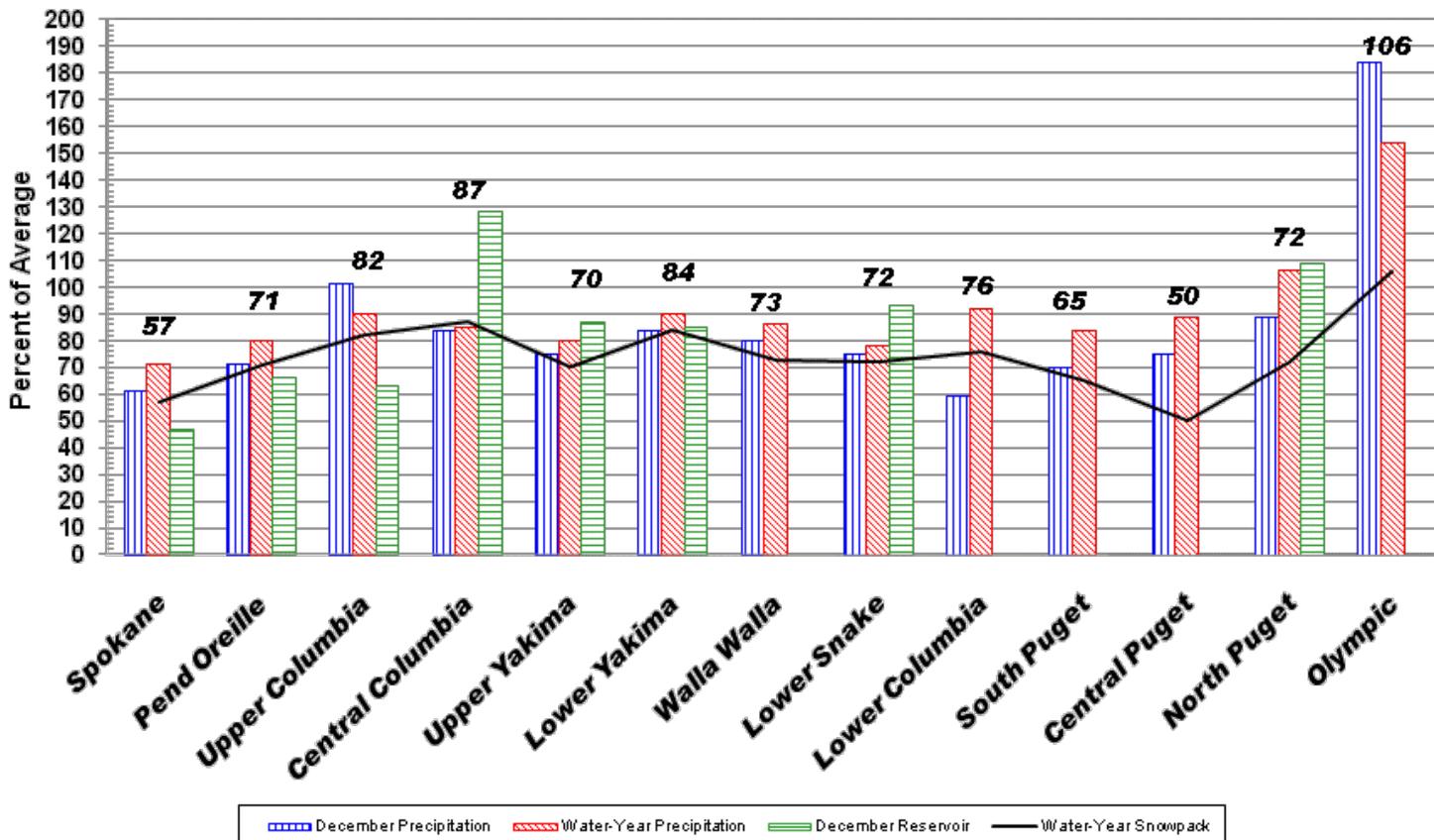
SNOW COURSE	ELEVATION	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 1971-00
SILVER STAR MTN CAN.	5600	1/30/10	56	18.3	17.6	20.0
SKALKAHO SNOTEL	7260	2/01/10	39	8.5	14.6	16.0
SKOOKUM CREEK SNOTEL	3310	2/01/10	3	.7	28.4	20.2
SKOOKUM LAKES	4230	1/28/10	19	5.9	8.4	--
SOURDOUGH GUL SNOTEL	4000	2/01/10	1	.3	5.4	--
SOUTH BALDY	4920	1/28/10	39	12.6	9.9	--
SPENCER MDW SNOTEL	3400	2/01/10	35	14.2	19.5	21.9
SPIRIT LAKE SNOTEL	3520	2/01/10	0	2.4	5.7	5.1
SPOTTED BEAR MTN.	7000	1/28/10	27	7.7	9.7	10.1
SPRUCE SPGS SNOTEL	5700	2/01/10	31	7.7	12.4	--
STARVATION MOUNTAIN	6750	1/25/10	43	10.9	8.4	13.0
STAHL PEAK SNOTEL	6030	2/01/10	72	21.0	18.3	24.1
STAMPEDE PASS SNOTEL	3850	2/01/10	49	14.9	21.5	31.0
STEVENS PASS SNOTEL	3950	2/01/10	70	21.5	21.4	30.2
STORM LAKE	7780	1/25/10	38	7.7	10.6	8.3
STRYKER BASIN	6180	1/28/10	59	19.5	17.1	21.3
SUMMERLAND RES CAN.	4200	1/29/10	23	5.8	5.1	6.9
SUMMIT G.S. #2	4600	1/29/10	30	7.4	5.6	6.3
SUNSET SNOTEL	5540	2/01/10	---	7.8	13.3	20.9
SURPRISE LKS SNOTEL	4290	2/01/10	70	26.9	24.8	32.2
SWAMP CREEK SNOTEL	3930	2/01/10	27	9.9	12.9	13.9
SWIFT CREEK SNOTEL	4440	2/01/10	88	38.6	27.6	38.5
TEN MILE LOWER	6600	1/25/10	21	3.7	4.8	4.7
TEN MILE MIDDLE	6800	1/25/10	29	6.1	6.6	7.1
THUNDER BASIN SNOTEL	4320	2/01/10	58	20.1	13.1	24.3
THUNDER BASIN	4200	1/30/10	39	12.7	10.8	14.5
THOMPSON CREEK	2500	1/27/10	0	.0	8.1	--
THOMPSON RIDGE	4650	1/25/10	37	8.6	5.5	--

SNOW COURSE	ELEVATION	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 1971-00
TINKHAM CREEK SNOTEL	2990	2/01/10	36	12.8	12.8	22.7
TOATS COULEE	2850	1/27/10	8	1.9	1.6	2.6
TOGO	3370	1/28/10	15	4.1	6.4	7.4
TOUCHET SNOTEL	5530	2/01/10	56	16.2	19.9	23.8
TRINKUS LAKE	6100	2/01/10	---	22.2E	24.1	26.6
TROUGH #2 SNOTEL	5480	2/01/10	36	10.0	3.9	7.5
TROUT CREEK CAN.	5650	1/29/10	21	5.8	--	5.5
TRUMAN CREEK	4060	1/27/10	9	1.8	4.8	3.5
TUNNEL AVENUE	2450	1/27/10	29	9.1	13.4	14.8
TV MOUNTAIN	6800	1/28/10	30	7.1	11.0	11.8
TWELVEMILE SNOTEL	5600	2/01/10	32	7.0	13.8	12.8
TWIN LAKES SNOTEL	6400	2/01/10	55	15.0	28.2	27.5
TWIN SPIRIT DIVIDE	3480	1/31/10	12	5.8	10.0	10.5
UPPER HOLLAND LAKE	6200	1/28/10	48	14.7	22.2	23.7
UPPER WHEELER SNOTEL	4330	2/01/10	29	7.6	6.1	9.2
VULCAN MTN	4660	1/29/10	29	8.9	7.2	--
VULCAN ROAD	3840	1/29/10	20	5.4	5.3	--
WARM SPRINGS SNOTEL	7800	2/01/10	50	12.1	17.7	13.8
WATSON LAKES AM	4500	1/26/10	31	13.3	25.9	35.6
WATERHOLE SNOTEL	5010	2/01/10	68	29.3	15.2	23.2
WEASEL DIVIDE	5450	1/27/10	55	17.1	16.3	21.5
WELLS CREEK SNOTEL	4030	2/01/10	51	18.8	14.0	22.0
WHITE PASS ES SNOTEL	4440	2/01/10	40	11.6	13.9	17.1



February 1, 2010 - Snowpack, Precipitation and Reservoir Conditions at a Glance

(Water Year = October 1, 2009 - Current Date)





Natural Resources Conservation Service

Washington State
Snow, Water and Climate Services

Program Contacts

Roylene Rides At The Door
State Conservationist
Spokane State Office
W. 316 Boone Ave., Suite 450
Spokane, WA 99201-2348
phone: 509-323-2961
fax: 509-323-2979
roylene.rides-at-the-door@wa.usda.gov

Jon Lea
DCO Supervisor
Oregon Data Collection Office
101 SW Main St, Suite 1300
Portland, OR 97204
Phone: 503-414-3267
Fax: 503-414-3277
jon.lea@or.usda.gov

Scott Pattee
Water Supply Specialist
Washington Snow Survey Office
2021 E. College Way, Suite 214
Mount Vernon, WA 98273-2873
phone: 360-428-7684
fax: 360-424-6172
scott.pattee@wa.usda.gov

Rashawn Tama
Forecast Hydrologist
National Water and Climate Center
101 SW Main St., Suite 1600
Portland, OR 97204-3224
phone: 503-414-3010
fax: 503-414-3101
rashawn.tama@por.usda.gov

Helpful Internet Addresses

NRCS Snow Survey and Climate Services Homepages

Washington:
<http://www.wa.nrcs.usda.gov/snow>

Oregon:
<http://www.or.nrcs.usda.gov/snow>

Idaho:
<http://www.id.nrcs.usda.gov/snow>

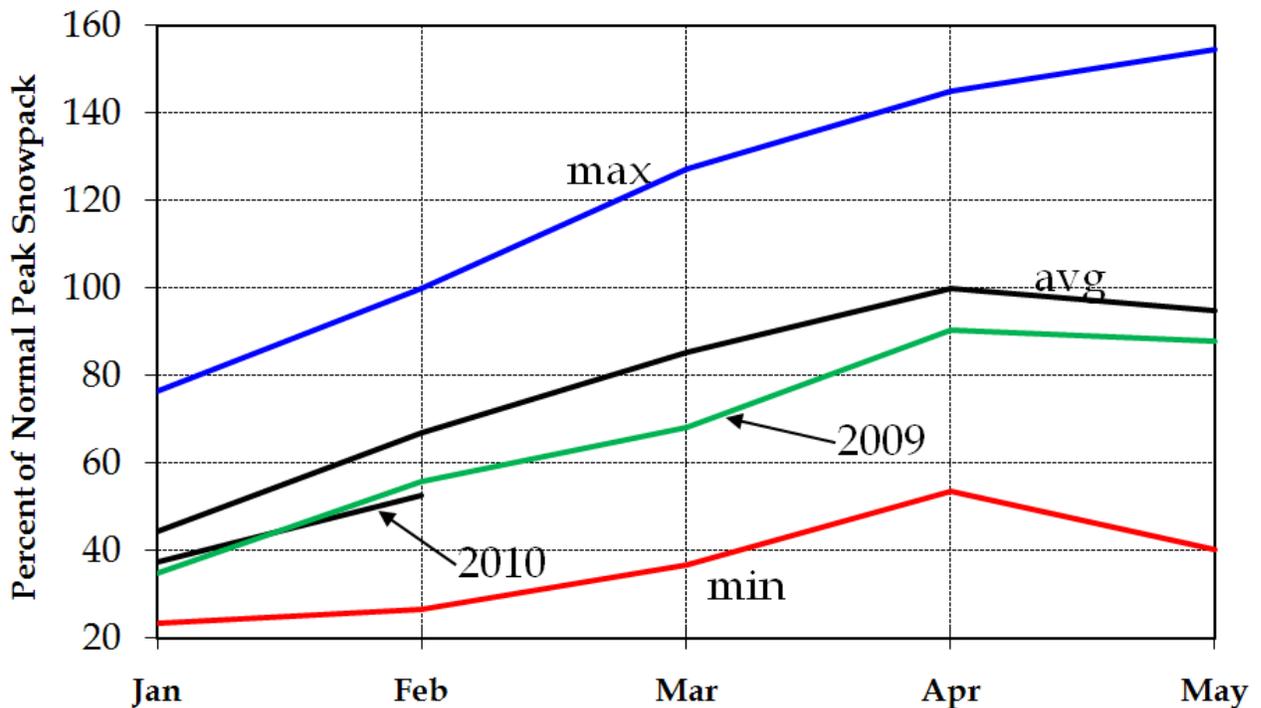
National Water and Climate Center (NWCC):
<http://www.wcc.nrcs.usda.gov>

USDA-NRCS Agency Homepages

Washington:
<http://www.wa.nrcs.usda.gov>

NRCS National:
<http://www.nrcs.usda.gov>

Columbia above The Dalles



February 1, 2010

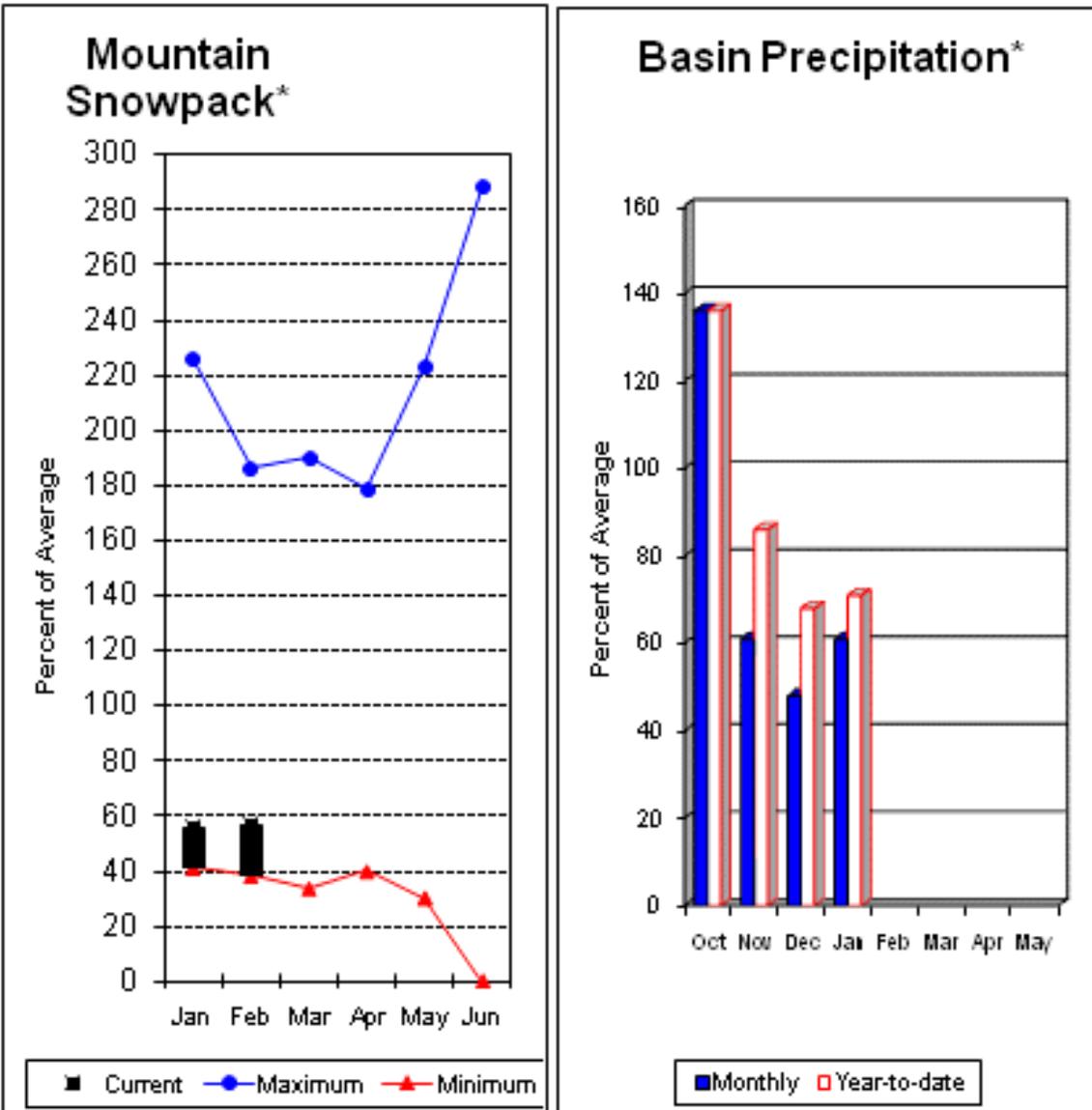
The Columbia Basin snowpack charts are produced, using data collected at numerous automated, remote climate stations in British Columbia, Alberta, and the United States. The data are provisional, until they are officially released by the responsible data collection agency.

The combined Columbia Basin snowpack above The Dalles is currently at 79 percent of average, compared to 85 percent last month and 84 percent last year. The northern tier basins (Canada, Kootenay, Pend Oreille, Kettle, and Spokane) all experienced worsening snowpack conditions. The losses ranged from 13 percent in the Kootenay to just 2 percent in the Spokane. The North Cascades, Snake headwaters, Boise, Eastern Oregon, and the Salmon snowpacks showed increases, ranging from 9 percent over the North Cascades to just 1 percent in Eastern Oregon. The Deschutes snowpack registered the largest decline in the Columbia Basin at 15 percent. Overall the combined basin snowpack is at 53 percent of the average peak accumulation. This compares to 56 percent last year. As a reference, the February 1 snowpack is normally at 67 percent of the peak (April) snowpack.

The snowpack in the Columbia Basin above Castlegar, B.C. is at 90 percent of average. This compares to 102 percent last month and 82 percent last year. For the basin above Grand Coulee, the snowpack is at 83 percent of average, compared to 93 percent last month and the same as last year. The Snake River snowpack above Ice Harbor is at 67 percent of average, compared to 65 percent last month and 89 percent last year.

The 6 percent decrease in the combined Columbia Basin snowpack percentage from last month is made even worse by the fact that the Canadian snowpack conditions worsened by 10 percent. Catching up to average may be difficult in this El Nino year.

Spokane River Basin



*Based on selected stations

The February 1 forecasts for summer runoff within the Spokane River Basin are 49% of average near Post Falls and at Long Lake. The Chamokane River near Long Lake forecasted to have 82% of average flows for the May-August period. The forecast is based on a basin snowpack that is 57% of average and precipitation that is 71% of average for the water year. Precipitation for January was much below normal at 61% of average. Streamflow on the Spokane River at Long Lake was 60% of average for January. February 1 storage in Coeur d'Alene Lake was 55,000acre feet, 47% of average and 23% of capacity. Snowpack at Quartz Peak SNOTEL site was 73% of average with 11.3 inches of water content. Average temperatures in the Spokane basin were 8 degrees above for

For more information contact your local Natural Resources Conservation Service office.

January and 1 degree above normal for the water year. Average temperature at Spokane WSO was 35.1°F, the 8th warmest on record.

Spokane River Basin

Streamflow Forecasts - February 1, 2010

Forecast Point	Forecast Period	Future Conditions				30-Yr Avg. (1000AF)		
		Drier		Wetter				
		Chance Of Exceeding *						
		90%	70%	50%	30%	10%		
		(1000AF)	(1000AF)	(1000AF)	(1000AF)	(1000AF)		
		(% AVG.)						
SPOKANE near Post Falls (2)	APR-JUL	645	1010	1260	49	1510	1880	2550
	APR-SEP	695	1060	1310	49	1560	1930	2650
SPOKANE at Long Lake (2)	APR-JUL	635	1040	1320	46	1600	2000	2850
	APR-SEP	795	1210	1490	49	1770	2180	3070
CHAMOKANE CREEK near Long Lake	MAY-AUG	2.7	6.1	8.4	82	10.7	14.1	10.2

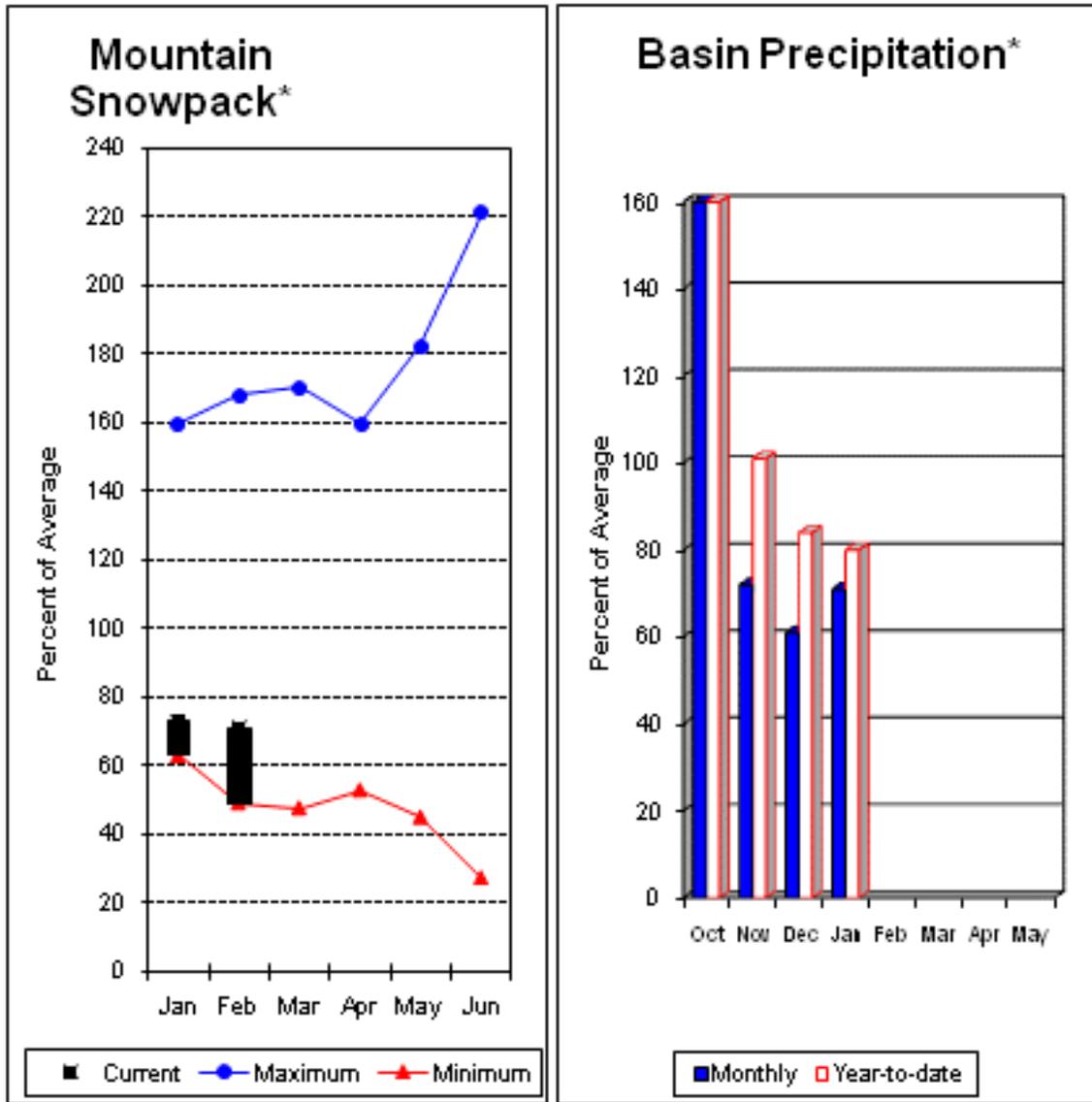
SPOKANE RIVER BASIN Reservoir Storage (1000 AF) - End of January					SPOKANE RIVER BASIN Watershed Snowpack Analysis - February 1, 2010			
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
COEUR D'ALENE	238.5	54.9	95.5	115.6	SPOKANE RIVER	13	63	57
					NEWMAN LAKE	1	40	73

* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
- (2) - The value is natural volume - actual volume may be affected by upstream water management.

Pend Oreille River Basins



*Based on selected stations

The April – September average forecast for the Priest River near the town of Priest River is 73% and the Pen Orielle below Box Canyon is 71%. January streamflow was 71% of average on the Pend Oreille River and 85% on the Columbia Birchbank. February 1 snow cover was 71% of average in the Pend Oreille Basin River Basin. Bunchgrass Meadows SNOTEL site had 17.1 inches of snow water on the snow pillow. Normally Bunchgrass would have 18.6 inches on February 1. Precipitation during January was 71% of average, dropping the year-to-date precipitation to 80% of average. Reservoir storage in the basin, including Lake Pend Oreille and Priest Lake was 66% of normal. Average temperatures were 8 degrees above normal for January and 2 degrees above for the water year.

For more information contact your local Natural Resources Conservation Service office.

Pend Oreille River Basins

Streamflow Forecasts - February 1, 2010

Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>						30-Yr Avg. (1000AF)				
		90% (1000AF)		70% (1000AF)		Chance Of Exceeding * 50% (1000AF) (% AVG.)			30% (1000AF)		10% (1000AF)	
PEND OREILLE Lake Inflow (2)	APR-JUL	6020	7780	8970	71	10200	11900	12700				
	APR-SEP	8140	9120	9790	70	10500	11400	13900				
PRIEST near Priest River (1,2)	APR-JUL	345	515	595	73	675	845	815				
	APR-SEP	375	555	635	73	715	895	870				
PEND OREILLE bl Box Canyon (2)	APR-JUL	6480	8070	9160	71	10200	11800	12900				
	APR-SEP	6770	8690	10000	71	11300	13200	14100				

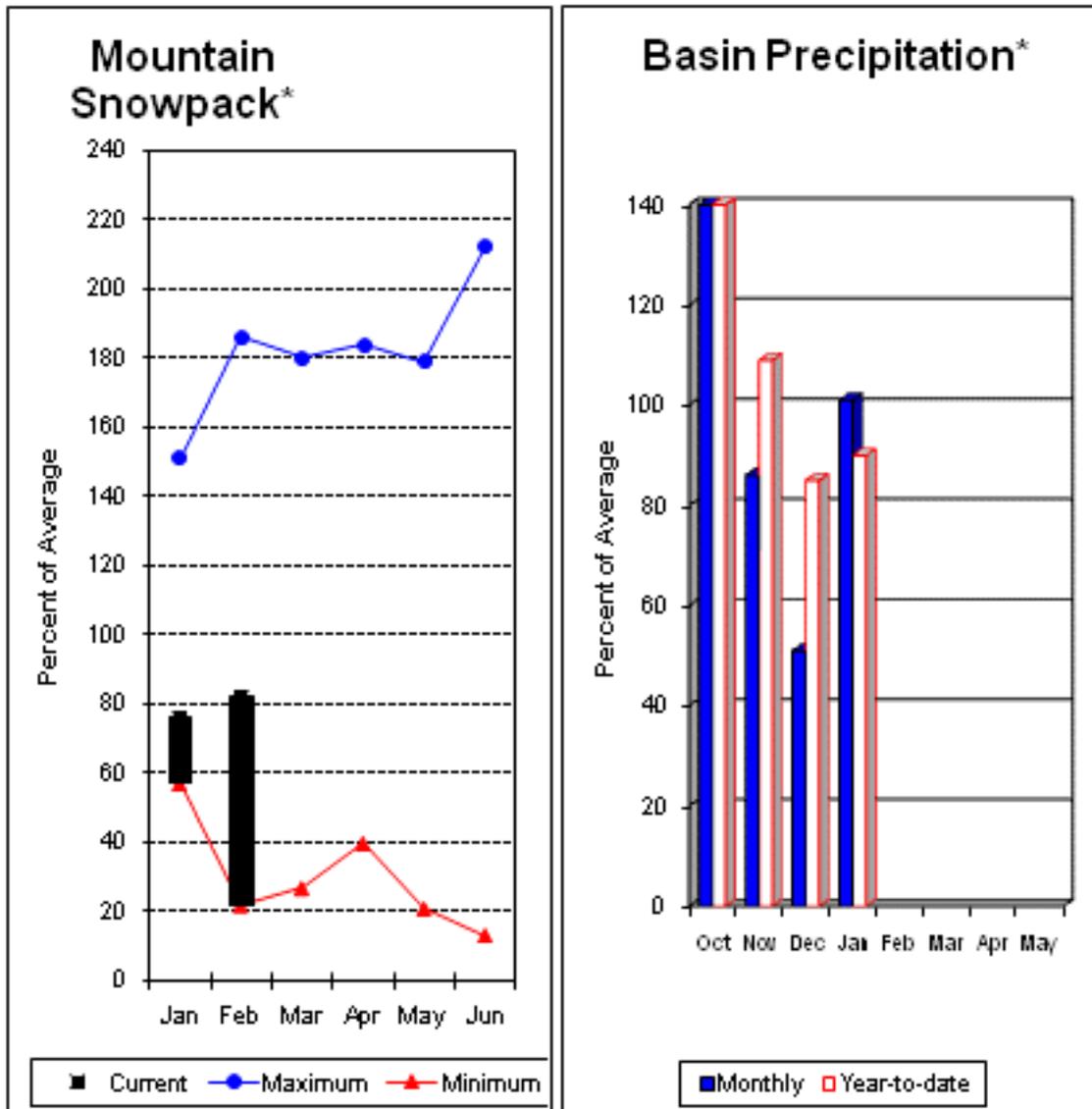
PEND OREILLE RIVER BASINS Reservoir Storage (1000 AF) - End of January					PEND OREILLE RIVER BASINS Watershed Snowpack Analysis - February 1, 2010			
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
PEND OREILLE	1561.3	475.1	567.3	749.3	COLVILLE RIVER	0	99	0
PRIEST LAKE	119.3	55.0	48.5	55.5	PEND OREILLE RIVER	8	82	61
					KETTLE RIVER	3	125	110

* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
- (2) - The value is natural volume - actual volume may be affected by upstream water management.

Upper Columbia River Basins



*Based on selected stations

Summer runoff average forecast for the Okanogan River is 76%, Similkameen River is 76%, Kettle River 76% and Methow River is 77%. February 1 snow cover on the Okanogan was 87% of average, Omak Creek was 108% and the Methow was 86%. January precipitation in the Upper Columbia was 101% of average, with precipitation for the water year at 90% of average. January streamflow for the Methow River was 89% of average, 85% for the Okanogan River and 99% for the Similkameen. Snow-water content at Salmon Meadows SNOTEL was 8.2 inches. Average for this site is 7.5 inches on February 1. Combined storage in the Conconully Reservoirs was 10,000-acre feet, which is 44% of capacity and 63% of the February 1 average. Temperatures were 10 degrees above normal for January and 2 degrees above for the water year.

For more information contact your local Natural Resources Conservation Service office.

Upper Columbia River Basins

Streamflow Forecasts - February 1, 2010

Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>						30-Yr Avg. (1000AF)
		Chance Of Exceeding *						
		90% (1000AF)	70% (1000AF)	50% (1000AF) (% AVG.)		30% (1000AF)	10% (1000AF)	
COLVILLE at Kettle Falls	APR-JUL	31	72	100	78	128	169	128
	APR-SEP	33	78	109	77	140	185	141
KETTLE near Laurier	APR-JUL	965	1230	1410	75	1590	1860	1870
	APR-SEP	1010	1290	1490	76	1690	1970	1970
COLUMBIA at Birchbank (1,2)	APR-JUL	25000	29000	30800	88	32600	36600	34900
	APR-SEP	31200	36100	38400	88	40700	45600	43500
COLUMBIA at Grand Coulee Dm (1,2)	APR-JUL	33400	40600	43900	82	47200	54400	53800
	APR-SEP	39600	48200	52100	81	56000	64600	64000
Similkameen R nr Nighthawk (1)	APR-JUL	660	915	1030	76	1150	1400	1350
	APR-SEP	725	985	1100	76	1220	1470	1450
Okanogan R nr Tonasket (1)	APR-JUL	665	1050	1220	77	1390	1770	1580
	APR-SEP	735	1150	1340	76	1530	1940	1770
Okanogan R at Malott (1)	APR-JUL	725	1130	1310	80	1490	1900	1630
	APR-SEP	810	1250	1450	79	1650	2090	1830
Methow R nr Pateros	APR-SEP	580	685	755	77	825	930	985
	APR-JUL	540	635	700	77	765	860	910

UPPER COLUMBIA RIVER BASINS Reservoir Storage (1000 AF) - End of January					UPPER COLUMBIA RIVER BASINS Watershed Snowpack Analysis - February 1, 2010			
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
SALMON LAKE	10.5	5.7	6.7	8.4	OKANOGAN RIVER	5	139	87
CONCONULLY RESERVOIR	13.0	4.7	8.3	8.2	OMAK CREEK	3	194	108
					SANPOIL RIVER	1	95	8
					SIMILKAMEEN RIVER	0	0	0
					TOATS COULEE CREEK	1	160	73
					CONCONULLY LAKE	3	326	111
					METHOW RIVER	8	145	86

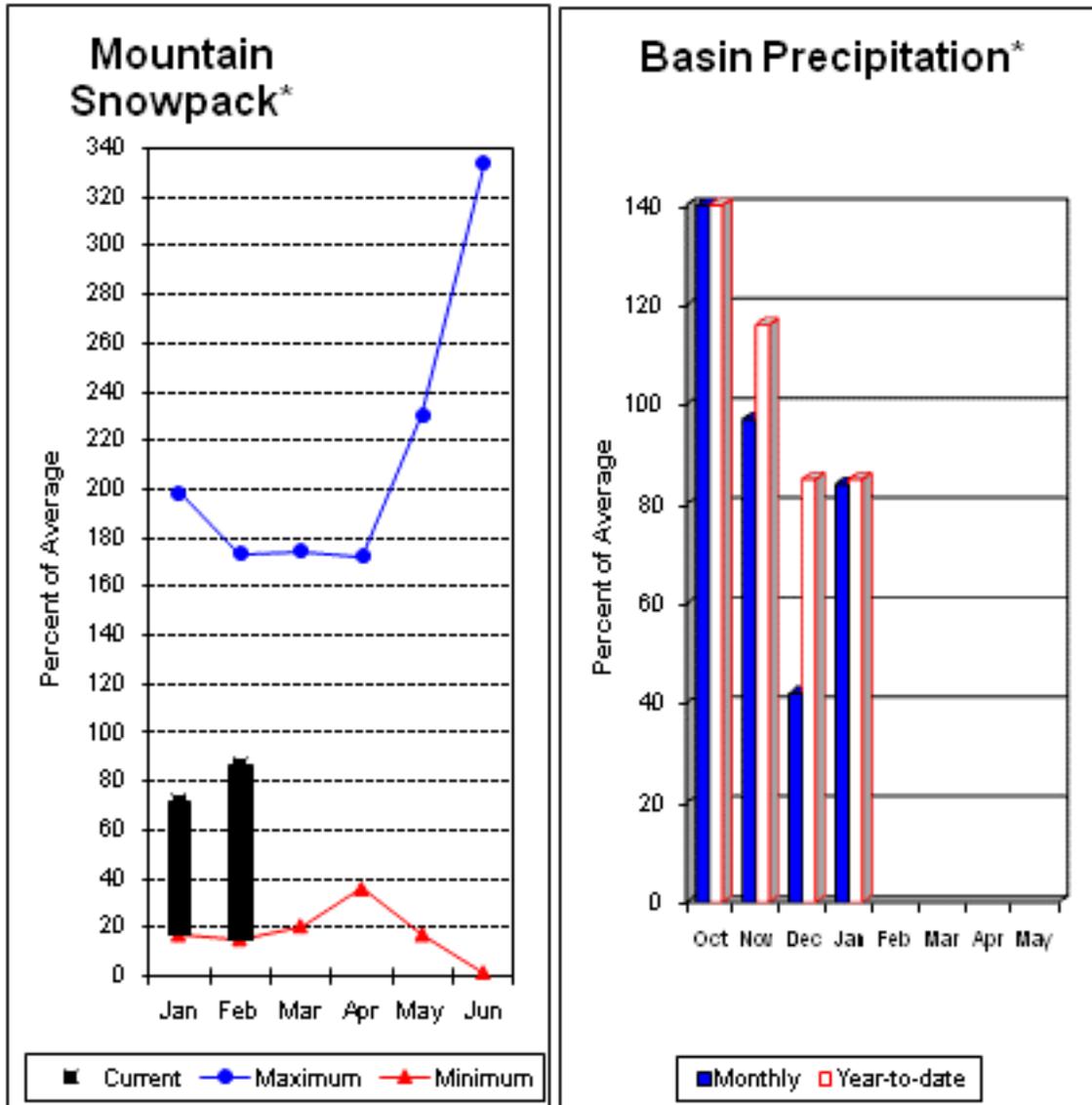
* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

(2) - The value is natural volume - actual volume may be affected by upstream water management.

Central Columbia River Basins



*Based on selected stations

Precipitation during January was 84% of average in the basin and 85% for the year-to-date. Runoff for Entiat River is forecast to be 74% of average for the summer. The February-September average forecast for Chelan River is 80%, Wenatchee River at Plain is 70%, Stehekin River is 83% and Icicle Creek is 68%. January average streamflows on the Chelan River were 83% and on the Wenatchee River 90%. February 1 snowpack in the Wenatchee River Basin was 79% of average; the Chelan, 80%; the Entiat, 84%; Stemilt Creek, 87% and Colockum Creek, 103%. Reservoir storage in Lake Chelan was 404,000-acre feet, 128% of February 1 average and 60% of capacity. Lyman Lake SNOTEL had the most snow water with 34.7 inches of water. This site would normally have 43.4 inches on February 1. Temperatures were 10 degrees above normal for January and 1-2 degrees above for the water year. The average temperature in Wenatchee was ranked the 12th warmest since 1931 at 34.2°F

For more information contact your local Natural Resources Conservation Service office.

Central Columbia River Basins

Streamflow Forecasts - February 1, 2010

Forecast Point	Forecast Period	Future Conditions						30-Yr Avg. (1000AF)
		<<===== Drier =====>>		=====		>>===== Wetter =====>>		
		90% (1000AF)	70% (1000AF)	Chance Of Exceeding * 50% (1000AF) (% AVG.)		30% (1000AF)	10% (1000AF)	
Stehekin R at Stehekin	APR-JUL	470	535	580	83	625	690	700
	APR-SEP	570	640	685	83	730	800	830
Chelan R at Chelan (2)	APR-JUL	730	795	840	80	885	950	1050
	APR-SEP	810	895	950	80	1010	1090	1190
Entiat R nr Ardenvoir	APR-JUL	133	151	163	76	175	193	215
	APR-SEP	145	165	178	74	191	210	240
Wenatchee R at Plain	APR-JUL	625	700	750	70	800	875	1070
	APR-SEP	680	770	830	70	890	980	1180
Icicle Ck nr Leavenworth	APR-JUL	178	197	210	68	225	240	310
	APR-SEP	191	215	230	68	245	270	340
Wenatchee R at Peshastin	APR-JUL	925	1030	1100	74	1170	1270	1480
	APR-SEP	990	1110	1200	74	1290	1410	1630
Columbia R bl Rock Island Dam (2)	APR-JUL	39000	44600	48400	82	52200	57800	59000
	APR-SEP	45900	52500	57000	82	61500	68100	69500

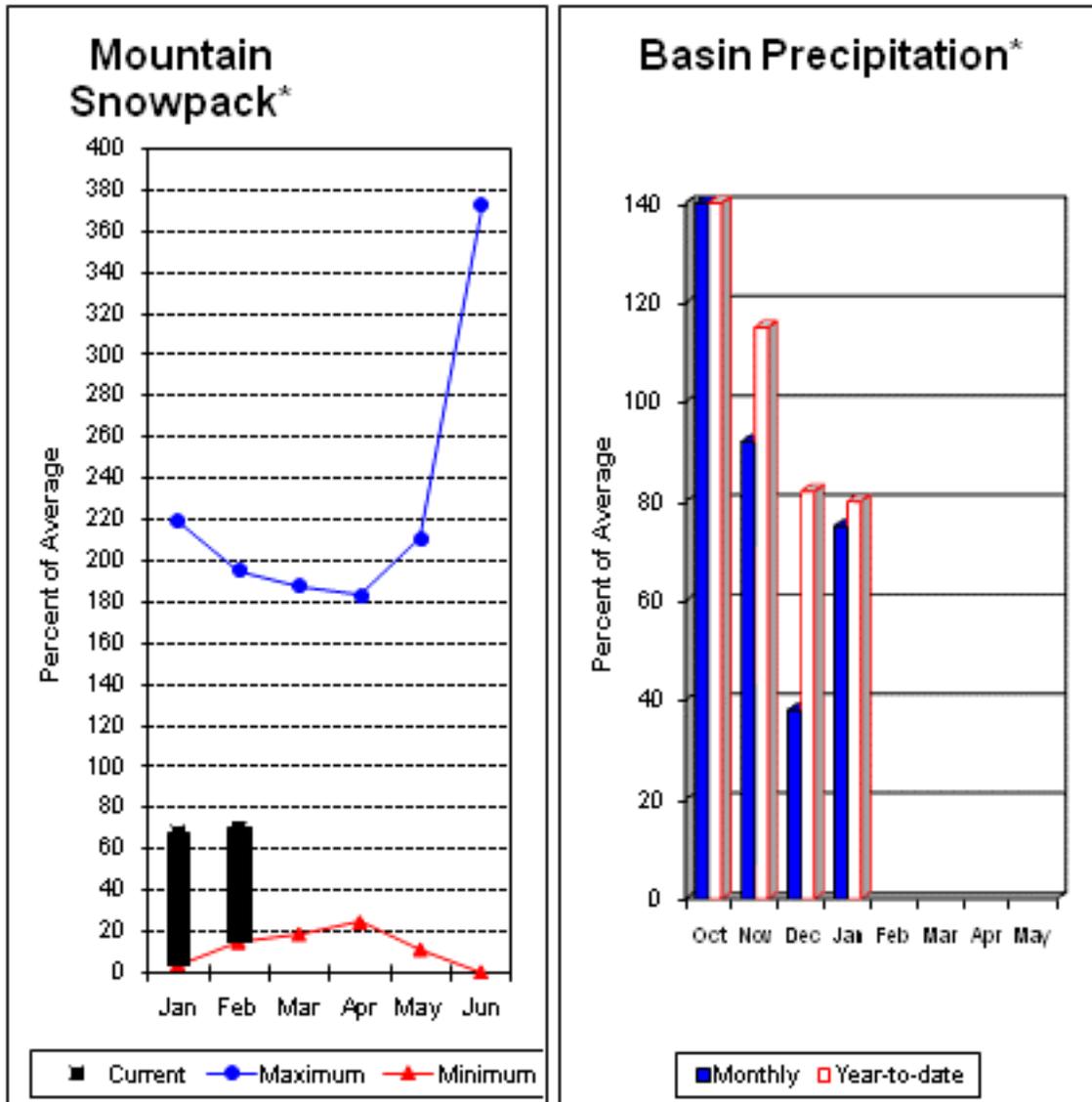
CENTRAL COLUMBIA RIVER BASINS Reservoir Storage (1000 AF) - End of January					CENTRAL COLUMBIA RIVER BASINS Watershed Snowpack Analysis - February 1, 2010			
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
CHELAN LAKE	676.1	403.6	342.1	315.5	CHELAN LAKE BASIN	5	115	80
					ENTIAT RIVER	1	134	84
					WENATCHEE RIVER	9	114	79
					STEMILT CREEK	2	132	87
					COLOCKUM CREEK	2	256	103

* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
- (2) - The value is natural volume - actual volume may be affected by upstream water management.

Upper Yakima River Basin



*Based on selected stations

February 1 reservoir storage for the Upper Yakima reservoirs was 388,000-acre feet, 87% of average. Forecasts for the Yakima River at Cle Elum are 73% of average and the Teanaway River near Cle Elum is at 50%. Lake inflows are all forecasted to be slightly below this summer as well. January streamflows within the basin were Yakima at Cle Elum at 76% and Cle Elum River near Roslyn at 72%. February 1 snowpack was 70% based upon 10 snow course and SNOTEL readings within the Upper Yakima Basin. Precipitation was 75% of average for January and 80% year-to-date for water. Volume forecasts for the Yakima Basin are for natural flow. As such, they may differ from the U.S. Bureau of Reclamation's forecast for the total water supply available, which includes irrigation return flow.

For more information contact your local Natural Resources Conservation Service office.

Upper Yakima River Basin

Streamflow Forecasts - February 1, 2010

Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>						30-Yr Avg. (1000AF)		
		90% (1000AF)		70% (1000AF)		Chance Of Exceeding * 50% (1000AF) (% AVG.)			30% (1000AF) 10% (1000AF)	
Keechelus Reservoir Inflow (2)	APR-JUL	57	77	90	74	103	123	121		
	APR-SEP	65	85	99	74	113	133	133		
Kachess Reservoir Inflow (2)	APR-JUL	50	66	77	69	88	104	111		
	APR-SEP	59	75	86	72	97	113	120		
Cle Elum Lake Inflow (2)	APR-JUL	220	265	295	72	325	370	410		
	APR-SEP	245	295	330	73	365	415	450		
Yakima R at Cle Elum (2)	APR-JUL	365	485	565	69	645	765	820		
	APR-SEP	435	570	660	73	750	885	900		
Teanaway R bl Forks nr Cle Elum	APR-JUL	33	56	72	50	88	111	143		
	APR-SEP	34	57	73	50	89	112	146		

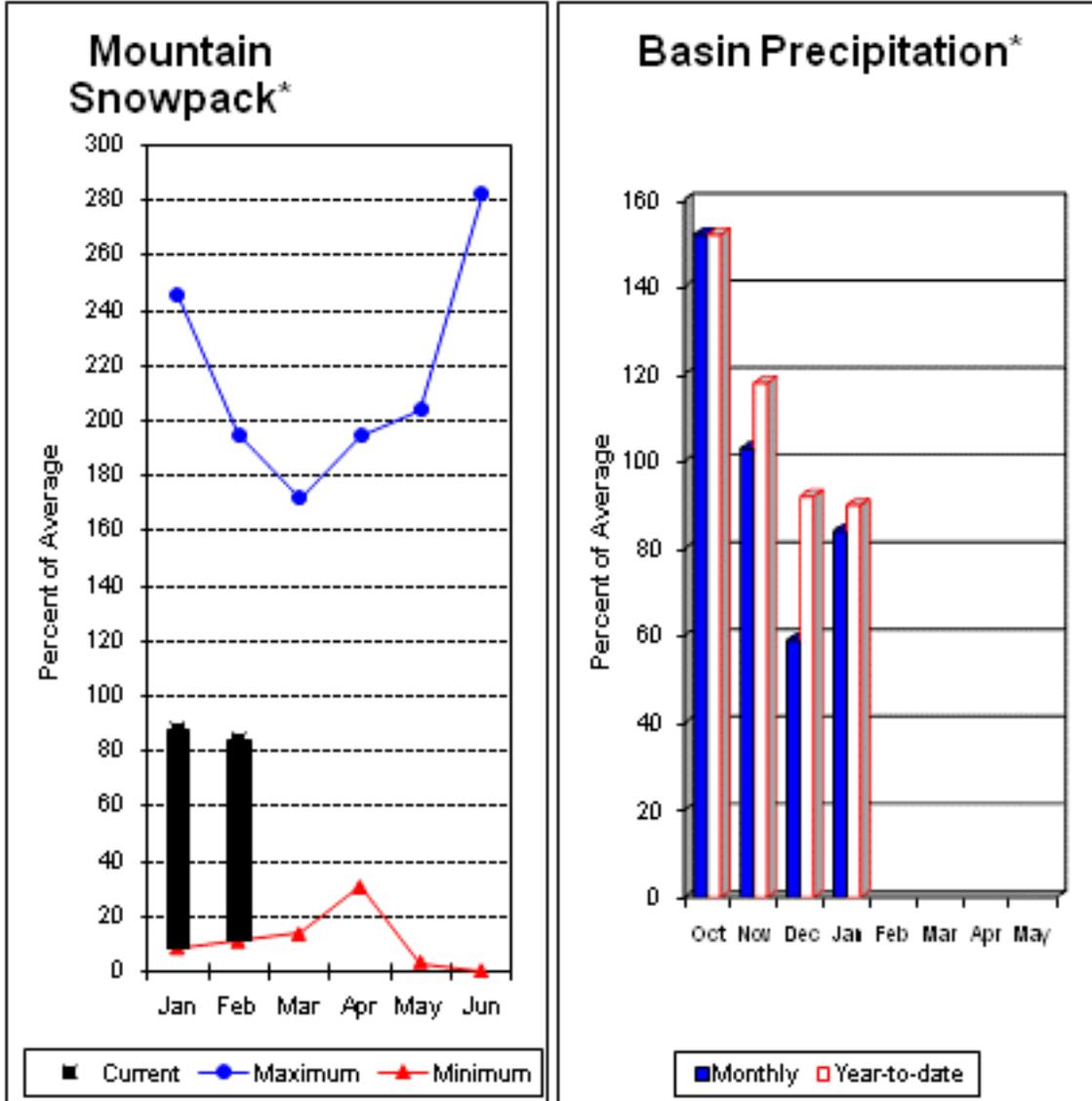
UPPER YAKIMA RIVER BASIN Reservoir Storage (1000 AF) - End of January					UPPER YAKIMA RIVER BASIN Watershed Snowpack Analysis - February 1, 2010			
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
KEECHELUS	157.8	81.6	126.8	89.9	UPPER YAKIMA RIVER	10	97	70
KACHESS	239.0	142.6	205.7	139.4				
CLE ELUM	436.9	163.4	316.8	215.4				

* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
- (2) - The value is natural volume - actual volume may be affected by upstream water management.

Lower Yakima River Basin



*Based on selected stations

January average streamflows within the basin were: Yakima River near Parker, 71%; Naches River near Naches, 80%; and Yakima River at Kiona, 71%. February 1 reservoir storage for Bumping and Rimrock reservoirs was 104,000-acre feet, 85% of average. Forecast averages for Yakima River near Parker are 71%; American River near Nile, 86%; Ahtanum Creek, 75%; and Klickitat River near Glenwood, 68%. February 1 snowpack was 84% based upon 8 snow course and SNOTEL readings within the Lower Yakima Basin and Ahtanum Creek reported in at 92% of average. Precipitation was 84% of average for January and 90% year-to-date for water. Temperatures were 7 degrees above normal for January and 1 degree above for the water year. The average temperature in Yakima was 36°F, the 8th warmest since 1946. Volume forecasts for Yakima Basin are for natural flow. As such, they February differ from the U.S. Bureau of Reclamation's forecast for the total water supply available, which includes irrigation return flow.

For more information contact your local Natural Resources Conservation Service office.

Lower Yakima River Basin

Streamflow Forecasts - February 1, 2010

Forecast Point	Forecast Period	Future Conditions					30-Yr Avg. (1000AF)	
		Drier		Wetter		Chance Of Exceeding * 50% (1000AF) (% AVG.)		
		90% (1000AF)	70% (1000AF)	30% (1000AF)	10% (1000AF)			
Bumping Lake Inflow (2)	APR-JUL	71	85	94	77	103	117	122
	APR-SEP	71	86	96	73	106	121	132
American R nr Nile	APR-JUL	73	85	93	86	101	113	108
	APR-SEP	78	92	101	86	110	124	118
Rimrock Lake Inflow (2)	APR-JUL	134	149	159	78	169	184	205
	APR-SEP	146	164	177	74	190	210	240
Naches R nr Naches (2)	APR-JUL	445	520	575	80	630	705	720
	APR-SEP	450	540	600	77	660	750	780
Ahtanum Ck at Union Gap	APR-JUL	14.4	20	24	80	28	34	30
	APR-SEP	14.3	20	24	75	28	34	32
Yakima R nr Parker (2)	APR-JUL	945	1140	1270	71	1400	1590	1800
	APR-SEP	1050	1260	1400	71	1540	1750	1980
Klickitat R nr Glenwood	APR-JUL	65	78	87	69	96	109	126
	APR-SEP	85	101	111	68	121	137	163
Klickitat R nr Pitt	APR-JUL	255	305	335	73	365	415	462
	APR-SEP	305	360	400	72	440	495	559

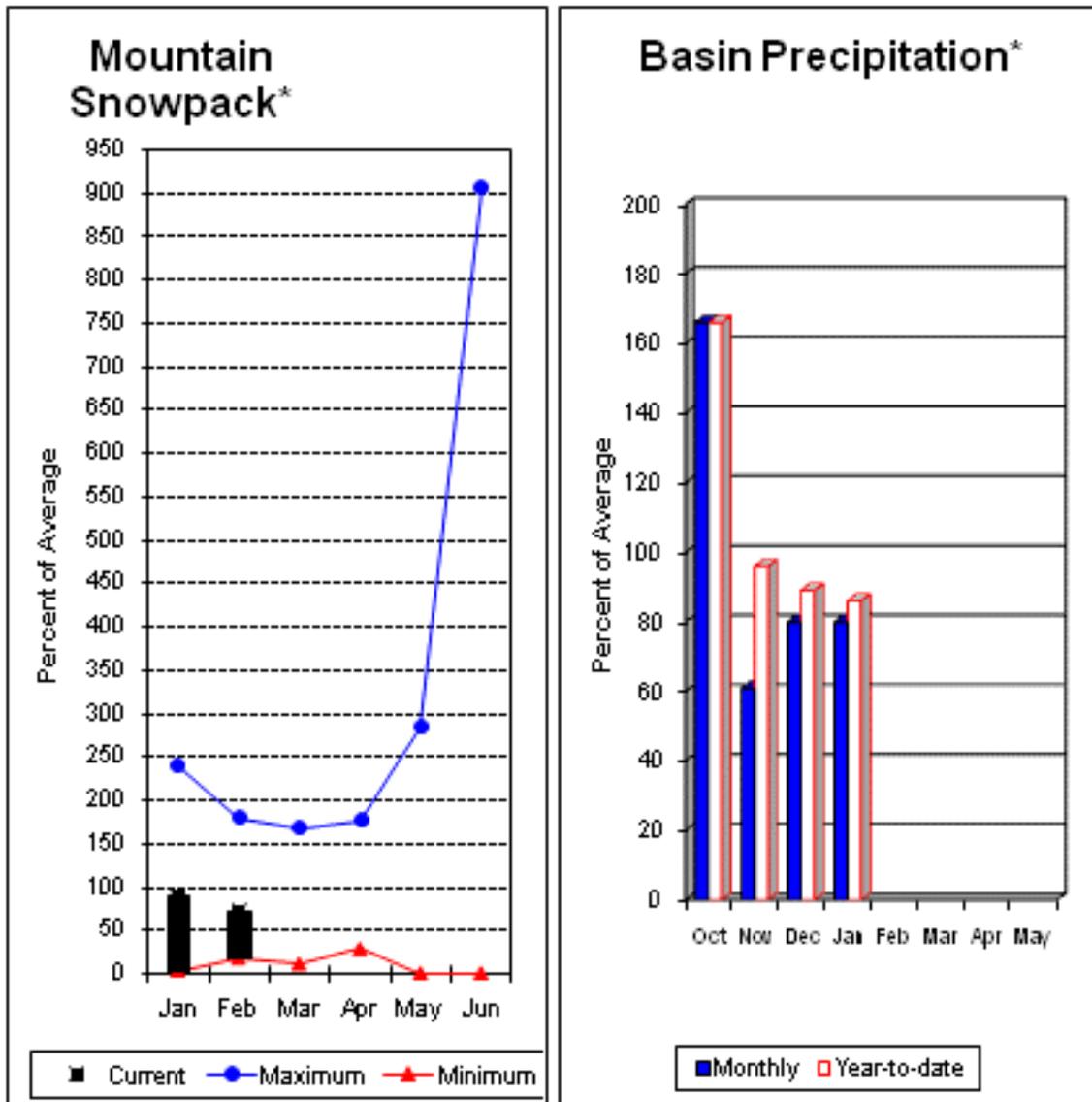
LOWER YAKIMA RIVER BASIN Reservoir Storage (1000 AF) - End of January					LOWER YAKIMA RIVER BASIN Watershed Snowpack Analysis - February 1, 2010			
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
BUMPING LAKE	33.7	12.2	16.7	9.9	LOWER YAKIMA RIVER	8	108	84
RIMROCK	198.0	91.6	129.0	111.8	AHTANUM CREEK	3	125	92

* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
- (2) - The value is natural volume - actual volume may be affected by upstream water management.

Walla Walla River Basin



*Based on selected stations

January precipitation was 80% of average, maintaining the year-to-date precipitation at 86% of average. Snowpack in the basin was 73% of average. Streamflow forecasts are 79% of average for Mill Creek and 82% for the SF Walla Walla near Milton-Freewater. January streamflow was 50% of average for the SF Walla Walla River. Average temperatures were 7 degrees above normal for January and near average for the water year. The average temperature in Walla Walla during January was 41.6°F and ranked as 6th since 1949.

For more information contact your local Natural Resources Conservation Service office.

Walla Walla River Basin

Streamflow Forecasts - February 1, 2010

Forecast Point	Forecast Period	<<==== Drier ===== Future Conditions ===== Wetter =====>>						30-Yr Avg. (1000AF)				
		90%		70%		50%			30%		10%	
		(1000AF)	(1000AF)	(1000AF)	(1000AF)	(1000AF)	(1000AF)		(1000AF)	(1000AF)	(1000AF)	(1000AF)
SF Walla Walla R nr Milton-Freewater	MAR-SEP	56	64	70	86	76	84	81				
	APR-JUL	34	41	45	83	49	56	54				
	APR-SEP	43	50	55	82	60	67	67				
Mill Ck nr Walla Walla	APR-JUL	13.3	17.0	19.5	81	22	26	24				
	APR-SEP	15.9	19.8	22	79	25	29	28				

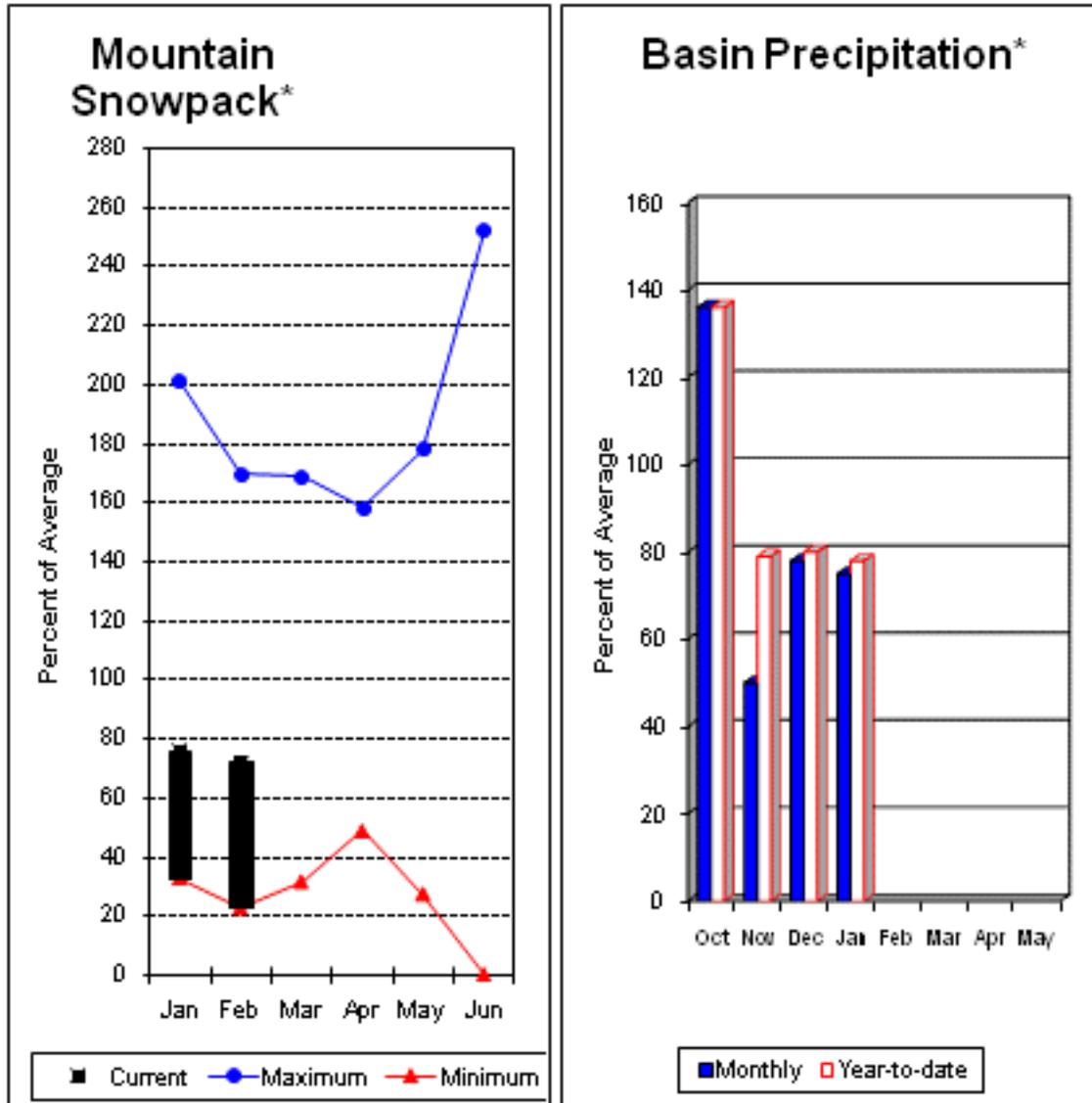
WALLA WALLA RIVER BASIN					WALLA WALLA RIVER BASIN			
Reservoir Storage (1000 AF) - End of January					Watershed Snowpack Analysis - February 1, 2010			
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
					WALLA WALLA RIVER	2	84	73

* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
- (2) - The value is natural volume - actual volume may be affected by upstream water management.

Lower Snake River Basin



*Based on selected stations

The April - September forecast is for 67% for Clearwater River at Spalding. The Snake and Grande Ronde rivers can expect summer flows to be about 64% and 81% of normal respectively. January precipitation was 75% of average, bringing the year-to-date precipitation to 78% of average. February 1 snowpack readings averaged 72% of normal. January streamflow was 67% of average for Snake River below Lower Granite Dam and 54% for Grande Ronde River near Troy. Average temperatures were 7 degrees above normal for January and near normal for the water year.

For more information contact your local Natural Resources Conservation Service office.

Lower Snake River Basin

Streamflow Forecasts - February 1, 2010

Forecast Point	Forecast Period	Future Conditions						30-Yr Avg. (1000AF)
		<<===== Drier =====>>		=====		>>===== Wetter =====>>		
		90% (1000AF)	70% (1000AF)	Chance Of Exceeding * 50% (1000AF) (% AVG.)		30% (1000AF)	10% (1000AF)	
Grande Ronde R at Troy	MAR-JUL	730	1120	1300	82	1480	1870	1580
	APR-SEP	595	950	1110	81	1270	1620	1370
CLEARWATER R at Spalding (1,2)	APR-JUL	3070	4380	4980	67	5580	6890	7430
	APR-SEP	3250	4630	5260	67	5890	7270	7850
SNAKE blw Lower Granite Dam (1,2)	APR-JUL	4490	10900	13800	64	16700	23100	21600
	APR-SEP	5030	12200	15500	64	18800	26000	24100

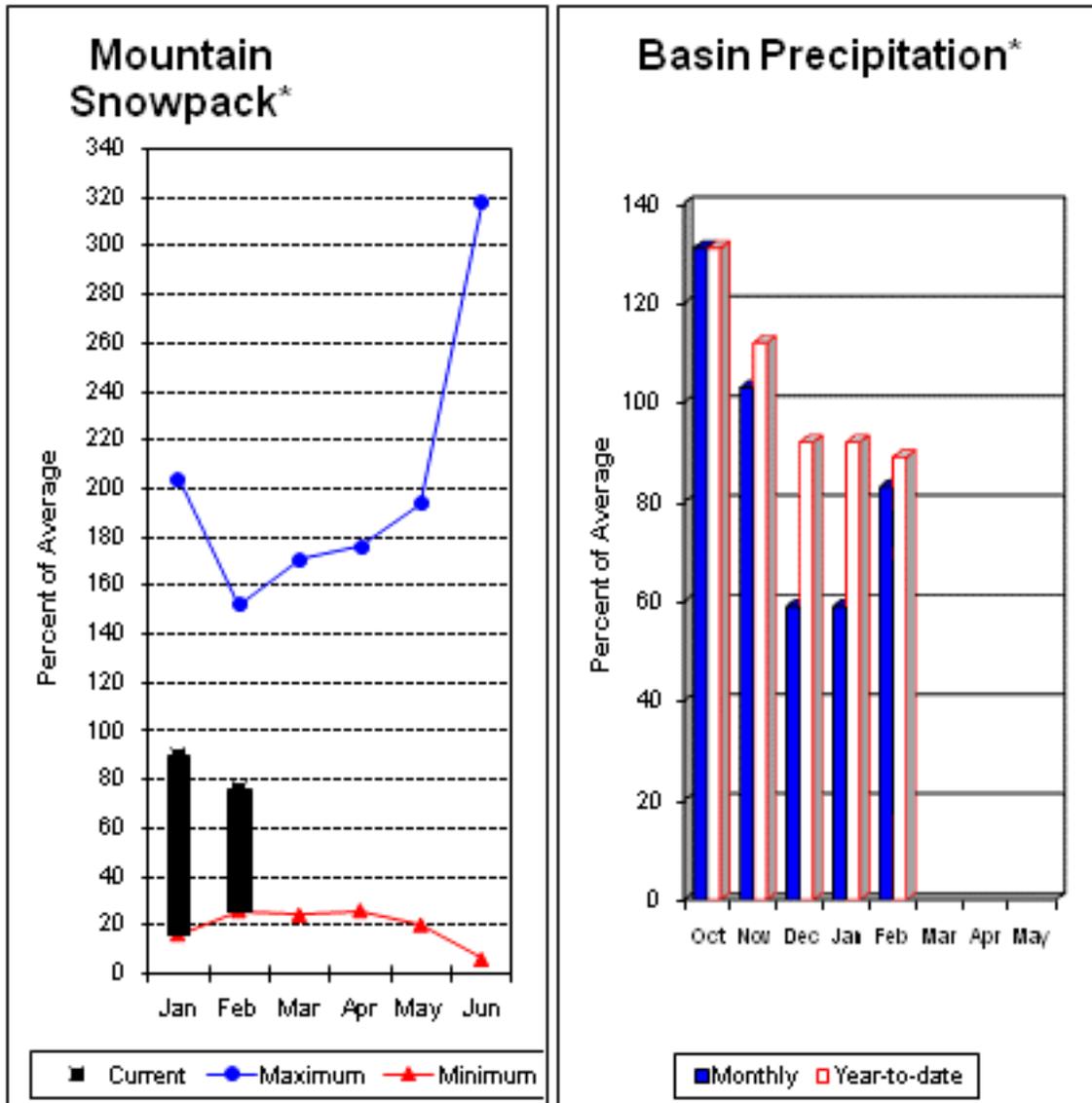
LOWER SNAKE RIVER BASIN Reservoir Storage (1000 AF) - End of January					LOWER SNAKE RIVER BASIN Watershed Snowpack Analysis - February 1, 2010			
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
DWORSHAK	3468.0	2167.4	2343.1	2324.3	LOWER SNAKE, GRANDE RONDE	14	79	72

* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
- (2) - The value is natural volume - actual volume may be affected by upstream water management.

Lower Columbia River Basins



*Based on selected stations

Forecasts for April – September streamflows within the basin are Lewis River at Ariel, 76% and Cowlitz River at Castle Rock, 77% of average. The Columbia at The Dalles is forecasted to have 74% of average flows this summer. January average streamflow for Cowlitz River was 102% and 107% for Lewis River. The Columbia River at The Dalles was 77% of average. January precipitation was 83% of average and the water-year average was 89%. February 1 snow cover for Cowlitz River was 75%, and Lewis River was 73% of average. Average temperatures were 5 degrees above normal during January and 1 degree above normal for the water year.

For more information contact your local Natural Resources Conservation Service office.

Lower Columbia River Basins

Streamflow Forecasts - February 1, 2010

Forecast Point	Forecast Period	<<==== Drier ===== Future Conditions ===== Wetter =====>>				30-Yr Avg. (1000AF)		
		90% (1000AF)	70% (1000AF)	Chance Of Exceeding * 50% (1000AF) (% AVG.)			30% (1000AF)	10% (1000AF)
Columbia R at The Dalles (2)	APR-JUL	47300	56200	62300	74	68400	77300	84600
	APR-SEP	55100	65500	72600	74	79700	90100	98600
Klickitat R nr Glenwood	APR-JUL	65	78	87	69	96	109	126
	APR-SEP	85	101	111	68	121	137	163
Klickitat R nr Pitt	APR-JUL	255	305	335	73	365	415	462
	APR-SEP	305	360	400	72	440	495	559
Lewis R at Ariel (2)	APR-JUL	515	675	785	76	895	1050	1031
	APR-SEP	615	780	895	76	1010	1170	1176
Cowlitz R bl Mayfield Dam (2)	APR-JUL	965	1160	1300	77	1440	1640	1689
	APR-SEP	1090	1320	1480	77	1640	1870	1922
Cowlitz R at Castle Rock (2)	APR-JUL	1380	1610	1770	77	1930	2160	2295
	APR-SEP	1840	1960	2040	77	2120	2240	2639

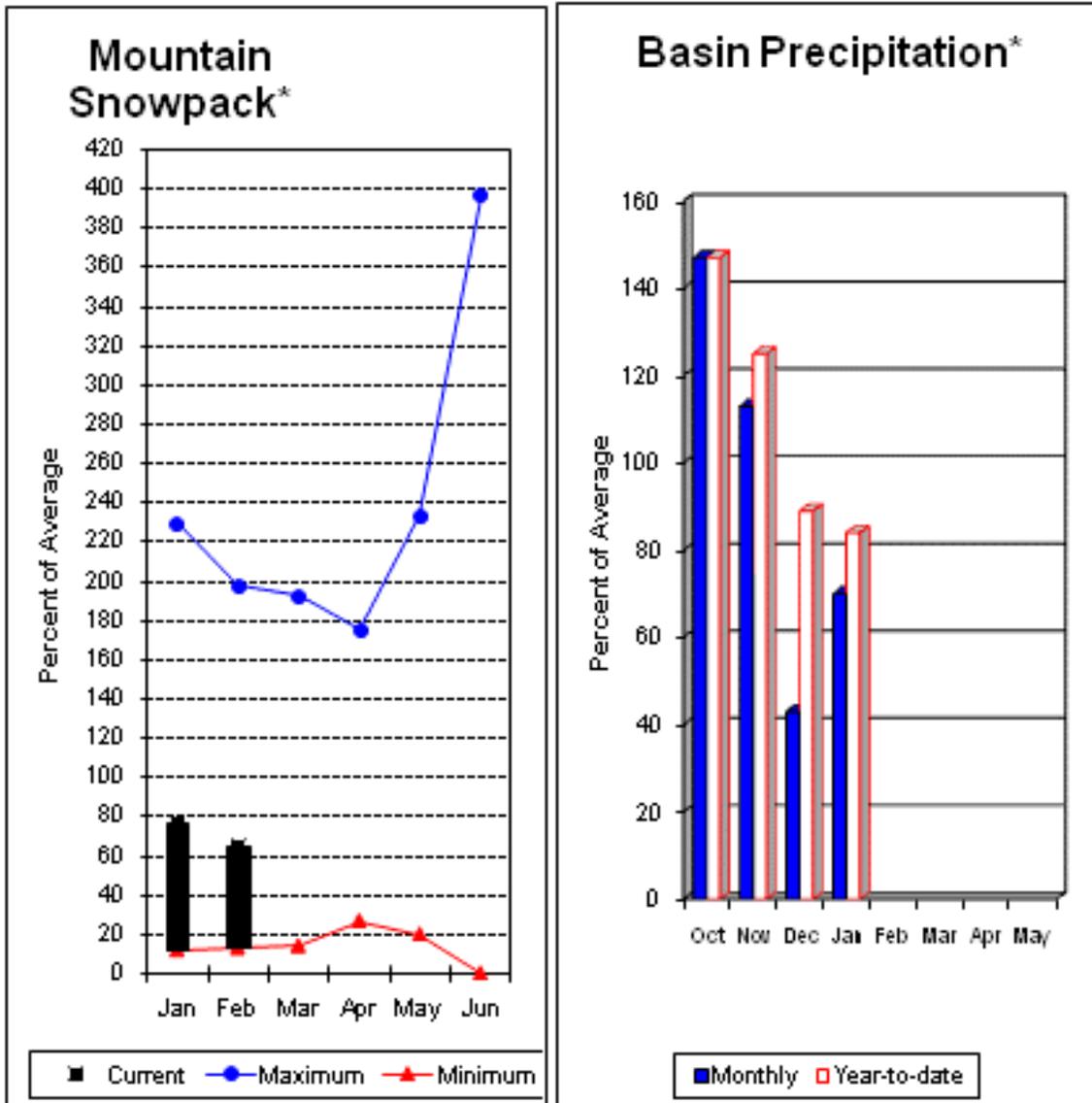
LOWER COLUMBIA RIVER BASINS Reservoir Storage (1000 AF) - End of January					LOWER COLUMBIA RIVER BASINS Watershed Snowpack Analysis - February 1, 2010			
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
MOSSYROCK	0.0	1187.7	1301.6	---	LEWIS RIVER	5	90	76
SWIFT	0.0	695.6	683.4	---	COWLITZ RIVER	6	84	75
YALE	0.0	351.7	386.2	---				
MERWIN	0.0	404.6	410.1	---				

* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
- (2) - The value is natural volume - actual volume may be affected by upstream water management.

South Puget Sound River Basins



*Based on selected stations

Summer runoff is forecast to be 67% of normal for the Green River below Howard Hanson Dam and 79% for the White River near Buckley. February 1 snowpack was 84% of average for the White River, 78 % for Puyallup River and 33% in the Green River Basin. Water content on February 1 at Corral Pass SNOTEL, at an elevation of 6,000 feet, was 16.2 inches. This site has a February 1 average of 22.1 inches. January precipitation was 70% of average, bringing the water year-to-date to 84% of average for the basins. Average temperatures in the area were 7 degrees above normal for January and 1 degree above normal for the water-year. The average January temperature in Olympia was 43.7°F, ranking as the second warmest January since 1948.

For more information contact your local Natural Resources Conservation Service office.

South Puget Sound River Basins

Streamflow Forecasts - February 1, 2010

Forecast Point	Forecast Period	Future Conditions						30-Yr Avg. (1000AF)
		Drier		Wetter		Chance Of Exceeding *		
		90% (1000AF)	70% (1000AF)	30% (1000AF)	10% (1000AF)	50% (1000AF)	(% AVG.)	
WHITE near Buckley (1,2)	APR-JUL	235	315	350	80	385	465	440
	APR-SEP	290	380	420	79	460	550	534
GREEN R below Howard Hansen (1,2)	APR-JUL	67	136	167	69	198	265	243
	APR-SEP	74	147	180	67	215	285	268

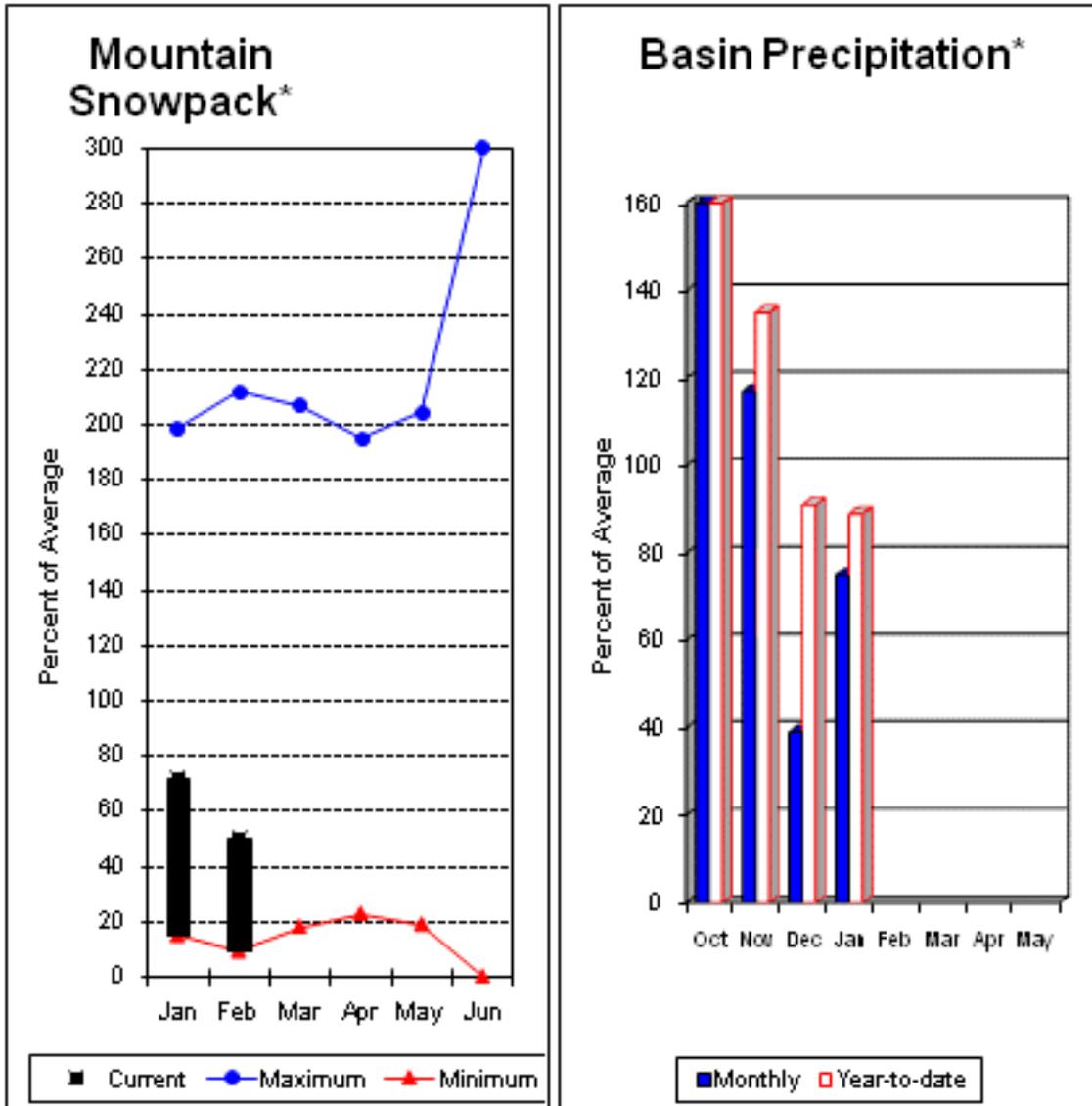
SOUTH PUGET SOUND RIVER BASINS Reservoir Storage (1000 AF) - End of January					SOUTH PUGET SOUND RIVER BASINS Watershed Snowpack Analysis - February 1, 2010			
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
					WHITE RIVER	3	107	84
					GREEN RIVER	4	51	33
					PUYALLUP RIVER	5	79	78

* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
- (2) - The value is natural volume - actual volume may be affected by upstream water management.

Central Puget Sound River Basins



*Based on selected stations

Forecast for spring and summer flows are: 65% for Cedar River near Cedar Falls; 64% for Rex River; 63% for South Fork of the Tolt River; and 62% for Cedar River at Cedar Falls. Basin-wide precipitation for January was 75% of average, bringing water-year-to-date to 89% of average. February 1 average snow cover in Cedar River Basin was 50%, Tolt River Basin was 34%, Snoqualmie River Basin was 51%, and Skykomish River Basin was 63%. Olallie Meadows SNOTEL site, at 3960 feet, had 29.1 inches of water content. Average February 1 water content is 39.2 inches at Olallie Meadows. Temperatures were 7-8 degrees above normal for January and 1 degree above for the water-year.

For more information contact your local Natural Resources Conservation Service office.

Central Puget Sound River Basins

Streamflow Forecasts - February 1, 2010

Forecast Point	Forecast Period	Future Conditions					30-Yr Avg. (1000AF)	
		Drier		Wetter		Chance Of Exceeding * 50% (1000AF) (% AVG.)		
		90% (1000AF)	70% (1000AF)	30% (1000AF)	10% (1000AF)			
CEDAR near Cedar Falls	APR-JUL	29	40	47	64	54	65	73
	APR-SEP	33	44	52	65	60	71	80
REX near Cedar Falls	APR-JUL	-0.5	9.5	16.2	65	23	33	25
	APR-SEP	0.9	11.0	17.9	64	25	35	28
CEDAR RIVER at Cedar Falls	APR-JUL	17.2	35	47	64	59	77	74
	APR-SEP	13.5	32	45	62	58	77	73
TAYLOR CREEK nr Selleck	APR-JUL	9.9	12.9	15.0	74	17.1	20	20
	APR-SEP	12.6	15.8	18.0	75	20	23	24
SOUTH FORK TOLT near Index	APR-JUL	4.8	7.6	9.4	64	11.2	14.0	14.7
	APR-SEP	5.9	8.7	10.6	63	12.5	15.3	16.9

CENTRAL PUGET SOUND RIVER BASINS Reservoir Storage (1000 AF) - End of January

CENTRAL PUGET SOUND RIVER BASINS Watershed Snowpack Analysis - February 1, 2010

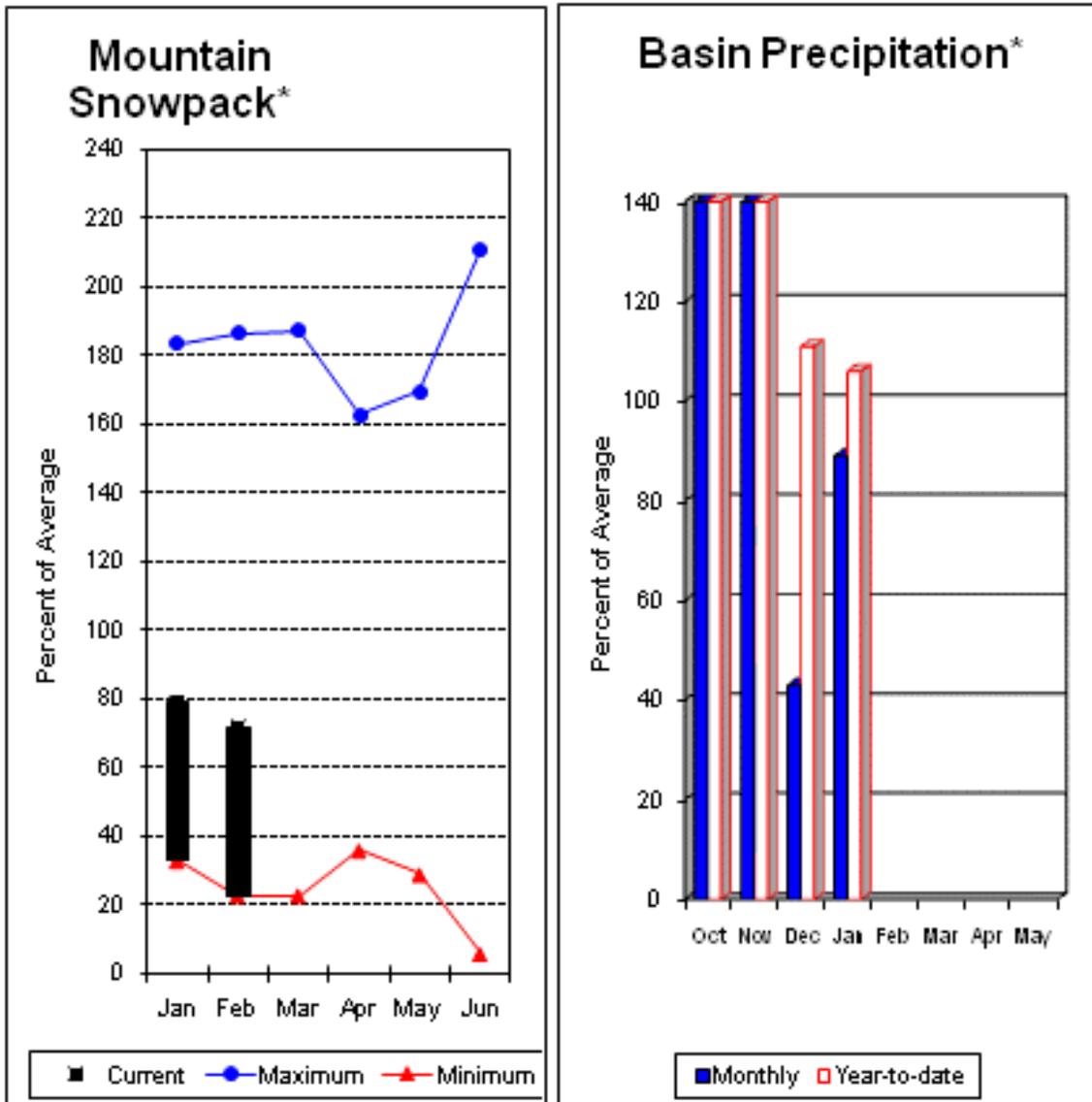
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
					CEDAR RIVER	4	49	50
					TOLT RIVER	2	29	34
					SNOQUALMIE RIVER	4	50	51
					SKYKOMISH RIVER	2	54	63

* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
- (2) - The value is natural volume - actual volume may be affected by upstream water management.

North Puget Sound River Basins



*Based on selected stations

Forecast for Skagit River streamflow at Newhalem is 77% of average for the spring and summer period. January streamflow in Skagit River was 116% of average. Other forecast points included Baker River at 78% and Thunder Creek at 89% of average. Basin-wide precipitation for January was 89% of average, bringing water-year-to-date to 106% of average. February 1 average snow cover in Skagit River Basin was 78%, Nooksack River Basin was 73% and Baker River Basin was 64% of average. Rainy Pass SNOTEL, at 4,780 feet, had 22.4 inches of water content. Average February 1 water content is 30.2 inches at Rainy Pass. February 1 Skagit River reservoir storage was 109% of average and 78% of capacity. Average temperatures for January were 8 degrees above normal for the basin and 2 degrees above average for the water year.

For more information contact your local Natural Resources Conservation Service office.

North Puget Sound River Basins

Streamflow Forecasts - February 1, 2010

Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>						30-Yr Avg. (1000AF)				
		90% (1000AF)		70% (1000AF)		Chance Of Exceeding * 50% (1000AF) (% AVG.)			30% (1000AF)		10% (1000AF)	
THUNDER CREEK near Newhalem	APR-JUL	180	198	210	90	220	240	234				
	APR-SEP	260	280	295	89	310	330	333				
SKAGIT at Newhalem (2)	APR-JUL	1200	1340	1440	77	1540	1680	1864				
	APR-SEP	1420	1590	1700	77	1810	1980	2217				
BAKER RIVER near Concrete	APR-JUL	520	595	650	79	705	780	828				
	APR-SEP	670	760	820	78	880	970	1050				

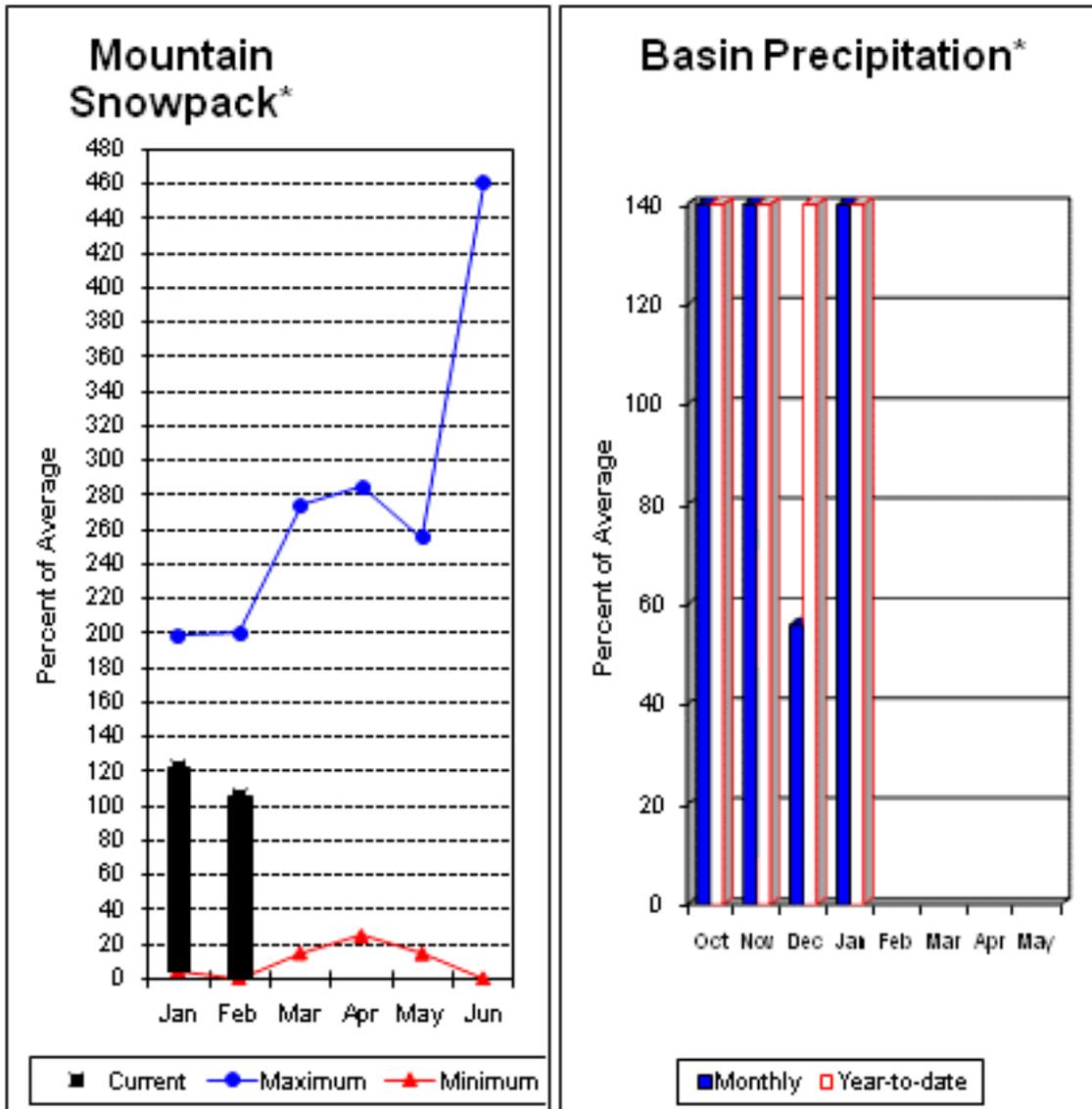
NORTH PUGET SOUND RIVER BASINS Reservoir Storage (1000 AF) - End of January					NORTH PUGET SOUND RIVER BASINS Watershed Snowpack Analysis - February 1, 2010			
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
ROSS	1404.1	1078.6	1060.7	978.3	SKAGIT RIVER	15	103	79
DIABLO RESERVOIR	90.6	86.0	85.7	85.5	BAKER RIVER	9	76	64
					NOOKSACK RIVER	3	96	73

* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
- (2) - The value is natural volume - actual volume may be affected by upstream water management.

Olympic Peninsula River Basins



*Based on selected stations

Forecasted average runoff for streamflow for the Dungeness River is 97% and Elwha River is 100%. January runoff in the Dungeness River was 215% of normal. Big Quilcene and Wynoochee rivers should expect near average runoff this summer also. January precipitation was 184% of average. Precipitation has accumulated at 154% of average for the water year. January precipitation at Quillayute was 22.54 inches. The thirty-year average for January is 13.65 inches. A record rainfall of 2.27 inches fell at Quillayute Airport on January 15, breaking the old record of 1.73 inches set in 1976. Olympic Peninsula snowpack averaged 106% of normal on February 1. Temperatures were 5-7 degrees above average for January and 1-2 degrees above for the water year. The average January temperature in Quillayute (46.3°F), and Hoquiam (46.5°F) both ranked as the second highest since records began in 1966 and 1953 respectively.

For more information contact your local Natural Resources Conservation Service office.

Olympic Peninsula River Basins

Streamflow Forecasts - February 1, 2010

Forecast Point	Forecast Period	Future Conditions						30-Yr Avg. (1000AF)
		Drier		Wetter		Chance Of Exceeding *		
		90% (1000AF)	70% (1000AF)	30% (1000AF)	10% (1000AF)	50% (1000AF)	(% AVG.)	
DUNGENESS near Sequim	APR-JUL	95	110	120	97	130	145	124
	APR-SEP	113	133	147	97	161	181	152
ELWHA near Port Angeles	APR-JUL	350	395	425	101	455	500	419
	APR-SEP	405	465	505	100	545	605	503

OLYMPIC PENINSULA RIVER BASINS Reservoir Storage (1000 AF) - End of January					OLYMPIC PENINSULA RIVER BASINS Watershed Snowpack Analysis - February 1, 2010			
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
					OLYMPIC PENINSULA	6	180	106

* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
- (2) - The value is natural volume - actual volume may be affected by upstream water management.

Issued by

Dave White
Chief
Natural Resources Conservation Service
U.S. Department of Agriculture

Released by

Roylene Rides At The Door
State Conservationist
Natural Resources Conservation Service
Spokane, Washington

The Following Organizations Cooperate with the Natural Resources Conservation Service in Snow Survey Work*:

Canada	Ministry of Sustainable Resources Snow Survey, River Forecast Centre, Victoria, British Columbia
State	Washington State Department of Ecology Washington State Department of Natural Resources
Federal	Department of the Army Corps of Engineers U.S. Department of Agriculture Forest Service U.S. Department of Commerce NOAA, National Weather Service U.S. Department of Interior Bonneville Power Administration Bureau of Reclamation Geological Survey National Park Service Bureau of Indian Affairs Recourse Conservation & Development Councils
Local	City of Tacoma City of Seattle Chelan County P.U.D. Pacific Power and Light Company Puget Sound Power and Light Company Washington Water Power Company Snohomish County P.U.D. Colville Confederated Tribes Spokane County Yakama Indian Nation Whatcom County Pierce County Kalispel Tribe of Indians Spokane Indian Tribe Jamestown S'klallum Tribe
Private	Okanogan Irrigation District Wenatchee Heights Irrigation District Newman Lake Homeowners Association Whitestone Reclamation District

*Other organizations and individuals furnish valuable information for the snow survey reports. Their cooperation is gratefully acknowledged.



Washington Snow Survey Office
2021 E. College Way, Suite 214
Mount Vernon, WA 98273-2873



Washington Water Supply Outlook Report

Natural Resources Conservation Service
Spokane, WA

