

# GENERAL OUTLOOK

April 1, 2004

## SUMMARY

What a difference a month makes. March 2004 was very pleasant month from a comfort point of view, but from a water supply perspective, March was very dismal. The snowpack in the mountains across the state exhibited a tremendous decline from last month, in some instances exhibiting a record or near record drop from last month. In the mountains of eastern Oregon, the decline in the snowpack from March 1 to April 1 was as much as 78 percent of average. The snowpack as of April 1, in the mountains of Oregon was between 106 percent of average in the Rogue/Umpqua and the Lower Deschutes Basins and 72 percent of average in the Owyhee/Malheur Basins. March precipitation was below average in all basins, ranging from 61 percent of average in the Northeastern corner of the state to 34 percent of average in Lake County. Since the first of the water year on October 1, the total precipitation amounts received in the basins of Oregon were between 102 percent of average in the Umatilla Basin and 55 percent of average in the Klamath Basin. Reservoir storage during March showed a major increase. As of March 31, there was 2,020,400 acre-feet of water stored in 27 major irrigation reservoirs in the state. This represents 81 percent of average and 62 percent of capacity. Last year at this same time there were 1,706,800 acre-feet of water stored. Reflecting the warm temperatures of March, the observed streamflow in some locations of the state was well above average, particularly in Eastern Oregon. The streamflow forecasts for the coming spring and summer months are between 102 percent of average on the Clackamas River at Three Lynx and the inflow into Applegate Reservoir and 41 percent of average on Honey Creek near Plush. Water users in many locations may experience water shortages this season, especially if water available in the irrigation reservoirs becomes limited.

## SNOWPACK

Usually March is one of the months where large amounts of snow water accumulate. March of 2004, was not. At the higher elevations some gains in snow water were observed, however, those gains did not keep up with average. But the biggest impact on the snowpack was the warm March temperatures. The well above average temperatures at many locations began melting the snowpack, with many locations losing the entire snowpack by April 1, nearly a month earlier than normal. As of April 1, the snowpack in the mountains of Oregon was between 106 percent of average in the Rogue/Umpqua and those basins draining the slopes of Mt. Hood to 72 percent of average in the Owyhee/Malheur Basins. The reduction in the snowpack from March 1 to April 1 ranged from a 78 percent reduction in the Owyhee/Malheur Basins and the Harney Basin to a 10 percent reduction near Mt. Hood. In some instances these reductions were record or near record values.

# PRECIPITATION

March was a very dry month in Oregon. The amounts of precipitation that fell during the month ranged from 61 percent of average in the Northeast corner of the state to 34 percent of average in Lake County. This amount of precipitation brings the total for the water year which starts on October 1 to between 99 percent of average in the John Day Basin to 83 percent of average in Lake County. In locations where early spring precipitation is essential, the lack of March precipitation puts many operations into a critical mode. Much will depend on future rainfall.

# RESERVOIRS

During March, many of the major irrigation reservoirs were able to store much of the water that was flowing in the streams due to early snowmelt. During March, 698,300 acre-feet of water were stored, bringing the total amount of water stored in 27 major irrigation reservoirs in the state to 2,020,400 acre-feet. This represents 81 percent of average and 62 percent of the capacity. In eastern Oregon, reservoirs exhibited a 47 percent gain from last month. Last year at this time there were 1,706,800 acre-feet of water stored in the same reservoirs.

# STREAMFLOW

Reflecting the warm temperatures, and the snowmelt from some locations, the observed streamflow in many locations of the state were above average. By the end of the month, much of the flow had receded to near normal levels. In some cases, these observed flows will represent the peak flow for the season. The streamflow forecasts for the coming spring and summer months range between 102 percent of average on the Clackamas River near Three Lynx and the inflow into Applegate Reservoir to 41 percent of average on Honey Creek near Plush. The following table is a summary of selected streamflow forecast points in the state.

STREAM	PERIOD	PERCENT OF AVERAGE
Owyhee Net Inflow	Apr-Jul	56
Grande Ronde at La Grande	Apr-Sep	70
Umatilla at Pendleton	Apr-Sep	88
Deschutes at Benham Falls	Apr-Sep	91
Willamette MF nr Oakridge	Apr-Sep	96
Rogue at Raygold	Apr-Sep	91
Upper Klamath L. Net Inflow	Apr-Sep	82
Silvies nr Burns	Apr-Sep	69

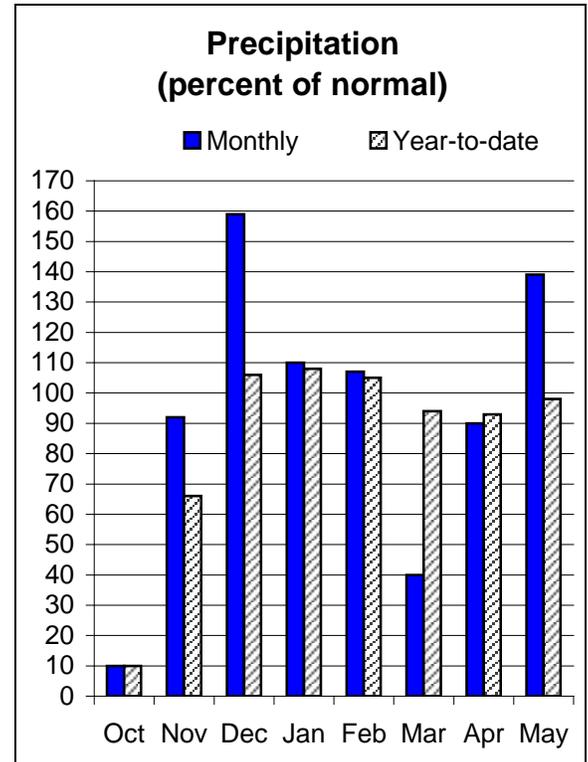
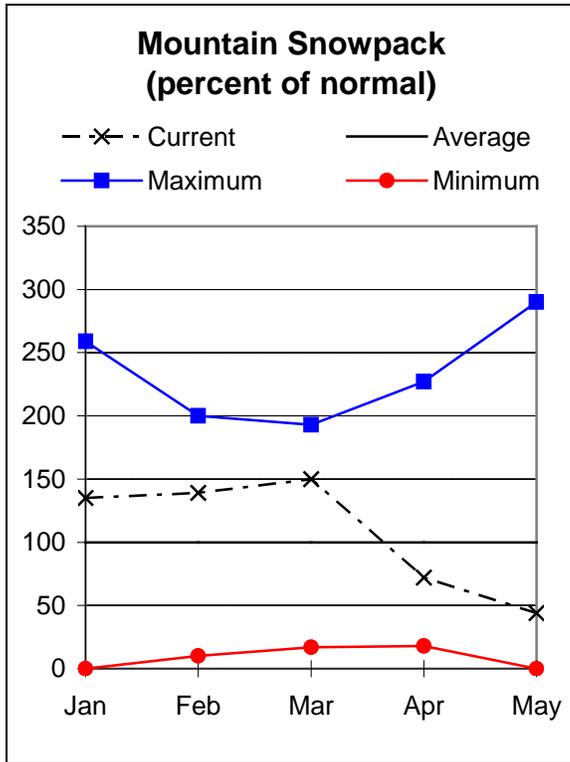
Some of these forecasts assume normal weather conditions will occur from now to the end of the forecast period.

The forecasts in this bulletin are a result of coordinated activity between the Natural Resources Conservation Service and the National Weather Service as an effort to provide the best possible service to water users.

This report contains data furnished by the Oregon Department of Water Resources, U.S. Geological Survey, NOAA National Weather Service and other cooperators.

# OWYHEE AND MALHEUR BASINS

April 1, 2004



## Water Supply Outlook

The snowpack in the basins showed a 78 percent decline from last month, tied with the largest drop in the state. As of April 1, the snowpack was 72 percent of average, the lowest percentage in the state. March precipitation was 40 percent of average, bringing the total since the start of the water year to 94 percent of average. Water stored in the irrigation reservoirs in the basin improved to 67 percent of average. The streamflow forecasts for the coming spring and summer months are between 88 percent of average at Succor Creek and 56 percent of average for the inflow into Owyhee Reservoir. Some water users may experience water shortages this season.

For more information contact your local  
 Natural Resources Conservation Service Office  
 Ontario - (541) 889-7637

OWYHEE AND MALHEUR BASINS  
Streamflow Forecasts - April 1, 2004

Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>						30-Yr Avg. (1000AF)
		=====		Chance Of Exceeding *		=====		
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	
MALHEUR near Drewsey	APR-JUL	36	47	55	74	64	79	74
	APR-SEP	35	46	54	71	63	77	76
NF MALHEUR at Beulah	APR-JUL	34	41	45	75	50	57	60
OWYHEE RESV INFLOW (2)	APR-JUL	135	186	225	56	268	337	400
	APR-SEP	147	200	240	56	284	355	430
OWYHEE near Rome	APR-JUL	128	180	220	58	265	338	380
SUCCOR CK nr Jordan Valley	APR-JUL	4.2	8.0	10.6	88	13.2	17.4	12.1

OWYHEE AND MALHEUR BASINS  
Reservoir Storage (1000 AF) - End of March

Reservoir	Usable Capacity	*** Usable Storage ***		
		This Year	Last Year	Avg
BEULAH RES	60.0	42.0	26.9	47.2
BULLY CREEK	30.0	30.2	16.6	24.1
OWYHEE	715.0	387.2	198.8	593.0
WARMSPRINGS	191.0	79.2	45.6	133.5

OWYHEE AND MALHEUR BASINS  
Watershed Snowpack Analysis - April 1, 2004

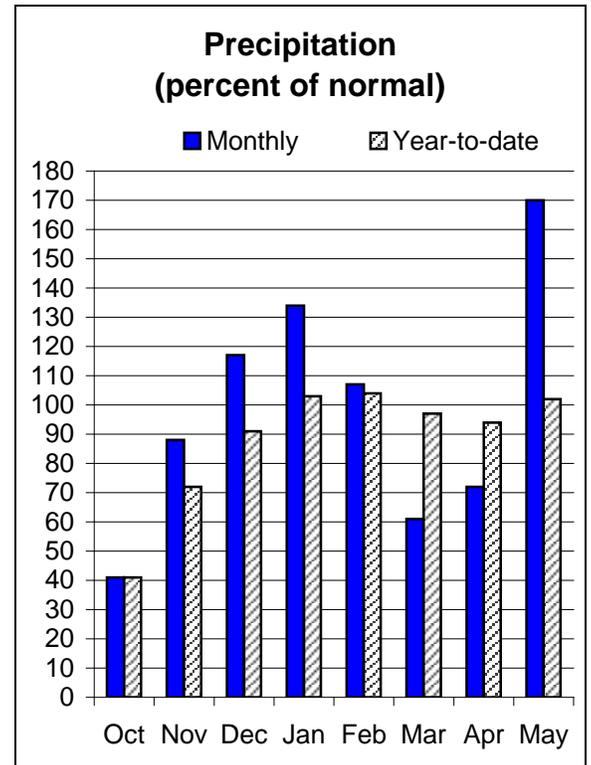
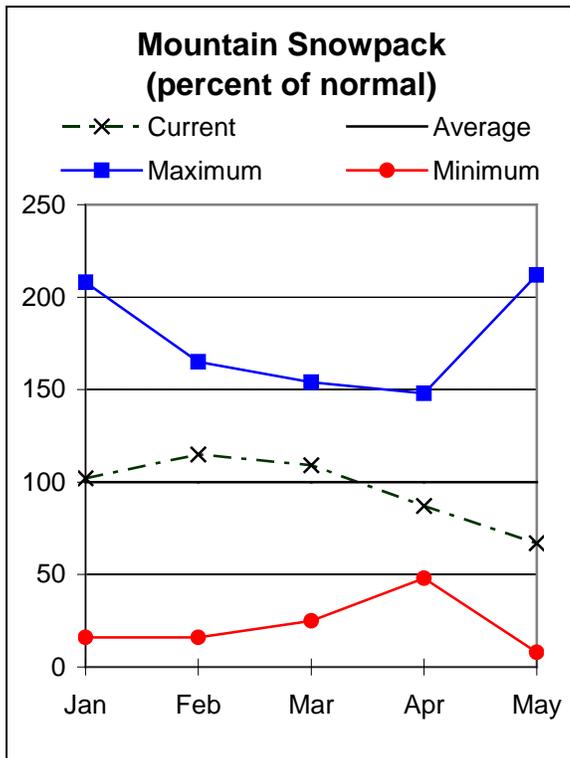
Reservoir	Watershed	Number of Data Sites	This Year as % of	
			Last Yr	Average
BEULAH RES	Owyhee River	20	146	71
BULLY CREEK	Malheur	9	130	66
OWYHEE	Jordan Creek	2	250	88
WARMSPRINGS	Bully Creek	2	0	0

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

- (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.

# BURNT, POWDER, GRAND RONDE, AND IMNAHA BASINS

April 1, 2004



## Water Supply Outlook

The mountain snowpack as of April 1 was 87 percent of average, a 22 percent decline from last month. March precipitation was 61 percent of average, the highest percentage in the state. Since the start of the water year, the total amount of precipitation has been 97 percent of average. Reservoir storage at the end of March was 68 percent of average. The streamflow forecasts for the coming spring and summer months are between 100 percent of average on Hurricane Creek near Joseph and 74 percent of Anthony Creek near North Powder. Some water users may experience water shortages this season.

For more information contact your local  
Natural Resources Conservation Service Office  
Enterprise- (541) 426-4588; Baker City - (541) 523-7121; LaGrande - (541) 963-4178

BURNT, POWDER, PINE, GRANDE RONDE AND IMNAHA BASINS  
Streamflow Forecasts - April 1, 2004

Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>						30-Yr Avg. (1000AF)
		=====		Chance Of Exceeding *		=====		
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	
ANTHONY CK bl NF nr North Powder	APR-JUL	7.4	10.1	12.0	74	13.9	16.6	16.2
BEAR CREEK near Wallowa	APR-SEP	45	55	62	95	69	79	65
BIG CK bl Burn Ck nr Medical Spgs	APR-JUL	6.3	8.1	9.3	78	10.5	12.3	11.9
BURNT near Hereford (2)	APR-JUL	17.0	24	28	76	32	39	37
	APR-SEP	15.0	22	27	69	32	39	39
CATHERINE CREEK near Union	APR-SEP	48	55	60	91	65	72	66
DEER CK nr Sumpster	APR-JUL	5.9	8.9	11.0	71	13.1	16.1	15.4
EAGLE CREEK abv Skull Creek	APR-JUL	118	134	145	90	156	172	161
	APR-SEP	130	147	159	90	171	186	176
GRANDE RONDE at La Grande	APR-JUL	80	107	126	69	145	172	182
	APR-SEP	85	113	132	70	151	179	188
GRANDE RONDE at Troy (1)	APR-JUL	769	1003	1110	87	1217	1450	1270
	APR-SEP	822	1075	1190	87	1305	1560	1370
HURRICANE CREEK near Joseph	APR-SEP	38	40	42	100	44	46	42
IMNAHA at Imnaha	APR-SEP	185	220	245	83	270	305	295
LOSTINE near Lostine	APR-SEP	95	103	109	90	115	123	121
PINE CREEK near Oxbow	APR-JUL	93	110	122	82	134	151	148
POWDER near Sumpster (2)	APR-JUL	37	43	48	83	53	59	58
	APR-SEP	37	44	49	83	54	61	59
EF WALLOWA near Joseph	APR-SEP	9.4	10.2	10.8	97	11.4	12.2	11.1
WALLOWA at Joseph (2)	APR-JUL	54	59	62	97	65	70	64
WOLF CK RESERVOIR inflow	APR-JUN	5.6	8.9	11.1	75	13.3	16.6	14.8

BURNT, POWDER, PINE, GRANDE RONDE AND IMNAHA BASINS  
Reservoir Storage (1000 AF) - End of March

BURNT, POWDER, PINE, GRANDE RONDE AND IMNAHA BASINS  
Watershed Snowpack Analysis - April 1, 2004

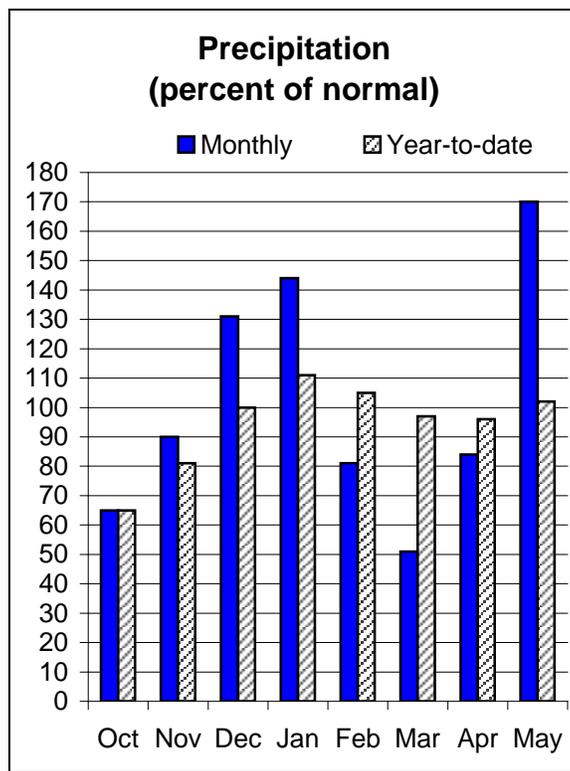
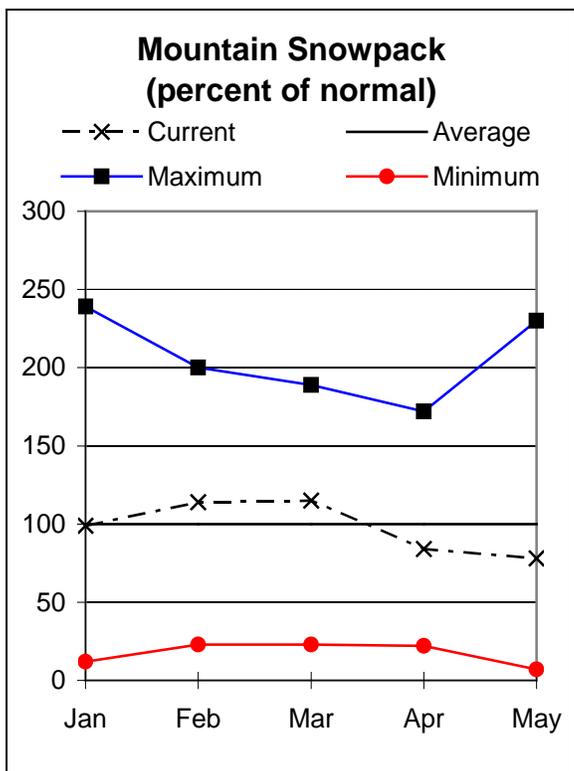
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
PHILLIPS LAKE	73.5	23.6	16.3	50.8	Grande Ronde ab LaGrande	6	141	91
THIEF VALLEY	17.4	13.4	13.5	17.9	Powder River	10	139	91
UNITY	25.2	24.1	22.1	21.1	Wallowa, Imnaha, Catherine	11	97	87
WALLOWA LAKE		NO REPORT			Burnt River	6	159	81
WOLF CREEK		NO REPORT						

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

- (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.

# UMATILLA, WALLA WALLA, WILLOW ROCK, AND LOWER JOHN DAY BASINS

April 1, 2004



## Water Supply Outlook

The snowpack as of April 1 was 84 percent of average, a 31 percent drop from last month. March precipitation was 51 percent of average, bringing the total amount of precipitation since the start of the water year on October 1 to 97 percent of average. Reservoir storage as of March 31 was 102 percent of average, the best percentage in the state. The streamflow forecasts for the coming April through July period are between 90 percent of average on Couse Creek near Milton-Freewater and 66 percent of average on Rhea Creek near Heppner and Rock Creek above Whyte. Some water users may experience water shortages this season.

For more information contact your local  
 Natural Resources Conservation Service Office  
 Pendleton - (541) 278-8049; Heppner - (541) 676-5021; Condon - (541) 384-2671

UMATILLA, WALLA WALLA, WILLOW, ROCK AND LOWER JOHN DAY BASINS  
Streamflow Forecasts - April 1, 2004

Forecast Point	Forecast Period	<<===== Drier =====>>		Future Conditions		===== Wetter =====>>		30-Yr Avg. (1000AF)
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	
BUTTER CK nr Pine City	APR-JUL	3.00	5.20	6.70	71	8.20	10.40	9.40
COUSE CREEK near Milton-Freewater	APR-JUL	3.00	3.30	3.60	90	3.90	4.20	4.00
MCKAY near Pilot Rock	APR-SEP	9.9	18.0	24	89	30	38	27
PINE CREEK near Weston	APR-JUL	2.20	2.50	2.70	90	2.90	3.20	3.00
RHEA CREEK near Heppner	APR-JUL	2.60	3.40	4.00	66	4.60	5.40	6.10
ROCK CREEK above Whyte	APR-JUL	2.3	5.7	8.0	66	11.5	16.7	12.1
UMATILLA near Gibbon	APR-JUL	45	57	65	89	73	85	73
	APR-SEP	50	62	70	89	78	90	79
UMATILLA at Pendleton	APR-JUL	83	111	131	88	153	178	149
	APR-SEP	85	115	136	88	156	186	155
SF WALLA WALLA near Milton-Freewater	APR-SEP	47	52	56	84	60	65	67
WILLOW CREEK LAKE INFLOW	APR-JUL	1.60	3.80	5.20	74	6.60	8.80	7.00

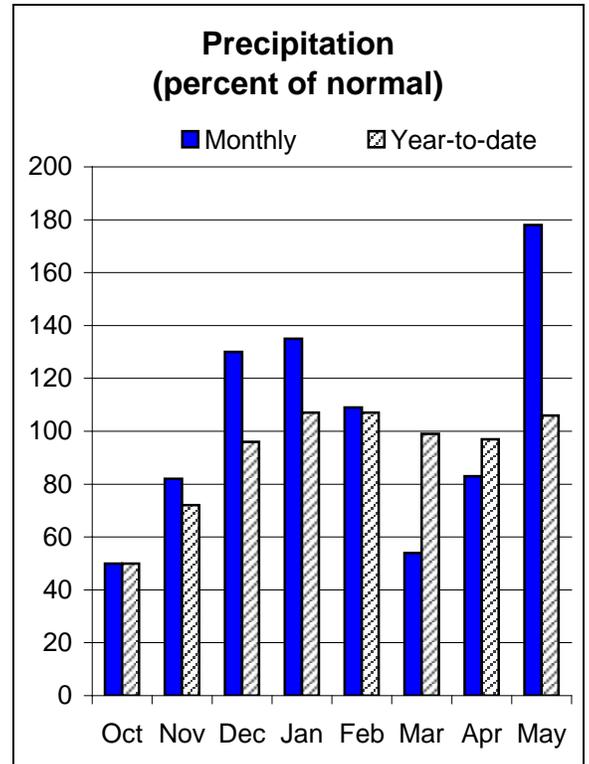
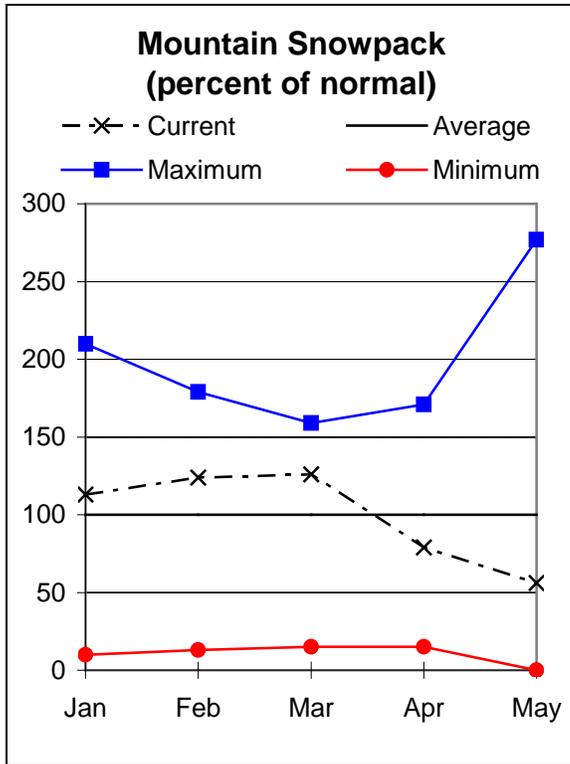
UMATILLA, WALLA WALLA, WILLOW, ROCK AND LOWER JOHN DAY BASINS					UMATILLA, WALLA WALLA, WILLOW, ROCK AND LOWER JOHN DAY BASINS			
Reservoir Storage (1000 AF) - End of March					Watershed Snowpack Analysis - April 1, 2004			
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
COLD SPRINGS	50.0	33.5	28.6	40.1	Walla Walla River	3	150	103
MCKAY	73.8	65.3	62.6	56.6	Umatilla River	6	200	92
WILLOW CREEK	1.8	1.2	0.0	---	McKay Creek	4	589	38

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

- (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.

# UPPER JOHN DAY BASIN

April 1, 2004



## Water Supply Outlook

The snowpack on April 1 was 79 percent of average, a 47 percent drop from last month. March precipitation was 54 percent of average, bringing the total for the water year to 99 percent of average, the highest percentage in the state. The streamflow forecasts for the coming April through July period range from a high of 96 percent of average on Mountain Creek near Mitchell and 48 percent of average on Camas Creek near Ukiah. Some water users may experience water shortages this season, especially if there is no access to stored water.

For more information contact your local  
 Natural Resources Conservation Service Office  
 John Day - (541) 575-0135

=====

UPPER JOHN DAY BASIN  
Streamflow Forecasts - April 1, 2004

=====

Forecast Point	Forecast Period	Future Conditions <<==== Drier ===== Future Conditions ===== Wetter =====>>						30-Yr Avg. (1000AF)
		90% (1000AF)		70% (1000AF)		Chance Of Exceeding * 50% (Most Probable) (1000AF) (% AVG.)		
		30% (1000AF)	10% (1000AF)	30% (1000AF)	10% (1000AF)			
CAMAS CREEK nr Ukiah	APR-JUL	6.6	13.2	17.6	48	22	29	37
MF JOHN DAY at Ritter	APR-SEP	67	87	101	79	115	135	128
NF JOHN DAY at Monument	APR-SEP	325	420	485	79	550	645	615
MOUNTAIN CREEK near Mitchell	APR-JUL	2.30	3.20	3.80	84	4.40	5.30	4.50
STRAWBERRY CREEK nr Prairie City	APR-JUL	5.10	6.10	6.80	96	7.50	8.50	7.10
	APR-SEP	5.50	6.60	7.40	95	8.20	9.30	7.80

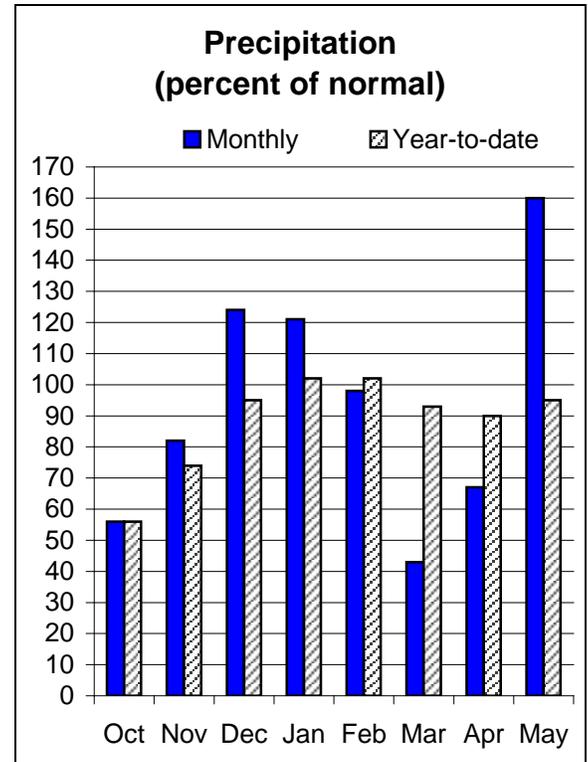
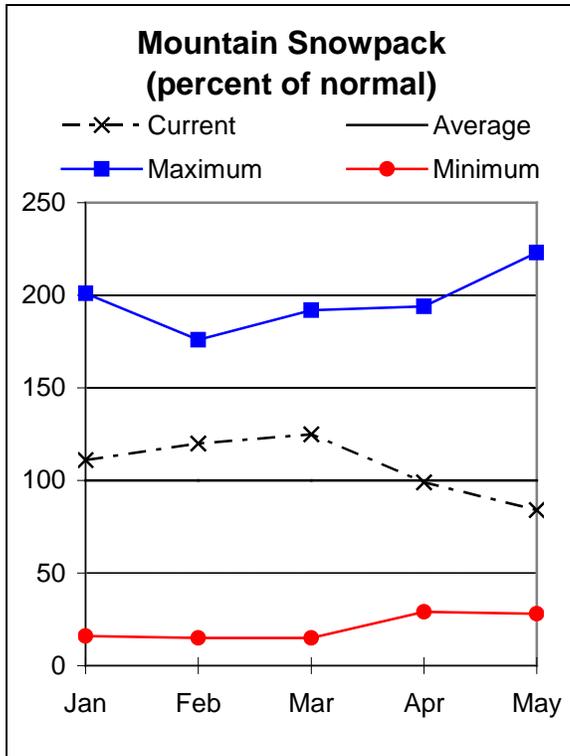
UPPER JOHN DAY BASIN Reservoir Storage (1000 AF) - End of March					UPPER JOHN DAY BASIN Watershed Snowpack Analysis - April 1, 2004			
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
					John Day, North Fork	7	126	74
					John Day above Dayville	3	143	88

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

- (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.

# UPPER DESCHUTES AND CROOKED BASINS

April 1, 2004



## Water Supply Outlook

The snowpack on April 1 was 99 percent of average, a 26 percent decline from last month. March precipitation was 43 percent of average, bringing the total since the start of the water year to 93 percent of average. The irrigation reservoirs of the basin were 96 percent of average at the end of March. The streamflow forecasts for the coming April through September period are ranging between 100 percent of average for the inflow into Ochoco Reservoir and 61 percent of average on Crescent Creek. Some water users may experience water shortages, especially if there is no access to stored water.

For more information contact your local  
 Natural Resources Conservation Service Office  
 Redmond (541) 923-4358

=====

UPPER DESCHUTES AND CROOKED BASINS  
Streamflow Forecasts - April 1, 2004

=====

Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>						30-Yr Avg. (1000AF)
		=====		Chance Of Exceeding *		=====		
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	
BEAVER CREEK near Paulina	APR-SEP	13.1	18.0	22	82	26	31	27
	APR-JUL	13.1	18.0	22	82	26	31	27
CRANE PRAIRIE RESERVOIR INFLOW	APR-JUL	50	54	57	97	60	64	59
	APR-SEP	77	85	90	97	95	103	93
CRESCENT CREEK near Crescent	APR-JUL	6.2	8.8	10.5	61	12.2	14.8	17.2
	APR-SEP	7.4	10.6	12.8	61	15.0	18.2	21
DESCHUTES below Bend (2)	AUG-SEP	87	113	130	77	147	173	168
DESCHUTES at Benham Falls	APR-JUL	300	315	320	91	325	340	350
	APR-SEP	450	470	480	91	490	510	530
DESCHUTES below Snow Creek	APR-JUL	24	29	32	97	35	40	33
	APR-SEP	41	51	57	97	63	73	59
LITTLE DESCHUTES near La Pine	APR-JUL	31	39	45	63	51	59	71
	APR-SEP	35	45	51	64	57	67	80
NF CROOKED blw Lookout Ck	APR-JUL	5.00	6.30	7.30	78	8.50	10.40	9.40
OCHOCO RESERVOIR INFLOW	APR-JUL	10.8	17.0	22	100	27	33	22
	APR-SEP	10.8	17.0	22	100	27	33	22
PRINEVILLE RESERVOIR INFLOW	APR-JUL	45	60	72	67	85	108	108
	APR-SEP	25	54	73	67	92	121	109
SQUAW CREEK near Sisters	APR-JUL	29	33	35	97	37	41	36
	APR-SEP	41	45	48	98	51	55	49
TUMALO CREEK near Bend	APR-JUL	30	33	36	97	39	42	37
	APR-SEP	36	41	44	98	47	52	45
WICKIUP RESERVOIR INFLOW	APR-JUL	142	148	152	89	156	162	171
	APR-SEP	245	255	260	91	265	275	285

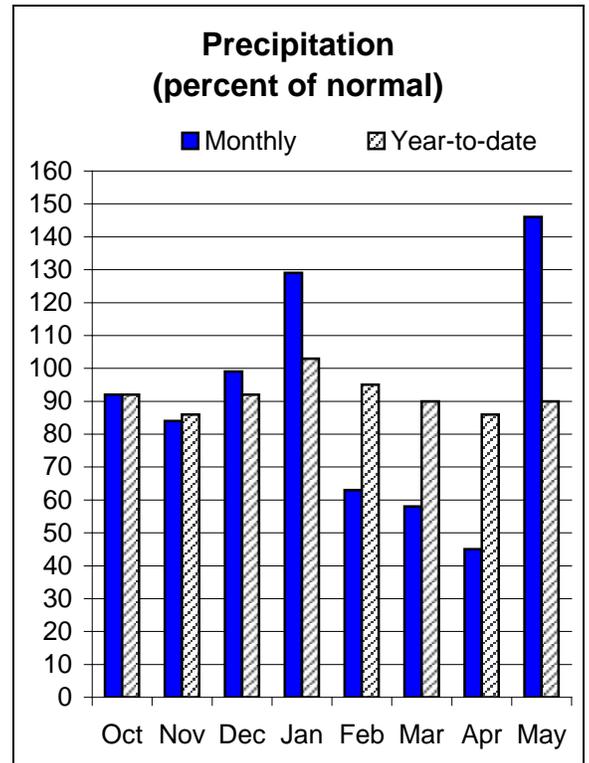
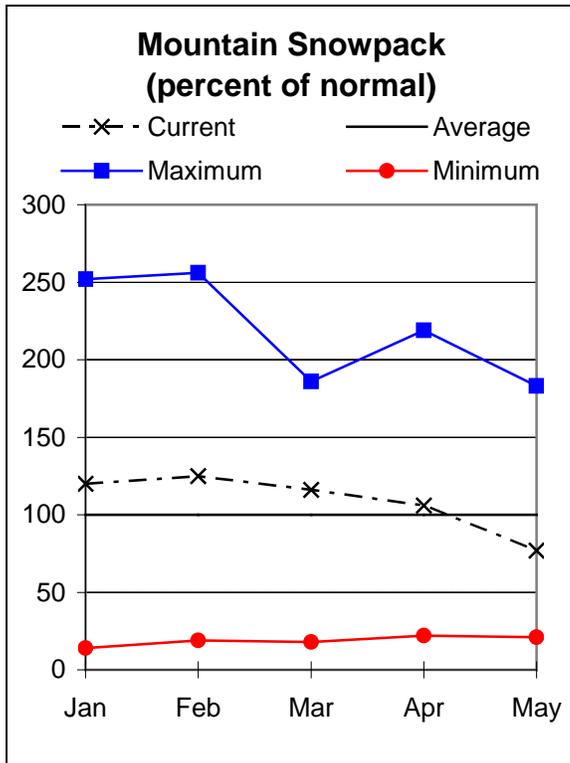
UPPER DESCHUTES AND CROOKED BASINS Reservoir Storage (1000 AF) - End of March					UPPER DESCHUTES AND CROOKED BASINS Watershed Snowpack Analysis - April 1, 2004			
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
CRANE PRAIRIE	55.3	37.7	42.9	43.9	Crooked, Ochoco	3	238	80
CRESCENT LAKE	86.9	34.1	46.8	53.5	Deschutes above Wickiup	3	185	115
OCHOCO	47.5	41.6	23.7	32.6	Little Deschutes	4	180	107
PRINEVILLE	153.0	147.2	123.2	132.9	Tumalo and Squaw Creeks	2	194	105
WICKIUP	200.0	174.7	182.0	189.7				

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

- (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.

# HOOD, MILE CREEKS, AND LOWER DESCHUTES BASINS

April 1, 2004



## Water Supply Outlook

The snowpack as of April 1 was 106 percent, tied with the Rogue/Umpqua area as the highest percentage in the state. Still, this is a 10 percent decline since last month. March precipitation was 58 percent of average, bringing the total precipitation since the start of the water year to 90 percent of average. The streamflow forecasts range from 89 percent of average on the West Fork of the Hood River to 86 percent of average on the Hood River at Tucker Bridge. Careful use of water will help insure that supplies will last the season.

For more information contact your local  
Natural Resources Conservation Service Office  
The Dalles - (541) 296-6178

HOOD, MILE CREEKS AND LOWER DESCHUTES BASINS  
Streamflow Forecasts - April 1, 2004

Forecast Point	Forecast Period	Future Conditions						30-Yr Avg. (1000AF)
		<<===== Drier =====>>		=====		>>===== Wetter =====>>		
		90% (1000AF)	70% (1000AF)	Chance Of Exceeding * 50% (Most Probable) (1000AF) (% AVG.)		30% (1000AF)	10% (1000AF)	
HOOD at Tucker Bridge	APR-JUL	155	179	195	86	211	235	228
	APR-SEP	194	218	235	87	252	276	271
WF HOOD near Dee	APR-JUL	84	98	107	88	116	130	121
	APR-SEP	101	115	125	89	135	149	141
WHITE below Tygh Valley	APR-JUL	73	87	97	88	107	121	110
	APR-SEP	84	99	109	88	119	134	124

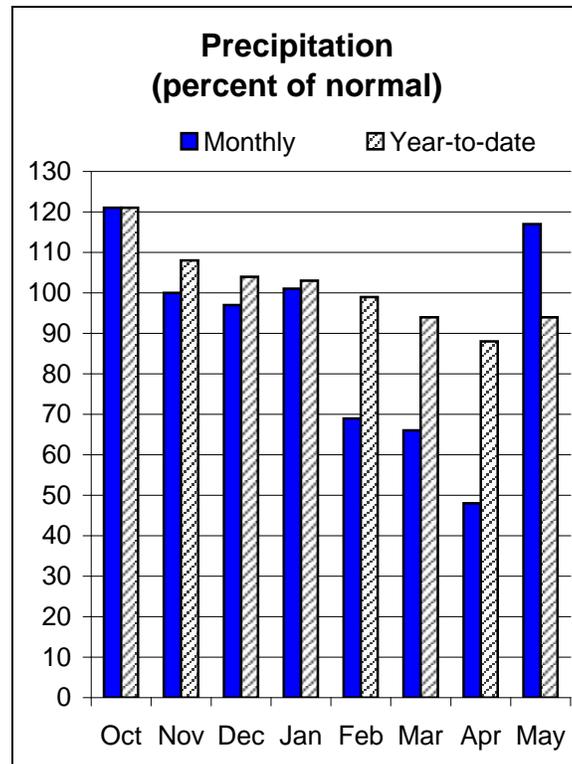
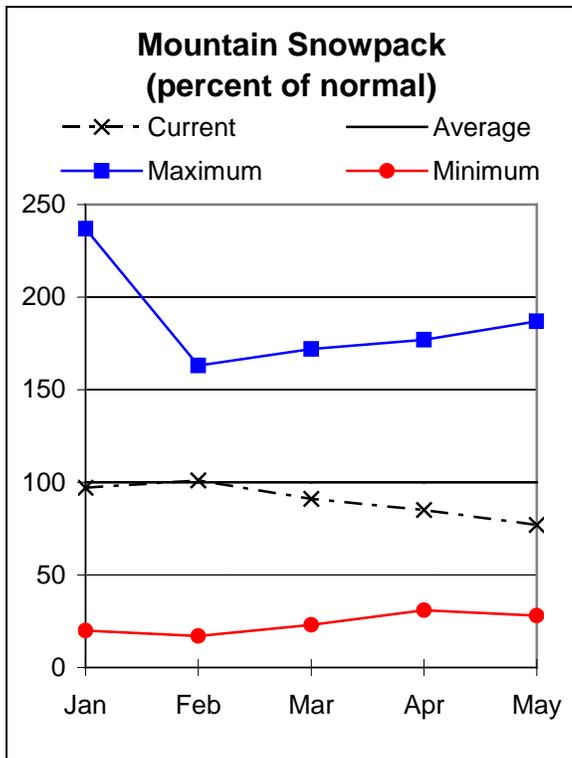
HOOD, MILE CREEKS AND LOWER DESCHUTES BASINS Reservoir Storage (1000 AF) - End of March					HOOD, MILE CREEKS AND LOWER DESCHUTES BASINS Watershed Snowpack Analysis - April 1, 2004			
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
CLEAR LAKE (WASCO)		NO REPORT			Hood River	7	158	101
					Mile Creeks	1	235	147
					White River	3	147	99

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

- (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.

# LOWER COLUMBIA BASIN

April 1, 2004



## Water Supply Outlook

The snowpack in the Sandy River Drainage was 109 percent of average. March precipitation was 61 percent of average, bringing the total for the water year to 92 percent of average. The streamflow forecast on the Sandy River for the April through September period is 92 percent of average. When considering the entire Columbia River Basin, including Canada, the snowpack on April 1 was 85 percent of average, a 6 percent drop across the entire basin. March precipitation was 66 percent of average, which brings the total for the water year to 94 percent of average. The forecasted flow on the Columbia River measured at The Dalles for the April through September period is 79 percent of average. Some water uses may be limited this season on the main stem of the Columbia River.

For more information contact your local  
 Natural Resources Conservation Service Office  
 Oregon City - (503) 656-3499

=====

LOWER COLUMBIA BASIN  
Streamflow Forecasts - April 1, 2004

=====

Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>						30-Yr Avg. (1000AF)
		=====		Chance Of Exceeding *		=====		
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	
COLUMBIA R. at The Dalles (2)	APR-JUL	55563	62254	66800	79	71350	78040	84600
	APR-SEP	67308	73555	77800	79	82040	88290	98600
SANDY near Marmot	APR-JUL	220	259	285	91	311	350	313
	APR-SEP	266	307	335	92	363	404	363

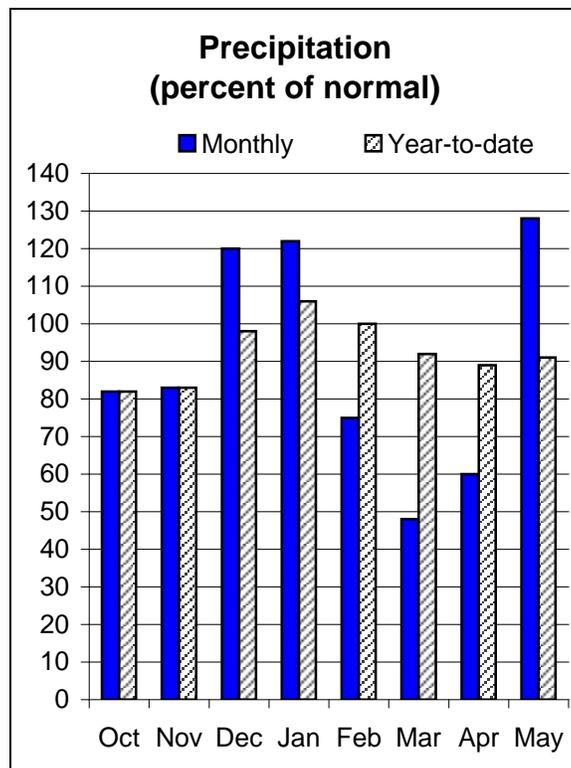
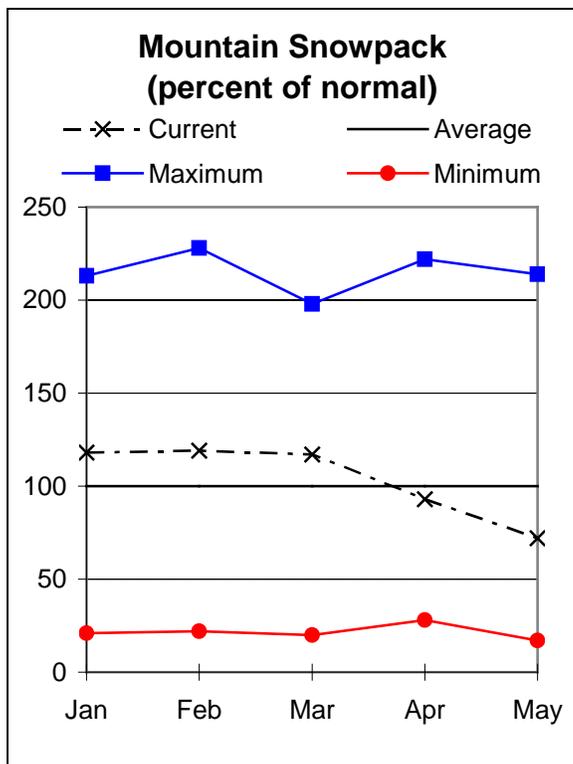
LOWER COLUMBIA BASIN Reservoir Storage (1000 AF) - End of March					LOWER COLUMBIA BASIN Watershed Snowpack Analysis - April 1, 2004			
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
					Sandy River	5	175	108

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

- (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.

# WILLAMETTE BASIN

April, 1 2004



## Water Supply Outlook

April 1 snowpack in the mountains of the Willamette Basin was 93 percent of average, a 24 percent drop from last month. March precipitation was 48 percent of average, bringing the total since the start of the water year to 92 percent of average. Water stored in Scoggins and Timothy Reservoirs was 90 percent of average as of March 31. The streamflow forecasts for the coming spring and summer months are between 102 percent of average on the Clackamas River at Three Lynx and 74 percent of average for the inflow into Detroit Reservoir. Most users should have adequate water supplies, but careful water management techniques may be required for others to make the supplies last.

For more information contact your local  
 Natural Resources Conservation Service Office  
 Eugene - (541) 465-6436; Portland - (503) 231-2270; Tangent - (541) 967-5925  
 Oregon City - (503) 656-3499; Hillsboro - (503) 648-3174; McMinnville - (503) 472-1474  
 Salem - (503) 399-5746; Dallas - (503) 623-5534

WILLAMETTE BASIN  
Streamflow Forecasts - April 1, 2004

Forecast Point	Forecast Period	Future Conditions					30-Yr Avg. (1000AF)
		<<==== Drier =====		===== Chance Of Exceeding * 50% (Most Probable) (1000AF) (% AVG.)		===== Wetter =====>>	
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	30% (1000AF)	10% (1000AF)	
BLUE RIVER LAKE INFLOW (1,2)	APR-MAY	36	52	60	90	68	67
	APR-SEP	40	63	74	86	85	86
CLACKAMAS at Estacada (2)	APR-JUL	519	588	635	99	682	640
	APR-SEP	611	685	735	98	785	748
CLACKAMAS above Three Lynx (2)	APR-JUL	413	456	485	102	514	474
	APR-SEP	498	544	575	102	606	562
COTTAGE GROVE LAKE INFLOW (1,2)	APR-MAY	10.2	25	31	94	38	33
	APR-SEP	10.2	30	39	91	48	43
COUGAR LAKE INFLOW (1,2)	APR-MAY	94	122	135	96	148	141
	APR-SEP	143	182	200	87	218	230
DETROIT LAKE INFLOW (1,2)	APR-MAY	175	241	271	78	301	349
	APR-JUL	249	346	390	74	434	528
	APR-SEP	307	409	455	74	501	616
DORENA LAKE INFLOW (1,2)	APR-MAY	31	78	100	93	122	108
	APR-SEP	36	90	114	93	138	122
FALL CREEK LAKE INFLOW (1,2)	APR-MAY	32	65	80	95	95	84
FERN RIDGE LAKE INFLOW (1,2)	APR-MAY	3.3	25	35	76	45	46
	APR-SEP	0.5	5.9	19.0	70	32	27
FOSTER LAKE INFLOW (1,2)	APR-MAY	178	282	330	89	378	371
	APR-JUL	202	352	420	86	488	490
	APR-SEP	227	380	450	85	520	527
GREEN PETER LAKE INFLOW (1,2)	APR-MAY	125	190	220	89	250	248
	APR-JUL	138	236	280	86	324	327
	APR-SEP	157	255	300	85	345	354
HILLS CREEK LAKE INFLOW (1,2)	APR-MAY	126	167	186	100	205	186
	APR-JUL	180	242	270	98	298	277
	JUN-OCT	116	140	150	92	160	164
	APR-SEP	222	279	305	95	331	320
LITTLE NORTH SANTIAM (1)	APR-JUL	50	90	108	81	126	133
	APR-SEP	54	96	115	80	134	143
LOOKOUT POINT LAKE INFLOW (1,2)	APR-MAY	337	442	490	100	538	492
	APR-JUL	461	622	695	96	768	726
	JUN-OCT	274	350	385	96	420	402
	APR-SEP	559	721	795	96	869	828
McKENZIE below Trail Bridge (2)	APR-JUL	199	218	230	87	242	266
	APR-SEP	289	310	325	80	340	404
McKENZIE near Vida (1,2)	APR-JUL	594	763	840	86	917	977
	APR-SEP	790	969	1050	87	1131	1201
MOHAWK near Springfield	APR-JUL	25	48	63	80	79	79
OAK GROVE FORK above Power Intake	APR-JUL	113	123	130	100	137	130
	APR-SEP	145	157	165	99	173	167
NORTH SANTIAM at Mehama (1,2)	APR-JUL	371	529	600	82	671	732
	APR-SEP	472	636	710	85	784	834
SOUTH SANTIAM at Waterloo (2)	APR-JUL	300	413	490	89	567	549
	APR-SEP	338	452	530	90	608	587
SCOGGINS CREEK near Gaston (2)	APR-JUL	4.9	9.2	12.2	95	15.2	12.9
THOMAS CREEK near Scio	APR-JUL	36	52	63	84	74	75
MF WILLAMETTE below NF (1,2)	JUN-OCT	289	348	375	96	402	391
	APR-JUL	491	628	690	99	752	698
	APR-MAY	331	427	470	100	513	471
	APR-SEP	564	704	768	96	832	798
WILLAMETTE at Salem (1,2)	APR-MAY	1844	2563	2890	92	3217	3140
	APR-JUL	2330	3389	3870	89	4351	4347
	APR-SEP	2669	3729	4210	88	4691	4804

WILLAMETTE BASIN Reservoir Storage (1000 AF) - End of March					WILLAMETTE BASIN Watershed Snowpack Analysis - April 1, 2004			
Reservoir	Usable Capacity	*** Usable Storage This Year	*** Usable Storage Last Year	*** Avg	Watershed	Number of Data Sites	This Year as % of Last Yr	% of Average
BLUE RIVER **	85.5	56.6	55.7	52.6	Clackamas River	4	287	93
COTTAGE GROVE **	29.8	16.6	16.7	18.5	McKenzie River	5	167	88
COUGAR **	155.2	0.0	0.0	150.5	Row River	1	529	96
DETROIT **	300.7	225.2	214.1	222.0	Santiam River	6	200	74
DORENA **	70.5	38.4	38.1	45.3	Willamette, Middle Fork	6	224	111
FALL CREEK **	115.5	73.9	0.0	71.1				
FERN RIDGE **	109.6	62.4	75.0	77.1				
FOSTER **	29.7	15.8	14.8	12.4				
GREEN PETER **	268.2	190.8	194.8	236.2				
HILLS CREEK **	200.2	142.6	146.1	169.1				
LOOKOUT POINT **	337.0	236.2	254.0	188.7				
TIMOTHY LAKE	61.7	51.2	62.1	51.6				
HENRY HAGG LAKE	53.0	52.1	51.7	49.8				

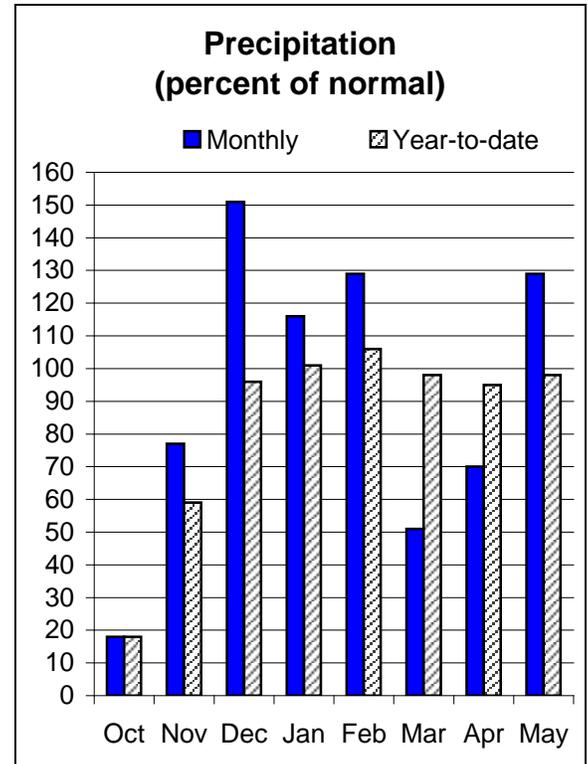
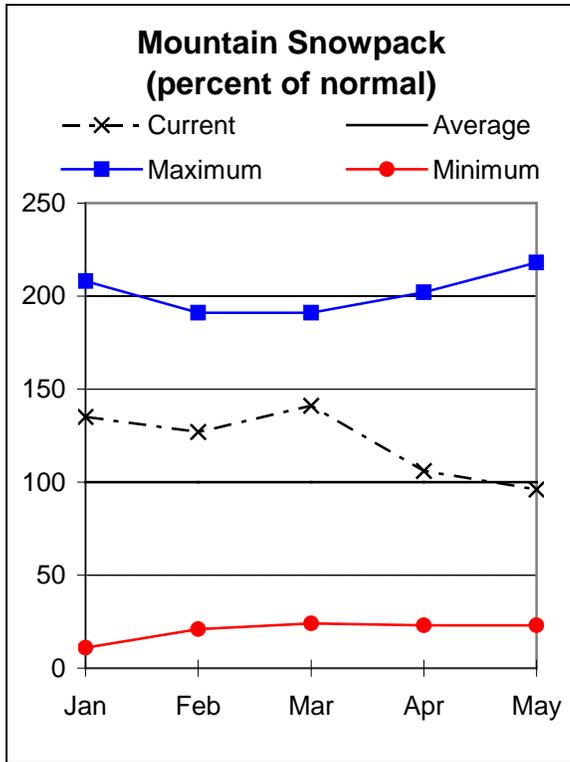
\* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

(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.

# ROGUE AND UMPQUA BASINS

April 1, 2004



## Water Supply Outlook

The snowpack in the Rogue and Umpqua Basins was 106 percent of average, tied with the area surrounding Mt. Hood as the highest snowpack percentage in the state. Despite having the highest percentages in the state, there was still a 35 percent drop in snowpack from last month. March precipitation was 51 percent of average, bringing the total precipitation since the start of the water year to 98 percent of average. As of March 31, water stored in the irrigation reservoirs of the basin was 70 percent of average. The streamflow forecasts for the coming April through September period are between 103 percent of average for the inflow into Applegate Reservoir and 72 percent of average on Cow Creek. Some water users may experience water shortages this season.

For more information contact your local  
 Natural Resources Conservation Service Office  
 Roseburg - (541) 673-8316; Medford - (541) 776-4267

ROGUE AND UMPQUA BASINS  
Streamflow Forecasts - April 1, 2004

Forecast Point	Forecast Period	Future Conditions						30-Yr Avg. (1000AF)
		<<===== Drier =====>>		===== Wetter =====>>				
		90% (1000AF)	70% (1000AF)	50% (1000AF)	10% (1000AF)	30% (1000AF)	10% (1000AF)	
		Chance Of Exceeding *						
				50% (Most Probable) (% AVG.)				
APPLEGATE LAKE Net Inflow (2)	APR-JUL	86	103	114	102	125	142	112
	APR-SEP	94	111	122	103	133	150	119
SF BIG BUTTE CK nr Butte Falls	APR-JUL	20	26	30	88	34	40	34
CLEARWATER above Trap Creek (2)	APR-SEP	50	57	62	93	67	74	67
COW CREEK near Azalea	APR-JUL	5.9	9.8	12.5	76	15.2	19.1	16.5
	APR-SEP	6.0	10.0	12.7	72	15.4	19.4	17.7
FOURMILE LAKE net Inflow (2)	APR-JUL	3.26	4.42	5.20	90	5.98	7.14	5.80
	APR-SEP	4.26	5.42	6.20	87	6.98	8.14	7.10
GRAVE CREEK at Pease Bridge	APR-JUL	2.71	4.67	6.00	82	7.33	9.29	7.30
HYATT PRAIRIE RES net Inflow (2)	APR-JUL	2.10	3.35	4.20	88	5.05	6.30	4.80
ILLINOIS R near Kerby	APR-JUL	75	114	140	78	166	205	179
	APR-SEP	83	122	148	80	174	213	186
NF LITTLE BUTTE CK nr Lakecreek (2)	APR-SEP	8.9	11.4	13.0	97	14.6	17.1	13.4
SF LITTLE BUTTE CK nr Lakecreek (2)	APR-SEP	20	26	30	94	34	40	32
LOST CREEK LAKE INFLOW (2)	APR-JUL	423	463	490	93	517	557	530
	APR-SEP	525	570	600	90	630	675	665
RED BLANKET CK nr Prospect	APR-JUL	22	28	32	94	36	42	34
ROGUE above Prospect	APR-JUL	195	216	230	94	244	265	245
	APR-SEP	246	269	285	95	301	324	300
SF ROGUE near Prospect (2)	APR-JUL	43	51	56	97	61	69	58
	APR-SEP	53	62	68	97	74	83	70
ROGUE R at Raygold (2)	APR-JUL	577	632	670	92	708	763	730
	APR-SEP	711	770	810	91	850	909	890
ROGUE R at Grants Pass (2)	APR-JUL	568	638	685	93	732	802	740
	APR-SEP	702	778	830	94	882	958	885
SUCKER CK blw Little Grayback	APR-JUL	25	35	42	81	49	59	52
	APR-SEP	27	38	45	80	52	63	56
NORTH UMPQUA nr Toketee Falls (2)	APR-SEP	111	128	140	93	152	169	151
NORTH UMPQUA at Winchester	APR-JUL	495	626	715	90	804	935	795
SOUTH UMPQUA near Brockway	APR-JUL	109	231	315	79	399	521	400
SOUTH UMPQUA at Tiller	APR-JUL	115	157	186	96	215	257	193
	APR-SEP	125	167	196	96	225	267	205

ROGUE AND UMPQUA BASINS  
Reservoir Storage (1000 AF) - End of March

ROGUE AND UMPQUA BASINS  
Watershed Snowpack Analysis - April 1, 2004

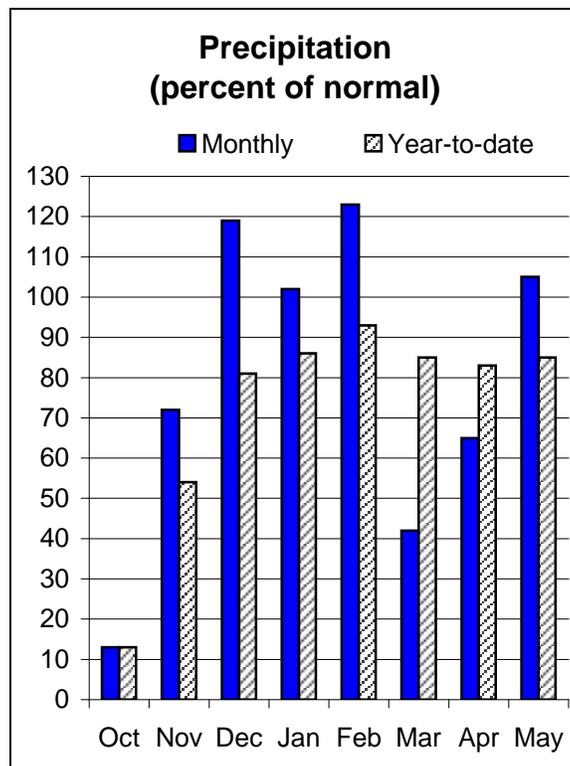
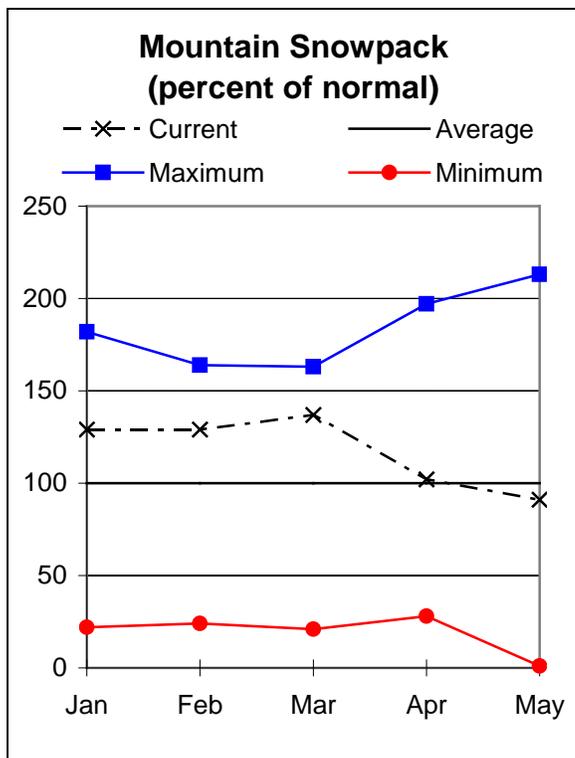
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
APPLEGATE	75.2	40.7	41.3	46.9	Applegate River	6	124	113
EMIGRANT LAKE	39.0	36.9	37.7	34.4	Bear Creek	5	115	109
FISH LAKE	8.0	4.1	3.9	5.8	Butte Creek	6	224	96
FOURMILE LAKE	16.1	2.3	3.8	10.2	Illinois River	4	217	121
HOWARD PRAIRIE	60.0	39.7	28.5	44.9	North Umpqua River	9	264	97
HYATT PRAIRIE	16.1	14.6	9.6	12.3	Rogue River	22	150	107
LOST CREEK **	315.0	136.1	144.7	263.2				

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

- (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.

# KLAMATH BASIN

April 1, 2004



## Water Supply Outlook

The snowpack in the mountains surrounding the Klamath Basin was 102 percent of average as of April 1. This is a 35 percent drop from last month. March precipitation was 42 percent of average, bringing the total precipitation since the start of the water year on October 1 to 85 percent of average. Water stored in the major irrigation reservoirs of the basin was 55 percent of average, the lowest percentage in the state. The streamflow forecasts for the coming spring and summer months are between 82 percent of average for the inflow into Upper Klamath Lake and 47 percent of average for the inflow into Gerber Reservoir. Many water users will experience water shortage this season, given the current conditions.

For more information contact your local  
 Natural Resources Conservation Service Office  
 Klamath Falls - (541) 883-6932

=====

KLAMATH BASIN  
Streamflow Forecasts - April 1, 2004

=====

Forecast Point	Forecast Period	Future Conditions						30-Yr Avg. (1000AF)
		<<===== Drier =====>>		=====		===== Wetter =====>>		
		90% (1000AF)	70% (1000AF)	Chance Of Exceeding * 50% (Most Probable) (1000AF) (% AVG.)		30% (1000AF)	10% (1000AF)	
CLEAR LK Net Inflow (2)	APR-JUL	0.8	15.2	25	61	35	49	41
GERBER RESERVOIR net Inflow (2)	APR-JUL	0.3	4.4	8.0	47	11.6	16.9	16.9
SPRAGUE R nr Chiloquin	APR-JUL	98	129	150	73	171	202	205
	APR-SEP	116	148	170	74	192	224	230
UPPER KLAMATH LK net Inflow (1)	APR-JUL	187	292	340	80	388	493	425
	APR-SEP	252	368	420	82	472	588	515
WILLIAMSON R nr Chiloquin	APR-JUL	151	207	245	77	283	339	320
	APR-SEP	202	263	305	79	347	408	385

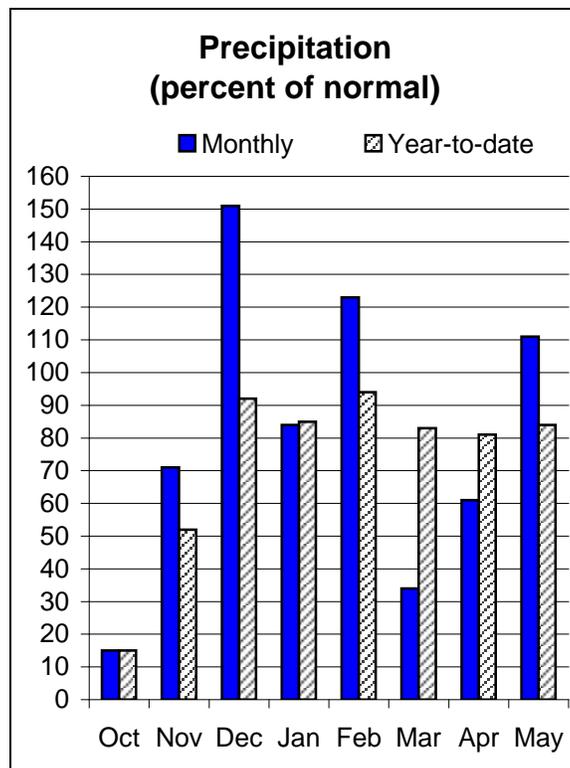
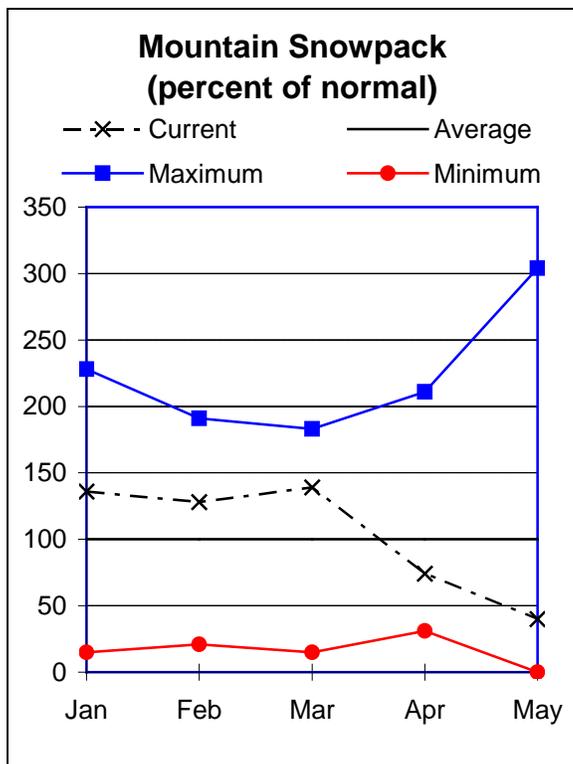
KLAMATH BASIN Reservoir Storage (1000 AF) - End of March					KLAMATH BASIN Watershed Snowpack Analysis - April 1, 2004			
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
CLEAR LAKE (CALIF)	513.3	131.4	113.3	248.9	Lost River	5	0	0
GERBER	94.3	49.6	33.0	66.6	Sprague River	6	159	83
UPPER KLAMATH LAKE	523.7	441.1	476.7	457.8	Upper Klamath Lake	13	158	104
					Williamson River	5	147	105

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

- (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.

# LAKE COUNTY AND GOOSE LAKE

April 1, 2004



## Water Supply Outlook

The snowpack as of April 1 was 74 percent of average, a 65 percent drop from last month. March precipitation was 34 percent of average, the lowest percentage in the state. Since the start of the water year, the total precipitation has been 83 percent of average, also the lowest percentage in the state. Water stored in the irrigation reservoirs of the basin was 71 percent of average as of March 31. The streamflow forecasts for the coming April through July period range between 74 percent of average on Cottonwood Creek and 41 percent of average on Honey Creek. Many water users will experience water shortages this season, given the current conditions.

For more information contact your local  
 Natural Resources Conservation Service Office  
 Lakeview - (541) 947-2202

LAKE COUNTY AND GOOSE LAKE BASINS  
Streamflow Forecasts - April 1, 2004

Forecast Point	Forecast Period	<<===== Drier =====>>		Future Conditions		===== Wetter =====>>		30-Yr Avg. (1000AF)
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	
BRIDGE CK nr Spahr Ranch	APR-JUL	0.22	0.92	1.40	44	1.88	2.58	3.20
CHEWAUCAN R nr Paisley	APR-JUL	30	42	50	68	58	70	74
	APR-SEP	35	47	55	71	63	75	78
COTTONWOOD CK nr Lakeview (2)	APR-JUL	4.26	5.54	6.40	74	7.26	8.54	8.70
DEEP CK abv Adel	APR-JUL	32	41	47	70	53	62	67
	APR-SEP	33	42	48	70	54	63	69
DREWS RESERVOIR net Inflow (2)	APR-JUL	3.3	9.7	14.0	67	18.3	25	21
HONEY CK nr Plush	APR-JUL	0.8	4.3	6.7	41	9.1	12.6	16.4
	APR-SEP	6.6	6.7	6.8	41	6.9	7.0	16.6
SILVER CK nr Silver Lk	APR-JUL	0.8	3.8	5.8	40	7.8	10.8	14.5
TWENTYMILE CK nr Adel	APR-JUL	1.5	5.9	9.0	53	12.1	16.5	16.9
	APR-SEP	1.8	6.3	9.4	54	12.5	17.0	17.4

LAKE COUNTY AND GOOSE LAKE BASINS  
Reservoir Storage (1000 AF) - End of March

LAKE COUNTY AND GOOSE LAKE BASINS  
Watershed Snowpack Analysis - April 1, 2004

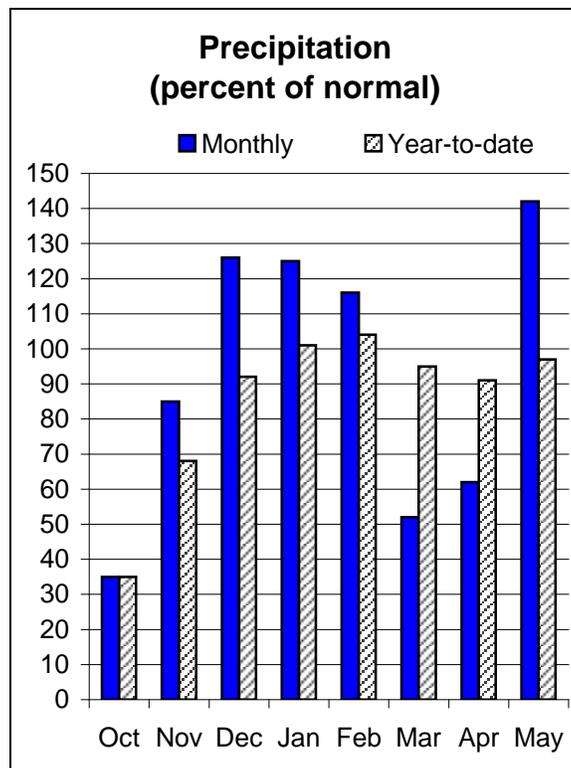
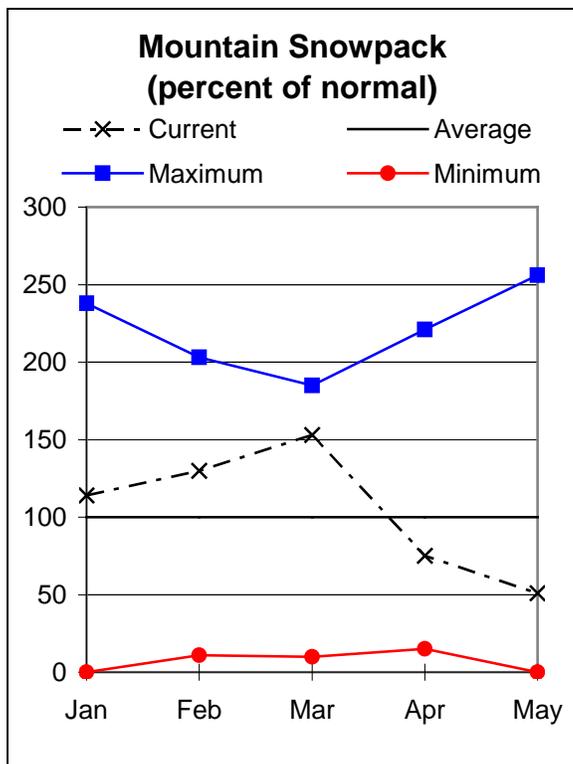
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
COTTONWOOD	8.7	9.3	7.5	5.7	Chewaucan River	5	134	81
DREWS	63.0	35.0	22.6	47.9	Deep Creek	4	168	95
THOMPSON VALLEY	18.4	19.7	6.8	13.2	Drew Creek	5	121	39
					Honey Creek	3	135	80
					Silver Creek (Lake Co.)	4	151	75
					Twentymile Creek	5	163	91

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

- (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.

# HARNEY BASIN

April 1, 2004



## Water Supply Outlook

The snowpack in the Harney Basin was 75 percent of average. This represents a 78 percent drop, tied with the Owyhee/Malheur Basins as the biggest drop in the snowpack in the state. March precipitation was 52 percent of average, bringing the total since the start of the water year on October 1, to 95 percent of average. The streamflow forecasts for the coming spring and summer months range between 79 percent of average on the Donner Und Blitzen and 62 percent of average on Silver Creek near Riley. Many water users will experience water shortages given the current conditions.

For more information contact your local  
 Natural Resources Conservation Service Office  
 Hines - (541) 573-6446

=====

HARNEY BASIN  
Streamflow Forecasts - April 1, 2004

=====

Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>						30-Yr Avg. (1000AF)
		=====		Chance Of Exceeding *		=====		
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	
DONNER und BLITZEN R nr Frenchglen	APR-JUL	35	44	50	78	56	65	64
	APR-SEP	39	49	55	79	62	71	70
SILVER CK nr Riley	APR-JUL	6.4	9.6	11.8	62	14.0	17.2	19.0
SILVIES R nr Burns	APR-JUL	16.7	46	66	69	86	115	96
	APR-SEP	17.8	48	68	69	88	118	99
TROUT CK nr Denio	APR-JUL	2.75	4.69	6.00	63	7.31	9.25	9.60
	APR-SEP	3.1	5.1	6.5	63	7.9	9.9	10.3

HARNEY BASIN Reservoir Storage (1000 AF) - End of March					HARNEY BASIN Watershed Snowpack Analysis - April 1, 2004			
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
					Donner und Blitzen River	4	162	86
					Silver Creek (Harney Co)	1	0	0
					Silvies River	5	144	70
					Trout Creek	4	89	65

=====

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

(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.