

## WATER BANKING IN IDAHO

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### ABSTRACT

Some irrigation projects in the Pacific Northwest are 50 - 70 years old. Storage and delivery facilities were originally constructed based on the best available data and permanent water allocations were made to meet the identified agricultural water needs. The intervening years have brought changes in farming practices and associated water needs, as well as the identification of new competing demands for water. When water supplies are fully allocated to existing users, the opportunities to develop new uses may be very limited. Water banking provides an opportunity to temporarily transfer water from an established water right holder to another.

Two water banks are presently functioning within the State of Idaho. These banks enable water users to transfer their storage entitlements to other users. Water banking is expressly authorized by Idaho law and the existing water banks function with the support and assistance of the Bureau of Reclamation and the Idaho Department of Water Resources.

### BACKGROUND

#### Minidoka-Palisades Project:

Two water banks presently function within the State of Idaho, one within the Minidoka-Palisades Project on the Upper Snake River and the other within the Arrowrock Division of the Boise Project on the Boise River. The Upper Snake water bank has existed in some form since the 1930's, and since 1980 it has been formally recognized by State law and regulation. The Boise River water bank began in 1988, partly in response to drought impacts, with State and Reclamation approval.

Jackson Lake Dam, near the headwaters of the Snake River in Wyoming, was the first major storage reservoir constructed in the Upper Snake area. American Falls Dam was constructed next downstream in Idaho. Construction of Island Park and Grassy Lake Dams followed on the Henry's Fork of the Snake to serve the northern and eastern parts of the Project. These developments were in place by the end of the 1930's. Some of the storage

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developed was committed to develop new lands but the bulk of the storage was used to supplement the supply of water to already of Palisades Dam was initiated in 1951 to supply supplemental water to the lands in the Upper Snake area. Allocations of reservoir space to the different contracting entities were based on needs as perceived at the time. A winter "water savings" program was authorized and implemented with construction of Palisades Dam. The purpose of the "water savings" program was to improve water supplies available for storage by eliminating some winter time diversions of water for livestock watering and domestic uses. The intervening years have also brought significant changes in irrigation practices, including sprinkler irrigation and laser leveling of fields. Total irrigation diversions have trended lower over the years and water supplies for most irrigators are abundant in most years and adequate in recent dry years.

#### Boise Project:

Development of the Arrowrock Division of the Boise Project followed a somewhat similar pattern as the Minidoka-Palisades Project. Arrowrock Dam was the first storage facility constructed in 1911-1915. It was built to provide water mainly to new lands. Arrowrock proved insufficient to meet the identified needs and dry periods of the 1930's brought forth urgent appeals for more storage. Anderson Ranch Dam was authorized in 1940 and completed in 1950. Anderson Ranch Dam and Reservoir added essentially no new land to the Project. The Corps of Engineers subsequently constructed Lucky Peak Dam further downstream mainly for flood control. Part of the storage space in Lucky Peak was marketed to augment the water supplies of existing irrigators.

#### Spaceholder Contracts:

On both Projects, all water marketing was through spaceholder contracts. This means that Reclamation sold each contractor a share of the reservoir space. Carry-over storage rights were also granted in some cases, meaning that water not used one year can be retained in the reservoir as a contingency against future drought.

The use of spaceholder contracts differs from the way water is marketed on most Reclamation projects. On most projects, water entitlements are conveyed to water user entities. These contracts establish the amount of water to be made available, sometimes specifying a given quantity of water, and set forth the criteria under which the project water supply is to be apportioned during conditions of shortage. Shortages are often shared equally by all project users. Spaceholder contracts do

not convey a water entitlement, rather they convey reservoir space, or a specific share of the reservoir. If the reservoir fills, the spaceholder's space is full. If the reservoir fails to fill, the spaceholder's space is only partly full. Apportioning water during shortage conditions is different with spaceholder contracts, because a normal accounting of carry over storage and accruals to storage precisely determines the amount of water in the reservoir available to each spaceholder. With spaceholder contracts, if all of the reservoir space has been marketed, Reclamation has no means of meeting other needs for diversion of water regardless of whether the reservoir spaceholders use their stored water. On projects where Reclamation simply promises to meet a contractor's needs, surplus water that may exist can be marketed to other users as long as Reclamation assures that the water supply needs of existing contractors can still be met. Depending on specific conditions new uses may or may not share equally in the water supply under shortage conditions.

#### WATER BANKS

##### Upper Snake:

Water transfers have occurred in the Upper Snake for many years. During construction of Palisades Dam it was widely accepted that surplus supplies would exist in many years due to the supplemental nature of the new storage. The repayment contracts thus provided that the reservoir spaceholders could rent water to others. The contracts specified that water could be rented for one year at a time under a controlled price. Water rentals did occur in many years, with considerable activity in the dry year of 1977. In 1979, due largely to concerns that State Law could be interpreted to cause forfeiture of a water right if water is leased to others, the Idaho State legislature authorized the establishment of such water banks statewide (Sections 42 IC 1761-1766). A key provision of this law was that water placed in the water bank would be considered a beneficial use.

In recent years the Idaho Power Company has purchased water from the Upper Snake River water bank to augment hydroelectric power generation. In 1988, a dry year, 235,325 acre-feet were made available to the Upper Snake water bank, of which 159,215 (68%) acre-feet were sold, leaving 76,110 acre-feet unsold. Irrigation users purchased 109,215 acre-feet and the Idaho Power Company purchased 50,000 acre-feet. Irrigation needs were considered prior to making water available to the Power Company.

Table 1. Upper Snake Water Bank Activity - 1979-88

Year	Consigned to the Bank	Total Used	Used By Power	Used By Irrigation
1979	88,870	73,960	50,000	23,960
1980	72,190	14,575	0	14,575
1981	170,107	149,039	125,000	24,039
1982	290,426	203,515	200,000	3,515
1983	540,606	353,084	350,000	3,084
1984	806,400	277,433	275,000	2,433
1985	497,302	362,169	350,000	12,169
1986	895,642	159,735	150,000	9,735
1987	365,006	192,506	150,000	42,506
1988	235,325	159,215	50,000	109,215

<sup>a</sup>All figures are in acre-feet

#### Boise:

As a result of dry conditions in 1987, the possibility of creating a Boise River water bank was discussed. In the spring of 1988 the Idaho Water Users Association sponsored a seminar on the possibility of a Boise water bank with the support and encouragement of the Bureau of Reclamation and the Idaho Department of Water Resources. Water users from the Upper Snake participated in the seminar and explained the functioning of the Upper Snake water bank. Their comments appeared to allay many concerns of the Boise area water users. The Boise water users responded favorably to the water bank concept and the Idaho Water Resources Board established the Boise River water bank on May 24, 1988. The rules and regulations for the new water bank were drafted by staff of Reclamation and State Water Resources with assistance from the watermaster, and were patterned after the rules and regulations governing the Upper Snake water bank. They were modified slightly by the water bank committee prior to implementation. In 1988, 22,000 acre feet were made available to the Boise River water bank and all were purchased. As of August 1989, only about 800 acre-feet of water have been made available to the water bank and fewer than 400-acre feet have been purchased.

The significant reduction in water bank activity from 1988 is probably due to different water supply conditions. Water users have likely placed less water in the water bank in 1989 because they believe most users have adequate supplies. Neither the watermaster nor Reclamation's Project Superintendent have actively encouraged water users to consign water to the bank as they did in 1988. Perhaps the most important reason less water

has been consigned to the water bank is simply the newness of the bank. Irrigators are like the general population in that it takes a high degree of motivation to change from the status quo. In time, change will undoubtedly occur. Catalysts of change could come in the form of new customers or recurrence of drought conditions.

#### Operation of the Water Banks:

The 2 banks are naturally similar in many respects. Each bank is managed by the local Watermaster under the direction and advise of a committee of local irrigators. Nearly all of the reservoir space is held by irrigation users. The only water that can be traded in the 2 banks is designated "stored water" which happens to exist entirely in Federal Reservoirs. Stored water has advantages over "natural flow" for water banking in Idaho since the trading of natural flow involves the requirement of State law that impacts to third parties be evaluated. Such evaluation can prove to be a rather imposing task for short term changes of use. Idaho State law does not require an analysis of third party impacts for changes in place or point of use of stored water. Indeed, if a noncontracting party claims potential harm from another party's change in diversion or use of stored water, the reservoir owner has probably found a new customer who should be paying for the benefits received. The water banks are open only to districts or individual diverters. Water transfers within districts still occur outside of the water bank framework, but the only short term transfers from one district to another explicitly permissible under State Law are through the water bank.

A key point is that irrigation diversions have not been reduced to make water available to the water bank. Reservoir space-holders have only committed water to the water bank which they did not expect to use in the then current year. The space-holders decided to rent the space to others and have less reservoir storage to carry over into the next season.

Water committed to the bank by July 1 is placed into a common pool and is not identified as coming from a given lessor. The lessors who commit water to the bank by the July 1 deadline share proportionately in the proceeds from the bank. For example, if District A places 50,000 acre feet of water in the water bank, and if a total of 500,000 is available in the pool on July 1 from all sources, District A will receive 10% (50,000/500,000) of the proceeds distributed to the lessors.

In the vernacular of the water bank, sellers are termed lessors and buyers are lessees. Lessees pay \$2.50 per acre-foot for water from the Upper Snake water bank and \$5.50 per acre-foot

from the Boise water bank. The Watermaster retains \$.50 per acre-foot on the Upper Snake and \$.32 on the Boise to use for system improvements that provide common benefits to the water users, such as improved measuring devices and HYDROMET facilities. The rates are different partly because the Boise water bank is patterned after the Upper Snake water bank and the contract rate paid to Reclamation is higher on the Boise. In addition, the rates are set by the water bank committees of the local areas. These local farmers attempt to set a price that is fair to buyer and seller alike, taking into consideration that sellers argue for high rates and buyers argue for low rates.

Changes:

Along with supporting implementation of the Boise water bank, the Bureau of Reclamation has taken active steps to expand the potential viability of the Upper Snake water bank. The language in the Palisades spaceholder contracts that permitted the leasing of water also constrained any leases to one year only. At the urging of State and other interested parties, Reclamation has offered contract amendments to all spaceholders allowing them to lease their space for up to 20 years. No other contract changes were proposed in the amendments. Reclamation requirements associated with irrigation will follow the water, including irrigability requirements and acreage limitation. Ten contractors have responded favorably to this offer. At the present time no specific long term lessees have been identified.