

**NORTHWEST POWER AND CONSERVATION COUNCIL MEETING
MAY 13, 2004
2004 WATER CONDITIONS AND HYDRO OPERATIONS**

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Water Supply

The May final water supply forecast as produced by the National Weather Service River Forecast Center and the Corps final forecasts for Libby and Dworshak have been completed. The volume forecasts are below normal for all of the Columbia Basin. The observed volumes for 2001 and 2003 and forecast volumes (in millions of acre-feet) at selected basins are:

<u>Project</u>	Jan-Jul 01		Jan-Jul 03		Jan-Jul 04	
	<u>Obsrvd</u>	<u>%</u>	<u>Obsrvd</u>	<u>%</u>	<u>Fcst</u>	<u>%</u>
Libby	3.34	52	5.2	82	4.96	79
Albeni Falls	7.74	50	12.0	78	11.0	72
Grand Coulee	37.39	59	54.2	86	52.2	83
Dworshak	1.82	51	3.6	100	2.7	76
Lower Granite	14.38	48	23.8	79	18.8	63
The Dalles	58.19	55	87.7	82	79.5	74

At Libby the April through August runoff in 2001 was the lowest on record for the period 1928-88 1944 had been lowest at 3.325 MAF. Albeni Falls is fourth lowest, Grand Coulee second lowest, Dworshak fifth lowest, and Lower Granite and The Dalles second lowest.

See 2 graphs on deteriorating water supply forecasts for The Dalles and Lower Granite

March and April Precipitation and Unregulated Inflow at Projects

LOCATION	MAR- PRECIP	MAR- INFLOW	APR- PRECIP	APR- INFLOW	ACCUM- PRECIP 04WY	ACCUM- INFLOW 04WY
Grand Coulee	83%	81%	77%	113%	92%	95%
Lower Granite	40%	77%	70%	73%	85%	67%
The Dalles	66%	83%	72%	97%	92%	86%
Libby	77%	89%	72%	121%	93%	95%
Pend Oreille	64%	88%	68%	114%	89%	85%

Project Operations

Libby: Lake Kooconusa was at elevation 2419.2' (39.8' from full) on May 11 and is filling. Project releases are currently at minimum flow, 4,000 cubic feet per second (cfs). Releases have been at 4,000 cfs since January 18 due to the low water supply forecast. Outflows are expected to increase for a 4 week period beginning May 17 – June 7 in response to a U.S. Fish and Wildlife request for endangered sturgeon flow per the Biological Opinion. The exact date of the increase will be based on water temperature and sturgeon activity. Project releases are expected to be in the 12,000 – 18,000 cfs range during this four week period. After project releases are made for sturgeon, releases will be reduced to 7,000 – 15,000 cfs range for bull trout and salmon flow augmentation.

Albeni Falls: Lake Pend Oreille was at elevation 2057.4' (5.1' feet from full) on May 11 and is filling. Project releases are currently 32,000 cfs. Outflows in March and April ranged from 14,000 to 22,000 cfs. Lake Pend Oreille will continue to fill to the full pool elevation of 2062.5 feet by the end of June.

Grand Coulee: Lake Roosevelt was at elevation 1273.5' (16.5' from full) on May 11. Project releases averaged 79,000 cfs in April and have averaged 91,400 cfs for the first 10 days in May. In March and through April 14, project releases were used to maintain 70,000 cfs at Priest Rapids per the Hanford Reach agreement for fall Chinook. April 10 is the planning date in the Biological Opinion to start 135,000 cfs at Priest Rapids for migrating juvenile salmon. However, because of the low water supply, the Salmon Managers gradually stepped up the request for Priest Rapids flows. On April 15 they requested weekly average Priest flows of 110,000 cfs; on May 7 they requested an increase to 120,000 cfs and on May 10 they requested an increase to 135,000 cfs. The duration of this 135,000 cfs flow is being critically evaluated weekly as there is also a desire to refill Grand Coulee by June 30 and maintain fairly steady Priest Rapids flows through June. The project is expected to draft to 1278' for flow augmentation by August 31 per the Biological Opinion.

Dworshak: Dworshak was at elevation 1574.8' (25.2' from full) on May 11 and is filling. The project is daily load shaping during the week and maintaining a flat flow on the weekend. Daily averages have ranged between 2200 and 4000 cfs the last 2 weeks. The project will adjust releases and is targeting to be full by the end of June. Flow augmentation will start when requested by the Salmon Managers. This typically starts after the 4th of July. The Biological Opinion calls for the project to draft 80' by the end of August for flow augmentation

Spring and Summer Biological Opinion flow objectives and estimated flows at McNary and Lower Granite

Biological Opinion flow objectives based on water supply forecast:	Estimated average seasonal flow, based on May final water supply forecast used in Corps Q adjust model
Lower Granite 4/3 – 6/20 85,000 cfs	57,000 cfs
Lower Granite 6/21 – 8/31 50,000 cfs	32,000 cfs
McNary 4/10 – 6/30 220,000 cfs	170,000 cfs
McNary 7/1 – 8/31 200,000 cfs	125,000 cfs

Actual McNary and Lower Granite Flows

Lower Granite actual average flows 4/3 – 5/11 55,000 cfs
McNary actual average flows 4/3 – 5/11 176,000 cfs

Lower Granite actual flows 5/7 - 5/11 actual flows ranged between 72,000 – 81,000 cfs.
McNary actual flows 5/7 – 5/11 ranged between 200,000 – 225,000 cfs

Spring Spill for Juvenile Fish

Lower Granite April 3 – April 23
Little Goose April 7 – April 23
Lower Monumental April 24 – May 14 (research)
Ice Harbor April 13 – July 17 (research)
McNary April 12 – June 30 (June 30 is the BiOp planning date for the end of spring spill)
John Day April 12 – June 30
The Dalles April 12 – June 30
Bonneville April 12 – June 30

Corps of Engineers Decision

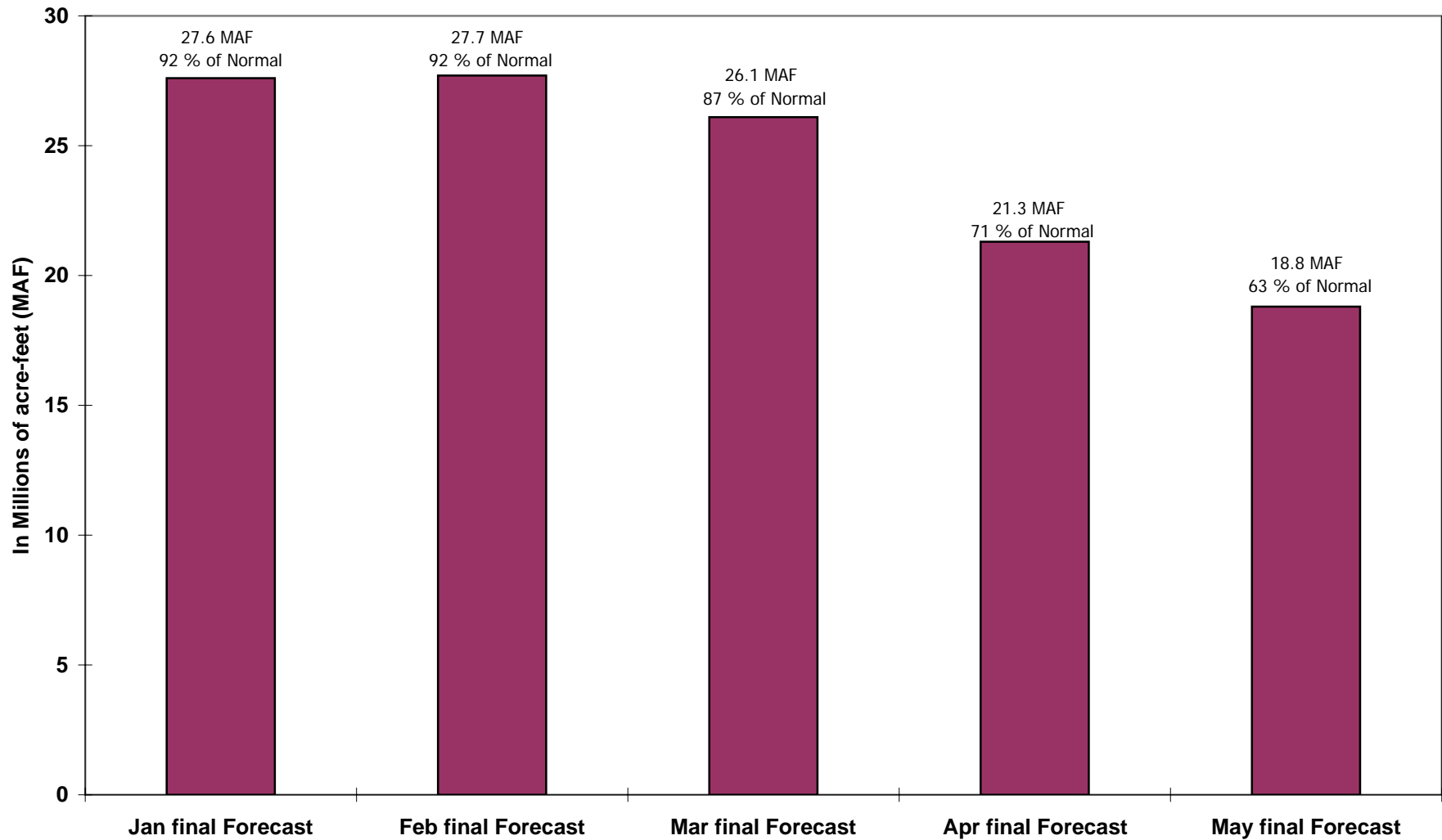
2004 Spring Spill at Lower Snake River Projects

The NOAA 2000 Biological Opinion (BiOp) has provisions for spill at the Lower Snake collector projects (Lower Granite, Little Goose and Lower Monumental) when seasonal average Snake River flows are projected to be above 85,000 cfs (RPA 40). Since Ice Harbor has no fish collection facilities, that project is required to spill. April final runoff volume forecast is for seasonal average Snake River flows to be about 77,000 cfs, well below the threshold for spill. As a result,

the BiOp calls for maximizing fish collection and transportation in the Snake River. Recent transport research results have raised questions about the benefits of transporting yearling Chinook salmon in April (as opposed to leaving them to migrate inriver) and NOAA Fisheries has been proposing reconsideration of the transportation criteria for early season migrants (RPA 51). As a result, two System Operation Requests have been issued, requesting spill in the Lower Snake for Spring 2004. On April 14, 2004 the Technical Management Team (TMT) met to discuss these Spring Spill operations in the Lower Snake River. Because TMT could not reach agreement, it was elevated to the Implementation Team (IT) on April 15.

Based on the discussions at IT, the Corps has decided to provide spill at Lower Granite and Little Goose until 23 April to provide inriver passage for yearling Chinook prior to the steelhead juvenile migration. In addition, subject to further consideration by the Study Review Work Group regarding the design of the modified spill research at Lower Monumental, up to 18 days of spill will be initiated there for early inriver passage and for the study. Three days of spill will be available prior to 26 April and 15 days will be available beginning 26 April and provided per the research design. Although the study is not considered the premier study, other valuable research can be gathered and the sunk costs are not lost. The Lower Granite behavioral guidance structure testing planned for 2004 will be postponed until April 2005.

**Deterioration of January - July Water Supply Forecast at Lower Granite Dam in 2004
(30 MAF is the avg 1971 - 1999)**



**Deterioration of January - July Water Supply Forecast at The Dalles in 2004
(107.3 MAF is the avg 1971 - 1999)**

