

Early Irrigation in the Boise Valley
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Agriculture is the dominant feature of Idaho's economy and the major portion of Idaho's agricultural development is predicated upon irrigation. The early pioneering efforts, ambitious as they were, merely opened the door to the vast projects that followed.

The difficulties faced and overcome by the early developers were legion: eastern capital had to be enlisted and fluctuations in the money market compounded this problem; the problems of trial-and-error methods in actual construction while the engineering science developed; increasing operational expenses; inadequate legislative statutes to determine the rights and use of the water and the ensuing litigation in the courts all hampered development. The story of how these problems were solved in the early development of irrigation in the Boise Valley is told in the following informative article by Professor Paul L. Murphy.

Those interested in further reading will find considerable material available. A classic study is William E. Smythe, *The Conquest of Arid America* (1899, 1905; reprint ed., Seattle, 1969). George Thomas, *Early Irrigation in the Western States* (Salt Lake City, 1948), is valuable. Mikel H. Williams, *The History of Development and Current Status of the Carey Act in Idaho* (Boise, 1970), is informative. Students should consult the Biennial Report of the Department of Reclamation to the Governor of Idaho, beginning in 1919-1920. A valuable survey of Idaho irrigation is in "Mineral and Water Resources of Idaho," a report prepared by the United States Geological Survey (Washington: 1964).

An interesting and humorous first-person account is Irvin E. Rockwell, *The Saga of American Falls Dam* (New York, 1947). An important contribution is Kate B. Carter, ed., *Pioneer Irrigation Upper Snake River Valley* (Salt Lake City, 1955).

Representative articles include: Louise M. Sill, "The Largest Irrigated Tract in the World," *Harper's Weekly*, LII (October 17, 1908), 11-12 (Twin Falls project); O. A. Fitzgerald, "1000 Miles of Rain," *Country Gentleman*, CXIV (October, 1944), 16-17, 60, 62-63; Robert T. Flynn, "In the Shadow of Calamity Point," *Reclamation* XLIX (November, 1955), 81-2, 97-9, (background on the Palisades Project); Kenneth L. Holmes, "Early Irrigation in Idaho," *Utah Farmer*, LXXIII (May, 1953), 7, 26; and Walter V. Woehlke, "Taming the Green Snake," *Sunset Magazine*, XLVIII (February, 1922), 25-7, 75-6.

Water has been the lifeblood in the development of the American West. Relied upon

from the beginning by miners and stock raisers, its potentialities for reclaiming vast areas of arid land were also early realized. Irrigation was begun in the American West by Pueblo Indians in what is now Arizona. In the sixteenth century Spanish adventurers found the Pueblos using advanced irrigation techniques. In the American westward movement, settlers such as the Mormons, as early as 1847, turned to irrigation in setting up an agrarian economy.¹ In less than half a century from this date, areas once regarded as uninhabitable for agricultural purposes boasted the most productive and highest priced farming lands in the United States. One such region was the Boise Valley in Idaho, in many senses a typical Western irrigated sector.

Boise Valley settlement had its impetus in the demand for agricultural goods by the gold seekers of the rugged mining country of the nearby Boise Basin. Gold had been found around the headwaters of the Boise River in the late summer of 1862, and the usual rush had begun.² By the summer of 1863, there were an estimated 19,000 people in the area,³ dependent upon provisions brought in from either the Columbia River or the Salt Lake areas.⁴ Opportunity beckoned to farmers. As Sherlock Bristol, one of the gold seekers, said, "The rush of the miners into the country - the high prices offered for hay and provisions - made it evident that ranching and gardening in the vicinity would be very profitable."⁵ Bristol was one of a group which, according to his later account, settled in the Boise Valley in early 1863 and "went to work at once staking off claims until the valley was preempted for a dozen miles on either side of the river."⁶

Other settlers followed, and the bottom lands along the river were soon taken up, since the problem of getting water to such lands involved the simplest type of diversion.⁷ Such a small project was well within the capacity of one man or a small group of men, and as long as new lands near the river were available these works sufficed quite well.⁸ However, with the full occupancy of these bottom lands, the simple stage of settlement and irrigation was over, and from that time until legal solution was sought in 1902, the Boise Valley irrigator was faced with a myriad of problems.

The first was the inevitable legal tangle over the disposition and control of water. In the beginning, there was no established water law in the West. When settlers, especially the early miners, needed water, it was diverted and used without respect to the traditional formalities of such action. In the mining area, the average miner staked his claim to water much as he did to land, and mining custom generally acknowledged that the person first using water had prior rights up to his individual needs. Maintenance of title to the water depended upon diligence in construction of the diversion system and continued use. This practice of water appropriation based upon the doctrine of priority was also utilized as water was increasingly made available for irrigation.⁹

Where legal formulas were respected, reference was made to the common-law heritage, in the absence of any territorial statute on the subject. Its "riparian rights" doctrine gave the owners bordering on a stream primary rights to the use and disposition of its waters. It failed to meet Western needs. However, because it was geared to the necessities of humid England, where water problems largely involved disposal of excess amounts.¹⁰

It was not until after the Civil War that Congress acted. In 1866, through pressure from Western legislators, a measure was passed insuring the validity of land and water titles previously acquired in accordance with local laws and customs." The various Western states were given the prerogative of determining title to unreserved public land and establishing legal practices dealing with irrigation.

The practices of the several states differed. Some, starting from the common-law base, retained the old riparian-rights doctrine, but modified it radically to meet Western needs. Others gave the practices of the frontiersman legislative approval by codifying the doctrine of appropriation.¹²

In Idaho, early irrigation practice followed in the path of that of the mining industry. Just as notices had been posted on lode or placer claims, irrigators also were required to post a notice in a conspicuous place at the point of intended diversions, stating the amount of water claimed, the purpose for which it was claimed, the place of intended use, and the means by which it was to be diverted. Such notices were also to be recorded in the office of the county recorder. These provisions had obvious weaknesses, since they failed to provide supervision to insure that the claims filed were accurate or in some cases even reasonable.

The territorial legislature had in 1873 taken under consideration a bill to set up a more workable system of water law, but the measure failed to pass.¹³ The proposed legislation would have written into law the system of prior appropriation. A State Supreme Court decision in 1883 did uphold the right of the prior appropriator,¹⁴ and in 1887, the territorial government included in the Revised Statutes the clause "that the right to the use of flowing water may be acquired by appropriation, and as between appropriations priority in time shall secure priority of rights."¹⁵ The way was thus opened for the State Supreme Court in 1890 to judge the right of a riparian owner inferior to that of a prior appropriator. ¹⁶

When the state constitution was drafted in 1889, six sections dealt with water, its use and administration. Idaho followed the lead of Wyoming in proclaiming that the water of streams belonged to the state. Machinery was set up through which future appropriation of water was to be made by application to the state engineer, and future rights were to be defined as they were acquired. Rights acquired prior to 1890 were to be defined and adjudicated through the courts.¹⁷

In practice, the system proved inadequate. The state engineer had no control over the diversion of streams. There was no central office of record in which to file water claims or court judgments acknowledging water rights. The only means provided for the establishment of rights was an action in the courts, and the only means for protecting those rights was to have the court appoint a commissioner to carry out the decree. In addition, the constitution implied that further appropriation was unlimited, stating that the right to divert and appropriate the unappropriated waters of any natural stream to beneficial uses shall never be denied."¹⁸ This resulted in a situation where, by 1898,

the 151 claimants to Boise River water asserted rights to 6,361,800 inches of water, whereas the actual flow of the river in September, 1898, was only 35,000 inches.¹⁹ However, in 1890, the Boise Valley irrigator had as yet to face the problem of water shortage, and he was satisfied that a legal definition of state water law had been made, even though the practicability of the system was in no sense assured.

The pressing problem at this time was the increasingly obvious fact that if further land was to be opened for irrigated agriculture, some method had to be devised to bring water to the valley's bench lands high above the river. The extensive upriver diversions and long canals required were beyond the capacity of individuals or small groups of farmers. Competent engineers were essential as were large labor crews and extensive materials. Such projects demanded considerable capital which only outside investors could produce. Lurking behind these factors was the inevitable, but seldom considered, paradox that the more outside capital that could be lured to build irrigation projects, and the more successful such projects might be in bringing new land "under ditch," the more acute would become the problems of water allocation and water shortage. Such capital did reach the valley and with it began the second phase of irrigated agriculture - the commercial irrigation venture.

Outside capital early demonstrated an interest in the Boise Valley. The federal government by its lenient land policy, especially in the Timber Culture Act of 1873 and the Desert Land Act of 1877, made land acquisition in the West extremely simple.²⁰ To the speculator, the easy acquisition of land, the bringing of water to it, and the sale of it at a greatly enhanced price seemed like a sound investment. In the Boise Valley a further incentive was present. In 1871 placer gold was found in paying quantities in the gravel bars along the Snake River near its juncture with the Boise. Several mining camps soon appeared in that region.²¹ The metal was found in the form of "flour gold" and could not be saved by the ordinary process of sluicing or panning. Consequently during the 1870's, although attempts were made at saving it, they were soon given up as worthless.²² The news of this find reached the East through a pamphlet published and circulated by direction of the Idaho legislature in 1881,²³ and an engineer sent by an Eastern company reported that "the gravel throughout this property will average from two to three times the return of what in California is considered extra profitable diggings."²⁴ To many Easterners such prospects seemed highly attractive.

Local authorities felt that the medium for gold recovery would have to be small, artificially constructed streams near the Snake River. Thus, if a large canal diversion could be built upstream on the Boise River, water could be run through the Boise Valley bench lands to the Snake. The project could be paid for by the fortune in gold amassed. Further, a permanent income would accrue from the canal by means of fees charged to settlers desirous of irrigating the newly opened lands. The attempt by outside capital to take advantage of these potentialities gives an interesting example of the way the commercial irrigation company operated.

In late fall, 1882, John H. Burns of New York arrived in Boise City. On November 13 he filed two claims at the Ada County courthouse for "agricultural, mining and milling

purposes." Each claim was for 150,000 inches of Boise River water, and these two claims together actually represented more water than the river carried at full season.²⁵ The water thus claimed was to be used by two potential canals, one in the east end and one in the west end of the valley. These canals would comprise one system, which was to be owned by the Idaho Mining and Irrigation Company. The second and western of the projects at first was intended as a distributing lateral for the eastern or New York Canal, which was to be taken from the river about ten miles above Boise City.²⁶

In the spring of 1883, preliminary surveys and estimates were prepared by the company for the New York Canal project, and some work was begun. In September, 1883, A. D. Foote and John Sherman arrived in Boise City from New York to take charge of the enterprise. Foote, as chief engineer and manager, filed for 75,000 more inches of water on October 26, 1883.²⁷ In the meanwhile, he continued the original surveys, the clearing of debris, and minor construction work. Between 1883 and 1891 surveys and small-scale construction were carried on intermittently, but little progress was shown in bringing the promised water to the lands. Those who had taken up land under the proposed venture were from the start critical of its lack of progress, especially in light of the company's claims of expending over a million dollars and irrigating 350,000 acres of land.²⁸

The western canal was not immediately developed by the Idaho Mining and Irrigation Company. In 1885, J. M. Stewart and James A. McGee, two agents of a Philadelphia company, arrived in Boise City. Since nothing had been done toward construction of the western project, they obtained its water right and incorporated, on November 6, 1885, the Phyllis Canal, for "agricultural and mining purposes."²⁹ The canal, named for McGee's daughter, was designed to develop the western end of the valley. With resentment rising from lack of action on the New York project, the new firm at first had trouble both in securing a right of way for its proposed canal and in finding buyers for its newly issued stock. Many settlers demanded excessive prices for needed land. Even more were unwilling to risk money in a venture they felt to be as unsound as its earlier counterpart. However, newspaper and public-interest pressure eased the situation,³⁰ and construction on the project was begun in the spring of 1886.

As in the case of the New York venture, engineering problems defeated the efforts of men equipped with no more than shovels, teams of horses, and initiative. Even the money for paying this labor soon ran out. Early in 1887 McGee went to Boston in the hope of securing further capital. From there he reported in letters that "The greatest difficulty is to get Boston people to understand what an irrigating ditch is, and what it means with respect to the development.... I feel certain that twill return with definite assurances that the ditch will be completed."³¹ However, he returned with no further funds, and after a token completion of a small portion of the actual canal, the company sold the extent of this construction and its water rights back to the Idaho Mining and Irrigation Company, October 14, 1888.³² Newspaper condemnation of the breach of faith by the Phyllis owners was strong.³³

Until 1890, the Idaho Mining and Irrigation Company contracted the local labor for its

two ditch projects. In 1890, in light of the lack of progress that had been made, it signed a contract for the completion of the two projects with a large construction firm, the W. C. Bradbury Company of Denver, Colorado. The Bradbury Company began work on the two projects in February, 1890, and kept from two hundred to five hundred men working on their construction for more than a year. In March, 1891, the Idaho Mining and Irrigation Company failed, being unable to raise further money in New York because of the general slump in the money market. Bradbury's construction had enabled water to be run in the Phyllis as far as Nampa by September, 1890; the next season saw all thirty-five miles of the ditch with water in it.³⁴ The money expended to that time on the Phyllis project totaled almost \$135,000.³⁵

The Bradbury Company was not so successful in completing the New York Canal. Although working on fourteen miles of the ditch, the company completed only six miles of it and spent almost \$400,000.³⁶ Desirous of realizing some return for its large outlay, the Bradbury Company hired a young Boise City lawyer, William F. Borah, to bring suit, April 8, 1893. Bradbury had filed a mechanic's lien for \$208,000 in July, 1891, and on February 8, 1894, his company purchased both the Phyllis and the New York Canals at an Ada County sheriff's sale for \$184,000.³⁷

The Bradbury Construction Company then owned two canals, something hardly in its line. The works of the New York Canal were left idle until its sale to a group of farmers in May, 1896. They reconstructed much of its course. Three succeeding farmer groups operated it successfully south of Boise City until it was incorporated into the later federal Boise Project.³⁸ The Phyllis project was assigned a manager and watermaster by the Bradbury Company. These men ran the project until it was taken over by the Pioneer Irrigation District in 1902.

The development of these two projects and their eventual fate is a good example of commercial water ventures in the Boise Valley and in the West. Outside capital had of necessity, to build the works since such projects were beyond the power of local groups. In some instances the projects were operated for a number of years by the commercial companies, but returns on such an investment proved slow. Further, the companies' interest in profits resulted in poor management, poor service and excessive charges to water users.³⁹ As in the case of the New York and Phyllis canals, such projects often were eventually sold to the farmer groups which they served. Such groups might work cooperatively in forming a local company, or they might operate through the framework of an irrigation district. The significance of the commercial irrigation venture cannot be underestimated, since through the introduction of outside capital vast new agricultural areas were brought "under ditch" which could not have been through farmer action. To say that the speculator paid the bills and the farmers got the advantages is to generalize too broadly, but the fact remains that in the end outside capital disappeared from the valley as farmer groups bought out the canals and the federal government took over the job of building new ones.

The pattern of canal building and the problems arising for those entering the irrigation field in the later period are well illustrated by the Farmer's Cooperative Ditch and the

Riverside Ditch. By the mid-eighties the eastern or upriver end of the Boise Valley had been brought largely under cultivation through irrigation works or would be under the existing projects. The western end was still a fertile field for development. Recognizing this fact two groups began projects to bring it "under ditch. One which eventually became known as the Farmer's Cooperative Ditch was begun in 1875 by a small group of farmers, who built a diversion and took enough water for their own individual use, enlarging the work as needs dictated. In 1887 Howard Sebree, a Caldwell businessman, purchased the ditch and water rights and began large-scale development of the project. By June, 1888, Sebree had expended \$65,000 and had built twenty-three miles of the canal, thus opening 22,000 acres of land to irrigation.⁴⁰

Sebree, in operating the project, followed the usual commercial canal company plan of selling an original water right to settlers under the ditch and then charging a rental for the water.⁴¹ However, as his operating expenses increased, he increased his water rental, and when local meetings were organized to protest such exploitation,"⁴² he announced in the press that "the company will be glad to turn the ditch over to the patrons and permit them to manage it according to their own ideas."⁴³ The farmers agreed to the proposal, and a plan was worked out between the company and the farmers wherein the farmers performed work in enlarging the canal to the amount of the cost of water rights that each desired. This insured the farmers permanent water rights and a voice in the management of the business. In all, the farmers performed \$25,000 worth of labor which enabled the canal company to deliver water at the actual cost of maintaining and operating the canal. This came to slightly over forty cents per acre, where previously Sebree had been forced to push the rate up to two dollars.⁴⁴ When the canal was sold in 1896 to a Salt Lake City concern, the Idaho Irrigation and Colonization Company, the rights the farmers had gained were considered beyond question.⁴⁵

The later history of the project turns about the general problem of dwindling water supply. In 1898 the company shut off the water in the ditch when farmers refused to pay the usual assessment in protest over the small amount of water delivered. The farmers responded by organizing protest meetings, and a group of the more "hot-headed" broke open the headgates of the ditch. Legal action over the validity of the company's action was brought. The company, represented by William E. Borah, was upheld in the local court. The court pointed out that the company was not to blame for the shortage of water.⁴⁶ As that shortage increased in the late summers of 1900 and 1901, the company was glad to sell the project in 1902 to the farmers under the ditch who operated it as the Farmer's Cooperative Ditch.⁴⁷

The second of the western projects, the Riverside Canal, faced different original problems but was vexed by the same problem of water shortage by 1900. The canal was on the opposite side of the river from the Farmer's Cooperative Canal, and its original diversion was only slightly above that of the Farmer's Cooperative Canal.

The project, early called the "Methodist Ditch," was begun by a locally organized company consisting of three Methodist ministers and two local Methodist businessmen.

The money for the project was raised largely through the sale of two classes of stock covering bottom land and bench land.⁴⁸ In 1883 a contractor, I. W. Stillwell, was hired to undertake the building of the project. Stillwell met great difficulties, for the problem of getting water to the bench lands was complicated by the terrain, which was full of seams and faults and defied permanent construction. Despite the added assistance of placer miners on the Snake River, still anxious for small streams for gold processing, the project had not succeeded by 1890 in bringing any water to the bench lands which it was designed to reclaim.⁴⁹ In 1892 it was purchased by a group of Boise businessmen, the Boise Land and Water Company, who in March, 1893, began the job of rebuilding and enlarging the existing works. With the aid of farmer labor, water was finally brought to the bench lands, and by 1900 the project was serving an area of 12,000 acres.⁵⁰

In the meanwhile, the Boise company had in 1894 sold its rights to the farmers under the ditch who had organized a company, the Riverside Irrigation District Ltd.⁵¹ The new organization provided that water rights could be obtained by the purchase of stock in the canal. At the same time the company issued a deed for the water. Each holder of a water right then became at once a joint owner in the ditch with a voice in its management, and he was liable to only such assessments as were necessary to pay his proportion of the actual running expenses.⁵²

Through the development of the Farmer's Cooperative Ditch and the Riverside project much new land in the western end of the Boise Valley was opened to agriculture. However, the potential of these projects was not realized until a later period when adequate water became available.

The more enlightened had foreseen a water shortage in the Boise Valley long before it became an actuality, and the problem of overexpansion had been predicted from the early eighties.⁵³ In 1890, for example, Howard Sebree, head of the Farmer's Cooperative Ditch project, seeing the burden that the proposed extensions of the Phyllis and New York projects would throw upon his ditch, filed a notice of protest against further construction, stating that: All the water running in the river in the time of low water has been filed upon and appropriated by individuals and companies, whose priority of claim and appropriation must be guarded and protected furthermore, in the time of low water, there is barely sufficient unappropriated water running in the river to supply our claim...consequently, any taking of water from said Boise River, by new canals, built by this company will cause a diminution of water appropriated by use, and therefore the proposed construction is unwarranted and will be resisted.⁵⁴

In 1896, in his first report, the Idaho state engineer warned: In the Boise Valley, there is much loss both in the distributing ditches and in the wasteful methods of irrigation practiced, in many instances, both of which will have to be reduced as the acres irrigated increase.⁵⁵

The management of the canal companies was far too worried about a profitable return for its large investment to have any qualms about distribution methods, and the irrigator, who paid large sums for his water, felt the way he used it was his own concern. By 1900 not only was the building of new canal systems impossible, but any expansion of

existing works was fast becoming hazardous. The 1900 report of State Engineer D. W. Ross indicated the urgency of action. After describing the great degree of overappropriation in the valley, Ross pointed out that: Unless water is used with greater economy the development of the Boise Valley will remain at the point where it has been for nearly three years...The only way the cultivated area in this valley can be increased is either by enlarging the canals, a virtual impossibility considering the water supply, or increasing the duty of the water already being diverted from the river, which can only be done by eliminating the wasteful ways of the present irrigator.⁵⁶

The solution to the Boise Valley water problem was not so simple that more economical water usage was the only practical answer. Also entangled in the problem were forty years of conflicting, overlapping water rights and claims and hundreds of legal decisions granting first this farmer or ditch, and then that, rights of water priority. Further, the basically poor canal engineering and construction was not designed toward using the available water in its most productive way. By the low-water season in 1900, 1901, and 1902, the situation had become so strained that irrigators along ditches in the western end of the valley were continually in dispute over the dwindling water supply. However, from the middle of August on, they were getting little water to argue over. The consequent crop damage and loss was not only beginning to arouse violent protests, but was forcing settlers to leave formerly fertile and productive agricultural land which was unable to grow crops without water. Thus, although the state constitution had set up a system of water law and necessary capital had been procured for large-scale projects, the basic issue of lack of water still demanded solution.

By 1902, the only possible step seemed a turn to the courts and an attempt through legal processes to solve the physical problem of insufficient water by the adjudication of the various water rights and claims in the valley.⁵⁷ The courts could not rectify the lack of water or the excessive use of water. However, the Farmer's Cooperative Ditch in 1902 turned to the courts and sued the owners of the Riverside Irrigation District and every other ditch and canal company using water from the river. The plaintiff in the case claimed that each of them against the will of said plaintiff and in violation of the rights of the said plaintiff, are depriving the plaintiff of the use of the said water to such an extent that at the present time the said river at the head of the said canal of the plaintiff is entirely dry, and that the crops, trees, and orchards of the various consumers of water from said canal are being injured and destroyed, and the said defendants threaten to and will continue to divert said water and convert the use of the same to the use of the said defendants, to the irreparable injury of this plaintiff, unless restrained from so doing by an order of this court.⁵⁸

The basis of this restraint was to be the priority of appropriation which the Farmer's Cooperative Ditch Company had to 12,000 inches of water, which it legally had right to receive before subsequent appropriators took any of the river's water.

This "Big Water Suit" which was called by the local press "the most important water suit in the history of Idaho,"⁵⁹ was begun in 1902 in the district court of the Seventh Judicial District, Canyon County. It was fairly typical of cases involving water adjudication

throughout the West. A wide variety of technical information was necessary, involving the details of each water right, its history, dates of acquirement, and physical features; the extent and character of the lands irrigated, and the amount of water used beneficially. Such information was secured through the testimony of all living irrigators available who had any connection with the history of irrigation in the locality.⁶⁰ The transcript of this testimony came to more than 1,500 printed pages.

The case proceeded intermittently through several years, and on January 18, 1906, District Judge George H. Stewart issued an opinion which came subsequently to be known as the "Stewart Decree." This decree adjudicated the rights and determined the priorities for all appropriators from June 1, 1864, to April 1, 1904. The case was then appealed to the Idaho Supreme Court, where it was affirmed as to priorities and acreage but was remanded to the district court "for the sole and only purpose of determining the duty of water on bench and bottom lands."⁶¹ In 1914, testimony was taken before the court as to the duty of water, that is, as to how much water was necessary to irrigate an acre of land. This time the testimony constituted 2,600 pages, but the final decree of the court as to such duty was never entered.

The system devised for distribution of Boise River water was one based on sliding-scale cuts. The authority for such a system, which has been in use from 1906 to the present, was a court order signed by various district judges of the Seventh Judicial District. A temporary order renewing the procedure was issued from year to year. In 1919 this order was made continuing. It provided that the various holders of water rights recognized under the Stewart Decree would receive 100 per cent of their water until decreasing stream flow would require shutting off the later rights. At that stage of flow all rights were to be reduced to 75 per cent of the decree and later to 60 percent. Sixty per cent of the decree was fixed as the rate of use during the season of shortage, and when old rights were cut to this value, later rights were shut off.⁶² This method of water distribution, based on sliding-scale cuts, provided a temporary solution to the immediate problem of conflicting water rights on the river, and its success as a distribution plan was attested to by the watermaster of the river. Speaking in September, 1947, to the Association of Western State Engineers, William F. Welch pointed out that: it is doubtful if a fixed and established duty of water will ever prove satisfactory for the Boise Valley. Seasonal conditions are continually changing...crops in the valley change from year to year...and our knowledge and methods of irrigation are constantly improving...In my judgment, if a final duty of water must ever be determined, it should follow very closely to the deliveries which have been made under the sliding scale cuts for the past forty years.⁶³

The case settling Boise River water problems was significant both in the history of Idaho and as a chapter in early Western irrigation development. The judgment provided a partial answer to the immediate problems of the Boise Valley irrigator. More economical methods for the distribution of the river's water were forced as a result, and water rights past and present on the river were positively determined. Such action meant an end to the wide-scale abuse of excessive appropriation and partially solved the problem of water distribution, which every irrigator desired but which each was unwilling to strive for

as long as he was getting enough water for his own personal use. Further, the system of sliding-scale cuts which was devised was unique in Western water adjudication and proved a highly workable system as time went on.

On a broader scale, the suit was an attempt to find an easy solution to a vexing problem by turning to the courts, even when the answer clearly lay elsewhere. No amount of litigation could have brought a solution to the actual problem, which turned on the fact that a large and growing number of irrigators were seeking water where only a fixed and limited amount of water existed. With the legal tangle as to the water rights solved, the Boise Valley irrigator was now able to see much more clearly that the real roots of his problem lay not in legal difficulties but in water shortage.

With the case settled, local water users began to focus their attention upon the solution of the real problem of water shortage. The case thus provided a climate of opinion which paved the way for enthusiastic local acceptance of the federal government's entrance into the reclamation field, and the Boise project,⁶⁴ geared to solving the valley's problems, was one of the first federal ventures.

NOTES

¹Elwood, Mead, *Irrigation Institutions* (New York, 1903), 41-42.

²The manuscripts of Joseph Branstetter, "Discovery of the Boise Basin," and David Cohanour. "Boise Basin" (Bancroft Library, University of California, Berkeley), contain interesting firsthand accounts of the early Boise Basin gold rush.

³Miscellaneous Document File, Idaho Secretary of State's Office, Statehouse, Boise, Idaho.

⁴Cohanour, *op. cit.*

⁵Sherlock Bristol, "Idaho Nomenclature," MS, Bancroft Library.

⁶Loc. Cit.

⁷For example, one of the earliest diversions on which there is record was that of Tom Davis, who at first had no headgate in the ditch which he used for irrigation, and merely took a portion of the natural flow of the river during high-water season. In 1864, he constructed a headgate from six to eight feet in width and four feet in depth which was the size of the ditch. See *Farmer's Cooperative Ditch Company vs. Riverside Irrigation District et al*, 16 Idaho 525(1909). Published with the case was a supplementary transcript and decree, containing all the testimony and rulings in the case. both in its original form in the Seventh Judicial District from which the case was appealed, and in the final case itself. Davis' ditch received first priority of appropriation in the settlement of the case. *Ibid.*, Transcript, 334.

⁸Second Annual Report of the Reclamation Service, 1902-1903, 58th Cong., 2nd Sess., House Document No.44 (1904). 298.

⁹See Sidney T. Harding. *Water Rights for Irrigation* (Stanford, 1936), 4-5; Albert E. Chandler, *Elements of Western Water Law* (San Francisco, 1918), 1-8; Elwood Mead. *op. cit.*, Chap. 4.

10See Frederick H. Newell. Irrigation in the United States (New York, 1902), 288-91. Harding, op. cit., 5-7; Chandler, op. cit., Chap. 2.

11U.S. Rev. Stat., 2339.

12See Ray Palmer Teele, Irrigation in the United States (New York, 1915), 86-87.

13Department of Agriculture, Office of Irrigation Inquiry, Abstract of the Laws of the Several States and Territories on Irrigation and Water Rights (Washington: G.P.O. (1893). 151-52. The measure would have provided for a territorial engineer, a board of adjudication of water rights with a method for the fixing of priorities; water division and water districts; and the appointment of water masters and assistants.

14Malad Valley Irrigating Co. vs. Campbell. 2 Idaho 411(1883).

15Abstract of Laws, 152.

16Drake et al vs. Farhart, 2 Idaho 750(1890).

17Constitution Adopted by a Constitutional Convention Held at Boise City, Idaho Territory, August 6, 1889, 51st Cong., 1st Sess., Senate Miscellaneous Document No.39 (1890), Article 10, pp. 17-18.

18Constitution Adopted . . . at Boise City, Article 15. Sec. 3.

19Biennial Report of the State Engineer to the Governor of Idaho for the Years 1899-1900 (Boise: Capital Printing Office, 1901), 85-90.

20Benjamin H. Hibbard, History' of the Public Land Policies (New York. 1924), contains excellent discussions of the Timber Culture and Desert Land Acts, pp.414-17, 427-28.

21John IE. Rees. Idaho Nomenclature (Chicago. 1918), 22.

22Robert E. Strahorn, Resources and Attractions of Idaho Territory (Boise City, 1881), 54.

23Loc. cit.

24James L. Onderdonk. Idaho (San Francisco. 1885), 41. Onderdonk was Idaho Territorial Comptroller.

25Farmer's Coop. vs. Riverside, Transcript. 122.262. An "inch" is a measure of the flow of water. It is an arbitrary standard both as to method and volume of water discharged. Because of this, different states have seen fit to standardize by legislation the measure of an inch by stating it in other terms. In Idaho an inch of water is one-fiftieth of a second foot; a second foot being the amount of water that will flow through an opening one foot square in one second.

- 26Ibid., 1243.
- 27Report of the Special Committee of the U.S. Senate on the Irrigation and Reclamation of Arid lands, 51st Cong.; 1st Sess.; Senate Report No.928. Part 2 (1890), Vol. I, p.328.
- 28Idaho Tri- Weekly Statesman (Boise City), Jan. 5, 1884, p.2.
- 29Farmer's Coop. vs. Riverside, Transcript, 262.
- 30Idaho Tri- Weekly Statesman, March 11, 1886, p. 2; Boise City Republican. April 17, 1886, p.1.
- 31Idaho Tri-Weekly Statesman, March 26. 1887, p. 1; see also ibid., Jan. 8, 1889, p.2.
- 32Farmer's Coop. vs. Riverside. Transcript, 262.
- 33Idaho Tri-Weekly Statesman, Aug. 7, 1891, p.8.
- 34See Newell. op. cit., 336.
- 35Idaho State Engineers Report, 1899-1900, 336.
- 36Loc. cit.
- 37Decree of Foreclosure and Order of Sale, District Court, Third Judicial District, Ada County. Idaho, April 8, 1893; Abstract of Records. Canyon County Courthouse Records, Caldwell.
- 38Farmer's Coop. vs. Riverside. Transcript, 122-25.
- 39William F. Smythe. "Irrigation in the Arid West," Atlantic Monthly, LXXXVI (Nov., 1900), 646, gives details on canal company abuses.
- 40Report... on the irrigation and Reclamation of A rid Lands, Vol.1., p.315.
- 41Loc. cit.
- 42Caldwell Tribune, May 12, 1894, p.2.
- 43Caldwell Tribune, May 23. 1894, p.2.
- 44Caldwell Tribune, Dec. 8, 1894, p.1.
- 45Caldwell Tribune, March 27, 1897, p.3.
- 46Caldwell Tribune, July 9, 1898, p.1.
- 47Caldwell Tribune, April 18, 1902, p.2.
- 48Farmer's Coop. vs. Riverside. Transcript, 572.
- 49J H. Lowell, History of Roswell, MS Appendix 1, p. 1. Lowell Family Papers, Caldwell. Idaho.
- 50Farmer's Coop vs. Riverside, Transcript, 567; Idaho State Eng's. Report, 1899-1900, 41-42.
- 51The company was not an irrigation district in the legal sense of the term, but merely used the name in its title.
- 52Lowell, Op. cit., Appendix 2, p.1.
- 53Idaho Tri-Weekly Statesman, Aug. 12, 1892, p.2.
- 54Notice of Howard Sebree, Pres. of the Idaho irrigation and Colonization Company, Nov. 5, 1890, Ada County, Abstract of Notices, 1890; at Canyon County Courthouse, Caldwell.
- 55First Biennial Report of the State Engineer to the Governor of Idaho, 1896 (Boise, 1898), 17.
- 56State Eng's. Report. 1899-1900, 85-90.
- 57Caldwell Tribune, April 25, 1905, p.8.
- 58Farmer's Cooperative Ditch Co. vs. Riverside Irrigation District Ltd., 16 Idaho 525 (1909).

59"The Big Water Suit." Caldwell Tribune, April 25, 1905, p.8.

60Many problems arose in gaining information through such a technique. Rules of evidence made it difficult to present a full showing of the facts regarding use. Further, many whose testimony was essential were either dead or unavailable, and of those who were called on for information, some were reluctant to commit themselves, while others welcomed the opportunity to talk endlessly upon local history, much of which was totally irrelevant to the case. See *Farmer's Coop. vs. Riverside*. Transcript, passim. The Idaho Supreme Court in commenting on this testimony stated: "the trouble with the whole line of evidence...is that it was for all practical purposes worthless, and was not founded on any actual measurements or tests, but was purely guess work as to the volume of water that had been used by the several witnesses . . . the first real and satisfactory tests or measurements that appear to have been made were made subsequent to the decree in attempting to distribute the water in conformity therewith." 16 Idaho 525.528 (1909).

61*Farmer's Coop. vs. Riverside*. 14 Idaho 450 (1908). See also 16 Idaho 525 (1909).

62William F. Welch. Report on Canal Deliveries from the Boise River (Watermaster's Report. 1943).

63William F. Welch. Stewart and Bryan Decrees - Sliding Scale Cuts - Boise River, Address before the Association of Western State Engineers, Sept. 10.1947, pp. 11-12.

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64See George W. James, *Reclaiming the Arid West* (New York, 1917), Chap. II; M. S. Cunningham, "Cashing in on Natural Wealth." *Harper's Weekly*. Vol. 61 (Oct. 16, 1915), pp. 369-71; "Where the Reclamation Service Stands High," *Sunset*, Vol. 35 (Oct., 1915), pp.654-65; "World's Tallest Dam" *Literary Digest* (Oct.31, 1915).

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