

CHAPTER V

THE DEVELOPMENT OF IRRIGATION

I

In 1880 the practice of irrigating the land was well understood by the inhabitants of the Yakima Valley although there were at that time no projects of much importance. It has been generally conceded that the first irrigation ditch in the valley was constructed about 1853 by the Indian, Chief Kamiakin, to whom the idea probably was suggested by Catholic missionaries with whom he was a close friend. That ditch was dug from a branch of the Ahtanum Creek, was about a quarter of a mile in length, and was used by Kamiakin to water his garden.¹

The first irrigation enterprise to be undertaken by white men was probably that of N.T. Goodwin, who in about 1867, dug a small ditch from the Yakima River to irrigate a small wheat field. The results of watering that five-acre field were so encouraging that a group of farmers, Messrs. Goodwin, Stoolcop, Vaughn, Mayberry, and Simmons began work on the first cooperative enterprise in irrigation in the valley. The project was started in the spring of 1868, but it progressed very slowly because the men had little capital with which to prosecute the undertaking. The intake of the ditch was located near the

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Layman, History of the Yakima Valley, 352; Splawn, Kami-
akin, 266.

mouth of the Naches River, and when it was completed it extended to the Goodwin place which was near the Moxee bridge. A number of years later it was enlarged and improved, and became known as the Union canal.²

In 1872 Charles and Joseph Schanno and Sebastian Lauber dug a ditch from a point on Ahtanum Creek to their half section of land which later became the site of Yakima City. The undertaking was not as successful as they desired so a year or two later they began work on what proved to be the first ditch of large size and public utility in the valley. It had its source at the Naches River about eight miles above the Schanno place, and by following a natural hollow for a great part of its length both the cost of its construction and the amount of labor which it required were reduced to a minimum. It was eighteen feet wide at the bottom, eighteen inches deep, and was completed in 1875.³

There were a few other small projects undertaken before 1880. Judge Beck is reported to have dug a small ditch in 1872 before the first ditch of the Schanno brothers was constructed. It carried water from the Yakima River to his place just ~~below~~ north of Yakima City. Another was constructed by William Lince, and it conducted water from Ahtanum Creek to irrigate his land.

² Rose Boening, "History of Irrigation in the State of Washington" in the Washington Historical Quarterly, 9:264 (October, 1918): Interstate Publishing Company, Illustrated History, 157.

³ Boening, "History of Irrigation," 264: Lyman, History of the Yakima Valley 353.

Other early projects werethose of J.M. Baxter and a Mr. Lockwood on the south side of the river in the vicinity of Prosser, and the Antanum and Wide Hollow canal which began on the north side of Antanum creek and extended for ten miles toward North Yakima.⁴

In 1880 a group of farmers a few miles below Yakima City began the digging of the Konnewock Ditch. The undertaking was a cooperative enterprise and shares of stock were sold to raise the necessary capital for its construction. Work on the ditch progressed slowly since the farmers themselves furnished most of the labor, and during the plowing, cultivating and harvesting seasons they had little time to spare for other activities. One observer reported in April of that year that for some time only one man had been working on the ditch. By June about two hundred rods of the most difficult part had been completed at a total expenditure of a little over one thousand dollars. According to a report of Robert Dunn, the secretary of the organization, thirty-four shares had been subscribed by June 26, 1880, making subscriptions to the stock not as numerous as desired. The owners persevered, however, until the canal was finished. It watered about 3,000 acres of land in the Parker bottom. By 1889 it was twenty miles in length and the owners were planning to extend it still farther. At a meeting in March the members who were present set May 25 as the date for a meeting to vote upon increasing the capital stock of the company to \$15,000 for

⁴ Ibid., 353, 354; Tonneson, First Report of the Board of Horticulture, 290.

that purpose, but in the meantime a new company had ben organized to make irrigated lands available throughout the entire Yakima Valley; and in the fall of 1890 the Kennewock Ditch company was offered a contract by which it would transfer its holdings to the Northern Pacific, Yakima & Kittitas Irrigation Company. The contract provided that the Konnewock ditch should become the property of the irrigation company in exchange for which each stockholder in the Konnewock Ditch company would receive four inches of water for each share of stock owned, for a period of fifty years. Some of the stockholders attempted to have the consideration inc eased to five inches of water, but it was finally agreed to accept the original offer, and on December 6, 1890, the⁵ transaction was completed.

Several other small irrfigation projects were undertaken during the first half of the decade, 1880-1890. On December 25, 1880, an item appeared in the colums of the Record which stated that Messrs. Walters, McAuslan and Nelson had located a ditch which would have its intake from the Naches. The editor predicted that the "future capital will undoubtedly be supplied with water from this source."⁶ A few weeks later articles of incorporation were filed under the name of the Yakima Valley and Water Company"for the purpose of constructing and operating can-

⁵ Lyman, History of the Yakima Valley, 363-363; Yakima Herald April 5, 1889, November 20, 27, December 11, 1890; Yakima Record, February 7, March 27, April 17, June 26, 1880.

⁶ Even at this early date some of the more enterprising citizens of Yakima City visualized that place as the future capital of the State of Washington.

als, ditches, flumes, etc. and by which to conduct water for the purpose of irrigation, manufacture, municipal and domestic use and for general improvement." The company offered 10,000 shares of stock for sale at twenty dollars per share, but from the evidence available the project never went beyond the paper stage.⁷

In March, 1880, it was reported that C.V. Fowler was working on an irrigation ditch in the Moxee Valley. That canal was completed about 1884, but it was later extended through Union Gap⁸ and became known as the Lombard and Horseley ditch.

In 1882 the Moxee Ditch Company was organized and began a ditch to irrigate a portion of the Moxee Valley. The following year the company voted to receive bids for the digging of 1,240 rods (almost four miles) of that canal. In 1884 the Governor of the Territory reported that the Yakima Farm and Ditch Company had been organized some time before for the purpose of irrigating the lands of the Moxee Valley. Probably he was referring to the Moxee Ditch company under a reorganized name, although he may have had in mind an entirely different enterprise. He estimated that the completed project would water about twenty thousand acres of land.⁹

⁷ Yakima Herald, December 26, 1880, January 8, 1881.

⁸ Ibid., March 27, 1880.

⁹ Ibid., July 15, 1882, April 7, 1883; Watson C. Squire, Report of the Governor of "Washington Territory," 1884, in the "Report of the Secretary of the Interior (48 Congress, 2 Session, House Executive Document No. 1, vol. 2 serial 2287, Washington, 1885, 634.

Sometime before 1887 a joint-stock corporation which was composed of Kittitas County and Tacoma men began work on a comprehensive scheme of irrigation--another which never progressed much farther than the "paper" stage of development. The corporation proposed to dig four canals; one known as the Teanaway Canal would water the eastern part of the Kittitas Valley; the second would begin in the Tieton basin and extend to Yakima City, a distance of about fifty miles; the third would have its source in the canyon of the Yakima River five miles north of North Yakima and would extend about seventy-five miles until it reached the horseshoe bend of the Yakima River; the fourth would begin near Yakima City and would extend one hundred fifty miles to a point below Wallula on the Columbia River. In 1887 some work had been done on about twenty miles of the first ditch which it was hoped would be completed in 1888 at a cost of \$100,000. Half of the land which was included in this extensive plan was owned by the Northern Pacific Railroad company, and since that company was engaged by 1890 in the work of constructing a canal of its own, it is readily understood that a chief obstacle toward the realization of the plan was the railroad company's title to the land.¹⁰

II

In the meantime there were several important problems that had arisen with regard to irrigation developments. The first of these to appear was the question of the riparian rights of

¹⁰ Sample, "Report of the Governor," 1887, pp. 987-988.

land owners along the streams. As early as 1883 one finds some complaint that corporations and irrigation companies were encroaching upon the vested rights of individuals, although there is also evidence that the riparian owners at times attempted to monopolize the water to the exclusion of all others.

At that time there had been no storage reservoirs constructed, and since a number of the streams which were used for irrigation purposes were small, there were certain periods during the farming season when the supply of water in them was limited.

In February, 1886, an act to regulate irrigation and water rights in Kittitas and Yakima counties was passed by the Territorial Legislature. The act provided "that any person or persons, corporation or company who may have or hold a title or possessory right or title to any agricultural lands within the limits of Yakima or Kittitas counties.....shall be entitled to the use and enjoyment of the waters of the streams or creeks in said counties for the purposes of irrigation and making said land available for agricultural purposes." The act further made provision for securing the right-of-way for ditches, dikes, or flumes by process of condemnation if consent could not be obtained from the owner, but specified that no water should be diverted from a stream in such a manner as to affect the rights of a prior appropriator. The A law approved March 4, 1890 extended the above privileges to persons anywhere in the state and added some further provisions: In case the volume of water from a stream was insufficient to constantly sup-

ply the wants of the entire country through which it passed, the judge of the superior court in any county through which the stream ran was to appoint three commissioners who would apportion the water to the several sections on alternate days, thus providing all landowners with an equitable distribution. Corporations were specifically recognized as having the right to construct works for irrigation purposes whether or not they owned the land through which the canals and ditches would pass but they were made subject to the regulations which might be prescribed by the legislature from time to time. An act of the year 1891 stated that the right to use water in any lake, pond or flowing spring in this state, or the right to the use of water flowing in any river, stream, or ravine of this state for irrigation...may be acquired by appropriation, and as between appropriations the first in time is the first in right." That act applied to persons, corporations or associations; and it also defined the conditions under which the appropriation of such water rights should be made, and attempted to prevent taking advantage of the law for speculative purposes by providing that the construction of works for irrigation purposes must commence within six months after posting the notice of appropriation.

The legislation regarding water and appropriation rights

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Kittitas Standard (Ellensburg), July 21, 1883; Laws of the Territory of Washington, 1883-1886, p. 509; Session Laws of the State of Washington, 1889/90 pp 706, 707, 721-22; Ibid. 1891, p 327-328; Yakima Herald, March 7 1889, January 9, 1890.

was complemented by the passage of another law which provided for the organization of irrigation districts. It aimed both to adjust difficulties over water rights and to aid in solving the problem of securing the necessary capital to construct irrigation works. The law, approved March 20, 1890, provided for the organization of an irrigation district "Whenever fifty or ~~an~~ majority of free holders owning lands susceptible of one mode of irrigation from a common source, and by the same system of works, desire to provide for the irrigation of the same....." A petition bearing the proper number of qualified signatures and describing the boundary of the proposed district was to be filed with the county commissioners of the county in which the greatest portion of the district lay. If the commissioners approved the petition they were required to divide the district into five approximately equal parts and order an election of five directors (one to be chosen from each district), an assessor, a collector, and a treasurer.¹² The management of the affairs of the district was to be in the hands of the board of directors who drew up the regulations regarding the use and distribution of water; made the surveys to locate the canals and other irrigation works acquired such property as was necessary to carry out the purposes for which the district was organized; issued 6 per cent bonds to finance the undertakings (provided that the qualified elect-

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A subsequent law of 1895, amending the law of 1890, provided for the election of three directors instead of five. Session Laws of the State of Washington, 1895, p. 435.

ors of the district approved such issue; and entered into contracts for the construction of canals, reservoirs, dams, flumes, and any other irrigation works required. Bonds were to be liquidated and retired at the end of thirty years according to the following plan: At the end of fifteen years and continuing through the twenty-ninth year, not less than six per cent was to be retired each year; and at the end of the thirtieth year the balances should be retired. Money to liquidate the bonds and for the payment of interest was to be obtained through an assessment on the property of the members of the district.¹³

Expenses of the district, including the repair and improvements of the irrigation works, were to be met either by an assessment against each member's property, or by charging fixed water rates, or both. "To stimulate the sale of irrigation bonds another law, approved March 7, 1890, provided that railroad corporations could "take, require, own, negotiate, sell and guarantee bonds and stocks of companies or corporations which areorganized for the purpose of irrigating and reclaiming lands within this state." The same law gave railroads au-

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Ibid., 436-437, 441. The amendments to the law of 1890 provided for the retirement of irrigation district bonds in twenty years according to the following plan: At the end of eleven years, five per cent; at the end of twelve years, six per cent; at the end of thirteen years, seven per cent; at the end of fourteen years, eight per cent; at the end of fifteen years, nine per cent; at the end of sixteen years, ten per cent; at the end of seventeen years, eleven per cent; at the end of eighteen years, thirteen per cent; at the end of nineteen years, fifteen per cent; and at the end of twenty years, sixteen per cent. The assessments for retiring the bonds were ordered by the same law to be levied in the same ratio.

thority to engage in reclamation projects of their own. That was a logical step since the railroad companies owned so much of the land in the regions where irrigation was feasible.¹⁴

III

The state having provided legislation which was favorable for the development of irrigation projects, it is not surprising that there was considerable activity centering around such developments between 1890 and 1900. A few of these had their beginning in the previous decade but were not completed until after 1890.

In 1888 the Moxee Company began the digging of a canal to water its lands.¹⁵ The first ditch was completed in 1889 and carried a body of water three feet deep. In 1893 the company was trying to sell 17,000 water rights after which it would construct a second canal on the higher bench lands. It would have been fifteen miles long and would have watered about 6,000 acres, but there is no evidence that it was constructed during the remainder of the period before 1900. Probably the panic of 1893 caused a cessation of activity of the project.¹⁶

¹⁴Session Laws of the State of Washington, 1889/90, pp.529 671-673. Apparently there was a feeling that the bonds of irrigation districts were not a security for first class investment. A more thorough study would probably reveal that the interests of the Northern Pacific had wielded considerable influence in securing its passage, as that company almost immediately began its huge irrigation in the Yakima valley.

¹⁵This was the Moxee Land Company, not the ditch company.

¹⁶Boening, "History of Irrigation," 268; Lyman, History of

During the same year in which the Moxee Company began work on its canal, the Selah Valley Ditch company was organized by John A. Stone of Pierce County. The canal which that company constructed was the largest irrigation enterprise that had been undertaken in the Yakima Valley. It was reported that the company bought 10,000 acres of land from the Northern Pacific Railroad Company and proposed to sell it to actual settlers¹⁷ at a price which included perpetual water rights.¹ The canal took water from the Naches River about thirty miles from its mouth and carried it to the Selah Valley just a few miles above North Yakima. It was constructed under considerable difficulty at a cost of \$75,000, but it was considered to be one of the best ditches in the county. Its completed length was twenty-two miles and it carried water to a depth of three and a half feet. The work of that project was not completed until the fall of 1891. There seems to have been some sort of reorganization effected later, for in 1895 a petition was received by the judge of the superior court of Yakima County to appoint a receiver for the affairs of the Selah

the Yakima Valley, 353-354; Yakima Herald, April 20, 1893, "A water right consisted of a guarantee of a certain amount of water. Various measures were used at that time, but for example a flow of one miner's inch of water continually was said to be sufficient to water from five to fifteen acres of land. A miner's inch then, might be called a water right. If a farmer owned five times as much land as a water right could satisfactorily irrigate, he would then have to purchase five water rights.

¹⁷ The price charged probably averaged about forty dollars per acre as that was the estimated value of the land with water according to a report to the federal government. It corresponds also to prices charged by other companies.

Valley Irrigation Company. The Bondholders who filed the petition had brought action because the company had defaulted in the payment of interest on its bonds, and after hearing the evidence the judge granted the request. It was predicted by the Herald that the receivership would probably last only a short time. ¹⁹ The prediction may have come true but the property eventually passed into the control of the bondholders who continued to make improvements on the canal system and to try to induce settlement on their lands.

In 1889 the Yakima Irrigation and Improvement Company began work on a project to furnish irrigation facilities for the lower Yakima Valley. Originally the plan of this company (under the name, Oneida Company) was to construct a canal on the north side of the Yakima River which would have its intake near Kiona, would water four thousand acres of land which had been acquired by the company and would carry enough water to also supply homesteaders farther down the river. The company in-

The author is certain that this company and the Selah Valley Ditch Company were the same organization, for the president of both was J.A. Stone; and Fichter & Law, Yakima Real estate agents and owners of considerable stock in the Ditch company were in 1895 advertising the lands of the Selah Valley Irrigation Company.

Richard J. Hinton, A Report of Irrigation and the Cultivation of the Soil Thereby, with Physical Data, Conditions and Progress Within the United States for 1891, Accompanied by Maps, Illustrations and Papers (52 Congress, 1 Session, Senate Executive Document No. 41, Vol. 4, part 1, Serial 2899, Washington, 1892) 269 Lyman, History of the Yakima Valley, 353; Yakima Herald February 2, July 4, December 19, 1889; January 9, February 6, April 3, June 12, 1890; August 6, October 1, 22, 1891, April 4 October 17, November 7, 1895; April 28, 1899.

tended to construct a canal of sufficient size to carry boats into the Yakima River where they could receive and discharge freight at terminals which would be established at Kiona. Such a plan would have provided the company and the farmers who had land along the canal with easy access to railroad transportation. The Oneida Company was forced into receivership in 1889, but so much money had been put into the purchase of land that a reorganization was effected and plans were pushed forward to realize something from the enterprise.²⁰ Accordingly a somewhat less pretentious plan was developed by which a canal of sixty miles was to be constructed to place under irrigation about 50,000 acres between Kiona and Wallula. The main ditch was located on the south side of the Yakima River but it was the intention of the company to provide water for the north side by means of conduits across the river. Work on this project was under way in January, 1892, and by 1894 the canal had been finished as far as Hover, a distance of about forty-five miles from its intake. The original canal proved to be inadequate to provide water for both sides of the river, but it was later enlarged to meet those needs.

In the meantime a company was organized under the name, Yakima & Kennewick Irrigation Company (popularly known as the Leadbetter Company). Its chief promoter was C.H. Leadbetter

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The author has made no attempt to analyze the causes or results of the various reorganization schemes which occurred among irrigation companies. This is an important subject in the history of irrigation, but except as it hindered or furthered the construction of irrigation works it probably had very little effect upon the agriculture of the valley.

of Portland , and it was largely promoted by outside capital. The company proposed to irrigate the lands of the Dell Haven Irrigation District (which was situated on the west bank of the Columbia River, just below the mouth of the Yakima) and 8,000~~0~~ acres of its own. On the north side of the Yakima River it proposed to provide water for the district lying between the Rattlesnake Hills and the Columbia. In order to locate its main canal high enough to furnish water for this project it was necessary to begin the ditch near Kiona, the same place that had been chosen by the Yakima Irrigation and Improvement company for the intake of its canal. In January 1892, a controversy arose between the two companies because the Leadbetter Company had attempted to begin the construction of its ditch on land which was owned by the Yakima Irrigation and Improvement Company. The litigation which followed this difficulty delayed the work, and the Leadbetter Company apparently modified its plan, for it was reported in June that the company's ditch would start at Prosser Falls and run on the north side of the river for nineteen miles. Then it would cross the river and continue to Kennewick, then follow the Columbia River to a point opposite Wallula. In September, 1892, it was reported that an agreement had been reached between the two disputing companies regarding the territory which each was to supply with water.

Early in 1893 the Yakima Irrigation and Improvement Com-

any acquired a part of the Leadbetter interests, but the hard times which ensued halted the enterprise and the interests of the Improvement Company were in turn acquired by the Dell Haven Irrigation District which operated the canal between 1893 and 1896. The irrigation district also failed to maintain itself and was forced to liquidate. Irrigation enterprise in the Kennewick region languished until 1902 when the Northern Pacific Railroad which had acquired the stock of the Dell Haven Irrigation District resumed operations.²²

Early in 1890 a great deal of enthusiasm was shown for an irrigation project which would water lands in the Tieton and Wide Hollow regions. A civil engineer, J.D. McIntyre and a few associates proposed to dig a canal from the Naches River above Tieton and to provide water for the lands of the Cowlitz, Antanum and Wide Hollow districts. It was recognized as a difficult undertaking and the estimated cost of the canal was placed at \$400,000, one-fourth of which the farmers in the area were to provide by buying stock in the company. Each subscriber was to buy one share of stock (at a par value of five dollars) for each acre of land which he proposed to water, and to pay an annual water rental of one dollar or one dollar and a half. That purchase entitled him to share in any dividends that might be declared. In lieu of the above plan he could pur-

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Interstate Publishing Company, Illustrated History, 185; Lyman, History of the Yakima Valley, 354-355; Yakima Herald October 3, 1889; February 27, 1890; October 22, December 24, 1891; January 14, 28, June 30, September 1, November 17, 1892.

chase a permanent water right for \$2,000 payable in installments and pay thereafter twenty-five cents per acre to keep the ditch in repair. That plan did not materialize, but a few months later in the year the Cowiche and Wide Hollow Irrigation District was organized by the landowners of that region, and in September an engineer was engaged to make a survey for a canal from the main channel of the Tieton River. Surveys were made and favorable reports were received concerning the feasibility of the project. On January 9, 1892, an election was held to vote on a proposal to bond the district for half a million dollars for the construction of the irrigation works. The bond issue was defeated but the agitation and discussion which arose over the question is credited with having prepared the way for the later government project in that region. ²³

Toward the end of 1893 a project of somewhat different nature was undertaken near Prosser where the land was too high to be reclaimed by a gravity system of irrigation. In February 1894 surveyors were investigating the possibility of using the fall in the Yakima River at that place to provide power to raise the water to a level where it could be used. The plan proved feasible and on April 16, 1894 the town of Prosser celebrated the completion of the enterprise with rather elaborate ceremonies. The project made use of large turbines and two duplex pumps which raised the water one hundred feet so that it

could be carried by flumes to the irrigation canals. The depression years proved to be hard on the Prosser Falls Irrigation Company, however, and in May, 1899, its property including the townsite was sold by the receiver. In 1911 the Prosser irrigating project was incorporated into the government system of the Sunnyside Canal.²⁴

The Yakima Land Company was organized in 1891 to test the possibilities of procuring water for irrigation from artesian wells. The company filed on five sections of land in the Moxee Valley under the provisions of the Desert Land Act, and made a number of purchases of railroad lands in that region. Well boring machinery was imported from St Paul, and in August of that year artesian water was struck in the first well. A second well was begun immediately but it did not prove a success. In January, 1892, however, water began to flow from the company's third well. The amount of water from the two was estimated at something over a million gallons a day. Such a quantity was sufficient to irrigate a half-section of land. By flowing wells, the Pacific Artesian and Land Company (which had begun operations at about the same time) had two, one of which was reported to yield 2,400,000 gallons of water per day. It was said that there was only one other artesian well in the United States which surpassed it in quantity of water. For a while it was believed by many that artesians could

¹ Lyman, History of the Yakima Valley 355; Yakima Herald February 1, April 12, 1894, May 18, 1899.

be located anywhere in the Yakima Valley and thus provide the higher bench lands with irrigation facilities. Geological surveys later showed, however, that there was a comparatively small and well defined artesian basin located in the Moxee Valley. Efforts to secure flowing water in other sections failed to meet with success. During the remainder of the decade numerous experiments were conducted to utilize every possibility of irrigation with artesian water. In February 1897, the Herald reported that there were eleven flowing wells in the Moxee Valley. In June, 1899, that number had increased to sixteen. There is evidence however that by the latter date the water pressure was falling for when the first wells were bored there were at least two from which the water rose fifteen feet above the surface, whereas a report in 1899 stated that "one well... spouts its flow of water 8 feet above the ground."

From the standpoint of permanency the artesian wells did not prove to be a success. Those that are in use today no longer flow freely, and the water has to be lifted with pumps. For ~~in 1903~~ a number of years, however, they played a rather important part in the irrigation progress of the valley. The bureau of Statistics reported in 1903 that there were thirty wells in the valley which irrigated an area of 2,915 acres.

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Boening, "History of Irrigation, 281; Bureau of Statistics, Agriculture and Immigration, Agricultural, Manufacturing, and Commercial Resources and Capabilities of Washington, 1903 (Olympia, 1903) 53; F.H. Newell, "Report on Agriculture by Irrigation in the Western Part of the United States at the Eleventh Census: 1890," in the Report of Statistics of Agriculture in the United States at the Eleventh Census: 1890

The most extensive irrigation enterprise of the Yakima Valley before 1900 was begun when the Yakima Canal and Land Company was organized in 1889 with a capital stock of one million dollars divided into two hundred thousand shares of fifty dollars each. The company was organized as a result of the energy of Walter N. Granger and J.D. McIntyre of Helena, Montana, who succeeded in interesting some Chicago capitalists to form the company with them. Both Granger and McIntyre had had experience with irrigation projects in Montana. The Yakima Canal and Land Company planned to purchase 1,000,000 acres of land to which it held an option from the Northern Pacific Railroad Company and to construct a canal one hundred miles in length to supply water right at a greatly increased price, the company estimated that it would realize a considerable amount of profit.

A preliminary survey for the canal was made in the fall of 1889 and the report proved so encouraging that the Northern Pacific Railroad Company also became interested in the possibilities of the project. Under the direction of Paul Schulze of Tacoma, the railroad company made a survey of its own, and there made advances toward the incorporation of the interests of the two companies. Early in 1890 the state legislature passed the law giving railroad companies the right to

(Washington 1895) 247; Wyckoff, "Irrigation," 253; Yakima Herald May 21, June 11, July 16, August 20, 27, September 10, 17, October 1, 1891 January 28 February 18, March 10, April 14, May 19, 1892, January 26, November 30, December 31 1893, May 31, November 20, 1894, February 25, June 24, 1897, June 22, 1899.

guarantee the bonds of irrigation companies and to engage in reclamation projects of their own, and a few months later (August 28, 1890) the merging of the interests of the two companies was realized. Schulze who was in the land department of the railroad became the president, and Granger the vice-president and general manager of the new company which was called the Northern Pacific, Yakima & Kittitas Irrigation Company. The original plans of the Yakima Canal and Land Company were greatly expanded. Sites were surveyed for the construction of seven reservoirs in the mountains in order to store the water against periods when the streams were low; and it was decided to construct three canals, one in Kittitas county and the other two in Yakima County. The first of these (and the only one to be constructed by that company) began on the east side of the Yakima River about two miles below Union Gap and extended for sixty miles toward the south, emptying into the river opposite the town of Prosser. It was known as the Sunnyside Canal, and is the one which incorporated the old Konnewock ditch which had been constructed during the previous decade.²⁶ The second Yakima county canal was to take water from the Naches River and cover the bench lands on the west side of the Yakima. It was known as the Sunnyside High Line, and it materialized only after the federal government entered the field of reclamation.

Work on the Sunnyside Canal began in the spring of 1891,

and on March 26, 1892 the first twenty-five miles was formally opened amid elaborate ceremonies. In November of the same year the contract was signed for the construction of the remainder of the canal.²⁷

The financial difficulties of 1893 greatly retarded the work of that project, however. Paul Schulze made several attempts during 1893 and 1894 to float bonds in order that the work could be continued but his efforts met only partial success, and as the company's land sales declined and interest payments could not be met, a crisis developed. A complete collapse of the company was temporarily averted by reorganizing it with the Yakima Investment Company, but in January, 1895 that company went into receivership at the request of the California Trust Company, the trustee for the irrigation company's securities. The subsequent suicide of Schulze in April of the same year led to an investigation which revealed that he had grossly misappropriated the funds of both the Northern Pacific and the Yakima Investment Company.²⁸

The irrigation company remained in receivership during the remainder of the decade, and although it continued to push the

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"Great Yakima Irrigation Canal," in Northwest Magazine 10:36 (April 1892); Interstate Publishing company, Illustrated History, 182, 537; Washington Irrigation Company; Sunny-

Side Canal, opposite plate 15; Yakima Herald, June 13, September 19, 27, 1889, April 24, August 28, September 4, October 16, 1890, January 8, April 16, May 7, December 10, 1891, March 24, 31, November 17, 1892.

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Yakima Herald May 11, June 22, 1893, April 26, May 10, June 14, July 19, 1894, January 10, February 28, March 21, April 18, 25, August 22, 1895, March 19, 1896.

work of the canal as fast as possible, progress was quite slow. By 1899 forty-five miles of the main canal were completed with enough laterals to reclaim most of the land which lay under the finished part of the ditch. During that time the company made a number of attempts to organize but all of them were unsuccessful, and in July 1899 Judge Hanford ordered the property of the Yakima Investment Company to be sold at auction. It was acquired by the Washington Irrigation Company which was financed with Portland capital. The new owners spent considerable money on improvements for the enterprise and encouraged the settlement of lands by lowering the price and offering it for sale at easy terms. The work of the Washington Irrigation Company is credited with having prepared the way for government enterprise in the Yakima Valley.

IV

Before 1900 the federal government did very little toward furthering irrigation enterprise beyond passing some legislation which aimed to help private capital to develop irrigation projects. The desert land act of 1877 was already been discussed and was the first effort to make some provision for reclaiming arid lands. After 1890 there was a great deal of agitation from a number of western states concerning the ques-

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Lyman, History of the Yakima Valley 360; Yakima Herald, April 2, August 6, September 24, 1896; January 28, July 29, August 5, 26, September 30, 1897; April 14, 1898; July 27, August 31, 1899.

tion of federal aid for reclamation projects. Congressmen, however, were opposed to lending such help because they could readily see how expensive it would become. To prevent undue speculation in arid lands, however, a law was passed in 1888 which provided for a geological survey under the direction of the department of the interior. Its purpose was to locate sites for reservoirs, ditches or canals for irrigation purposes, and to reserve from sale the lands which would be affected by such works. Except for an act amending the desert land law of 1877, no further legislation affecting arid lands was passed until 1894 when provision was made for the states to make application to receive not to exceed one million acres of arid lands from the public domain. Such portion of the grant as had not been reclaimed by the state at the end of ten years was to revert back to the federal government. In 1895 the Legislature of the state of Washington passed an act creating a Commissioner of Arid Lands whose duty it was to make a selection of such lands as the state would accept under the terms of the federal law. The commissioner was empowered to enter into contracts with individuals or with corporations for the reclamation of the lands which were selected, and to sell land to individuals in not less than ten or more than forty-acre tracts. In 1896 the Yakima land office received application from the commissioner to segregate 77,180 acres of lands in Yakima

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This latter provision was made in the law of 1897 which amended the law of 1895. Session Laws of the State of Washington, 1897, p. 354.

County for state use, but for the remainder of the decade private capital showed little interest in developing new irrigation projects.³¹

Before 1900, however, the first government irrigation project in the Yakima Valley did materialize in the form of two ditches which were dug on the west side of the Yakima River on the Indian reservation. They were finished in 1897 and within a year or two white men began to lease large areas of the reservation for farming purposes.³² Thus it was that before the beginning of the twentieth century the whole Yakima Valley was provided with facilities to water its lands. Besides the projects which have been discussed there were a number of others which, although they were small in themselves, combined to furnish water for a great many acres of land. The general growth of irrigation is shown by the fact that there were in 1889, 293 irrigators who had under cultivation 15, 129 acres of land in the Yakima Valley. In 1899 the number of irrigators had increased to 1,307 while the acreage irrigated was 56,611, an increase of 41,482 acres or more than twice the entire acreage which had been irrigated ten years earlier.³³

³¹ Session Laws of the State of Washington, 1895, p 452-455; Ibid., 1897, p. 347-354; United States Statutes at Large, 25:526; Ibid., 28:422; Yakima Herald, January 9, 1896.

³² Interstate Publishing Company, Illustrated History, 231; Yakima Herald, September 10, 17, June 4, 1896.

³³ William R. Merriam (Director), "Agriculture," Part 2 in the Twelfth Census of the United States, Taken in the Year 1900 (Washington, 1901) 862.

A summary of the projects in irrigation is represented by the following table. Although the figures are for the year 1896, they represent approximately the status of irrigation at the end of the decade, for with the exception of the Indian reservation projects, no irrigation works of any consequence were begun after 1893.

"A Table Showing the canals that have been constructed or surveyed in Yakima county, their size and the area of lands which they cover,"³⁴

	Mileage Completed	Mileage to be Completed	Acres Reclaimed	Acres Cultivated
Delah Valley Canal	22	----	6,000	1,000
Yakima Valley Land Co.	16	---	3,000	700
Tacoma & Yakima Land Co	12	24	-----	----
Naches & Cowiche	7	--	3,000	3,000
Union, Broadguage & Schanno	16	--	5,000	4,500
Moxee Canals(3)	33	18	5,050	2,150
Moxee Artesian Wells (8)	--	--	1,250	550
Yakima Investment Company	42	18	50,000	9,860
Yakima Irrigation & Improvement Co(3)	51	--	17,710	1,100
Prosser Falls Irrigation Co	8	--	3,000	350
*Ahtanum Valley	100	--	16,000	16,000
*Naches Valley	12	--	8,000	8,000
*Wenas Valley	8	--	4,800	4,800
*Cowiche Valley	12	--	4,000	4,000
Indian Reservation	26	32	14,600	14,600
Total	365	92	141,410	70,610
*Small Canals				

³⁴ Price, First Annual Report of the Bureau of Statistics, 1896, p. 29