

Murland _____

Alan _____

April 2, 1981

Mr. Robert G. Rickel
Chief, Hydrology Section
U.S. Army Corps of Engineers
Building 602
City-County Airport
Walla Walla, Washington 99362

Dear Bob:

Enclosed is a draft of the reservoir storage accrual section for the Boise Regulation Manual which Col. Moeller requested in his November 28, 1980 letter. We have supplied copies to Harold Brush and Joe Wensman and discussed it with them.

Sincerely yours,

Alan C. Robertson,
Supervisor
Hydrology Section

ACR:mb

Encl.

*Copy given to Norm w/note
about beg. accounting system
for Boise 16 Sep 81 R
Also discussed w/ Dave Shaw
who wants to participate when
we meet w/um.*

BOISE RIVER RESERVOIR FILL

Boise River reservoir storage accrues on a daily basis to each reservoir according to the priority of the water right(s) for the reservoir(s) and the natural flow supply available at the point of diversion. Natural flow is determined at the location of the dams for the main river reservoirs (Anderson Ranch, Arrowrock, and Lucky Peak), and at the Boise Project Main (New York) Canal Diversion Dam for the offstream reservoir, Lake Lowell.

Daily accrual

Flows at point of diversion

In order of priority, the water rights for storage in Anderson Ranch, Arrowrock, Lucky Peak, and Lake Lowell reservoirs are as follows:

Storage rights

Priority	Rate (cfs)	Volume	Remarks*
December 14, 1903	1354.58	-	New York Canal (BD)
January 13, 1911	8000		Arrowrock (BD)
June 25, 1938		25,000	Arrowrock (L)
December 9, 1940		493,161	Anderson (L)
April 12, 1963		307,000	Lucky Peak (P)

*

BD - Bryan Decree
L - License
P - Permit

All of these rights are held by the Water and Power Resources Service for the United States

Department of Interior.

The New York Canal right of 1354.58 cfs is an irrigation right which can also be used to store water in Lake Lowell Reservoir during the non-irrigation season. The volume of water storable per annum is limited by the physical capacity of Lake Lowell, 177,150 acre-feet. Identified transmission losses in the New York Canal from November 1 to April 1 may be diverted in addition to the physical capacity of Lake Lowell to compensate for such losses.

Lake Lowell

Canal losses allowed

Arrowrock Reservoir is filled according to two rights, one for 8000 cfs for a physical capacity of 275,000 acre-feet, and another for 15000 acre-feet with no limit on the diversion rate. However, because of siltation the current total physical capacity is 286,600 acre-feet, so that the latter value is limited at the time of this agreement to 11,600 acre-feet.

Arrowrock

Anderson Ranch Reservoir is filled by a right for 493,161 acre-feet with no limit on diversion rate. This right is limited by dead storage of 28,980 acre-feet plus normally inactive storage of 40,981 acre-feet to 423,200 acre-feet active

Anderson Ranch

space.

Lucky Peak Reservoir is filled by a right for 307,000 acre-feet, also having no limit on diversion rate. The right is limited by normally inactive storage of 28,800 acre-feet to 278,200 acre-feet active space. At the time of this agreement, the Lucky Peak right is at permit stage and may or may not be modified upon licensing.

The above described reservoir rights are the sole diversion rights in effect during the non-irrigation season (November 1 to April 1). Prior to and subsequent to these dates when natural flow is sufficient to meet some or all of these rights, the storage rights are considered equal in stature to all other rights subject to priority date and other conditions imposed by State water law. To provide for efficiency and flexibility in reservoir operations, storage under these rights can physically occur in any of the four reservoirs without regard to the reservoir specified in the right as long as the capability of any other right to be exercised remains unaffected.

The volume stored per annum, beginning on November 1 of each year, cannot exceed the volume

Lucky Peak

Reservoir rights only,
in winter

Reservoir rights intermixed
with irrig rights in irrig
season.

comment:
(After April 1 Lake Lowell
account will be replaced
by all the NY Canal rights
which are for irrigation.
NY ID. will be able to
make additional actual fill from
these rights.)

Storage in any reservoir
(or nowhere)

specified by the water right or the physical capacity of the reservoir unless all subsequent rights have been met. The volume stored (including unused storage from a previous year) cannot on any given day exceed the specified or physical volume of the reservoir. Previously unused storage (carryover) which is released during the non-irrigation season for a specified beneficial use can be replaced in the same year within the constraints of the right(s) governing that space. The United States Water and Power Resources Service shall inform the watermaster of any such use of carryover storage.

Maximum is one fill/yr unless all other rights are met.

Fish release

In order to properly administer storage rights, it is the responsibility of the United States Water and Power Resources Service to inform the Boise River Watermaster of the amount of unused storage in each of the three main river reservoirs (Anderson Ranch, Arrowrock, and Lucky Peak) within thirty days of the time the Watermaster has determined the amount of stored water used. Similarly, it is the responsibility of the Boise Project Board of Control to inform the Watermaster of the unused storage of Lake Lowell Reservoir.

W & PRS identifies carryover

Boise Project identifies Lake Lowell carryover

It is the duty of the Boise River Watermaster to determine on a daily basis the accumulation of stored water under the rights of each of the four reservoirs and to inform the United States Water and Power Resources Service and the Boise Project Board of Control each season when the maximum fill of each reservoir is known. The Water and Power Resources Services shall in turn inform the Watermaster of each user's stored water allocation in sufficient detail for proper delivery of that water.

*watermaster computer fill
WEPRS allocates it*