The History of Irrigation and the Orchard Industry in the Bitter Root Valley

Dorothy J. Zeisler

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THE HISTORY OF IRRIGATION
AND THE ORCHARD INDUSTRY
IN THE BITTER ROOT VALLEY

By

Dorothy J. Zeisler
B.A., Carroll College, 1975

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The History of Irrigation and the Orchard Industry in the Bitter Root Valley (128 pages)

Directors:  Dr. David Emmons
            Dr. Duane Hampton

The purpose of this study was to 1) provide a history of the development of irrigation and the orchard industry in the Bitter Root valley, and 2) to apply this information in the framework historians traditionally characterize Montana. Historians support one of two major themes in Montana history. One theme depicts and objects to Montana's exploitation and colonial status by outside interests, the other accepts Montana's colonial economy, believing the benefits of development outweigh non-development. The history of irrigation and the orchard industry serves to question the validity of either of these themes.
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INTRODUCTION

Historians traditionally characterized Montana as a "colony" that has served Eastern interests. This exploitation stunted Montana's political, economic and cultural development. In his *Montana: High, Wide and Handsome*, Joseph Kinsey Howard explored this idea, and designated the Anaconda Company, the Federal Reserve System, Montana newspapers, and the Montana Power Company as the exploiters.

Howard gave an emotional account of Montana's victimization by Amalgamated Copper Company (Anaconda Company). He blamed Francis Augustus Heinze, an early copper magnate, for forcing the trust "to thrust its finger into everyman's pie and to make brutally manifest its absolute economic domination of the state, its power of life and death over the common man." Montanans protested this domination. "It has always been the central political conflict in Montana, this effort of the people to cast off the shackles of copper as they groped their way out of a colonial economy." The company also dominated Montana by controlling the dissemination of news in the state; it owned the majority of Montana newspapers. This continued until 1959, when the company sold its newspaper interests.

The Federal Reserve System contributed to Montana's "exploitative colonial tradition." Howard deplored this
bureaucracy, which forced local bankers to sell their business to absentee-owned banks. The absentee-owned bank system was disastrous, Howard contended, because its profits did not return to Montana, but were invested "into Swedish matches and utility holding companies."4

The Montana Power Company influenced the state's development, but to a lesser degree than did the Anaconda Company. The majority of the power company's stockholders lived outside the state, and for many years the company aligned itself with the Anaconda Company. Howard considered this alignment extremely detrimental to Montanans. Litigation developed over the appropriation of water in the Missouri River, with the power company claiming a superior water right for its hydroelectric plant. Howard stressed the importance of this contention between the state's irrigators and the power company, which forced the courts to decide whose right was most important.5

Another Montana historian, K. Ross Toole, supported the theme of Montana's exploitation and colonial status. His interpretation of Montana's exploitation, however, is less vituperative than Howard's, and he is not as eager to blame Montana's ills solely on outside interests. Toole asserted that Montana's history is one of exploitation, but stated that "nature, not the evil designs of men, decreed that Montana be a place with a colonial economy."6
The fault, according to Toole, lies not so much with the "company," but with existing, unalterable conditions. In Toole's opinion, it was inevitable that Montana be developed by the East; Montanans such as Marcus Daly, A. B. Hammond or William A. Clark did not have adequate capital and turned to eastern bankers for financial backing for their mining and lumber enterprises. Once Easterners began to invest in Montana, the profits naturally returned to the East.

Toole complained that once this financial backing began, the West lost all control to outside interests. "Montana neither owned nor controlled what it was." Toole pictured a state that often was subject to legislation "concoted mainly by legislators grossly unfamiliar with its problems." Montana lacked the benefits of a free press, and Montanans considered themselves culturally inferior to the east. The state had little control over its economic well-being, and "because of this lack, the possibility of a financial calamity ... [was] very real."

Toole illustrated his thesis with the problem of strip mining. Montana again was exploited, economically and environmentally. "Over 60 percent of the power generated at Colstrip units 1, 2, 3 and 4 would be owned by out-of-state power companies. Yet all the
pollution, degradation, water loss, erosion, aesthetic reuination—the virtual destruction of huge areas of a beautiful country—would be the heritage of Montana alone."¹² Toole aptly developed Howard's ideas.

Is there another interpretation of Montana history? Two historians, Michael P. Malone and Richard B. Roeder offered another insight to Montana's development. In part, they agreed with Howard and Toole, but acknowledged the need for outside capital. Malone and Roeder saw Montana as "a supplier of raw wealth, not a processor of that wealth."¹³ Montana may lose its scenic beauty through industrialization, but "without such development, Montana will no doubt continue to fall farther behind the economic standards of the nation and will continue to lose its most valuable resource of all, its youth."¹⁴ While Toole objected to Montana's colonial tradition and sought alternatives, and Howard asserted that Montana was "victimized," Malone and Roeder willingly accepted Montana's colonial economy; they thought the benefits of development outweighed its cost.

Another historian, Gene M. Gressley answered the criticisms of Howard and Toole. Gressley reviewed the literature written by historians sympathetic to the theme of exploitation, and found their conclusions inconsistent with Western action. Westerners protest government interference, yet "assiduously woo the federal government
for funds to build interstate highways." Westerners may resent Easterners' characterization of them as frontiersmen, but they utilize this image to attract tourists. Westerners attack Eastern culture while they emulate it. Gressley astutely observed ambivalence and inconsistency in the Western response to the East.

If the West forbade Eastern institutions from tapping its natural resources, what other means would the West have to attain economic self-sufficiency? Gressley used the example of the exporting of natural gas from the West. Carl Kraenzel, an early advocate of the exploitation thesis, objecting to exporting natural gas from the West. Gressley argued that large amounts of natural gas are useless to the West, which has a small population of consumers. If the gas was unused, the West would have to borrow from Eastern institutions, for lack of adequate revenue.

Gressley's points are well made, and serve as an introduction to the Bitter Root apple boom*, which many viewed as a promotional land scheme initiated by Eastern institutions to serve their interests. These perceptions are inaccurate, for the boom proved to be more than just a land scheme, and embodied the dreams of many of its advocates. The boom's supporters were not wholly self-serving and many of their slogans and the economic returns they promised were not deceptive; these men believed in their slogans and their economic perceptions. Bitter
Root residents also encouraged this boom, and welcomed the men and capital of the Eastern institutions that financed the boom.

*The term "apple boom" is used throughout this thesis, but is not to be interpreted in a strict economical sense. If a quantitative framework were applied, the existence of an actual boom might be questionable. Members of the media first used this term in describing the activity that occurred in the Bitter Root Valley from approximately 1905 to 1920. This activity encompassed the subdivision of land into orchard tracts, planting of apple orchards, investments by non-residents in the orchard tracts, and the formation of the Bitter Root Valley Irrigation Company which subsequently built the Big Ditch. Whereas, the promoters of these events planned for an apple boom to materialize as a result of these activities, the boom for the most part, remained a dream. Despite this failure, promoters and critics frequently referred to the period as the "boom," which supported the use of the term in the following thesis.
FOOTNOTES


2 Ibid, p. 244.

3 Ibid.


5 Ibid, p. 275-287.


7 Ibid, p. 166.


11 Ibid.


14 Ibid.


16 Ibid, p. 8.
CHAPTER I

THE EARLY BITTER ROOT VALLEY

Inflated land values, property speculation, and random development of subdivisions currently plague the West. This situation, however, is merely a continuation of trends in the West's development. The Bitter Root apple boom, which many labeled a promotional land scheme, is an early example of the problems that occur in a brief period of land development.

The Bitter Root valley is 100 miles in length with an average width of 8 miles, and comprises an area of 511 square miles or 327,040 acres.¹ The valley's west side is lined with the rocky Bitter Root mountains, and the east side is marked by bench lands that blend into the less-imposing Sapphire range. Most of the valley is in Ravalli County; its principal waterway is the Bitter Root River which drains numerous local mountain streams. Hamilton and Stevensville are the main urban areas, and existed before the apple boom.

Early explorers were skeptical of the valley's agricultural potential. In their journal, Lewis and Clark commented on the land's poor quality.

Some [creek] runs on the left, the bottoms as also the hills Stoney bad land. Some pine on the creeks and mountains, and partial on the hills to the right hand Side [.] The foot of the Snow mountains approach the river on the left.
side. Some Snow on the mountain on the right also, proceeded on down the vallie which is pore Stoney land.²

British and American fur traders who followed Lewis and Clark used the area for trading and trapping. When the Jesuit Father DeSmet arrived in 1841, he intended to settle permanently in the valley and chose a site near Stevensville for his Flathead Indian mission, St. Mary's. DeSmet found the land barren and rocky. The valley

... has but one defile, which serves as the entrance to, and issue from the valley. The mountains which terminate it on both sides appear to be inaccessible, they are piles of jagged rocks, the base of which presents nothing but fragments of the same description, while the Norwegian pine grows on those that are covered with earth, giving them a very somber appearance, particularly in the autumn when snow begins to fall.³

Father Mengarini, a companion of DeSmet, retained vivid memories of the valley's long, cold winter.⁴ The land appeared inhospitable.

The early visitor to the valley invariably commented on the uninviting mountains, rocky or sandy soil, and severe climate. DeSmet, the most sanguine commentator, characterized the area as barren and useless. Despite his initial impression, DeSmet began to cultivate the land in 1842, and sought to interest the Flathead Indians in agriculture. Aware of their nomadic nature, DeSmet nevertheless persisted in forming a semi-agricultural community. Farming allowed the Indians stability, and offered them a sense of permanency. He traveled to Fort
Colville, Washington Territory, and returned with "several bushels of oats, wheat, and potatoes for planting."\(^5\) The missionaries successfully planted these crops, and provided an abundance for all.\(^6\) In the spring of 1842, the missionaries planted a garden and "raised a variety of vegetables such as carrots, onions, lettuce, beans."\(^7\) The land was not quite so barren as they imagined.

Further evidence of the priests' farming activities came from Enias Francois in the 1902 court case of Sheldon D. Cowell v. B. F. Julian, et. al., which dealt with adjudication of the Burnt Fork creek water. Francois testified that the priests, DeSmet, McGreeny (Mengarini), and LaPoint farmed the land and raised "wheat and potatoes and all kinds of garden."\(^8\) According to Francois, the priests irrigated their wheat fields and "had a ditch and flume to carry the water to the grist mill."\(^9\) Although the first farming in Montana was a success, it was difficult.

Father Mengarini complained that "the soil is naturally dry and filled with large rocks . . . and we cannot find arable spots except along the creeks which are often located at great distances from each other."\(^10\) DeSmet surmised that

St. Mary's, or Bitter Root Valley, is one of the finest in the mountains, presenting, throughout its whole extent of about 200 miles, numerous grazing, but few arable tracts of land. 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. This difficulty, however, if the county should ever be thickly settled, can be easily obviated, as the whole region is well supplied with numerous streams and rivulets. These remarks apply to the valleys contiguous to St. Mary's, the general aspect of them differing perhaps but slightly in regard to the heights of the mountains, the colossal dimensions of the rocks, or the vast extent of the plains.11

As early as 1842, newcomers realized that irrigation was necessary for agriculture in the valley. While Lewis and Clark had painted a bleak picture of the valley's usefulness, DeSmet evidenced a guarded optimism that came from experience. He farmed the land before he reached his conclusions, which contrasted with later promoters of the valley's resources.

In 1850, after their limited success, the Jesuits abandoned St. Mary's. The raiding Blackfeet Indians, the Flatheads' growing interest in the gold-rich state of California combined to force the closure of St. Mary's. In November, 1850, the Jesuits sold the "mission's buildings and fences for the two hundred and fifty dollars"12 to Major John Owen, who built Fort Owen. Upon his arrival at the mission, Owen began to cultivate the land. During his stay in the valley, he encouraged farming for new and potential residents. Owen built a gristmill and bought new machinery which aided the settlers. He also improved livestock and seed, and experimented with fruit growing
in the valley.

In his journals, Owen discussed his gardening techniques. One entry read, "Saturday, Made a commencement at gardening. Sowed Beets - Onions - Parsnips, pepper Grass Parsley Rhubarb plant - also planted Nearly one Bu. potatoes." Owen, according to Francois's testimony, followed the priests' example and irrigated the area. He persisted in agriculture, hoping that farmers would immigrate to the region. Before the legitimate arrival of homesteaders, however, the Indian problem had to be resolved.

Owen's title to the mission and the surrounding buildings became absolute on January 1, 1852, when the Jesuits failed to return. Ownership of the land, however, remained unclear. During this period, the valley and its surrounding regions underwent a series of political changes. In 1846, the United States and England resolved the Oregon problem and the two countries established a boundary line for their respective territories. Oregon, under the United States' dominion, remained under a provisional government until 1848, when it attained territorial status. Government in the area was uncertain while the North and South debated the expansion of slavery. The Compromise of 1850 offered a degree of stability. After 1850, Congress divided the Oregon territory and established Washington territory; the Bitter Root valley was part of the area designated Indian
territory. Major Issac I. Stevens, governor of Washington territory, proclaimed himself territorial superintendent of Indian affairs, a position that included jurisdiction over the Bitter Root valley.15

One of Stevens' first tasks was to explore and evaluate the territory. In 1854, Stevens and a party of scientists and explorers, traveled from Fort Owen to Vancouver. An Army surgeon, Doctor George Suckley, accompanied Stevens on this expedition. Suckley recalled the scenic mountains and fertile land in the Bitter Root valley, which was fed by various streams.16 Another member of the group was an Army officer, named Grover, who recorded climatic data and researched the territory's natural and economic conditions.17 Grover reported a lack of snow at the valley's periphery and noted that in some places, the valley was without snow, while outside of the valley, snow had fallen.18

Stevens's impressions were equally favorable, but his notes were on the area east of the Cascades, of which the Bitter Root valley was a part. In the summer of 1854, he wrote the commissioner of Indian Affairs that

There is much valuable land and an inexhaustible supply of timber east of the Cascades. I consider its speedy settlement so desirable that all impediments should be removed . . . . There is a population of about 6,000 Indians in about twelve different tribes east of the Cascades . . . . The amount that will be required to negotiate treaties with these Indians will not be less than $13,000.19

Along with his glowing impressions of riches to be gained
from timber harvesting, Stevens began a campaign to acquire this land for white settlement.

Stevens continued his drive to evict the Indians from their territory. "The Indian title has not been extinguished, nor even a law passed to provide for its extinguishment east of the Cascade Mountains. Under the land law of Congress it is impossible [for settlers] to secure titles to land and thus the growth of towns and villages is obstructed." By 1845, settlers began moving into the territory, as their perceptions of it changed. In Stevens' land description, the valley assumed great economic value.

Stevens' fight to secure land for white settlement was arduous. The Bitter Root valley was not officially open to white settlement until 1872; it was not until 1892 that the last of the Flathead tribe left the valley. For administrative purposes, Stevens divided the territory east of the Cascades into Indian districts and called the Flathead agency the "eastern district," although most settlers continued to refer to it as the Flathead agency. He assigned agents and other employees to the tribe. In July, 1855, Stevens met with the Flatheads, Pend d'Oreilles, and Kootenais to negotiate a treaty. Steven's policy was a "cession of aboriginal lands, placing the Indians on reservations and paying them by annual shipments of goods." In the final Hell Gate Treaty, the tribes ceded twenty-five thousand acres to the United States; and Victor became
chief of the combined tribes. The lands vacated by the tribes were opened to white settlement, and the federal government was to pay the Indian confederation, over a twenty year period, one hundred and twenty thousand dollars. The Indians were to receive land for a reservation, either in the Jocko or Bitter Root valleys, and might combine with the Lower Pend d'Oreille and Coeur d'Alene tribes.

Despite Stevens' victory, several problems ensued. Congress refused to ratify the treaty until 1859, a delay which provoked much confusion among whites eager to settle. Many thought the valley was open for settlement with the conclusion of the treaty. A large number of Flatheads also refused to leave the Bitter Root valley for the new reservation.

While waiting for Congressional ratification, Stevens requested Dr. Richard Lansdale to inspect the Jocko and Bitter Root valleys for the proposed Flathead reservation. Lansdale advocated the Jocko valley, which had better agricultural land, as the reservation site. He found the Bitter Root valley "poor in quality and intersected by moraines." On the west side of the valley, he reported that the "fertile spots are numerous but of small extent . . . . The amount of fertile, arable lands on the east side of the river [estimated] at twenty-five sections or square miles . . . . The whole of the open lands in the valley both wet and dry, afford good grazing and may be estimated at three
hundred square miles." With federal approval, Stevens selected the Jocko valley. The Flatheads considered the Bitter Root valley their home and disagreed with the treaty provisions; it was not until 1891 that the last of the Flatheads left the Bitter Root valley for their reservation.

Soon after Congress ratified the treaty on March 8, 1859, new immigrant trains arrived in the valley. With a growing number of homesteaders, Montana became a territory in 1864. Settlers established communities along the Bitter Root River, choosing the "fertile spots" that Lansdale mentioned. Other areas of settlement appeared along creeks such as Ten Mile, Three Mile, Burnt Fork, Willow, Girds, Skalkaho, and Weeping Child. Newcomers appropriated water from these streams and dug irrigation ditches. By 1865, settlers had established two schools and built forty homes in the town later known as Stevensville.

These early white settlers were unhappy with the Flathead situation. Few of the Flatheads were serious about agriculture in the valley; this attitude provoked the whites, who wrote petitions and requested the Indians' removal. One of their petitions eventually reached President Andrew Johnson. In 1868, the president sent William J. Cullen to the valley to negotiate "a peaceful relinquishment of all Montana Indian lands occupied by whites." Cullen
was the first of several to assume this task. After his failure, General Alfred M. Sully succeeded him with the same amount of success. Neither persuaded the Indians to leave the valley.

In November, 1871 President Ulysses Grant sent James A. Garfield to the valley to negotiate a peaceful removal of the Indians to the Jocko reservation. Officials allotted fifty thousand dollars to Garfield to pay for the improvements the Indians had made on their Bitter Root land and for their removal. While Garfield succeeded in persuading some of the tribe to move up the Jocko with Chief Arlee, the remainder stayed in the Bitter Root under Chief Charlot. 27

After this partial victory, another rush of white settlers arrived in the valley. The Bitter Root valley was opened for patenting by white settlers who settled on their property before June 5, 1872. This area was surveyed previously according to Indian claims upon specific areas in the valley. 28 In February, 1874, Congress opened the remainder of the valley to all homesteaders.

With the influx of more settlers and the coming of the railroad, Charlot and his dwindling band of followers began to lose hope in retaining the Bitter Root valley. By 1891, all of the Indians had moved to the Jocko reservation, which freed the Bitter Root valley of one obstacle to white settlement. Scarcity of water and productive soil were the barriers that remained.
CHAPTER I FOOTNOTES


7Ibid., p. 61.

8Cowell v. B. F. Julian, Et. al., 4th MT Judicial District, 86 (1902).

9Ibid, p. 87.

10Lucylle H. Evans, St. Mary's in the Rocky Mountains, (Stevensville, MT: Montana Creative Consultants, 1976), p. 69.

11Chittenden and Richardson, Life, Letters and Travels of Father DeSmet, 1:571.

CHAPTER I FOOTNOTES (CONTD.)

17 Ibid.
18 Ibid.
19 Fahey, The Flathead Indians, p. 91.
20 Ibid.
21 Ibid.
22 Ibid, p. 92.
23 Ibid, p. 96.
25 Ibid, p. 145
26 Ibid, p. 146.
27 Evans, St. Mary's in the Rocky Mountains, p. 190.
CHAPTER II

EARLY FRUIT GROWING AND IRRIGATION

Settlement in the Bitter Root valley occurred before the Indian removal, and farmers established communities in Grantsdale, Stevensville, and Corvallis. As early as 1864, farmers in the Grantsdale area appropriated water for agriculture from major streams. The newcomers settled only where water was readily available, either on the west side of the valley with its numerous mountain rivulets, or on scattered spots on the east side, near one of its streams. DeSmet's opinion that irrigation was necessary for farming in the valley proved to be true. Rainfall was minimal compared to the Midwestern or Eastern states.

By the 1880s, small irrigation ditches laced the Grantsdale area. The Independent Ditch, built in 1872, provided water for surrounding ranches. J. A. Hedge, the owner of a sawmill east of Hamilton, dug the first high-line ditch in 1883.* This ditch carried water to the bench east of Hamilton from Skalkaho Creek. In 1880, a visitor to the valley, Abe Williamson, wrote to his family in the East about irrigation and the possibility of beginning an

*A high-line ditch is significant in that the ground has to be built up for its construction. This contrasts with the simpler surface ditch, in which construction consists of digging down in the ground.
apple industry, for which he believed sufficient water existed.\(^3\)

Newcomers settled the west side more quickly than the east during these early years because water was available from west-side mountain creeks that swelled with spring runoff. The soil in many areas was rocky and unsuited to agriculture. The east side had a rich fertile layer of top soil, but intermittent streams, with small amounts of water. Before the apple boom, many successful commercial apple orchards were established on the west side; in many instances this side provided good air drainage, in addition to its adequate water supply.\(^4\) The east side, however, had better soil and in the few places where water was available, such as Willow Creek, farmers quickly settled. Frederick D. Nichols, one of the valley's promoters, explained that "for many years the wide-reaching eastern benches of the valley have been coveted by the early settlers and by capitalists who have visited the valley."\(^5\) After the apple boom began, Nichols commented, "The flat river bottoms and . . . tracts bordering the mountain streams have been irrigated and cultivated for two generations; but the adjoining and long-coveted "bench" lands . . . of the valley have awaited until now the magic touch of water."\(^6\)

The majority of the valley's early farmers grew wheat or alfalfa or ranched. They believed that the soil and climate were only suited for this type of farming, or for stock raising. Influenced by traveling nursery salesmen,
a few pioneers planted fruit trees. In 1866, Thomas Harris planted the first fruit trees in the valley, which he purchased from Washington-based salesmen. They sold Harris "100 apple trees, 4 plum trees, 2 Pear trees, 12 Rasberys and 50 Strawberry plants." Harris planted them on his farm by Three Mile Creek. Others, following Harris's example, bought trees from Philip Rietz of Washington territory. Most of the valley's early settlers believed that fruit growing was an unrealistic pursuit, and unsuccessful experiments confirmed this early belief. "While the very few had faith in the success of their planting, they were scoffed at and jeered at by their neighbors . . . . The Bass Brothers, Dudley and Edward, however, challenged this idea. In 1870, the Bass Brothers planted the valley's first successful commercial orchard at Pine Grove Ranch, on the west-side benchlands. Their location was one of those few suited for fruit growing. Ambitious, the Basses opened an experimental station that operated for twenty years, and their first trees produced fruit in 1877. The Basses planted several varieties of apples: Duchesses, Red McIntosh, Alexanders, and crab apples such as the Transcendent and Hyslop. Their primary crop was McIntosh and Alexander apples. In the 1880s, J. A. Goodhue, of Smith Brothers' nursery, sold five hundred more trees to the Basses at one dollar per tree. Goodhue also sold trees to many other settlers in
the valley. By 1890, the Basses' commercial orchard was well-established and they shipped apples to Butte. They brought in thousands of dollars from their orchard.\(^{13}\)

Other events occurred during this period to encourage the fruit-growing settlers in the valley. The opening of the Northern Pacific Railway in Montana in 1883 and the construction of the Missoula and Bitter Root railroad to Grantsdale in 1887, fostered the settlement of farmers in the valley by allowing them easy access to a market for their crops. After the railways opened, population in the valley increased.

Another important event was the arrival of Marcus Daly in 1887. For several reasons, Daly was instrumental in the valley's development. He founded the town of Hamilton, and he developed the area by establishing a lumber industry and saw mill. He built a flour mill and the Daly Ditches. The influence that the Daly Ditches exercised upon the promoters of the apple boom is unknown; however, they were the prototype of the Big Ditch, which was the impetus for the apple boom.

Daly bought twenty-eight thousand acres of land in the valley for his Bitter Root Stock Farm, on which he raised thoroughbred horses, wheat, and other crops. Part of his land holdings were on the upper east-side benchlands, and although the soil was good, it was dry with few natural streams. To correct this, Daly enlarged and extended the
Hedge ditch, bought the Republican ditch from its shareholders, and built several other canals to "reclaim and add thousands of acres of bench lands to his princely estate." The Skalkaho and Girds Creeks were two high-line ditches included in these lands. Daly intended to extend his ditches to include most of the eastern bench lands, an additional sixty miles, but he died before this project was completed. By 1900, the Daly Ditches extended to Corvallis, but the remaining east side up to Florence remained without water. Daly's efforts fostered the growth of the area and provided the inspiration for the Big Ditch.

Daly's influence and the railroads sparked settlement in the valley, and part of this growing community engaged in fruit growing. By the 1890s, thousands of apple trees had been planted and were bearing fruit. In 1890, Missoula County, which at this time included Ravalli County*, reported over nine thousand bearing apple trees with most of the orchards concentrated in the Bitter Root valley. The owners of the larger orchards were W. B. Harlan at Como, Daniel E. Bandmann at Missoula, H.C.B. Colville at Missoula and William Tiedt at Darby. In 1892, W. B. Harlan formed the Western Montana Fruit Growers Association and in the fall of 1893, Stevensville held the First Pacific

*Ravalli County was established in 1893.
Northwest fruit fair.\textsuperscript{18} Settlers in the valley became increasingly receptive to the advantages of fruit growing, especially because of the excellent fruit exhibited. The exhibits at Stevensville later were taken to Helena and Butte.\textsuperscript{19}

After the fruit fair, the settlers' perceptions changed. Prior to the fair, "those who had planted out large numbers of trees were looked upon as cranks and people in the fruit belt did not realize they were making money from them."\textsuperscript{20} After the fruit fair, a boom in planting occurred. Many considered this the "apple boom" but the actual boom began when orchards developed on the east side bench lands. The actual "boom" was on a much larger scale than this one in the 1890s. Nevertheless, farmers began to plant orchards and to form stock companies during this period.

Later statistics provide evidence of the number of trees planted during this period. The state inspector estimated the 1900 crop in Ravalli County at sixty-five thousand boxes of fruit of one bushel each.\textsuperscript{21} The inspector for the Fourth District at Como stated Ravalli County had three hundred and fifty thousand fruit trees, the majority of which were apple trees. By 1898, Ravalli County annually produced twenty thousand bushels of apples.\textsuperscript{22}

After this premature boom, Montana fruit growers met
in Stevensville in 1896 and 1897 for annual conventions. In February, 1898, the fruit growers convened to organize the Montana Horticultural Society. Soon after, the State Board of Horticulture was formed, with its first biennial report written for the years 1899-1900. The board received state funding and employed a staff of state inspectors for areas throughout the state. The functions of this board often were thinly-veiled promotional campaigns for the Bitter Root valley fruit industry. W. B. Harlan, in particular, claimed there was a perfect climate for the fruit industry in the valley, and a lack of harmful insects or disease in the valley's fruits. From 1896 to 1915, his name frequently appeared in the local papers, The Western News, Ravalli Republic, and the Northwest Tribune, while he promoted the orcharding industry. In commenting on the Basses' success, he stated, "Their success gave others courage, myself among the number . . . ." In answer to those who remained skeptical about the fruit industry, he pointed out that "more and more trees bore fruit and still the market was not glutted, though apples sold for from 25 to 50 cents per pound."

Other local and state residents aided Harlan in his promotional campaign for the fruit industry. S. M. Emery, director of the Montana Experiment Station in Bozeman, Montana, championed Harlan's ideas in an article he wrote,
"Montana Agriculturally Considered," published in 1900. Emery reviewed orcharding in Ravalli County and concluded that "orcharding has been persistently followed up in this valley until it is today the scene of the greatest commercial activity in the United States. Here are located orchards of 500 acres and upward, and the valley in the near future is destined to be one vast orchard." Emery also praised the soil of the east and west side bench lands and noted its rocky composition, which he considered perfect for "apple, cherry and plum culture."

R. W. Fisher also supported Harlan's campaign by testifying to the valley's suitability for fruit growing in a 1902 publication of the Montana Agricultural Experiment Station. Fisher remarked upon the soil in Ravalli and Plains counties, and its adaptibility to the fruit industry. "Practically all the best known varieties [of fruit] can be grown here with more or less success, and the question of best varieties is a very hard one to determine, the orchardists, who have been growing apples there for many years, not being settled upon this point." Other areas in the state, such as the Gallatin valley, Northern Montana, or the Yellowstone valley, were less fortunate and farmers needed to determine what type of fruit best suited their soil and climate.

Fruit growers experimented with "every fruit known in
both the Eastern and Western hemispheres. They grew apples such as King of Thompkins Company, Rome Beauty, Ben Davis, McIntosh Red, Bethel, Delaware Red, Alexander, Wealthy, and Yellow Transparent. The McIntosh was later the primary fruit grown in the valley during the boom days, but was seldom grown before 1902, although the Basses experimented with the variety.

One setback occurred in the winters of 1898 and 1899, when two thirds of the fruit trees were lost to the severe cold. Promoters could still boast of glowing statistics, however, because many trees planted before these two severe winters survived and bore fruit during these two years. Despite this harsh weather, advocates of the fruit industry continued their campaign. Dallman, of the Horticultural Society, claimed that the setback placed the industry "on safe business lines."

After 1894, local newspapers consistently emphasized the agricultural aspects of the valley. The Bitter Root Times regularly contained a column "Little Pointers on Ways of Doing for the Farm, the Orchard and the Live Stock." In another newspaper appeared an advertisement offering to sell forty acres of fruit and orchard land, with 670 trees set out. In The Bitter Root Times, one writer boasted that Montana had the second largest
orchard in the United States, which was part of Daly's Bitter Root Stock Farm and included sixty-five thousand trees. The Bitter Root Orchard Company owned forty-nine thousand apple trees in a solid block. The writer asserted that many orchards in western Montana had six thousand to ten thousand trees.36

The railroads naturally contributed to the upsurge in production. While their role was not as great in the settlement of the Bitter Root as it had been elsewhere, railroad promoters appealed to the local farmer. An article in a local paper discussed a new Northern Pacific train that ran between Butte and Grantsdale. The writer urged Montana farmers to establish themselves in cities, and demand a refrigerator car to run on each train to their towns. Bitter Root fruit growers were encouraged to eliminate all Utah, Washington and Idaho fruit from the Butte and Anaconda markets. Farmers would "reap fortunes through the enterprise of the Northern Pacific."37

Along with railway promotion went irrigation campaigns. Scarcity of water presented a major obstacle to agriculture in the Bitter Root valley. Fertile soil and a moderate climate existed, which allowed a longer growing season than most agricultural areas in Montana. The valley's growing season often lasted for ninety days, but was closer to a
sixty-day season, and there was always the possibility of harsh winters. The average annual precipitation was a mere ten to twelve inches. The months of July and August were especially dry. Newcomers noticed this as early as Father DeSmet's time, and tried to alleviate the situation with irrigation, but their small-scale canals affected a small area. In the pre-boom period, several groups submitted plans for an extensive irrigation system, either in cooperation with the federal government or with private investors.

In 1894, one plan proposed the construction of a canal that would carry fifteen thousand inches of water and irrigate between Willow Creek and Three Mile (part of the eastern bench lands). This area ranged from fifty thousand to one hundred thousand acres. The estimated cost of this proposal was five hundred thousand dollars with a possible return of thirty thousand dollars annually. Daly promoted this scheme, thinking the idea was "worth investigation." Accompanied by local members of the Valley Club, which included ranchers, farmers, and businessmen, Daly held a meeting to discuss the proposition. Among those who attended the meeting were W. B. Harlan, as chairman, R. A. O'Hara, Daly's attorney as secretary, William Toole, Henry Buck and George W. Ward. All of these men became active in subsequent irrigation projects. Their names appeared throughout the valley's irrigation history, and Harlan became increasingly outspoken on behalf of the valley's fruit industry.
Daly initially was reluctant to advance the idea of a canal proposed for wheat farming. In his estimation, the cost for this would outweigh the return. At the meeting, however, Daly supported the canal plan, as fruit growing now appeared profitable, and the soil of the eastern bench lands was suitable to this type of agriculture. A growing number of valley residents shared this opinion, viewing the fruit industry as potentially lucrative. If the proposed canal became a reality, the population of Ravalli County would double, and witness "the bursting into bloom of fruit and flower blossoms, of thousands of acres of our bench lands now lying arid and unused for want of water, but known by actual test to be particularly fitted for the raising of that superb quality of fruit for which our little valley is already famous."38

Members also discussed financing the project at the meeting. Daly suggested the issuance of bonds and formation of a private corporation; after the bonds matured, water users could buy shares. The water route most seriously considered for the canal began at Sleeping Child and tapped into the Bitter Root River. A large portion of the canal required flumes to guarantee a sufficient head of water when it reached the Willow Creek area. Daly offered to pay for a survey to determine a definite route of the canal, the area to be placed under irrigation, and the cost.
Local papers, however, mentioned no further news of the survey or any other research. Another irrigation project, the enlargement of the Republican ditch, began in 1894. Extension of this canal, which consisted of a new ditch from Skalkaho, irrigated "a large quantity of the high bench land on the east side of the valley." Local investors financed this project.

The next significant proposals were not announced until 1898, and then the financial sources were both federal and private. "When the federal government undertook to reclaim arid land, one of the places visited was the Bitter Root, but no plans were advanced to construct irrigation facilities there." Valley residents petitioned the State Board of Land Commissioners to relinquish part of its claim to lands in the valley to the federal government, which would permit "the state arid land commission to reclaim the land under the Carey Act." The board resolved to cede these lands in exchange for lands of a comparable area from the federal government. The arid land commissioner was to conclude this transaction with the Interior Department "so that work on the canal . . . for the irrigation of these Bitter Root lands can be commenced early in the summer."

Donald Bradford, vice president of the state arid land commission and Fortimer, chief engineer of the commission, visited the valley. In response to questioning,
Bradford discussed the possibility of constructing the Big Ditch. In 1898, planners labeled this project the Big Ditch, and each consecutive proposal was named the Big Ditch. Bradford "stated that in his opinion the ditch was a certainty." He mentioned the Supreme Court's intention to review the legality of state boards relinquishing their lands to the federal government. Bradford thought that once this was resolved the Interior Department would approve the proposal. Construction of the ditch would solve several problems. Water disputes would end; Bradford predicted that state control would ensure equity to all water users, possibly by hiring ditch walkers and a ditch superintendent. Another benefit included an option for settlers to buy water rights. First, however, newcomers had to demonstrate willingness to settle, after which they would pay for water rights on special terms. Terms of payment were liberal, and consisted of "a rate of 20 per cent above the cost of the ditch."

Fortimer commented on the actual length of the canal, which he estimated at sixty miles. He believed if everything ran smoothly work could begin in the summer, and he had no doubts of the project becoming a reality.43

The project failed to materialize. Attempts to obtain federal financing, however, did not end. Local interest temporarily shifted to Marcus Daly's irrigation project.
Daly examined the idea of a canal as early as 1894. The project interested him, because part of his Stock Farm on the east side possessed little or no water. Not surprisingly, he posted a notice in April, 1893, that called for a water right of eight thousand inches for the existing Hedge irrigation canal. Daly planned to use the water in the Hedge canal, after he enlarged and extended the ditch.44

Reported cost of construction for the project was two hundred thousand dollars to three hundred thousand dollars,45 and included construction of two more major ditches and extension of a third. Daly enlarged the fourteen-mile Hedge ditch to a depth of four feet and a width of sixteen feet; on this ditch alone he expected to use three million feet of lumber for fluming.46 On the new Skalkaho ditch, Daly employed twenty men and used over one million feet of lumber for fluming. Three miles of it was trestle work.47

The project was unprecedented in the valley. Daly's "lands, because of the cost of reclamation, had before lain barren and unproductive, but under irrigation are now considered among the most desirable in the valley, as they have the advantage of natural, gravity drainage.48 Daly's ditches merely allowed for more home-grown produce; builders of the Big Ditch aimed to expand agricultural production to serve a national market.

Belief in the magic of irrigation was a national pas-
time during this period; Bitter Root valley residents were only a handful of the converts. Many people believed that irrigation would convert the desert West into a garden. The federal government shared this thinking, and considered the construction of huge reclamation projects. The Bitter Root valley's situation merely reflected current perceptions and practices.*

In 1899, The Daily Missoulian published a special edition entitled "Missoulian Souvenir of the National Irrigation Congress." This issue comprised almost one hundred pages and included reviews of irrigation projects on the local level. Samuel Dinsmore, a local entrepreneur, who played a large role in the Bitter Root valley's orchard industry, received mention in this special issue.

Active in the Bitter Root valley before the boom days, Sam Dinsmore, with J. P. Markley, and C. F. Lloyd formed the Bitter Root Orchard Company in 1895. This organization and the Missoula Orchard and Improvement Company, which formed in 1897, represented the first corporate development

*The irrigation craze resulted in the Newlands Reclamation Act of 1902, in which the federal government appropriated large amounts of money to build reservoirs and irrigation structures throughout the West. Two projects built in Montana with these funds were the Huntley Project and the Milk River Project.
of the valley's orchard industry. In 1895, the Bitter Root Orchard Company planted over ten thousand trees, and in 1896 added more than thirty-three thousand on their land near Hamilton. Near the Eight Mile area, the Missoula Orchard and Improvement Company, with C. M. Allen as president, bought four hundred and thirty acres. In 1898, the company formed a corporation valued at twenty-five thousand dollars.49

Dinsmore began in the valley as a poultry farmer and devised an irrigation system for his hatchery. Dinsmore also was a member of the Horticultural Society, which acquainted him with the practice of irrigation. Soon after the creation of the Bitter Root Orchard Company, Dinsmore completed Daly's plan for an irrigation system on the eastern bench lands of the valley.

In 1900, Dinsmore organized the Dinsmore Irrigation Company. He took options on, and surveys of, possible irrigation routes and paid for them with his funds. He employed an engineer, H. S. Lord, to survey the proposed canal. Dinsmore intended to route the canal from the West Fork of the Bitter Root on the west bank, approximately fourteen miles above Darby to a point opposite Lake Como, twenty-two miles north of the West Fork diversion. Afterwards, Lord and Dinsmore intended to construct a forty-eight hundred foot pipe line that would run near Harlan Creek.50 The Big Ditch later was established at a site
opposite this point for the Lake Como reservoir, which was the beginning of the system.

Dinsmore's initial endeavors met with failure. He needed $1.5 million dollars to construct the irrigation system, which he attempted to raise locally. This failing, he turned to the federal government to finance his scheme. After serious consideration, the federal government abandoned his proposal, as the majority of land was privately owned. Despite these failures, Dinsmore and Daly provided the stimulus for construction of the Big Ditch.
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40 U. S. Department of Interior, Bureau of Reclamation, Project History, Bitter Root Project, Montana, Calendar Years 1931 through 1962, 1 July 1963, p. 3.
41 The Bitter Root Times (Mont.), 25 March 1898.
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43 Ibid.
44 The Bitter Root Times (Mont.), 22 April 1898.
45 The Bitter Root Times (Mont.), 13 May 1898.
46 The Bitter Root Times (Mont.), 6 May 1898.
47 The Bitter Root Times (Mont.), 30 May 1899.
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CHAPTER III

THE INTERIM

During the early 1900s, many Bitter Root residents continued to produce fruit. Local newspapers, the railroads, and prominent associations, such as the Horticultural and the Agricultural Experimental Station, all assisted in this venture. The growth of the apple industry reflected this promotional campaign.

In 1903, the valley yielded 64,218 boxes of apples valued at $43,522.00; in 1904 production was 106,938 boxes, at a value of $74,865.00; and 1905's produce total was 116,763 boxes for $81,734.00. Between 1900 and 1905, statewide orchard production increased by approximately thirty-seven percent. Most of this came from trees planted between 1890 and 1900. In 1906, there were 374,579 growing apple trees located on 3,090 acres of land, an average of 121 trees per acre. Despite these impressive figures, the 1906 yield was lower than the two previous years. This, however, was not a setback to promoters.

In 1907, R. W. Fisher published another article for the agricultural experimental station in which he surveyed orchard growing in the Bitter Root valley. The tone of this article differed from his previous ones; he now considered fruit growing for a commercial market rather than for home consumption. "That fruit growing is a profitable
and safe business to pursue in certain valleys of this state has been demonstrated by a large number of growers in the Bitter Root, Flathead and Yellowstone Valley . . ." Fisher stated. "In certain favored locations the production of fruit for market is the main source of profit." He reviewed several aspects of the apple industry, including methods of apple marketing. The valley was well suited to apple orcharding on a commercial basis, he concluded, and profits ranged from $20 to $1000 per acre, depending on the care taken and variety of apple chosen. Fisher mentioned that estimated income derived from the valley's orchards for the years 1903 to 1906 was $20.56 per acre, but he blamed this on lack of cultivation and poor varieties.  

A meeting of the Horticultural Society in 1900 indicated the shift from home to commercial orcharding. At this meeting, Merriam from the Northern Pacific railroad spoke on the creation of produce markets, while H. A. Jackson, from the Great Northern discussed "equitable freight rates." The Bitter Root Fruit Growers' Association formed in 1907 and by 1910, 257 of its members had shipped 269 carloads of fruit.  

People's perceptions of the valley's potential had again changed. Promoters and settlers now believed that the valley's resources offered more than a moderate living. If growers used correct varieties of apples, cultivation,
and marketing methods, they could derive large profits from the land. Samuel Dinsmore shared this belief, and finally succeeded in attracting enough capital to make it a reality.

Dinsmore failed in his early attempts for an irrigation project on the east side because he lacked adequate financial resources. He vainly tried to obtain the necessary capital from local investors and from the federal government. In 1905, Dinsmore appealed to a Chicago financier, W. I. Moody, who visited the valley that year. Why Dinsmore appealed to Moody is unknown; some sources claim that Moody visited the valley before 1905, but whether the two became acquainted at that time is uncertain. The estimated cost of Dinsmore's project had reached $3.5 million. Dinsmore planned to use this money to secure a right-of-way and to finance construction of the ditch. During his visit, Moody was

... charmed with the luxurious scenic beauty of the valley and instantly impressed with the wonderful latent resources abounding all about. Thoroughly conversant with the productivity of the great agricultural states of the Mississippi valley, he was amazed by the prolific yields of the Bitter Root farms and orchards. "It seemed incredible that the bench lands should have been permitted to lie unreclaimed. True, it was a big undertaking and would cost millions to provide an irrigation system to water the 40,000 acres, but that thought only served to spur him on - provided the lure of big and successful achievement! He was determined to apply the magic touch of water, to cause that barren waste to "blossom as the rose.""  

Moody also viewed the Bitter Root Stock Farm and the
Daly Ditches irrigation project, and he approved Dinsmore's scheme. The nature of the irrigation project changed. It became an eastern endeavor, with eastern capital and eastern ideas. Local support existed, but the project lacked a "grass roots" or "native" image.

Before Moody returned to Chicago, he endorsed the continuation of Dinsmore's plans. Moody had not obtained any financial backing, but he planned to invest his own money in the project's preliminary steps until he secured other funds. The Dinsmore Irrigation and Development Company incorporated under the laws of New Jersey in November, 1908, with a value of $1.5 million. The new corporation probably chose New Jersey for its liberal laws regarding corporations. Dinsmore enlisted the support of an Easterner, F. D. Nicols, who became very active in the later apple boom days, and F. H. Bailey and A. C. Walbridge, whose names were also associated with the boom. Moody proposed a change for the route. He suggested the use of Lake Como for storing water, rather than using Dinsmore's idea of tapping the river. Lake Como subsequently was utilized as a major source of water for the Big Ditch.

From 1905 to 1906, Dinsmore and Moody worked to sell the project, form a company, and seek guaranteed backing. Project supporters assisted Dinsmore and Moody in their
initial steps. Paul Bickel, eventually one of the project's engineers, helped to attract investors. He wrote to one group of financiers that

> The Bitter Root market is excellent. Butte and Coeur d'Alene mines at all times furnish high prices for every kind of produce... The valley is soon to have an electric road, which has the right-of-way practically procured. The necessary funds are expected to be raised very soon. It offers a safe investment to anyone who may be financially connected with the same.8

Local newspapers advanced the project. Joseph M. Dixon, owner of the Daily Missoulian, promoted the proposed irrigation system, which mirrored his view of the state's potential. Dixon stated his opinion in a speech made during his congressional career to a group of eastern businessmen in New York. "There is enough good, fertile soil within... [Montana's] border, when irrigated to raise the entire bread and vegetable supply of the United States."9 Another local editor, J. C. Conkey of the Ravalli Republic stated, "we want eastern people to know what we raise out here and join us in making one of the richest valleys in the whole West the ideal home spot."10 Miles Romney, Sr., editor of the Western News assisted the project by securing land for it from various settlers.

Outside the newspaper industry, those involved with endorsing the project included R. W. Fisher of Thousand Acres Ranch, who provided orcharding advice and advertising
and W. O. Fish, manager of the Valley Mercantile in Hamilton. Many people now perceived the valley as a predominantly agricultural community, and believed the possibilities for agriculture to be endless. Promoters encouraged orcharding, dairying, and sugar beet cultivation. Dinsmore and Moody proposed their project at an opportune moment, and naturally received support.

This new agricultural fervor was not unique to the valley, but echoed the nation's mood. Men thought they had mastered their environment by making technological advances in communication, transportation, and construction. The Panama Canal seemed only the start of engineering feats. Dinsmore and Moody unquestioningly believed that 70,000 acres of useless land would be turned into a garden merely by constructing a major irrigation canal.

In 1906, Dinsmore appeared before the State Land Board and the Carey Land Act Board to obtain a valuation on the land he purchased for the ditch. The property followed the proposed ditch route, stretching approximately 80 miles northward from Darby. The board estimated the future value at $10 per acre, a price that satisfied Dinsmore.

Dinsmore accomplished a great deal in a short time; the company secured options on land that extended from a few miles north of Darby to within nine miles of Missoula.
The company's assets included a claim that it "cornered a guaranteed supply of water on the Federal Reserves near Lake Como" with "contracts for delivering a minimum of the equivalent of 30 inches per year of rainfall."  

The project's financial success remained uncertain, and evidence of some of the transactions that took place from 1905 to 1908 is both sketchy and contradictory. Dinsmore and Moody obtained support from local sources, which increased when the Dinsmore Irrigation and Development Company incorporated. Despite this new support, Moody experienced constant difficulty in securing capital. The firm of Cobe & McKinnon of Chicago financed capital toward the project. In 1906, the Assets Realization Company of Chicago assisted Dinsmore's corporation with $3 million. Cobe and McKinnon may have had connections with this company, for later they became officers of the company. Dinsmore changed his company's name to the Bitter Root District Irrigation Company; the events that surround this name change and refinancing remain unclear. The newspapers offered little comment, but indicated that several changes in management occurred. Moody probably remained at the center of these changes, as part of the financing came from Chicago-based institutions.

Management of the Bitter Root Irrigation Company entailed several obligations. To "reclaim" the eastern bench
lands for orcharding, irrigation on a large scale was required, which in turn, necessitated a Big Ditch. Upon completion of the Big Ditch, the company had to realize a profit.

Moody and the Bitter Root Irrigation District Company proposed to reclaim the dry, unproductive eastern bench lands, to enable this land to yield fruit, which would ensure profit. The perspective of these men, however, differed slightly from the apple industry's past promoters. Moody and others looked to a national market for their apple crops, while previous supporters depended chiefly upon local markets. The valley's apple industry was to rival that of the neighboring Wenatchee valley of Washington. The company's aim was to "expand the valley's McIntosh apple orchards" and make the Bitter Root valley the center of the apple industry.

Local newspapers printed commentaries on the industry's potential. "As for markets, there are several important mining cities in the state which consume great quantities of all these products, while the transcontinental railways which pass through Missoula give easy access to all the cities of the Pacific Coast, the central states and the Atlantic seaboard." The near-completion of the ditch was also a newsworthy event, and the local papers discussed the changes the valley would experience with the completion of the ditch. The Dinsmore company optimistically pro-
nounced that "the world faces a permanent apple shortage
with resultant high price," thus guaranteeing those who
entered the industry a healthy profit.19

To these promoters, both Bitter Root natives and
their Eastern counterparts, the Bitter Root valley was to
become the national fruit center, serving an insatiable
market for a high return. Orcharding in the valley had
evolved from a hobby, which perhaps supplied a family,
to a commercial system supplying Anaconda and Butte,
(Montana's two most populous areas), to, finally, a large
commercial undertaking that aimed at capturing a part of
the national market. Irrigation projects changed the
character of agriculture in the Bitter Root valley.

Early promoters of the apple industry feared to suggest
such far-reaching enterprises. Now the community welcomed
Moody and the company.

To realize these ambitions, construction of a large
irrigation ditch was imperative. Moody modified Dinsmore's
initial plans and proposed several water sources for the
ditch. Lake Como was to be dammed fifty feet higher than
its original water surface, swelling the lake to four times
its original size. Current estimates placed the lake's
storage capacity at approximately 37,000 acre feet. Rock
Creek, which drained the surrounding mountains, annually
provided the lake with water from its spring runoff.20

The company also obtained water rights on Lost Horse,
Skalkaho, Willow, Three Mile, Ambrose, and Burnt Fork Creeks. These rights, however, were predominantly high water rights.*

At the beginning of the irrigation season, the ditch at high water, supplied its users. Upon exhaustion of this supply, the impounded waters of Lake Como were usable, which allowed an additional forty-five irrigation days. This system allowed each user approximately one-half to one inch of water per acre of land; however, it worked only when there was adequate high water and runoff to fill the reservoir.

Despite these problems, work began on the canal in 1906. Under supervision of engineers from Montana and the Interior Department, the Bitter Root District Irrigation Company built the dam at Lake Como. To demonstrate the immensity of the project for these times, the company built a standard-gauge railroad to carry supplies from the Northern Pacific station at Darby, which was a spur from

*The value of a water right is based on a priority date, which is that date an individual filed on his water right at the county courthouse. The earlier the date, the better the right, as the earlier rights are assured of a water supply, while the later rights may only claim water after the initial rights are satisfied. The earlier rights are called senior rights and later ones are known as junior rights. Junior rights are more commonly known as high water rights. Thus, an individual who filed on Burnt Fork water in 1854 possessed a senior water right, which is more valuable than a right filed in 1860.
the main line at Missoula. Completed in 1909, the dam required 800,000 yards of earth. After the dam was completed, the ditch was to wind northward, irrigating the eastern bench lands as far as Florence.

By the winter of 1906, the company finished seventeen miles of the ditch. The ditch measured twenty-four feet in width, and had a carrying capacity of a head of water six feet deep. The project was impressive, not only because of the length of the canal—a proposed seventy-five miles—but also for the engineering skills it required. Much of the canal was built on hillsides or required flumes to cross numerous gulches, and in a few instances, it was siphoned under the highway. Work on the canal was done by a steam shovel fired with wood or coal. Various mechanical problems occurred with the steam shovel, however, which delayed construction.

The Big Ditch carried water a long distance before delivery. This proved to be one of its failings. A ditch needs careful attention and labor, and the beginning of the Big Ditch required some of the most costly maintenance. Soon after the water left Lake Como, the ditch required flumes and siphons. The wooden flumes deteriorated and periodically required replacement. These areas of the ditch needed constant attention, and did not even turn out water. Seepage, leakage, evaporation and breaks occurred, but the
promoters of the Big Ditch remained confident. In November, 1907, the Anaconda Copper Mining Company filed suit against the Bitter Root District Irrigation Company. The plaintiff charged that the company failed to pay its bills, amounting to more than $29,000 for lumber ordered from the Anaconda Copper Mining Company. The Bitter Root District Irrigation Company pleaded no contest. The court ordered the Irrigation Company to be put into receivership.

After the court's decision in February, 1908, Moody published a letter in the Western News, asking land owners on the east side to sell their property to company officials at low prices. If the property owners agreed, Moody could secure the remaining land options. If the landowners refused to consent to this scheme, Moody warned, the project would collapse. Local promoters rallied to the scheme, and encouraged landowners to follow Moody's advice.

In March, 1908, the court sold the company's assets under circumstances that reflected Moody's influence. At the sale, only a Ravalli County Attorney representing S. R. Jenkins cast a bid. Jenkins subsequently purchased the company for $50,000. Jenkins was an employee of the Bitter Root District Irrigation Company and an official of the Assets Realization Company. After the sale, the Assets Realization Company emerged as owner of the project's con-
trolling interest. The company changed its name to the Bitter Root Valley Irrigation Company, and became closely associated with the apple boom. Henceforth, the Bitter Root Valley Irrigation Company and Assets Realization Company were almost one and the same. Officers of the Bitter Root Valley Irrigation Company were also officers of Assets Realization Company; when Assets moved its offices from Chicago to New York City, the Bitter Root Valley Irrigation Company moved its home office there, and the two subsequently had adjoining suites. Following the sale, Moody became an executive in the Bitter Root Valley Irrigation Company.

Despite setbacks, the company and its local promoters continued actively to support the project. People believed the promises of Moody and local promoters. Visions of the Ravalli county population jumping from 7,822 to 100,000 or the pledge of productive land on the east side were too enticing to ignore. Whatever the reason, the new Bitter Root Valley Irrigation Company continued its project with the encouragement of local residents.

Work on the canal employed approximately 100 people. Employment either was direct work on the canal or under a contract by which farmers agreed to supply wood for the flumes. The company bought land bordering the canal from local farmers at $2.50 to $15 per acre. After construction
of the canal, it resold the property for $400 to $1000 per acre, depending on the improvements made, which consisted of the land's cultivation, orcharding and similar changes.29

Moody, Dinsmore, and Nichols initially intended to irrigate 70,000 acres, but later reduced this figure to 30,000 or 40,000 acres.30 After the canal passed through a piece of property, company planters immediately set out fruit trees. In April, 1909, one of the local papers announced that the ditch was near completion, and that in one week, water would be turned in to test the canal walls. The canal, however, was not ready for irrigating purposes and 35,000 acres remained for sale.31 By 1909, the company had sold 14,000 acres and delivered water to this acreage.32 The company previously had platted and subdivided this land into five-and-ten-acre orchard tracts, with a few twenty acre tracts.33 Eastern newcomers, local and outside investors purchased the tracts.

By the spring of 1909, the canal extended to Burnt Fork Creek; fifty-six miles had been completed. Twenty-four miles and 30,000 acres remained. The company failed to meet its first deadline of fall, 1908, but completed an eighty-mile long canal by 1910. Early in 1909, business was well established. The company boasted of its assets and assured an abundant water supply. Twenty-eight thousand
inches of water were to be delivered through the canal at a cost of more than $3.5 million. The "boom" was at its height.
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3 Ibid.

4 Northwest Tribune (Mont.), 26 January 1900.

5 Burlingame and Toole, History of Montana, I:294.


7 Hamilton (Mont.) FOCUS, Ravalli Republic, January 1979.


10 Ibid.

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12 Hamilton (Mont.) FOCUS, Ravalli Republic, January 1979.


14 Hamilton (Mont.) FOCUS, Ravalli Republic, January 1979.

15 Bitter Root Valley Irrigation Company, Bankrupt, 1st MT Judicial District, Case #1390, (1916).


17 Hamilton (Mont.) FOCUS, Ravalli Republic, January 1979.
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19 ^Bitter Root Valley Irrigation Company, Bitter Root Valley, (Chicago: Bitter Root Valley Irrigation Company, 1912.) p. 27.


21 Ibid.

22 ^Stevensville Historical Society, Montana Genesis, pp. 156-161.


24 ^Bitter Root Valley Irrigation Company, Bankrupt, 1st MT Judicial District, Case #1390, (1916).


26 ^Bitter Root Valley Irrigation Company, Bankrupt, 1st MT Judicial District, Case #1390, (1916).


28 Ibid.


30 ^Hamilton (Mont.) FOCUS, Ravalli Republic, January 1979.

31 ^Northwest Tribune (Mont.), 2 April 1909.

32 ^Stevensville Historical Society, Montana Genesis, p. 162.

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34 U.S., Department of Interior, Bureau of Reclamation, Project History, Bitter Root Project, Montana, Calendar Years 1931 through 1962, p. 7.
CHAPTER IV

THE BOOM

Factors beyond the enterprises of the Bitter Root Valley Irrigation Company and its promotionalism characterized the "boom." From 1910 to 1916, many newcomers arrived in the Bitter Root valley, changing it from an agricultural community to a semi-recreational place. Frank Lloyd Wright and his "planned community concept," university professors on summer leave, doctors, lawyers, blue collar workers who had invested their savings in an orchard tract, and nationally-known horticulturists who praised the Bitter Root McIntosh Red, all changed the valley's character. The Bitter Root Valley Irrigation Company, however, served as the catalyst for the ensuing developments. The misconceptions of the newcomers stemmed from the company's promotionalism; misconceptions continue to dominate the valley's development.

People have associated the "bust" with the Bitter Root Valley Irrigation Company, as they have regarded the company as the stimulus for the "boom." Although the apple boom received great impetus from the Bitter Root Valley Irrigation Company, it existed before and after the company's demise, and went beyond the company's financial schemes and promotionalism.

While the boom progressed, the company designed a new town. Work began soon after the canal reached Burnt Fork in spring, 1909 and the company moved its offices from Hamilton to the new location in February, 1911.
The town's name was Bitter Root, and the architect was Frank Lloyd Wright, then in the early stages of his career. Situated in the lower Three Mile area, the town was in the heart of the company's remaining property, an estimated 30,000 acres, designated for orchards. Wright designed the Bitter Root Inn, which was built by carpenters of the Bitter Root Valley Irrigation Company. The Western News contained a panegyric on the proposed town.

The company has picked out one of the most attractive sites for a rural mountain community to be found anywhere in the whole West. A pine-covered ridge, wooded ravines, good drainage, good elevation, and picturesque views, combine to make it an ideal location for a new town. It is easily possible for the resident investor to live within the town limits and to develop his land; or he may prefer to build his home on his own acres within a radius of a few miles from the town. The non-resident who takes advantage of the company's contract to develop an orchard for him, will find the new town of Bitter Root a most satisfactory place for a summer. Summer homes in Montana for non-residents appeared an easy means of attracting investors. This idea recurred throughout the boom; in part, the bust occurred because of the presence of outside investors.

Wright's role in the apple boom stemmed from his employment by the Bitter Root Valley Irrigation Company. Like others in the company, Wright was from Chicago. His work for the company entailed the planning of two residential developments; he situated the town of Bitter Root at one
end of the Big Ditch, and University Heights at the other. The Bitter Root Valley Irrigation Company initially developed University Heights, also known as Como Orchards. Moody and Nichols later gained control of the project after they resigned from the Bitter Root Valley Irrigation Company and created a branch office called the Como Orchard Land Company.

Neither of these projects were completed, and while Wright designed both of them, he supervised little of the construction. His designs were innovative examples of "town planning," an early twentieth-century experiment "intended to improve residents lives by controlling each element of a town's structure." Wright attempted to structure each town by giving careful attention to climate, sunlight, shade, and natural beauties. Wright was partially successful in implementing his ideas for the town of Bitter Root.

Wright's role in the apple boom centered upon attracting outsiders to Montana. His involvement demonstrated the promoters' hopes of enticing a distinct group of investors to the boom. Through Wright's participation a somewhat elite group, composed mainly of university professors, came to the valley and lent uniqueness and credibility to the boom. Promotional pamphlets accented the university professors' investment in the area, which added an element
of sophistication to the boom. An investment in the boom now entailed both cultural and financial advantages.

The Bitter Root Valley Irrigation Company greatly expanded its investments in 1909 and 1910. While the two towns were being established, two camps worked in setting out new orchards, although water for irrigation remained unavailable. E. P. Sandston of the University of Wisconsin Horticulture Department, superintended the project. There were two large camps in the valley; Camp 1 employed 120 men and worked ninety teams of horses, while Camp 2 had sixty men and forty teams. Both camps were located near the Bitter Root Inn. Sandston worked these tracts without the benefit of irrigation water from the Big Ditch, but hauled water in from other sources by buckets, go-devils, or stone boats. Other smaller camps the company owned and operated were located near Ambrose, Dry Gulch, Eight Mile, and on the eastern benches outside of Stevensville.

The company needed to sell its remaining property to make a profit, and so expanded into orcharding. The company's holdings extended northeast of Corvallis to Burnt Fork Creek, and varied in width from two to three miles. Sunset Orchard Land Company and the surrounding Burnt Fork properties interrupted these holdings. After this break, however, was "the 'bench' which forms the southern boundary of the body of thirty thousand acres, practically all owned
by the company, called 'Eastland Benches' in which is situated the new town of Bitter Root and the 'Sunnyside orchards.' This body stretches to the north of Missoula county, about eighteen miles from Missoula, and varies in width from three to six miles. The Bitter Root Valley Irrigation Company held a substantial amount of property, claiming assets of more than $5 million in 1912.

Despite this prosperous appearance and an impressive array of employees, such as Wright, Miles Romney, Sandston and Harlan, the company needed to sell its land to realize a return. With an elaborate payment plan to lure investors, the company offered several options to prospective buyers. One plan entailed offering undeveloped land at $300 cash per acre, or, if payments were to be stretched out over a period of ten years, the price amounted to $406, which included principal and interest. A "development plan" was also proposed, in which the company cultivated an orchard for five years. At the end of this period, if the orchard demonstrated profit, the buyer had two options: he could settle on the tract or continue with the company's orchard cultivation. If the buyer chose the second option, he would pay the company an additional sum each year. Terms for this plan were $500 cash per acre, or $646 per acre, which included principal and interest, over a ten year period. Another report of the development plan stipulated five years as
the time period for payment. During this period, trained workers cared for the new orchard. The difficulty with the "development plan" was the clause that dealt with an orchard yielding a profit. For an orchard to show profit in five years, conditions must be perfect, which rarely occurred. Another plan quoted $300 an acre for undeveloped land and $500 an acre for developed. Other figures included $200 to $300 for unimproved land, while Sunnyside orchards' improved land sold for $450 per acre. Inclusion of water charges and taxes for the first five years, included in the down payment, provided an added incentive to buy. The company of Charlos Heights asked $4,000, with $1,600 cash, for a ten acre tract with 300 trees. The balance of $600 per year, at six per cent interest was to be paid over five years. During this period the company cared for the orchard. Water previously had been deeded or filed on, obviating a water rental charge in this development.

Regardless of price discrepancies, the Bitter Root Valley Irrigation Company reaped a profit; it paid only $2.50 to $15 per acre for land, much of which was still only worth that amount. Inflated land values undermined the valley's later development by hindering the process of normal development. The Bitter Root Valley Irrigation Company, however, was not alone in this practice; other
orchard companies formed and charged comparable prices.

Along with payment plans, the company guaranteed its customers thirty inches of irrigation water for their orchard, although the company claimed most orchards required only seventeen inches. The company also named one-half inches of water per acre as a water measure. If the company charged the new owner for this water, the price was $1.25 per acre. One half-inch of water per acre was a low but realistic estimate, given the company's meager water supply. The company, however, boasted that "the water supply and the system of the Bitter Root Valley Irrigation Company is more than adequate."

The financial practices of the orchard companies injured the valley's growth. The plans appealed to non-residents, for there was little reasons for them initially to see the land they invested in. The "development plan" allowed purchasers to wait at least five years to settle on their property, and after this period, the option of allowing the company to cultivate their orchard still existed.

Farming skills were not essential for beginning orchardists. This was detrimental to the valley's development as many settlers were from urban areas and lacked the experience and capital necessary for farming; newcomers placed too much reliance upon the company's orchardists.
Activity in the rest of the valley resembled that of the thriving Bitter Root Valley Irrigation Company. Orchard companies, similar in purpose to this company, formed throughout the valley. Two early companies were Thousand Acres, located east of Corvallis, and Sunset Bench, southeast of Stevensville. These companies planted orchards on the canal as early as 1907 and 1908 and, like Professor Sandston, finished their planting before the canal reached the benches.

Charlos Heights, University Heights, Mountain View Orchards, Summer Dale, Home Acres, Hamilton Heights, and East Side Addition were among the valley's orchard companies. Sunnyside Orchards, credited with the packing and shipping of more than 500 carloads of apples in the year 1915, Imperial Orchard near Sweeny Creek, which shipped numerous carloads of fruit to New York, Calmono Orchards on Eight Mile, Thomas Smith at Carlton, J. S. White's orchard near One Horse Creek, and MacIntosh Manor which converted to orchard tracts in 1911, were other valley companies. The Ben Kress orchards, located west of Hamilton, the Curlew orchard north of Victor and D. C. Bass's Pine Grove Ranch produced fruit before the establishment of the Bitter Root Valley Irrigation Company, and were not dependent on the canal. The company planted the majority of its orchards in 1910 and 1911, and the most important
orchards were set out in 1911, 1912, and 1913.\textsuperscript{22} Many of the new companies represented out-of-state interests. The O. W. Kerr Company, owner of Charlos Heights and Curlew Orchards, was based in Minneapolis; Sunset Orchard Land Company listed a local office in Stevensville and an Eastern office in St. Paul, Minnesota. Proprietors of the Sunset Orchard Land Company were "men prominent in financial circles, chiefly in Minneapolis, St. Paul and Duluth, who were led . . . to the Bitter Root valley by splendid opportunities for land investment."\textsuperscript{23} The Como Orchard Land Company, previously connected with the Bitter Root Valley Irrigation Company, originated through Chicago-based financing.

Noteworthy men worked for these companies. John M. Downs represented the O. W. Kerr Company, "one of the biggest land agencies in America," which under Minnesota law, was incorporated with a capital of $500,000 and assets of $1,750,000; he was involved in the sale of one half million acres in Alberta, Canada. Downs, an experienced realtor, was instrumental in the company's purchase of 4,380 acres to establish Carlos Heights and 500 acres for Curlew Orchards. In 1911, the company subdivided the acreages into ten-acre tracts. The company employed John D. Hadjiief as their garden superintendent; he was a graduate of the Government School of Horticulture at Viddien, Bulgaria.
The president of the Montana State Board of Horticulture, W. J. Tiedt, also worked for the company in the position of superintendent of planting and of the nursery.\textsuperscript{24}

Sunset Orchard Land Company also employed several successful businessmen. The president was E. M. Ferguson of Duluth who owned "fruit land in different parts of the world," and was involved in the Western Fruit Jobbers Association. Vice-president was W. H. Sulflow of Minneapolis, who also held a comparable position at Western Mortgage Securities in Minneapolis. Another officer, Albert Wunderlish from St. Paul, was president of the Security Mercantile agency. The Sunset Orchard Land Company owned approximately 1,600 acres.\textsuperscript{25}

Como Orchard Land Company also was staffed by competent administrators. In addition to W. I. Moody and Frederick D. Nichols, the company employed "Mr. O. T. Cooper of the Citizens State Bank of Hamilton, Mr. J. O. Read, a prominent orchardist and recently president of the State Board of Horticulture, Mr. Wm. J. Tiedt, a successful orchardist on the Como bench, now member of the State Board of Horticulture, and R. W. Fisher, . . . State Horticulturist and Professor of Horticulture at the Agricultural College." This company planted 1,600 acres in orchards and paralleled the rest of the valley's development when it subdivided its property.\textsuperscript{26}

Forty-five percent of the subdivisions recorded before
1973 occurred in the years 1907 to 1914.27 The Bitter Root Valley Irrigation Company subdivided Mountain Park Orchards and Mountain View Orchards in 1909, Riverview Orchards in 1908, and Home Acres Orchard in 1909.28 All of the subdivisions were platted for fruit growing.

Outside capital made the boom possible. Attempts to raise money locally for construction of the Big Ditch failed. Nevertheless, many of the valley's residents wanted the Big Ditch built, and desired a thriving commercial apple industry in the valley. The companies' investments were the only means to achieve these goals. Valley residents were proud of Eastern involvement and considered it an asset. More importantly, however, the companies appeared to believe in the "apple boom" just as much as valley residents. They spent large amounts of capital to develop their orchards and hired professionals in the field of horticulture, because they believed in the potential of the "apple boom." Outside promoters, rather than exploiting Western interests, adopted Western interests.

In April 1910, the founder of the Bitter Root Valley Irrigation Company, Moody and his co-worker, Nicols resigned from the company, to look after their "individual interests at Como . . . ."29 The newspapers treated the incident lightly, barely mentioning the event. Although Moody no longer headed the company, he still managed the land buying department.30
With the "boom" now in progress, agricultural literature abounded with advice to prospective orchardists on the perfect location for an orchard. Most companies chose areas with soils "derived from old valley filling . . . . Owing to their position and perfect air drainage they have been planted extensively to fruit." The Big Ditch irrigated areas below the 3,700 foot elevation. In a more general vein, the same scientific journal stated that

The setting of orchards has not been confined to any particular section of the valley. As a rule the sites have been selected chiefly because of their position above the valley floor, the higher benches and foothill slopes on both sides of the valley being largely used. The entire valley of Three Mile Creek, a large part of that of Eight Mile Creek, the somewhat lower lying soils of the Victor series on the west side, and parts of the main valley are also used. In the high parts of these valleys there is little more likelihood of injury from frosts than on the higher benches and foothill slopes, but in the lower parts there is considerable danger.31

Another explanation of the company's choice for the canal route was that "these benches seemed well adapted for fruit trees: they missed the late spring and early autumn frosts and had deep, well-drained soil which made them ideal for apples, cherries, pears and plums.32 All of the companies hired horticulturists to plant their orchards in the best sites, and utilized the best methods of cultivation. Local papers carried articles written by prominent horticulturists, and the State Board of Horticulture
published bulletins to inform farmers of the newest methods. Included in these studies were commentaries on the perfect weather conditions and climate for orcharding.

The predominant fruit of the valley orchards was apples, particularly the McIntosh variety, although other types such as the Yellow Transparent, Wealthy, Duchess, Rome Beauty, Northern Spy Transcendent, Whitney Crab and Hyslop Crab were still popular. Orchardists also grew cherries, pears and plums in limited quantities.

The hoped-for arrival of an electric railroad bolstered people's hope for the apple industry. The local papers never ceased to discuss this event and the orcharding companies always described it as one of the valley's attractions. The Northwest Tribune mentioned the possibility of an electric railroad early in 1909, and reported that the electric light and street railway franchise would extend to Missoula, which seemed to ensure the construction of a railroad in the valley. The proposed railway, however, was to be a feeder for the Milwaukee, which precluded a train through the valley. The proposed valley route was on the east side of the river and passed through Stevensville. In spring, 1909, a local paper discussed the possibility of "a Northern Pacific branch on this side of the river." The electric railway failed to materialize, but the possibility of one indicated the
boom's influence on the valley's character.

Residents observed the arrivals and departures of many influential businessmen, intellectuals, and agricultural and scientific experts. Many of these individuals conceived new ideas for the valley that reflected the national zeal for development and expansion. Ideas such as electric rail-ways, huge commercial orchards with modern scientific methods, "planned communities," and particularly the proposed irrigation of 40,000 acres, evidenced the drive toward "improvement."

The irrigation craze exercised a national appeal. The possibility of converting thousands of "useless" acres into productive land in many ways remained a wonder. The local newspapers often reported national irrigation news. In 1909, the Northwest Tribune announced the 17th Session of the National Irrigation Congress and later informed its readers that John S. Hughes had arrived in Stevensville to interest people in the Congress. Hughes was a field representative for the Board of Control. The valley's development was characteristic of the era, and represented only one example of the many irrigation projects begun at this time.

Irrigation and orcharding affected the valley through changing land values. In 1909, at the 12th Annual Session of the Horticultural Society, W. B. Harlan stated that land recently had sold for $25 an acre, but now general commercial
orchards charged from $200 to $1000 per acre. The Basses' 1,000 acre Pine Grove Ranch sold to an eastern buyer for $50,000 in 1908; the Basses definitely profited from their homestead, as the price of land was very low when they initially settled.

Despite high land prices and an aura of affluence, the Bitter Root Valley Irrigation Company encountered several difficulties. Legal problems plagued the company throughout its existence. The Anaconda Copper Mining Company's suit against the company in 1908 began the Bitter Root Valley Irrigation Company's legal troubles. Other suits followed, based on ditch maintenance (or the lack of it), the shortage of water, or ditches flooding an individual's property. Another suit involved a sale of property in which the buyer bought a tract, sight unseen, with the understanding that an orchard existed on the land. Later, when the purchaser viewed his property, he found no orchards planted. In yet another suit filed against the company, the plaintiff claimed that the company had sold eighty acres represented as prime orchard land for $4,000. Blight had infested the orchard, however, and most of the trees were destroyed. A couple sued the company after they paid $150 per acre for land represented as suitable for fruit growing, which was not adapted to the fruit industry.

In 1913, the United States Government filed suit against
R. A. O'Hara, H. S. Lord, F. D. Nicols, and W. I. Moody, all employees of the Bitter Root Valley Irrigation Company. The charge was more serious than those of previous suits. The federal government alleged that the defendants had hired entry men to file claims on land that would be irrigated from the Big Ditch. After the entry men filed the claims, the company, through a previous agreement, bought the claims. In a non-jury trial for three of the defendants, the court found a lack of "sufficient evidence" to convict O'Hara, Nicols, and Moody. Lord, in a jury trial, was not found guilty. The reception given these men upon their homecoming exemplified the valley's support for their activities. A brass band and supporters met them at the train station with a sign that read, "We believe in you, Welcome to the builders of the Bitter Root."  

Between 1910 and 1911, companies began to plant orchards and entice investors to the Bitter Root valley. The companies used different advertising techniques to attract a specific social class. In former years, the railroads and land companies appealed to the yeoman farmer or the immigrant, people without substantial means to settle and homestead new areas. A different pattern now emerged; the companies developed the land and then attempted to induce a group—without farming experience and from an urban background—to engage in orcharding. The companies also
appealed to an intellectual, elite class, composed mostly of university professors. A unique combination occurred: the business and academic joined. The companies successfully attracted these groups, but this success proved their undoing. When promoters evoked the yeoman-farmer image to interest settlers, a pioneering spirit evolved. Now, however, promoters ignored the pioneering spirit, and emphasized the sophisticated, urbane character of the boom's new orchardists. Orcharding requires a pioneering spirit, a devotion to hard work. The promoters now sought to attract a group by appealing to a vision of an aesthetic lifestyle, which was incompatible with orcharding. The valley ultimately suffered from this lack of the pioneer spirit.

During these years, however, valley residents were proud of the newcomers that the boom attracted:

In the character of people who have come to the valley to establish homes in recent years, the social community has received most desirable acquisitions. They are largely of that eastern class who, having the leisure that financial independence brings, have located here to enjoy the scenic delights and climatic advantages of the valley. They possess in most instances broad culture and ripe experience. The University Heights community is composed entirely of professors in the University of Chicago, and there are hundreds of other new residents of equal desirability. The migration hither the last few years, at full tide, has given the Bitter Root valley the distinction of being the most cosmopolitan community in Montana.

Another observer noted that
Many men and women of wealth, refinement and education, as well as a considerable number of men of national reputation, have purchased tracts in both projects. (Lake Como Orchards and Sunset Orchard Land Company) The advent of eastern investors of this desirable class is adding to the momentum of the new era of intensive cultivation and orcharding which was ushered into the valley only a few years ago.

In appealing to investors who wished to live outside the valley, one promoter claimed that "there are no other orchard opportunities in the Northwest today, for the non-resident investor in particular, to compare at all favorably with that which these properties have offered."42

Another testimony to the company's upper-class clientele came from Robert Morss Lovett, a former University of Chicago professor and owner of 340 acres and 27,000 fruit trees in the University Heights Orchard Company. Lovett credited Nicols with the plan of "settling a group of professors on an estate in the Bitter Root valley ..." Many of Lovett's friends, including several professors from the University of Wisconsin, purchased tracts. Lovett's reasons for investing in the orchard industry were twofold: to become rich, and to enjoy the area's beauty. "Outside the university my chief concern in those years was in getting rich," Lovett wrote. "This ambition led me to look westward to the fading frontier of America rather than to the culture of Europe." He continued to extol the West.

The scenery was magnificent. To the east, the Rockies; to the West, the Bitter Root mountains, rising eleven thousand feet to the summit of El
Capitan. The green valley and hillsides crowned by snow peaks reminded me of the Engadine. The air had a stimulating tang. The clubhouse, with great open fireplaces, was full of cheer. A dash­ing brook from Tin Cup Lake brought water which was distributed through irrigation ditches. There were trout in the Bitter Root River; trails through the mountains; the promise of a hunting party in the autumn over the divide into wild Clear Water country of Idaho. I can only describe the whole effect as intoxicating. I was ready to abandon literature for orcharding.

Lovett mentioned two other impressive investors in the University Heights Orchard Company: Alexis and Eugene Du-Pont. According to archival records, however, their holdings were small. In 1914, both had purchased one share of capital stock valued at ten dollars.

In its promotional literature, the Bitter Root Valley Irrigation Company claimed that "the valley is a center of culture and refinement, a considerable proportion of the newcomers being graduates of eastern colleges." In its pamphlets, the O. W. Kerr Company stressed the buyers' prospective association with "refined and well-to-do neighbors . . . and presidents of colleges, [and] college graduates." The newspapers buttressed these claims when they reported that the Bitter Root Valley Irrigation Company appealed to individuals who were interested in buying property for a summer home. The papers reported the settlement of newcomers in the valley, such as John H. Lewis, an attorney from Minot, North Dakota and a graduate of Harvard who bought 80 acres near Grantsdale. Another typical
article carried headlines stating that 'Two Excursions Arrive Today,' and discussed the arrival of approximately 150 Easterners as guests at the Bitter Root Inn. W. T. Burns, a golf expert from England, also visited the inn and reviewed its new golf links.48

"High pressure salesmen from the BRVIC invaded Cleveland in force," Lucile Bass reported in a personal history. Her father, a Cleveland doctor, a proofreader for the Cleveland Plain Dealer, and "two old maid librarians, an elderly school teacher, a music teacher, a clerk and a retired minister all invested a major portion of their life savings in orchard tracts purchased from the BRVIC." Bass's father and the proofreader were the only two who travelled to the valley and saw their property.46 Bass later married Lee Bass, the son of Dudley Bass, and remained in the valley for the rest of her life.

The companies succeeded in their campaign to attract out-of-state investors and persuaded a large number of eastern firms and individuals—lawyers, doctors, professors, and other professionals—to invest in the orchards. Many of those who purchased tracts never saw their land or built homes on them, and only a few of the newcomers remained after the bust. In their drive to encourage investors, the companies and local promoters exaggerated their praise of the valley's scenic beauty and economic potential. Responsi-
bility for this aspect of the boom lay with everyone, not just the Bitter Root Valley Irrigation Company.

Valley promoters promised a robust lifestyle, near-perfect climate, or the possibility of becoming rich with little labor or initial investment. "It is the land of homes where people breathe pure air and imbibe the spirit of the mountains. The nerve-racking struggle of existence of the cities is not to be found in these everlasting hills . . . ." In promotional literature for Sunnyside orchards, the company alleged that

. . . a holder of ten acres of choice bearing orchard can depend upon net profits of from $2,000 to $5,000 a year, according to the age of trees. . . . Sunshine may be experienced approximately 300 days in the year . . . . More than one-half of the average annual rainfall comes in April, May and June, a condition that approaches the ideal in orchard economy . . . . It is a blizzardless country . . . . There has not been a killing frost in the growing season on the bench lands where the company's tracts are located in their orchard history . . . .

In 1910, the company shipped apples produced from the early planted orchards to eastern cities. The company hired representatives in these cities to display the fruit and attract investors. The company tied apples to trees and then had the "orchard" photographed. In an effort to entice non-farmers to the area, the company claimed that rocks in the soil indirectly caused redness in apples, for the rocks reflected sun onto the apples, causing them to ripen. Rocky soil became an asset. The success of these
particular schemes remains undetermined, but after this ploy, investors from the east soon arrived in the valley.52

The O. W. Kerr Company, a competitor of the Bitter Root Valley Irrigation Company, lavishly praised the valley and its potential. The valley, or "The Garden Spot of the West," was "where Mother Earth shall yield her fruits and grains in abundance and neither extreme heat nor cold shall annoy." The fully-developed Bitter Root valley would "produce fruit to the value of $120 million annually or twice the yearly output of minerals from the entire state."53 To ease buyers' fears about market fluctuations and profit, the company claimed that the "apples are unexcelled, an ample market and good prices are assured !and! crop failures are unknown." Maintenance of an orchard was described as "light work" or "comfortably busy."54

Community groups also displayed a zeal for the boom. The Montana Horticultural Society, active in advancing the fruit industry before the boom played an equally active role during the boom. Many of its key members were employed by the companies. In a newspaper editorial, a society member claimed, "We . . . have the very best fruit growing localities !and! our climate in western Montana is not surpassed by the greatly advertised California climate . . . Western Montana is now considered by eminent authority, the logical fruit growing locality in the great Northwest."55
A group of local farmers affiliated with the Bitter Root Fruit Growers and the county commissioners had earlier published a pamphlet to advertise the valley's resources. The brochure contained a misleading observation by R. W. Fisher, State Director of Horticulture. Fisher remarked that

The Bitter Root Valley is one of the few fruit districts in the United States where there are no serious insect enemies. The absence of the Codlin Moth makes it possible to sell the Transcendent Crab apples in the eastern markets at very good profits.... Because of the total absence of the insect enemy and with soil and climate so well adapted to fruit production the Bitter Root valley offers the best inducements for the intelligent fruit growers.56

Fisher was not the first to boast of an insect-free valley, but contemporaries who shared his belief were not horticulturists. Fisher ignored the work of a fellow scientist, Dr. R. A. Cooley, of the Montana State College Experiment Station. Cooley had researched and published information on the occurrence of disease and the prevalence of insects in the Bitter Root orchards. He discovered that apple scab existed in all of Montana's apple orchards by 1911; that fire blight occurred as early as 1906, and he had detected the codlin moth in all Montana orchards by 1905. Cooley also claimed that the flat-headed apple tree borer had damaged many orchards in the Bitter Root, and that the leaf roller had destroyed numerous orchards before the boom's end.57
The companies denied the validity of Cooley's findings until 1913, when blight destroyed much of the apple crop and their claims lost all credibility. The companies were naturally reluctant to acknowledge this research, but Fisher's ignoring or disputing Cooley's findings was inexcusable. Fisher's association with the Como Orchard Land Company provided an explanation for his actions. Other horticulturists joined Fisher in this type of association. W. J. Tiedt, Sandsten, Thornber and others were employed by the orchard companies, and they combined their work with their investments. Fisher's promotionalism, however, was a blatant example of a company employee allowing his investment to override the credibility of his research.

To supplement Fisher's remarks, the Bitter Root Fruit Growers Association provided a sampling of incomes derived from various orchards in the valley. Thomas Padden's orchard realized $1,600 from each acre of McIntosh Reds during one season. Gus D. Gorus's orchard on the Lake Como "Bench" yielded $800 per acre of McIntosh Red apple trees. Lovett's earlier guarantee appeared plausible. Lovett had stated that with an initial investment of $27,000 for 340 acres of trees, he would eventually increase the $27,000 five fold.

From the boom's start, the local papers zealously
joined forces with the companies to entice buyers into the valley. The publisher of The Western News, Miles Romney, was an employee of the Bitter Root Valley Irrigation Company. After publication of a supplement that contained glowing reports of the apple boom, little doubt remained of Romney’s future with the company. Romney endorsed every aspect of life in the Bitter Root valley. He commented on the apple industry, he published articles written by successful orchardists in the valley, he praised the Bitter Root Valley Irrigation Company and the work of Moody, whom he referred to as "the man who swung the ditch." He commended the Hamilton Chamber of Commerce and the social life in the valley to his readers. Throughout his promotionalism, Romney, appealed to Easterners, presenting the valley as the East’s counterpart. In an article on the activities and future plans of the Hamilton Chamber of Commerce, Romney analogized the proposed town assemblies to "those old town meetings of New England," and promised a sophisticated social life to valley residents.

The supplement contained assertions that

The Bitter Root valley is characterized by unusual scenic beauty, a remarkable climate, the richest soils, an abundance of water for irrigation, and a prosperous and enlightened rural civilization... with the inspiration of rapturous vistas and in the compass of ever enriching glory, one is wooed to love of life in the incomparable Bitter Root, fairest vale of the Pacific-sylph of the western hills!
One author claimed, "even ordinary farming in . . . 
[Sunnyside Orchards] becomes a pleasure and inspiration.
Orcharding, which is largely business science and a garden-
er's task, is undoubtedly one of the most satisfactory under-
takings the human being can center upon." Slogans for the
valley included, "The Valley of Opportunity," "The Land of
Perfect Fruit," "The Land of the McIntosh Red," "The
Peaceful Valley," and "The Garden Spot Among the Mountains." 60

Besides assistance from local promoters, the companies
used another form of advertising to entice investors.
This new advertising technique originated with the Bitter
Root Inn, which the Bitter Root Valley Irrigation Company
constructed, in part, to house perspective buyers. Company
Locomobiles welcomed a potential purchaser in grand style.
The Northwest Tribune, discussing the company's most recent
acquisition, remarked that

The BRVI co. recently received two new 40 horse-
power Locomobile automobiles in addition to the
three thirty horsepower cars received three weeks
ago. The cars are all red, and similar in appearance
except that the 40 horsepower cars are chain driven.
The company will take all of the cars to the town of
Bitter Root soon, as they contemplate transporting
their buyers from the trains at Missoula directly to
their land at Bitter Root, by automobile. 61

After a prospective investor arrived, company employees
drove him to one of the sample orchard plots, which were
kept in excellent condition. To maintain this prime
orchard, the company frequently spent more than it claimed
was necessary for a successful orchard. After viewing the orchard, the investor returned to the inn, where the company catered to him as a guest. Promoters boasted of the steak dinners at the inn, and for recreation, a golf course was available. Only potential investors received this exceptional treatment; those who had already purchased tracts were met in Missoula and promptly driven to their property.

In her recollection of the Bitter Root Valley Irrigation Company's treatment of prospective buyers, Lucile Bass noted, "When Mama and I left Chicago... along with fifteen or twenty other people bound for "Utopia," we were really catered to as we'd never been on any trip before. The BRVI representatives were most charming men and made everyone feel they were VIPS." Bass remembered being met at the station and driven through the valley "by a caravan of locomobiles with liveried chauffeurs."

The valley underwent a steady growth as a result of this extensive advertising and preferential treatment for buyers. In 1900, Ravalli county claimed the existence of 177,652 acres for farming; in 1910, this figure jumped to 209,266 acres, and in 1920 the figure rose to 245,965 acres. Along with these changes was an increase in the number and size of farms. In 1900, 891 farms existed in the county, in 1910, the number increased to 1,055 and finally to 1,231
farms in 1920. Between 1910 and 1920, the number of farms
that were smaller than one hundred acres increased by
109.65 This increase in the number of small farms re-
lected the orchard boom's influence.

Intensification in crop production accompanied agri-
cultural expansion. In 1898, Ravalli county produced an
estimated 20,000 bushels of apples; in 1909 the amount
reached 300,364 bushels and it peaked in 1919 with 400,000 bushels.66 There were other reports for these years,
but these tables are probably the most accurate.67

Statisticians also tabulated the increase in the number
of trees. Approximately 450,000 apple trees were plant-
ed in the valley in the early 1900s, and this figure grew
to more than a million trees by 1920. The yield from some
of these orchards was excellent, especially during the
years 1915 to 1916. Claims for these years consisted of
a yield of 230 boxes per acre, and an estimated price of
$2.50 per box.68 In 1908, a box of apples cost $1.75.69

According to these 1915-1916 figures, many orchards grossed
$600 per acre.70 Clark Gray, active in the orchard industry
during the boom, commented on this rate, and recounted
years when his orchard produced 5,000 to 7,000 boxes of
apples; in one year, his orchard produced 7,500 boxes of
McIntoshes. Fruit production reached such a volume that
valley residents established cooperative organizations to
handle and market the fruit. A more inflated estimation of output was 1,041,000 bushels of apples valued at $968,000 in 1915, and 768,000 bushels priced $845,000 in 1916.

Company representatives grossly overstated crop yields. Companies advised investors to plant diversified crops while waiting for their orchard to mature. Crops such as celery insured returns of $1,000 per acre, and strawberries would yield $250 per acre. The investor supposedly profited during these interim years, while he waited for his orchard to mature. The company outdid any of its previous claims, when it advertised the projected return for a mature orchard.

We are out of sympathy with representations of profit averages based on exceptional yields. While admitting that yields bringing net profits of from $1,000 to $2,000 per acre, and even more, frequently occur, such abnormalities are omitted from consideration in our computations. We illustrate simply how a holder of ten acres of choice matured orchard land can depend upon net profits of from $2,000 to $5,000 a year.

This estimate represents the annual net profit from a standard apple orchard of ten acres, eighty trees to the acre. It shows the amount you should have left as clear profit after deducting all excess for cultivating, pruning, picking, packing, shipping, etc.

<table>
<thead>
<tr>
<th>Year</th>
<th>Boxes</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fifth</td>
<td>600 boxes at 1.10</td>
<td>$660.00</td>
</tr>
<tr>
<td>Sixth</td>
<td>1,200 boxes at 1.10</td>
<td>$1,320.00</td>
</tr>
<tr>
<td>Seventh</td>
<td>2,400 boxes at 1.10</td>
<td>$2,640.00</td>
</tr>
<tr>
<td>Eighth</td>
<td>3,200 boxes at 1.10</td>
<td>$3,520.00</td>
</tr>
<tr>
<td>Ninth</td>
<td>4,000 boxes at 1.10</td>
<td>$4,000.00</td>
</tr>
<tr>
<td>Tenth</td>
<td>4,800 boxes at 1.10</td>
<td>$5,280.00</td>
</tr>
</tbody>
</table>
After the tenth year, it is estimated that the increase in the bearing power of the trees will be about a box a year, the increase to continue indefinitely.

Aside from its earning from the production of fruit your ten acres planted and growing by the time it is only seven years old attains an asset value to you of ten thousand dollars, or double the price at which you now have your opportunity to make purchases on easy terms. The increase in asset value of your orchard continues steadily with the growth of your trees each season . . .

"Silver-tongued promoters" made spectacular promises.

Sadly, many people believed these extravagant claims.
CHAPTER 4 FOOTNOTES

1 Stevensville Historical Society, *Montana Genesis*, p. 163.

2 *Northwest Tribune* (Mont.), 1 October 1909.


6 Ibid.


8 Ibid.


16 Ibid.
CHAPTER 4 FOOTNOTES (CONTD.)

17 Bitter Root Valley Irrigation Company, Bitter Root Valley, p. 19.

18 U.S. Department of Interior, Bureau of Reclamation, Project History, Bitter Root Project, Montana, Calendar Years 1931 through 1962, p. 11.

19 Bitter Root Valley Irrigation Company, Bitter Root Valley, p. 17.


21 Stevensville Historical Society, Montana Genesis, p. 163.

22 Sherman E. Johnson, "The McIntosh Apple Industry in Western Montana," Montana Agricultural Experiment Station of the Agricultural College of Montana, no. 218 (January 1924), p. 5.

23 Hamilton (Mont.) Bitter Root Valley Illustrated, Western News, 1910, p. 22.

24 Ibid, p. 22.


26 Ibid, pp. 18-22.

27 In 1907, 1,037 acres were subdivisions; in 1908, there were 7,050 acres of subdivisions; 1909, was 4,866 acres; 1910, was 6,675 acres, and 1913 witnessed the subdivision of 2,943 acres. Hamilton (Mont.) FOCUS, Ravalli Republic, January, 1979.


29 Northwest Tribune (Mont.), 8 April 1910.

30 Northwest Tribune (Mont.), 10 April 1910.


33 Northwest Tribune (Mont.), 1 January 1909.
34 *Northwest Tribune* (Mont.), 12 February 1909.
35 *Northwest Tribune* (Mont.), 23 April 1909.
36 *Northwest Tribune* (Mont.), 4 June 1909.
37 *Northwest Tribune* (Mont.), 12 February 1909.
40 Ibid.
42 Ibid, p. 18.
44 Alexis and Eugene duPont, Jr., 8 January 1914, Papers of Eugene duPont (1840-1902) and Family, Manuscript Accession #1503, Eleutherian Mills Historical Library, Wilmington, Delaware. (xerox copy)
47 *Northwest Tribune* (Mont.), 2 April 1909.
48 *Northwest Tribune* (Mont.), 20 May 1910.
50 Hamilton (Mont.), *Bitter Root Valley Illustrated, Western News*, 1910, p. 27.
51 Bitter Root Valley Irrigation Company, *Bitter Root Valley*, p. 11.
52 Interview with Clark Gray, Hamilton, Montana, 3 September 1979.

54Ibid, p. 41.

55Northwest Tribune (Mont.), 12 February 1909.

56Hamilton (Mont.), FOCUS, Ravalli Republic, January 1979.

57Ibid.

58Hamilton (Mont.), Bitter Root Valley Illustrated, Western News, 1910, p. 41.

59Lovett, All Our Years, p. 131.

60Hamilton (Mont.), Bitter Root Valley Illustrated, Western News, 1910, pp. 8-28.

61Northwest Tribune (Mont.), 29 April 1910.


63Stevensville Historical Society, Montana Genesis, p. 169.

64Bass, "Our Tapestry," pp. 46-47.

65Sherman E. Johnson, "An Economic Analysis of Production Problems in the Bitter Root Valley," Montana Agricultural Experiment Station of Agricultural College of Montana, no. 220 (January 1929).

66Burlingame and Toole, History of Montana, I:294.

67Another researcher (#72) claimed that the yield for 1909 was 567,000 bushels of apples and the production for 1919 was 850,000 bushels. The largest yields occurred in the years 1915 and 1917, which produced 1,041,000 bushels and 1,044,000 bushels, respectively. This same reviewer asserted that the annual crop in 1926 consisted of approximately 300 carloads with 756 boxes to the car. To attest to the accuracy of the first statistics (#65), this same report alleged total production was 840,000 bushels, which sounded high in consideration of the severe blight which occurred that year.

68 *Missoulian* (Mont.), 29 March 1979, p. 17.


70 *Missoulian* (Mont.), 29 March 1979, p. 17.

71 Interview with Clark Gray, Hamilton, Montana, 3 September 1979.


73 U. S., Department of Interior, Bureau of Reclamation, Project History, Bitter Root Project, Montana, Calendar Years 1931 through 1962, p. 11.


75 Bass, "Our Tapestry," pp. 46-47.
CHAPTER V

THE BUST

Despite some phenomenally large yields from the valley's orchards during the mid-teen years, the fortunes of the Bitter Root Valley Irrigation Company and its competitors waned. Financial difficulties plagued the Bitter Root Valley Irrigation Company from the start. Construction of the ditch and its subsequent breakdowns drained much of the company's capital. The incompatibility of some valley soils to orcharding or the treatment of insects were problems that resulted from the company managers' ignorance. One of the most damaging blows, however, was a lawsuit.

In 1914, Hans B. Knudsen, a Bitter Root orchard owner acting on behalf of 100 fellow orchardists, filed a suit against the Bitter Root Valley Irrigation Company and Assets Realization Company. The suit charged that the company was insolvent and had accumulated debts of $5 million, and that the annual $1.25 per acre water fee assessed by the company was "deposited in a manner unknown to the plaintiffs." The company ostensibly used the maintenance fee for operation and maintenance of the canal. The plaintiffs asserted that water users had a right to be informed of the disposition of their fees. By this time, the company had sold 22,000 acres of land intended for orchards, and the plaintiffs requested a halt in the sale of the company's remaining acres.
Knudsen also asked that the yearly maintenance fee be de­posited in a trust fund under the supervision of a court­appointed trustee of the company. Finally, Knudsen pe­titioned for a replacement of Assets Realization Company as receiver of the company. Delays in the trial en­sued due to a jurisdiction problem and the company's sub­sequent actions. This suit damaged the company's credi­bility and the local newspapers reporting the incident re­flects this.¹

In 1914, the company began to have problems in meeting its obligations, thus confirming some of Knudsen's charges. John W. McKinnon stated that Assets Realization Company in­vestigated the affairs of the Bitter Root Valley Irrigation Company at its request. McKinnon, working as an advisor to the Bitter Root Valley Irrigation Company, "succeeded in selling a block of mortgages that produced cash sufficient to meet the installment of $100,000 of principal and interest on the bonds falling due January 1, 1915." The company was less fortunate the following year.²

The once-prosperous company neared disaster. Its fi­nancial matters were chaotic. All lands, water rights, irrigation canals, and franchises of the Bitter Root Valley Irrigation Company were mortgaged to the First Trust and Savings Bank of Chicago with Emile K. Boisot as Trustee. On January 1, 1916 the total amount of bonds due on the
mortgage was $976,000; $150,000 of the bonds fell due. The company failed to meet this obligation. The company also had approximately $4,500,000 of unsecured claims against it, which brought its debts to approximately $5,500,000.  

On September 16, 1915, the Board of Directors of the Bitter Root Valley Irrigation Company met at their home office in New York and stated their intention of declaring bankruptcy. After defaulting on payment of its bonds, the company filed for bankruptcy in the United States District Court, and was adjudicated as bankrupt on January 3, 1916. Following this action the First Trust and Savings Bank foreclosed on its mortgage against the company. Another company shared a similar fate; under threat of a mortgage foreclosure, the Sunset Orchard Land Company changed hands in 1920. Afterwards, both companies lost their most ardent promoters.

The company's failure surprised many, but the bankruptcy proceedings made the cause for its demise understandable. When the company filed for bankruptcy, its liabilities totalled more than $5 million. The income derived each year from water sales was only about $20,000 to $25,000 and the irrigation system required about $25,000 for maintenance. In addition, the company was responsible for the care of 415 acres on behalf of non-resident in-
vestors, and it had 4,000 acres of its own planted in apple and cherry orchards. The company possessed 26,000 to 27,000 unsold acres of land, however, it could not provide this land with water. At times, it was impossible to supply the 22,000 acres it had under irrigation with adequate water. The company drastically over-extended itself by spending excessive amounts of capital. The "apple boom" never provided an adequate return. Boom promoters assumed they would have an irrigation system with low maintenance cost, a high water-season every year, a perfect fruit growing season and a moderate winter, and the desire of thousands to invest in the "apple boom." Unrealistic perceptions guided investors in the "apple boom."

The company's bankruptcy signaled the failure of individual investments in other apple orchard tracts. Lucile Bass has described the bust's effect upon her family. In her case, they practiced diversified farming with potatoes, until their apple trees matured.

... We planted acres of potatoes between the scrubby little trees. We irrigated and the men helped our neighbors. They all worked together. Everybody was trying so hard. Everybody worked that fall. We rented a horse-drawn potato digger, and some of us followed it, sorting and sacking. I was never so tired in my life. It was a fine crop all over the valley—and no market for it—so despair settled heavily on us. We could not afford to move back East, so it was
decided that Donald [her brother] should go back to Cleveland and his old job. Many, many of our friends left the valley then, too. The bubble had burst.

Dr. F. E. Gladwin of Pennsylvania bought an orchard in 1914. In 1919, he wrote that "The orchard has already cost me $6,762 all told. To date I have never received a cent from it. I was hoping it would be different this year. . . . I am beginning to fear that my apples were among the 50 carloads that were frozen instead of among those that were sold and shipped."

In his autobiography, Professor Lovett also described the end of the boom.

When I returned to the Bitter Root in 1916 the bloom was off the fruit. On the bench there were two older orchards which had not suffered from the pests and it was thought the narrow valley was quarantined. The first year, however, the transcendent crabs showed blight and had to be pulled out. Then came a succession of attacks, that of the Colorado leaf roller being especially ferocious. State inspection and requirements of spraying became a heavy charge. The advantage of the high valley for growing apples with the tang and aroma of northern fruit turned into disappointment. Year after year a late frost caught the blossoms or an early freeze caught the fruit. The orchards specialized in the Mackintosh Red, which was becoming popular, but farmers in Vermont and New York entered the market, and freight rates to the East went up. Each season left a deficit.

Lovett recounted the fate of University Heights Orchard Company, which eventually became the Mackintosh-Morello Company.
It was unable to meet the exactions of the state horticultural inspection. The apple trees were pulled out in favor of cherries. Still under pursuit, the cherry trees were pulled out and the estate was put into wheat. Wheat became a drag on the market and was replaced by hogs. Those died of cholera. The company tried to sell or give away the property, but it was tied up with a contract to supply water to neighboring farmers. They tried to force the state to take it over for taxes. Finally I suspect they arranged to have someone buy it so that they could charge off the losses against income taxes. That was also my interest.

Perhaps the most pathetic account was from J. F. Smith of Ohio. In 1921, Smith wrote

We purchased our land in the Bitter Root in good faith and paid for them as well as we could. This took all the money we had together with some borrowed money, thus putting us all into a condition of bankruptcy . . . . I am sorry to be obliged to plead poverty on the part of all the Smiths whom I was instrumental in getting to throw away their hard-earned money upon Montana property. Recently there was one of my neighbors in the Bitter Root to look after his own orchard there, and he returned with the report that he considered everything we put in out there as lost. You will recall that I and my family hung on in the Bitter Root after most of our neighbors had thrown up and left the valley. We did this at a sacrifice, still hoping that we might be able to save something from the wreck, but the longer we hung on the more hopeless the outlook became. Therefore, we too left, glad to get away with our minds still unbalanced. [sic]

The boom's disastrous end affected both the well-to-do and the prospective settler. While Bass emphasized that the crops were without a market outlet, Lovett stressed the prevalence of insects and disease, and a competitive market. These observations, however, only partially explain the boom's end.
Horticulturists, local historians, and other interested individuals have blamed a nitrogen deficiency in the soil or a lack of water for the boom's dissolution. The spread of disease, or the advent of new apple markets in New York and Vermont are more viable explanations than some interpretations, but all of the alleged causes warrant investigation.

Insects and disease were recurrent themes. Local historians claimed that the fruit was insect-free, but that various disease, including blight, scab, and scale developed. These historians concluded that the lost load of apples shipped east in 1920, remained unsold and that growers paid the freight bill. Alternatively, the growers may have sent apples to New York, but found that the price for apples would not pay the freight charges, and so they left them stored in cars.

In 1917, the Montana State Board of Horticulture published its Tenth Biennial Report in which it observed, "not only in Montana but elsewhere in the United States the nursery business of late years has been at low ebb. The setting of fruit trees has been very small with the exception of home orchards. Very few commercial orchards have been planted within the last five years." With this admission from one of the boom's most loyal and fervent support groups,
came a realization that the boom had ended. The author of
the report discussed several different fruit diseases, such
as apple scab and fire blight, and their effect on the
Bitter Root orchards, indicating that the boom had failed.\(^{13}\)

Several authorities with agricultural backgrounds have
claimed that the land was not adapted to fruit growing.
The apple trees were set out without "much regard for
suitable location with respect to air drainage and soil
conditions."\(^{14}\) Partly because of this poor choice of soils
for orcharding, growers abandoned 750,000 trees from 1910
to 1920.\(^{15}\)

Agriculturists cited a lack of nitrogen in the soil,
the varieties of fruit planted, and competition from other
apple growers as reasons for the boom's failure. According
to experiment station studies, a nitrogen deficiency was the
chief cause of the collapse. In substantiating this claim,
Professor Lewis of Corvallis, Oregon recommended the use of
nitrogen fertilizers which produced favorable results.
Local growers, however, challenged this method, questioning
its long-term success. Later growers conducted soil experi-
ments with nitrogen, but the boom was over.\(^{16}\) The varieties
of fruit planted often were unsuitable to the region, and
were unmarketable.\(^{17}\) New England, British Columbia, and
New York rivalled the Bitter Root producers and finally
eliminated them from competition.

An important reason for the failure was the companies' tendency to attract an urban population with no farming skills or additional capital to invest in their farms. In one agricultural journal, the author blamed the boom's failure on non-resident investors. These investors, the author contended, depended upon company employees to care for their property; however, rising costs and absentee ownership soon encouraged orchard workers to neglect their crops. 18

Throughout the boom's history, one theme recurs: ignorance. Nowhere was this ignorance more apparent than in two letters written by non-resident investors. A Pennsylvania investor confided that

I purchased my orchard in 1914. The friend who influenced me to make the purchase also influenced me to put it in the care of Mr. Louis Erhart, and he has had the care of it ever since. I have never met Mr. Erhart. I am not acquainted with a single soul in the whole valley and I have never been there. Anyone could tell me almost anything about it and I would have no reason for believing or disbelieving the statement. 19

Another absentee owner admitted that there was "no one ... [in the valley] whom I know and can trust to look after my interests ... . Those who look after my land manage things to suit themselves and I take what is left." This same investor also explained that as an Easterner, he was unacquainted with the methods and problems of irrigation. 20
The boom failed for a host of reasons: numerous lawsuits, the planting of orchards in unsuitable soil, lack of a market, insects, disease, the incompatibility of some varieties of fruit with certain soils, a nitrogen deficiency, the rise of competitive markets, and the ignorance of non-resident investors who lacked farming skills and the necessary capital to engage in farming. Finally, many who purchased tracts were university professors, who lacked a pioneering spirit, and invested in the valley without the intention of establishing permanent residence. They neglected to reinvest any profit derived from the area back into the valley, and merely drained its resources. Despite promotionalism by the boom's ardent supporters, the valley failed to realize its prophesized wealth, and instead suffered.

All of these interpretations, however, are based on the assumption that the general idea of the boom was sound. When the "apple boom" began in 1905, with the construction of the 'Big Ditch', no one doubted that this would benefit the valley. The frenzied development that followed the ditch's construction appeared an asset for the valley. The boom's promoters failed to perceive the valley realistically, and instead distorted its potential. The bust, occurred because the Big Ditch and the accompanying apple industry were impractical goals for the Bitter Root valley.
Impractical, though as they were, Easterners and residents alike shared these goals, and both suffered large financial losses when the boom failed.
CHAPTER 5 FOOTNOTES

1 Hamilton (Mont.), FOCUS, Ravalli Republic, January 1979.

2 Bitter Root Valley Irrigation Company, Bankrupt, 1st MT Judicial District, Case #1390, (1916).

3 Ibid.

4 Ibid.

5 Ibid.


7 F. E. Gladwin, M.D., personal letter to Francis F. Powell, 10 December 1919.

8 Lovett, All Our Years, p. 132.

9 Ibid.

10 J. F. Smith, personal letter to Francis F. Powell, 7 June 1921.


12 Interview with Clark Gray, Hamilton, Montana, 3 September 1979.


14 Sherman E. Johnson, "The McIntosh Apple Industry in Western Montana," Montana Agricultural Experiment Station of the Agricultural College of Montana, no. 218 (January 1924), p. 17.

15 Missoulian (Mont.), 29 March 1979, p. 17.

16 Hamilton (Mont.), FOCUS, Ravalli Republic, January 1979.


18 Ibid.
CHAPTER 5 FOOTNOTES (CONT.)

19 F. E. Gladwin, M.D., personal letter to Francis F. Powell, 10 December 1919.

20 Dr. Frederick C. Smith, personal letter to Francis F. Powell, 25 December 1919.
CHAPTER VI

POST BOOM

The dream of a thriving fruit industry in the Bitter Root valley lingered long after the Big Ditch company and many individual investors had departed. Several changes occurred, and for many years promotion of the apple industry continued, though in a more restricted manner. While the company's collapse had a negative impact on the valley, many of the perceptions that led to the boom survived.

People began to blame the Bitter Root Valley Irrigation for the boom's failure. One investor expressed his hope that "the Bitter Root Valley Irrigation Company and everything connected with that company will be driven out of the State of Montana." Others censured the clever selling tactics of eastern promoters. People's misunderstandings of the causes for the boom's failure enabled promoters to encourage another "boom." Many initially had blamed the boom's demise on eastern promoters, or the "profit-seeking" Bitter Root Valley Irrigation Company and other companies' questionable business tactics. The boom's supporters then reversed their initial reaction to its collapse. After the Bitter Root Valley Irrigation Company's ruin, many resident promoters adopted a conciliatory attitude, and praised the company's accomplishments.

As news of the Bitter Root Valley Irrigation Company's ruin emerged, the question arose of who would maintain the
After the company filed a petition for bankruptcy, a federal court judge appointed Judge F. C. Webster trustee of the company's property. Webster was to operate the irrigation system in the subsequent season. Despite litigations to equalize and resolve the company's financial losses, the project continued to operate. The advent of World War I enlarged the market for agricultural produce. The bondholders also aided Webster by loaning him $15,000. Residents in the Three Mile area raised $5,000 to restore sections of the ditch that had fallen into disrepair. These users had accumulated the fund by paying their taxes in advance. Webster later became receiver of the property and continued in this capacity until 1918, when Ravalli Water Company took over the project.

Operation of the Big Ditch continued to pose problems. Residents formed a Water Users' Association to protect their interests in the Big Ditch because bondholders contended that their mortgage included all of the water rights and the entire irrigation system. The water users claimed that water rights accompanied their original purchase of land, and upon purchase of the property, they were released from obligations under the mortgage. The Water Users Association then filed a petition for intervention. The Association claimed "that each owner of property owned a share of the water and of the irrigation system and that the bondholders had no claim or share of that ownership." The decision
on this action was made at the trial for the bondholders' foreclosure suit. In addition to forming an association, the water users also obtained an engineering report on the irrigation system and became a stronger and more vocal group. Francis F. Powell, chairman of the Board of Trustees, encouraged much of the Association's involvement in the future of the Big Ditch, while urging a reorganization of the irrigation project.

In 1918, the court ordered the sale of the company's assets. With an estimated value of $1.5 million, the First National Bank of Missoula bought the company's property. In contrast, the losses of the original investors totalled approximately $4.5 million. Following the purchase, the Ravalli Water Company incorporated in November, 1918. The company's purpose "was to take title to the irrigation system and water rights of the bankrupt Bitter Root Valley Irrigation Company, to operate the same."^5

The Ravalli Water Company shareholders, however, had little interest in the unsold property of the Bitter Root Valley Irrigation Company. The Bitter Root Realty and Trust held the property and it appears that the First National Bank of Missoula sold its assets to the company represented by Henry D. Tudor and John W. McKinnon. McKinnon's involvement indicated that Assets Realization Company was attempting to recoup some of its losses. Upon organization, the Ravalli
Water Company offered a contract to the Bitter Root Realty Trust, which assured the delivery of water to those lands accessible to the canal. This contract resembled those made by the Bitter Root Valley Irrigation Company. Later, the assured delivery of water for the irrigation of 37,000 acres, (of which only 25,000 were irrigable), was contracted.

As chairman and executive officer of the committee for reorganization, Powell urged landowners to form an irrigation district. The committee obtained signatures from 549 landowners on the original petition for the creation of an irrigation district. The land owners' total acreage amounted to 17,389 acres in the proposed district. On January 7, 1920, the committee filed its petition. The court granted the request, and the Bitter Root Irrigation District became a municipal corporation under the laws of Montana in December 1920. The District organizers immediately confronted a major problem.

The District sought to purchase the irrigation system from the Ravalli Water Company and to absolve the new corporation from the company's "excess contracts" with the Bitter Root Realty Trust. Negotiations began between the Bitter Root Irrigation District, the Ravalli Water Company, and the Bitter Root Realty Trust. Powell and six court-appointed commissioners represented the District. The new District faced two obstacles: the Ravalli Water Company members' high
price for the system, and the nullification of the company's prior contracts. Powell and others knew that the system, could not supply water to the large area, stipulated in the contract.\textsuperscript{8}

The District's first years were precarious. The Ravalli Water Company was bound by contract to provide water at a fixed rate of $1.25 per acre, and water delivery was assured. The Ravalli Water Company requested $75,000 in District bonds, which the Board of Commissioners reluctantly approved. To pay this sum the Board levied a charge of $3.75 against each user. Most of the board members thought that the system should have been conveyed to the District without any monetary considerations. They agreed to the company's offer to avoid further litigation and to allow valley property values to stabilize. Although there was a prior agreement with the Bitter Root Realty Trust, by which the District's acreage was extended to 20,000 acres, approximately 17,000 acres under contract, remained without water. The Bitter Root Realty Trust, however, reacted favorably to the cancellation of this additional acreage. The Bitter Root Realty Trust insisted upon the inclusion of 22,000 acres in the District, rather than the 20,000 acres; the Board considered it impossible for the system to deliver this much water. The court also questioned the capacity of the canal, and set a limit of 18,000 acres. The Board took a risk by
including 20,000 irrigable acres in the District. The Dis­
trict could not overextend itself to this degree. After
further negotiation, all concerned parties agreed to com­
promise and the Ravalli Water Company deeded its assets

to the District. These assets were the irrigation system
and water rights. 9

After these transactions, many farmers who retained their
property during the boom's collapse experienced another
boom. There was less promotionaialism than before, but its
characteristics remained unchanged.

In the second boom, promoters emphasized fruit growing
for home consumption, not for large markets. This marked
a return to people's attitudes during the 1890s and 1900s.
In 1917, speakers again advocated 'home orchards' at the
Tenth Biennial Meeting of the Montana State Board of Horti-
culture. Board members concluded that "the setting of fruit
trees had been very small with the exception of home orchards.
Very few commercial orchards have been planted within the
last five years." After 1916, apple size and yields de­
clined, as the fruit industry was in its last few productive
years. 10

P. T. Baden, Inspector for the Fifth District, wrote
a report entitled, "Horticultural Conditions in the Bitter
Root Valley." His study comprised part of the Tenth Biennial
Report and he supported other recommendations made in the
report. Baden asserted that "the prospects for a sane and progressive growth along horticultural lines have never looked brighter to the real orchardists, than now." Baden condemned the previous boom orchardists, the majority of whom were non-residents who placed their orchards under the supervision of caretakers. Baden advised the interested orchardist to plant only the number of trees he could cultivate, and to leave a portion of land without orchards. One of the most distinctive features of the new boom was experts' advice to diversify. Horticulturists unanimously supported diversification.

In 1922, the Daily Missoulian published a special Souvenier Edition on agriculture in the valley. Chester C. Davis, State Commissioner of Agriculture, wrote an article entitled, 'Western Montana State's Garden Spot.' He praised the valley's scenic beauty, but differed from early promoters in his assessment of the valley's agricultural potential. Rather than emphasizing the commercial fruit industry, Davis advocated "dairying and a diversified agriculture." The fruit industry should comprise only a part of this diversified agriculture because "the fruit grown in the western part of Montana is not of the same basic importance as alfalfa as a foundation for farm homes." While he advocated diversification, Davis nevertheless praised the valley's fruit industry in a manner similar to promotions.
for the earlier boom. Davis wrote of the perfect color of the McIntosh Red, the profitability of selling apples in New York and how an individual succeeds in commercial orcharding. Davis, however, realized that development of the apple industry was contingent upon the amount of work that an orchardist put into his orchard, a factor that his predecessors failed to emphasize. He also noted that disease and insects occurred in the valley, but he did not consider them fatal to the fruit industry. Davis blamed the previous boom's failure on the "promotion company, which committed numerous blunders." Among the company's errors were the cultivation of orchards for non-residents, and the poor choice of soils and fruit varieties. Davis also blamed the company for the state's poor reputation in the fruit industry, and the retardation of the valley's development in the industry.12

Members of the new Bitter Root Irrigation District, who were native farmers and businessmen, circulated a pamphlet with several claims for the orcharding business. Publication of the pamphlet resulted from a drive to settle the property that the Bitter Root Valley Irrigation failed to sell. The district offered to sell the land for $30 per acre, a considerable reduction from the boom prices. Promoters stressed the need for a realistic assessment of the valley. Discussions revolved around the land settlement problem and diversified farming. Promoters studied the acreages and crops of the
farmers who remained after the boom. These farmers had demonstrated their ability to produce large yields of excellent-quality crops.\textsuperscript{13}

The pamphlet's authors recommended growing crops such as tomatoes, peppers, melons, potatoes and green beans. They also suggested dairying, raising hogs, sheep, cattle, and poultry, honey production, and fruit growing. Orchardists suggested that hard work, and the "Bitter Root Irrigation District's system with its unfailing water supply and its soil," were requisite for a successful orchard.\textsuperscript{14} The second boom meant a renewal of the valley's productivity, which had begun through the promoters of the Bitter Root Valley Irrigation Company ten years previously.

The State Department of Agriculture, Labor and Industry was also involved in the boom, and in 1926 published a publicity tract on Montana's fruit industry. "The Montana grown McIntosh apple is the best McIntosh apple grown anywhere on this continent and has for several years demanded the highest price of any apple on the eastern markets of the country."\textsuperscript{15} More than any other literature during this period, this tract echoed the claims of earlier promoters.

More sober were the agricultural bulletins written by the agricultural industry, the risks, and hazards involved in production, the sales methods used in disposing of the crops and the probable competition from other areas." In his
analysis, Johnson reviewed the proper weather conditions for orchards, and helped to explain why the previous boom had failed. The climatic hazards for orcharding were: "late spring frosts following weather warm enough to start fruit buds, frosts inuring fruit at picking time, extreme temperature changes, rainy weather at blossoming time and hail storms." By studying harmful weather conditions, Johnson undermined the old myth that orcharding was easy. He also favored diversified farming, and thought that "the prospects for the good orchard man, who is already in the business are better than they have been at any time since the World War."  

Johnson studied the changing economic conditions of the valley after the boom, and published his findings in another agricultural bulletin. He perceived that the Bitter Root valley's economic situation resulted from two causes: national conditions affecting the area, and the effect the previous boom had on property values. Promotionalism had led to an "artificial stimulation of land development and land values in the period immediately preceding the World War." Johnson made a serious attempt to unveil the causes of the boom and its outcome; his attitude differed from that of other horticulturists, who overlooked many of the boom's shortcomings.
Regardless of advice to diversify, careful assessments of Montana's weather, and relaxed promotionalism, the post boom also failed. The factors that led to the failure of the post boom closely resembled those of the first boom. An additional setback for the post boom was severe weather in the early 1920s. In 1922 and 1923, the valley suffered damaging hail storms; "late spring frosts and extreme temperature fluctuations" also occurred. Despite these problems, the Extension Service published a bulletin to encourage small-scale orcharding. The boom's end became more obvious with the onset of the Depression and a continuing rivalry that allowed eastern buyers to accept only the highest quality of fruit, brought the boom nearer to collapse. In 1930, when the Extension Service published a bulletin on "How to Remove Apple Orchards," it was obvious the boom had ended.18

After the collapse of the orcharding industry, the Bitter Root Irrigation District continued to serve farmers who had diversified their crops. Despite this change in agriculture, the new district remained economically unstable. Soon after the district assumed control of the project, major reconstruction was necessary; the district raised $600,000 to meet maintenance costs. Accumulating this amount of capital proved difficult, as many farmers verged on financial ruin. This was only the beginning of the repairs necessary for the Big Ditch to continue operations.
Due to the impracticality of various engineering features of the system, its length and the rugged terrain it crosses, structures have been repeatedly washed out, costing the users thousands of dollars in repair. Soon after the district's reorganization the users sought government assistance to operate and maintain their project. Congress and the Bureau of Reclamation approved this request and henceforth the Bureau has aided in the project's operation. The users obtained loans from the federal government to repair the project and increase its efficiency, and are presently indebted to the Bureau of Reclamation for $2 million.

Many aspects of the project have changed. Of the ditch's 650 water users, only seventy-nine are full-time farmers. The amount of land under irrigation remains at 16,665 acres because the Bureau determined that this is the maximum acreage that the ditch can adequately supply with water. Substantial fee increases have occurred. The user now pays a flat fee of $30 for operation and maintenance, and $8.40 per acre for water. Delivery of water is not guaranteed in drought years, as the Big Ditch has gone dry. The system is not an "unfailing water supply" but has a very limited water reservoir. Once the spring runoff is utilized, the reservoir on Lake Como can only supply users for forty-five days.
Operation of the ditch is impractical but with 650 people irrigating from it, abandonment is impossible. Water users have accustomed themselves to rising water costs, periodic breakdowns, and early water shortages. Seventy years later, the promises of promoters have proven to be unrealistic and unattainable.
CHAPTER 6 FOOTNOTES

1 Dr. Frederick C. Smith, personal letter to Francis F. Powell, 25 December 1919.

2 Hamilton (Mont.), FOCUS, Ravalli Republic, January 1979.

3 U.S., Department of Interior, Bureau of Reclamation, Project History, Bitter Root Project, Montana, Calendar Years 1939 through 1962, p. 3.

4 Hamilton (Mont.), FOCUS, Ravalli Republic, January 1979.

5 Bitter Root Irrigation District File, Bitter Root Heritage Museum Center, Hamilton, Montana - Correspondence (unaccessioned or filed).

6 Ibid.

7 Ibid.

8 Ibid.

9 Bitter Root Irrigation District File, Bitter Root Heritage Museum Center, Hamilton, Montana - Correspondence (unaccessioned or filed).


13 Ibid.

14 Ibid.


16 Sherman E. Johnson, "The McIntosh Apple Industry in Western Montana," Montana Agricultural Experiment Station of the Agricultural College of Montana, no. 218 (January 1924).

CHAPTER VII

CONCLUSION

How would historians, Howard, Toole, Malone, Roeder, and Gressley interpret the apple boom? Howard and Toole would view it as another example of eastern exploitation and Montana's colonial status. Malone and Roeder would identify the situation as a case of development versus non-development, with development as a necessary evil. Gressley would regard it as another case of Westerners desiring development, but lacking the revenue to initiate it, and then turning to Eastern institutions to finance the project. While all of these points would be well-made, the Bitter Root apple boom began and failed for other reasons.

People's perceptions of the Bitter Root valley have undergone great changes. The first visitors to the valley, Lewis and Clark, found a land devoid of any resource other than scenic beauty. The West, even with its fertile valley areas, was not the garden that early explorers expected. The face of the frontier changed for hopeful settlers when Lewis and Clark wrote of a land, "pore and stoney" instead of a fertile, rich frontier like that east of the Mississippi. Lewis and Clark's interpretation of this new land was more of a disappointed reaction to what they saw rather than an objective impression. They envisioned a continuation of the productive eastern frontier; and found the Western terrain
surprisingly rough.

This theme recurred throughout the valley's history. Later settlers, hoping to establish farms and land promoters measured the valley in terms of the east's resources rather than in the West's assets. A succession of settlers attempted to mold the valley into communities similar to Eastern settlements. Few, if any, evaluated the valley's potential objectively, but developed it according to Eastern ideas. This attitude prevailed throughout the century, and when ideas, that were Eastern in origin failed in the valley, residents of the valley blamed individuals or companies, but never understood the West's unsuitability to these schemes.

The Bitter Root apple boom did not originate because of Eastern greed, nor did it fail because of the East's involvement. It was not a case of "necessary" development, for the apple boom was based on the erroneous assumption that an adequate water supply existed. Finally Westerners wooed Eastern money to the boom, but this does not alter the fact that neither Eastern nor Western capital could make the boom a success. Both regions labored under the same misconceptions.

These conceptions began with the West's first explorers and subsequent settlers, whose perceptions were shaped by their reactions, rather than circumstances. The only exceptions to this rule were the valley's early fur traders
and trappers.

Lewis and Clark's perceptions of the West prevailed for approximately three decades. Few believed that the West was the home of the yeoman farmer, as the Eastern frontier had been; instead it seemed a barren wasteland. Then Father DeSmet contended that irrigation would lead to the valley's agricultural success. Two views emerged: one of the West's harsh elements and lack of opportunity and potential, and another of land productive through the aid of irrigation. These two ideas contrasted sharply, for both were extremes. Neither offered an impersonal assessment. One just demonstrated the barrenness and severity of climate and the other emphasized an altered, modified environment. The valley's possibilities in its natural state went unnoticed. DeSmet's view eventually predominated. The valley was considered prime farmland with the aid of irrigation.

The groundwork was laid for the apple boom as this serious misperception of the valley was established. The valley's history stemmed from this misperception. The apple boom did not occur merely because of this misperception. The boom was also a product of the age. When the idea of the apple boom began, irrigation was a national craze with supporters in the East and West. Before Moody visited the Bitter Root, valley residents conceived of the
reclamation of the eastern bench lands' 40,000 acres, and their subsequent conversion into apple orchards. Agricultural pursuit seemed possible with irrigation.

The valley residents' ideas about development also mirrored a national inclination. Development meant progress, and progress was inherently good. Progress spelled improvement, and improvement in the valley meant reclamation of the eastern bench lands. Another national tendency that the Bitter Root valley adopted was speculation and investment. Business was considered a part of progress.

In 1905, when the Eastern financier W. I. Moody considered investing in Dinsmore's proposed irrigation ditch, the valley was ready to receive him and his extravagant claims. Moody found supporters in the local press, politicians, farmers and ranchers. His plans represented a massive undertaking that imitated national practice. His scheme required huge machinery to build a dam and cut through tons of earth. The project's impracticality was irrelevant to Moody and his supporters. The outstanding idea was achievement—the mechanics of accomplishing such a task. Science and technology had begun to blossom; for a brief time, the nation believed its potential unlimited. Natural forces, climate and other elements, no longer seemed barriers, but things to be conquered. Construction of the Big Ditch represented one example of this mood.
The apple boom however, represented more than the construction of the Big Ditch, it also reflected the age's experimental thought. Not only was construction undertaken, the company also explored the idea of experimental farming. Apple orchards along the canal by which investors expected to realize millions of dollars, mirrored the sentiments of those who engaged in bonanza farming. Experiments in large-scale agriculture rather than small-scale farming, complemented the achievements of large-scale construction projects.

Another aspect related to the craze for experimentation was Wright's role in the boom. His ideas of a controlled community reflected a national mood. Wright's involvement placed the boom in another realm beside that of speculation and business. His contributions brought the valley an exposure to social and cultural developments that occurred East of the Mississippi. Wright's activities also demonstrated that Moody and his financial backers wished the boom to be diverse, not merely profitable.

Howard and Toole fail to address the obvious sincerity of the boom's promoters. Advocates of the boom were not trying to exploit the West and subordinate it to Eastern lending institutions. In many instances, they demonstrated a genuine desire to transform the valley into a bastion of eastern refinement and western charm, to channel all of the national trends into the molding of this new community.
They were not cold, impersonal businessmen, but were individuals caught up in a national transformation. Eastern promoters did not arrive in the valley without encouragement from valley residents. Dinsmore, Romney, Harlan and others were just as attracted to the idea of development in the valley as the Eastern promoters.

In addition, valley residents appealed to Eastern promoters because they lacked funds. Local promoters failed to find the capital needed for the boom within the valley, therefore outside funding was necessary. This is often the case in Western development, as Gressley points out; the East's involvement in the West is only a logical outcome, based on need.

Despite promoters' sincerity local residents' belief in valley development, and the aid of Eastern capital, the boom failed. Other reasons for the boom's failure, such as poor orchard sites, planting of the wrong fruit varieties, the lack of pioneering spirit, or the ignorance of many orchard owners, are only symptoms of the boom's collapse, not its principal cause. The boom was a result of Easterners and Westerners perceiving the valley exclusively in Eastern terms. What is unique and characteristic of the valley had never been discovered; instead, many of the same assumptions that have existed since DeSmet's time continue to reign. Howard, Toole, Malone, Roeder and Gressley all worked within
that same framework, their theses all stemmed from the classic argument of development versus non-development. They refer to development in the Eastern sense, such as agricultural enterprises, or mining. These endeavors are dependent on an adequate supply of resources. In the case of agriculture, a sufficient water supply and fertile soil are requisite; in mining, a reliable water supply is often necessary. The West often lacks these resources. The Bitter Root apple boom was a classic example of these shortcomings. The valley did not possess the qualities essential for commercial orcharding thus the outcome was inevitable.

The theses of Howard, Toole, Malone, Roeder, and Gressley need to be expanded. Rather than review whether Montana and the West should be developed or not, one should first explore the West's potential. Is there any type of pursuit that the West is uniquely suited to, that does not deplete its resources, or require modification, such as irrigation, to succeed? What resources does the West have an abundance of, and how can they be utilized? These questions must be addressed before the debate of development versus non-development can proceed. A return to Lewis and Clark's impressions may be advisable. Westerners and Easterners have lost their perspective on the West's potential, and if the West is to be preserved, a realistic assessment of the West's capabilities is crucial.
MAP IN POCKET
I. Books and Monographs


II. Periodical Articles


III. Government Documents


IV. Miscellaneous


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