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natural Resources Conservation Service

Washington Basin Outlook Report May 1, 1995



Basin Outlook Reports and Federal - State - Private Cooperative Snow Surveys

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How forecasts are made

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Most of the annual streamflow in the Western United States originates as snowfall that has accumulated high in the mountains during winter and early spring. As the snowpack accumulates, hydrologists estimate the runoff that will occur when it melts. Predictions are based on careful measurements of snow water equivalent at selected index points. Precipitation, temperature, soil moisture and antecedent streamflow data are combined with snowpack data to prepare runoff forecasts. Streamflow forecasts are coordinated by Natural Resources Conservation Service and National Weather Service hydrologists. This report presents a comprehensive picture of water supply conditions for areas dependent upon surface runoff. It includes selected streamflow forecasts, summarized snowpack and precipitation data, reservoir storage data, and narratives describing current conditions.

Snowpack data are obtained by using a combination of manual and automated SNOTEL measurement methods. Manual readings of snow depth and water equivalent are taken at locations called snow courses on a monthly or semi-monthly schedule during the winter. In addition, snow water equivalent, precipitation and temperature are monitored on a daily basis and transmitted via meteor burst telemetry to central data collection facilities. Both monthly and daily data are used to project snowmelt runoff.

Forecast uncertainty originates from two sources: (1) uncertainty of future hydrologic and climatic conditions, and (2) error in the forecasting procedure. To express the uncertainty in the most probable forecast, four additional forecasts are provided. The actual streamflow can be expected to exceed the most probable forecast 50% of the time. Similarly, the actual streamflow volume can be expected to exceed the 90% forecast volume 90% of the time. The same is true for the 70%, 30%, and 10% forecasts. Generally, the 90% and 70% forecasts reflect drier than normal hydrologic and climatic conditions; the 30% and 10% forecasts reflect wetter than normal conditions. As the forecast season progresses, a greater portion of the future hydrologic and climatic uncertainty will become known and the additional forecasts will move closer to the most probable forecast.

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Washington Water Supply Outlook

MAY 1995

General Outlook

April temperatures were near to below normal which helped preserve mountain snowpack. Snowpack averages increased while April streamflows decreased from last month. National Weather Service climatological stations indicated much above average precipitation for the Yakima, Lewis and Walla Walla river basins and near average for the rest of the state. SNOTEL showed near normal conditions for April with early normal snowpack accumulations which peaked mid-month. Normal spring meltout has began statewide.

Snowpack

The May 1 statewide SNOTEL reading showed that the snowpack is 125% of average, an increase from the April 1 reading of 110%. Snowpack in the Spokane-Pend Oreille river basins remains below average with only 84% of normal. The east slope of the Cascade Mountains remains strong with 154% of average for the Methow, 125% of average for Chelan Lake Basin, and 136% for the Wenatchee Basin. The Yakima River Basin is above normal at 129% of average. Westside averages are also holding strong with a high of 141% of average on the White River Basin to a low of 86% of average in the Baker River Basin. Snow measurement points within the Olympic Mountain River basins stayed about the same with 56% on the Elwha River, 97% for Morse Creek, 71% for the Dungeness and 167% of average for the Quilcene.

BASIN	PERCENT OF LAST YEAD	R PERCENT OF AVERAGE
Spokane		
Colville	N/A	N/A
Pend Oreille		
Okanogan		
Methow		
Wenatchee		
Chelan		
Yakima		
Walla Walla		
Cowlitz		
Lewis		
White		
Green		
North Puget Sound	1	
Olympic Peninsula	a172	

Precipitation

Reports from National Weather Service stations showed April precipitation in excess of 150% for the Lewis, Yakima and Walla Walla river basins as well as for the dryland crop ground of southeastern The rest of the state received near normal amounts of Washington. precipitation. Accumulated precipitation from October 1, 1994 remains above average for Eastern Washington with some central locations much above average. Most of the Westside is closer to normal. Year-todate precipitation ranges from 186% of normal in the Wenatchee-Chelan River basins, to 121% in the Olympic Peninsula River basins. April basin reports range from 142% of normal in the Walla Walla River Basin to only 61% of average in the Okanogan - Methow River basins. SNOTEL sites in Washington showed high elevation water-year-precipitation values to be 120% of average on May 1. Maximum reportable precipitation was again at the June Lake SNOTEL site near Mount St. Helens, with 173.2 inches since October 1. This puts June Lake at 97% of the normal April accumulation and 134% of average for the year.

		APRIL		V	VATER YEAR
BASIN	PERCENT OF	AVERAGE		PERCENT C	OF AVERAGE
Spokane					110
Colville-Pend Ore	eille				113
Okanogan-Methow.		61			119
Wenatchee-Chelan		103			140
Yakima					120
Walla Walla					128
Cowlitz-Lewis					121
White-Green-Cedar					104
North Puget Sound	ł		• • • • • • • •		107
Olympic Peninsula	a				101

Reservoir

Flood management has been the name of the game for most reservoir operators across the state. Overall forecasts are looking good for the end of season storage. Reservoir storage in the Yakima Basin was 756,200 acre feet, 97% of normal and 147% of last year. Storage at other reservoirs included Roosevelt and Banks Lake at 199% of average, and the Okanogan reservoirs at 122% of normal for May 1. The power generation reservoirs include the following: Coeur d'Alene Lake, 140,500 acre feet, or 57% of normal; Chelan Lake, 296,700 acre feet, 66% of average and 44% of capacity, and Ross Lake at 87% of average and 40% of capacity.

BASIN	PERCENT OF	CAPACITY	PERCENT	OF AVERAGE
Spokane	eille			
Okanogan-Methow.				122
Yakima	1	44		
North Puget Sour	nd			

Streamflow

Forecasted flows for May - September vary greatly across the state. A high of 139% of average for Salmon Creek near Conconully to a low of 65% of normal for the Cedar and Green rivers can be expected. May forecasts for some Western Washington streams include: Rex River near Cedar Falls, 75%; South Fork Tolt, 89%; and the Dungeness River, 88%, all holding close to the same as last month. Some Eastern Washington streams include Mill Creek at Walla Walla, 127%; the Wenatchee River at Plain, 108%; and the Colville River, 106%. April streamflows dropped from last month but stayed near normal for most of the state. The Methow River near Pateros had the highest April flows with 139% of average, and the Pend Oreille with 70% of normal was the lowest in the state. Other streamflows were the following percentage of normal: the Cowlitz River, 76%; the Okanogan River, 121%; the Spokane River, 71%; the Columbia at the Canadian border, 79%, the Skagit near Concrete, 76% and the Yakima River at Kiona, 105%.

BASIN

PERCENT OF AVERAGE MOST PROBABLE FORECAST (50 PERCENT CHANCE OF EXCEEDANCE)

Spokane	75
Colville-Pend Oreille	09
Okanogan-Methow100-13	39
Wenatchee-Chelan108-12	21
Yakima100-12	21
Walla Walla	27
Cowlitz-Lewis	21
White-Green-Cedar65-8	89
North Puget Sound	80
Olympic Peninsula	88





BASIN SUMMARY OF SNOW COURSE DATA

MAY 1995

SNOW COURSE	ELEVATION	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 1961-90	SNOW COURSE ELEV	ATION	DATE	SNOW WA DEPTH	ONTENT	AST AV YEAR	ERAGE 1961-90
PEND ORBILLE RIVER							BUMPING RIDGE PILLOW	4600	5/01/	95	23 75	16.6	18 9
BENTON MEADOW	2370	5/01/95	0	.0	. 0	. 0	CAYUSE PASS	5300	5/01/	95	114.0E	68.7	88.1
BENTON SPRING	4920	5/02/95	23	10.2	.8	13.6	CORRAL PASS PILLOW	6000	5/01/	95	37.85	24.8	29.5
BOYER MOUNTAIN	5250	4/27/95	64	26.4	12.8	23.6	FISH LAKE	3370	4/26/	95 53	23.8	12.1	22.4
BUNCHGRASS MDWPILLO	W 5000	5/01/95		31.6	17.9	26.9	FISH LAKE PILLOW	3370	5/01/	95	27.1S	13.5	25.0
HOODOO BASIN	6050	5/01/95		42.1E	28.6	51.2	GREEN LAKE PILLOW	6000	5/01/	95	29.6S	14.0	19.7
HOODOO CREEK	5900	5/01/95		34.4E	23.4	47.1	GROUSE CAMP PILLOW	5380	5/01/	95	23.25	2.8	9.2
NELSON CAN	W 5140 3100	1/25/95	30	23.2	3 0	29.3	MODESTAKE PILLOW	5100	5/01/	95	18.15	20 6	8.2
KETTLE RIVER	. 5100	4723733	50	11.0	3.7	***	OLALLIE MOWS PILLOW	3960	5/01/	95	46 15	34 2	44.4
BARNES CREEK CAN	. 5300	4/25/95	49	19.0	16.6	20.5	OLALLIE MEADOWS	3630	5/01/	95	45.0E		43.5
BIG WHITE MTN CAN	. 5510	4/30/95	56	23.5	13.9	19.9	SASSE RIDGE PILLOW	4200	5/01/	95	35.55	17.9	24.1
CARMI CAN	. 4100	5/01/95	4	1.1	.0	1.7	STAMPEDE PASS PILLOW	3860	5/01/	95	47.5S	27.3	39.1
FARRON CAN	. 4000	4/27/95	26	10.3	5.6	10.4	TUNNEL AVENUE	2450	4/28/	95 25	11.1E	8.3	12.7
GRAYSTOKE LAKE CAN	. 5940	5/03/95	42	15.0	11.0	18.1	WHITE PASS ES PILLOW	4500	5/01/	95	23.85	14.0	18.7
TRAPPING OF LOW CAN	3050	4/25/95	30	11.5	0.0	12.0	GREEN LAKE DILLOW	6000	5/01/	95	20 65	14 0	10.7
TRAPPING CK UP CAN	4460	4/30/95	1	. 4	.0	5.6	LOST HORSE PILLOW	5000	5/01/	95	18.15	.2	8.2
COLVILLE RIVER							MILL CREEK						
OMAK LAKE, TW1N LAKES							HIGH RIDGE PILLOW	4980	5/01/9	95	14.3S	.0	12.4
MOSES MOUNTAIN (1)	4800	4/25/95	37	14.6		10.0	TOUCHET #2 PILLOW	5530	5/01/9	95	30.1	18.8	27.3
MOSES MTN PILLO	4800	5/01/95		13.75	. 0	7.3	LEWIS - COWLITZ RIVERS	6 2 0 0	5 / 01 / I	0.5	114 05	(0 7	
MOSES READOWS (3)	5650	4/25/95	95	31 0		5.5	TINE LAKE PILLOW	3200	5/01/5	95	24 95	10 1	88.1
MOUNT TOLMAN	2000	4/24/95	0.5	.0			LONE PINE PILLOW	3800	5/01/	95	31 45	24 2	26.4
TWIN LAKES	2700	4/27/95	0	.0			PARADISE PARK PILLOW	5500	5/01/	95	81.25	61.2	61.8
SPOKANE RIVER							PIGTAIL PEAK PILLOW	5900	5/01/	95	51.1S	36.0	47.7
FOURTH OF JULY SUM	3200	5/02/95	0	.0	.0	.0	POTATO HILL PILLOW	4500	5/01/9	95	20.65	13.0	17.0
LOST LAKE (d)	6110	5/01/95		47.5E	24.5	57.1	SHEEP CANYON PILLOW	4050	5/01/9	95	19.45	24.1	34.7
MOSQUITO RDG PILLO	₩ 5200	5/01/95		30.5	15.0	34.7	SPENCER MDW P1LLOW	3400	5/01/9	95	19.25	18.4	17.2
SUNSET PILLO	N 5540 J 5140	5/01/95		22.2	13.1	36.5	SPIRIT LAKE PILLOW	4250	5/01/5	95	4.25	35 1	.3
NEWMAN LAKE	5140	5/01/95		23.2	13.5	27.5	WHITE PASS ES PILLOW	4500	5/01/9	95	23.85	14.0	18.7
QUARTZ PEAK PILLO	4700	5/01/95		18.9	4.8	18.6	WHITE RIVER		0,01,		20100		100
OKANOGAN RIVER							CAYUSE PASS	5300	5/01/9	95	114.0E	68.7	88.1
ABERDEEN LAKE CAN	4300	4/28/95	0	. 0	.0	1.7	CORRAL PASS PILLOW	6000	5/01/9	95	37.85	24.8	29.5
BRENDA MINE CAN	4800	4/26/95	34	13.5	2.2	9.8	MORSE LAKE PILLOW	5400	5/01/9	95	75.9S	30.6	44.4
BROOKMERE CAN	. 3200	4/30/95	8	2.0	.0	5.1	GREEN RIVER	2200	5 (01 (0.6	00	0	0.2
ENDERBI CAN	5410	4/29/95	91	30.0	41.3	42.9 17 5	COUGAR MIN. PILLOW	2900	5/01/5	95	.05	.0	9.3
ESPERON CK. MID CAN.	4690	4/29/95	35	14.2		11.9	LESTER CREEK	3100	4/27/9	95 37	14.7		15.0
FREEZEOUT CK. TRAIL	3500	4/26/95	12	4.4	.0	7.0	LYNN LAKE	4000	4/27/9	95 0	.0		10.7
GREYBACK RES CAN.	5120	4/26/95	30	9.0	2.0	7.7	SAWMILL RIDGE	4700	4/27/9	95 70	32.1		28.2
HAMILTON HILL CAN.	4890	4/29/95	16	6.3	.3	12.6	STAMPEDE PASS PILLOW	3860	5/01/9	95	47.55	27.3	39.1
HARTS PASS	6500	4/26/95	111	49.4	31.1	45.1	CEDAR RIVER						
HARTS PASS PILLO	V 6500	5/01/95		56.4S	26.7	42.0	MT. GARDNER PILLOW	2860	5/01/9	95	.05	.0	10.8
ISINIOK LAKE CAN.	. 5500	4/28/95	22	6.3	.0	6.3	TINKHAM CREEK PILLOW	3000	5/01/9	95	10.75	7.4	16.7
MCCHILOCH CAN	4000	4/29/90	25	0.7	.9	2 4	SNOULAIMIE DIVED	3240	5/01/:		.05	/.1	21.0
MISSEZULA MTN CAN.	5090	4/30/95	15	5.6	.0	7.0	OLALLIE MDWS PILLOW	3960	5/01/9	95	46.15	34.2	51.0
MONASHEE PASS CAN.	4500	4/25/95	30	11.3	6.6	12.8	OLALLIE MEADOWS	3630	5/01/9	95	45.0E		43.5
MT. KOBAU CAN.	5900	4/29/95	54	18.9	8.3	13.3	SKYKOMISH RIVER						
MUTTON CREEK #1	5700	5/01/95		10.5E		9.6	STAMPEDE PASS PILLOW	3860	5/01/9	95	47.55	27.3	39.1
OYAMA LAKE CAN.	4400	4/28/95	16	5.7	.3	3.1	STEVENS PASS PILLOW	4070	5/01/9	95	35.25	35.2	32.1
SALMON MODELS DILLO	4500	5/01/95	21	7.5	2.6	b.4	SKAGIT RIVER	2200	1/27/0	35 3	1 0	0	4 1
SILVER STAR MTN CAN	6000	4/30/95	78	33.3	24.4	29.7	BEAVER CREEK TRATE	3680	4/28/9	95 67	30.9	17.0	28.1
SUMMERLAND RES CAN.	4200	4/27/95	13	5.3	.0	6.3	BROWN TOP AM	6000	4/26/9	95 151	67.6	44.4	61.7
SUNDAY SUMMIT CAN.	4300	4/29/95	0	.0	. 0	.8	DEVILS PARK	5900	4/26/9	95 109	48.6	29.6	45.0
TROUT CREEK CAN.	4690	4/29/95	6	2.2	.0	4.8	FREEZEOUT CK. TRAIL	3500	4/26/9	95 12	4.4	.0	7.0
VASEUX CREEK CAN.	4600	4/27/95	7	2.7	.0	3.0	HARTS PASS	6500	4/26/9	95 111	49.4	31.1	45.1
WHITE ROCKS MTN CAN.	6000	5/01/95	60	25.5	11.7	22.4	HARTS PASS PILLOW	6500	5/01/9	95	56.4S	26.7	42.0
HADTE DAGE	65.00	1/26/05	111	40.4	31 1	45.1	KLESILKWA CAN.	3/10	4/26/9	70 U 35 25	.0	. U	0.3
HARTS PASS PILLON	6500	4/20/95		49.4 56 AS	26 7	45.1	IVMAN LAKE PILLOW	5900	5/01/9	35	80.75	42.2	58.7
MUTTON CREEK #1	5700	5/01/95		10.5E	20.7	9.6	MEADOWS CABIN	1900	4/27/9	95 0	.0	.0	1.1
SALMON MDWS PILLOW	4500	5/01/95		9.85	.0	1.1	NEW HOZOMEEN LAKE	2800	4/28/9	95 0	.0	.0	4.5
CHELAN LAKE BASIN							RAINY PASS	4780	4/27/9	95 100	44.6	26.6	40.6
LYMAN LAKE PILLOW	5900	5/01/95		80.7S	42.2	58.7	RAINY PASS PILLOW	4780	5/01/9	95	52.0S	24.7	36.8
MINERS RIDGE PILLOW	6200	5/01/95		58.0S	35.9	51.3	THUNDER BASIN	4200	4/27/9	95 54	22.2	15.6	30.5
PARK CK RIDGE PILLOW	4600	5/01/95	100	35.15	13.7	33.6	THUNDER BASIN PILLOW	4200	5/01/9	15	28.85	17.4	
RAINI PASS PILION	4780	4/2//95	100	44.0 52.0S	20.0	40.0	DOCK BUTTE AM	3800	5/04/9	95 108	55.0		66.8
ENTIAT RIVER	1.00	3/01/ /3		52.00		5010	EASY PASS AM	5200	5/04/9	5 200	104.0		85.4
POPE RIDGE PILLOW	3540	5/01/95		14.55	.0	1.6	JASPER PASS AM	5400	5/04/9	5 188	94.0		89.3
WENATCHEE RIVER							MARTEN LAKE AM	3600	5/04/9	5 124	63.0		75.8
BLEWETT PASS#2PILLOW	4270	5/01/95		9.75	.3	4.9	MT. BLUM AM	5800	5/04/9	5 146	70.0		69.1
FISH LAKE PILLOW	3370	5/01/95		27.1S	13.5	25.0	ROCKY CREEK AM	2100	5/04/9	5 6	3.0 51.0F	42 2	19.1 56.2
STEVENS DASS DITION	5900 1 1070	5/01/95		00./S	42.2	58./ 32.1	SCHREIBERS MDW AM	2200	5/04/9 /sa/o	5 0	01.05		1.1
TROUGH #2 PILLOW	1 5310	5/01/95		13.85	33.2	2.5	WATSON LAKES AM	4500	5/04/9	5 110	55.0E	47.0	67.2
UPPER WHEELER PILLOW	4400	5/01/95		14.0S	2.0	4.8	ELWHA RIVER		-, • • • / /				
SQUILCHUCK CREEK							HURRICANE	4500	4/30/9	5 28	12.2	7.0	21.9
STEMILT CREEK							MORSE CREEK						20.1
UPPER WHEELER PILLOW	4400	5/01/95		14.0S	2.0	4.8	COX VALLEY	4500	4/29/9	5 83	38.0	23.8	39.1 (
COLOCKUM CREEK	6.210	E /01 /05		12.00		2.5	DUNGENESS RIVER	6200	1/20/0	5 21	13.2	3.0	18.7
YAKIMA RIVER	5310	2/01/32		12.82	.0	2.5	OUILCENE RIVER	5200	4/20/9	3 31	13.2	5.0	1011
BLEWETT PASS#2011LOW	4270	5/01/95		9,75	. 3	4.9	MOUNT CRAG PILLOW	4050	5/01/9	5	37.55	20.4	22.4
BUMPING LAKE (NEW)	3400	4/26/95	19	9.3E	7.6	10.9	WYNOOCHEE RIVER						Ł

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FOR ADDITIONAL INFORMATION

Spokane River Basin

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Olympic Peninsula River Basins

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Precipitation* (% of normal)





The May 1 forecasts for summer runoff on the Spokane River at Long Lake are 75% of normal, no significant change from last month. The forecast is based on a basin snowpack that is 80% of average and precipitation that is 110% of normal for the water year. Precipitation for April was only 86% of average. Streamflow on the Spokane River was 71% of average for April. May 1 storage in Coeur d'Alene Lake was 140,500 acre feet, 57% of normal, and 59% of capacity. Temperatures in the basin were 1 degree below normal during April.

SPOKANE RIVER BASIN

Streamflow Forecasts - May 1, 1995

	l	<<=====	= Drier =====	Future Co	onditions =	===== Wetter	====>>	1
1 Developet Defet	Deventer			<i>a</i>		1000		1
Forecast Point	Period	90%	70%	50% (Most	Exceeding * '	30%	10%	1 1 30-Yr Avg.
	loriou	(1000AF)	(1000AF)	(1000AF)	(% AVG.)	(1000AF)	(1000AF)	(1000AF)
SPOKANE near Post Falls (2)	MAY-SEP	970	1190 /	1340	73	1490	1710	1846
	MAY-JUL	905	1120	1270	73	1420	1630	1749
SPOKANE at Long Lake	MAY-JUL	1080	1310	1460	74	1610	1840	1975
	MAY-SEP	1260	1490 1	1650	75	1810	2040	2198
	*============		 =================			 =k=e4f=S4=S55;	*********	
SPOKA	NE RIVER BASIN	<i>.</i>				SPOKANE RIVER	BASIN	3005
Reservoir Storage	(1000 AF) - End	of April			watershed Si	nowpack Analys:	1s - May I	, 1995
	Usable	*** Usab	le Storage ***	1		Numbe	r This	Year as % of
Reservoir	Capacity	This	Last	Water	rshed	of		Vr Avorago
***************************************	 	Iear	Iear Avg) == =========		Data SI	Les Last	II Average
COEUR D'ALENE	238.5	140.5	184.5 246.	7 i Spoka	ane River	11	188	80
				1				

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

The average is computed for the 1961-1990 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 flow - actual flow may be affected by upstream water management.

Quartz Peak SNOTEL Elevation 4700 ft.



Colville - Pend Oreille River basins

Mountain Snowpack* (inches)

Precipitation* (% of normal)



*Based on selected stations

The forecast for the Kettle River streamflow is for 109% of normal, the Pend Oreille below Box Canyon, 67%. The forecast for the Priest River near the town of Priest River is 79% of normal for the summer runoff period. Forecasts for points on the Columbia River, at Birchbank, are 95% and at Grand Coulee Dam, 89% of average. April streamflow was 70% of normal on the Pend Oreille River, 79% on the Columbia at the International Boundary, and 125% on the Kettle River. May 1 snow cover was 87% of normal for the Pend Oreille Basin, and 91% of normal on the Kettle River. Snowpack at Bunchgrass Meadows SNOTEL site contained 28.4 inches of water, compared to the average May 1 reading of 24.9 inches. Precipitation during April was 81% of average, bringing the water year-to-date to 113% of normal. Temperatures were slightly below normal for April.

COLVILLE - PEND OREILLE RIVER BASINS

	SCIC	anii 10	N IOIECE	1303 1	aug 1,	1995		
***************************************		<<=====	== Drier ====	== Future C	onditions =	======= Wetter	=====>> 	
' Forecast Point	Forecast			= Chance Of	Exceeding *			
	Period	90%	70%	50% (Most	Probable)	30%	10%	30-Yr Avg.
		(1000AF)) (1000AF)	(1000AF)	(% AVG.)	(1000AF)	(1000AF)	(1000AF)
PEND OPETILE Lake Inflow (1.2)		5770	7110	1 7720	70	8330	9670	11070
PEND OREIDLE Lake Inflow (1,2)	MAY-SED	6390	7880	1 8560	70	1 9240	10700	12290
	THI SEE	0570	,000	1 0,500		1 2.0	10,00	122,00
PRIEST nr Priest River (1,2)	MAY-JUL	335	445	495	79	545	655	627
	MAY-SEP	380	490	540	79	590	700	680
				1		L		
PEND OREILLE bl Box Canyon (1,2)	MAY-JUL	5130	6810	1 7570	67	8330	10000	11220
	MAY-SEP	5700	7550	8390	67	9230	11100	12430
	MAY-JUN	4270	5670	6300	67	6930	8330	9410
CHAMOKANE CK pr Long Lake	MAX-AUG	55	83	1 10.3	110	1 123	15 1	94
Chronolic en ni bong bake	JUL-AUG	3.2	3.5	1 3.6	109	1 3.7	4.0	3.3
	000 1100	5.2	3.3	1	109	1		0.0
COLVILLE at Kettle Falls	MAY-SEP	66	80	89	106	I 99	113	84
	MAY-JUL	59	72	80	110	89	102	73
	MAY-JUN	51	63	I 71	111	1 79	91	64
VOMMEN AND A SHORE THE SHORE	MNY 055	1450	1.010	1 1700	100	1020	1000	15.00
KETTLE near Laurier	MAI-SEP	1450	1610	1 1720	109	1 1030	1990	1582
	MAI-JUL	1380	1520	1 1610	108	1 1500	1610	1409
	MAI-JUN	1230	1340	1 1420	108	1 1500	1610	1314
COLUMBIA at Birchbank (1,2)	MAY-JUL	27300	29600	30600	95	31600	33900	32090
	MAY-SEP	34500	37400	38700	95	40000	42900	40760
	MAY-JUN	19200	20800	21500	95	22200	23800	22620
				I		I		
COLUMBIA at Grand Coulee Dm (1,2)	MAY-SEP	45700	49900	51800	89	53700	57900	57921
	MAY-JUL	37200	40600	42200	89	43800	47200	47614
	MAY-JUN	28200	30700	31900	89	33100	35600	35827
1:222222222222222222222222222222222222	*******	*=========		; =========================		 =====================================	**********	
COLVILLE - PEND O	REILLE RIVE	R BASINS		I	COLVILLE ·	- PEND OREILLE	RIVER BASI	NS
Reservoir Storage (100	0 AF) - End	of April		1	Watershed S	nowpack Analys	is - May 1,	1995
	Usable I	*** Ucak	le Storage *	**		Numbo	r This	Year as % of
Reservoir	Capacity	This	Last	Water	rshed	of	=====	
	Japan 0 1	Year	Year A	vg l		Data Si	tes Last	Yr Average
ROOSEVELT	5232.0	2861.9	4191.0 131	0.0 Colv	ille River	0	0	0

Streamflow Forecasts - May 1, 1995

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

435.0 |

Pend Oreille River

Kettle River

163

154

87

93

88

7

670.9

The average is computed for the 1961-1990 base period.

BANKS

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

608.0

715.0



11



Precipitation* (% of normal)





Summer runoff forecast for the Okanogan River is 103% of normal; the Similkameen River, 100%, the Methow River, 130%; and Salmon Creek, 139% of normal. May 1 snow cover on the Okanogan was 105% of normal, and the Methow, 1548. April precipitation in the Okanogan-Methow was 61% of normal, with water year-to-date at 119% of average. April streamflow for the Methow River was 139% of normal, 121% for the Okanogan River, and 99% for the Similkameen. Snow water content at the Harts Pass SNOTEL, elevation 6500 feet, was 56 inches. Normal for this site is 39.8 inches. Temperatures were near normal for April. Storage in the Salmon Creek Reservoirs near Conconully was 19,600 acre feet, which is 83% of capacity and 122% of the May 1 average.

OKANOGAN - METHOW RIVER BASINS

Streamflow	Forecasts -	- May 1,	1995
------------	-------------	----------	------

		<<======	Drier ====	== Future C	onditions =	wette	r =====>>	1
Forecast Point	Forecast Period	======= 90% (1000AF)	70% (1000AF)	= Chance Of 50% (Most (1000AF)	Exceeding * Probable) (% AVG.)	30% (1000AF)	10% (1000AF)	 30-Yr Avg. (1000AF)
SIMILKAMEEN nr Nighthawk (1)	MAY-SEP	1060	1230	1300	100	1370	1540	1 300
	MAY-JUL	990	1140	1205	100	1270	1420	1205
	MAY-JUN	810	950	1014	100	1080	1220	101 4
OKANOGAN RIVER nr Tonasket (1)	MAY-SEP	1000	1360	1530	103	1700	2060	1485
	MAY-JUL	900	1220	1370	103	1520	1840	1328
	MAY-JUN	765	1020	1130	103	1240	1500	1095
SALMON CREEK near Conconully	MAY-JUL	15.2	21	I 25	140	29	35	18.0
	MAY-SEP	15.8	22	I 26	139	31	37	18.9
METHOW RIVER near Pateros	MAY-SEP MAY-JUL MAY-JUN	1000 955 800	1070 1010 855	1110 1050 890	130 134 135	1150 1090 925 	1220 1140 980	854 786 659

OKANOGAN - METHOW RIVER BASINS						OKANOG	AN - METHOW RIVER I	BASINS	95
Reservoir Storage (1000 AF) - End of April						Watershed S	nowpack Analysis -	May 1, 19	
Reservoir	Usable Capacity 	*** Usa This Year	ble Storag Last Year	e *** Avg	 	Watershed	Number of Data Sites	This Yea Last Yr	r as % of Average

SALMON LAKE 105 NO REPORT 1 Okanogan River 24 213 CONCONULLY RESERVOIR NO REPORT Methow River 2 248 154 1 ______

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

The average is computed for the 1961-1990 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 flow - actual flow may be affected by upstream water management.



Precipitation* (% of normal)



*Based on selected stations

Precipitation during April was 103% of normal in the Wenatche - Chelan river basin and 140% for the year-to-date. Runoff for the Entiat River is forecast to be 121% of normal for the summer. The May-September forecast for the Chelan and Wenatchee rivers is for 108% of normal, and 104% for the Stehekin. Icicle Creek is forecast to be 114% of normal this summer. Streamflow for April on the Chelan River was 111% of average, and on the Wenatchee River it was 105% of normal. May 1 snowpack in the Wenatchee Basin was 136% of average, which is 194% of last year. The Chelan Basin was 125% of average, and Stemilt Creek was 292% of normal. Pope Ridge SNOTEL on the Entiat River had 14.5 inches of snow water on May 1. Normal is 1.6 inches. Reservoir storage in Lake Chelan was 296,700 acre feet or 66% of May 1 average and 44% of capacity. Lyman Lake SNOTEL had the most snow-water in the basin with 80.7 inches of water. This site would normally have 58.7 inches.

WENATCHEE - CHELAN RIVER BASINS

Streamflow Forecasts - May 1, 1	995
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		<<=====	= Drier ==		Future Co	onditions ==	====== Wetter	=====>>	
Forecast Point	Forecast Period	 90% (1000AF)	70% (1000AF)	=== Ch 5	ance Of E 50% (Most (1000AF)	Exceeding * = Probable) (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
CHELAN RIVER near Chelan	MAY-SEP MAY-JUL MAY-JUN	1010 895 655	1080 955 720		1125 996 765	108 110 110	1170 1040 810	1240 1100 875	1041 905 693
STEHEKIN near STEHEKIN	MAY-SEP MAY-JUL MAY-JUN	705 575 405	750 620 450		781 651 485	104 104 105	815 680 520	860 730 565	751 625 462
ENTIAT RIVER near Ardenvoir	MAY-SEP MAY-JUL MAY-JUN	230 205 157	245 220 171		252 228 180	121 121 120	260 235 190	275 250 205	208 188 150
WENATCHEE at Plain	MAY-SEP MAY-JUL MAY-JUN	1000 905 710	1070 965 755		1125 1005 788	108 109 110	1180 1040 820	1250 1100 865	1042 925 716
WENATCHEE R. at Peshastin	MAY-JUL MAY-JUN	920 735	1180 935		1355 1070	106 107	1530 1210	1790 1410	1277 997
STEMILT nr Wenatchee (miners in)	MAY-SEP	115	142	1	160	116	178	205	138
ICICLE CREEK nr Leavenworth	APR-SEP APR-JUL APR-JUN	300 275 220	370 345 270		420 388 308	114 114 114	470 435 345	540 500 395	370 340 270
COLUMBIA R. bl Rock Island Dam (2)	MAY-SEP MAY-JUL MAY-JUN	50900 41800 31600	55100 45300 34200		58000 47700 36000	92 91 91	60900 50100 37800	65100 53600 40400	62987 52239 39509
WENATCHEE - CH Reservoir Storage (1000	ELAN RIVER E D AF) - End	BASINS of April				WENATCH Watershed Sn	EE - CHELAN R Dwpack Analys	IVER BASINS is - May 1,	1995
Reservoir	Usable Capacity 	*** Usab This Year	le Storage Last Year	*** Avg	 Water	shed	Numbe of Data Si	r This ===== tes Last	Year as % of Yr Average
CHELAN LAKE	676.1	296.7	281.3	448.8	Chela	n Lake Basin	4	194	125
					 Entia	t River	1	0	906
					Wenat	chee River	7	194	136
					Squil	chuck Creek	0	0	0
					Stemi	lt Creek	1	700	292
					I Coloc	kum Creek	1	0	552

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

The average is computed for the 1961-1990 base period.

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



Precipitation* (% of normal)



*Based on selected stations

May 1 reservoir storage for the five major reservoirs was 756,200 acre feet, 97% of average and 71% of capacity. May 1 summer streamflow forecasts are for near to slightly above normal in the Yakima Basin. Forecasts for the Yakima River at Cle Elum are for 99% of normal. Naches River, 112%; the Yakima River at Parker, 104%; Ahtanum Creek, 100%, and the Tieton River, 110%. The Klickitat River near Glenwood is forecast for 121% of normal flow this summer. April streamflows dropped from last month with the Yakima River at Parker 90% of normal, May 1 85% for the Yakima near Cle Elum, and 87% for the Naches River. snowpack was 129% based upon 15 snow course and SNOTEL readings within the Yakima Basin. Snow surveys also reported 150% of average snowpack April precipitation was 84% of normal and 120% for for Ahtanum Creek. the water year-to-date. Temperatures were 1.4 degrees below normal for April. Volume forecasts for the Yakima Basin are for natural As such, they may differ from the U.S. Bureau of Reclamation's flow. forecast for the total water supply available, which includes irrigation return flow.

YAKIMA RIVER BASIN

Streamflow Forecasts - May 1, 1995

		<<=====	= Drier ==		Future Co	onditions ==	Wetter	====>>	
Forecast Point	Forecast			=== Ch	ance Of F	Exceeding * =			
	Period	90%	70%	1 5	0% (Most	Probable)	30%	10%	30-Yr Avg.
		(1000AF)	(1000AF)	1	(1000AF)	(% AVG.)	(1000AF)	(1000AF)	(1000AF)
KEECHELUS LAKE INFLOW	=========== MAY= الال		89	== ===	96	100	103	113	96
	MAY-SEP	86	99	i	107	100	115	128	107
	MAY-JUN	64	74	Ì	81	100	88	98	81
KACHESS LAKE INFLOW	MAY-JUL	73	79	1	84	98	89	96	86
	MAY-SEP	76	85	i	90	98	96	104	92
	MAY-JUN	62	69	1	73	99	77	84	74
CLE ELUM LAKE INFLOW	MAY-JUL	315	330	ł	345	102	360	375	339
	MAY-SEP	345	370	i	385	102	400	425	378
	MAY-JUN	250	270	I	282	102	295	315	276
YAKIMA at Cle Elum	MAY-JUN	475	515		540	99	565	605	546
	MAY-JUL	580	620	1	650	99 I	680	720	657
	MAY-SEP	645	695	1	730	99	765	815	740
BUMPING LAKE INFLOW	MAY-SEP	117	128	1	135	115	142	153	117
	MAY-JUL	110	118	I	124	117 I	130	138	106
	MAY-JUN	89	96		101	117	106	113	86
AMERICAN RIVER near Nile	MAY-SEP	95	104	i	110	108	116	125	102
	MAY-JUL	86	94	1	100	108	105	113	92
	MAY-JUN	68	77	1	82	110	88	96	75
RIMROCK LAKE INFLOW	MAY-SEP	200	215	i i	225	110	235	250	204
	MAY-JUL	170	180	1	187	112	194	205	167
	MAY-JUN	129	138		145	113	152	162	128
NACHES near Naches	MAY-SEP	680	735	i i	770	112	805	860	686
۵	MAY-JUL	625	670	1	700	115	730	775	609
	MAY-JUN	515	555	1	580	115	605	645	505
AHTANUM CREEK nr Tampico (2)	MAY-SEP	30	35	Ì	38	100	41	47	38
	MAY-JUL	26	31	1	34	100	37	42	34
	MAY-JUN	22	25	1	28	100	31	34	28
YAKIMA near Parker	MAY-SEP	1470	1570	1	1640	104	1710	1810	1580
	MAY-JUL	1310	1400	1	1464	105	1530	1620	1390
	MAY-SEP	1470	1570	1	1640	104	1710	1810	1580
KLICKITAT near Glenwood	MAY-JUN	91	100	i	106	121	112	120	87
	MAY-SEP	123	134	į.	142	121	149	160	117
				 ======		 =================			
YAKIMA Reservoir Storage (1	A RIVER BASIN 1000 AF) - End	of April			 	Y Watershed Sn	AKIMA RIVER BA: owpack Analysi:	5IN 5 - May 1,	1995
	Usable	*** Usab	le Storage	* * *	1		Number	This	Year as % of
Reservoir	Capacity	This	Last		Water	shed	of		
		Year	Year	Avg	 ========		Data Site	es Last	Yr Average
KEECHELUS	157.8	130.4	102.9	119.0	Yakim	a River	15	182	127
KACHESS	239.0	154.5	102.2	197.0	i Ahtan	um Creek	1	211	150
CLE ELUM	436.9	303.3	187.3	308.0	1				
	100.9		10110		į				
BUMPING LAKE	33.7	8.5	25.4	15.0	1				
RIMROCK	198.0	159.5	95.4 1	144.0	1				

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

The average is computed for the 1961-1990 base period.

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

Walla Walla River Basin

Mountain Snowpack* (inches)

Precipitation* (% of normal)



*Based on selected stations

April precipitation was 142% of average, bringing the year-to-date precipitation to 128% of normal in the Walla Walla River Basin. May 1 snowpack was at 112% of normal. The forecast is for 101% of average streamflow in the Walla Walla River for the coming summer, 120% for the Grande Ronde at Troy, and 127% for Mill Creek. April streamflow was 132% of normal for the Walla Walla River, 72% for the Snake River, and 96% on the Grande Ronde River near Troy. The Touchet SNOTEL site had 30.1 inches of water equivalent, compared to the normal May 1 reading of 27.3 inches. Temperatures were 2.7 degrees above normal for April.

WALLA WALLA RIVER BASIN Streamflow Forecasts - May 1, 1995

		<<=====	Drier ====	== Future Co	onditions =	===== Wetter	=====>>	
Forecast Point	Forecast Period	======== 90% (1000AF)	70% (1000AF)	= Chance Of E 50% (Most (1000AF)	Exceeding * Probable) (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
GRANDE RONDE at Troy (1)	MAY-JUL MAY-SEP	1.0 890	1.0 1080	1050 1160	120 120	1.0 1240	1.0 1430	872 970
SNAKE blw Lower Granite Dam (1,2)	MAY-JUL MAY-SEP	12600 14700	14900 17300	15900 18500	94 94	16900 19700	19200 22300	16940 19650
MILL CREEK at Walla Walla	MAY-SEP MAY-JUL MAY-JUN	6.3 6.1 6.0	8.2 8.0 7.8	9.5 9.3 9.0	127 127 127	10.8 10.6 10.2	12.7 12.5 12.0	7.5 7.3 7.1
SF WALLA WALLA nr Milton Freewater	MAY-JUL	32	35	37	101	I 40	43	37
COLUMBIA R. at The Dalles (2)	MAY-SEP MAY-JUL MAY-JUN	64500 53600 42100	71400 59300 46500	76000 63200 49500	89 88 89	80600 67100 52500 	87500 72800 56900	85635 71413 55578
WALLA WALLA RIVER BASIN Reservoir Storage (1000 AF) - End of April					WA1 Watershed Si	LLA WALLA RIVE nowpack Analys	R BASIN is - May 1,	1995

	*******	******							
	Usable	*** Usa	ble Storag	e ***	1		Number	This Yea	ras% of
Reservoir	Capacity	This	Last		1	Watershed	of	*******	
	I.	Year	Year	Avg	I.		Data Sites	Last Yr	Average
=======================================	PEREEZEEZEE		===========						
•					Į.	Mill Creek	2	236	112

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

The average is computed for the 1961-1990 base period.

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



Touchet #2 SNOTEL Elevation 5530 ft.

Precipitation* (% of normal)



*Based on selected stations

The Lewis River is forecast for near normal flows this summer. The Cowlitz River is forecast for 95% of normal runoff. April streamflow on the Cowlitz River was 76% of average, and 78% on the Lewis River. April precipitation was 111% of normal, bringing the precipitation down slightly to 121% of average for the water year. May 1 snow cover for the Cowlitz River Basin was 117% and the Lewis River Basin had 123% of average. The Paradise Park SNOTEL recorded the most water content for the basin with 80.2 inches of water. Normal May 1 water content is 61.6 inches. Temperatures were near normal for April.

COWLITZ - LEWIS RIVER BASINS

Streamflow	Forecasts	- M	lay	1,	1995
------------	-----------	-----	-----	----	------

		<<======	Drier ====	== Future C	onditions =	Wetter	=====>>	
Forecast Point	Forecast Period	====================================	70% (1000AF)	= Chance Of 1 50% (Most (1000AF)	Exceeding * Probable) (% AVG.)	30% (1000AF)	10% (1000AF)	 30-Yr Avg. (1000AF)
LEWIS RIVER at Arie1 (2)	MAY-SEP MAY-JUL MAY-JUN	720 590 490	845 695 575	930 765 635	110 110 110 110	1020 835 695	1140 940 780	848 696 578
COWLITZ R. b1 Mayfield Dam (2)	MAY-SEP MAY-JUL MAY-JUN	720 615 490	1180 1000 805	 1500 1270 1020	98 98 98	 1820 1540 1230	2280 1930 1550	1531 1292 1038
COWLITZ R. at Castle Rock (2)	MAY-SEP MAY-JUL MAY-JUN	915 770 610	1510 1260 1010	 1910 1600 1280	95 95 95	2310 1940 1550	2910 2430 1950	2021 1679 1349
KLICKITAT near Glenwood	MAY-JUN MAY-SEP	91 123	100 134	106 142 	121 121	 112 149 	120 160	87 117

	COWLITZ - LEWIS RIVER BASINS					1	COWLITZ -	LEWIS RIVER BA	SINS	
	Reservoir Storage	(1000 AF) - End	of April			1	Watershed Snowpa	ck Analysis -	May 1, 19	95
Reservoir		Usable Capacity 	*** Usa This Year	ble Storage Last Year	> *** Avg	===: 	Watershed	Number of Data Sites	This Yea. Last Yr	r as % of Average
							Cowlitz River	7	145	117
٠							Lewis River	4	126	123

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

The average is computed for the 1961-1990 base period.

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



Paridise SNOTEL Elevation 5120 ft.

Precipitation* (% of normal)



*Based on selected stations

Summer runoff is forecast to be 65% of normal for the Green River, 69% for the Cedar River near Cedar Falls, 75% for the Rex River, 89% for the South Fork of the Tolt River, and 65% for the Cedar River at Cedar Falls. May 1 snowpack was 141% of normal in the White River Basin and 98% in the Green River Basin. The Cedar River Basin was not reported Water content on May 1 at the Morse Lake SNOTEL near this month. Chinook Pass on the White River, at an elevation of 5400 feet, was 78.7 inches. This site has a May 1 average of 41.4 inches. April precipitation was 73% of normal, bringing the water year-to-date to The National Weather Service reported temperatures 104% of average. at Stampede Pass to be 1.6 degrees above average for April.

	Stre	amflow	Forec	ast	s - N	1ay 1, 1	1995		
		<<=======	Drier ===		Future C	onditions ==	====== Wette	r =====>>	
FOTECAST POINT	Period	======== 90% (1000AF)	70% (1000AF)	== Ch 5 	ance Of 0% (Most (1000AF)	Probable) (% AVG.)	30% (1000AF)	10% (1000AF)	 30-Yr Avg. (1000AF)
GREEN RIVER below Howard Hanson Dam	MAY-JUL MAY-SEP MAY-JUN	75 87 65	97 112 84	1 	112 128 97	66 65 66	127 145 110	149 169 129	170 198 147
CEDAR RIVER near Cedar Falls	MAY-JUL MAY-SEP MAY-JUN	25 29 24	32 38 30		38 44 34	67 69 72	 43 50 38	50 59 44	56 64 47
REX RIVER near Cedar Falls	MAY-JUL MAY-SEP MAY-JUN	8.4 12.0 7.6	11.5 15.0 10.1		13.7 17.0 11.8	71 75 70	 15.9 19.0 13.5	19.0 22 16.0	19.2 22 16.8
CEDAR RIVER at Cedar Falls	MAY-JUL MAY-SEP MAY-JUN	4.0 0.0 11.0	22 21 25		35 36 34	65 65 65	 48 51 43	66 72 57	54 55 52
SOUTH FORK TOLT near Index	MAY-JUL MAY-SEP MAY-JUN	7.4 9.2 6.1	8.9 11.1 7.3	 	9.9 12.4 8.1	87 89 87	10.9 13.7 8.9	12.4 15.6 10.1	11.4 13.9 9.3
WHITE - GREEN Reservoir Storage (1000	RIVER BASI AF) - End	INS of April				ا WHITE Watershed Sr	l E – GREEN RIV nowpack Analy	ER BASINS sis - May 1	, 1995
keservoir	Usable Capacity	*** Usab1 This Year	e Storage Last Year	*** Ava	======== Wate:	rshed	Numb of	er This	Year as % of
£=x;n#c&===c===c===z==kb=bbbcdddd		1661		=====	======== White	e River	3	183	141
8					l I Green	n River	2	174	98
					Cedaı 	r River	0	0	0

WHITE - GREEN - CEDAR RIVER BASINS

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

The average is computed for the 1961-1990 base period.

4

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



Stampede Pass SNOTEL Elevation 3860 ft.

70 180 160 P 60 e W 140 r a С 50 t e 120 е n r t 40 100 С 0 f 0 80 30 n t Ν 60 e 0 20 n r t 40 m a 10 I 20 Oct Nov Dec Jan Feb Mar Apr May May Jan Feb Mar Jun Apr Current Monthly Year To Date Average Maximum 🗖 Minimum

*Based on selected stations

Forecast for the Skagit River streamflow is for 108% of normal for the spring and summer period. April streamflow in the Skagit River was 76% of average. Other forecast points include the Baker River at 103% and Thunder Creek at 99% of average. Basin-wide precipitation for April was 67% of average. Water year-to-date remains at 107% of normal. May 1 snow cover in the Skagit River Basin was 110%, the Baker River Basin was 86% and the Snohomish River Basin was 105% of average. Rainy Pass SNOTEL, at 4780 feet, had 49.7 inches of water content, down from 52.6 inches last month. Normal May 1 water content is 34.3 inches. May 1 reservoir storage showed Ross Lake at 87% of normal and 40% of capacity. April temperatures were near normal.

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

Mountain Snowpack* (inches)

Precipitation* (% of normal)

NORTH PUGET SOUND RIVER BASINS

Streamflow Forecasts - May 1, 1995

&#####################################				-*					**======		
	I	<<=====	= Drier ==		Future Co	onditions =		Wetter	====>;	>	
	I									1	
General Forecast Point	Forecast	******		=== Ch	ance Of 1	Exceeding *	======			-	
	Period	90%	70%	5	0% (Most	Probable)	1	30%	10%	- I -	30-Yr Avg.
	1	(1000AF)	(1000AF)	1	(1000AF)	(% AVG.)	1 (1000AF)	(1000A)	F)	(1000AF)
						**********	=====				
THUNDER CREEK near Newhalem	MAY-JUL	182	196		206	99	1	215	230		209
	MAY-SEP	285	300	1	306	99		315	325		308
	MAY-JUN	108	120		129	100	1	138	151		129
CURCID DIVER at Northelen (2)	MAY COD	1010	2000	-	2120	100	1	2240	2420		1062
SKAGII KIVER at Newhalem (2)	MAI-SEP	1510	2000	-	2120	108	!	2240	2430		1903
	MAI-JUL	1070	1050	!	1750	109	!	1050	2000		1000
	MAY-JUN	1070	1210	-	1295	109	1	1380	1520		1198
BAKER RIVER near Concrete	MAY-JUIL	675	725		761	108	1	795	845		703
BAREN NEVEN NEUT CONCIECE	MAY-SEP	825	900	- i	954	103	i	1010	1080		930
	MAY-JUN	435	485	1	516	108	i –	550	595		478
	1211 0011	100	105	1	510	100	i	550	3,5		1.0
-*======		*********							==========		
NORTH PUGET	SOUND RIVER BA	SINS			1	NORTH	PUGET :	SOUND RI	VER BASI	NS	
Reservoir Storage (1	1000 AF) - End	of April			1	Watershed S	nowpacl	k Analys	is - May	, 1, 1	995
	Usable I	*** Usab	le Storage	***				Numbe	r Th	is Ye	ar as % of
Reservoir	Capacity	This	Last		I Water	rshed		of			
		Year	Year	Ανα	1			Data Si	tes La	st Yr	Average
ROSS	1404.1	557.8	893.3	544.4	I Snoho	omish River		3	13	3	105
					1					_	
DIABLO RESERVOIR	90.6	87.5	87.0		Skagi I	it River		13	18	5	110
GORGE RESERVOIR		NO REPORT	Г		l Baker	r River		2	15	2	110
1					L						

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

The average is computed for the 1961-1990 base period.

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



Rainy Pass SNOTEL Elevation 4780 ft.

Olympic Peninsula River basins

Mountain Snowpack* (inches)

Precipitation* (% of normal)



*Based on selected stations

May forecasts of runoff for streamflow in the basin are for 88% of average for the Dungeness River and 83% of normal for the Elwha River. April precipitation was 84% of average. Precipitation has accumulated at 101% of normal for the water year. April precipitation at Quillayute was 5.9 inches, which is slightly below normal at 83% of average. Average May 1 snow cover in the Olympic Basin varied as follows; Elwa River, 56%, Morse Creek, 97%, Dungeness River, 71%, and the Quilcene River, 167% of normal. The Mount Crag SNOTEL near Quilcene had 33.7 inches of snow water equivalent on May 1. Normal for this site is 16.6 inches. Temperatures at Quillayute were 1.1 degrees above normal for April.

OLYMPIC PENINSULA RIVER BASINS Streamflow Forecasts - May 1, 1995

*======#########=======================									
		<<======	Drier ====	= Future Co	onditions		= Wetter	====>>	
		1						1	
i Forecast Point	Forecast	********		= Chance Of H	Exceeding *				
	Period	90%	70%	50% (Most	Probable)	1	30%	10%	30-Yr Avg.
		(1000AF)	(1000AF)	(1000AF)	(% AVG.)	1	(1000AF)	(1000AF)	(1000AF)
	=============								
DUNGENESS RIVER nr Sequim	MAY-SEP	100	114	123	88	1	133	147	140
	MAY-JUL	79	90	97	87	1	105	116	112
	MAY-JUN	53	62	69	87	1	76	85	79
						1			
ELWHA RIVER nr Port Angeles	MAY-SEP	275	320	353	83	1	385	430	427
5	MAY-JUL	225	260	284	83	1	310	345	342
						1			
OLYMPIC PENI	NSULA RIVER B	ASINS		1	OLYMP	IC PEN	INSULA RI	VER BASINS	

Reservoir Storage (1000 AF) - End of April			i	Watershed Snowp	oack Analysis -	Analysis - May 1, 1995		
Reservoir	Usable Capacity 	*** Usable This Year	e Storage Last Year	*** Avg	Watershed	Number of Data Sites	This Ye Last Yr	ar as % of Average
					Elwha River	1	174	56
					Morse Creek	1	160	97
				1	Dungeness River	1	440	71
				1	Quilcene River	1	184	167
					Wynoochee River	0	0	0

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

The average is computed for the 1961-1990 base period.

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

Mount Crag SNOTEL Elevation 4050 ft.





In addition to basin outlook reports, a Water Supply Forecast for the Western United States is published by the Natural Resources Conservation Service and National Weather Service monthly, January through May. Reports may be obtained from the Natural Resources Conservation Service, West National Technical Center, 101 SW Main Street, Suite 1700, Portland, OR 97204-3225.

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Issued by		Released by					
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The Following Organ	izations Coo	perate With the Natural Resources					
Conservation Service	e in Snow Su	rvey Work*:					
Canada	Ministry of the Investigations	Environment Branch, Victoria, British Columbia					
State	Washington S Washington S	tate Department of Ecology tate Department of Natural Resources					
Federal	Department o Corps of E U.S. Departm Forest Ser U.S. Departm NOAA, Na U.S. Departm Bonneville Bureau of Geological National P Bureau of	f the Army ingineers ent of Agriculture vice ent of Commerce tional Weather Service ent of Interior Power Administration Reclamation Survey ark Service Indian Affairs					
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*Other organizations and individuals furnish valuable information for the snow survey reports. Their cooperation is gratefully acknowledged.



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