Development of a policy towards irrigation in Montana to 1908

John W. Hakola

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Development of a Policy Towards Irrigation in Montana to 1908

by

John W. Hakola
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Approved:

Paul C. Phiri
Chairman of Board of Examiners

W. P. Clark
Dean, Graduate School
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preface</td>
<td></td>
<td>iii</td>
</tr>
<tr>
<td>I</td>
<td>The Land and The Water</td>
<td>1</td>
</tr>
<tr>
<td>II</td>
<td>Irrigation Laws</td>
<td>10</td>
</tr>
<tr>
<td>III</td>
<td>The Public Land Acts</td>
<td>51</td>
</tr>
<tr>
<td>IV</td>
<td>The Corporation Period</td>
<td>65</td>
</tr>
<tr>
<td>V</td>
<td>The Carey Land Acts</td>
<td>80</td>
</tr>
<tr>
<td>VI</td>
<td>The National Reclamation Act</td>
<td>110</td>
</tr>
<tr>
<td>VII</td>
<td>Indian Reclamation</td>
<td>122</td>
</tr>
<tr>
<td>Appendix</td>
<td>Developments Under National Reclamation</td>
<td>131</td>
</tr>
<tr>
<td>Bibliography</td>
<td></td>
<td>140</td>
</tr>
</tbody>
</table>
PREFACE

The importance of water in the development of Montana has been recognized since the days of the early farmers and miners. The efforts to control its supply have caused the citizens of Montana and of the whole country to give a great deal of thought to an adequate solution. The policy of control has been long and tortuous. It was to find out how this control developed in relation to irrigation that this study was undertaken.

Information for this thesis has been obtained primarily from state and federal government publications. The statutes of the territory and state as well as those of the national government have provided much of the material for this work. Publications of the various state and national agencies have been invaluable. Secondary sources on Montana history and irrigation development, of which there are few, have provided background material.

This study has been limited, for the most part, to the Legislative history of irrigation before 1902. By that date the basic water right legislation, as it exists today, was on the statute books. In that year, too, the National Reclamation Act was passed and since that time most irrigation progress in the state was made by the various agencies of the federal government.

Many difficulties were encountered by the author in preparing an outline of the material in this thesis. That
which has been adopted may not be the best possible one, but it has been easiest to work with. The first chapter is devoted to an explanation of the need for irrigation in Montana and the possibilities for developing it. Basic to the whole problem is the matter of water right legislation, which is discussed in chapter two. Financial considerations were also of extreme importance during this early period for the people of Montana often lacked capital with which to construct canals and dams. The unsuccessful efforts of the people of the Territory and State to solve this problem of the lack of capital by individual initiative, by the construction of works by cooperatives and commercial corporations, and by public-private development under the Carey Land Act are considered next. The final portion of the thesis is devoted to the advent of national reclamation and a summary of work done in Montana by the federal government.

The author wishes to express his gratitude to his adviser, Dr. Paul C. Phillips, who has done so much to encourage and aid him. He has been extremely patient with the writer’s first faltering attempts at scholarly composition. The staff of the History Department and the Library have also been very cooperative.
CHAPTER I

THE LAND AND THE WATER

Montana lies within the great semi-arid region of the Northwest, the eastern section of which is included in what was once called the Great American Desert. Rainfall generally has been too scanty to provide for successful production of most crops year after year. The western two-fifths is mountainous; the rainfall there, however, is a little greater than in the plains region to the east.

Major John Wesley Powell, a Geological Survey engineer who made extensive investigations in the West during the 1870's, in his Report on the Lands of the Arid Region, set the limit of successful agriculture without irrigation at an annual rainfall of at least twenty inches and stated that even then there was no real certainty that agriculture could be conducted successfully with still more rain. He wrote that the Isphytal, or mean annual rainfall line of twenty inches, began sixty miles west of Brownsville, Texas, and intersected the northern boundary about fifty miles east of Pembina on the eastern border of North Dakota. This line was quite irregular and varied between the 95th and 100th meridians of longitude west of Greenwich. "The Arid Region is the great Rocky Mountain region of the United States.

and it embraces something more than four-tenths of the whole country, excluding Alaska."

William E. Smythe, an early advocate of federal reclamation, placed the dividing line between the arid region and the more moist eastern region at the 97th meridian. He told of the early ideas prevailing in the east that "land which won't grow trees, won't grow anything." The distinguishing characteristic of the land west of the 97th meridian was its aridity, he said.

The reasons for this aridity are patent. The prevailing winds in the western part of the United States are from the West. As these winds cross the northern Pacific Ocean they pick up a great deal of moisture. Upon striking the Coast Range and the higher ranges of the Rockies and Sierra Nevadas, however, they are forced to rise in order to get over the peaks, and in doing so, they lose most of their moisture onto the western slopes of those mountains. Therefore, the areas east of the mountains have to do with much less. This condition prevails to about the 100th meridian where the rains increase again.

Montana lacks adequate moisture for that reason. For the fifty-one year period from 1895 to 1946 the average annual precipitation for the state as a whole was 15.37 inches.

2. Ibid., 2.
4. Ibid., 22.
5. Brigham, Geographical Influences in American History, (Boston, 1903), 251.
During the same period the average annual precipitation for the western part of the state was 17.42 inches; for the central part 14.80 inches; and for the eastern section 13.85 inches. The amount varied considerably from year to year. In all three sections, the greatest precipitation fell during May and June. Agricultural conditions are more favorable when the greatest quantity of moisture falls during these months, for then the crops develop and ripen more readily and are larger than if the moisture comes earlier or later.

Temperature conditions the need for irrigation when precipitation is on the borderline of adequate rainfall without irrigation. Generally Montana gets more moisture than do the mountain and plateau states to the south and it is also cooler so there is less evaporation. Thus, the state can accomplish more with its water supply than can its neighbors.

From 1895 to 1946 the Weather Bureau of the Department of Commerce took complete records of the weather in Montana.

During this 51-year period, the mean temperature in the state was 43° with extremes of 117° and -61°.

6. United States, Weather Bureau, Montana Section, Climatological Data, Volume 49, Nos. 1428, (Helena, 1946), pages 1, 7, 13, 21, 27, 35, 39, 45, 51, 57, 63, 69. Temperatures and rainfall statistics for the period before 1895 are available in Powell's report and from other governmental sources but they are incomplete and often unreliable.


8. Weather Bureau, Climatological Data, 1, 7, 13, 21, 27, 33, 39, 45, 51, 57, 63, 69. During this 51-year period the average temperature for the state as a whole by months was: January, 19.7; February, 22.4; March 31.3; April 43.3; May 52; June 59.6; July 67.1; August, 65; September, 55.2; October, 45.1; November, 32.0; and December, 23.4.
The soils of Montana are of many different types and generally, in regions where irrigation is feasible, they lend themselves readily to irrigation. In northern and eastern Montana are the northern dark-brown or chestnut type soils. These come from limestone, sandstone, shale, granite, and quartzite and tend to have lime base which prevents excessive absorption of water. The top soil is generally two feet thick and can be highly productive with adequate moisture. In the central and southeastern parts of the state are the brown soils which, in Montana, are called Scobey soils. From six to eighteen inches thick and of dark grayish-brown color, these soils are excellent for dry farming and are also good for irrigation. The mountainous region of Montana is composed, for the most part, of an acid type soil called Podzol, which results from the coniferous forests of the region. It is usually a new and immature soil and has no great value for agriculture. Finally, among the more important soils for irrigation, are the alluvial soils, which have been deposited in the larger river valleys of the state. They are generally light colored and poor in organic matter. Their compact structure causes poor drainage, which often leads

10. Ibid., 1084
11. Ibid., 1038, 1125
to an accumulation of alkali. Though they are unsuited for
dry land farming, they are easily irrigated and produce
good crops when watered.

Montana is divided into three great watersheds: the
Missouri, Yellowstone, and Clark Fork. The Missouri and
Yellowstone drain the eastern part of the state, while the
Clark Fork drains the region west of the divide. A consider-
able quantity also flows from the Kootenai river in northwestern
Montana but it is little used for irrigation. Some of the water
which flows from Glacier Park into Hudson's Bay is diverted for
use in Montana.

The watershed of the Missouri river is the largest,
comprising 85,200 square miles in the state. Most of the course
of the river is across the plains region which has an average
elevation of 5,000 feet. The waterflow varies widely from
year to year. In the eighteen-year period from 1928 to 1946,
the average discharge was 6,715 second-feet, with extremes of
66,800 and 320 second -feet. The average annual water run-off
during the period 1931-40 was 4,630,000 acre-feet.

12. Ibid., 1133

Water Supply of the United States, 1946, Part VI, Water-
Second-feet is an abbreviation for 'cubic feet per second'.
A second-foot is the rate of discharge of a stream whose
channel is one square foot in cross-sectional area and whose
average velocity is one foot per second.
An 'acre-foot' is the quantity of water required to cover
an acre to the depth of one foot and is equivalent to
43,550 cubic feet.

14. United States, Department of the Interior, Missouri River
(Washington, 1944), 57
The upper reaches of the Missouri Valley are characterized by steep mountains and narrow valleys while the lower reaches of the Missouri Valley are characterized by plains which lie far above the river bed. In the lower basin of the Missouri below Great Falls, the Missouri River is gauged narrowly and the lands are too far above the plains which lie far above the river bed. In the upper basin of the Missouri, the Missouri River is gauged widely and the lands are too far above the plains which lie far above the river bed.

The Missouri River offers good irrigation. Since the fall of the river is the reason why a dam is not required. The Missouri River is gauged narrowly and the lands are too far above the plains which lie far above the river bed. The Missouri River offers good irrigation. Since the fall of the river is the reason why a dam is not required. The Missouri River is gauged narrowly and the lands are too far above the plains which lie far above the river bed.
and Montana, which are regions of heavy snows. Like the Missouri, the discharge of this river varies greatly. The average run-off during the period from 1926 to 1948 was 11,580 second-feet, with a maximum of 132,000 and a minimum of 860 second-feet. From 1931 to 1940, a period of extreme drought in the plains region, the average annual run-off at Sidney, near the river's mouth, was 6,758,000 acre-feet.

For the most part, until it gets to the vicinity of Billings, the Yellowstone flows through a rather narrow channel between the mountains. Thus, though there is a great deal of water, irrigation has been restricted because of the lack of good land. Farther downstream the valley widens and much of the bench land there has been irrigated. Extensive developments have also taken place along portions of the three large tributaries—the Big Horn, Tongue, and Powder Rivers.

The Clark Fork drains most of the mountainous portion of the state west of the divide. The mountainous character of the terrain in this area reduces the land available for irrigation. This watershed has greater precipitation than the others. Thus, even though the drainage area of the Clark Fork is only about 21,800 square miles, the average discharge of the river from 1926 to 1948 was 18,450 second

feet, half again as large as that of the Yellowstone and three times as great as that of the Missouri. The water run-off from 1931-40 averaged 13,950,000 acre-feet annually.

The three large valleys of the system, the Bitterroot, Flathead, and Dear Lodge, contain most of the farm land. Even in these valleys the major portion of the irrigating is done from the smaller streams. The steepness of the land makes this possible since the water can be easily diverted higher up on the streams and then distributed onto the gently sloping bench lands. In these valleys the bottom soil and the soil on the benches is very fertile and easy to work.

In any western region, the quantity of water available is generally the limiting factor in agriculture and not the extent of land. Good agricultural lands are available in Montana to the extent of about 35,000,000 acres. Estimates as to the amount irrigable have ranged from 6,000,000 to 35,000,000 acres. Early western leaders in the irrigation movement, in their eagerness to promote development, often presented a picture which was much more rosy than actual conditions. They usually were not trying to delude anyone but with inadequate stream measurement they were not able to


estimate well the amount of land susceptible to irrigation. Even as late as 1889, John W. Powell estimated that the amount of irrigable land in Montana was 35,000,000 acres. Later engineers placed the irrigable acreage nearer to 6,000,000 acres. That seems to be the most logical estimate.

The only element which Montana lacks for successful agriculture year after year is adequate rainfall. In the other respects the state is well-suited for farming. However, enough water flows from the three great drainage basins to irrigate millions of acres of land.


Montana, Department of Agriculture, Labor and Industry, Division of Publicity, Montana—Resources and Opportunities Edition, Vol. 3, No. 2, (Helena, 1928), 34. "At the lowest water records in the history of the State, there was sufficient water in Montana to irrigate ten million acres, four million more than the estimated amount of land that can at reasonable expense be irrigated."
CHAPTER II

IRRIGATION LAWS

The first use of water in what is now Montana was for fishing, drinking, washing, and an occasional swim. The first agriculture of a permanent nature was carried on by the Jesuit missionaries among the Flatheads, who then lived in the Bitterroot Valley. St. Mary's Mission was established there by the Jesuits and, in the spring of 1842, Father DeSmet planted a crop. There is no evidence, however, that irrigation was used at that time.

The development of irrigation was foreseen by the missionary. He realized its value in the semi-arid valley but it is doubtful that he, or any of his co-workers, practiced irrigation there.

Leventille, in his Life of Father DeSmet, S.J. (1801-1873), (Authorized translation by Marian Lindsay), (New York, 1915), 141, says, "The missionary brought back from Fort Colville several bushels of oats, wheat and potatoes for planting."

2. Chittenden and Richardson, op. cit., II, 571. In a letter dated September 6, 1846, to the Father Provincial in St. Louis, DeSmet said, "The soil yields abundant crops of wheat, oats and potatoes...the rich prairie here is capable of supporting thousands of cattle. Two large rivulets, now almost useless, can, with a little labor, be made to irrigate the fields, gardens, and orchards of the village...Irrigation, either by natural or artificial means, is absolutely necessary to the cultivation of the soil, in consequence of the long summer drought that prevails in this region, commencing in April and ending only in October."
In 1850, Major John Owen leased the mission at St. Marys from the Catholics. There he set up a trading post, operated a mill which the Jesuits had previously established, and practiced farming. He planted all sorts of grains and vegetables but with varying success because of the uncertain moisture situation. Certainly by 1852, Owen was doing a limited amount of irrigation, and by 1865 he spoke of it as a common practice in the valley.

In the Missoula area, the first agriculture was carried on in 1857, by a man named Brooks, who broke eight acres of land at Hell Gate Ronde which he sowed to wheat and to a vegetable garden. The enterprise did well until killed by frost on August 14. After the first farming irrigation was not practiced there for several years. In succeeding years more settlers came into the area, settling at Grant Creek, Frenchtown, and in Missoula itself. At about the same time as the early agricultural developments in Missoula and Hellgate region were going on, James Stuart, in April, 1858, planted a garden at Gold Creek which was unsuccessful due to heavy frosts. While writing of the failure of this first crop he stated that if he had planted on the benchlands near the creek the crops would not have been frozen and he could have

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irrigated the garden from Gold Creek.

Probably the first farming east of the continental divide in Montana was carried on at Fort Benton in 1855. The Fort Benton Journal for that year contains the notation for Saturday, May 26, "Commenced to make a garden." However, no further mention of the matter was made during the summer so it is not certain that the garden was ever completed or whether it succeeded.

Close upon the heels of this early development came the first farming on Sun River. In 1859, Colonel Vaughn established a "Government Farm" on the Sun River as the first agency for the Blackfeet. In the same year he planted a number of acres of crops and estimated that the first crop would yield about 75 bushels to the acre and so reported to Washington.

In Central Montana in the 1860's, the Jesuit missionaries attempted to establish a mission among the Blackfeet. Several settlements were begun on the Teton and on the Missouri and its tributaries but none was successful. An excellent site on the Missouri near Cascade was tried but no permanent farming could be carried on at that time because of the droughts which


7. Robert Vaughn, Then and Now or Thirty-Six Years in the Rockies—1864-1900, (Minneapolis, 1900), 66.
plagued the region. If an irrigation ditch were built it would have had to be seven miles long. Finally the Jesuits settled at Fort Shaw on Sun River, where a more desirable location was found. Here was good soil and sufficient water close at hand to irrigate the crops. With irrigation the mission prospered.

The development of the Gallatin valley began in the summer of 1864 when several farmers entered it. W. W. Alderson was among the first and most important of them, coming in July, 1864. During the next year more farmers came and 20,000 bushels of wheat were produced. The soil was fertile and irrigation was made easy by the presence of numerous streams. Irrigation was practiced from the time of the earliest settlements and its use continued to increase. It was not long before the valley became the most important agricultural area in the new territory.

These are only some of the early beginnings of agriculture and irrigation in the Montana region. Other starts were made at an early date but records of development are not available. When the mining claims were depleted, many of the miners turned to agriculture. Some of the gulches were farmed but they were usually quite small and generally unsuited to agriculture because of soil and moisture deficiencies. The chief developments from the very beginning

occurred in the larger and more fertile valleys such as the Bitterroot and Gallatin.

During the early period of irrigation, before the formation of the territory of Montana, and even after, this work was carried on primarily by individuals. A farmer generally obtained water from the nearest stream and used it only on his own fields; there were few community ditches. Since there were so few irrigators, land immediately adjacent to a stream could be used and irrigated, ditches were thus quite short and relatively inexpensive to construct.

These early settlers gave no thought to their right to use the water of rivers and streams. The water was there running to waste, so they put it to use, just as other natural resources were used, with no thought of the right to do so. The settlers were isolated and knew almost nothing of the laws and customs of other irrigating regions. Being preoccupied with the task of making farms out of wild country, the early agriculturalists did not realize the overwhelming importance of the water in the region.

Few problems concerning water rights could arise when the population was small; there was enough water near good lands to supply the needs of everyone who wanted it. In fact there was very little agriculture carried on before the mining regions opened. Markets were too distant to enable the products to be profitably shipped out. Enough food was grown to feed the sparse population of the region and some of the
Indians who were being encouraged to live a more settled life.

With the discovery of gold in what is now southwestern Montana, thousands of miners poured into the region. Water assumed a role which was vital to the livelihood of the people. The gold-bearing gravels were located chiefly along small streams. Water was indispensable in the placer mining process of separating the gold from the gravel. Something had to be done to insure the rights of those miners who first staked out claims to land and water.

Many of the early prospectors came from California where similar conditions prevailed and the problem was settled in much the same fashion as was done in that state. The early miners generally met together and formed mining districts to guarantee the rights of individuals to lands they had claimed, and to the water needed to work the claims. Districts established rules governing nearly all matters concerning mining and water claims and even set up their own court systems to try violators. The early arrivals were given prior rights to the use of water but a person could use no more than he needed to work his claim.

Such a method was satisfactory for mining regions but, at the same time, a large number of farmers entered the various valleys in western Montana to grow food for the miners. Since conditions encountered in agriculture were far different from those met in mining, some form of regulation of water rights came to be indispensable as the land along
the smaller streams was claimed and the demands for water came to be greater than the supply available. As a solution to this dilemma, the farmers began using the same practices and customs which prevailed in the gold fields. The first settler would locate his claim and dig an irrigation ditch, thus gaining a prior right to the use of the water.

Such measures did not completely solve the problem. As the population increased, controversy resulted, and a better form of centralized and unified control was needed. The government of the Territory of Idaho, which included Montana, was not concerned with the difficulties of the distant eastern counties. The leaders in the new mining camps chafed under this lack of interest and worked to rectify the situation by the organization of a new territory from the eastern counties. They were finally successful when the Territory of Montana was created by Congress in June, 1864. The Organic Act provided a framework of government but no legislation was passed. Nor was any mention of irrigation or water rights made. Such matters had been unimportant in the East and Midwest and Congress knew little concerning them. Therefore, the solution to the problem was left to the territorial assembly.

In attempting to write a water code, the early legislators encountered two diametrically opposed doctrines for obtaining rights to water which had arisen in the region: one was that of riparian rights and the other of prior appropriation.
In its strict sense the former holds that:

the owner of the land contiguous to a watercourse is entitled to have the stream flow by or through his land, undiminished in quantity and unpolluted in quality, except that any riparian proprietor may make whatever use of the water he requires for domestic and household purposes and the watering of farm animals.

In its modified sense this theory allowed each riparian landowner to make such use of the water for the irrigation of his land as was reasonable in relation to the needs of the other landowners on the same stream. Under its more recent interpretation, however, "the riparian owner’s use of the water must be reasonable with respect to the needs of appropriators of water for use on non-riparian lands."

This doctrine was introduced into the United States in the early 1800’s and arose from the civil law of France and the common law of England.

The riparian doctrine was generally unsuited for the irrigation of lands in the West. Water was vital to the people in order to raise crops and the better lands were not always contiguous to the streams, but the principle barred the use of water on non-contiguous lands. Thus, most of the states and territories in the arid region of the West rejected this theory. Those supporting it were the states and

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12. Ibid., 39-40

territories along the 100th meridian where the rainfall was generally greater than in the areas further west, and the need for irrigation was not so great. California and Washington supported the doctrine in modified form but Oregon was quick to reject it.

The second, and more important principle for the West, was the statutory doctrine of prior appropriation which held that "the first user of water acquires a priority right to continue the use, and contiguity of land to the watercourse is not a factor." At an early date the Mexicans had used a form of it and later the Spanish used it in the southwestern part of the United States. The doctrine as we know it, however, did not arise directly from these sources, but from the requirements of the California mining region for protection in the use of water supplies needed to work the mining claims.

The miners' customs became law, adaptable to diversions of water for irrigation as well as for mining purposes; and it is the specific principles there developed under the exigencies of that environment, rather than the less widely known principles of Mexican appropriation law and custom, that have been adapted by legislation and court decisions and are now a part of the water codes throughout the West. 16

The first settlers in the West followed the theory that

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15. Ibid., 50.
16. Ibid., 67.
anyone needing the water had the right to take it. However, as population increased in the western part of the country, and more and more water was used, with a consequent shortage at times, changes were made which modified and limited the theory in actual practice. Principles of "First in time, first in right," actual use, reasonable use, and beneficial use were applied. Questions of abandonment of rights, change of place of diversion, and change of use had to be considered when water was no longer in unlimited supply. These problems and many more were considered by the western leaders when they attempted to solve the complicated and extremely vital matter of rights to water. How well Montana succeeded in doing so is the principle subject of this chapter.

Before 1866, the federal government had allowed the western states and territories complete freedom in developing their own laws in relation to water rights. In that year it more completely defined the position of the national government and the states and territories. In a law granting ditch building rights on public lands in the West, Congress held that "whenever, by priority of possession, rights to the use of water for mining, agricultural, manufacturing, and other purposes, have vested and accrued, and the same are recognized and acknowledged by the local customs, laws, and decisions of courts, the possessors and owners of such vested rights shall be maintained and protected in the same..."

17. United States, Statutes at Large, XIV, 253.
By this action the government seemed to approve of the doctrine of prior appropriation for the public lands in the West. It did not, however, surrender control or authority over navigable streams.

On January 12, 1865, the Montana Territorial Legislative Assembly passed the first law concerning irrigation and water rights for the new territory. This act "to protect and regulate the irrigation of land in Montana," provided:

First, that all persons who claimed, owned, or held possessory right or title to land within Montana Territory as defined by the Organic Act, when those claims were on the bank, margin, or neighborhood of any stream of water; were entitled to the use of that stream for irrigation and making the claim available to the full extent of the soil for agricultural purposes. Second, that when a person owning a claim near a river or stream did not have sufficient land area exposed to the stream in order to obtain a sufficient fall of water to irrigate his lands, or if the lands were too far removed from the stream and did not contain water facilities, such person was entitled to have a right of way through lands between him and the stream above or below. Third, this right of way was to extend only to a ditch, dyke, or cutting sufficient for the purposes required. The fourth section held that if there was not enough water in the stream for all users, a group of three water commissioners was to be appointed by the nearest justice of the peace whose duty

it would be to appportion the water equitably, taking into consideration the legal rights of all concerned. Fifth, that upon refusal of owners of tracts of land between the appropriation's land and the stream to allow a ditch to be built, the justice of the peace would appoint three commissioners to view the premises, taking into consideration the rights of both parties and the size of the ditch. By the sixth, if the commissioners thought it proper, they would assess damages to the owner of the land and also consider the benefits he would receive. Seventh, after the assessment of it the justice of the peace was to handle the case unless it was too large, in which case it would go to the probate judge of the county, who would render judgement. By the eighth section any person who had a claim for water could install a water wheel or other contrivance to raise the water to a higher level for irrigation, and the right of way was not to be refused. The last three sections provided for payment of $2.00 per day to the commissioners, non-interference with water rights obtained previous to the passage of the act, and also that parties using the water were not to waste it nor injure anyone.

This act, though it was expressly stated to be for the regulation of irrigation of land in Montana, was applicable to both mining and agriculture. It was better suited, however, for the mining regions than the farming areas. It was planned, for the most part, by the miners and showed the type of thinking
then prevalent in the mining regions. Many of the leaders had come from the mines of California and other western areas, and they naturally favored the type of legislation with which they were most familiar. Others came from the Midwest where the question of rights to water was of no great concern. Thus, they knew little about making laws for the uses of water. As was to be the case during the entire territorial period, the legislators attempted to impose mining methods on agriculture. If the weather was sufficiently mild in the mining areas, the water was needed the year round in order to work the placer claims. The farmers, however, needed the water for a very limited time during the year, while the crops were maturing. During the rest of the year it was allowed to flow undisturbed. In order to make the greatest and best use of the available water, some better method would have to be developed.

Although the doctrine of prior appropriation was implied in the first section when it stated that landowners in the "neighborhood" of streams were entitled to the use of the streams for irrigation, little elaboration was made of it. The commissioners to be appointed to adjudicate the claims were to consider the rights of all parties but no one was sure what the rights were. With no further interpretation one could not be certain that prior rights would be respected. Other facets of the appropriation theory such as beneficial use were not adequately considered. The act stated only that "parties using water shall not waste it."
The method for settling disputes was weak and it did not provide for cases which might arise between claimants in different counties. No provision was made for the recording of claims to water. Disputes between agricultural users and those seeking water for mining purposes could easily arise. Perhaps the legislators did not think such a matter could become serious or possibly they believed that the courts could handle the situation adequately. Water right legislation was still in its infancy on the frontier and many such problems could not be foreseen.

The provision for settling disputes over rights of way for ditches and canals was deficient in that no definite penalties were provided for violators, and a great deal of discretion was left to the justices of the peace and the probate judges.

With this act, appropriation of water was still left largely to the customs and habits which prevailed in the mining regions. No statutory methods of appropriating water were provided so the mark of a complete appropriation was the completed ditch and actual use of the water. It was left to the courts of the Territory to ascertain and determine rights to water when controversies arose. Even though this measure had many weaknesses and deficiencies, such shortcomings can be more easily understood and evaluated if the legislation is considered in light of the experience of those who framed it.
The Territorial Supreme Court, in 1870, held that Section 4 of the Act of 1865 was illegal since it set up the board of three commissioners to decide controversies between various claimants of rights. By the Organic Act the courts were the proper bodies to decide issues of law and the actions of such commissioners were thus contrary to the Organic Act. Any rewards such commissioners had made were void.

This action led to many misunderstandings and lawsuits. Appropriations of water were not as carefully checked as they would have been had the commissioners been used. As it was, the courts were to be crowded with hundreds of water cases, for that was the only method by which rights could be determined in case of controversy.

Something better than the first act was needed, so the sixth assembly in 1870, passed a law in which the doctrine of prior appropriation was more clearly enunciated. It provided that when controversies respecting the rights to water arose, the rights would be determined by the date of appropriation as made by the various parties. The waters of the streams of the territory were made available for irrigation without regard to deterioration in quality or diminution in quantity and the rights of the prior appropriator were insured.


It was not until 1870 that the Supreme Court of the Territory gave complete sanction to the doctrine of prior appropriation. In that year it held that "law and equity give the first locator of land and claimant of water a sufficient quantity of water to irrigate his lands." The judges held that the doctrine had long been recognized in many parts of the West and they continued to recognize it.

According to a decision of the Court in 1872, the riparian theory had been repealed by the statute of 1865.

Various other clarifications of the rights and duties of appropriators were made in the same period. A party who intended to claim water had to appropriate the same with reasonable diligence by some known means, and at a certain point; the declaration alone being insufficient. If the appropriator of water prosecuted the work on his ditch with reasonable diligence, the appropriation would date back to the commencement of the work. An appropriator was not allowed to assert a claim to water after he had abandoned it and the water had been claimed by another. The claimant of water for mining purposes at a certain point could extend

24. Woolman v. Garringer 2 Montana 59. This became known as the "doctrine of relation."
his ditch and use the water to the extent of his appropriation, at any other point, for the same or a different purpose.

The ruling of the court that appropriations which would date back to the commencement of the work, if such work were prosecuted with diligence, established a precedent which was sustained by later statutes and court decisions. It helped to prevent any hasty construction which might have resulted had the right been dated from the time of actual use of the water. The builders of large and substantial canals were protected from the competition of others who might have built small, poorly constructed ditches. These decisions, coming in the early 1870's, tended to solidify the position of the doctrine of prior appropriation in Montana Territory and eliminated any danger that the common-law doctrine of riparian rights would gain any strength.

Most of the early decisions were for cases concerned with water rights for mining but they were just as applicable to Irrigation. They tended to prolong and give emphasis to ideas which were not always in accord with those best suited for the proper use of water in agriculture.

The authorities cited for almost every decision during this and later periods were the decisions of the jurists in California. Irrigation law had developed earlier there than almost anywhere else in the West. Conditions in the two areas were also very similar so it was natural that

the Montana jurists should follow the decisions handed down in California.

Statute law relating to water and irrigation was extended in 1872 when the legislature decided that solutions to controversies relating to water would be determined by dates of appropriation, with the modifications existing under the local laws, rules, or customs and decisions of the Supreme Court. But it was not until 1885, with the Fourteenth session the Assembly, that the appropriation doctrine was placed into the statutes in the fashion in which it was interpreted by the Supreme Court fifteen years earlier. This provided for the use of the waters of the Territory by appropriation and also stated that "as between appropriators, the one first in time is first in right." The influence of the California legislation on that of Montana can easily be recognized in relation to this law of 1885. In the Civil Code of the State of California for 1872, the water right section is almost identical with this act of the Fourteenth Assembly.

No further modifications of this law were made until 1901. In that year the Seventh session of the state Assembly.

legislature made a change in the reading of the law when it stated that "the right to the use of any unappropriated water... may hereafter be acquired by appropriation." The word "unappropriated" was inserted into the earlier statutes. This action seemed to imply that before anyone could make a new appropriation from a stream, he would have to make certain that the water in it was not all appropriated by earlier claimants. The effect of this would be to help prevent overappropriation of streams and so decrease litigation.

Neither the territorial laws nor the court decisions had settled the right to ownership of water in the streams. Some believed that it was the property of the individual users; others considered it the property of the territory. Water was far different from other forms of property. The flowing water could not be held back or disposed of as other interests. It was, nevertheless, of great importance for upon it depended the development of agriculture. Although the Assembly had made provisions for the use of water, the question of actual ownership was not settled during the territorial period.

31. Montana Territory, Session Laws, First Session, 367; Sixth Session, 57; Fourteenth Session, 130.
This uncertainty led many Montanans to fear that corporations would obtain a monopoly of the territorial water supply. Debates concerning this problem consumed much time in the meetings of the Montana Constitutional Convention in 1889. The Convention's Committee on Irrigation proposed that all of the unappropriated water in the territory be made public property so that the new state could dispose of it for the benefit of all the people. The Committee also favored giving the county commissioners in each county the power to establish reasonable maximum rates for the use of water, whether furnished by individuals or by corporations.

These propositions were rejected, however, and on the motion of Joseph K. Toole, the following provisions were drawn up and accepted as part of the Constitution:

The use of all water now appropriated, or that may hereafter be appropriated for sale, rental, distribution or other beneficial use and the right of way over the lands of other, for all ditches, drains, flumes, canals and aqueducts necessarily used in connection therewith, as well as the sites for reservoirs necessary for collecting and storing the same, shall be held to be a public use.


This did not settle the question of ownership, but Toole wanted to protect the people of the state from arbitrary and vindictive owners and corporations who might gain control of the waters. This provision made the use of water a public use, which gave the state the right to take measures to protect the interests of the people.

In connection with the use and ownership of land, the relation of the ownership of land and water rights became very important. Were the land and water rights claimed for it two separate entities, or were they to be considered as one? In various decisions, the Supreme Court of Montana held that a water right was an appurtenance to the land upon which it is used and such a right passed with the land if it was sold, unless specifically reserved. "Where a party grants a thing, he by implication grants whatever is incident to it, and necessary to beneficial enjoyment, unless it is strictly reserved." This decision was sustained by later courts in 1891 and 1894.

Such decisions, however, did not eliminate the dangers of the severance of the water rights from the land. The courts allowed such a procedure provided severance was explicitly reserved in contracts. The danger of separation was still there. Powell had warned the nation in 1878 when he

held that:

When the area to which it is possible to take the water of any given stream is much greater than the stream is competent to serve, if the land titles and water right are severed, the owner of any tract of land is at the mercy of the owner of the water right. In general, the lands greatly exceed the capacities of the streams. Thus, the lands have no value without water. If the water rights fall into the hands of irrigation companies and the land into the hands of individual farmers, the farmers then will be dependent upon the stock companies, and eventually the monopoly of water rights will be an intolerable burden upon the people.

Therefore he maintained that the "right to use water should inhere in the land to be irrigated, and rights should go with land titles."

In the meantime, other decisions of importance in the matter of appropriations were made by the Supreme Court. In 1891, the Court held that "a water right can be acquired only by the actual appropriation, diversion, and use of a quantity of the waters of a stream for a lawful and beneficial purpose." People who owned a ditch together were considered tenants in common of a water right if they used the water for a common purpose. A lawful appropriation of water for a specified purpose gave the owner the right of law to change the use of the appropriation so long as it did not injure

37. Ibid., 41.
38. Sweetland v. Olson 11 Montana 27.
subsequent appropriators in their acquired rights.
Finally, the court held that "No one, by prior appropriation,
can obtain exclusive control of any stream, or any part
thereof, for irrigation purposes, unless the appropriation
is for some beneficial purpose, existing or contemplated, and
not for mere future speculative profit or advantage."

During the early period of irrigation in Montana there
was little need for restrictions on the amount of water used
on land by appropriators since there were so few of them.
Later on, however, the better streams became overappropriated
and measures had to be taken to insure that the water
was not wasted or used indiscriminately. The act of 1865
had provided that water should not be wasted but no
penalties were provided if it were.

Twelve years later, in 1877, the tenth assembly passed
an act for the sale of surplus water. Elwood Head of the
Reclamation Service, writing in 1907, said, "No irrigation
 statute of any state goes further in the direction of
speculative ownership than section 1897 of the Montana
 irrigation code... ." This section, which Head said was

42. Head, Irrigation Institutions, (New York, 1907), 302.
made possible by the great abundance of water in Montana, provided that:

Any person having the right to use, sell, or dispose of water and to engage in using, selling or disposing of the same, who has a surplus not used or sold, or any person having a surplus of water and a right to sell and dispose of the same, is required, upon the payment or tender to the person entitled thereto an amount equal to the usually and customary rates per inch, to convey and deliver to the person such surplus of unsold water, or so much thereof for which said payment or tender shall have been made, and shall continue so to convey and deliver the same weekly so long as said surplus of unused or unsold water exists and said payment or tender be made as aforesaid.

The implications of this act were indeed very serious. It encouraged speculation in water rights in the Territory. A person or group of persons could appropriate the water supply of a stream and sell it to others who came later at prices as high as the traffic would bear. The entry of settlers into the territory could be slowed if no water was available except at prohibitive prices. The price of water was to be at "the usual and customary rates per inch", but exactly what was "usual and customary" was often hard to determine, so this was no bar to high prices.

The eleventh session provided that when an appropriator was diverting water over and above what was being used by him, he had to turn the excess back into the stream when requested to do so. This had little effect in preventing an oversupply of water since methods of enforcement were almost non-existent and many arguments could be raised.

that the water was being used continually. Enforcement of the statute could be obtained by resort to the courts but the expenses of litigation were often too great and litigation was too slow for persons to take advantage of this method. As more and more people claimed water, the number of suits concerning rights to it increased. Court decisions in the 1890's clarified this law and attempted to restrict the actions of persons who diverted water in quantities in excess of what was being used.

In 1894, the Supreme Court held that after an appropriator had used a certain amount of water, any that flowed back and all the rest of the stream which was not appropriated, could be used and appropriated by another for some beneficial purpose. Several years later it held that, "The diversion of water for domestic purposes in excess of what is required, and allowing such excess to overflow lands without intention of irrigating, and without any intention of using such excess for any useful purpose, does not constitute an appropriation of the excess." In this connection the Court held in 1900 that no one, by prior appropriation could obtain exclusive control of an entire stream, or a part thereof, for irrigation, unless the

45. Creek v. Roseman Waterworks Company 15 Montana 121.
appropriation was for some beneficial purpose, existing or contemplated, and not for mere speculative profit or advantage. Such doctrines and decisions tended to insure a better use of the existing water and had an effect in dispelling tendencies toward monopolization of the water supply.

Mention has been made in many of the foregoing court decisions that all water diverted had to be used for a beneficial purpose. This theory had arisen in the West as part of the prior appropriation doctrine. Whenever water became scarce, care was needed to see that the available supply was used properly. The Court could make no all-inclusive definition of a beneficial use and decisions were made only when cases were brought before the courts. In actual practice almost any use could be considered beneficial. The benefit theory was not put into statute form until 1885 when it was decreed that "appropriation must be for some useful or beneficial purpose, and when the appropriator or his successor abandons and ceases to use the water for such purposes the right ceases." Under this law each appropriator had a right, as against a subsequent appropriator, to a continued use of the quantity of water he was using when the later appropriator acquired a right. In 1870 the Supreme Court had held that water could be appropriated for

irrigation but limited the quantity to the amount necessary to irrigate the lands of the claimant. Twenty years later it decided that a "water right can be acquired only by the actual appropriation, diversion, and use of a quantity of the waters of a stream for a lawful and beneficial purpose."

Even though this doctrine was emphasized by statute law and court decisions and even by laws of the national government such as the Desert Land Act, it did not always work well in practice. The only real enforcing agencies in the territory were the courts, and resort to these was along and tedious process.

Another facet of the same question caused no end of trouble for the people and the courts of the Territory. The irrigation code which was passed in 1885 held that if the water was not used for some beneficial or useful purpose, or when the appropriator abandoned the use of the water, the right would cease. But it also held that questions of abandonment were to be questions of fact and were to be determined as other questions of fact.

This act did not define abandonment but merely provided the conditions under which rights could be maintained. The mere lapse of time was not held to be sufficient to establish abandonment of a water right through non-use. The intentions of the appropriator had to be considered. If the owner of a right

49. Thorp v. Woolman 1 Montana 168.
did not use it and made no attempt to assert his claim to it and allowed others to use it for a long time, such actions were held to be an inference of abandonment.

The punishment of persons unlawfully diverting water was provided by an act of 1883. If a person who was unlawfully diverting water refused to relinquish his claim, or by force or threats of force, prevented another from using water to which he was legally entitled, fines and jail sentences could be imposed.

The Assembly, in 1885, provided that a person entitled to the use of water could change the place of diversion, extend his ditches and change the use of the water, provided others were not injured. It provided further that appropriated water could be turned into the channel of another stream and mingled with its waters and then be reclaimed; but in reclaiming it, water already claimed by another could not be diminished in quantity or deteriorated in quality. This principle had been recognized for fifteen years by the Supreme Court of Montana.

Customs and court decisions determined the method of

appropriating water before 1885. The mark of a complete appropriation in the early mining regions was a completed ditch and actual use of the water for a good purpose. In 1870 the Supreme Court held that a party who intended to claim water had to appropriate it with reasonable diligence by some known means, and at a certain point. A declaration of such a claim without any acts of possession was insufficient.

This period of appropriation by custom came to an end in 1885 when the early practices were included in the comprehensive statute of that year. Anyone wanting to appropriate water had to post a notice at the point of intended diversion, stating therein such pertinent facts as the number of inches claimed, the means of diversion, size of flumes, the name of the appropriator and the date of diversion. Further notice had to be given to the county recorder of the proper county, and work a report as the diversion progressed. Failure to comply with the provisions of the act would deprive the appropriator of his rights as against the claims of one who filed a notice later on. Persons having rights before the act was passed were required to file a declaration similar to that required of new claimants, but the failure to do so would not deprive them of such rights. The declarations which were registered

in the recorder's office, and which the recorder was to keep
in a "well-bound book," were to be considered prima-facie
evidence by the courts of the Territory.

Although this enactment tended to bring together, at
least in each county, the records of water rights, it actually
did little to solve the basic problems. The streams in
Montana often were long and an appropriation near the mouth of
a stream was likely to pass unnoticed to claimants located near
the source who were in a different county. Thousands of
claims made before the enactment of the measure were required
to be recorded within six months but nothing was done if they
were not. Thus there was still no way of knowing with any
certainty, the number and amounts of the claims to a stream;
these could be determined only by court action. Claims,
which were recorded, were often falsified and the quantity
of water claimed during the earlier territorial days was often
forgotten. Records of early court decisions were not well
kept. Thus, even if the rights to the waters of a stream had
been adjudicated, records of such decisions were often
difficult or impossible to find.

The courts liberally construed the provisions of the
act. In the case of Murray v. Tingley, the Supreme Court
held that a valid water right could be acquired even where
there was no compliance with the statute, if water was actually

diverted and put to a beneficial use. It was careful to protect the rights acquired prior to 1865 but which had not been registered. It could be stern on occasion too, for it held that notices of location and appropriations had to be in conformity with the act or else they would be fatally defective. There were still no limits to appropriations if they were for a useful purpose.

Still another matter concerning irrigation which was often vexing was that of rights of way for canals and ditches. Much of the irrigated land was located away from the streams, and thus the matter of rights of way for ditches and canals assumed great importance. As has been noted, the first assembly allowed a right of way for canals to persons owning land which was not contiguous to a stream, and provided for the settlement of disputes through the use of commissioners and the court system. In 1870 this was repealed and the use of the commissioners was dropped. Thus, in order to obtain justice, a person would have to go through the long, tedious process of obtaining it through the courts. The statute also provided that those who dug canals or built flumes across public roads were required to keep them in good repair.

60. Ibid. 260.
This measure remained in the codes for twenty-two years, until the second session of the state legislature in 1891, when an act was passed to define the procedure in relation to obtaining the right of way for irrigation and other types of ditches. It provided that when a person living away from a stream had to build a canal but could not obtain a right of way from the owners of the intervening land, he could present a petition to the judge of the District Court for the right of way, giving a description of all the lands to be affected and the names of the occupants. After the receipt of the petition the clerk of the court could order both sides to appear for a hearing within ten days. If, after examining the evidence, the judge found the petitioner in the right, he was to issue an order awarding him the right of way and was to appoint three commissioners to assess damages resulting to lands affected by the order. The commission was to assess damages and report to the person injured. For good cause the judge could set aside the report and appoint three more commissioners. After paying the assessment, the petitioner could occupy the right of way and begin work. Appeals could be carried to higher courts.

The situation was further clarified by the fourth session of the state legislature in 1895. It held that the right to conduct water from or over the land of another for any beneficial use included the right to raise the water by means of dams, reservoirs, or embankments to a height

sufficient to make the water available for the use intended. The right to any and all land necessary for doing so could be acquired upon the payment of just compensation in the manner prescribed by law. However, if it were necessary to conduct the water across a railroad right of way, thirty days notice, in writing, of such intentions, would have to be given to the railroad concerned. The point of crossing and the time of construction would have to be included in the notice. If the owners of the railroad or their agents failed to appear in time at the place prescribed in the notice, it would be lawful for the owner or owners of the ditch or flume to construct the same over the right of way without further notice to the owners of the railroad.

The comprehensive water code of 1885 provided that the plaintiff in any suit could make people, who had diverted water from the same stream, parties to such an action, and the court in one decree could settle the relative priorities and rights of all parties. The jury could assess and apportion damages among defendants and plaintiffs. In any action concerning joint water rights or joint rights in water ditches, unless partition of the same were asked by parties to the action, the court was to hear and determine the

65. Montana, The Codes and Statutes of Montana in force on July 1, 1892, Volume I, Division II, Part IV, Title VIII, Section 1894.
controversy as if the same were several as well as joint.

In relation to the above act, the sixth state legislature authorized the appointment of a commissioner for the measurement and division of water in certain cases after decrees by courts. If twenty-five per cent of the water users affected by a court decree wanted it, a commissioner would be appointed to distribute the water according to the decree of the court. Such a commissioner was required to examine the ditches and headgates under his control and had the power of a sheriff or constable in arresting persons interfering with the proper conduct of his work. The water users would be liable for fees in proportion to their use of the water, in order to pay the commissioner for his services.

The adequate measurement of water was of extreme importance when there were many claimants. The earliest irrigators merely took the quantity of water needed with no thought of measurement. The method which came into general use before 1885 was introduced by the miners. It was called the miner's inch. The measure of it was the amount of water which would flow through an opening of one square inch. An appropriator could claim a certain number of inches and that would be the extent of his claim unless he could get more before others claimed it. If

64. Montana Territory, Session Laws, Fourteenth Session, 130-133.
the capacity of his ditch was not as great as the number of inches claimed, the size of the ditch would determine the appropriation. Though not expressly stated in any statutes until 1865 when the Assembly put it into writing and formalized the procedure, this custom was recognized by nearly everyone.

This form of measurement was repealed by the sixth state legislature of 1899, which, in its place, provided that thereafter the cubic foot (7.48 gal.) per second of time was to be the legal standard for the measurement of water. One hundred miner's inches were to be considered the equivalent of two and one-half cubic feet per second.

By the 1890's more and more dams were being built in the state to raise the level of the water for irrigation purposes. The better locations for obtaining water were becoming more scarce so construction of dams had to be restored in order to store water for the irrigation season. The state legislature provided that no one was to construct a dam except in a "thorough, secure and substantial manner."

In 1901, the seventh session of the state legislature declared that all navigable streams were to be considered public ways but that rights to the use of water for such purposes as irrigation and industry should be continued as in the past.

In the United States at the present time, 1890, the census report, U.S. Department of Agriculture, 69. Consequence: irrigation, land and water.
I could not exceed 100,000 until the decade between 1890 and 1900, and by 1900 it was only 420,000. Further, did not exceed 100,000 until the decade between 1870 and 1880, rather than to farming. The proportion of the montana. In 1890, was in an advanced stage in the measurement procedure. Montana's water laws had been improved, but the laws were not well enforced, and very few people were interested in water measurement. Methods of measuring water were related to measuring the direction of settling drops, but did not go far enough to count all discharges. Montana, almost by the very naturalness of the soil and topography, had to respect the riparian right of water users. Water rights under the appropriation doctrine, and the riparian doctrine, were well defined. Montana was forced to adopt the riparian doctrine. Montana, in 1901, provided for compulsory measures to enforce water rights, and no real clarification could be made of them. The proposition was left to the courts to enforce any of them. Water rights to rights of way were well planned.
submitted his report to Governor Toole in 1902. In this illuminating report the author pointed out very clearly the major weaknesses of Montana irrigation legislation as it existed in 1902.

He declared that in the respects of land, water, altitude and climate the state was well favored for agriculture, but he also pointed out that its irrigation laws were bad. This retarded the development of the state. For the bad situation which existed in regard to irrigation legislation in Montana, he blamed the California influence, saying that:

our fragmentary water right laws are the outgrowth of placer mining customs and were largely copied from California laws where the miner preceded the irrigator. Grave evils resulted in California from applying these laws to irrigation.

Ray pointed out that it was hard to obtain a clear and indisputable title to water and neither adequate security to the investor nor protection to the user was given. He stated the "under existing conditions it is almost as easy to build a canal as to ascertain its rights to water."

Nothing in the law prevented overappropriation and most of the smaller streams were claimed in excess of their capacity. The records for water rights, Ray complained, were scattered.


73. Ibid., 10.
throughout the various counties through which a stream ran. He bemoaned the lack of central state control. The old recorded water rights would be insecure as long as there were no restrictions placed on new appropriations; hence to afford such right holders protection, he said there must be some official charged with supervision and power to limit diversion.

In November of 1902, there were 86,846 recorded claims for water rights in Montana. Of course, some were no longer used but with this great number many of the streams were oversupplied. This situation inevitably led to a great deal of very expensive litigation. Money which was spent on this could just as well have gone for improving lands and providing for better irrigation facilities.

That the quantity of water in streams was unknown, that records were scattered in many court houses, and that very many streams were overappropriated were held to be the chief

74. Ibid., 10-34.

75. Ibid., 11-12. Ray reported that the recorded rights to Trout Creek in Lewis and Clark County, which had a mean annual discharge of 500 acres inches in the irrigating season, totalled many times that discharge. The first claim alone exceeded the amount of water four times.

76. Ibid., 14. "From inquiries addressed to each county I have ascertained the following: During the current year there has been water right litigation before the District Court in 80 counties, the number of cases in each ranging from one to fourteen. Such litigation is now pending in seventeen counties, in some of which are as many as ten cases. Water cases are reported as increasing by 12 counties; a case pending in Silver Bow has 64 defendants; one in Carbon has 400 defendants and involves all the water rights on Rock Creek. In Carbon a large portion of the criminal cases and two-thirds of the civil cases are water and ditch controversies."
obstacles to irrigation investment in Montana.

Finally, Mr. Ray warned that if Montana was ever to get national aid, it would have to have a new irrigation code.

This code, he said, was needed to:

1. Make the water of the streams state property and make the use of them under control of the state.
2. Let the water be taken by the Federal Government or individuals if they comply with the rules.
3. Prevent speculative filing, i.e., it must restrict rights to a beneficial use of the waters appropriated.
4. Give individuals or companies acquiring water for irrigation, etc., a clear and indisputable title to its use.
5. Protect holders of rights in the exercise of such rights by the creation of a state department to see that this was done.
6. Require disputes or complaints regarding the division or use of water to be referred to and settled by a state executive charged with the administration of the irrigation code.
7. Prevent water waste and encourage economical use.

Included in the report submitted to Governor Toole was a proposed irrigation code which embodied the above ideas. It was not adopted by the legislature.

It might be added that Montana was one of the few states not to have centralized control of water rights at the turn of the century. Demands had been raised for such state control and regulation but they had gone unheeded. During the Constitutional Convention in 1889 the Lewis and Clark representatives advocated the establishment of an Office of

77. Ibid., 20.
78. Ibid., 14.
State Engineer to handle such matters but nothing came of it.

At the same convention an intriguing proposal was advanced by J. W. Powell. He proposed that the counties in the new state be formed to coincide with the boundaries of drainage basins. The object was to get better administration and supervision of laws relating to water. This plan, he said, was the only logical one for the formation of counties in a western state.

On the whole, the laws of Montana had not kept pace with the changing conditions in the Territory and State. When the Territory was first formed, mining was the paramount industry and water legislation was written with the welfare of the miners in mind. As the years passed, agriculture assumed a more and more important role in the economy of the State. It became the primary user of water. The legislation pertaining to water rights, however, changed little, and did not adequately resolve the new situation.

The problem of writing adequate legislation was not the only one which the people of the territory had to face in attempting to reclaim the arid lands. Other factors, such as land and capital for construction, were just as important, if not more so. These problems had to be solved before extensive irrigation could be carried on in Montana.


80. Ibid., 821.
CHAPTER III
THE PUBLIC LAND ACTS

Montana was for many years by-passes by travellers going from the Mississippi Valley to the West. People crossing the continent to Oregon in the 1830's and 1840's generally followed the Oregon Trail, up the Platte and over South Pass, south of the present state. Until the discovery of gold, the route up the Missouri River was barred by the great mass of the Rocky Mountains.

Due to the scarcity of white settlements in what is now Montana, the early land acts made no immediate impression upon the region. There were three great land acts passed before the close of the Civil War which were later to have a great influence on agricultural developments within Montana. The first of these was the Preemption Act of 1841. The second was the Donation Land Act of 1850 which applied particularly to Oregon Territory which at that time included what is now that part of Montana West of the continental divide. This law provided that settlers in the Oregon country could claim, without cost, 320 acres of land. It had little or no effect upon what later was Montana as practically all claims were confined to the Willamette River Valley.

1. United States. Statutes at Large, V. 453-456. Under this act settlers could claim up to 160 acres of land and till the soil until surveys were made when they would have a chance to purchase it for the minimum price of $1.25 per acre.

2. United States. Statutes at Large, IX. 496-500.
The next important federal land legislation came in 1862 with the Homestead Act. By this measure any citizen over twenty-one years of age, or anyone who had intentions of becoming a citizen, might obtain title to 160 acres of public land after a residence of five years. No charge was made other than a nominal filing fee. This was a continuation of the governmental policy of providing homes for its people on the public domain.

When this act was passed the Montana region was still unsettled. Farmers could see no reason to set up homesteads in this area of scanty rainfall. The small area allowed for homesteading could not produce enough to maintain a family.

The lack of interest in Montana during the first years is shown by the small number of homestead entries. The first of these were not recorded until 1869. Then only 48 claims totalling 7,265 acres were filed. In 1873, the first homestead was proved up, probably by an ex-soldier who did not have to wait as long as other people. During the decade following 1869, only 1,638 entries were made for a total of 249,642 acres. Final title had been obtained for only 572 claims amounting to 88,548 acres.

These homesteads represented only a tiny portion of the

3. United States, Statutes at Large, XII, 392.
territory. Little specific data are available as to the location of these claims but it can be presumed that most of the claims were taken out in the fertile valleys in the western part of the territory. Some settled near Frenchtown, others in the Beaverhead, Madison, Gallatin, and Jefferson valleys, while a few homesteaded on Sun River.

There still remained a vast expanse of arid land in the territory. Sporadic demands for government assistance in the development of these lands were heard. Precedents for such action had been established in 1849 and 1850 when swamp lands were granted to some of the states with the proviso that they be drained and reclaimed. It was not until after the Civil War, when returned soldiers were seeking homes that they received attention.

Numerous bills were then introduced into Congress calling for government aid to reclamation. J. T. Gance, in an article in The Mississippi Valley Historical Review, presented a good summary of these demands. Between the beginning of the 40th Congress in 1867 and the end of the 42nd Congress in 1873, he stated, more than forty bills relating to arid lands and irrigation were presented in Congress. Almost all asked for aid for specific irrigation projects. Several bills were passed but only a few concerned

Montana. Most related to California where surveys and some land grants were provided.

The first settlers in the arid west used the water and land with no thought of their right to do so. As more people came and territorial governments were formed, many became worried about their right to use the water. There were no federal laws or court decisions relating to this matter. In 1866, however, Congress took some action to clarify the situation. An act of that year held that:

Whenever, by priority of possession, rights to the use of water for mining, agriculture, manufacturing, and other purposes, have vested and accrued, and the same are recognized and acknowledged by the local customs, laws, and the decisions of the courts, possessors and owners of such vested rights shall be maintained and protected in the same; and the right of way for the aforesaid is hereby acknowledged and confirmed:

Provided, however, that whenever, after the passage of this act, any person or persons shall, in the construction of any ditch or canal, injure or damage the possessions of any settler on the public domain, the party committing such injury or damage shall be liable to the party injured for such injury or damage.

This act was amended in 1870 as follows:

All patents granted, or preemption or homesteads allowed shall be subject to any vested and accrued water rights, or rights to ditches and reservoirs used in connection with such rights, as may have been acquired under or recognized by the preceding section.

6. See United States, Statutes at Large, XVII, 520, and Ganoe's discussion for specific projects proposed.

7. United States, Statutes at Large, XIV, 253.

8. United States, Statutes at Large, XVI, 218.
Of great importance was the fact that these acts gave to the states and territories in the arid region, control over the waters of non-navigable streams. Further recognition of state control of non-irrigable streams came with the Desert Land Act of 1877 and later laws.

The lag of settlements during the 1870s called for further action by Congress. Capital to construct larger enterprises was lacking so the people looked to Congress for other means of getting aid to hasten reclamation. One of the more obvious and enticing solutions in the eyes of the territorial and state leaders was for the government to cede lands to state and territories to help pay for irrigation. Resolutions and memorials to this effect were presented to Congress, typical of which was the Montana Joint Memorial of 1874.

This Memorial asked that one-half of the arid lands not included in the mineral areas be granted to the states and territories. The Assembly maintained that despite the fact that there was sufficient water to irrigate much of the arid land west of the 99th meridian, development had been restricted because of the great cost of construction. The better land had been taken, they argued, and no industry or future agricultural development would be possible without stored water. Therefore, the proceeds from the sale of these

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lands would be used to set up a fund for their reclamation and for the construction of storage dams. Precedents for such action had been set when the government granted lands to railroads.

The Assembly provided that control of the water supply and distribution would remain in public hands and not go to private persons. It requested control of the construction and maintenance of the irrigation works with the power of issuing bonds which would be paid off from land sales. The Memorial also advocated state and territorial control of any lands filed under the Preemption and Homestead acts if brought under irrigation, and favored a bill providing that no title be given to lands until the claimant proved to be a bona-fide actual settler upon the land claimed.

This proposal marked a departure from the old practice of land grants to railroads. Primary emphasis turned to cessions of land for reclamation. Montana had been settled to a great extent by southerners and Irish who retained and developed a states-rights philosophy. They wanted state and territorial control of land disposal. But although the government granted lands to the states and territories for the aid of schools and railroad building, it was reluctant to grant them for irrigation, and it was not until 1894 when the first, and almost the only, such grants were made. This was twenty years after the first formal Montana Demand.

It soon became apparent that settlers would not take
up lands on the arid Great Plains in great quantities under
the Homestead Act. Members of Congress realized that more
land than just a quarter-section would have to be made
available to settlers. Homesteaders lacked capital for
development and no liens could be placed against unpatented
lands. This lack of capital made extensive construction
impossible. Congress attempted to remedy some of these
shortcomings by making more land available to prospective
settlers.

With the Desert Land Act of March 3, 1877, the fondest
dreams of some of the western leaders seemed to be realized.
Under the provisions of this statute any person twenty-one
years old was allowed to claim arid lands. He was required
to file a declaration which described the land he intended to
reclaim. An initial payment of $.25 per acre was required
when filing. The applicant could purchase up to one section
of land provided he agreed to reclaim it by conducting water
upon it within a three-year period. The right to the use
of water was to depend upon a bona-fide prior appropriation
and such right was not to exceed the amount actually appropriated
and necessarily used for the purpose of irrigation and reclamation.
At any time within three years after the first declaration,
a patent would be issued for the land provided proof of
reclamation was presented and an additional $1 per acre paid

10. United States, Statutes at Large, XIX, 377.
for the land. No person was to enter more than one tract of land and the area was to be in compact form and not to exceed 640 acres.

Desert lands were defined as "all land exclusive of timber lands and mineral lands which will not without irrigation, produce some agricultural crop... which fact shall be ascertained by proof of two or more credible witnesses under oath, whose affidavits shall be filed in the land office in which said tract of land may be situated." The act applied to eleven western states and territories.

Despite the fact that this act was passed fifteen years after the Homestead Act, by 1902 nearly as much land was claimed under it as under the latter law. Immediate interest by the people of Montana was shown. During the first year almost 30,000 acres were claimed. Up to June 30, 1902, 1,284,431 acres had been proved and paid for. This was more than the land irrigated in Montana in that year.

Even though millions of acres of land were being claimed under the act, severe criticisms were soon heard. No person could hope to irrigate 640 acres of land. No one was certain whether the whole section or only a portion of it had to be reclaimed.

Evasions of the law were frequent. Ditches were often

12. United States, Congressional Record, XXXVIII, 58 Congress, 2 Session, (Washington, 1904), 3864.
only furrows dug into the ground which, in some cases, did not even carry water. Land office agents were sometimes corrupt; they helped speculators obtain extensive holdings. Where the agents were honest they were usually overworked, for there were few land offices in the Territory and each office was responsible for a vast region. Stockmen gained control of much of the grazing land in this fashion. In some cases they would pay the twenty-five cents per acre down payment and hold the land for three years, after which time they would sell their interest. Large bodies of land were thus speculatively held. Exactly what comprised desert land was difficult to determine. The evidence of two "creditable witnesses" helped little if they were corrupt and if there were too few land agents to check the claims.

Protests by western governors and land experts finally exerted enough influence on Congress that in 1881 the original act was modified. In order to decrease the number of fraudulent entries, any plans of proposed irrigation works had to be filed with the Land Office. Individuals were allowed to associate together to build projects. Thereafter, if it was provided that at least three dollars per acre would have to be expended in reclaiming the land, title could be obtained before the three year period ended if proof of


reclamation and the expenditure of at least three dollars per acre was presented. This act continued the policy set down in an act of Congress in 1890 which limited the amount of desert land which one person would acquire from the government to 16,320 acres. One-eighth of the land had to be cultivated in order to obtain final title. Another important provision was that only residents of the state in which land was located could enter desert lands. This provision was an attempt to decrease speculation in lands by eastern moneyed interests.

Despite that fact that the maximum amount of land which could be purchased was halved in 1890, the total acreage taken up by the people of the state after that year was just as much as before, except for several years immediately following the Panic of 1893. The population of the state was growing rapidly at this time. The Great Northern Railroad was being constructed across northern Montana, bringing with it numerous settlers who demanded land. Immigration from abroad increased and the lands farther east were practically filled. Demands for land rose as a result.

There were still those in government and in private life, however, who felt that the Desert Land Act should be repealed since progress in reclamation by its provisions...

15. United States, Statutes at Large, XXVI, 391.
16. United States, Land Officer Reports, 1879-1902, (Washington, 1879 ff.)
was not rapid enough. Senator Gibson of Montana stated the dangers and shortcomings of the Desert Land Act very well when he said:

*The Desert Land Act, in my opinion, never was intended by those who framed it to advance the settlement of any one of the arid states and so long as it remains in force it will be simply a means of increasing the holdings of the public lands in a few individuals and companies.

In my opinion there is but one way to preserve the public domain for settlement and that is by the repeal of the Desert Land Act, and the stopping of the further issuing of scrip, thus making it possible to acquire land in no other way than by homesteading it. And this is not all. The Homestead Act should be deprived of any and all commutation provisions, thus making it obligatory upon the homesteader to establish an actual residence upon his land for five years. Unless a rigid system similar to that which I have indicated is adopted all the choice irrigable lands out of the 500 million or more acres embraced in the public domain will shortly pass into the control of men who will never cultivate them, except in rare instances, but who will use them for pastoral purposes.

Another reason why the Desert Land Act should be repealed is that time has fully demonstrated that it is impossible to enforce its provisions. If there is any doubt on this point let him who desires to investigate, go over the desert land locations of Northern Montana and see if the provisions of the act have been complied with except in rare instances.

The Desert Land Act was not an effective instrument for disposing of public lands to those who needed homes. The loopholes in the laws were too large and too numerous to prevent speculation and even though Montanans made final proofs on over 1,500,000 acres of desert land by 1902, only a small percentage of it was actually irrigated.

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18. No precise figures are available but Gibson and others pointed out that only a small portion was ever actually irrigated.
In April, 1878, a year after passage of the Desert Land Act, a Report on the Lands of the Arid Region was presented to the Secretary of the Interior and to Congress by John Wesley Powell, of the Geological and Geographical Survey. This was the first comprehensive report on western lands, and is still considered a classic in its field. Powell and his co-workers had conducted extensive investigations in the arid region. Although western leaders were quite impressed by his findings, Congress was not.

The arid region was defined and described in some detail. Powell then recommended that the land in the west be classified as mineral, timber, coal, irrigable, and pasture lands, with special emphasis on the last two. Claiming that the old "rectangular" method of surveying was unsuited to the arid west, Powell recommended that the system of surveying be changed in order to provide more water frontage for different sections of land. In this way more land units would have water.

In regard to irrigation, Powell felt that its use was absolutely necessary in most parts of the West. The smaller streams were nearly all claimed and future developments would have to come from the larger water courses. In order to accomplish this, reservoirs would have to be built either high up on the streams or in ponds near to the irrigable areas.

He favored the building of ponds instead of larger reservoirs. Individuals could no longer afford the expenses of building ditches, so to facilitate the reclamation of the arid land, Powell proposed that Congress pass a law making it lawful for nine or more persons to acquire homesteads, limiting each farming unit to 80 acres, to settle and organize irrigation districts, and to acquire title to irrigable lands. In this way more capital and labor could be brought together to construct reclamation works and there would be a better chance of success. Land, he held, should be irrigated before transfer of title was made, and the land and water should not be separated.

Powell drew up two bills which embodied his recommendations on the pasture and irrigable land questions. They were introduced into Congress but failed to pass. Powell's recommendation that the land be classified as such was almost immediately followed by Congress. In 1879, it created the United States Geological Survey which was required to survey and classify the lands in the West.

Powell's proposals represented a sane approach to the problems of the arid region. Had they been followed and properly administered much more could have been done in the way of reclamation in the West. With his proposed district

20. Ibid., 12-32.
system, he anticipated developments which were to arise in the West in a very few years. Powell wanted to provide homes for settlers and at the same time make adequate provision for the pasture and timber lands, but speculators and others, who stood to gain by a law system of land administration, foredoomed to failure any real efforts toward reform.
CHAPTER IV
THE CORPORATION PERIOD

With the failure of Congress to heed Powell's recommendations, the people of Montana were forced to turn to their own devises. Problems of individual projects were baffling. The lands along the streams were already watered. Further extension to the bench lands was expensive. To carry water to them, corporations and cooperative associations were formed.

The water company was by no means new in Montana. The First Assembly chartered several canal companies with the right to engage in building ditches for mining and agriculture. They were given special charters because no general corporation law existed. Those receiving charters were the Madison River Ditch Company, the Stinking-Water Ditch Company, the Beaverhead Ditch Company, and J. S. and W. H. Lott. These companies were allowed to build ditches for mining, irrigation and other beneficial purposes. The Gallatin Valley Ditch Company was chartered to build canals exclusively for irrigation. Little is known of later activities of these companies. While they were undoubtedly used extensively in the mining regions, it is doubtful if many existed for purely agricultural purposes.

For the next fifteen years no charters were granted.

Then in 1880, the "irrigation Company age" really began. The Desert Land Act made more land available to the people. With the completion of the Northern Pacific Railroad in 1883, travel to Montana was simplified, while at the same time, a larger market for the products of Montana farms was made available in the Midwest and East. The population of Montana increased about 250 per cent between 1880 and 1890.

As a result, there arose a still greater demand for water for irrigation. This demand, the people tried to meet through a renewed interest in stock companies and cooperatives. Such organizations continued to thrive until after the turn of the century. Then activities under the National Reclamation Act and the Montana District Law of 1907 made commercial developments no longer necessary.

Of these two types of concerns, perhaps the more important, and certainly the better known, was the commercial stock company. Owners of capital, who were interested in investing in irrigation enterprises, pooled their resources to build ditches. Articles of incorporation were taken out, waters appropriated, and stock issued to the investors. Bonds

2. In 1880 the population of Montana was 39,159, while in 1890 it had risen to 142,924.

3. Little is known of the exact sources of capital for companies in Montana. Undoubtedly the money for the smaller enterprises came from within the state, but at least a part of that for the larger works must have come from the Midwest and East.
of the remaining companies. Settlers could sometimes hasten
sold stock representing an interest in the works and rights
water under option formed cooperative stock companies, when
they were forced out of business. When this happened, the
made the position of the commercial entrepreneurs tenable. Often
the varying condition surrounding agriculture in Colombia

In those much money was wasted by the bad planning
originally planned on too vast a scale and had to be decreased
purposes and were poorly planned. Most companies were
taken too. Many companies were formed for purely speculative
risk could be spread among many people. There were dozens
capital was made available for construction. The amount of
several advantages. In the absence of government aid, more
the stock company method of developing reclamation had
carried with it an interest in the works
annually charged. In some instances, the state or water rights
entitled to operate water from the canal upon payment of an
in the works of the construction company, but were merely
been sold to settlers. The purchasers gained no interest
off the debit and to make a profit on the investment were
construction. Water rights at prices sufficient to pay
were often sold in order to obtain money to advance
this development by obtaining lands under a corporation ditch and then refusing to purchase water. Eventually the company would go into receivership and the water users could purchase its rights at a low cost.

Cooperative enterprises were also formed in other ways. Farmers and stockmen who owned land near streams would pool their resources to build a large canal to serve all of the users. Usually the amount of water a settler could claim depended upon the work or capital he had contributed to the enterprise. But here too, the practices varied. Sometimes the organization was quite loose, with the members and owners building a ditch and apportioning the water. In some cases the stock could not be transferred or sold.

Cooperative associations were generally unable to raise as much capital to defray construction costs as the commercial companies. They had many of the other weaknesses of commercial enterprises such as faulty planning and inadequate knowledge of water supplies. But this form of organization had its advantages too. The water users owned the works and after construction costs were paid off the only costs were for operation and maintenance. Quite often the members of the cooperative did the construction work themselves and did not require as much capital as the commercial organizations.

Before 1890, most irrigation was confined to western Montana to the headwaters of the Missouri, the Bitterroot
Valley, where it moved to the areas around Missoula. It was there that the first companies were formed in 1885.

An early cooperative development took place in the Bitterroot Valley, where the first irrigating in the Territory had been done. In 1883, nine farmers from the Corvallis vicinity entered into an agreement to construct what became known as the Republican Ditch, from Skalkaho Creek to Willow Creek. According to the terms of this agreement, each shareholder had an equal interest in the completed work, provided he did the same amount of construction and maintenance work as the others. The shareholders were not allowed to rent or give away their shares of the water. This arrangement did not work out well, so in 1886, the Republican Ditch Company was incorporated with a capitalisation of $4,000, divided into 80 shares of $50 each. In June, 1889, the capital stock was increased to $7,000, while the number of shares rose to 214. The Census Office reported expenditures of $16,000 on the project up to 1890, with several thousand acres under irrigation.

Beaverhead County, at an early date one of the centers of irrigation development in the Territory, also experienced corporation activity. At least three water companies existed

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in the county in 1893. They were the Canyon Ditch Company, 7
the Union Ditch Company, and the Beaverhead Canal Company.

In the Gallatin Valley, where the first ditch company
exclusively devoted to building irrigation canals was located,
company development was expanded after 1880. The Manhattan
8 Maltine Company constructed a ditch which cost $100,000. This
compny, along with the West Gallatin Irrigation Company,
owned 25,000 acres of good farm land, which they proposed to
divide into small tracts to sell to settlers, including with
each portion of land, a certain number of shares of the capital
stock, so that, when all land was sold, the canal would be owned
by the parties purchasing the land.

The Excelsior Canal Company, incorporated in 1890 with
a capital stock of $50,000, made an appropriation of water
and built the "Farmer's Canal" from the West Gallatin River
to the outskirts of Bozeman. The canal, when completed, could
carry much more water than its original appropriation called
for. Therefore, the original corporation was dissolved in
1892, and a new organization, the Farmer's Canal Company,
was formed. It purchased the rights of the old company and

7. Montana Irrigation Convention, Report of the Proceedings
   of the Second Montana Irrigation Convention, 1893, 50.
8. Ibid., 43.
increased the appropriation.

An example of faulty planning and corruption in irrigation companies was the Gallatin Canal. This canal was begun as a cooperative venture by a group of farmers. They could not complete it themselves and appealed to outside capitalists for aid. Assistance was obtained, but the owners of the capital induced the farmers to take stock in the enterprise while they managed the business. The farmers took almost enough stock to build the ditch, and paid for the stock by working on the ditch, while the incorporators and officers of the company voted themselves large amounts of stock without paying for it. The farmers took the matter to court. By 1892, the courts had ruled that the incorporators and officers were not entitled to the stock and, therefore, nullified their actions. This allowed the farmers to obtain control of the $75,000 canal.

A canal project, which appeared fantastic, at least for its time, was once projected to carry water over the hills and valleys from Virginia City, on the Madison River, more than 150 miles to the Prickly Pear Valley in Lewis and Clark County. It was first planned in 1878, when an engineer surveyed the route and found it practicable. The total cost at that time was estimated to be four or five million dollars.

10. Montana Experiment Station, Bulletin No. 29, 30.
At that early date it did not get beyond the planning state even though Martin Maginnis introduced a bill into Congress which provided for a land grant consisting of every second section for ten miles on each side of the canal, to aid in construction. Congress refused to approve the bill. Nothing came of it until 1905, when interest was renewed in the project. But again it got nowhere.

The Sun River Valley, parts of which had been among the first irrigated land in central Montana, also became a center of irrigation company activity. The Crown Butte Canal was one of the largest enterprises there. Water was diverted from Sun River to thousands of acres north and west of Great Falls. The first plans were on an enormous scale, but as difficulties of construction increased, they were greatly modified. In 1889, the canal was 23 miles long and had cost $60,000.

A group of ranchers in the same vicinity pooled their resources to build the Sun River Ditch. They intended to irrigate hay and meadow lands to provide winter feed for their cattle. Total costs in 1890 amounted to $14,000.

Numerous other canals, built by cooperative associations and commercial firms diverted water from Sun River and from

12. The Madison River Canal--The Biggest Most Important Enterprise in the State. What you can do to promote it. (Helena, Montana, April, 1905), 5-6. Propaganda pamphlet.


other streams in Cascade County. These included the Wilson and Thomson Ditches, the Chestnut Valley Ditch, the Missouri Rapids Ditch, the Willow Creek Ditch, and the Muddy Ditch. These Cascade ditches had an aggregate length of 96 miles in 1895 and had cost $226,000.

The Teton River was another tributary of the Missouri which was developed by corporate methods. This had been the site of early irrigation attempts by agents of the Blackfeet Indians. Many of the new developments were of a speculative nature. The Eldorado Ditch was designed to irrigate 16,000 acres but in 1895 was unproductive. The Eureka Ditch, for a time the largest in Teton County, was constructed to provide water for 30,000 acres. Only 12,000 acres had been filed on by 1893, and there is no evidence that any part of it was actually irrigated.

Prospects for a tremendous irrigated acreage in the Teton Valley brightened during the late 1890's and the early years of the twentieth century. There, the Conrad Investment Company began the construction of the largest irrigation project undertaken up to that time by private capital in Montana. The Company intended to irrigate 250,000 acres of parched land in the Teton Valley at a total cost of approximately $1,000,000. Construction began in 1898 and proceeded steadily until in 1904 it was reported

16. Ibid., 48.
land was owned by the company which intended to sell it along with water rights. However bright the prospects appeared in 1904, the project was never completed, and it is extremely doubtful that in 1900 many people had settled on the lands and were using water.

When the Northern Pacific Railroad was constructed through the Yellowstone Valley, it became a beehive of irrigation activity. The Billings region became the center for some of the largest commercial and cooperative developments in the entire territory. It was there that the first really large and widely known commercial project was located. The Minneapolis and Montana Land and Irrigation Company, probably with the aid of midwestern capital, built a 39-mile canal at a cost of $110,000. The "Big Ditch", as it was often called was designed to carry sufficient water to irrigate 25,000 acres. Much of the land under the canal was controlled by the company, which held it for speculative price rises.

Also at Billings, the Billings Land and Irrigation Company constructed a 50-mile canal which supplied water for 25,000 acres. The Company had extensive land holdings

18. Montana Experiment Station, Bulletin No. 29, 35.
which were sold at prices ranging from $35 to $50 per acre. Presumably this price also included the water right, but no proof of it is available.

Cooperative canals in the Billings vicinity were more numerous than those built by commercial firms. Typical of these was the Yellowstone and Canyon Creek Canal. Sometime before 1890, twenty farmers pooled funds amounting to $10,000 to construct this ditch. Each owner received water in proportion to the amount of stock he held. Annual assessments for operating expenses, amounting to $.50 per acre in 1889, were levied. A portion of this assessment could be worked out by laboring on the canals at a rate of $2.50 per day. Other cooperative ventures near Billings included the Mill Ditch, the Clark's Fork Ditch Company, the Yellowstone Ditch Company, the Stillwater Ditch Company, and the McAdow Ditch.

Many small canals diverted water from the river and from tributaries west of Billings. A ditch near Big Timber supplied water for 3,700 acres, of which 700 were actually watered. The land company, The Livingston Land and Irrigation

Company, the Park Branch Canal Company, and the Clyde Park Canal Company provided water for small areas of land near Livingston. Each of these enterprises owned lands which were offered for sale at prices ranging upwards from $10 per acre.

East of Billings developments began somewhat later, but it was not long until several large canals were under construction. Near the mouth of the Tongue River, the Miles City Irrigating and Ditch Company planned a canal capable of carrying enough water to irrigate 30,000 to 35,000 acres, at a total cost of $180,000. In 1902, it had a ditch twenty-five miles in length, but supplied water to only 6,000 acres. The Buffalo Rapids Ditch, in the same region in which the Reclamation Bureau later built a project, supplied water to 2,000 acres in 1902. At Forsyth, the Rosebud Land and Improvement Company constructed a canal sufficiently large to irrigate 15,000 acres. Settlement lagged and in 1902 only 1,000 acres were cultivated.

Nearly a million acres of land were irrigated in the state in 1898, of which the Bureau of Agriculture, Labor and Industry estimated that the area irrigated by commercial

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24. Ibid., 9
27. Ibid., 9.
enterprises amounted to more than 200,000 acres. Thus, even though corporation development was proceeding at a steady rate, by far the greatest amount of irrigation in Montana still came from canals owned by individuals and partnerships. The census of 1900 gave support to these findings. In 1899 it found 2,902 ditches in Montana which provided water for 29,951,154 acres of land. Each main ditch watered an average of only 328 acres of land.

At the same time, the census office estimated that $4,683,073, or an average of $4.92 per acres, had been spent on construction. This low cost can be explained by the fact that a majority of the ditches were of private ownership and little use had been made of expensive dams and headgates.

Development of irrigation by corporations and cooperatives, though of increased importance after 1880, lagged for a number of reasons. Inadequate knowledge of stream flow was often a prime factor, and most promoters had to cut down the size of their grandiose schemes when the true quantity of water was ascertained. Originally, through ignorance or lack of foresight, works were planned on too elaborate a scale.

28. Montana, Bureau of Agriculture, Labor and Industry, Sixth Annual Report, 1898, 5. No estimate of acreage irrigated by cooperative enterprises was made.


30. Ibid., 846. No estimate of the amount spent by commercial enterprises and cooperatives was made.
The estimates of cost were invariably too low. Many projects were of a speculative nature and insufficient interest was taken in construction of permanent works.

Generally promoters overestimated the number of settlers who would be attracted to their projects. Prices of land and water rights were sometimes prohibitive, making it impossible for prospective settlers to make a success of a farm during a period of low prices. For these reasons, the sale of water rights and land lagged. It was not surprising that the mortality rate on irrigation companies was high.

Despite the fact that irrigation companies in 1900 supplied water to only an average of about one-fifth of the irrigated land, the people of the state, long before that time, began to fear their power and influence. Laws were demanded to curb them. At the Montana Constitutional Convention, Joseph K. Toole had shown concern over the increasing importance of companies and had asked a constitutional provision which would enable the state to control them. Delegates to the Montana Irrigation Conventions also expressed fears of corporation control.

Many observers, even while the corporation movement was still gaining strength during the 1880's, realized that


the commercial and cooperative methods of development would not be successful in developing the arid region. Therefore, beginning about 1885, demands were heard again in Montana that the Government do more to aid in the reclamation of its vast public domain.
CHAPTER V

THE CAREY LAND ACT

The people of Montana, long before 1889, had come to believe that extensive reclamation could only be accomplished by government assistance. Montana's Territorial Governors devoted much space to land and water considerations in their annual reports to the Secretary of the Interior. Farmers as well as businessmen, also made insistent demands for aid.

For various reasons, before 1890 most of the people of Montana favored a policy of state control of arid lands and local direction of reclamation. The states-rights influence was still strong. Fear of a strong central government remained. People thought that the reclamation question was too great for the federal government to handle well. They did not believe the government could be fair to all of the interests involved. It was also thought that the work could be done more rapidly under the direction of the territory.

Typical of this feeling were the ideas expressed by Governor John S. Crosby, Montana's Territorial Governor, in his Annual Report to the Secretary of the Interior in 1884. If the policy of continuing the present desert land act in force is ever abandoned or modified, it seems that the same reasons exist for giving the desert lands to the States in which they lie as was done in the case

of the swamp lands. The policy of a government is clearly to take that course which will earliest lead to their reclamation, whether under the operation of its own laws and the supervision of its own agents or those of the states.

Would the general or the local government be the better medium to devise and push the best means of reclamation? Congress should be urged to make sufficient appropriation for the boring of artesian wells in different parts of the Territory, and the increase in the value of the land from their successful operation, would repay tenfold each out-lay by the Government.

Crosby firmly believed that the desert lands would be reclaimed more rapidly if they were under territorial control. But he deviated from a strictly "states-rights" outlook by favoring the government construction of artesian wells.

In 1889, the year in which Montana became a state, sentiment was still largely in favor of state control, but was slowly swinging away from it. Reports were presented by two Governors in that year, one Territorial and the other State. The last Territorial Governor, Benjamin F. White, in his final report to the Secretary of the Interior in 1889, called for cooperation between the Federal Government and the states and asked that they work out a comprehensive system for land and water utilization. While stressing the importance of irrigation as a form of insurance policy, Governor White declared that it was of utmost importance that:

3. Ibid., 15.
no wasteful or improper diversion be permitted and that the state should control its appropriation, as well as its subsequent division among the various claimants. The expense of this work will be heavy and cannot reasonably be provided by taxation, as are other expenses, but should be paid for out of the proceeds of the sales of these lands. It is impossible for Congress to pass general laws which would operate with equal justice in the arid belt as a whole. Conditions differ in different sections. The people of each section are best calculated to determine upon the system most suited to their needs, and should be allowed to regulate the matters in connection with the subject, and be given the means of carrying them into effect.

He concluded that the best, and only easy way of accomplishing the desired end, would be to have the government cede the lands to the states, who would have full control over their disposal and reclamation.

A completely different opinion was expressed by Montana's first State Governor, Joseph K. Toole, in his initial address to the Montana Legislature in the latter part of 1889. After speaking of the inadequacies of state control of irrigation and of the small amount of work done up to that time, Toole said, "I therefore suggest that you memorialize Congress to give all possible aid to the scheme of the director of the Geological Survey, looking to the reclamation of our desert lands by a system of governmental irrigation by means of reservoirs, dams, etc." This opinion was the first

4. Ibid., 15.

expressed in favor of governmental reclamation by a
high official in Montana's government. Governor Toole's
appeal fell on deaf ears. The majority of the people still favored
governmental cession of lands and private development and
no action was taken in the way of memorializing Congress to
begin a system of reclamation works in the west.

The farmers of Montana were plagued by severe drouths
in the late 1880's and early 1890's. The drouth of 1886
and the terrible winter which followed, during which a large
part of the cattle in Montana was lost, drove many people
into farming. More dry years followed, the summer of 1890
being especially bad.

With the drouths, the people became more aware of the
complete inadequacy of irrigation development in Montana. In
1890, 350,582 acres were irrigated. Adequate reclamation
might have helped to mitigate the evils resulting from the
lack of moisture. Further expansion was demanded, but the
people seemed to be as divided as ever on the means of
bringing it about. The advocates of state control were to
fight a bitter, but losing, battle with those who favored
national reclamation.

The numerous difficulties which the farmers faced finally
drove them to hold meetings to discuss possible solutions.
Local irrigation congresses were held, then county and state,
and ultimately national and international meetings. The movement culminated in the First National Irrigation Congress which was held in Salt Lake City in 1892. This was attended by reclamation leaders from all over the West. At this meeting, the consensus of opinion was in favor of the cession of public lands to the states, who would then have absolute control of their reclamation. The convention's chief resolution was to this effect.

Not all of the delegates at the first Congress favored state reclamation. Senator Power of Montana was the leader of violent opposition to state control of public lands. Explaining his position to the San Francisco Chronicle after the Congress adjourned, he said:

My claim is that the plan to take the arid lands away from the Federal Government is the scheme of a few men acting in conjunction with the railroads, to increase their holdings and place in their hands a supreme power that cannot be otherwise than vicious. More than that, a consummation of this big job would result in the organization of a giant political machine, that in far-reaching effects and unlimited possibilities, cause Tammany to appear as a pigmy.

The cost of surveying the lands, if granted, would be over

6. Smythe, in his Conquest of Arid America, gives a good, though short account of the development of irrigation congresses. His reports of the major decisions seem accurate. He was one of the earliest advocates of the congress idea and national reclamation, and used his journalistic talents to further the cause.

7. Ibid., 268-269.

8. These ideas were stated by Power in an interview published in the San Francisco Chronicle. It is quoted in Raymer's Montanan The Land and the People, I, 427-429, but no other informant can be given.
$1,000,000, a sum which would saddle the state with a great debt. The lands would have to be sold at a low price in order to get enough to pay the debt off. Power maintained that most of the land would then go to the speculators and land grabbers. "In Montana," he said, "we want the arid lands to be kept in control of the Government, we want that Government to adopt some plan by which a portion of the whole land can be sold and the proceeds applied to the reclamation of the whole. We stand ready to adopt anything that is fair to all the people."

Other National Congresses followed in each of the succeeding years. Investigations and studies of development in the West were recommended, but most noticeable was the gradual shift by the delegates to a position favoring some form of direct action by the federal government.

When Senator Power said that the people of Montana favored national control of reclamation, he was using the opinion of the first Montana Irrigation Convention as his authority. This convention, attended by reclamation leaders from all over the state, met at Helena in January, 1892. The Montana Irrigation Society, dedicated to advance the interests of reclamation, was formed. The opinions expressed then were just as varied as at the National Irrigation Congress later in the same year. But the chief resolution,

9. Ibid., 427-429.
accepted by a majority of the delegates, favored a form of national control and assistance. It stated that:

...it is the duty of the general government to aid in the development by irrigation of the arid lands in the several states and territories where such lands exist; and while we do not deem it desirable that the control and title of such lands should pass from the general government to the several states containing them, we do nevertheless urge at least that the proceeds arising from the sale of such lands shall be applied to the supplying of water for their development for the purpose of agriculture, and we urge upon our Senators and Representatives in Congress to use every effort to accomplish such legislation as will bring about this desirable result, not only in our own states, but to all other States and Territories similarly situated.

This demand, that the government use funds derived from the sale of arid lands for their reclamation, was made ten years before the actual use of such funds for that purpose under the National Reclamation Act. That this demand was so different from that made by the National Irrigation Congress later in the same year, may be an indication of the lack of capital in the state and the failure of corporation development. The Convention also called upon the senators and representatives of the State to use every effort in Congress to secure funds for investigating the possibilities of using artesian wells for reclamation.

Donald Bradford, delegate from Lewis and Clark county and also a state representative, opposed any reclamation


11. Ibid., 5.
work by the national government, saying that the task was too great for one agency to handle, that it would give too much power to the central government, that it would be a tax on states which in no way would benefit, and that irrigation was essentially a local matter. William A. Clark, who seemed to be deeply interested in reclamation work in Montana, also led the faction which favored state control of arid lands and irrigation. He thought the interests of Montana safer in the hands of the legislative assembly than in those of Congress. He claimed that the best water rights in the state were being taken up by individuals and companies who might not develop them properly, and warned the state to do something quickly to end such dangers. As to the best method of saving the situation, Clark advised the Convention and the Government to:

...let the states own the land, and they will take care of them and dispose of them judiciously, without fostering monopolies or allowing the practice of extortion. We are asked how this can be accomplished. I say, leave that problem to the future. It will be of easy solution. Canals and reservoirs may be constructed by the State, and the proceeds of the sale of the land applied to reimbursement, or a law enacted creating irrigation districts, whereby the people themselves can carry out the system of reclamation.

C. A. Gregory of Gallatin spoke in favor of federal control of the arid lands and against state control, "because," he said, "state control leads to corruption and jobbery and is

12. Ibid., 19.

13. Ibid., 29. Author's underscoring. It seems doubtful that Clark really had the best interests of the state
not in the best interests of the people. My watchword is 'extension of irrigation under national control,' (not at national expense), gradual, sure, and up to the point to meet the wants of the coming millions of people into the arid region."

A second Convention was called for the following year. The most important question before this gathering, when it met at Helena in February, 1895, was not that of national vs. state control, but of state vs. individual or corporate control. A better irrigation code to regulate disposal of the water supply was demanded. Fears that water corporations might completely monopolize the supply were voiced by many delegates. The sentiments of the group were still opposed to the cession of arid lands to the states.

Those favoring national reclamation continued, however, to gain strength. Governor Richards, in his annual message to the Montana Legislature in 1895, continued the demands for aid to irrigation by some agency of the national government. The magnitude of the task made it possible for private persons to do much more work, and he said that private enterprise was only willing to undertake projects from which

14. Ibid., 46.

the national government was the only agency to undertake additional work.

Western Congressional members also worked actively for more federal assistance. They were not, however, united in their demands. Some wanted cession while others demanded government construction. Senator Carey of Wyoming was the most persistent advocate of governmental cession of arid lands to the states. He had introduced numerous bills for this purpose but, until 1894, all failed to pass. In that year, after comparatively little debate, what has come to be known as the "Carey Land Act" was approved by Congress as an amendment to an appropriation bill.

The Carey Land Act provided a grant of up to 1,000,000 acres of desert land to each of the western states, under the following conditions. The land was to be irrigated, reclaimed, occupied, and not less than twenty of each 160 acre tract cultivated by actual settlers within ten years after the passage of the act. Before any agreement was drawn up or segregation made, the state planning to develop lands had to file a map with the Secretary of the Interior which was to contain pertinent data about the contemplated project. The state could make the necessary contracts for reclaiming


17. United States, Statutes at Large, XDXVIII, 422.
the land and to induce settlement, but was not allowed to
lease any of the lands or dispose of them in any way except
by securing their reclamation, cultivation, and settlement.
As soon as proof of reclamation was furnished, patents would
be issued to the state or its assigns for such lands. No state
could sell or dispose of more than 160 acres of land to any
one person, and any money realized from the reclamation of
lands was to be held in trust for the reclamation of other
desert lands in the state.

With this act, the federal policy of making homes for its
people on the public domain was expanded. The government
hoped that settlement would be speeded in the arid regions.
One of the fundamental ideas behind the act was to see to it
that no one but purchasers of water could get these lands.
This device was used in an attempt to correct the practice
which had arisen in the West by which settlers under a com-
mercial company canal would refuse to purchase water in the
hope of being able to get it later at a lower price.

Several shortcomings were soon noted in the act. It
was realized that the irrigation companies formed to
construct projects would not be able to obtain capital
if no liens could be placed against the lands. In 1896,
Congress authorized the use of liens, but they were to be
effective only when the states gained control of

At the same time, Congress provided that, when sufficient water had been provided to reclaim certain tracts on projects, patents could be issued to the states without regard to settlement or cultivation. The United States, however, was not liable in any manner for such liens or liabilities provided in the act.

The ten-year period was too short a time for real development and, in 1901, Congress extended the Carey Act for an indefinite period. It was provided also that the ten-year period for completing work was to begin from the date of the approval of segregation by the Secretary of the Interior. The Secretary could, at his discretion, continue any segregation for five years after the end of the ten-year period, or else could restore such lands to the public domain.

The state legislature was quick to implement this national legislation with a state law providing means of taking advantage of the Act. The fourth legislature in 1895, created a non-partisan Arid Land Grant Commission of five


20. United States, Statutes at Large, XXXI, 1901, 1188.

21. Ibid., 1188. The date of segregation came when the Commission approved of plans for a project and wrote to the Secretary of the Interior for final approval. If he approved, the lands were set aside for the state and could not be entered through the various land acts.

members, who were to be appointed by the Governor. This Commission was to have all authority to comply with the conditions of the act of Congress and enable the state to reap full benefit from the act. It could contract with any person or corporation to reclaim the land, at a cost not to exceed eight dollars per acre. No liability or indebtedness could be created against the state.

Under this act, Montana undertook construction at the expense of the Commission, which would be repaid by land sales and sale of water rights. The Commission was authorized to select lands and make contracts on behalf of the state, with the Secretary of the Interior, for the reclamation of the lands. It was also to provide for sale to actual settlers. Title to lands reclaimed was to pass directly to the state from the United States. The Commission could make contracts with private firms to construct the projects. At least four miles of canal construction had to be finished before any payments were made and then 15% of the full cost was to be withheld until the work was completed.

The funds for each contract were derived from the sale of lands by the Commission and by the issuing of warrants. Warrants constituted a lien upon the land, the water rights, and against the entire plant and improvements of the Project. The accounts of each project were to be kept separate from those of other projects. In the sale of land to actual
In implementing the

Floods in eastern and central counties, which began conformation of
had had experience as a Trustee of the Department of Inland Com-
A. M. Weisenbickler, Joseph Foulke, and T. W. Lanford. Brandford,
The first commission consisted of G. D. Reed, Donald Brandford,


22. Montana, Bureau of Agriculture, Labor and Industry, Indian

preliminary survey to determine for a proposed project on

the only action taken by the first commission was the

our to the consultation validity of the water use

never knew how much money it could obtain on. Doubts arose

the water use did not always exist in part, so the commission

secretary of funds made impossible any real accomplishment.

in implementation, their lack of experience, coupled with a

determined position, only one of whom was experienced

Governor Richards immediately appointed a commission of

be used for further reclamation. Such a surplus never occurred.

act. Any surplus funds arising from the operation were to

a continuous program of reclamation was provided by the

act was to interfere with any other or vested water rights;

authorized for obtaining rights of way and nothing in the

provision by a legislative of Montana. Extermination of Montana

insuperable from the lands revalued—the first such

settlement. Any settlement were authorized to accept

outstanding warrantee as payment.
the Yellowstone near Glendive and Fort Buford.

This first Commission lasted until 1897, when the law 25 was changed. To help eliminate possible corruption, it was decreed that no commissioner or relative of a commissioner, was to be interested in any way in the awarding of contracts, which were to be given to the lowest bidders.

The legislature recognized that the reclamation of land was more expensive than it at first appeared and raised the maximum amount which could be spent in reclaiming the lands from $8 to $12.50 per acre. Bonds, which constituted a lien upon the lands and which could not be sold below par, were authorized. Finally, water charges were also made a lien on the lands. After six months of default, the Commission could foreclose against the lands.

Quite often privately owned lands were located on Carey Act "segregations." In 1899, the Commission was authorized to buy such lands as were susceptible to irrigation at a contemplated project near Billings. It was not to pay more than $2.00 per acre and bonds might be issued in payment. 25 The Arid Land Grant Commission was also authorized to issue bonds for constructing water systems on state lands and to 26 issue warrants to meet preliminary costs.

27. Ibid., 53-54.
The new Arid Land Grant Commission, appointed in 1897, was able to accomplish no more than its predecessor. The funds available were limited. No engineering department existed and outside help had to be sought, help which was not always dependable. The Commission members, still lacking in experience, were spread around the state, and it was often difficult to get them together. Owners of capital were still reluctant to invest in the contemplated projects. The 1890's and 1900's were not the prosperous times for agriculture, and few people were willing to pay much extra money for water rights.

By 1898, only two districts had been established. These were at Billings, in Yellowstone County, and near Big Timber in Sweetgrass County. Nothing had been done on them except preliminary survey work, but action was expected shortly.

The Commission's Annual Report for 1900 listed four districts in Montana. District 1, near Billings, comprised 10,000 Carey acres, with a possibility of 15,000 more from the Northern Pacific Land Department. Engineering work had been completed, but little actual construction had been finished. Efforts had been made to interest eastern capital

28. Information as to the activities of the Arid Land Grant Commission is difficult to obtain. Only one report is available. Other information has come from Carey Board Reports and reports from the various state agencies.

Montana, Grant Land and Board, Report Preliminary, 3-2.

December I, 1900, 3-2.

Montana, Grant Land Great Commission Annual Report.

was abandoned. No progress was reported for the December
extensive investigation, the engineer had told the people
or bonds; so little work was done there. After a
of the timber, the promoters were having trouble in disposing
of the neglected area at the mining was expanded to 15,000 acres. At

During the next three years, little work was done. The
five years only 60,000 acres were surveyed for restoration.

on opportunity assistance in view of the fact that in the part
up the restoration of the 15,000 acres of land. The

such a guarantee, they said, would provide the funds to speed
their project and interest on bonds which they planned to issue.

sought new sources of money. They asked the state to guarantee

in view of the necessity of capital, the Commission

in Lewis and Clark County, but no contracts had been leased.
In 1901, bids had been advertised for the Dearborn direct
Bridge and Red Lodge, and construction was started to begin
restoration had been issued for work in December 2 between
reasons satisfactory to the Commission until April, 1901.

supposed to have begun in June, 1900, was postponed
interest. In December 1 at Big Timber, work which was
the report did state that capitalists were showing more
in the project, but with no concrete results, though
By 1903 it was obvious that the Arid Land Grant Commission was not meeting the needs of the state. Demands for better legislation and a new organization were made by the Governor and other interested persons. In response to these complaints, the legislature in 1903 created a new Board.

This new body was designated the Cary Land Act Board, and consisted of the State Engineer, the Secretary of State, and the State Examiner. The duties remained the same as under the old Commission. The new Board was to see that the projects already begun were completed but it would not obligate the state in any contract, nor could it make the state responsible in any way for the failure of contractors to fulfill the terms of a contract.

The Office of State Engineer was a new position created particularly for this purpose and the Engineer was made Chairman of the Board. He was to carry out such duties as the board imposed upon him, and was to pay special attention to projects already under way. He was to familiarize himself with the waterways of the state and to make measurements in cooperation with the Montana Experiment Station and the United States Geological Survey. He was to prepare the biennial report of the board which was to be submitted to the Governor and Legislature. Any moneys collected by the Board were to be placed in a Cary Land Act Fund in charge of the State Treasurer.

Further refinements came in 1905. Many provisions of the earlier acts were retained, but some were eliminated or altered. An act of 1905 provided that members of the Board were not to be interested in any of the projects under the act. This provision was in earlier statutes, but it was reemphasized because of trouble which had arisen at the Dearborn Project. The Board was not allowed to initiate projects but requests for selections of land could be filed with it by any person or corporation, along with proposals for construction. All pertinent data for the projects were to be listed with each request.

A change in the procedure of making contracts was made. If the Board approved of a plan presented, it entered into a contract with the government by which the Board agreed to reclaim and settle the lands. When approval by the Secretary of the Interior was obtained and when all plans were completed, the Board would sign a contract with the Company which made the initial proposal. This provision ended competitive bidding for contracts. No contract was to run over five years, and each was to contain specific information concerning the date of completion and settlement.

Another significant departure from established practice was made in the matter of operation of completed projects. After a project was finished and at least ninety per cent of

the permanent water rights were sold, the project would pass into the hands of the water users. This allowed cooperative control by the water users and eliminated any chances of exploitation by construction companies.

Water rights were still attached to the land but could be forfeited if payments were more than one year in arrears. The state continued its policy of selling lands at a low price—not less than $.50 nor more than $2.50 per acre. In making provisions for the construction of any project, the Board or applicants under it were allowed to appropriate any unappropriated water in the state.

The membership of the Board was changed in 1911, when the legislature decreed that thereafter it would consist of the Governor, and the Secretary of State, and the Attorney General. The Governor was made Chairman and was required to sign all contracts. The State Engineer was removed from the Board but was to act as its Secretary, and he was still responsible for preparing the biennial report.

This constitutes the legislation by which Montana took advantage of the Carey Land Act. Development still remained largely in the hands of private interests. After the first years, the Board ceased to enter actively into reclamation work. It merely sold the land at a low price, usually $.50 per acre, but gave no aid for developing water projects.

The development of the Cary's Land Act Board, 1898–1900.

The Act established the Cary's Land Act Board to develop and maintain the lands under the Act. The Act provided for the appropriation and administration of the lands. The Board was also responsible for the development and allocation of the lands.

By 1900, the Act had been in operation for over ten years, and the Board had made significant progress in developing the lands. The Board had acquired over 2,400 acres of land, and developed various projects, including the construction of roads, canals, and irrigation systems. The Board had also been successful in attracting industries to the area.

The Act was considered a success, and many other states followed suit by passing similar legislation. However, the Act did not provide for the development of the lands in a comprehensive manner, and many of the projects were never completed.

Although the Act was successful in attracting industries, it did not provide for the development of the lands in a comprehensive manner. Many of the projects were never completed, and the lands remained underdeveloped.

The Cary's Land Act Board was successful in developing the lands, but the Act did not provide for the development of the lands in a comprehensive manner. Many of the projects were never completed, and the lands remained underdeveloped.
Billings Bench Water Users Association on December 20, 1920.

At that time there were 13,223.54 acres segregated, of which 12,264.62 were settled. All of the land had been patented to the state, which in turn had patented 11,905.38 acres to settlers who had made final proofs. The project had cost a total of $504,000 up to the time of change of control.

Since that time the project has remained in substantially the same condition, with some lands which could not be sold. These were left to lie idle or else were leased to farmers for grazing. The Carey Board termed the project as being "very successful." In spite of its share of financial troubles, the project was more successful than any of the others.

The second district planned by the Arid Land Grant Commission was an area of about 50,000 acres on both sides of the Yellowstone near Big Timber. The Glass-Lindsay Company, contractor in charge of the work, had difficulty from the very beginning in disposing of bonds, and this slowed up the work. The Carey Board report for 1912 showed that 7,556.12 acres had been patented to the state, which had in turn patented 2,139.32 acres to settlers. The segregated area was later


38. Ibid., 15. In 1920 water rights cost from $35 to $65 per acre at Billings, from Ninth Biennial Report.
decreased to about 22,000 acres. Construction was nearly completed during the 1920's and by 1930 the total cost amounted to more than one million dollars, twice the cost of the Billings Project. This necessitated a high price for water rights.

Settlement proceeded slowly and the trouble which the Glass-Lindsay Company had in obtaining capital, forced it to reduce the size of the project. The total segregation in 1928 was 10,739 acres, most of which had been patented to the state. At that time 3,000 acres remained unsold but they were gradually settled during the 1930's and 1940's.

Near Valier, in north central Montana, was the third and largest of the Carey Act projects. When first begun, the promoters contemplated an irrigable area of 153,000 acres. In 1910, 70,000 acres had been segregated and approval was expected for 32,000 more. After more complete engineering investigations, it was discovered that there was not water

41. Nineteenth Biennial Report of the Carey Land Act Board, 1919-20. In 1920 water rights were selling at $50 to $60 per acre.
available for more than 80,000 acres. The amount finally segregated in 1928 was 68,797 acres. In 1948, the Board reported 40,000 irrigable acres for the project. Most of the segregation was patented to the state, which in turn patented to settlers. Very little land was open to entry.

The Valier-Montana Land and Water Company did not escape the trouble which beset construction companies on other Carey projects. Up to 1936, when work was nearly completed but had not yet been accepted by the Board, more than $4,500,000 had been spent on construction. The construction company had trouble in disposing of its bonds. To make matters worse, settlement lagged throughout the entire period and, during times of depression, many people left. Thus, money was not available to pay off the bonds or even the interest.

In 1932, the Board granted an extension of three years to the company to finish the project. However, it was still unfinished in 1935. No action was taken by the Board until 1942, when the company filed bankruptcy proceedings. A new company, the Valier Company, was formed, which took over all rights, titles, and interests of the defunct corporation. Arguments arose


45. Twenty-Third Biennial Report of the Carey Land Act Board, 1947-48. Twelve years before this time the Board reported that 60,000 acres were actually irrigated. No reason is given for the discrepancy.

over its right to do so and the Pondera County Canal and
Reservoir Company, formed by water users, demanded the rights
of the old group. The Valier Company was given permission to
complete the project but it was also required to post a
bond of $100,000. By 1948, it had not done this and no
solution had been found for the problem.

Numerous other projects were contemplated and work
actually begun on some, but none was completed.

The Dearborn case represents the most sordid side of
development under the Carey Act. It had its beginnings in
1886, when Donald Bradford, one of the people working
most actively for state control of arid lands, appropriated
300,000 inches of water from the Dearborn River. This he
conveyed almost immediately to the Dearborn Canal Company,
of which he was a trustee. The Company began construction of
a dam and canal but work was stopped in 1890 after only a
small section was finished.

In 1900, District 4, the Dearborn District, was created
by the Arid Land Grant Commission, which on April 2, 1901,
purchased the rights of the Dearborn Company. At that time
Donald Bradford was also a member of the Commission. A
contract called for the reclamation of land at the highest
possible price of $12.50 per acre was signed with the
Company.

Then the trouble really began. The contract called

47. Twenty-Third Biennial Report of the Carey Land Act
for reclamation and settlement of the lands by 1904, but in 1906 not a single bona-fide settler was on the land. Land and water rights in the District were selling for prices ranging upwards from $17.70 per acre, while in other areas they cost from $10 to $15 per acre. A competent engineer, employed by the Board, reported that there was not sufficient water in the river for more than 6,512 acres without the aid of storage dams. The canal was poorly constructed and much of the soil was unfit for agriculture. There was an element of fraud in the contract. Bonds to the amount of $187,500 were delivered to the contractor when the company was entitled to only $61,855.

In 1906, the Carey Board recommended the return of the patented lands to the government and the relinquishment of the rest of the segregation. When an attempt to get repayment from the Dearborn Canal Company failed, the Board suggested that the state nullify the bonds. "If settlement were encouraged," said the Board, "a fraud would be committed upon the People."

The state legislature in 1907 allowed the Carey Board to compromise claims on the $207,000 bonded debt of the district. The Ames Realty Company of St. Louis, which held the bonds, gained control of the rights and property of the Dearborn Company from the state and in return gave up the bonds, which

were then cancelled. The Board signed a contract with
the Ames Realty Company to continue the work. The company,
however, did not complete the job, so the Board contracted
with the Great Falls Land and Irrigation Company, which also
failed to complete the project. On November 8, 1911,
the contract was voided and the remaining segregation was
relinquished.

During these disgraceful proceedings, several laws of
the State and national government were violated. In the
first place, the contract should not have gone to the
Dearborn Canal Company since Bradford was a trustee of the
company and also a member of the Commission. This violated
the law of 1897 which held that members of the Commission
were to have no interest in the contracts negotiated by
that body. Secondly, the company sold some of the bonds
below par, which was illegal by terms of the law of 1897.
Finally, the federal law limiting landholdings to 160 acres
was violated. The whole affair smacked of corruption and
tainted the reputation of the Commission, the Board, and
state development in general.

A development consisting originally of 130,000 acres
was planned for the Teton River in north central Montana.
When surveys were made only 55,000 acres were segregated.
While this was lowered still more to 34,000 acres. No great


amount of work was done on the project, and it was allowed to
drag on until 1926, when the works were sold to the Bynum
Irrigation District. The lands were finally relinquished
in 1926. Up to 1922, $400,000 had been spent on the project
but no water was delivered or settlements made.

Other projects which were planned and on which some work
was begun included two on the Musselshell with an acreage
of 35,000. Plans were made for a 22,300 acre development
on the Ruby River in southwestern Montana. In the same
general area was the 8,000 acre Red Rock Project and the
Beaverhead District. The Flatwillow Project in central
Montana, consisting of 13,000 acres, was also abandoned.
The Little Missouri Project on the Dakota border lingered on
for a time but was finally abandoned.

During the early part of its existence, the Board was
quite busy planning projects. The high point in segregations
came in 1910 when 411,326.87 acres were set aside from the
state. But when confidence in the integrity of the Board
declined and irrigation development by private companies
became more unprofitable through competition from the national
reclamation and district projects, interest in the Carey
Act dwindled, and the number of segregations dropped rapidly.

1925-26*, p. 18.


53. Ibid., 9-11.

54. Ibid., 3.
For a number of years the Board has done almost nothing. In 1948, only about 95,000 acres of a possible 1,000,000 had been obtained from the government.

Up to 1936 at least $7,000,000 had been spent on the Carey Act projects. The Board itself took in sufficient money from land sales to meet its expenses each year but there was never a surplus for new developments.

The primary reasons for the failure of developments under the Carey Act may be summarized as follows. Many of the companies entered the reclamation of lands for speculative purposes. Projects were not always well planned. Capital would not be obtained except with the greatest difficulty. Irrigation bonds were a drug on the market after 1900. Stream measurements were not always adequate and most projects were planned on too elaborate a scale and subsequently had to be reduced in size.

During the early years of the administration of the Act, the members of the Arid Land Grant Commission and the Carey Land Act Board were inexperienced in matters pertaining to the development of large-scale irrigation projects. Often membership on the Commission or Board constituted only a minor part of the activities of the members, so insufficient time was spent with the activities and work of the Board. The Board itself could not institute nor promote projects but had to wait until plans were presented to it before
action could be taken. Little foresight was used in planning future developments. Corruption was evident during the period of the Arid Land Grant Commission.

The process by which the government allowed liens to be placed against the land did not always work to the benefit of the projects. Water had to be made available to sections of land before liens could be authorized against them. But most of the money was needed before the lands were settled. Liens in themselves were no adequate guarantee against loss if no settlers showed up to buy the land and water rights. During much of the period the nation was in a state of agricultural depression and settlers were not willing to take up lands at a relatively high cost if they could not dispose of their products. During the periods of severe depression, the projects lost more settlers than they gained.

In examining the results of a half-century of irrigation development before 1902, more people became convinced that private interests as well as the states could not adequately provide for the reclamation of arid lands in the West. The Homestead Act, and the Desert Land Act, the corporation movement, and finally the Carey Land Act had all failed to provide adequate water for the parched lands in Montana. Government aid in the form of grants of all land was no longer able to satisfy the most insistent advocates of reclamation. Pressure for direct government aid continued, and became more powerful, as the twentieth century began.
CHAPTER VI
THE NATIONAL RECLAMATION ACT

The Carey Act produced only a temporary respite in the struggle over the public domain and irrigation. The West did not have the ability to develop its own resources and came more and more to look to the federal government to do the work. The Carey Act gave only a part of what it wanted and did not satisfy the demands for assistance in reclamation.

Congress began to study the reports of the Geological Survey which fostered the demands for federal aid. Since its organization in 1879, the Geological Survey had been making surveys and investigations on the vast public domain. The land classification program was being pushed, and a vast store of knowledge about the arid region came as a result. Reports of these activities gave Congress a startling picture of the problems of the arid region. In 1883, even before the passage of the Carey Act, Congress provided for a more thorough survey of the arid region by appropriating $100,000 to the Geological Survey to investigate the extent to which the arid region could be redeemed by irrigation. The Survey was to select the best sites for reservoirs and other works necessary for the utilization of water for irrigation and the prevention of overflows. 1

The Act further stipulated that:

all the lands which may hereafter be designated or

1. United States, Statutes at Large, XXV, 527.
selected by such United States surveys for sites for reservoirs, ditches or canals for irrigation purposes and all the lands made susceptible of irrigation by such reservoirs, ditches or canals are from this time henceforth hereby reserved from sale as the property of the United States, and shall not be subject after the passage of this act, to entry, settlement or occupation until further provided by law.

Provided: That the President may at any time in his discretion by proclamation open any portion or all of the lands reserved by this provision to settlement under the homestead laws.

Opposition to this act arose at once. Many in the arid region feared that much of the best land would be segregated if the work was prosecuted with diligence. In such an event, it was argued, western development would be greatly retarded.

Congress acquiesced to these sentiments and modified the law on August 30, 1890. The provision providing for the withdrawal of public lands from entry was repealed. However, the reservoir sites already segregated were to continue to be reserved until otherwise provided by law, and any sites selected thereafter would also be closed to public entry. The investigations and segregation of reservoir sites continued.

Investigations of possible reservoir sites in Montana were begun almost immediately by the Geological Survey. The valley of the Sun River seemed most promising, and it was in this area that the first investigations were made. By 1890, ten reservoir sites, capable of storing water to irrigate over 300,000 acres, were located in the valley. Preliminary surveys for several

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2. United States, Statutes at Large, XXVI, 391.
canals, varying in length up to forty-one miles, were also conducted. Almost 12,000 acres were recommended for segregation to the Secretary of the Interior. In the following year, twenty-seven additional sites were surveyed and thousands of acres of additional land recommended for segregation. Most of these surveys were conducted in the western and central parts of the state—on the Beaverhead, Madison, Smith, Musselshell, and other tributaries of the Missouri. Tributaries of the Yellowstone near Big Timber were also surveyed for possible sites.

More surveys did not satisfy the people of Montana. Nor did the passage of the Carey Land Act do more than temporarily abate the demands of the farmers. The measure had scarcely been passed when Montanans resumed their demands for federal construction of projects.

Governor John E. Rickards, in his message to the fourth legislature in 1895, declared that private capital was not equal to the burden of reclaiming the vast tracts of land in the West, and that "it is the duty of the general government to aid in adapting the arid belt to the purpose of civilization, and that appropriations for this purpose should be made." He stated that western interests had been


injured by those who wanted the states to do the whole job of reclamation and by the deference of Congress to those who opposed extension of the nation's agricultural land.

In all of the demands made for direct government aid, the inability of private enterprise to handle the job of reclamation adequately was given as a primary reason for the need of assistance. Colonel Hiram Chittenden of the United States Army discussed this problem in a report on reservoirs in the arid region which he presented to the Secretary of the Interior in 1899. Colonel Chittenden had devoted several years to an exhaustive study of the arid region and his report is still considered one of the best ever presented to Congress. "A comprehensive reservoir system in the arid regions of the United States," he said, "is absolutely essential to the future welfare of the national domain." To insure adequate development of irrigation in the West, Chittenden estimated that from one-quarter to three-quarters of the stream flow would have to be held back in reservoirs. Such reservoirs, he concluded, were too costly for private enterprise, and other factors such as interstate relations, the importance of having each site developed to its highest possibilities regardless of the

6. Ibid., 19-20
extent of interest in its immediate neighborhood, and
the improbability that the best attainable results could
be obtained from either private individuals or states, pointed
to the general government was the agency best qualified
to undertake the work.

Chittenden advocated government construction of only
the reservoirs. He said, that if the government did not
hold itself aloof from the irrigation business, there
would be an "almost certain clash of authority with local
laws." "The use of water so stored," he said, "should be
absolutely free to the people forever, just as the canals,
harbors and other public works are free for general use
without toll or levy of any kind." These reservoirs
would be built as a natural and legitimate exercise of the
same governmental policy under which the government built
levees and large reservoirs for storing flood waters.
Chittenden concluded that the support of the East was
necessary for the accomplishment of the work.

The Seventh National Irrigation Congress, which met in
Cheyenne, Wyoming, in 1898, followed Chittenden's recom-

Construction of Reservoirs Under National Supervision,"
National Irrigation Congress, Seventh Annual Session of the
National Irrigation Congress, 1898, 21-22.

9. Ibid., 21-22.

10. Seventh Annual Report of the Bureau of Agriculture,
Labor and Industry, 1898, 211.
mendations, and advocated the government construction of reservoirs at the most feasible sites on the public domain. The delegates also favored the government construction of the canals.

The Eighth Congress, meeting in Missoula, Montana, in 1899, reiterated the demands made by the Seventh Congress. It advocated government construction of canals through the foothill districts and local construction of the distributing systems. At that meeting the National Irrigation Association was formed. Some of the leaders of the National Irrigation Congress, led by George Maxwell of California, realizing the need for a more active organization, used their influence as members of the executive committee to form the Association. Its membership was composed largely of businessmen of both the East and the West who thought they would be able to greatly extend their markets if more projects were built. The Association remained very active in its work for national reclamation.

Western elements in both national political parties began to make their influence felt in party policies. The platforms of both in the election of 1900 contained planks concerning reclamation. The Republican Party, "in pursuance of the constant...policy to provide free homes on

11. Seventh Annual Session of the National Irrigation Congress, 1898, 161.
the public domain..." advocated, "adequate national legislation to reclaim the arid lands of the United States," but favored reserving control of the distribution of water to the respective states and territories. The Democratic platform called for "an intelligent system of improving the arid lands of the West, storing the waters for purposes of irrigation, and the holding of such lands for actual settlers." Both provisions were quite vague and evasive, neither promised direct construction by the government.

No action was taken until after the close of the century. The depression, which followed the Panic of 1893, and the excitement during the Spanish-American War relegated the reclamation issue to the background. With the accession of Theodore Roosevelt to the Presidency, the national reclamation movement had its first real supporter from among the Presidents. Roosevelt had lived in the West during his youth and understood its need of water. In his first annual message to Congress he advocated the construction of reservoirs for flood control and irrigation. He thought the only possible irrigation development left was on large projects, which only the government had the resources to build. The new works, he said, should be built on unsettled arid lands so that they could be reclaimed, thus making

more homes for the people.

Beginning in 1901, Representative Newlands of Nevada introduced bills into Congress calling for national reclamation. Debate was extremely bitter. Eastern businessmen objected to the scheme since it benefitted the West directly but not the East. The farmers were unwilling to have the agricultural area extended for fear of what increased crop production would do to prices which were already low. Since the Constitution made no mention of irrigation or reclamation, many questions the legality of Newland's proposals. Opponents of national reclamation declared that it was unfair to tax one section of the nation to benefit another. This eastern opposition was successful in killing many bills.

The proponents of national reclamation justified their position in numerous ways. They often referred to the reports of Chittenden and Powell to point out the need for reclamation. The argument that the proposals were unconstitutional were brushed aside when the supporters of reclamation pointed out that Congress was given authority to dispose of its public domain as it wished. The advocates stated that homes for many more people would be made available on the public domain. These people, it was argued, would provide a new market for eastern goods. The support of President

Roosevelt added strength to the movement.

The Congressional members from Montana took no part in these debates. Senator William A. Clark, though he had attended the Montana Irrigation Convention, was primarily interested in mining. Senator Gibson, who opposed the cession of arid lands to the states, was silent on this issue. Representative Caldwell Edwards rarely spoke in the House debates.

The arguments presented by the proponents of national reclamation gradually wore down the opposition. National Reclamation became a reality when President Roosevelt signed the National Reclamation Act on June 17, 1902. This act provided for the government construction of reclamation projects in the arid region. A "reclamation fund," composed of moneys collected from the sale of public lands in the various states, was set up. From this fund was to come money for the construction and maintenance of irrigation works in the states and territories. Authority to survey and construct the works was to be in the hands of the Secretary of the Interior. He was required to submit an annual progress report to Congress.

The Secretary was to determine the feasibility of any project and could let contracts for construction, provided there was money in the reclamation fund. Before giving

16. United States, Statutes at Large, XXXII, 588.
public notice of construction, the Secretary was required to withdraw from public entry, any lands required for construction, but entries under the Homestead Act could still be made on proposed projects. Public notice of the lands irrigable was required, as well as the limit of area per entry, the charges to be made per acre upon the entries, and the number of annual installments in which such charges were to be paid. Not more than ten years was allowed for repayment of the construction costs. The Secretary was to determine the time when such payments were to begin. Charges were to be determined with a view to returning to the reclamation fund the estimated cost of construction of a project, so that additional sites could be developed.

Settlers claiming lands in any projects built under the provisions of this act were required to follow the settlement procedure outlined in the Homestead Act. They also had to reclaim one-half of the irrigable area. Before a settler could receive a patent for any land, he was required to pay all charges against it. A maximum farming unit of 160 acres was provided and no water was to be sold for landin excess of that amount. When payments on the major portion of the lands irrigated under a project were completed, the management and operation of the works was to pass to the water users, who were to maintain them at their own expense under such form of organization as was acceptable to the Secretary of the Interior. The government was to retain title to all
reservoirs and other works necessary for the protection and operation of the projects.

The Secretary of the Interior, through the right of eminent domain, was authorized to obtain any property necessary for the construction of projects. The laws of the states and territories relating to appropriation, use, and distribution of water were to be recognized and followed, provided that "the right to the use of water acquired under the provisions of this act shall be appurtenant to the land irrigated and beneficial use shall be the basis, the measure, and the limit of the right."

A final important section held that the Secretary of the Interior was to see that the major portion of the funds received from the sale of land in each state were to be spent in the state from which they were received. The Secretary could spend the money where he deemed advisable, but within each ten-year period after the passage of the act, the expenditures for the benefit of the states and territories were to be equalized according to the proportions of money received from land sales in each state or territory.

This act represented a radical departure from the usual government policy. Previously, Congress had refused to construct irrigation works except on Indian lands. By this act, it proposed to have an agency of the federal government do the work, even though it expected to be repaid.
The passage of the National Reclamation Act was the culmination of a movement in the West which had first obtained the preemption privilege, then free land, the Desert Land Act, and the Carey Land Act. The failure of these earlier laws to provide adequate irrigation forced the general government to this step of providing a program of national reclamation.

Thus, after 1900, the West entered a "national reclamation era." The passage of the act had an adverse affect on state and private developments within Montana. Carey act segregations and construction, which remained high during the first decade of the twentieth century, declined rapidly after 1910. There were soon four national reclamation projects and these turned interest away from development under the Carey Act. Corporation developments also lagged. Individuals, perhaps more than any other group, let the government build their ditches instead of doing the job themselves.

In this general plan of development, the Indian was not long to be forgotten. The unfortunate experiences, which had characterized the earlier efforts to irrigate Indian lands from tribal funds, were forgotten when the Indians received supplemental aid from Congress.
CHAPTER VII
INDIAN RECLAMATION

The first attempts to encourage agriculture and irrigation among the Indians of Montana were made by the Catholic missionaries at St. Mary's and St. Ignatius. They had some success in agriculture but none in irrigation.

When the government signed treaties with the Indians of Montana in the 1850's and 1860's, it agreed to set up agencies for them. Farms were established at each agency to provide food for the inhabitants and to teach the methods of agriculture to the Indians.

Irrigation works, built with tribal funds, were begun at each agency. The agent for the Crows in 1871 reported that 100 acres of land were cultivated and the Indians had fenced in a farm of 450 acres, and constructed over a mile of irrigating ditch, besides several lateral ditches."

In the same year, the agent of the Blackfeet Indians reported that "In consequence of the [dry] atmosphere and the scarcity of rain the farm and garden have had to be watered by means of irrigation for the accomplishment of which I had constructed during the early part of the summer a substantial aqueduct of irrigating ditch nearly a mile in length and enough for 200 acres." In 1873, the agent of the Flathead Indians had


2. Ibid., 428. It is interesting to note that at this time the agent among the Blackfeet considered the Milk River unfit for use in agriculture. He stated also that there was not sufficient water in the stream for irrigation,
"broken and seeded 140 acres of land, {and} made about 3 six miles of irrigating and other ditches...."

The government could not make the Indians settle down to an agricultural way of life as long as game existed on the plains and in the mountains. Some of the agencies, such as the Crow and Blackfeet, were often shifted. This made it almost impossible to develop adequate farming among those Indians. In 1879, only 3,669 acres were cultivated at the Montana agencies. How much of this area was irrigated was not indicated in the agents' reports.

Until 1884, money for the construction of irrigation works came from the tribal funds. The agents used what money they could spare for construction and employed Indian labor as much as possible. In that year, Congress made a general appropriation for Indian irrigation. Another followed in 1892. Beginning in 1893, Congress made annual general appropriations for such agencies which did not obtain funds from special appropriations. But the use of tribal funds was continued.

During the twenty years after 1884, construction of works proceeded rather slowly and unevenly as among the various tribes. Despite the fact that Congress made appropriations specifically for irrigation, the amount of

3. Annual Report of the Commissioner of Indian Affairs to the Secretary of the Interior, 1873, 249.
money made available to each reservation was at most of
them, too small to permit much progress.

The greatest progress was at the Crow Reservation in
southeastern Montana. The agent reported that in 1885, a
ditch eight miles long, with a capacity sufficient to
irrigate 4,500 acres, was under construction. The Crows
ceded a portion of their reservation to the United State in
1890 for which Congress paid them $946,000 for the lands,
and provided that $200,000 of the sale price should be
used to build canals. A reserve of $75,000 was laid aside
to be spent for operation and maintenance expenses. By 1895,
the Indians there were cultivating and irrigating 2,350 acres
of land. Additional funds for reclamation were made
available in 1899, when Congress authorized the Secretary of
the Interior to use tribal annuity funds for reclamation.

These funds made much more rapid progress possible. Main
ditches, totalling seventy-eight miles in length and with a
capacity to irrigate 70,000 acres, were soon constructed. Water
was diverted to the agency lands from the Big Horn and Little
Big Horn rivers. The agents attempted to use as much Indian

5. Annual Report of the Commissioner of Indian Affairs to
the Secretary of the Interior, 1885, 274-275.
6. United States, Statutes at Large, XXVI, 1040.
8. United States, Statutes at Large, XXX, 947.
agents attempted to use as much Indian labor as possible and hoped the Indians would learn habits of industry and also gain a better knowledge of irrigation.

Other agencies made less progress after 1885. The reports of the Blackfeet agents indicated that little irrigation was carried on there until after 1890. In 1896, one reported that "there are now about 25 to 30 miles of constructed ditches on the reservation, some of which, like the Willow Creek system, are of no practical use in their present condition." The agency had been shifted, so the work had to be done over. Practical surveys for ditches totalling 23 miles in length were being made. It was planned to irrigate 9,000 acres.

In partial exchange for the cession of some tribal lands in 1896, Congress agreed to construct an irrigation system for the Blackfeet tribe. Despite this promise, progress was agonizingly slow. A seven mile ditch was built in 1898, and the Indians, with the assistance of an engineer, had constructed others. The irrigation system which existed there in 1902, was neither systematically nor scientifically

11. Ibid., 181.
planned, and the Indians were in great need of water to 13
irrigate their hay lands. It was not until 1908 that
irrigation got under way.

The agent of the Fort Belknap Indians gave no indication
that irrigation was attempted on that reservation until
shortly before 1895. In that year, he reported that irrigation
works were being planned for 4,400 acres. To assist this work
the government in 1896 promised to construct a system of
15 irrigation canals. Little was done and, in 1902, there was
still no irrigation in effect there. Construction was under
way, however, on two small canals to provide water for 8,000
16 acres of hay lands.

At the Fort Peck reservation, a dam and several ditches were
built prior to 1885. That year the agent reported that the
dam had been washed out and the ditches were almost useless
since they had been poorly planned. He also reported that the
services of a practical engineer to plan proper construction
were being obtained through authorization by the Commissioner
17 of Indian Affairs. By 1895, a large canal, which diverted

13. Eighth Report of the Bureau of Agriculture, Labor and
    Industry, 1902, 121.
15. United States, Statutes at Large, XXIX, 321-351.
16. Eighth Report of the Bureau of Agriculture, Labor and
    Industry, 1902, 123-124.
17. Annual Report of the Commissioner of Indian Affairs to
    the Secretary of the Interior, 1895, 133.
the Poplar River, had been completed but laterals were not yet finished. The agent thought that sufficient land could be irrigated to produce enough food to satisfy the needs of the inhabitants of the reservation. He hoped that an 800 acre hay meadow, then being built, would fulfill the winter forage requirements.

The Poplar Ditch was the only existing irrigation canal on the reservation in 1902 and it provided irregular service. The Indians' farming operations consisted principally in cutting wild hay for winter and raising small patches of corn and potatoes. Little more was accomplished at the Fort Peck reservation until after 1908.

The Flathead Indians, though they possessed the most promising location for irrigation development, made little more progress in irrigation than the other tribes. Funds for a canal were authorized for the project from the general Congressional appropriation in 1884. By 1885, five miles of construction was nearly completed. Ten years later, only ten miles of ditches were diverting water from the Jocko River. Some Indians had settled there and were producing crops. In 1902, water was available for 5,000


acres from two government-built ditches. Individual Indians were making some use of the numerous mountain streams. More rapid development at the Flathead reservation began in 1904, when Congress authorized the construction of a project and appropriated funds for surveys. Other large annual appropriations followed.

A reservation for the Northern Cheyenne tribe was established on the Tongue River in 1891. The region was not suited for agriculture and little progress was made in irrigation. No irrigation ditches were constructed for the Indians before 1902 but a few white farmers had diverted water to their fields. Prospects for more development there were very dim.

The National Reclamation Act made no provisions for Indian irrigation. But even before the passage of that act, Congress had demonstrated a greater interest in Indian reclamation in Montana. It had agreed to build ditches for the Blackfeet and Fort Belknap reservations and had made more money available to all of them. Government appropriations began to increase after 1902 and thereafter


23. United States, Statutes at Large, XXXIII, 510.

the Indians had to depend less upon tribal funds for development. Congress also sought other means to speed the work which had already been started on some reservations and which might begin at others.

Finally, in 1908, Congress made provisions for more efficient and better coordinated efforts on Indian irrigation projects. It authorized the Secretary of the Interior to make "such arrangements and agreements as he deemed best for the good of the Indians," for the irrigation of Indian allotments. Congress realized that the Indians were in no financial position to make repayments, and provided that no liens or charges for construction, operation, or maintenance could be created against the Indian lands.

With the passage of the "Indian Reclamation Act," a new era for development of Indian lands was ushered in. The government realized that it would be better to provide means by which the Indians could make a living than to supply them with food and other goods each year.

The National Reclamation Act and the "Indian Reclamation Act" fixed finally the pattern for reclamation in Montana. The state no longer attempts to promote large irrigation projects. Water companies are generally a thing of the past. Large-scale cooperative developments have faded out.

25. United States, Statutes at Large, XXXV, 86.
Individuals who have access to streams still develop some new irrigation. However, most progress has come about through the acts of 1902 and 1906. They have undergone no fundamental change since they were passed nearly a half-century ago.
APPENDIX

DEVELOPMENTS UNDER NATIONAL RECLAMATION

The basic policy for irrigation, in Montana, which the nation has followed up to the present time, was laid down in the National Reclamation Act in 1902 and the "Indian Reclamation Act" in 1908. Thereafter, the big task was chiefly administrative. Numerous changes were made in the provisions of the acts but the essential purpose, that of providing productive family-sized farms on the public domain, was kept continually in mind.

Under the acts of 1902 and 1908, the Secretary of the Interior was given wide discretion in the use of funds for constructing projects. On Indian reservations, he used tribal funds and money obtained from general and specific Congressional appropriations to construct projects. He directed the Office of Indian Affairs and the Reclamation Service to work together on some projects. In Montana, work was begun by the Reclamation Service at the Blackfeet, Flathead, and Fort Peck reservations. In 1910, Congress restricted this authority when it provided that no new projects on Indian lands could be constructed without direct authorization by Congress, if the cost exceeded $55,000.

1. Good reviews of national irrigation law can be found in Volume III of the Report of the President's Water Resources Policy Commission, (Washington, 1950), and also in the Bureau of Reclamation's Federal Reclamation Laws (Annotated), (Washington, 1943)

2. United States, Statutes at Large, XXXVI, 269.
A somewhat similar situation existed under the National Reclamation Act. The Secretary of the Interior was authorized to begin construction of projects wherever he wished on the public domain, provided money was available in the reclamation fund. Immediately after the passage of the act, the Secretary was subjected to pressures from groups all over the West. Local farmers and businessmen exerted what influence they could in an attempt to get projects for their localities. Senators and Representatives also attempted to influence the decisions of the Secretary. This freedom in initiating projects was taken away from the Secretary in 1914. After July 1, 1915, no new expenditures could be made from the reclamation fund except from annual authorizations by Congress.

Numerous reclamation projects were authorized by the Secretary between 1902 and 1915. In most cases, the actual costs far exceeded the original estimates. As a result the size of the reclamation fund dwindled rapidly. Congress, however, passed several laws to replenish the supply. It provided that part of the money obtained from oil, mineral, and grazing land leases were to be placed in the funds. As expenditures on reclamation projects increased, there was insufficient money in the reclamation fund to meet all of the expenses. Congress then began to make annual appropriations without reference to the reclamation fund.

3. United States, Statutes at Large, XXXVIII, 690.
Thus, one of the basic ideas behind the National Reclamation Act, the idea that money received from the sale of lands on the public domain would pay for the costs of reclaiming part of it, was forgotten.

Numerous changes were also made in the methods of repayment. The original ten-year repayment period was too short a time for the new settlers to repay the costs of reclamation. Changes were often made in the requirements. Now the usual repayment period is forty years, but it varies between the different projects. Indians were required to repay construction costs for a time after 1914, but that requirement was eliminated because most Indians were unable to make payments. They were made responsible, however, for the payment of maintenance and operations expenses.

The various groups interested in obtaining projects for Montana carried considerable influence. In the first four years after the passage of the reclamation law, four projects were begun in the state. These were the Milk River Project, the Lower Yellowstone Project, the Huntly Project, and the Sun River Project.

The Milk River Project, authorized by the Secretary of the Interior on March 14, 1903, was the first in Montana under the National Reclamation Act. Actual construction was begun in July, 1906, and the first water was delivered in 1911. Construction on various phases of the project has continued to the
present time. The first estimate of irrigable area on this project was 251,806 acres. This was reduced until in 1950 the irrigable area was 127,001 acres, of which 76,366 were actually irrigated. Total costs amounted to $8,776,922.49 on June 30, 1948.

On May 10, 1904, the Lower Yellowstone Project became the second authorized for Montana. Actual construction for the estimated 66,000 acres began in 1906. The total completed cost was $3,685,433. In 1950, approximately 57,000 acres were irrigable, of which 49,000 were actually irrigated.

The Huntley Project, on the Yellowstone River near Billings, consisted of 35,000 acres of former Crow Reservation lands. Authorization for it was obtained in 1905, and construction began the same year. This was pushed rapidly.


7. Reclamation Project Data, 181-182.


and Huntley became the first completed reclamation project in Montana. In 1950, water was available for 32,508 acres, while 24,385 acres were irrigated. Total costs had amounted to $1,559,580. This was probably the most successful national reclamation project in Montana.

The final early national project in Montana, the Sun River Project, was authorized in 1906, with an estimated irrigable area of 256,000 acres. This had dwindled to about 97,000 areas in 1950 with 76,500 actually watered. Total expenditures have amounted to $9,822,166.

Congress and the Secretary of the Interior also speeded work on Indian projects in Montana. In 1907, Congress appropriated $300,000 for reclamation work on the Blackfeet reservation. Surveys were begun in 1908 by the Reclamation Service. The original estimated irrigable area was 132,000 acres. By 1941, water was available for only 22,291 acres and

10. Reclamation Project Data, 149-150
14,878 were cropped.

Earlier developments at the Crow Reservation were continued, and in 1809, the United States agreed to construct additional ditches there. In 1941, 52,975 acres were under canals and 27,379 were irrigated.

The most successful Indian project in Montana was the Flathead Project where the Indian Service and the Reclamation Service worked together in constructing it. The project was authorized in 1904, and when $30,000 was appropriated for preliminary surveys in 1908, the irrigable area was set at 130,000 acres. In 1910, the reservation was opened to white settlers, who soon outnumbered the Indians, and did most of the farming. The acreage under the canals in 1941 was 104,490 acres, of which 76,785 were irrigated.

Grandiose plans were also made for the Fort Peck reservation, which was authorized in 1908. Surveys were conducted in the same year and the Reclamation Service began construction in 1912. In 1941 water was available.

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18. United States, Statutes at Large, XXXV, 1909, 781, 797.


20. Ibid., 32.

21. Ibid., 32.
for 26,888 acres but only 3,277 were actually watered.

Small-scale projects were begun at the other Indian reservations in Montana. Water was available for 20,255 acres at the Fort Belknap reservation in 1941, but 13,173 were actually irrigated. Only 804 acres were under constructed works at the Rocky Boy reservation, and at the Tongue River, water was available for 1,597 acres but only 266 were irrigated.

After the initial flurry of national reclamation activity, no new projects were begun in Montana until 1930. In that year, Congress authorized the Secretary of the Interior to liquidate the indebtedness of and rehabilitate a private development of about 20,000 acres in the Bitterroot Valley. The work was carried out and repayments were begun. The project had an irrigable area of 16,665 acres in 1950, most of which were irrigated. The completed cost amounted to $947,641.05.

Among the small depression-born projects was that at Frenchtown which was authorized in 1935. Construction began in 1936 and was completed in the same year. Water was diverted into 2,975 acres in 1950 when the total irrigable

22. Ibid., 32.
23. Reclamation Project Data, 21.
26. Reclamation Project Data, 125-127.
area was 4,935 acres. The costs, when the project was completed, totalled $273,603.

The Buffalo Rapids Project, on the Lower Yellowstone, was first authorized in 1937. Extensions were provided in 1940. Emergency relief appropriations and appropriations under the Water Conservation and Utilization Program were used in construction. In 1950, 23,433 acres were irrigable, of which the greatest part was watered. Total costs to June 30, 1949, amounted to $1,048,423.64.

The Intake Project, a small extension of the Lower Yellowstone Project, was authorized by Congress in 1944. It was built under the provisions of the Water Conservation and Utilization Act, and was designed to pump water to 881 acres of land above the main canal of the Lower Yellowstone Project. In 1950, water was available for all 881 acres but only 403 were irrigated. Total costs up to 1948 amounted to $92,371.46.

In the Missoula area, another project was constructed.

29. Reclamation Project Data, 45-47.
32. Reclamation Project Data, 157-158.
under the Water Conservation and Utilization Act. Supplemental water was made available for 977 acres of which 258 were irrigated in 1950. Total costs amounted to $252,627.48.

During approximately forty-nine years of irrigation activity by the government in Montana, about 400,000 acres of land in family-sized farming units have been supplied with water. In 1950, there were 265,863 irrigated acres in national projects in the state, while water was available for 361,900 acres. The acreage under Indian ditches in 1941 was 229,300, of which 136,187 were irrigated, mostly by white farmers who had settled on the lands. The activities of the national government have provided about one-half of the increase in irrigated acreage in Montana.
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C. JOURNALS, MEMOIRS, AND MONTANA CONTRIBUTIONS:

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II. SECONDARY SOURCES AND ACCOUNTS:

A. GENERAL WORKS:


B. PAMPHLETS:

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C. PERIODICALS AND NEWSPAPERS:


