

Busterback Ranch: Valuing Water Rights in a Scenic Easement Area

Charles K. Thompson

Introduction

Migrating Pacific Ocean salmon and steelhead must pass three hydroelectric dams in the Columbia River, and travel over 600 miles to an elevation of 7,200 feet to reach their spawning grounds in the headwaters of the Salmon River. In the Stanley Basin of central Idaho, the use of the stream not far from the source springs is the subject of much controversy. Irrigation water rights owned by the ranchers allow diversion of essentially all of the stream, resulting in a deleterious effect on the water flow needed to sustain the annual migration.

The Bonneville Power Administration Department of Fish and Wildlife determined that this ecosystem would be substantially enhanced if the summer stream flow were maintained near its natural level during the critical spawning period. The diversion of irrigation waters for ranching purposes on this fragile run of the river was limiting the anadromous fish migration and quality of the spawning beds. A proposal was made to the owner of the Busterback Ranch to buy a portion of the water rights at market value. An agreement would result if the funds from the sale would cover the cost of a pivot sprinkler system and the remaining water rights fulfill the reduced water requirement under sprinkler irrigation. The purchased water

would remain in the river to maintain a minimal flow.

Water rights are not sold separately in the basin and no reasonable comparison can be made with sales in outlying regions, such as the Snake River plains. A special-use "before" and "after" approach was the only practical solution. During the past decade, the entire market area had been subjected to a "before" and "after" influence as scenic easements were acquired throughout. The recreation market had nearly collapsed before the market's perception of values with scenic easements in place was well documented. The problems, costs, and operating feasibility of a sprinkler operation on a hay ranch susceptible

to frosts through the grazing season were questionable.

Appraising the value of water rights brought forth unusual features with their attendant problems. The magnificence of the Sawtooth Mountains forming a backdrop for this wide, high mountain valley has been recognized with the establishment of the Sawtooth National Recreation Area (SNRA). The Busterback Ranch onto which the Salmon River irrigation waters are diverted is much larger than typical ranches in the Basin, and is both a working cattle ranch and a summer and winter dude ranch. The recent market was limited, which required that less comparable sales than normally acceptable be dissected to reveal motivations that could be matched. The water rights involved in this situation had five different decree dates and are incorporated into operations dependent on flow cutoff dates.

Description

Neighborhood. Stanley Basin is a wide, scenic high mountain valley of the upper reaches of the Salmon River. It is flanked by the spectacularly glacial high mountains of the Sawtooth Range rising directly from the valley floor. Across the pass overlooking the headwaters is the Sun Valley district. Four recreation lakes nestle into the foothills, and numerous glacial lakes pocket the upper levels of the surrounding mountains.

About 100 hardy souls occupy the two villages situated at each end of the valley.



Sawtooth Range backdrops the ranch.

Charles K. Thompson, MAI, is owner of C. K. Thompson and Associates of Idaho Falls, Idaho. Mr. Thompson is the winner of the American Institute of Real Estate Appraisers 1986 Manuscript Competition for this article.

Services are provided for the summer vacationers and ranchers, with limited accommodations for winter cross-country skiers and snowmobilers. The severe climate limits winter activities. Private land ownerships range from various size building lots up to several hundred acres and a few exceptionally large ranches. Scenic easements essentially limit vacation homes, except for one subdivision, to thinly dispersed homesites of several hundred acres each.

Ranch. Busterback Ranch is at the upper end of the basin and reaches across the bottomlands of the valley with its 2,282 acres of meadows and hayfields. The Salmon River, only a stream here, and its joining tributary, Alturas Lake Creek, flow for four miles through the wide level hayfields. Paralleling the river through the ranch is Scenic Highway 75, providing excellent but distant access to the communities of southern Idaho.

Carrying Capacity. The high elevation and rock faces of the mountains rising from the valley floor preclude outside grazing permits. Other than a few hundred acres of dry grazing at the farmstead, the fields are entirely flood irrigated or subirrigated. The land is largely grass pasture and there is no hay cutting on this ranch. Some pastures are grazed from mid-May until mid-September, a four-month season. Grass pasture yields approximately 1.4 tons per acre, the equivalent of four animal unit months (AUMs) or one acre per cow for the season. Forage has a protein content of about 15%, a satisfactory but not a high protein feed. Because of irrigation management and such pastures not being particularly dependent on the weather, the yields are consistent. Thus, the ranch can carry an equivalent of 1,700 cattle for a four-month grazing season—a 567-animal-unit (AU) carrying capacity.

Irrigation. Table 1 lists the water rights to be valued.

Before Valuation

Sales Data. Sawtooth National Recreation Area (SNRA) was established in the Stanley Basin of central Idaho in 1972. Acquisition of the large majority of scenic easements was completed in the 1970s. The area is administered by an office of the U.S. Forest Service, which continues to maintain property sales records and generously makes data available. Sufficient time has

passed to effect a reasonable value stabilization of the remaining rights of ownership in this isolated market.

The lack of available data during a time of low sales activity requires the use of

property sales of much more divergent features than usually practical. Vistas of the Sawtooth Range, often from a raised elevation, are the prestigious amenities of the SNRA. Angle views of the ends of the range



White Cloud Mountains flank east side of basin.



Busterback Ranch from above Galenz Pass.

TABLE 1
Busterback Water Rights

License No.	Permit	Priority Date	Amount	Source
*71-0059	71-C	1912	25.6 cfs.**	Salmon River
71-0061	71-C	8/30/33	40 cfs.	Salmon River
*71-0064	71-C	8/15/15	11.056 cfs.	Alturas Lake Creek
71-0066	71-C	7/1/30	10.75 cfs.	Alturas Lake Creek
71-0068	71-C	7/1/35	12.32 cfs.	Alturas Lake Creek
Total:			99.726 cfs. or 4,986.3 miners inches***	
			or 2.185 miners inches per acre	

* Water rights to be purchased.

** cfs.=cubic foot per second.

*** miners inch=1/50th or 1/40th of a cfs.

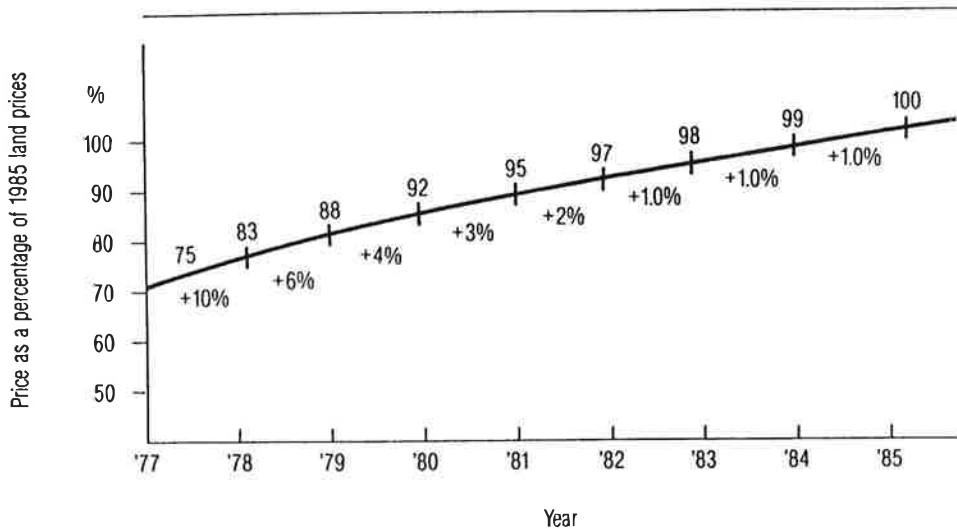


Figure 1. Time-Price graph.

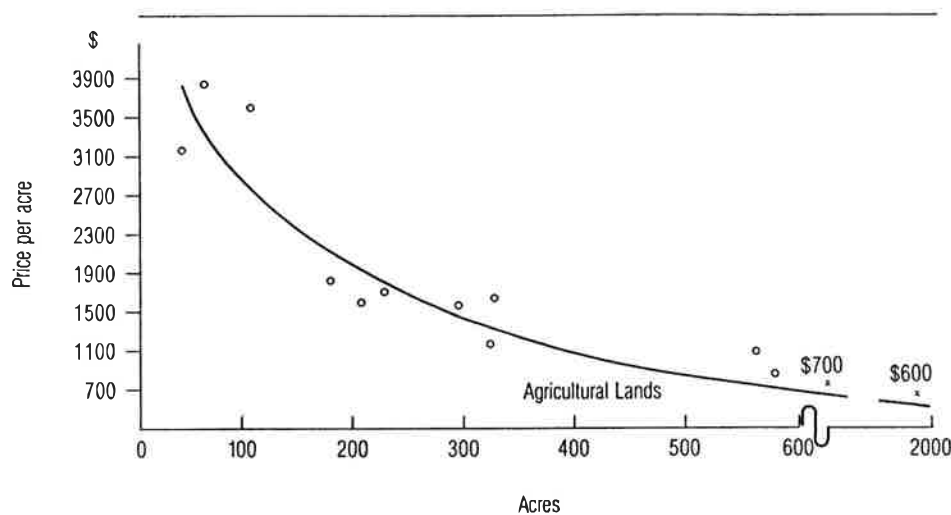


Figure 2. Size-Price graph. Prices are time adjusted. \circ = actual sale.

are spectacular but moderately inferior by comparison. Frontage on the Salmon River is desirable, but homesites are generally set back due to subsurface water and insect conditions. Ease of access to the public domain with the recreational features of the mountains, their lakes and flora and fauna, are amenities enjoyed by all owners, some of which are more convenient than others.

The time chart in Figure 1 points out the decreasing rate of value inflation and a final level market in recent years. The size chart in Figure 2 requires an interpretation of relationships through a land breakdown classification system to reveal the buyer motivation of various size levels. It is apparent that there is a regular sequential step-up of motivations as size increases.

Land Classes. The motivations for purchases within the SNRA can be identified in three main sales categories. A homesite tract is a small tract of one to five acres on

which to locate a vacation home with the land selling at about \$30,000 for the first acre and \$20,000 for the next four acres or \$50,000 for the site. Often a second homesite is allowed on large acreage tracts, typically adding about \$35,000. Recreation tracts are from 100 to 300 acres, including one or two building sites selling for approximately \$1,000 per acre for gravity or sub-irrigated land and approximately \$750 per acre for rangeland, in addition to the basic building sites as above described. Irrigated pasture tracts are large ranch acreages having the elements of homesites and recreation tracts, plus commercial ranching utility with values commensurate with working ranches of the region enhanced by a multiple of 1.33. The before-recreation adjustment value of high elevation ranchland land classes in the region in 1985 typically was \$475 per acre for irrigated wild hay, \$300 per acre for subirrigated pasture, and \$100 per acre for dry range.

Seven sales, including a sale of the subject ranch the previous year, were analyzed. Two sales were found to be anomalies, while the others yielded good price patterns when broken down into the size-segmented portions apparently recognized in the market. The matched-pairs analysis in Table 2 is of the pivotal land class, irrigated recreational land. This class represents one segment of a sequential land value classification system based on significant differences in size.

The Indicated Rate column in Table 2 indicates that Sale 2, which involved family members as buyers and sellers, is below the typical price paid. This is not an unusual situation. Sale 5 is out of the pattern for no apparent reason. These two sales do not reflect a typical market and are largely eliminated from the final analysis. The conclusive value of irrigated recreation land is \$1,000 per acre.

Irrigation Values. For the smaller homesite tracts, irrigation water is not usually available or desired. For the ranchettes of more than 100 acres, there is no apparent difference in prices paid for recreation gravity-irrigated wild hay lands as compared with subirrigated pasture. The increased productivity of the gravity-irrigated land is offset by the lack of labor required to man-

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TABLE 2
Sales Adjustment Chart—Recreation Land

Sale	Acre Size	Rate per Acre	Date	Time Adjust-ment	Time Adjstd Rate	Other Feature Features	Adjustments View	Physiog.	Size	Total Adjust-ment	Indi-cated Rate
1	256	\$1,083	1979	130	\$1,213	-125	0	125	-200	-\$200	\$1,013
2	100	\$ 780	1981	39	\$ 819	0	0	0	-150	-\$150	\$ 669
3	153	\$ 900	1979	108	\$1,008	0	0	0	-175	-\$175	\$ 883
4	325	\$1,200	1984	12	\$1,212	180	-360	100	-220	-\$300	\$ 912
5	326	\$ 454	1981	23	\$ 477	40	0	150	- 80	\$110	\$ 587
6	227	\$ 930	1980	83	\$1,013	233	-100	100	- 90	\$143	\$1,156
Subj	285	\$1,000	1984	10	\$1,010	0	0	0	0	\$ 0	\$1,010

TABLE 3
Value of Busterback Ranch Before Taking of Early Water Rights

Class	Acres	Rate	Value
3 Homesites *	15		\$ 120,000
Recreation (irrigated)	60	\$1,000	60,000
Recreation (meadow)	137	1,000	137,000
Recreation (dry grazing)	88	750	66,000
Irrigated wild hay	991	650	644,150
Sub-irrigated pasture	923.6	400	369,440
Rangeland	67	125	8,375
Totals:	2,281.6	Land value:	\$1,404,965
Total buildings†:			\$ 130,166
		Total estimated value:	\$1,535,131

Notes:

* Due to the large acreage of this ownership, the scenic easement provides for three separate homesites. The most appropriate use would be 100 acres of homesite/recreation land class for each site. The two new homes would be best located at the west boundary shared with U.S. Forest Service forest on the foothills. Value is not calculated on a rate per acre basis, see p. 174.

† The above building values are on a depreciated basis. Because values are in constant "Before and after valuations," a detailed cost analysis is not necessary. No economic depreciation is included for the buildings of specialty use for the dude ranch operation because both previous and present owners actively pursued the summer (dude) and winter (cross-country skiing) business.

age pastures on tracts purchased for recreational enhancements. Dry range acreage, at the size bracket of ranchettes, has recreational enhancement, but the grass or sage vegetation is perceived to be inferior to pasture grasses.

The forage yields become important on the working ranches, and normal price relationships hold with the gravity-irrigated wild hay land being worth 1.6 times that of the pasture land; that is, \$650 per acre for wild hay land and \$400 per acre for pasture. These rates correlate with those of other ranching districts before the land value decline that began around 1982.

Agricultural Lands. The Busterback Ranch is a working ranch considerably larger than the ranchette sales within the SNRA. The hay and rangeland are valued by comparisons with six ranch sales downstream in the next county. Figure 1 reveals a near level slope for the sales in the basin for the years of 1982, 83, and 84. Outside ranch values fell about 33% during that

period. The peak outside value period occurred in 1982, and these rates were applied directly to the subject, effecting a 33% premium for recreational enhancement.

Calculations. Table 3 illustrates the calculations involved in estimating the total value of Busterback Range before the taking of its early water rights.

After Valuation

The purchase will be of the early 1912 right of 25.6 cubic feet per second (cfs.) on the Salmon River and the 1915 right of 11.056 cfs. on Lake Creek, for a total of 36.656 cfs. out of a total of 99.726 cfs., or 37%. Were it not for the cutoff dates of the stream flow, this purchase would not totally change the character of the ranch. In the history of the ranch, the three water rights dated in the 1930s are for so-called flood rights that are cut in the month of July after the first half of the growing season.

For the remainder of the season, the 1912 and 1915 rights carry the ranch. Consequently, after a purchase of these early rights, the ranch would be irrigated only for the first half of the season. The spring flood rights are used for the heavy irrigation in the month of June, to build up the aquifer under the lower half of the ranch. This develops the subwater irrigating the pasture acres.

Effect of Half Season Irrigation

Removal of the leaves of a grass plant any time during the green period reduces the amount of food made and stored by the plant. As a result, the capacity of the plant to produce both shoot and root growth the next year is reduced. Defoliation is most harmful when reserves are lowest. This is about the time the plant is growing most rapidly. Generally, close defoliation of the plant year after year—at almost any green growth stage—ultimately results in depletion of food reserves and the death of the plant.¹

Thus, the lack of water after midseason cutoff of the late date water rights will have an even more serious effect than removal of the leaves from the plant at its most vulnerable period. Busterback Ranch has a 3- to 3½-month grass growing season with midseason being the time of lowest plant reserves. Because native and improved pasture grass varieties cannot be expected to survive under drought conditions the last half of a season, the ranch will take on the characteristics of a dry grazing range.

The taking of the early water rights from the ranch will essentially remove all of the water from the ranch, even if the sprinkler system were to be developed. The best use is to reestablish the now dry pastures with drought resistant grasses, such as Crested Wheatgrass, and continue operations as stated in the before valuation situation, but with reduced numbers of livestock.

Land Classification

Land Value. Because the ranch cannot be effectively irrigated with June flood right waters, the irrigated lands specified in the "before" valuation section become dry range, with the exception of 200 acres of pasture subirrigated naturally along the Salmon River. Value rates for the various land classes remain unchanged. The property continues to provide recreational amenities, but the agricultural production is reduced to dry range forage production.

Amenity of increased stream flow due to retention of water is a minor positive rec-



Morning mists at 40° below 0°; a comparable sale near Stanley Townsite.

TABLE 4

Value of Busterback Ranch After Taking of Early Water Rights

Class	Acres	Rate	Value
3 Homesites *	15		\$120,000
Recreation	285	\$750	213,750
Pasture	200	400	80,000
Dry range	1,781.6	125	222,700
Totals:	2,281.6	Land value:	\$636,450
Total buildings:			130,166
		Total estimated value:	\$766,616

* Value is not calculated on a rate per acre basis, see p. 174.

recreation appearance feature. An increased salmon run will have little effect on recreation possibilities due to closure of spawning ground streams to fishing during spawning season. Overall, there will be no measurable value benefit.

Building Value. All of the "before" valuation uses remain fully viable because there is adequate natural irrigated land along the borders of the Salmon River for grazing dude ranch horses, as they are not dependent on the irrigation of the agricultural lands.

Calculations

Table 4 illustrates the calculations involved in estimating the total value of Busterback Ranch after the taking of its early water rights.

Value of Water Rights

The calculation of the value of the water rights is as follows:

"Before" value	\$1,535,131
"After" value	<u>— 766,616</u>
Value of water rights to be purchased =	\$768,515

The purchase of the early water rights from this ranch will effectively remove all of the water rights value, since flood rights have no value when isolated from full season rights. Valuing the rights by the "before" and "after" appraisal technique results in a total valuation of both the early right to be purchased and the loss in value to the remaining later dated rights.

Any alternative purchase plan will result in a significantly different valuation analysis because of the unique conditions required to bring up the subwater on the lower half of the ranch.

Feasibility of Proposed Sprinkler System

Substituting a sprinkler system for a gravity ditch flood irrigation system will necessitate irrigating the entire 2,120 acres of the ranch because there will be no subwater resulting from a heavy spring irrigation water application. A sprinkler system will cost approximately \$500 per acre, making the market value of sprinkler-irrigated alfalfa and grass hay land approximately \$750 per acre, including the recreational increment. Because dry range has a value of \$125 per acre, the sprinkler system will increase value a maximum of \$625 per acre ($\$750 - \$125 = \625) for a possible entrepreneurial profit of \$125 per acre. Considering the risks for a largely unproven irrigation system, this is a marginal economic feasibility.

To date, no system has been designed to bring the water from upstream with sufficient head pressure. Assuming that a pipeline approximately 1½ miles long would be required, the construction cost, together with the acquisition of the right-of-way, could only be estimated. Because there is no provision in Idaho law for private parties to condemn a right over a neighbor's land, the cost of a right-of-way is speculative and could make the proposed sprinkler system too expensive to be feasible.

The above considerations are academic in light of the present plan to acquire the early water rights, and would only be applicable to an alternative plan providing adequate water for the entire season, unlike the plan currently proposed. (IRWA)

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End Note

1. Hormay, August L. "Effect of Defoliation," *Principals of Rest-Rotation Grazing and Multiple-Use Land Management*. Washington, D.C.: U.S. Department of the Interior, Bureau of Land Management, September 1970.