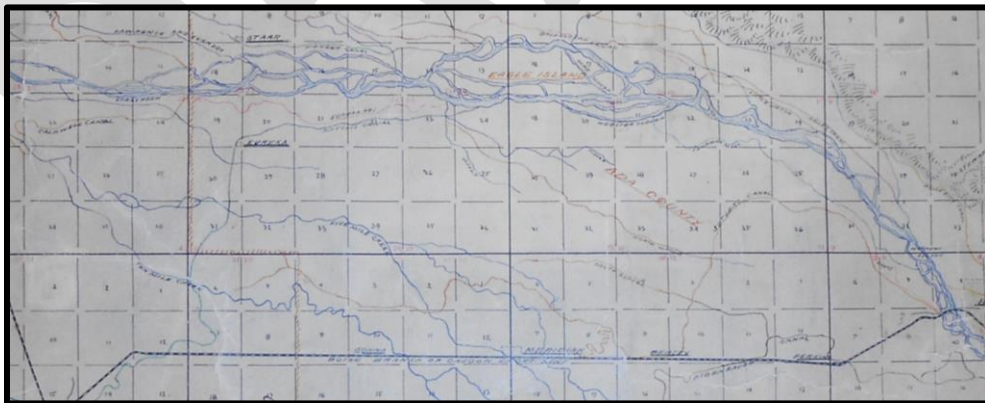

WATER IN THE BOISE VALLEY:

A HISTORY OF THE NAMPA & MERIDIAN IRRIGATION DISTRICT



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ABSTRACT

This history was prepared for Nampa & Meridian Irrigation District for the purpose of documenting the historical development of its facilities, and particularly its drainage system.

Today's landscape might lead an untrained observer to believe that the Boise River has always been a relatively neat and tidy channel, or that the many waterways snaking across the landscape have always fed and enhanced the Boise River's flows from the south as well as the north. But the modern landscape and hydrology of the Boise River Valley bear little resemblance to the landscape and hydrology encountered by the earliest pioneers. Settlers who arrived in the Boise River Valley in the 1860s encountered an unpredictable river surrounded by a dry and forbidding sagebrush landscape. The Boise River rises in the high mountains of central Idaho, and courses south and west to its confluence with the Snake River near the Oregon border. Its final 50 miles flow west through a valley of rich agricultural lands in the southwest corner of Idaho that have been cultivated to support the increasing human population since the late 19th century. But before the advent of irrigation systems, the river consisted of multiple braided channels flowing through the valley, regularly changing course and overflowing their banks each spring.

The General Land Office sent surveyors out to Idaho territory in the 1870s to take inventory of the land and prepare it for settlement by setting corners and boundaries, utilizing the rectangular survey system adopted by the United States to survey the Northwest Territory in 1796. The records they left of the Boise River's meanderings provide evidence of a very different hydrological system than the one we see in the 21st century. Walking the township and section lines throughout the Boise Valley, surveyors found that very few streams fed the river from either north or south. The 19th-century surveys clearly demonstrate that only three creeks existed south of the Boise River before the 1890s: Five Mile, Ten Mile, and Indian Creeks, and that these were ephemeral, flowing only for a month or two in the springtime when snowmelt found its way through drainages to the Boise River. An unknown deep aquifer lay beneath these lands. It was fed from higher elevation precipitation, but was not visible to the human eye nor accessible until later in the 20th century when technology was developed to allow its use. Thus, the surface waters of the Boise River were the only water source for growing food in the Boise Valley, presenting challenging conditions for Americans who came to settle in the valley.

The arrival of European Americans provoked conflicts over use of natural resources and especially water, the results of which subjected the Boise River to major changes during the 19th century. The first European Americans to pass through the area were the fur trappers who traveled and stayed temporarily during the early part of the century; none created permanent settlements, however. The earliest whites to actually settle in the Boise Valley began to arrive in the 1860s, brought by the promise of gold over the hills to the north in Idaho City. Those who settled in the valley near the river grew crops to feed the miners and meet other business demands. Their most obvious need was water. During the ensuing decades, they undertook the challenge of utilizing the Boise River to build communities from the fertile desert lands that spread for miles north and south of the river.

Pioneers who came to Idaho from many points east left records that help historians reconstruct the historic landscape and fragile hydrological balance that existed before irrigation. Many were lured by the promise of free land and the dream of owning their own farm. But when they arrived, they found that the land was vastly different from their homes of origin; it needed clearing and

preparation, and the lack of precipitation was a surprise to many. Homesteaders who staked ground in the Boise area soon found that securing land too far from the river could render their already dry land distant from an adequate water supply; but conversely a decision to settle too close could result in potentially devastating flooding. And, other than the hot artesian flows that pioneers used for hot springs, homesteaders knew nothing about the ground water that lay beneath them and its potential to provide water for their crops. The homesteaders' records reveal the aridity not just of the land, but of the stream beds and natural depressions that cross the desert south of the river. The detailed statements that the government required pioneers to file about their land provide a window into the challenges of being a homesteader on dry earth with such a limited water supply.

Thus, the unpredictability of the river and the need to develop the means to use the available water supply were key characteristics of early settlement in the Boise Valley. The Boise River was the only source of reliable water that could be diverted onto the desert lands for farms, and as this report will demonstrate, the construction of facilities to deliver irrigation water was fraught with difficulties. Settlers came nonetheless, but pioneering here was challenging, and only the hardest survived and persisted through the years before larger and more reliable irrigation arrived in the 1890s.

The lack of federal funding before 1902 meant that irrigation development in the 19th century was subject to the volatility of capital markets. Engineers with big dreams designed canals to stretch 20-40 miles across dry desert lands, but the costs to build them were staggering. All too often a lack of funding halted work before it was complete, resulting in partially dug ditches and unfinished irrigation systems. The construction of the Ridenbaugh Canal was no different as it became one of the first irrigation systems to serve the lands south of the Boise River. Although its construction began in 1873, it was not until 1891 – through much trial and error – that the Ridenbaugh's lengthy extension west was finally completed, totaling approximately 52 miles.¹

As irrigation systems grew in the latter third of the 19th century and sagebrush was plowed under to create productive agricultural lands, the hydrology of the Boise River Valley began to evolve. A portion of the water diverted from the Boise River seeped through canals and the soils of irrigated fields to form a shallow aquifer that rose to the surface in many places as the years proceeded. The rising shallow aquifer and return flows from the newly irrigated lands naturally sought outlets back to the Boise River, causing the ephemeral creeks to run with water more regularly and new waterways to be formed in the land's natural depressions.²

These developments and alterations to the hydrology of the Boise River Valley accelerated after the United States Congress created the U.S. Reclamation Service in 1902 (now known as the Bureau of Reclamation). Reclamation Service engineers arrived in the Boise Valley in 1904, bringing with them plans for the Boise Project, consisting of storage reservoirs and funding to expand and finish incomplete canals and irrigation systems. Simultaneously, farmers across the Valley organized

¹ Lynne MacDonald, U.S. Bureau of Reclamation, *Historic American Engineering Record Nampa & Meridian Irrigation District*, Sept. 2002, Updated April, 2008, Draft, citing from *Biennial Report of the State Engineer to the Governor of Idaho for the years 1899-1900* (Boise, ID: 1900) (hereafter HAER report). (NMID5) Note: MacDonald's report does not contain page numbers. Note: All NMID source numbers reference the SHRA Archives table unless otherwise noted.

² "Idaho State News: Water for Caldwell," *Idaho Daily Statesman*, June 9, 1891. (NMID News85)

irrigation districts under recently-enacted state laws to manage their water delivery. Users under the Ridenbaugh canal formed the Nampa & Meridian Irrigation District in 1904 and purchased the canal and its associated infrastructure on December 23, 1905.³ By 1915, the Reclamation Service had completed and expanded the New York and Ridenbaugh Canal systems, and constructed Arrowrock Reservoir for irrigation purposes, despite ongoing engineering work. The ownership patterns in the district had changed by this time, and only a few pioneering souls remained on their original homesteads. Families farming larger plots had ascended to prominence, and could now depend on reliably delivered irrigation water through canals that stretched for miles across the Treasure Valley's south desert lands.

The rapidly rising shallow aquifer beneath the irrigated lands was an unexpected consequence of expanding irrigation in the Boise Valley near the turn of the century. By 1910, the shallow depressions in the desert could no longer accommodate the volume of irrigation water being applied to homesteads, and the waterways that had begun to run like streams in the late 19th century were dotted with stagnant pools of swamp water teeming with reeds. The volume of water continually being applied to farmlands had inundated thousands of acres; orchards and farms were ruined, and alkali invaded the seeped lands. Farmers were devastated and sought the assistance of the Reclamation Service as well as their irrigation district boards to engineer a solution to this unforeseen problem.

By 1913, Reclamation Service engineers began working together with local engineers to design a drainage system that would dig deeper into the land's natural depressions to relieve these excess flows and direct them back to the Boise River. West valley lands lying in Pioneer Irrigation District were the first to be relieved under a contract signed with Reclamation in 1913. Two short years later, Nampa & Meridian Irrigation District's Board also voted to enter a contract with the Reclamation Service to engineer, finance, and construct a system of 11 deep surface drains, utilizing the ephemeral creeks as well as additional natural depressions to reclaim the seeped lands. Five Mile, Ten Mile, and Indian Creeks were all deepened, straightened, and engineered so that any resemblance they bore to their former ephemeral existence was all but lost. New place names such as "Mason Creek" and "Nine Mile Creek" appeared on maps and the landscape, and together with the mushrooming number of canals and laterals, led any untrained eye to rapidly forget that the land had been desert not long before. Ultimately, completion of the primary drainage systems in 1918 laid the groundwork for the functional balance and equilibrium between surface and ground water that persists to this day.

To rectify the drainage challenges that were increasing throughout the valley, the Idaho Legislature got involved. In 1913, they recognized the need for drainage construction and passed legislation enabling the creation of county drainage districts. The first of these was created by at least 1917.

However, drainage needs continued to spread across the valley floor. The legislature passed another bill in 1917 conferring upon irrigation districts "the same power and authority as is now conferred or may hereafter be conferred respecting irrigation...shall now be construed to include drainage."⁴ The law became codified as Idaho Code Section 43-305. That year, Nampa & Meridian Irrigation District completed its system and apportioned drainage benefits and assessed its

³ Boise City Irrigation and Land Co. to Nampa & Meridian Irrigation District, Instrument Numbered 9582, Dec. 23, 1905, Special Projects, 1900-1925, Nampa & Meridian Irrigation District Office, Nampa, Idaho. (NMID277)

⁴ Idaho House Bill No. 254, 14th session of the Idaho Legislature, 1917. (NMID356)

landowners throughout the District accordingly, per their 1915 contract with the Reclamation Service. Additional drainage – constructed after 1918 outside the District’s boundaries but upon Boise Project lands – also required the Nampa & Meridian District to assess their landowners to recoup the annual \$1/acre maintenance and operation charge the Reclamation Service began to assess to the District in 1920, a charge that the District unsuccessfully fought all the way to the U.S. Supreme Court.⁵ Finally, supplementary drainage for lands within the boundaries of the Nampa & Meridian Irrigation District were handled by the District, which assessed its landowners a separate charge for drainage that went into a special drainage fund beginning in 1926.⁶

The District today manages water delivery and drainage for thousands of acres of land, stretching from eastern portions of the Boise River Valley west into lands surrounding the towns of Nampa and Meridian. The continuous evolution of man-made reservoirs, canals, laterals, and drains designed to meet the needs of water users has dramatically shaped the area’s hydrology, economy, culture, landscape, and overall appearance since the time of settlement. The Valley’s development led to the demand for yet a greater water supply, which resulted in the addition of Anderson Ranch and Lucky Peak Reservoirs in the 1950s. These dams also provided flood control benefits, recreational uses, and hydropower for Valley residents. Together, the Boise River irrigation delivery, drainage and storage developments that began in the 1870s continue to meet the needs of Boise Valley communities while maintaining the hydrologic balance between surface and ground water. Storage reservoirs supplement natural Boise River water flows to supply water for irrigation throughout the valley. Water diverted from the Boise River for irrigation feeds the shallow aquifer, creating a ground water supply that meets multiple needs. The shallow aquifer and irrigation return flows feed the drainage systems that replenish the Boise River where they meet the river downstream from the City of Middleton. This hydrologic balance, developed and maintained since the early 1900s, has truly transformed the pre-irrigation desert landscape to sustain the communities of the Boise Valley.

⁵ *Nampa & Meridian Irrigation District v. Bond*, 268 U.S. 50 (1925). (NMID378)

⁶ NMID Board Meeting Minutes, March 2, 1926. (NMID377)

INTRODUCTION

This report will trace the evolution of land and water south of the Boise River within the bounds of the Nampa & Meridian Irrigation District from European American settlement in the 1860s through the 1920s. The report will detail the history of these facilities, which now comprise the largest system in the Boise River Valley, as they transitioned over 50 years from being privately financed, to irrigation district facilities.

The first section of this report will discuss the era of private development, and trace the land's evolution from arid desert settled by European Americans in the 1860s to the accelerated application of widespread artificial irrigation on these lands into the 1890s. It will detail the impact of the artificial irrigation infrastructure on the creeks flowing into the Boise River from the south, including Five Mile, Ten Mile, and Indian Creek. It will demonstrate that the rise of artificial irrigation modified the hydrology of the area, creating new waterways and dramatically altering the nature of preexisting ones.

The second section of this report will discuss the consequential rise of the water table across these same lands, the acquisition of privately-owned irrigation facilities by a newly formed irrigation district in 1904, and the increasing need for the drainage of farmlands through the first two decades of the 20th century. It was during this period when water users, suffering from seeped and unproductive lands due to the altered hydrology, worked with the Bureau of Reclamation to deepen and realign preexisting ephemeral drainages and construct new drains to reclaim waterlogged lands south of the river. It will describe the uses of these drains, how they were constructed and financed, how the engineering altered their flows, and how they have been maintained. By the 1920s, the Boise River Valley hardly resembled the lands encountered by early pioneers. Where the lands south of the River had once been dry and unproductive, offering water only in a small number of ephemeral streams, they now flowed with man-made drains that served productive farms.

The final section of the report will provide a summary of the Nampa & Meridian Irrigation District following the construction of the drainage system, detailing the continued need for drainage on the lands and the engineering that achieved it, and the operation and maintenance of the district through the modern era.

SECTION 1: SETTLING THE BOISE RIVER VALLEY: 1860-1900

The Boise Valley's earliest white settlers left behind many records of their lives and impressions of the land. In some cases, they did so through written diaries or letters, while others left behind business records that have survived. But the majority of recorded information about the character of the land and landscape that survived originated with the pioneers' interactions with the government.

The United States was still a young country in 1865. The federal government was keen to expand its land mass and prove its independence and power. Verbal skirmishes with Great Britain over claims to the Pacific Northwest ultimately resulted in the United States marking its territory up to the 49th parallel (location of the modern international boundary with Canada) through negotiation of the Oregon Treaty in 1846. But it was not until almost 20 years later that President Abraham Lincoln signed legislation in 1863 which carved the Idaho Territory out of the land that had been annexed from Britain in 1846. Soon after, the U.S. General Land Office (GLO) posted a General Surveyor in the new territory to inventory the land, and the settlers began to arrive in greater numbers.

The GLO inventory allowed for the subdivision, privatization, and ultimate settlement of the area by United States citizens. The surveys in the Boise River Valley began in 1867 with the land closest to the Boise River and the most concentrated area of settlement. The records left behind serve as important documentation demonstrating the character of the land before the physical alterations of the late 19th century. Entrepreneurs hoping to capitalize on the land rush and the need for water also left records of their enterprises. These records, together with newspaper accounts, allow us to piece together an accurate picture of the Boise River Valley's features in the period before large-scale irrigation was firmly established in the 1890s.

The available records reveal that water development south of the Boise River has a distinct timeline and history. In the years before the 1890s, that is, the era preceding large-scale artificial irrigation, the land south of the Boise River was consistently dry, and there were no streams that flowed with any reliability. It was a high desert environment absent any abundant water. The only streams mentioned by contemporaries – Five Mile, Ten Mile, and Indian Creeks – were consistently described as containing water in the spring and running dry the remainder of the year. Often they were mentioned in the paper only because of flooding during the months of snowmelt. Regardless of the context, they were unfailingly and repeatedly characterized as ephemeral.

Starting in the 1860s and 1870s, pioneering settlers began to engineer ditches to divert the waters of the Boise River to these dry lands. As the newly constructed canals – including the Ridenbaugh, the New York, and the Settlers, all located on the south side of the Boise River – began to carry and deliver more water into and throughout the 1890s, the noted creeks began to flow with more regularity and volume. This became increasingly true over time as the canals extended their systems further and further west, stretching into Nampa, Meridian, and Caldwell and irrigating an increasing number of acres each year. In fact the records demonstrate intentional engineering and manipulation of the creek beds of Five Mile, Ten Mile, and Indian Creeks as a means of delivering water to farmers and avoiding the expense of additional canal construction. As the decade progressed, another interesting phenomenon occurred. The increasing flows in these creeks encouraged settlers to file on rights to the waste water flowing in them, creating new sources of reliable water. Outside of the spring snowmelts, however, the records demonstrate that increased

flow in these streams in the 1890s was entirely a result of and dependent upon the irrigation of nearby lands and the return flows from them. Eventually, the re-capture of these flows became the right of the irrigation districts that owned the original diversions.

SURVEYING THE BOISE VALLEY: 1867-1875

The U.S. GLO (predecessor to the Bureau of Land Management) began the survey of townships south of the Boise River in 1867 and continued until all of the land within the modern boundaries of the Nampa & Meridian Irrigation District was surveyed in 1875. These survey records provide a consistent and telling story about the arid character of land in the Boise River Valley during the eight years they were performed.

The method for surveying these public lands followed the government's established pattern in other territorial lands. In preparation for each survey, the GLO signed contracts with the survey team and directed them to follow a particular set of instructions issued by the agency. Some of the surveys completed in the area of study were done pursuant to the instructions issued by the GLO in 1855 and a supplemental circular issued in 1864, while the remainder of them were completed using instructions issued in 1871. Both the 1855 and 1871 instruction manuals provided surveyors with directions regarding the objects and data they were to record in their field notes. The instructions explained that the purpose of the field notebooks was to provide information about:

the elements from which the plats and calculations in relation to the public surveys are made. They are the source wherefrom the description and evidence of locations and boundaries are officially delineated and set forth. They therefore must be a faithful, distinct, and minute record of everything officially done and observed by the surveyor and his assistants, pursuant to instructions, in relation to running, measuring, and making lines, establishing boundary corners, and c&; and present, as far as possible, a full and complete *topographical description* of the country surveyed, as to every matter of useful information, or likely to gratify public curiosity.⁷ [Emphasis in original.]

This instruction was intended to convey to surveyors the importance of their notes being precise and accurate. The surveyors often referenced the instructions in their field notebooks, underscoring the significance of the instructions to doing the job correctly.

In addition to providing justification for the work, the manuals also instructed the survey teams on the *specific items* they were to record in their notebooks. The directions left little to question, and although the language in other parts of the document changed slightly over time, the manuals from 1855 and 1871 were identical with regard to their requirements for recording land and water objects. The instructions directed that surveyors record the following land objects: settlers' claims, the nearby rivers, creeks, swamps, and bottom lands, and whether the bottom lands were wet or

⁷ The "&c" is an early form of "etc.," meaning "and other things." *Instructions to the Surveyors General of Public Lands of the United States for Those Districts Established In and Since the Year 1850: Containing, Also, A Manual of Instructions to Regulate the Field Operations of Deputy Surveyors* (Washington, D.C.: A.O.P. Nicholson, 1855), 15; *Instructions to the Surveyors General of Public Lands of the United States for Those Districts Established in and Since the Year 1850: Containing, Also, A Manual of Instructions to Regulate the Field Operations of Deputy Surveyors* (Washington, D.C.: Government Printing Office, 1871), 17.

dry. *Water* objects were also to be recorded, including the presence of “all rivers, creeks, and smaller streams of water which the [survey] line crosses,” and the width of the water body at the point of intersection.⁸ The manuals also required that surveyors record lakes, springs, roads and trails, and timber, among other items. This section of the instructions concluded by requiring surveyors to note at the end of the field note book “such further description or information touching any matter or thing connected with the township (or other survey) which he may be able to afford, and may deem useful in the *aggregate*, as respects the face of the country, its soil and geological features, timber, mineral, waters, &c.”⁹ Such specific directions directed the surveyors to note all of the items deemed significant by the Land Office, and led the surveyors who examined the lands in this Valley to provide multiple descriptions of the land and water during their inventories.

The earliest surveys of the valley were performed only on the exterior lines of the valley’s townships in order to determine potential for settlement and cultivation and to record the features of the land. Peter Bell and Allen Thompson were the first surveyors to obtain contracts with the GLO. In 1867, Bell signed up to survey the exterior boundaries of Township 1 North, Range 3 East; 2 North, 2 East; 2 North, 1 East; 1 North, 4 East; and 1 North, 5 East. He was also contracted to survey the subdivision (interior) lines of Township 3 North, Range 2 East, just upstream from the new town site of Boise. The same year, Thompson was contracted to survey lands to the west of Bell’s, including Townships 2 North, Range 1 West; 3 North, 1 West; 3 North, 2 West; 3 North, 3 West. Their records provide a detailed look at the landscape and hydrology of the area for this period of early settlement.

My examination of hundreds of such public land surveys for studies similar to this one indicates that these surveys are extremely useful for understanding the physical features present on lands in their pre-settlement state. In this case, a great deal of irrigation development had taken place in these townships by the mid-20th century, and modern maps note the presence of many “creeks” in the region. However, the 19th-century surveys clearly demonstrate that only three creeks existed south of the Boise River before the 1890s: Five Mile, Ten Mile, and Indian Creeks. Furthermore, the surveys and their corresponding field notes reveal that even these named streams were not dependable sources of water, flowing only during a small part of each year. In addition to seasonal variations, the stream flows also were affected by the underlying lava formations, which caused them to disappear entirely in certain areas as their flows sunk into the porous ground beneath them. While surveyors recorded the presence of water in some reaches of each of these creeks, the bulk of evidence establishes that all three were ephemeral, dependable more for their aridity than for any reliable water flow. Furthermore, an examination of records for these townships – through which Three Mile, Eight Mile, Nine Mile, and Mason Creeks flow today – show that these additional four creeks are modern water objects created by the application of artificial irrigation on surrounding lands, and that they did not exist by 1875 when the surveys were completed.

FIVE MILE CREEK

Five Mile Creek is one of the three creeks that did in fact exist before large-scale irrigation practices began. It rises on the sagebrush plains of southeastern Idaho to the southwest of Boise in the

⁸ *Instructions*, 1855, 17; and *Instructions*, 1871, 18. The 1864 circular did not contradict these instructions.

⁹ *Instructions*, 1855, 18. The wording in the 1871 *Instructions* differ slightly after the word “useful” in that they specifically require surveyors to provide a “*general description* of the township in the *aggregate*,” with the soil and geological features specified, as well. *Instructions*, 1871, 19.

southeast portion of Township 3 North, Range 1 East, near or in Section 25. Before its man-made alterations, the original bed continued to the northwest through Townships 3 and 4 North, Range 1 West before turning south at the eastern boundary of Township 4 North, Range 2 West and joining Ten Mile Creek on its journey to the Boise River.¹⁰ (See Figure 1 for an example of one of these township plats.) The earliest written impressions of Five Mile Creek by European Americans were done in the 1860s by General Land Office surveyors, but other observations were recorded throughout the latter part of the 20th century, as well, by settlers and in newspaper reports.

The first GLO surveyor to record the presence of Five Mile Creek was Allen Thompson in the spring of 1867, just one mile west (downstream) of the creek's heading.¹¹ At the time of the survey, Boise and its surrounding area were sparsely settled. Thompson did not note the presence of any settlers whatsoever. His survey of the north and east boundaries of Township 3 North, Range 1 West (see Figure 1) began in April, when he encountered Five Mile Creek on the township's eastern boundary and recorded that it was 20 links wide¹² (just under 13 feet), and coursed west.¹³ Just a few months later, but into the dry part of the year, Thompson was contracted to survey the remaining exterior boundaries of the same township. Thompson conducted this survey in August, and simply referred to his encounter with Five Mile Creek on the north boundary of the township as a "creek bed," likely reflecting the lack of water in the creek by that time of the year. Interestingly, he refers to Indian Creek in another portion of this survey as a "creek," so the contrast in terminology and language is significant, as Thompson referred to both Five and Ten Mile Creeks as "creek beds," implying their lack of water. The accompanying plat, accepted by the General Surveyor, labeled the water object on the north boundary as Five Mile Creek.¹⁴ Thompson continued to survey the land along the stream that summer as he walked downstream into Township 4 North, Range 1 West and consistently referred to the "bed of 5 Mile Creek" instead of a flowing creek.¹⁵

A number of years passed before the GLO contracted with Thompson again for townships relevant to a study of Five Mile Creek, but field notes from his next survey are consistent with Five Mile Creek's ephemeral nature. In 1875, he was hired to survey the interior (subdivision) lines of Township 3 North, Range 1 East, where Five Mile Creek heads, and upstream from his 1867 surveys. Thompson performed the survey of Township 3 North, Range 1 East in April 1875, and his route resulted in him crossing the water object many times. In contrast to his August survey in the 1860s when he referred to Five Mile as a "creek bed," in April 1875, he referred to it consistently as a "creek." April is often the time of heaviest flows for ephemeral creeks, as they receive the greatest

¹⁰ Allen M. Thompson, Original Survey Plat, Township 4 North, Range 2 West, accepted March 1868. (NMID215) Note: All General Land Office Survey Records (field notes and plats) can be found online at www.glorerecords.blm.gov, unless otherwise mentioned. Note: All surveys referenced in this report are from the Boise Meridian.

¹¹ Allen M. Thompson, Exterior Line Field Notes for Township 3 North, Range 1 West, under Contract 2, approved May 1867. (NMID68)

¹² A surveyor's link is just less than eight inches long; a surveyor's chain is comprised of 100 links. There are 80 chains (or 8,000 links) in one mile, which is equal to the length of one section in a township.

¹³ Thompson, Exterior Line Field notes for Township 3 North Range 1 West, under Contract 2, approved May 1867. (NMID68)

¹⁴ Allen M. Thompson, Exterior Line Field Notes and Plat for Township 3 North, Range 1 West, under Contract 5, approved December 1867. (NMID12, NMID16)

¹⁵ Allen M. Thompson, Subdivision Line Field Notes for Township 4 North, Range 1 West, under Contract 5, approved January 1868, 10, 19, 27. (NMID166)

snowmelt when the warmer temperatures arrive, so it is not surprising that Five Mile Creek appeared to have water at the time. His recordings of the creek's width in this township varied between five (5) and ten (10) links (between three and six feet) and actually narrowed as it headed downstream.¹⁶

The presence of water in April – both in 1867 and 1875 – and the apparent dryness of the bed in August (1867) is consistent with other sources which describe Five Mile Creek in this way. (See below.)

TEN MILE CREEK

The impressions of and records related to Ten Mile Creek follow a pattern similar to Five Mile Creek. Ten Mile Creek runs parallel to Five Mile Creek but rises far above the city of Boise. Its official head today is at the Black Creek Reservoir (known today as “Blacks Creek”) in Township 2 North, Range 4 East. Before that reservoir was constructed, Black Creek became Ten Mile Creek in Township 1 North, Range 3 East. The first official recordings of Ten Mile Creek during the period of settlement came from surveyors hired by the GLO to inventory and subdivide the land. Like the land along Five Mile Creek, much of the land adjacent to Ten Mile Creek was also surveyed beginning in 1867, with surveys of the land along the entirety of the creek eventually being completed in 1875 by the same two surveyors, Thompson and Bell.

As with Five Mile Creek, surveys of land along Ten Mile that were conducted in the spring resulted in references to the “creek,” while surveys that took place in drier months referred to the creek “bed.” Some of the 1867 surveys were done in spring while others were completed in summer, providing a good sample of the stream's character. For example, Allen Thompson surveyed the eastern boundary of Township 3 North, Range 1 West in April 1867, and noted his encounter with Ten Mile this way: “Creek 50 links wide course N40W,” suggesting the presence of water.¹⁷ (See Figure 1.) Surveys were performed upstream from that point later in the year. The most upstream parts of the stream were located in Township 1 North, Range 3 East, a township surveyed by Peter Bell in July, where he recorded his encounter with Ten Mile as a “creek.”¹⁸ Just downstream, Bell was also in charge of surveying Township 2 North, Range 2 East, which he also did in July, recording Ten Mile as a “creek.”¹⁹ But as the stream flowed downstream to the northwest, the next survey (also executed by Peter Bell and also during the summer months of 1867) in Township 2 North, Range 1 East noted just how ephemeral the stream was along its course even within the span of just a few days and a few miles. (See Figure 2.) Bell, who was contracted to survey this township's exterior boundaries, first marked the stream's presence on his northern traverse along the township's east boundary, where he wrote in his field notes: “creek 18 links wide course NW,” suggesting again the presence of water. Yet just a few miles downstream, as Bell walked along the

¹⁶ Allen M. Thompson, Subdivision Line Field Notes for Township 3 North, Range 1 East, under Contract 58, approved July 1875, 230, 231, 242, 254, 266, 280, 282, 285. (NMID14)

¹⁷ Thompson, Exterior Line Field notes for Township 3 North Range 1 West, under Contract 2, approved May 1867, 109. (NMID68)

¹⁸ Again, Bell erroneously named this creek “16-Mile Creek” in his field notes, although the associated plat correctly called it “Ten Mile Creek.” Peter W. Bell, Exterior Line Field Notes for Township 1 North, Range 3 East, under Contract 4, approved December 1867, 101-102. (NMID 60)

¹⁹ Peter W. Bell, Exterior Line Field Notes for Township 2 North, Range 2 East, under Contract 4, approved December 1867, 31. (NMID53) Interestingly, Bell mistook his encounter with Ten Mile Creek in this location for Indian Creek. The associated plat, however, labeled it correctly as Ten Mile Creek.

north boundary of this same township, he recorded his downstream encounter with Ten Mile Creek this way: "Creek 'dry bed' course N40W 10 links."²⁰

Further downstream yet, Allen Thompson surveyed the exterior boundaries of Township 3 North, Ranges 1 and 2 West, also performing them during summer of that same year. He, too, appeared to have found a dry creek bed in these two townships, since he recorded his encounter with Ten Mile Creek in Township 3 North, Range 1 West as "creek bed 50 links wide course N40W,"²¹ and along the north edge of Section 1 in Township 3 North, Range 2 West, as "creek bed 50 links wide course NW," referring to Ten Mile Creek.²² In the more upstream sections of these two townships, it is important to note that Thompson also encountered and recorded Indian Creek, which he called a "creek" rather than a "creek bed," in contrast to his recording of Ten Mile.²³

In 1875, the GLO contracted with Allen Thompson to survey subdivision lines for the townships for which only exterior boundary surveys had been completed. Between April and June 1875, Thompson surveyed all of the land inside the Nampa & Meridian Irrigation District, including lands lying adjacent to Ten Mile Creek. The townships included 1 North, Range 3 East, 2 North, Ranges 1-3 East, 3 North, Range 1 East, and 3 North, Range 1 West. Although Thompson did not survey them in a downstream manner, all of the townships were surveyed during the spring months, when it would have been customary to see water flowing in Ten Mile Creek.²⁴ Thompson recorded crossing Ten Mile Creek at many points during his survey. He recorded the water object as a "creek," and taken together, it is clear that the creek widened as it flowed downstream, at one point (in May) even being recorded as 50 links wide, or more than 30 feet.²⁵ It is not surprising to find such descriptions for a survey done during the spring snowmelt.²⁶

²⁰ Peter W. Bell, Exterior Line Field Notes for Township 2 North, Range 1 East, under Contract 4, approved December 1867, 14, 19. (NMID51)

²¹ Thompson, Exterior Line Field Notes for Township 3 North, Range 1 West, under Contract 5, approved December 1867, 234. (NMID12)

²² Allen M. Thompson, Exterior Line Field Notes for Township 3 North, Range 2 West, under Contract 5, approved December 1867, 285(4). (NMID48)

²³ In the downstream township of 3 North, Range 2 West, Indian Creek is also referred to as a creek bed. See Indian Creek section of this report for details.

²⁴ 1875 was also a good water year in which 13.83 inches of rain fell on Boise City. A.D. Foote, *Feasibility of Irrigating and Reclaiming Certain Desert Lands Between the Snake and Boise Rivers, in Ada County, Idaho, and of other projects connected therewith*, 1883, 13. (NMID41)

²⁵ Allen M. Thompson, Subdivision Line Field Notes for Township 2 North, Range 1 East, under Contract 58, approved June 1875, 98, 110, 111, 123, 124, and 43. (NMID44)

²⁶ Allen M. Thompson, Subdivision Line Field Notes for Township 1 North, Range 3 East, under Contract 58, approved July 1875. (NMID35); Allen M. Thompson, Subdivision Line Field Notes for Township 2 North, Range 3 East, under Contract 58, approved July 1875. (NMID34); Allen M. Thompson, Subdivision Line Field Notes for Township 2 North, Range 2 East, under Contract 58, approved July 1875, mentions of Ten Mile Creek at 159D, 168, 169, 180, 191, 203. (NMID46); Thompson, Subdivision Line Field Notes for Township 2 North, Range 1 East, under Contract 58, approved June 1875, 98, 110, 111, 123, 124, and 43. (NMID44); Thompson, Subdivision Line Field Notes for Township 3 North, Range 1 East, under Contract 58, approved July 1875, mentions of Ten Mile Creek at 260, 274, 276, 279. (NMID14); Allen M. Thompson, Subdivision Line Field Notes for Township 3 North, Range 1 West, under Contract 58, approved December 1874, mentions of Ten Mile Creek at 71, 83, 84, 95, 107, 108, 124. (NMID15).

Taken together, the various surveys done for the townships through which Ten Mile Creek flowed in the middle of the 19th century demonstrate a creek that carried water in the spring, but which dried up as the year progressed, running entirely dry by the summer months.

INDIAN CREEK

Indian Creek, which also rises in the desert lands southeast of Boise, was historically grouped together and discussed with Five and Ten Mile Creeks, since it shared many of the same characteristics and flowed nearby. In 1867, for instance, Peter Bell's survey of Township 1 North, Range 3 East (which also included encounters with both Ten Mile and Indian Creeks) in 1867 included a general description in which he wrote: "This township contains some 1st rate land – especially along the valleys of the small water courses the most of which are dry in the summer."²⁷ Like Five and Ten Mile Creeks, Indian Creek coursed northwest through the southern desert, emptying into the Boise River in Township 4 North, Range 3 West, not far downstream of the confluence of Ten Mile Creek and the Boise River.²⁸ While there is evidence that Indian Creek may have carried water more regularly than either Five or Ten Mile Creek, it still was an ephemeral stream through its lower reaches, flowing only for a short time in the spring.

Surveys done on the lands adjacent to Indian Creek were part of the surveys done in 1867. The Indian Creek surveys were all done during summer months, a time when the creek would, in fact, be expected to run dry. It appears from the field notes of these surveys that the creek contained water close to its origin in Township 1 North, Range 5 East, but that it dried up further downstream. The presence of water in the upper reaches could possibly be attributed to a particularly wet year, since the surveyors that summer recorded some parts of Indian Creek as being as wide as 150 links – or 100 feet wide – (in Township 2 North, Range 1 West), while later recordings (1875) of stream width near the same location were significantly narrower (50 links).²⁹ Nevertheless, Bell and Thompson's notes from the 1867 surveys between Township 1 North, Range 3 East downstream through Township 2 North, Range 1 West recorded Indian Creek as an actual creek, and not a creek bed. In fact, Bell noted in Township 2 North, Range 1 West that Indian Creek was "stream of pure good water... but in Section 22 it begins to form a canyon and is too low for any practible [sic] purpose as the water sinks in all Basaltic regions."³⁰

In addition to it being summer and therefore typically dry, the sinking water might explain Allen Thompson's 1867 field notes in some of the downstream reaches of Indian Creek through Townships 3 North, Range 2 West and Township 3 North, Range 3 West. In those two surveys,

²⁷ Peter W. Bell, Exterior Line Field Notes for Township 1 North, Range 3 East, under Contract 4, approved December 1867, 104. (NMID60)

²⁸ Indian Creek has also been known historically as Fifteen Mile Creek, as noted on the Survey Plat for Township 4 North, Range 3 West. Allen M. Thompson, Original Survey Plat, Township 4 North, Range 3 West, accepted March 1868. (NMID216)

²⁹ Allen M. Thompson, Subdivision Line Field Notes for Township 2 North, Range 1 West, under Contract 58, approved June 1875, 33. (NMID25). In the southwest corner of Township 3 North, Range 1 West, similar disparities were uncovered between the surveys of 1867 and 1875, in one case measuring Indian Creek in the southwestern region of this Township at 100 links wide while the 1875 survey for the northwestern part of Indian Creek measured it at 50 links wide. (See NMID12 and NMID15.)

³⁰ Peter W. Bell, Subdivision Line Field Notes for Township 2 North, Range 1 West, under Contract 9, approved August 1868, 17. (NMID24)

Thompson noted several encounters with the “creek bed,”³¹ and further stated that the region was “not susceptible of cultivation without artificial irrigation,” indicating an overall lack of water.³²

Like land along the other creeks, the subdivision surveys of the lands adjacent to Indian Creek were done in 1875 and reflect findings similar to the descriptions of those streams. Near the creek’s head in Township 1 North, Range 3 East, Allen Thompson recorded in his general description that the township offered rich bottom land near Indian Creek, identifying it as a “fine stream of good clear water.”³³ Its width generally was recorded to be between 25 and 50 links for the remainder of its length before emptying into the Boise River in Township 4 North, Range 3 West.³⁴ There is no mention of a dry creek bed, even in the stream’s lower reaches, which is explained by the fact that the survey was performed in April and May, the typical period of flow for Indian Creek as well as Five and Ten Mile Creeks. But, as will be seen from other sources discussed below, Indian Creek was as unreliable as Five and Ten Mile Creeks, flowing only during the spring.

The GLO surveys are useful for providing a snapshot of the land’s characteristics preceding the era of increased settlement and large-scale artificial irrigation. They offer a starkly contrasting picture to the land’s character just a few decades hence, illustrating the ephemeral nature of the three creeks, as well as the complete absence of any others. This picture of the south Boise desert changed dramatically over the next few decades.

ENTREPRENEURS AND SETTLERS SOUTH OF THE BOISE RIVER

In addition to the surveyors who came to the Boise region, many entrepreneurs and pioneers came to settle permanently or to make a quick fortune through the exploitation of the vast resources of the area. Entrepreneurs arrived soon after the discovery of gold in the early 1860s, some flush with eastern capital and ready to make deals and develop the area. For those not predisposed to try their luck in the mines, land and water were an alternate way to strike it rich, and investors poured thousands of dollars into efforts across the valley to dig canals that would divert river water to lands being speculated on by many of the same men.

³¹ Thompson, Exterior Line Field Notes for Township 3 North, Range 2 West, under Contract 5, approved December 1867, 284 (NMID48); Allen M. Thompson, Exterior Line Field Notes for Township 3 North, Range 3 West, under Contract 5, approved December 1867, 332. (NMID50)

³² Thompson, Exterior Line Field Notes for Township 3 North, Range 3 West, under Contract 5, approved December 1867, 335. (NMID50)

³³ Thompson, Subdivision Line Field Notes for Township 1 North, Range 3 East, under Contract 58, approved July 1875, 61. (NMID35)

³⁴ The approved survey plat for Township 4 North, Range 3 West labeled Indian Creek “Fifteen Mile Creek.” Thompson, Original Survey Plat, Township 4 North, Range 3 West, accepted March 1868. (NMID216) Indian Creek also mentioned in the following survey field notes: Thompson, Subdivision Line Field Notes for Township 2 North, Range 1 East, under Contract 58, approved June 1875, 127, 139, 141. (NMID44); Thompson, Subdivision Line Field Notes for Township 2 North, Range 1 West, under Contract 58, approved June 1875, 11, 12, 13, 19, 20. (NMID25); Thompson, Subdivision Line Field Notes for Township 3 North, Range 1 West, under Contract 58, approved December 1874, 45. (NMID15); Thompson, Subdivision Line Field Notes for Township 3 North, Range 2 West of the Boise Meridian, under Contract 58, approved July 1875, 2, 3, 15, 16, 28, 29, 40, 55, 58, 60. (NMID29)

Those settlers might have been driven to the West by a conviction that God had pre-ordained their country's destiny to spread across the continent. A reflection of that belief came in the form of multiple laws enacted by Congress, whose members hoped to encourage permanent settlement of the country's far-flung western lands. By 1880, Congress had passed two key pieces of legislation to encourage settlement on public lands. First was the 1863 Homestead Act, a law providing free land to settlers who could prove residence on the land and the cultivation and improvement of at least a portion of it. The promise of free land was expected to lure people to the western territories, and it worked. However, the 1863 law limited acquisition by any individual to 160 acres, a relatively small plot for the amount of capital and labor it took to actually make the land productive. It became clear to policy makers within a few years that settlement west of the 100th meridian was unique and challenging. Water was a major problem, and Congress tried to facilitate successful settlement by passing another law that increased the total acreage (to 640 acres) that could be acquired by an individual but which also required proof that water rights had been secured through existing or planned systems. The Desert Land Act encouraged even more people to migrate west. The citizens who took advantage of these offers of free land left behind a treasure of documents generated by the paperwork that the government required them to file before obtaining title to their land. Among the information the settlers were obliged to provide was a description of the land, and, depending on which law they used to apply for their land and what year they did it, a description of how they would water their lands.

ENTREPRENEURS

THE RIDENBAUGH CANAL

Two years after Allen Thompson completed his 1875 General Land Office surveys, William B. Morris began construction on the Ridenbaugh Canal. Morris hoped that the canal would serve to develop irrigation on the lands south of the Boise River. In this early period, the canal was little more than a small ditch. Over the years, multiple companies and numerous construction efforts provided the foundation for the intricate irrigation system that serpentine today's landscape and waters the lands in what we now know as the Nampa & Meridian Irrigation District. In 1877, the *Tri-Weekly Statesman* explained that the canal stretched for seven miles and employed 45 sub-graders or shovelers and 20 teams of scrapers and plows. In addition to the main ditch, the *Statesman* article explained that "two miles of smaller ditches have been constructed for distributing the water over the land."³⁵ Together, the system would form the earliest working portion of the vast and intricate system of irrigation.

In addition to constructing what would become the Ridenbaugh Canal, Morris also purchased land to the south of Boise. Construction continued on these lands, where Morris commissioned the construction of smaller ditches which enabled the distribution of water from the canal.³⁶ By the close of 1878, the seven-mile long ditch was complete, irrigating approximately 1,200 acres of land south of Boise.³⁷ That same year, Morris passed away and ownership of the ditch reverted to his

³⁵ "Completed," *Idaho Tri-Weekly Statesman*, May 4, 1878. (NMID283)

³⁶ "The South Boise Canal and Land—A Magnificent Property," *Idaho Tri-Weekly Statesman*, Oct. 12, 1878. (NMID284)

³⁷ MacDonald, HAER report, Sept. 2002, updated April 2008, Draft. (NMID5)

widow, Lavinia T. Morris, and his nephew, William H. Ridenbaugh. Despite lacking investment funds, Ridenbaugh followed in his uncle's entrepreneurial footsteps and filed a notice for an additional 30,000 inches of water. However, his aspirations were short lived. Ridenbaugh was unable to obtain the capital needed to extend the canal and eventually sold it in 1883. Over the course of the next twenty years, approximately eight investment companies owned and tried to extend and make a success of the Ridenbaugh Canal.³⁸

The first group to own the canal after Ridenbaugh sold it was a group of men named Ogilvy, Settle, and Dunn. Soon after their purchase was complete, the men proclaimed that "as soon as the irrigating season is over, the upper portion of the Morris canal will be enlarged to the same width as that of the extension."³⁹ But from 1884-1886, a lack of newspaper reporting on construction plans suggests that prevailing economic conditions severely hampered irrigation development.⁴⁰

Though Ogilvy, Settle, and Dunn had great plans for the canal, it appears that the economic conditions proved too difficult an obstacle to overcome, a problem that plagued subsequent owners, as well. By November 1887 the Boise and Nampa Canal Company had obtained control of the canal and verbalized plans to extend it to the city of Nampa.⁴¹ But by autumn 1888 the canal was once again sold and remained just seven miles long.⁴²

In September 1888, the Idaho Central Canal and Land Company became the newest owner of the Ridenbaugh. Like its predecessors, the company immediately began making plans to extend the canal.⁴³ But in contrast to them, the Central Canal and Land Company was able to execute on its plans and began work immediately. On May 10, 1889 the *Idaho Daily Statesman* published an article detailing the work and reporting that the company began construction with "the needed enlargement and improvements at the headgate or initial point of the enterprise," and that the canal had also been widened."⁴⁴ According to the article the canal was 20 feet wide at its base and 30 feet wide at its surface, with a water depth of six feet, and a capacity of 300 cubic feet per second.⁴⁵ Work on the canal's extension continued into the winter of 1889, when the *Idaho Daily Statesman* reported that,

"the extension of the Ridenbaugh Irrigation Canal is progressing rapidly. Some twelve miles of the extension are already completed, taking the canal to a point beyond Ten Mile Creek. Within another week a point on the bench will be reached from which the town of Nampa can be seen. Should the winter prove as favorable for outdoor work...the Canal will be completed to Nampa and beyond, long before the water will be needed for irrigation next season."⁴⁶

³⁸MacDonald, HAER report, Sept. 2002, updated April 2008, Draft. (NMID5); Idaho State Historical Society Reference Series, Ridenbaugh-Rossi Mill Ditch, Number 151, 1974, 1-2. (NMID237)

³⁹ "Irrigation," *Idaho Tri-Weekly Statesman*, May 10, 1883. (NMID285)

⁴⁰ MacDonald, HAER report, Sept. 2002, updated April 2008, Draft. (NMID5)

⁴¹ "Local Intelligence," *Idaho Tri-Weekly Statesman*, Nov. 8, 1887. (NMID286)

⁴² MacDonald, HAER report, Sept. 2002, updated April 2008, Draft. (NMID5)

⁴³ "South Side of the River," *Idaho Daily Statesman*, Sept. 22, 1888. (NMID287); MacDonald, HAER report, Sept. 2002, updated April 2008, Draft. (NMID5)

⁴⁴ "The Ridenbaugh Ditch," *Idaho Daily Statesman*, May 10, 1889. (NMID288)

⁴⁵ "The Ridenbaugh Ditch," *Idaho Daily Statesman*, May 10, 1889. (NMID288)

⁴⁶ "Ridenbaugh Irrigation Canal," *Idaho Daily Statesman*, Dec. 7, 1889. (NMID289)

In spite of the capital expended on improving and extending the Ridenbaugh Canal, the Central Canal and Land Company sold the Ridenbaugh to the newly incorporated Boise City and Nampa Irrigation, Land and Lumber Company on April 25, 1890, deeming it a "poor investment."⁴⁷

Work on the canal continued to move rapidly under the new ownership. Determined to have the canal reach Nampa by January 1, 1891, the Boise City and Nampa Irrigation, Land and Lumber Company contracted one company to complete three (3) miles of the canal extension and commissioned another company to construct 11 additional miles.⁴⁸ The *Idaho Daily Statesman* reported that the work was "to be completed to Nampa by January 1, 1891, or the contractors are to forfeit \$25 a day until the work is completed."⁴⁹ As canal construction continued, the Boise City and Nampa Irrigation, Land and Lumber Company set out to diversify its holdings. Several company officials purchased land south of the Ridenbaugh, close to Nampa.⁵⁰ In the meantime, the officers of the new company traveled east to obtain additional investments for the work, and convinced Buffalo capitalists H.L. Taylor and J. Satterfield to invest heavily in the enterprise.⁵¹

Thus, by the end of 1891 the Boise City and Nampa Irrigation, Land and Lumber Company possessed an impressive enterprise and the capital to do still more. The *Idaho Daily Statesman* noted that "one hundred and five miles of the Boise & Nampa canal, including the main canal and the laterals have been completed and are carrying water."⁵² In addition, an electric light reservoir was filled on the Boise bench, with the 80-foot water fall providing power for the growing manufacturing industry in the Boise valley.⁵³ Other parts of the enterprise's grand scheme included surveys for multiple lakes and reservoirs along the Ridenbaugh's path, including Lake Ethel, Lake Marie, Lake Nampa, and Lake Paradox, among others. By 1893, the ditch was constructed all the way to within a few miles of Nampa with a bottom width of 22 feet, a top width of 32 feet, and a water capacity at its headgate of 66,000 inches.⁵⁴ Plans to double the capacity of the lengthened ditch were soon hatched and implemented by the purchase of a steam dredge to work atop a boat

⁴⁷ MacDonald, HAER report, Sept. 2002, updated April 2008, Draft (NMID5); Richard J. Hinton, *A Report on Irrigation and the Cultivation of the Soil Nearby...for 1891, Part I*, 52 Cong., 1st sess., Senate Ex. Doc. 41, Part 1, under direction of the Secretary of Agriculture, 175. (NMID292)

⁴⁸ "The B.C.&N.I.L.&L. Co," *Idaho Daily Statesman*, Nov. 9, 1890. (NMID290)

⁴⁹ "The B.C.&N.I.L.&L. Co," *Idaho Daily Statesman*, Nov. 9, 1890. (NMID290)

⁵⁰ MacDonald, HAER report, Sept. 2002, updated April 2008, Draft. (NMID5)

⁵¹ *Idaho Daily Statesman*, Sept. 15, 1892. (NMID309)

⁵² "Local Brevities," *Idaho Daily Statesman*, Aug. 18, 1891. (NMID291)

⁵³ "Boise City, Idaho," *Idaho Daily Statesman*, Dec. 12, 1892. (NMID310)

⁵⁴ "Ridenbaugh Ditch," *Idaho Daily Statesman*, March 29, 1893. (NMID298) Although a 1942 University of California Master's thesis in history by Paul Murphy suggests that the company had constructed multiple lakes along the Boise Bench at the conclusion of 1891, it is clear from the majority of other sources that only one lake – Lake Ethel – was ever constructed as part of the company's plans. In his 1942 Master's thesis in history for the University of California Paul Murphy wrote that the company's holdings in 1891 included "a chain of ten lakes and reservoirs for storage," for which he cites the 1891 Congressional Irrigation Report by Richard Hinton. It is clear when examining the Congressional report that the lakes were planned but not constructed, therefore Murphy's assertion is incorrect. Paul Lloyd Murphy, "Irrigation in the Boise Valley. 1863-1903: A Study in Pre-Federal Irrigation" (master's thesis, University of California, 1948), 62-63. (NMID263)

constructed for the purpose.⁵⁵ Over the ensuing years, the canal and its associated infrastructure continued to serve the lands under it as its owners contemplated additional expansion.

ENTREPRENEURS

A.D. FOOTE AND THE IDAHO MINING AND IRRIGATION COMPANY

Morris and his successors were not the only entrepreneurs in the valley. In 1883, the same year Ridenbaugh first sold the canal, eastern capitalists sent engineer A.D. Foote to Idaho to inspect the land between the Boise and Snake Rivers for the purposes of potential investment in a system of reclamation and irrigation. Foote's observations are useful again for offering a glimpse onto a landscape that had not yet been fully manipulated. Foote's examinations – undertaken between 1883 and 1887 – reflect an era that immediately preceded major changes to the landscape and especially to the area south of the Boise River, when the previously dry creek beds began to run more regularly due to the return flows and waste water from the newly constructed canals. His notations regarding the landscape closely match those of the GLO surveyors ten years earlier, and are perhaps more significant because he observed the landscape and hydrology with an eye toward irrigation development. Thus, any encounter with water would no doubt have figured into his analysis.

Upon examination and survey, Foote reported back to his employers in March of 1883 with a description of his proposed canal line. Discussing what would become the New York Canal, he noted:

A branch from this point [at the top of the mesa], running down the highest part of the divide, will cover all of the land lying between Boise River and Five-mile Creek, amounting to about thirty thousand acres. Thence, with an irregular line following the contour of the land, the canal continues southward toward Snake River, putting off branches at the highest points between Five-mile and Ten-mile, and Ten-mile and Indian Creeks. *These creeks have an existence only for a few days in the winter or spring, as they are called into life by melting snows or rains.*⁵⁶ [Emphasis added.]

The map accompanying the report, presumably drawn either by Foote or at his direction, showed Five Mile, Ten Mile and Indian Creeks, and all three were depicted with the words "dry channel" written next to their names.⁵⁷ (See Figure 3.)

Encouraged by Foote's report, the capitalists organized the Idaho Mining and Irrigation Company in 1884 and filed upon a large volume of water in the Boise River that year. They intended to apply to purchase or homestead thousands of acres of land upon which the water would be applied.

⁵⁵ "Ridenbaugh Ditch," *Idaho Daily Statesman*, March 29, 1893. (NMID298) It was not long before the company's big plans went awry. A lawsuit by Taylor and Satterfield against the company's operators soon resulted in an ownership change through a fire sale, and then another series of owners before the Nampa & Meridian Irrigation District was formed. Only Lake Ethel was ever constructed. See below for additional details. "Attachment Suit Filed," *Idaho Daily Statesman*, Aug. 24, 1893 (NMID311)

⁵⁶ Foote, *Feasibility of Irrigating...*, 17. (NMID41)

⁵⁷ Foote, *Feasibility of Irrigating...*, 23. (NMID41)

Foote revised his report that year, and added detail to it. The second version of Foote's report described the Boise area in general terms before moving on to the specifics of the land being marketed by the company. Foote prefaced the subject by deeming irrigated land drainage as "nearly" as important as the irrigation itself, and then continued:

The lands controlled by this company have...the immense advantage of local slopes and drainage channels. For instance: Indian Creek has a regular fall of twenty-six and one half feet to the mile...The line of the company's canal runs on the south side of it at a distance of from six to ten miles away. The land between the two is permeated by hundreds of slight, natural drainage channels, or draws, each with its branches, leading from the canal to the creek. Channels is not quite the word for them, as they are seldom strongly marked enough to have a channel. Slight depressions between slight knolls would perhaps describe them better. It is precisely the same way between the other creeks, altogether making as perfect a system of drainage as could be desired. *It might be well to mention that the creeks spoken of are simply dry channels, which the melting snows, when there are any, fill in the spring, until the frost comes out of the ground. After that the dry soil takes every drop of moisture there is and the creeks vanish.* [Emphasis added.]⁵⁸

Foote also described the duty of water in the area, the availability of timber, and the placer mining opportunities before launching into another description of the canal he proposed to build. He explained that the canal would take out of the river in a canyon about ten miles above Boise. At a point at the top of the mesa, he had designed the canal to make a sharp turn south so as to avoid the grading. Because of the savings in grade, the canal reached the next cut at a higher place and therefore saved more grade at the cut between what he called Seven and a Half and Ten Mile Creeks. He explained that there was "almost no natural drainage across this line," and that the creeks were so small and short that they made perfect locations for waste gates, allowing for a much less expensive canal than in other places where they needed to place flumes to get across drainages.⁵⁹ Foote urged the use of waste gates, explaining that while some people might deem them unnecessary, they were actually good for the increased safety of the canal. If the canal were ever to break, he explained, the waste gates "render it much more harmless, as the water above any break can quickly be taken away. The natural channels are there, and it is better to use them." He opined that it might be "advisable also to use the valley of Five and Seven and a Half Mile Creek as reservoirs."⁶⁰ It is not clear precisely which creek Foote intended with use of the term "Seven and a Half Mile Creek," but the creek was insignificant enough to be left off the sketches that accompanied all three versions of Foote's reports between 1883 and 1887.

Based on the progress of the Ridenbaugh and the reports issued by Foote, it is clear that by 1890, the rush to irrigation had begun in earnest. Foote's company ultimately was responsible for the partial construction of both the New York and the Phyllis Canals, two of the biggest in the valley. Enthusiastic construction of the canal recommended in Foote's reports – the New York – began in 1890 but stopped soon after it started. The financial panic that occurred in 1893 and the resulting financial circumstances of the capitalists, together with mismanagement of the project, resulted in

⁵⁸ A.D. Foote, *The Idaho Mining and Irrigation Company* (New York: Theo. L. Devinne Printers, 1884), 14. NMID40

⁵⁹ Foote, *The Idaho Mining and Irrigation Company*, 32. NMID40

⁶⁰ Foote, *The Idaho Mining and Irrigation Company*, 33. NMID40

only partially completed work. Consequently, the canal was not put into service until 1900 and even then was not complete. The Ridenbaugh, however, was in good shape by March 1891, as described above, and was watering many thousands of acres. According to the company secretary, Freemont Wood, the main line of the Ridenbaugh Canal had been “constructed, completed and conveying water past the head of...Mason Creek extension since the spring of 1891.”⁶¹ (Details on this construction and the creation of Mason Creek will be provided in the next section of this report.) Other canals in the valley, including the Settlers and Phyllis Canals, gradually began delivering additional water throughout the 1890s, putting increasing acreage into production across the desert lands south of the Boise River.

SETTLERS

Despite the speculative nature of land development and the unreliability of canals constructed in this part of the Boise River Valley in the late 19th century, settlers were determined to obtain the government-offered free lands. The process of doing so was complex, requiring a good deal of paperwork and the effort to get witnesses to testify in support of the application. Applicants for lands under the Homestead and Desert Land Acts were required to file a series of documents during the three to five years it took to “prove up” their claims. The forms asked many questions, including improvements made on the land, length of residence, citizenship, crops grown, and (for Desert Land applications) the source of water for irrigation.

Settlers began to apply for lands in the Boise area in the 1860s, but the real influx to the valley began in the 1880s. The first to apply to the federal government for a land patent near Five Mile Creek was James Daley in Section 7, Township 3 North, Range 1 East, the same township where that creek heads. By 1885, Daley was working on filing the necessary paperwork to perfect his patent under the Homestead Act. Daley was one of many citizens who filed on land along Five Mile Creek, but not a single one of the settlers who homesteaded adjacent to the creek named it as a natural body of water on their property that could be used for irrigation.⁶² Many of them described the land instead as “sage-brush land” or “sagebrush plains,”⁶³ and even detailed the means by which they were receiving Boise River water (as opposed to creek water) for irrigation.

⁶¹ Boise City and Nampa Irrigation, Land, and Lumber Company, a corporation, Right of Way Filing for Extension of Canal and for Reservoir Locations in the Boise City Land District, April 24, 1895, Entry UD 569 Old Canal & Reservoir Files, Boise City and Nampa Irrigation & Lumber Co., Box 2, Record Group 49, Records of the Bureau of Land Management,, U.S. National Archives, Washington D.C.. (NMID275)

⁶² As one patent file example, see the following primary source. Homestead Proof-Testimony of Witnesses, David Howry and H. Young, Oct. 31, 1885, and Homestead Proof-Testimony of Claimant, John Daley, Oct. 31, 1885, Homestead Entry Patent File 457, Township 3 North, Range 1 East, James Daley, Box 312, Land Entry Files, Boise City, Record Group 49, Records of the Bureau of Land Management, U.S. National Archives, Washington D.C. (NMID173) Note: All Homestead and Desert Land patent files can be found in Record Group 49, Records of the Bureau of Land Management, U.S. National Archives, Washington D.C., unless otherwise stated.

⁶³ Homestead, Pre-Emption, and Commutation Proof, Testimony of Witness, Solomon Pettit and Milton Burns, Jan. 15, 1889, and Homestead, Pre-Emption, and Commutation Proof, Testimony of Claimant, Lucy Fox, widow of Charles Fox, Jan. 15, 1889, Homestead Entry Patent File 646, Township 3 North, Range 1 West, Charles and Lucy Fox, Box 315, Land Entry Files, Boise City. (NMID192); and Final Proof under the Desert-Land Act of March 3, 1877, James Nelson, June 18, 1890, Desert Land Patent File Entry 123, Township 3 North, Range 1 West, Fremont Wood, Box 397, Land Entry Files, Boise City. (NMID191)

One settler went so far as to provide a description of Five Mile Creek in her paperwork. Cascinda Sanders filed a Desert Land Entry application for land in Section 2 of Township 3 North, Range 1 West. As such, she was required to describe how water was going to be applied to her lands. On January 8, 1890 George Field appeared before the Boise Land Office to testify on Sanders's behalf. He noted that "no living streams or other body of water" existed on Sanders's land. However, he also explained that the corner of Five Mile creek ran through Sanders's property but only ran "during the rains of the early spring and fall of the year for a short time." On the same day, William Sanders also testified for Cascinda Sanders. He also testified that Five Mile Creek only ran during the early spring and fall, and noted further that Sanders's water was obtained from the Boise River via a ditch. Finally, Cascinda Sanders's own testimony underscored the ephemeral nature of the stream, stating that while the corner of Five Mile Creek coursed through her land, it only contained water during the rains of early spring and fall and only for short times.⁶⁴

Ten years after Sanders filed her Desert Land Entry application, the characteristics of Five Mile Creek were further explored in a 1900 lawsuit between Luther and Susan Snyder and the Boise City Irrigation and Land Company (owner of the Ridenbaugh Canal prior to the Nampa & Meridian Irrigation District). The case revolved around whether the Five Mile "slough" or "drain" was natural or man-made. The company's complaint in the case accused the couple of tapping, diverting and selling water which belonged in the company's ditches and laterals, specifically what they referred to as the Five Mile Drain. The company asserted that the waterway was a man-made ditch and that they had claimed rights to the water that was discharged via construction of the drain. Luther Snyder, however, asserted that "the five mile slough mentioned in plaintiff's complaint is a natural channel for the running and carrying of melted snow and waters that fall on the lands in the vicinity of the said slough."⁶⁵

As the case progressed, the Boise City Irrigation and Land Company filed into evidence several documents, including a May 17, 1899 Notice of Water Right belonging to R.E. Green, the manager of the company, that predated the filing of the lawsuit. The document noted that the company (by way of Green) "hereby claims the use of the waters of the herein described drain ditch now constructed or in process of construction." The document further explained that the purpose of the constructed drain ditch was to "divert water or begin said drain ditch at or near the point where a copy of this notice is and more definitely described as follows." Appended to the document was a detailed description of the area in which the company had initiated and completed construction of the drain on Five Mile Slough. The description maintained that the waterway from the NW 1/4 of the SW 1/4 of Section 24 in Township 3 North, Range 1 East (or the intersection of the Farmer's Lateral and Five Mile Slough) moving in a northwesterly direction all the way to the NE 1/4 of Section 2 in Township 3 North, Range 1 West (to the South Slough Lateral) had been under or was in the process of construction when the water right was issued. Additionally, the description explained that the south branch of Five Mile Slough, starting in the NE 1/4 of the NE 1/4 of Section 27 in

⁶⁴ Desert Land Act of March 3, 1877, Affidavit of Witness, George Field, Jan. 8, 1890 and William Sanders, Jan. 8, 1890, and Desert Land Act of March 3, 1877, Declaration of Applicant, Cascinda Sanders, Jan. 8, 1890, Desert Land Entry Patent File 158, Township 3 North, Range 1 West, Cascinda Sanders, Box 398, Land Entry Files, Boise City. (NMID207)

⁶⁵ *The Boise City Irrigation and Land Co., a corporation, Plaintiff, vs. Luther Snyder and Susan S. Snyder, Defendants*, Separate Answering of Deft. Luther Snyder, Feb. 2, 1901, Ada County District Court Civil Cases, 1890-1908, Cases 46-83 AR 202, Records of Ada County, at the Idaho State Archives and Record Center (hereafter: SARA). (NMID269)

Township 3 North, Range 1 East (where Five Mile intersected with the Farmer's Lateral) and moving northwesterly to the S 1/2 of the NW 1/4 of Section 16 in Township 3 North, Range 1 East, also was artificially constructed.⁶⁶ (See Figure 4.)

Although the historical record does not provide the answers as to how the case was settled, the documentation is nonetheless significant in its details regarding the intentional alteration and use of Five Mile Creek for water delivery in the years predating the turn of the century. While Green's Notice of Water Right does not indicate precisely *how* the Boise City Irrigation and Land Company altered or constructed segments of Five Mile Slough Drain, it does indicate that humans manipulated the seasonal waterway; his water right application describes the so-called "creek" as a "drain ditch now constructed or in the process of construction." Green's water right application likewise reveals that by at least 1899, irrigation companies, specifically the Boise City Irrigation and Land Company, altered and engineered depressions in the natural landscape for the use of irrigating land. Thus, private companies were actively constructing ditches for drainage and to develop an additional water supply even before the federal government created the Bureau of Reclamation in 1902. Five Mile Slough was not a reliable source of water for settlers seeking to reclaim land before Green's employer (Boise City Irrigation and Land Company) deepened it, but once the drain ditch was constructed to collect excess flows, a new water supply was developed. These creeks – in this case, Five Mile – did not become a reliable source of water under they were deepened and constructed to collect the excess flow.⁶⁷

Ten Mile Creek was equally absent as a noted source of irrigation water on these lands before the 1890s, but patent documents show that this creek was used for *water delivery* purposes as early as 1887. For instance, the neighbors who testified on behalf of settler Freemont Wood's patent application provided useful testimony in 1887 about the nature of both these creeks.⁶⁸ Wood had filed for 280 acres of land in Sections five (5) and six (6) of Township 3 North, Range 1 West under the Desert Land Entry act. This was a piece of land through which Ten Mile Creek flowed when it carried water. However, his witnesses explained that Wood obtained water through an intricate system of ditches and laterals and indicated that Ten Mile Creek was not a reliable source of water to irrigate Wood's land. One affiant, Charles Stewart, explained that Wood's property was situated on "sage brush plain between Five and Ten Mile Creeks" and that "no natural streams or bodies of water [are] upon or pass through or adjoin" Wood's land. He explained that the only exception was "Ten Mile Creek which has water it its bed very seldom, being dry most of the year. Last year it had no water in it at all."⁶⁹

⁶⁶ In the District Court of the Third Judicial District of the State of Idaho, In and For the County of Ada, *The Boise City Irrigation and Land Co., a corporation, Plaintiff, vs. Luther Snyder and Susan S. Snyder*, Defendants, Complaint, Oct. 3, 1900; and In the District Court of the Third Judicial District of the State of Idaho, In and For the County of Ada, *The Boise City Irrigation and Land Co., a corporation, Plaintiff, vs. Luther Snyder and Susan S. Snyder*, Defendants, Separate Answering of Deft. Luther Snyder, Feb. 2, 1901 and Notice of Water Right, R.E. Green, Manager of The Boise City Irrigation and Land Co., May 17, 1899, Civil No. 66 in the District Court, *Boise City Irrigation and Land Company, a corporation vs. Luther Snyder and Sarah Snyder*, Action for Injunction, Ada County District Court Civil Cases, 1890-1908, Cases 46-83, AR 202 Records of Ada County, SARA. (NMID269)

⁶⁷ Notice of Water Right, R.E. Green, 1899 (NMID269)

⁶⁸ Wood is the same man affiliated with the company that owned the Ridenbaugh canal at the time.

⁶⁹ Desert Land Entry Patent File 123, Township 3 North, Range 1 West, Fremont Wood, Box 397, Land Entry Files, Boise City. (NMID191) For some additional examples, see: Homestead Proof-Testimony of Witnesses, Lewis Corcoran and

While Ten Mile might have been dry most of the time, A.D. Foote's examination and survey of the land from the 1880s had urged both his own investors and other competing canal companies to use this and the other creeks to convey water to farms. Additional paperwork from Wood's patent application shows that the creeks were in fact subject to such human engineering as early as 1887. Testifying on behalf of Wood, James Nelson explained how Wood intended to obtain water to irrigate his land. Noting that the natural character of the property was "sage brush plains between Five and Ten Mile Creeks," and that "no natural streams or bodies of water are upon or pass through or adjoin" Wood's land, he then explained how Five Mile Creek was used to direct water to his land: "water was brought from the Boise River through the Settlers Ditch and was then turned into south slough between 6 and 7 miles from the [Boise] river." After running through the south slough, the water entered into Five Mile Creek and was again taken out and carried through a ditch with a capacity of 300-400 inches of water having a width of three feet and depth of two feet at the head gate.⁷⁰ Figure 5 (a 1901 map) depicts the Settlers Irrigation District and shows the configuration of this scheme.

By at least the 1890s, Ten Mile Creek was utilized in this manner as well. A Desert Land Entry application by W. Scott Neal for 160 acres in Section 19 of Township 3 North, Range 1 East was approved and granted in 1901 by President William McKinley. Paperwork for the application noted that "Ten Mile Creek sometimes furnishes small water supply before irrigation season commences," but that the channel was "usually dry." The maps submitted with the application shows that the Ridenbaugh Canal, however, used Ten Mile Creek to deliver water to the land in question. (See Figure 6.)

In addition to Wood's and Neal's patent applications, other sources show that these creeks were gradually being subjected to engineering and manipulation, and that they were carrying more water than they had naturally carried before irrigation. The *Idaho Daily Statesman* reported in February 1896 that farmers in Meridian also planned to convey water to Five Mile Creek at "a point about three miles from the end of the New York canal and thence to the farms in the vicinity of Meridian."⁷¹ By 1901, so much water was flowing in the creek that residents had begun filing for water rights on it, noting that the "water in question is the waste water from the New York canal and smaller ditches."⁷² Five Mile Creek was even used to divert water out of canals during dangerous flood periods in order to avoid damaging the canals.⁷³

Indian Creek was no different than Five Mile and Ten Mile. Indian Creek's historic flows – which had been enough at times in its upstream reaches (near Kuna) to cause accidents⁷⁴ – occurred

Columbus Haynes, Dec. 11, 1894, Homestead Entry Patent File 1090, Township 3 North, Range 1 East, Frank Foster, Box 322, Land Entry Files, Boise City. (NMID185); and Homestead Proof-Testimony of Witness, Fayette Baker and Ephraim Belfoag, Aug. 5, 1896, and Homestead Proof-Testimony of Claimant, Edward Crawford, Aug. 5, 1896, Homestead Entry Patent File 1222, Township 3 North, Range 1 East, Edward Crawford, Box 324, Land Entry Files, Boise City. (NMID180); Homestead Proof-Testimony of Witness, David Dealy and Causfield Towner, Aug. 23, 1897, and Homestead Proof-Testimony of Claimant, John Clauson, Aug. 23, 1897, Homestead Entry Patent File 1289, Township 3 North, Range 1 East, John Clawson, Box 325, Land Entry Files, Boise City. (NMID198) (There are 4 others we have as well if we want to be inclusive.)

⁷⁰ Final Proof under the Desert-Land Act of March 3, 1877, James Nelson, June 18, 1890, Desert Land Entry Patent File 123, Township 3 North, Range 1 West, Fremont Wood, Box 397, Land Entry Files, Boise City. (NMID191)

⁷¹ "Local Brevities," *Idaho Daily Statesman*, Feb. 28, 1896. (NMID News80)

⁷² "Brief Local News: Water Location," *Idaho Daily Statesman*, Apr. 27, 1901. (NMID News81)

⁷³ "Damage to Canals and Railroad Lines," *The Idaho Daily Statesman*, Mar. 31, 1904. (NMID News82)

⁷⁴ "Accident," *Tri-Weekly Statesman*, Feb. 23, 1884. (NMID News83)

frequently enough to require bridges at certain places. The *Statesman* had even reported in June 1887 that a bridge was being placed over Indian Creek on the Nampa branch road.⁷⁵ Despite these instances, residents typically expected the creek to be dry most of the year in many places.

One such resident was George Fulmer who owned property in Section 31 of Township 3 North, Range 1 West. While filing his Final Proof for his Desert Land Entry application in 1892, Fulmer asserted that “the bed of Indian Creek runs through the land, [however] it is a dry stream except in early spring and affords no natural irrigation.” Thomas McKee bolstered Fulmer’s assertion and explained that Indian Creek ran through Fulmer’s property but described it as a “dry run except in early spring. It does not naturally irrigate the land.” Needing a secure irrigation source, Fulmer chose to obtain water from the Boise River via the canals of the Boise and Nampa Irrigation, Land and Lumber Company in addition to his own laterals.⁷⁶

Indian Creek’s surrounding topography presented additional challenges for settlers attempting to reclaim their land. In 1907 Jennie Beck submitted the Final Proof for her Desert Land Entry application for property in Section 24 of Township 1 North, Range 4 East, close to where the creek rises in present day Elmore County. According to Beck, Indian Creek ran across her land and was eight feet wide and two feet deep. But in spite of Beck’s best efforts to utilize water in Indian Creek, the banks of the creek proved too high and prevented her from naturally irrigating her land.⁷⁷ A settler downstream by the name of John McGinty had made similar assertions years earlier. Indian Creek wound through McGinty’s land in Section 6 of Township 3 North, Range 2 West. An 1894 plat map appended to McGinty’s entry maintained that “Indian Creek is a deep ravine where it passes through the land.”⁷⁸ The combination of a dry bed and high banks clearly deterred settlers from relying on Indian Creek to irrigate their land throughout its entire course.

Multiple maps submitted for land entries over the years underscored Indian Creek as a historically “dry” course.⁷⁹ In fact, a 1894 map of the Boise & Nampa Irrigation Canal which showcased the majority of Ada County went so far as to categorize Indian Creek as “Indian Canal,” insinuating both manipulation and diversion were required in order for adequate use. Interestingly, the same map

⁷⁵ “Local and General,” *Tri-Weekly Statesman*, June 21, 1887. (NMID News84)

⁷⁶ Final Proof Under the Desert-Land Act of March 3, 1877, Deposition of Applicant, George Fulmer, May 17, 1892 and Final Proof Under the Desert-Land Act of March 3, 1877, Deposition of Witness, Thomas McKee, May 17, 1892, Desert Land Entry Patent File 172, Township 3 North, Range 1 West, George Fulmer, Box 398, Land Entry Files, Boise City. (NMID229)

⁷⁷ Final Proof under the Desert-Land Acts of March 3, 1877, and March 3, 1891, Deposition of Witness, Grover Corder, March 13, 1908 and Final Proof under the Desert-Land Acts of March 3, 1877, and March 3, 1891, Deposition of Applicant, March 13, 1908; Desert Land Entry Patent 47861, Township 1 North, Range 4 East, Jennie Beck, Box 420, Land Entry Files, Boise City. (NMID244)

⁷⁸ Desert Land Act of March 3, 1877, Affidavit of Witness, John McGinty, Feb. 7, 1893 and Plat Map illustrating irrigation water, Updated, Desert Land Entry Patent 352, Township 3 North, Range 2 West, John McGinty, Box 405, Land Entry Files, Boise City. (NMID225)

⁷⁹ Plat Map illustrating irrigation water, Undated, Desert Land Entry Patent File 352, Township 3 North, Range 2 West, Jennie Harris, Box 405, Land Entry Files, Boise City. (NMID225); Map of Desert Land Entry of Edwin Herrington, Undated, Desert Land Entry Patent File 352, Township 3 North, Range 2 West, Edwin Herrington, Box 405, Land Entry Files, Boise City. (NMID225); Plat Showing Source of Water for Sec.'s 5 and 8, Undated, Desert Land Entry Patent File 401, Township 2 North, Range 1 West, Richard Green, Box 408, Land Entry Files, Boise City (NMID231); Untitled Hand Drawn Map, Undated, Desert Land Entry Patent File 594, Township 2 North, Range 1 East, Ellery Coles, Box 418, Land Entry Files, Boise City. (NMID235)

identified “Ten Mile Canal” and “Five Mile Canal” which were often referred to in other documentation as creeks.⁸⁰

That same year, 1894, the company secretary, Fremont Wood provided testimony which corresponded with the Boise City and Nampa Irrigation, Land and Lumber Company’s application for the location and withdrawal of several reservoir sites. Wood specifically addressed the characteristics of Indian Creek, stating that aside from a short time in the spring, the creek was “not a living stream of water during the entire year anywhere within” Ada and Canyon counties. Additionally, Wood’s testimony revealed that a small body of water flowed for a few miles in Elmore County, after which the creek “sinks and is lost.” Most importantly, Wood emphasized that water did not pass through Indian Creek “where it crosses the canal of the Boise City and Nampa Irrigation, Land and Lumber Company at any time during the irrigation season,” except in the spring due to the snow melt.⁸¹

The following year Wood addressed Indian Creek again while filing a Right of Way for the Boise City and Nampa Irrigation, Land, and Lumber Company. Wood explained that the company’s proposed reservoir site was situated on what was commonly known as Indian Creek which he claimed was “dry during the entire year.” He also noted that the right-of-way’s location did “not appropriate any natural stream...and reservoir locations do not embrace any Lake [sic] bed or the bed of any natural stream.” Wood concluded his testimony by stating that the spring water and the water appropriated to the dry bed of Indian Creek was specifically for the purpose of filling a potential reservoir thirty miles north east of Lake Nampa.⁸² This lake was never constructed, but both of Wood’s explanations clearly demonstrate that by 1895 Indian Creek was both unreliable in terms of regular flows, as well as intended for artificial delivery of water to support the Boise City & Nampa Irrigation, Land and Lumber Company’s growing irrigation network.

Such manipulation and the increase in return flows caused Indian Creek to begin flowing with more regularity in the early 1890s. In 1891 the *Idaho Daily Statesman* reported:

It has been a matter of surprise and wonder to a great many why Indian creek, which runs through the center of the town [Caldwell], has so much running water this year, when heretofore it was as dry as a bone, save a short time in the spring when the snow went off. The explanation is simple. All the waste water of the Ridenbaugh and Phyllis ditches eventually gets into Indian creek and down it comes. The more canals they build above us,

⁸⁰ Map of Boise & Nampa Irrigation Canal, Ada County, Idaho, circa 1894, Entry UD 569 Old Canal & Reservoir Files, Boise City and Nampa Irrigation & Lumber Co., Record Group 49, Records of the Bureau of Land Management, U.S. National Archives, Washington D.C.. (NMID275)

⁸¹ Before the Secretary of the Interior, Washington D.C., Application for the Location and Withdrawal of Reservoir Sites for what is known as Lake Nampa, Lake Geneva, and Lake Paradox, Feb. 23, 1894, Entry UD 569 Old Canal & Reservoir Files, Boise City and Nampa Irrigation & Lumber Co., Box 2, Record Group 49, Records of the Bureau of Land Management,, U.S. National Archives, Washington D.C. (NMID275)

⁸² Boise City and Nampa Irrigation, Land, and Lumber Company, a corporation, Right of Way Filing for Extension of Canal and for Reservoir Locations in the Boise City Land District, April 24, 1895, Entry UD 569 Old Canal & Reservoir Files, Boise City and Nampa Irrigation & Lumber Co., Box 2, Record Group 49, Records of the Bureau of Land Management, U.S. National Archives, Washington D.C. (NMID275)

the more water for Caldwell. All that is necessary now is to dam the creek, construct a reservoir and let it fill with waste water.⁸³

Declaring Caldwell to have “cinched” the water question, the paper ran regular reports over the ensuing few years about plans to dam Indian Creek and use the water for orchards and farms. In 1893, the newly formed Orchard Irrigation Company purchased the reservoir sites, reservoirs, dams, and ditches on Ten Mile and Indian Creeks from J.M. Clark, who then stayed on as manager and superintendent of the operations.⁸⁴ The major 1894 flood noted above caused the Indian Creek dam to breach, but that did not stop the residents from continued efforts to use Indian Creek for irrigation purposes.

Therefore, by the 1890s, the configurations and flows of Five Mile, Ten Mile, and Indian Creeks were no longer indicative of their natural, pre-engineered state. All three creeks had been naturally ephemeral streams in pre-settlement times; none flowed except in the spring and during floods. The application of artificial irrigation through the construction of laterals and canals to serve the additional lands being settled changed the hydrology of these creeks. The creeks now carried return flows and were utilized to deliver water for irrigation purposes, both of which altered their course and their flows.

THREE MILE, EIGHT MILE, NINE MILE, AND MASON CREEKS

The historical record shows that by the turn of the 20th century, many new “creeks” also began to appear, none of which were noted to have existed in the GLO surveys discussed above. In fact, by the middle of the 1890s, water was flowing across the south desert in places that had heretofore been even drier than Five Mile, Ten Mile, or Indian Creeks and had never been recorded by the surveyors who were specifically directed to note such features. The record reveals that the water was definitively a consequence of the increasing acreage subjected to artificial irrigation from the sundry canals being constructed. This part of the report will describe the appearance of these new “creeks” from east to west.

Three Mile Creek first appears as a place name just after the turn of the 20th century. Maps typically show Three Mile Creek heading in Section 20 of Township 3 North, Range 2 East – the precise location that was subject to a lawsuit filed by A.H. Eagleson & Sons in 1904. John W. Eagleson had obtained a federal patent for 160 acres of land in Section 20 in 1896. Various family members also owned land nearby in adjacent Sections 29 and 30. Making the land agriculturally productive had become a problem since 1903, when, according to the complaint filed by the Eaglesons, the New York Canal Company had begun delivering water through the basin, or draw, on their land. This draw had come to be known as Three Mile Creek. (See Figure 7.)

⁸³ “Idaho State News: Water for Caldwell,” *Idaho Daily Statesman*, June 9, 1891. (NMID News85)
Interestingly, the GLO contracted with surveyor Frederick Mills to re-survey the eastern boundary of Township 3 North, Range 3 West in 1891. Mills recorded the creek’s crossing in this relatively downstream location as being less than seven links (or less than five feet) wide. The apparent (although not express) presence of water in this survey can be attributed to the time of year the survey was performed (April), as well as the increasing presence of wastewater from upstream canals. Frederick Mills, Exterior Line Field Notes for Township 3 North, Range 3 west, under Contract 126, approved November 1891. (NMID217)

⁸⁴ “Local Brevities,” *Idaho Daily Statesman*, Jan. 17, 1893. (NMID News86)

The Eaglesons claimed that an agreement had been struck in April 1902 in which nearby land owners had requested permission from the Eaglesons to have the New York Canal Company deliver their water through a ditch they planned to dig in the depression known as Three Mile Creek and thus through the Eaglesons' lands. The Eaglesons claimed to have approved of this plan as long as a ditch was actually dug to contain the water, and wagon bridges placed over the newly constructed ditch. Judge Stewart heard the case, and according to his Findings of Fact, signed in April 1905, the ditch was:

to be constructed so as to carry said water from New York canal through and along said Three Mile ~~creek~~ bottom to a point in Three Mile creek near the south line of the S.E. ¼ of the S.W. ¼ of sec. 20, to the beginning of a surveyed line for a ditch and thence along said surveyed line across the lands of the said Martha Eagleson.⁸⁵ (Strikethrough in original.)

Things did not go as planned. In 1904, the Eaglesons filed a lawsuit asserting that the 1903 irrigation season had witnessed the New York Canal Company turn the water from its waste gate into the so-called Three Mile Creek to deliver water to the defendants, but that no ditch existed. The lack of ditch caused flooding on the Eaglesons' land because there was no channel to contain the flow. The Eaglesons filed suit against both the canal company as well as the landowners.

During the course of the litigation, the key question became whether Three Mile Creek was a natural creek. Documents filed by the defendant land owners asserted that the creek was a natural water way. Three Mile Creek, they claimed:

Is a natural depression and water-way, carrying large quantities of water at different periods of the year, and especially in the Spring and early Summer months, and is and was such natural stream and water-way carrying large quantities of water as aforesaid, and a drainage channel for all the lands riparian and contiguous thereto, long prior to the acquisition by plaintiff or its predecessors in interest, of the lands set forth and described in the complaint herein, and while said lands were the property of the United States, and prior to the time that the defendant the New York Canal Company, Limited, and prior to plaintiff or its predecessors in interest being upon said land, or in any way connecting itself or themselves therewith.⁸⁶

The decision about whether Three Mile Creek was a natural creek became the linchpin in the case. As we know from examining Peter Bell's General Land Office field notes and survey plat of Township 3 North, Range 2 East done in 1867, no such creek had been noted by the surveyor.⁸⁷ In fact, Bell did not even mention the existence of a creek bed. Judge Stewart's Findings of Fact supported that conclusion, and he found for the plaintiffs. He wrote:

The country slopes from said New York canal in a westerly direction; and that the natural slope of the surface of the land forms a draw, basin or low bottom extending from said New

⁸⁵ *A.H. Eagleson & Sons Ltd. Vs. New York Canal Company Ltd. Et al.*, Civil No. 427, Findings of Fact, April 14, 1905. Ada County District Court Cases 1890-1920, Cases 415-460, AR 202, Records of Ada County, SARA. (NMID210)

⁸⁶ *A.H. Eagleson & Sons Ltd. Vs. New York Canal Company Ltd. Et al.*, Cross Complaint. (NMID210)

⁸⁷ Subdivision line field notes and survey plat for Township 3 North, Range 2 East of Boise Meridian by Peter W. Bell under contract 4, approved January 1868. (NMID13 and NMID22)

York canal across the said land of the plaintiff toward the land of the said defendants, the same being commonly known as "Three Mile," and that the water naturally drains from said New York canal across the land of the plaintiff along said Three Mile bottom, and that the same is a broad flat bottom, and that artificial water turned therein, without being confined in a natural channel, will spread out and form a swamp therein.⁸⁸

Stewart also found that "the only available water supply for use upon the lands of the answering defendants and cross-complainants is the water diverted from the Boise River by the New York canal and conveyed through said canal." Therefore, he enjoined the New York Canal Company, Ltd. from turning any water into Three Mile "bottom" for irrigation purposes until a proper ditch was constructed.⁸⁹

Like Three Mile Creek, Eight Mile, Nine Mile, and Mason Creeks were also not natural creeks and had no flow at all before artificial irrigation was applied to surrounding lands in the 1890s. "Eight Mile" appeared in the local newspaper for the first time as a named location on February 29, 1896, when it was reported that a woman had died at a residence there, but no further details were provided.⁹⁰ In the multiple patent application files for land along the modern course of so-called Eight Mile Creek, none of the applicants or their witnesses mentioned a creek or other natural water course running through their land. In fact, in examining six such patent files of settlers whose patents were perfected between 1890 and 1904, not a single person mentioned the presence of a water body, and some even specifically stated that there was no such water body.⁹¹ This finding is consistent with the lack of such a water object in all of the surrounding GLO surveys from 1867 and 1875. The first time that Eight Mile Creek appears on a map as a water body was on an undated map of the Boise & Nampa Irrigation & Power Company's system.⁹² Drawn in approximately 1896, the stream was labeled as the "Eight Mile Lateral." (See Figure 8.) By 1901, a map showing the lands watered under the New York Canal (see Figure 7) referred to the same water body as "Eight Mile Creek," demonstrating that Eight Mile was in fact a human-constructed water object. As it turns out, Nine Mile Creek figures into the history of this same water body. Following the line of that lateral and comparing it with the course of the stream labeled "Nine Mile Creek" on a 1914 Reclamation Service map (see Figure 9), it is clear that the two depictions follow an identical course, leading to the conclusion that Nine Mile Creek began as a water conduit (Eight Mile Lateral) for the Ridenbaugh Canal, was intermittently referred to as "Eight Mile Creek," and was man-made.

⁸⁸ *A.H. Eagleson & Sons Ltd. Vs. New York Canal Company Ltd. Et al.*, Civil No. 427, Findings of Fact. (NMID210)

⁸⁹ *A.H. Eagleson & Sons Ltd. Vs. New York Canal Company Ltd. Et al.*, Civil No. 427, Findings of Fact and Conclusions of Law. (NMID210)

⁹⁰ "Local Brevities," *Idaho Daily Statesman*, Feb. 29, 1896. (NMID News88)

⁹¹ Final Proof under the Timber Culture Act of June 14, 1878, Hugh Rutledge, July 8, 1901, Timber Culture Entry 69 (978), Township 3 North, Range 1 West, Fremont Wood, Box 385, Land Entry Files, Boise City. (NMID171); Homestead Entry Patent File 2078 (4069), Township 3 North, Range 1 West, Warren Walt, Box 3337, Land Entry Files, Boise City. (NMID172); Desert Land Entry Patent File 200, Township 3 North, Range 1 West, Edward Shainwald, Box 399, Land Entry Files, Boise City. (NMID177); Final Proof under the Timber Culture Act of June 14, 1878, John Simmons, January 15, 1900, Timber Culture Entry 68 (932), Township 3 North, Range 1 East, Box 385, Land Entry Files, Boise City. (NMID179); Desert Land Entry Patent File 148, Township 3 North, Range 1 West, Mary Curtis, Box 397, Land Entry Files, Boise City. (NMID189); Desert Land Entry Patent File 215, Township 3 North, Range 1 East, Cordillia Mason-Wilburn, Box 400, Land Entry Files, Boise City. (NMID204)

⁹² This company was the predecessor in interest to Ridenbaugh Canal before Nampa & Meridian Irrigation District purchased it.

Regardless of its name, the creek was not present on any GLO plat through its entire course, leading to the conclusion that this water body was also a man-made one.

Finally, it is important to provide details on the man-made history of Mason Creek in the early 1890s. First, Mason Creek – either as a creek or a dry creek bed – does not appear in the 19th century GLO survey field notebooks or plats for Townships 3 North, Ranges 1 and 2 West where Mason Creek flows today. However, in 1891, the *Idaho Daily Statesman* reported that approximately a quarter mile from Nampa, a new lake had been made “by turning water from the Ridenbaugh ditch into a depression on the prairie. This lake is a quarter of a mile in length and an eighth of a mile broad and in many places fifteen feet in depth. There is an old bed of a *dry creek* at one end of this pond which is filled with water and is very deep in places.”⁹³ [Emphasis added.] The paper reported that this was Lake Ethel, one of the Boise & Nampa Irrigation, Land and Lumber Company’s planned lakes, and legal documents from a 1913 case confirm that the “dry creek” was in fact a reference to Mason Creek.⁹⁴ An 1896 map depicting the canal system of the Boise & Nampa Irrigation & Power Company (Figure 8 in this report) shows that what we know today as “Mason Creek” was called the “Ethel Lateral” for several years following its construction to denote the diversion of water from the Ridenbaugh Canal to Ethel Lake.

By the early years of the 20th century, however, the watercourse was commonly known as “Mason Creek.”⁹⁵ As in other parts of the valley lying south of the Boise River, engineers affiliated with irrigation enterprises used the natural depression in the land as a course through which to gather waste waters from irrigated lands higher up, and also as a lateral to feed Ethel Lake. The engineers manipulated the valley’s water supply – as it did with Three Mile and Nine Mile – to serve its water users’ needs. Records associated with a legal dispute over flooding in 1913 recognized the natural drainage function of the depression in the land that came to be known as Mason Creek:

said Mason Creek Flat or Basin in which plaintiff’s land is situated is a depression in the nature of a basin into which the surface waters of the surrounding country drain and flow, the entire water-shed [sic] of Mason Creek finding its way down to this Basin, said water-shed [sic] being very extensive and comprising many thousands of acres of land; that the Phyllis Canal owned and operated by the Pioneer Irrigation District is a large canal and the waters from this canal irrigate many hundreds of acres of land lying under the same, but above that of plaintiff, and from which land so irrigated the water naturally seeps underground [sic] and flows down into said Mason Creek Basin and forms the water table of the community and of the land of plaintiff.⁹⁶

Further documentation from the case described the natural state of this so-called “creek:”

⁹³ “The City in Type: Making a Lake,” *Idaho Daily Statesman*, June 5, 1891. (NMID News87)

⁹⁴ *Finding of Facts*, Judge Ed L. Bryan, May 16, 1913, in *Charles Verheyen vs. E.H. Dewey and the Nampa & Meridian Irrigation District*, Transcript on Appeal, 23, in No. 2293 Verheyen v. Dewey (envelope and 2d vol. transcript), Idaho Supreme Court Case Files, AR9, Box 85. (NMID381)

⁹⁵ See 1914 Reclamation Map (Figure 9 in Appendix), as well as “Boy Drowned,” *Idaho Daily Statesman*, June 1, 1900: “Mason Creek, the stream that flows into Lake Ethel.” (NMID News90)

⁹⁶ *Charles Verheyen vs. E.H. Dewey and the Nampa & Meridian Irrigation District*, Transcript on Appeal, 15, in No. 2293 Verheyen v. Dewey (envelope and 2d vol. transcript), Idaho Supreme Court Case Files, AR9, Box 85. (NMID381)

That said Mason Creek is the natural drainage channel for a large area of land situated above the plaintiff, and has a channel over a portion of its course, but has not now and never did have a natural channel or defined course or banks over the land of plaintiff or in the vicinity of plaintiff's said land.⁹⁷

Materials in the case further confirmed that Lake Ethel was constructed in the bed of a dry Mason Creek, and that the water table had risen dramatically in the previous decade: "the water under said land of plaintiff eight years prior to commencement of this action was 40 feet below the surface of the ground and at the time this action was commenced was from 16 to 30 inches below the surface of the ground on plaintiff's land."⁹⁸ Mason Creek-area settlers pointed to the lateral as part of their efforts to prove up their lands. Settlement in the area began in the 1890s, and one patent file in particular shows the lateral – known today as Mason Creek – as part of the water delivery system for the land.⁹⁹ Additionally, in 1892 the Boise Land Office Register transmitted to the General Land Office in Washington D.C. the Boise City & Nampa Irrigation, Land and Lumber Company's plat and field notes associated with Lake Ethel "and its supply canal," further indicating that Mason Creek did not naturally carry water.¹⁰⁰ Lake Ethel remained a lake subject to water use and local recreation until the Nampa & Meridian Irrigation District sold the land underlying it in 1918 to E.H. Dewey.¹⁰¹ It was the only lake planned by that company that was ever constructed.

CONCLUSION

The changes to Boise Valley's hydrology and landscape accelerated rapidly once settlers began to arrive. Their demand for water gave rise to an intricate water delivery infrastructure consisting of dams, canals, and laterals. The construction of these systems, paid for in part with eastern capital, transformed the Valley almost unrecognizably. The changes and developments wrought by artificial irrigation posed a stark contrast to its image of only 30 years earlier. The lands that were dominated by sagebrush plains had been converted into productive agricultural lands, and through these properties that had heretofore been dry most of the year, were irrigation canals snaking through the desert, complete with laterals and "creeks" branching off in many directions.

The application of irrigation on these lands created a shallow aquifer which in turn resulted in several newly formed waterways in the natural depressions of the valley. Ultimately, many of these came to be called creeks. However, settlers and irrigation engineers soon discovered that the perfect system of drainage described by A.D. Foote in the 1880s was not as efficient as he had proclaimed. The irrigation of lands on the Boise River's south side caused the aquifer to rise,

⁹⁷ *Finding of Facts*, Judge Ed L. Bryan, May 16, 1913, in *Charles Verheyen vs. E.H. Dewey and the Nampa & Meridian Irrigation District*, Transcript on Appeal, 23, in No. 2293 Verheyen v. Dewey (envelope and 2d vol. transcript), Idaho Supreme Court Case Files, AR9, Box 85. (NMID381)

⁹⁸ *Finding of Facts*, Judge Ed L. Bryan, May 16, 1913, in *Charles Verheyen vs. E.H. Dewey and the Nampa & Meridian Irrigation District*, Transcript on Appeal, 23, in No. 2293 Verheyen v. Dewey (envelope and 2d vol. transcript), Idaho Supreme Court Case Files, AR9, Box 85. (NMID381)

⁹⁹ Plat Map, Undated (c.1893?), Desert Land Entry Patent File 247, Township 3 North, Range 1 West, Pringle Jones, Box 401, Land Entry Files, Boise City. (NMID260)

¹⁰⁰ Chas Kingsley to Hon. Commissioner General Land Office, Sept. 9, 1892, Entry UD 569 Old Canal & Reservoir Files, Boise City and Nampa Irrigation & Lumber Co., Bureau of Land Management Record Group 49, U.S. National Archives, Washington D.C. (NMID275)

¹⁰¹ "Lake Ethel Site Is Sold," *The Idaho Daily Statesman*, Feb. 19, 1918. (NMID News89)

creating new surface waterways that were not deep enough to prevent hundreds of acres of lands from becoming swamped and useless for agriculture. It was not long before farmers complained not about a lack of water on their arid lands, but a surplus of water on lands that did not naturally drain. The farmers and the newly formed irrigation districts – Nampa & Meridian and Pioneer – realized they could benefit from the federal government’s newly created Reclamation Service, which they hoped could assist with this new problem.

SECTION 2: FORMATION OF THE NAMPA & MERIDIAN IRRIGATION DISTRICT AND ACQUISITION OF THE RIDENBAUGH CANAL SYSTEM: 1904-1905

By the turn of the 20th century, private development was reaching the limits of what it could accomplish for irrigation in the West. Private interests, as shown in Section 1 of this report, repeatedly failed to provide reliable water for all the settlers in the Boise Valley. Between 1891 and 1905 ownership of the Ridenbaugh canal irrigation system passed through at least two different companies, possibly three.¹⁰² An 1895 Desert Land Patent document referenced a settler who obtained water from the “Boise and Nampa Irrigation and Power Company’s Canal.”¹⁰³ But by 1900 the Boise City Irrigation and Land Company had gained control of the Ridenbaugh Canal and its related irrigation system and held onto it until the formation of the Nampa & Meridian Irrigation District.¹⁰⁴

Both state and federal governments recognized that to accomplish the development and settlement desired by public policy, they would have to design and pass better laws to assist the farmers. Idaho passed the first law authorizing the organization of irrigation districts in the 1890s, and by 1900 the legislature had perfected it enough to allow for the organization of the Pioneer Irrigation District. The irrigation district law was intended to facilitate cooperation among farmers working toward a common end. But the lack of funds and the volatility of the investment market continued to point toward a different solution from Congress. Finally, in 1902, Congress passed the Reclamation Act, creating the Reclamation Service as a new federal agency and providing federal funding to irrigate the West.

¹⁰² Both MacDonald and Murphy cite three. However, neither identifies the company names. Reconstructing ownership names from *The Idaho Daily Statesman* and other sources suggests that Rodolphus Purdum owned part of the Boise City & Nampa Irrigation, Land, and Lumber Co. between 1891-1893, together with H.E. Simons (of New Jersey) and J.M. Jones (of Nampa). Following a judgment against them in 1893-1894, the Ridenbaugh was sold in 1894 to H.L. Taylor and John Satterfield of Buffalo, New York, who then arranged a sale to Utah interests led by J.E. Jennings, who planned a large colonization scheme. *The Idaho Daily Statesman*, March 29, 1893; Feb. 16, 1894; Feb. 20, 1895.

¹⁰³ Affidavit of Witness, Rodolphus Purdum, Oct. 29, 1895, Desert Land Entry Patent File 401, Township 2 North, Range 1 West, Richard Green, Box 408, Land Entry Files, Boise City. (NMID231)

¹⁰⁴ In the District Court of the Third Judicial District of the State of Idaho, In and For the County of Ada, *The Boise City Irrigation and Land Co., a corporation, Plaintiff, vs. Luther Snyder and Susan S. Snyder, Defendants*, Complaint, Oct. 3, 1900, Civil No. 66 in the District Court, Boise City Irrigation and Land Company, a corporation vs. Luther Snyder and Sarah Snyder, Action for Injunction, Ada County District Court Civil Cases, 1890-1908, Cases 46-83, AR 202, Records of Ada County, SARA. (NMID269)

The arrival of the U.S. Reclamation Service¹⁰⁵ in the Boise River Valley in the early 20th century changed the valley, the state, and the region forever. The federal agency's mission was to reclaim the arid land of the western United States through the construction of large-scale irrigation projects. The Boise Project was one of the first such projects, and its construction was well underway by 1908, augmenting the acreage being brought under production and expanding the practice of using these natural depressions on the sagebrush plain to deliver water.

The inconsistent private ownership and development of the Ridenbaugh Canal system made it ripe for takeover by the farmers. Recognizing the opportunity, the canal's water users joined together and in February 1904 voted to organize a district pursuant to Idaho's recently passed irrigation district law.¹⁰⁶ Soon after, some of the Nampa & Meridian Irrigation District's new members met to discuss the bond issue that would be needed for the district to purchase the canal from its existing owner, the Boise City Irrigation and Land Company. Despite some price disputes with the existing owners, Taylor and Satterfield, the new irrigation district Board voted to purchase the canal system for \$270,000, including all personal property and reservoir sites.¹⁰⁷ The bond issue that would be used to pay for the canal system would have to be put to the voters.

Initially, the Board entertained the idea of enlarging the Ridenbaugh Canal system in conjunction with the filing of new water rights that would serve unimproved lands. The system would include new reservoirs (Lake Marie and Lake Nampa, both of which had been planned for more than a decade by Nampa & Meridian Irrigation District predecessors), enlargement of the Ridenbaugh Canal, the dam across the Boise River, headgates, rights of way, and other items. The system was to distinguish between the new and old lands and water rights, to be charged accordingly at a rate of \$675/second cubic foot of new water.¹⁰⁸ But District members voted the plan down in December of 1904 with Nampa voters favoring the plans and Meridian voters opposing them. The newspaper explained that Meridian farmers' opposition was based on the proposed system of rotation, a system they felt would unfairly benefit Nampa farmers further down the system.¹⁰⁹ Therefore, to purchase the system, the Board would have to come up with an equitable payment mechanism for all the users in the system.

The evident divide of the Nampa & Meridian Irrigation District electorate would prove to be persistent as the users faced multiple issues in the ensuing years that pitted the old water right users against the new, and it took many years for the operations and assessments issues to be settled. Thus, in spite of the District's formal organization, they still did not own the canal by the end of 1904.

As the farmers approached the 1905 irrigation season, the reclamation and political landscape had changed significantly in the Boise River Valley. The Secretary of Interior approved the Boise Project that spring, enhancing Ridenbaugh water users' role in the development of Boise River water and irrigation and making them integral to the changes underfoot. It took the federal government's

¹⁰⁵ Predecessor to the U.S. Bureau of Reclamation.

¹⁰⁶ "Irrigation District is to be Formed," *The Idaho Daily Statesman*, Feb. 10, 1904.

¹⁰⁷ Minutes of the Nampa & Meridian District Board July 6, 1904, at the Nampa & Meridian Irrigation District archives (hereafter referenced as NMID Board Minutes). (NMID267)

¹⁰⁸ NMID Board Meeting Minutes, July 6, 1904. (NMID267)

¹⁰⁹ "Proposed Bond Issue Defeated," *The Idaho Daily Statesman*, Dec. 14, 1904.

assistance to cement the infrastructure construction that private financiers and irrigation district could not accomplish on their own.

Through negotiations and discussions between Nampa & Meridian Irrigation District Board members and the Reclamation Service over the next few months, it was decided that the new bond issue should reflect construction plans that were closely coordinated with the federal project so as to avoid duplicative efforts. They also agreed that the Ridenbaugh Canal as it existed should be used up to its present capacity to serve the old lands, but that lands not currently served by the canal would secure their entire supply of water from the government project.¹¹⁰ This solution offered the kind of compromise that everyone hoped would satisfy both Nampa and Meridian land owners.

The Board adopted a resolution to that effect on July 21, 1905.¹¹¹ The resolution made it clear that the users would pay for the purchase of the canal system through assessments and that the District would purchase additional lands totaling 6,000 acres that would be watered by government water. This clause thereby released the District from any obligation to water those lands (known as the Taylor & Satterfield estates), which the board decided on July 24, 1905 not to assess for the work in securing new water.¹¹² On July 22, 1905, *The Statesman* reported that the deal to purchase the canal system had been completed, for a total of \$285,000.¹¹³ Idaho's State Engineer, James Stephenson, Jr. approved the plan just a few days later, recommending that the new plan for Nampa & Meridian Irrigation District should: "call for the minimum amount of new construction, leaving that to the government works...in other words, the district plan is really a part of the government plan, the district doing only what is necessary in order that the government plan shall have a clear field." Thus, the proposal, which would forthwith include the construction of only one reservoir, Lake Nampa and therefore be less costly, was to be submitted to the voters anew. The election was held on August 26, 1905,¹¹⁴ with voters approving the plan, including the requisite sale of District bonds to pay for the plan by year's end and an enlargement of the Ridenbaugh so as to increase the irrigated acreage in the District.¹¹⁵ The District acquired the Ridenbaugh Canal System in late December 1905.¹¹⁶

On December 23, 1905 the Boise City Irrigation and Land Company's Board of Directors executed Instrument Number 9582, deeding its irrigation system and water rights to the Nampa & Meridian Irrigation District. The deed specifically described and conveyed the Ridenbaugh Canal as well as several laterals, including the South Slough Lateral, North Slough Lateral, Duval Lateral, Mason Creek Lateral, North Nampa Lateral, South Nampa Lateral, Heron Lateral, Ridenbaugh Lateral and

¹¹⁰ NMID Board Meeting Minutes, June 9, 1905. (NMID267); "Plan for the Ridenbaugh," *The Idaho Daily Statesman*, June 10, 1905.

¹¹¹ NMID Board Meeting Minutes, July 21, 1905. (NMID267)

¹¹² NMID Board Meeting Minutes, July 24, 1905. (NMID267)

¹¹³ "Sale of Canal," *The Idaho Daily Statesman*, July 22, 1905.

¹¹⁴ NMID Board Meeting Minutes, James Stephenson, Jr. to Nampa & Meridian Board of Directors, July 25, 1905. (NMID267)

¹¹⁵ "Canal Bonds All Regular," *The Idaho Daily Statesman*, Nov. 26, 1905.

¹¹⁶ *Findings of Fact and Conclusions of Law, May 20, 1915*, by Judge Ed. L. Bryan, In the Matter of the Petition of the Board of Directors of the Nampa and Meridian Irrigation District for the Examination, Approval, and Confirmation of the proceedings for the Authorization of the Execution of a certain contract with the United States of America, In the District Court of the seventh Judicial District of the State of Idaho, in and For the County of Canyon, Civil No. 1782 (on microfilm), Canyon County Courthouse. (NMID282)

the Mason Creek High Line Lateral. Additionally, four reservoir sites were relinquished, including Lake Ethel, Lake Paradox, Lake Geneva, and the Lake Ether Reservoir site.¹¹⁷

Operation of the District in ensuing years was tenuous as the details of large-scale water delivery were ironed out. Many of the land owners whose rights did not pre-date the Ridenbaugh's 1888 water right – a water right that was filed when the ditch was being enlarged – and who recognized that their Ridenbaugh rights were subject to being cut off during dry seasons signed individual contracts during the 1905 to 1907 period with the Payette-Boise Water Users Association, allowing them to purchase water from the Boise Project.¹¹⁸ Later, to ensure that the various entities in the Valley did not duplicate efforts and that a single system of delivery was utilized, the District negotiated a series of agreements, starting in June 1909 with the Payette-Boise Water Users Association. The 1909 contract allowed the United States or the Association to "enlarge, improve and extend all existing lateral ditches now owned or hereafter acquired by the District." It also permitted the construction of new laterals to connect the system as a unified whole. The purpose of the agreement was to prevent any sort of duplicative efforts between the District and the Reclamation Service, since the contract stated that it was "deemed inadvisable to construct in connection with the Payette-Boise Project a system of canals and laterals paralleling or duplicating the existing system of the District and it is to the interest of all parties that there should be but one distribution system for the lands within the District." The contract further allowed for reimbursement to the District by the United States or the Association for proportional parts of the expenses involved in the repair and maintenance of the canal system in the lower portions of the project that were considered new lands and receiving government water.¹¹⁹ To pay for said work, the District assessed its users an annual fee.

Early operations of the District continued to be complicated by the mixture of land owners claiming water under different appropriation dates as well as the mix between Boise Project lands and old water right lands. In 1913, the issue came to a head when the Third Judicial District Court of Idaho (Ada County) issued a judgment that forced the Board of the Nampa & Meridian Irrigation District to divide lands irrigated by the district into classes based on their appropriation dates.¹²⁰ In addition to differences between the landowners in the District, the water users would soon face a new and unanticipated problem that would complicate District operations even further.

SECTION 3: SOLVING THE DRAINAGE PROBLEM, 1910-1925

Although the increasing flows of these various creeks and the gradual improvement of land south of the river was a positive sign for the growth of this frontier town, one unforeseen major problem soon plagued many of the farmers: a rising water table that resulted in waterlogged lands and an inability to farm productively. To contend with the issue, a period of drainage planning and construction began in 1910 and lasted into the 1930s. It was during this period of grand

¹¹⁷ Boise City Irrigation and Land Co. to Nampa & Meridian Irrigation District, Instrument Numbered 9582, Dec. 23, 1905, Special Projects, 1900-1925, Nampa & Meridian Irrigation District Office. (NMID277) It is unclear if the names of these lakes changed over the years, or if these were additional lakes planned by predecessor companies.

¹¹⁸ Findings of Fact, May 20, 1915, p. 6. (NMID282)

¹¹⁹ NMID Board Meeting Minutes, June 1, 1909. (NMID267)

¹²⁰ NMID Board Meeting Minutes, July 18, 1913. (NMID270)

engineering that these so-called creeks became permanent, man-made fixtures on the landscape. This section of the report will provide an overview of the changing relationship between farmers and the formal irrigation entities and detail the infrastructure development done by the Pioneer and Nampa & Meridian Irrigation Districts in conjunction with the Reclamation Service.

Troubles with swamped, over-wet lands began on neighboring properties in the Pioneer Irrigation District as early as 1904,¹²¹ but they spread rapidly onto Nampa & Meridian District lands in just a few years. By the summer of 1910, an engineer studying the problem found that 36 blocks in the vicinity of Nampa, Idaho were “wholly submerged,” and that “much property was injuriously submerged along the low lands of Indian Creek.” Over the 7.5 miles of Indian Creek he studied, the engineer noted that the movement of sand in that water body had exacerbated existing drainage difficulties as had weeds, brush, and other debris that retarded water flow. He noted that the growth of willows, weeds, and other vegetation had also added to the clogging of waterways. “Since the advent of the settler and the introduction of irrigation on the lands adjacent to Indian Creek Valley,” he wrote, “the seepage and waste waters have brought about a changed condition along the Creek during the entire year now.”¹²² This change in Indian Creek was exacerbated by the man-made engineering that occurred over the ensuing 15 years of drainage construction, rendering the original creek bed and ephemeral characteristics permanently gone. Indian Creek was not the only water way to be altered so dramatically by the advent of artificial irrigation. Farmers along Mason Creek were also affected, as he also described: “much injury to the farm lands along Mason Creek and on adjacent slopes is being done by the accumulation of this groundwater.” Seepage there had grown serious enough that alkaline salts began to accumulate in some places. His vision for relief involved “straightening the bends when too abrupt and widening and deepening the creek bed to a sufficient size, so as to allow the flood waters to pass by with a minimum of injury to property.” He wanted to take care of the ground water by constructing “proper ditches or canals which will carry away the excess, and have a sufficient depth to lower the water plain [*sic*] of the low lands through which it must run. Smaller side drains discharging into the larger drainage canal will be necessary.”¹²³

In 1912, the farmers in the parts of the valley most seriously impacted by swamping petitioned the U.S. Reclamation Service to help them with this very serious problem. Pioneer Irrigation District attempted to obtain the cooperation of the U.S. Reclamation Service in constructing a system of surface drains similar to that described and envisioned years earlier by A.D. Foote to contend with the issue. The Service was initially reluctant since it was unsure that it possessed the legal authority to finance such drainage systems. But after overcoming that hurdle, the Service deepened, straightened, and otherwise altered Five and Ten Mile Creeks as well as Indian Creek between 1913 and the early 1920s to accommodate additional inflow from newly constructed diversions. Additionally, the man-made watercourses created over the previous two decades – Eight Mile, Nine

¹²¹ See Jennifer Stevens, “A History of the Pioneer Irrigation District, Idaho: An Initial Report, 1884-1938,” submitted in the matter of *Pioneer Irrigation District v. City of Caldwell* (CV-08-556-C), 2009.

¹²² Robert Milliken, Engineer to President and Members of the Idaho Promotive and Protective Association, Nampa, Idaho, Dec. 28, 1912, Entry 3, General Administrative and Project Records, 1902-1919 (cited hereafter simply as “Entry 3”), Box 393, R.G. 115, Records of the Bureau of Reclamation, U.S. National Archives, Denver (cited hereafter as “R.G. 115” and referring to the records at the Denver branch of the U.S. National Archives unless stated otherwise). (NMID118)

¹²³ Milliken to President, Dec. 28, 1912, Entry 3, Box 393, R.G. 115. (NMID118)

Mile, and Mason Creek – also were permanently changed in order to allow the adjacent lands to produce crops and remain well-drained.

By 1912, a preliminary drainage plan had been devised that looked similar to that described by Foote. It called for drainage lines along the principal sloughs, although engineers believed that there was “a wide choice of location within these sloughs, especially as some of them are comparatively wide and nearly level from one side to the other.”¹²⁴ Drainage ditches were proposed for construction in the sloughs known as Dixie, Wilson, Elijah, Isaiah, Moses and Noble; Mason and Indian Creeks; Purdam Gulch; and the Wilson Drain.¹²⁵ Because the lands in the Pioneer District were in more dire condition, a contract was signed in February 1913 between the Reclamation Service and the Pioneer Irrigation District in which the Service financed the drain construction over time.¹²⁶ Nevertheless, because the line between the districts had no relation to the natural drainage of waters, several of the proposed drains fell partially in the Nampa & Meridian Irrigation District, including Mason, Wilson, Elijah, Purdam, and Five and Ten Mile Creeks.¹²⁷ Soon it was clear that lands in the Nampa & Meridian Irrigation District were suffering the same fate as that of their neighbors to the west, and the two districts began discussing the possibilities of sharing drainage issues and costs.

However, the Reclamation Service was reluctant to provide funds for the work in the Nampa & Meridian District. To bolster the District’s case, the Boise Project Board of Engineers wrote to the Director of the U.S. Reclamation Service in Washington D.C. on August 20, 1913 to describe seepage conditions in the vicinity of Nampa and Caldwell, underscoring the farmers’ need for assistance in this District in addition to Pioneer. Their letter provided the agency with a deeper understanding of the continued (and spreading) problems:

Irrigation of high lands has had the ordinary result of causing a rise in the water table of the lower lands, which condition has been made worse by the absence for long distances of surface channels and by the general presence below the upper soil of a stratum of gravel and sand. In the natural depressions in the lower lands the ground water surface has been rising until it has made its appearance on the surface, converting fertile lands into swamps and injuring adjoining and somewhat higher lands by the formation of alkali on the surface.¹²⁸

As a later study of ground water in the Boise Valley explained, “surface water spread on irrigated land contributed a large volume of new ground-water recharge and drastically changed the ground-water regimen.”¹²⁹ The result was that the waterlogged lands were rendered unworkable for

¹²⁴ Engineer in Charge of Drainage, Mitchell, Nebr. to Supervising Engineer, Boise, Idaho, July 5, 1913, Entry 3, Box 391, R.G. 115. (NMID112)

¹²⁵ Map, Seepage on Upper Wilson Drain, 1912, Entry 3, Box 393, R.G. 115. (NMID118)

¹²⁶ See Stevens, 31.

¹²⁷ General Location of Proposed Drainage Ditches in the Pioneer Irrigation District, 1912, Entry 3, Box 391, R.G. 115. (NMID111)

¹²⁸ Boise Project Board of Engineers to Director of the United States Reclamation Service, Aug. 20, 1913, 260-A BOISE PROJECT Drainage of Pioneer Irrigation District 1913-1914 260-A, Entry 3, Box 391, R.G. 115. (NMID112)

¹²⁹ S.W. West, *Ground-Water and Drainage Problems in the Whitney Terrace Area, Boise, Idaho* (Open File Report, United States Geological Survey, Water Resources Division, Ground Water Branch, Boise, Idaho, August 1955), 5. (NMID355)

agriculture, and a great deal of acreage was forced out of production until the problem could be addressed. The Board of Engineers' letter explained that "during the last few years [seepage] extended gradually up along the bottom of the draws into the Nampa-Meridian district. These conditions have lately grown worse so rapidly that it is apparent that deep drains in this district will be necessary." They explained that the lands could be drained by constructing "deep drains in the principal depressions," stressing the need for drainage work in both Pioneer and Nampa & Meridian Districts and asking the Reclamation Service to contract with Nampa & Meridian in order to execute the plan. They predicted that such a program would require a year to complete, and that "we see no way in which earlier relief can be had, except to a slight extent by enlarging small culverts under the Phyllis Canal and preventing waste water from entering Wilson and other sloughs as far as feasible."¹³⁰

Construction on the first Pioneer Irrigation District drains began in October of that year, with the removal of a total 48,930 cubic yards from Wilson Slough and Mason Creek drains. That same month, Reclamation Service engineers answered the engineering board's pleas and began preliminary drainage investigations in the Nampa-Meridian Irrigation District.¹³¹ On February 15, 1914, Boise Project engineers again penned a letter explaining the District's seepage problems and how there was no way to avoid constructing drainage ditches that would discharge through Pioneer Irrigation District. They described that some of the necessary work was underway per the provisions of the Pioneer Irrigation District's contract, but that "some additional lines, especially down Five Mile and Ten Mile Creeks will be necessary to provide satisfactory outlets for Nampa-Meridian drains."¹³² The letter included a March 1914 map showing the general location of proposed drainage ditches in the Nampa-Meridian Irrigation District, indicating areas (with a list of number of acres, shown below) where the water plane was within six feet of the surface, with predicted increases through 1918 in parentheses (not all showed a predicted increase):

✓ - Five Mile Creek	195	(285)
✓ - Ten Mile Creek	335	(625)
✓ - Nine Mile Creek	165	(205)
✓ - Purdam Gulch	235	(220)
✓ - Sky Pilot Drain	50	
✓ - Wilson Slough	240	(30)
✓ - Elijah Slough	260	(15)
✓ - Joseph Slough	90	(135)
✓ - Orr Slough	118	(17)
✓ - Aaron Slough	5	
✓ - Poe Drain	35	

¹³⁰ Boise Project Board of Engineers to Director, U.S. Reclamation Service, August 20, 1913, Entry 3, Box 391, R.G. 115. (NMID112)

¹³¹ Annual Report Covering History of Boise Project Distribution Unit Boise Idaho for 1913, Boise, Vol 5, 1913, Entry 10, Project Histories 1902-1932 (cited hereafter as "Entry 10"), Box 32, R.G. 115. (NMID95)

¹³² Consulting Board, Messrs. Davis, Henny, Weymouth, Bliss and Burkholder to Reclamation Commission, February 15, 1914, 260-A BOISE PROJECT Drainage of Nampa Meridian Irrigation District 1914 Thru 260-B, Entry 3, Box 392, R.G. 115. (NMID116)

Before long, all of these drains would appear on the map of the land south of the Boise River.

It was during these years of drainage construction that the greatest engineering of these natural depressions occurred. For instance, construction or deepening of a drainage ditch through the so-called Nine Mile Creek – which showed up for the first time on a map (c. 1896) as “Eight Mile Lateral” (see Figure 8) – was indicated as being high priority on the map accompanying the 1914 engineer letter.¹³⁴ Cost estimates for the drainage of the Nampa-Meridian system were performed that year, but the Reclamation Service had concerns regarding the lands in the district that were not signed up with the water users association and therefore had no monetary obligation to the project.¹³⁵ Who would be responsible for the cost of drainage construction would in fact become a major concern.

The Nampa & Meridian Irrigation District Board considered the drainage work in 1914. They met in early April and voted to send a letter to each water user in the district, asking for the water users to carefully consider three schemes: a drainage system similar to or an extension of that being constructed by the Reclamation Service in the Pioneer Irrigation District; the purchase by the District of an interest in Arrow Rock Reservoir in order to supplement water rights during periods of low water; and the District's purchase of storage water rights for the Boise Project lands within the District boundaries. Their letter urged the adoption of a contract with the Service that would permit all three.¹³⁶ They also hired their own engineer to review the Reclamation Service plans.

In July, the Board's engineer reported his opinion regarding the proposed drainage contract with the Reclamation Service, recommending that the contract be executed at once. He noted that “the ditches as proposed will follow the natural drainage courses, except that where such courses are more or less tortuous, they will be straightened. In fact the location is such as to reduce the amount of material to be excavated to the minimum amount.”¹³⁷ At a special meeting of the Board on August 25, members unanimously adopted a resolution and general plan to purchase from the Boise Project an additional supply of water for 44,060 acres of heretofore dry lands (“Project Lands”), purchase a \$24,840 interest in Arrow Rock Reservoir to provide a supplemental water supply of 828 acre feet for old water right lands in the district, and enter into an agreement with the U.S. Reclamation Service for the drainage of seeped lands, benefits of which would include an increased water supply for the District and assessed to the old water right lands at a rate of only \$266,000.¹³⁸

¹³³ Map, Exhibit B, General Location of Proposed Drainage Ditches for the Nampa-Meridian Irrigation District, March 1914, 260-A BOISE PROJECT Drainage of Nampa Meridian Irrigation District 1914 Thru 260-B, Entry 3, Box 392, R.G. 115. (NMID116)

¹³⁴ “Exhibit “A,” Map Showing General Location of Proposed Drainage Ditches for the Nampa-Meridian Irrigation District,” 260-A BOISE PROJECT Drainage of Nampa Meridian Irrigation District 1914 Thru 260-B, Entry 3, Box 392, R.G. 115. (NMID116) A 1917 contract states clearly on pages 4-5 that Nine Mile Creek was sometimes known as Eight Mile Creek: Contract between the United States of America and Nampa-Meridian Irrigation District and the Heirs of J.J. Jones, deceased, June 22, 1917, 695-A3 (J) Boise Project, Idaho. Settlement of Waste Water Rights, Entry 3, Box 403, R.G. 115. (NMID128)

¹³⁵ F.E. Weymouth to Chief Engineer, Oct. 12, 1914, 260-A BOISE PROJECT Drainage of Nampa Meridian Irrigation District 1914 Thru 260-B, Entry 3, Box 392, R.G. 115. (NMID116)

¹³⁶ NMID Board Meeting Minutes, April 7, 1914. (NMID270)

¹³⁷ NMID Board Meeting Minutes, Aug. 4, 1914. (NMID270)

¹³⁸ NMID Board Meeting Minutes, Aug. 25, 1914. (NMID270)

The contract was intended to provide for a single system to solve the drainage issue for both public (still unpatented) and private lands, the costs of which would be apportioned equitably between old water right lands and public lands, so as not to overburden the public lands with a high cost system.¹³⁹

A draft of the contract was included with the August 25 Board minutes. It separated the construction into three phases to denote the order in which the drains would be constructed, with drains numbered “one” being highest priority and “three” intended for final construction. The contract made clear that the intent behind the construction of drains was to reclaim land which was uncultivable due to “seepage conditions.” It also provided a budget of \$557,000, which was intended to pay for construction but also to cover any damages resulting to users holding water rights on any of the “sloughs or natural channels” of the Nampa & Meridian Irrigation District.¹⁴⁰ The contract explained that the plan was only intended to provide for “principal drains,” and that individual and community farm drains might be necessary in order to “completely drain” the lands in the District. The contract also spelled out that the District would be in charge of maintenance, and would charge the cost of such to the old water right lands in the District in the same proportion as the cost of the construction, and that stored water from Arrow Rock would not be available to these lands since they had first priority rights. Finally, the contract outlined that the project lands in the District would be apportioned:

to the project lands in the District a total of Three Million Three Hundred Four Thousand Five Hundred (\$3,304,500) Dollars, being a charge of seventy-five (\$75.00) Dollars per acres the benefits under this contract to said lands; provided, however, that if the building charge per acre announced by the Secretary of the Interior in his Public Notice for similar lands of the Boise Project, is less than seventy-five (\$75.00) Dollars per acre, then the assessment of benefits against the project lands in the District shall be reduced to the same amount per acre as is announced by the Secretary of the Interior...and the District will collect the sums so apportioned to such project lands in the District and pay the same to the United States. ...The District will be reimbursed by the United States for the cost of distributing the water to said project lands in the District by the payment to the District of the pro-rata share of the cost of operation and maintenance provided in the contract of April 1, 1909. [sic]¹⁴¹

Finally, the contract provided for the cancellation of all individual contracts between landowners and the Payette-Boise Water Users Association in lieu of the new arrangement.¹⁴² The Idaho State Engineer approved the plans on September 2, 1914, and the election was to be held on October 10, 1914.¹⁴³

¹³⁹ Findings of Fact, May 20, 1915, p. 4-5. (NMID282)

¹⁴⁰ Perusal of Board minutes and other Board records demonstrates that this clause was utilized only to cover damages to users on Five and Ten Mile Creeks.

¹⁴¹ NMID Board Meeting Minutes, Aug. 25, 1914. (NMID270)

¹⁴² Findings of Fact, May 20, 1915, p. 6-7. (NMID282)

¹⁴³ NMID Board Meeting Minutes, Sept. 3, 1914; Oct. 12, 1914. (NMID270)

A contract was expected to solve the Reclamation Service's concerns since it would "[compel] all the lands in the district to pay their proportionate share of the project charges."¹⁴⁴ Thus, when the votes were tallied and found to be lopsidedly in favor of the contract by a count of 1206 to 160, the Service and the District Board were optimistic. The Board met several times in the next few months to determine a fair apportionment of the benefits of the drainage system across the District lands. In January, they received 47 written protests from land owners on the bench in the upper end of the District between Boise and Meridian who opposed the contract and the proposed assessments.¹⁴⁵ But in May, the Board finally determined the benefits that would accrue to each of the subdivision tracts from the drainage works due to be constructed by the United States, and filed said list and apportionment with the Idaho State Engineer.¹⁴⁶

In the meantime, the differences between water users in the District reared their ugly heads once again, this time in the courtroom. Following the election, and in accordance with the law, the District filed its petition with the District Court in the 7th Judicial District of Canyon County to examine, approve, confirm, and authorize the proceedings which led to the contract. Almost immediately, representatives of the 160 "no" votes filed an objection to the petition. They offered many arguments, among which were their recent conclusions that they were not in need of supplemental water per their individual contracts with the Payette-Boise Water Users Association, since their water rights were only partly served by the District and otherwise served by private water rights obtained through sub-irrigation, or wells. They disputed that the District could force them to pay for the new system, and that they would suffer economic damages at the presumed rate of \$75/acre for the work described and outlined in the contract and drainage plan.¹⁴⁷

Many landowners offered testimony that spring as part of the legal tangle that made its way through Judge Bryan's courtroom in 1915. They argued that they were not actually part of the Boise Project, and that the proposed (and elector-approved) plan was inequitable to them. In its responses, the District explained that each landowner would have the opportunity to challenge their individual assessment in court when the District filed its petition to approve and confirm the assessments, as they were required to do by law, but that the law was on their side for the execution of the contract. Bryan was convinced by the District's arguments, and issued his Findings of Fact and Conclusions of Law in favor of the District in May.¹⁴⁸

DRAINAGE CONSTRUCTION, 1915-1917

Drainage construction in the Nampa & Meridian Irrigation District evolved quickly after the litigation concluded. In June 1915, Nampa & Meridian Irrigation District finally signed the 1914 draft contract with the Reclamation Service to drain lands in their district. The total expenditure of \$557,000 for said drainage system was divided between the United States (\$291,000 to be paid by the United States for District lands watered by the Reclamation Service) and Nampa-Meridian

¹⁴⁴ F.E. Weymouth to Chief Engineer, Oct. 12, 1914, 260-A BOISE PROJECT Drainage of Nampa Meridian Irrigation District 1914 Thru 260-B, Entry 3, Box 392, R.G. 115. (NMID116)

¹⁴⁵ NMID Board Meeting Minutes, Dec. 14, 1914; Jan. 18, 1915. (NMID270)

¹⁴⁶ NMID Board Meeting Minutes, Feb. 13, 1915; May 4, 1915. (NMID270)

¹⁴⁷ In the Matter of the Nampa and Meridian Irrigation District, Answer and Cross-Complaint, p. 15

¹⁴⁸ Case file, Civil No. 1782, Canyon County Courthouse; Judgment and Findings of Fact and Conclusions of Law, May 20, 1915. (NMID282)

Irrigation District (\$266,000 to be paid for land watered by landowners holding water rights belonging to the District.) Under Reclamation laws, the District was enabled to collect the repayment money on behalf of the Service, and therefore assessed landowners under the revised system – once for delivery water, and a separate amount for drainage.

The greatest concern in the Nampa & Meridian Irrigation District was not the existing number of seeped acres, which was still relatively small, but the expected and imminent spread of such seeping.¹⁴⁹ The agreement included five pages of cost estimates, and proposed that the ditches would “follow the natural drainage courses as closely as feasible, and...be straightened and deepened.” These courses were: Five Mile Creek, Purdam Gulch, Wilson Slough, and Elijah Slough. All ditches in the Nampa & Meridian District, with the exception of the Five Mile Creek and Ten Mile Creek Drainage Systems, would discharge into drainage ditches in the Pioneer Irrigation District below the Phyllis Canal. The agreement listed Ten Mile Creek along with Nine Mile Creek, and Sky Pilot, Orr, Joseph and Aaron Sloughs as the “drains together with their branches [that] compose the entire system.”¹⁵⁰

The Reclamation Service planned to construct the drains in three phases, according to the most urgent need based on swamped lands. The first phase, or “Number 1” drains, included alterations to almost five-and-a-half miles of Five Mile Creek, and the entire planned construction of Ten Mile Creek, Nine Mile Creek, Wilson Slough, Elijah Slough, and Orr Slough. The “Number 2” drains included the final two miles of construction on Five Mile Creek, Purdam Gulch, and Joseph Slough. The final phase, consisting of the “Number 3” drains, included the Aaron and Sky Pilot Sloughs. In total, construction of the drains was expected to result in the excavation of almost 1.3 million cubic yards of material, deepening the natural surface depressions in the District, thereby relieving the waterlogged lands of their excess water and making them productive again.¹⁵¹ [See Figure 11.] The contract signing was followed by water measurements in open test wells throughout the district.¹⁵²

As the Reclamation Service prepared to execute the work, they set about obtaining the needed rights-of-way for the new waterways. Because the land in the District had been settled many decades prior, virtually all of it was privately owned. According to the 1916 project history, “the work of securing rights of way has...constituted a considerable portion of the year’s work for the survey party, the office engineer and the drainage engineer.” By year’s end, the Service had obtained 69.59 acres of right-of-way through donations and 88.79 acres through purchase at an average price of \$89.60 per acre. Condemnation suits were pending on two additional tracts.¹⁵³

¹⁴⁹ Annual Project History of Boise Project Idaho for 1915, 246-47, Boise, Vol 7, 1915, Entry 10, Box 33, R.G. 115. (NMID97)

¹⁵⁰ 1915 Agreement, United States of America and Nampa & Meridian Irrigation District, 13, Contracts, 1900-1940, Nampa & Meridian Irrigation District archives (NMID64)

¹⁵¹ Nampa-Meridian Drainage System, Estimate of Cost, March 24, 1914, 260-B BOISE PROJECT Drainage of Nampa Meridian Irrigation District Contracts 260-B, Entry 3, Box 392, R.G. 115. (NMID117)

¹⁵² Nampa-Meridian Drainage System, Estimate of Cost, 260-B BOISE PROJECT Drainage of Nampa Meridian Irrigation District Contracts 260-B, Entry 3, Box 392, R.G. 115. (NMID117)

¹⁵³ Annual Project History of Boise Project, Idaho for 1916, Boise, Vol. 8, 1916, Entry 10, Project Histories 1902-1932, Box 33, R.G. 115. (NMID99) The U.S. Reclamation Service was not required to obtain rights-of-way for the drainage construction that commenced pursuant to the contract on lands settled *after* October 2, 1888, thanks to a law passed by Congress on that day. The legislation was intended to permit the U.S. Geological Survey to survey the entire West for national irrigation projects under Major John Wesley Powell,

During and after construction, many additional landowner accommodations were necessary, as the newly constructed drains impeded landowners' access to their lands. The modification most frequently needed by landowners was the placement of bridges across newly constructed drains, since many of the drains segmented otherwise cohesive parcels of land. During the two-year course of drainage system construction, many bridges were built over the drains, including: Elijah, Wilson, Ten-Mile, Purdam, Nine Mile,¹⁵⁴ and Sky Pilot.¹⁵⁵

Alterations to the existing creeks during the drainage construction were so great that other adjustments to the system were needed, as well. For instance, waste water rights filed in the 1890s (when irrigation return flows and waste water began to accumulate in Five and Ten Mile Creeks) were compromised by the deepening of these drainage channels, since the lowered surface water level removed the gravity needed to continue diverting water into the owners' pre-existing laterals. The District signed many agreements to settle such issues during the years of drainage construction and to accommodate new methods of delivery.¹⁵⁶ Even Settlers Irrigation District – which had been utilizing the course of Five Mile Creek to deliver water for decades (see Section 1 of this report for details) – signed an agreement with the United States that allowed the Reclamation Service to move the canal company's facilities.¹⁵⁷

The Reclamation Service began to analyze the drainage work at the end of 1916. Generally, the work was successful, with workers having excavated 725,498 cubic yards of material and reclaimed 6,000 acres of seeped land in the Nampa & Meridian Irrigation District in 1916 alone. The year-end assessment underscored the man-made character of these various new creeks, although the changes would become even more evident in ensuing years. For instance, Reclamation engineer D.J. Paul began his annual report on drainage in the area below the Boise Project by describing the region: "The only natural water courses of any considerable extent are those of Indian Creek, Five Mile Creek, and Ten Mile Creek." Paul then explained that "during the year 1916, *the natural water courses of Five mile Creek and Ten Mile Creek have been replaced thru* [sic] this section by the constructed system of deep drains, a great portion of the drainage area lying below the Ridenbaugh

and once passed, was followed by the General Land Office withdrawing 850,000,000 arid acres from entry and reclaiming it for the federal government. Thus, the government did not require rights-of-way for reclamation work on any parcel that was settled after that date. In cases where the government did in fact need the right-of-way, many landowners donated it in exchange for a bridge being built over the drain or some other accommodation. One exception was a group of land owners living in Section 7 of T3N, R1E that made what the District believed were "unreasonable" demands on the United States and the District for rights of way through their lands. Therefore, on March 6, 1917, the Board authorized and instructed the Reclamation Service to stop the construction of Five Mile Drain on the north side of the section. Annual Report of the Commissioner of the General Land Office for the Fiscal Year Ended June 30, 1890, "Public Lands of the Arid Region," citing Executive Document No. 136, Senate, 51st Cong., 1st sess. (Oct, 2, 1888), (25 Stat. 526), pg. 59 (NMID279); NMID Board Meeting Minutes dated: June 6, 1916 (Elijah); Nov. 9, 1916 (5- or 9-mile); Jan. 4, 1917 (Purdam Drain and Ten Mile); Feb. 6, 1917 (Ten Mile); March 6, 1917 (Five Mile); April 3, 1917 (Ten Mile).

¹⁵⁴ For each bridge over Nine Mile, the land descriptions offered in every case referred to the location of a portion of the previously referred to Eight Mile Lateral, per NMID 164.

¹⁵⁵ NMID Board Meeting Minutes, June 6, 1916-Dec. 3, 1918 (entire). (NMID272)

¹⁵⁶ See NMID64, NMID128, NMID124, NMID123, NMID127 as examples, and NMID Board Meeting, June 6, 1916-Dec. 3, 1918 (entire). (NMID272)

¹⁵⁷ United States 1917 Agreement with Nampa & Meridian Irrigation District, Settlers Canal and Five Mile Drainage Canal, Contracts, Nampa & Meridian Irrigation District archives. (NMID64)

Canal brought within the limits of the affected area of deep drainage.”¹⁵⁸ [Emphasis added.] The Five Mile Creek system, construction on which began in February 1916, consisted of 26 miles of drains by the end of that year. Paul detailed the results in this way: “It follows that at the beginning of the year the seepage inflow was but a small part of the discharge. At the end of the year seepage inflow became a considerable factor.”¹⁵⁹ A table that was included in the 1916 report showed that Mason Creek Drain discharge increased by more than 20,000 acre-feet, Five Mile Creek by 20,000 acre-feet, and Indian Creek by 4600 acre-feet.¹⁶⁰ Even so, the impact of the drains on the system’s hydrology was only starting to be realized.

As noted above, drainage work had commenced under the Pioneer contract in 1913, and work began in the Nampa & Meridian District in 1915. Construction did not always proceed as planned, since alterations to the original scheme were periodically required when plans did not perfectly translate on the ground. In most cases, the changes involved extensions of planned drains so that they could serve additional lands. In other cases, it was determined that the proposed drain needed to be deeper or even to take a slightly different course. At the end of 1916, only Five Mile, Ten Mile, and Sky Pilot remained incomplete.¹⁶¹

By 1918, the Service began to report on the major hydrological changes that had begun to appear in the wake of drainage construction. One study described the pre-drainage conditions this way:

under irrigated areas there was a more or less rapid rise of the ground water table until a point was reached where part of the areas became seeped and swamped and the evaporations together with the natural drainage and the less application of water on account of diminished crop area established a partially balanced condition.

The unproductive lands were unsatisfactory, and the engineers’ goal with the drainage construction was to establish this same “balanced condition” between surface and ground water while *also* facilitating the cultivation of land.¹⁶²

¹⁵⁸ Report on Drainage Investigation of Pioneer and Nampa-Meridian Districts in Boise Valley for the year 1916, 4-5, BOI-530.00-16C-1, Report on Drainage Investigations 1916, Project Reports, 1910-1955, Box 60, R.G. 115, p. 6. (NMID89). Patent files for lands in upstream portions of Indian Creek, such as Townships 1 North, Ranges 2 & 3 East underscored the dry nature of that creek into these later years. One such patentee explained that “Indian Creek ... does not carry water all the time,” and that his efforts to obtain irrigation water from Indian Creek for seven years demonstrated “that it would be wholly and totally impossible to develop sufficient water for the irrigation of land.” (Aug. 30, 1915) His witness explained that “there is no water in the creek only flood water in the spring.” (Oct. 27, 1917) Desert Land Entry Patent File 623602, T1N, R2E, Halvor Jorde, Box 22087, Land Entry Files, Boise City. (NMID241)

¹⁵⁹ Discharge of Drains, by D.J. Paul, 1916, part of Annual Project History of Boise Project, Idaho for 1916, Boise, Vol. 8, 1916, Entry 10, Project Histories 1902-1932, Box 33, R.G. 115. (NMID99)

¹⁶⁰ Discharge of Drains, by D.J. Paul, 1916, part of Annual Project History of Boise Project, Idaho for 1916, Boise, Vol. 8, 1916, Entry 10, Project Histories 1902-1932, Box 33, R.G. 115. (NMID99)

¹⁶¹ Discharge of Drains, by D.J. Paul, 1916, part of Annual Project History of Boise Project, Idaho for 1916, Boise, Vol. 8, 1916, Entry 10, Project Histories 1902-1932, Box 33, R.G. 115. (NMID99)

¹⁶² “Report on How the Return Flow from Land on the South Side of the Boise River is Effected by Drainage, Evaporation, and Reservoir Losses, Supplimentary [sic] to the 1916 and 1917 Drainage Reports for the Pioneer and Nampa-Meridian Districts,” by W.G. Steward, 260-A BOISE PROJECT Drainage of Pioneer Irrigation District 1915-1919 260-A, Entry 3, General Administrative and Project Records, 1902-1919, Box 391, R.G. 115. (NMID110)

It took some months before such equilibrium was achieved, and when it was, major changes to the hydrology had occurred. *Prior* to drain construction, “the ground was fully saturated at the beginning of the irrigation season.” *Immediately* after construction, a great deal of the water applied immediately ran off into the drains instead of into the ground and was carried off during the early irrigation months of June and July. But soon, there was a major and permanent shift. As the system moved toward a balance between surface and ground water, the period of maximum discharge of return flows to the Boise River occurred in August and September instead of June and July. One engineer explained it this way: “This is very important because the Boise River is usually at maximum discharge in May and June and at the low stages in Aug. and Sept. hence these drains suppliment [sic] the river rights during the low water period.”¹⁶³ Thus, the increased runoff caused by the drainage construction, which was accounted for in part by the fact that evaporation was reduced over the impacted area, helped supply farmers with late season irrigation water, as well.¹⁶⁴ The entire system of water rights and deliveries had been altered by draining these seeped lands and constructing the surface drains.

Construction of the Wilson Drain is a telling example of how the drainage work and additional water developed together. The Wilson Drain was one of the first to be constructed during the project, and was intended to drain the waterlogged lands near the modern-day Nampa Fish Hatchery. However, the completed product provided only partial (and temporary) relief from the problem. By 1919, the seepage problem had spread. In a June 25, 1919 letter, the Drainage Engineer for the Bureau of Reclamation wrote the following:

Seepage on the Upper Wilson Drain is very much worse than in previous years and probably over one hundred acres is now badly affected. In the study of existing ground water data, it seems probable that the seepage water is an accumulation of irrigation and canal losses on the higher surrounding areas and that the Deer Flat Reservoir losses have little or no effect on this area. The deep percolating seepage water finds its way into the porous lava beds which underlie the higher areas as well as in the immediate vicinity of the seeped tract and causes water-logging by direct upward pressure.¹⁶⁵

The new, additional solution for drainage was to drill wells. The Drainage Engineer explained the rationale to provide drainage for the seepage:

It seems probable that no relief could be afforded by ordinary drainage means since the present water-logged condition extends to the banks of the present deep drain and the proposed method of drilling deep wells under the lava rock is believed to be

¹⁶³ “Report on How the Return Flow from Lands on the South Side of the Boise River is Effectcd by Drainage, Evaporation, and Reservoir Losses, Supplimentary [sic] to the 1916 and 1917 Drainage Reports for the Pioneer and Nampa-Meridian Districts,” by W.G. Steward, 260-A BOISE PROJECT Drainage of Pioneer Irrigation District 1915-1919 260-A, Entry 3, General Administrative and Project Records, 1902-1919, Box 391, R.G. 115. (NMID110)

¹⁶⁴ B.E. Stoutmeyer to Chief Counsel, U.S. Reclamation Service, June 6, 1918, 260. Boise Project Engineering Reports, etc. January 1, 1917 - June 30, 1919 260. Entry 3, General Administrative and Project Records, 1902-1919, Box 390, R.G. 115. (NMID107)

¹⁶⁵ Drainage Engineer to Chief of Construction, June 25, 1919, 260-B BOISE PROJECT General Correspondence re Drainage of Lands 260-D, Entry 3, General Administrative and Project Records, 1902-1919, Box 393, R.G. 115. (NMID118)

a proper method of accomplishing drainage. It seems probable that a considerable flow *can be developed by such wells* since there is available at grade elevations of the Wilson drain approximately a maximum head of 20 feet. [Emphasis added.]¹⁶⁶

The engineer enclosed a 1912 map of the drainage system (including the Wilson Drain) with his letter, showing the proposed location of the Wilson Drain prior to construction. As it appeared in his enclosure, the 1912 map had been modified to indicate the approximate location of the new, additional "Seepage on Upper Wilson Drain."

Efforts to drain the seeped area by drilling three 6-inch wells began as early as 1919. The Project Manager penned a letter on August 16, 1919 and enclosed another map which depicted the locations of the new wells.¹⁶⁷ It explained that engineers had encountered lava rock a short distance below the surface in the wells, and a large water-bearing seam was encountered at a depth of 45 to 65 feet. The wells produced a combined flow of approximately 6.5 cfs.¹⁶⁸

The 1919 Annual Project History discussed the well drilling progress, and noted that improvement had been observed in the wet condition of the area.¹⁶⁹ But the 1919 irrigation season was very dry, and little irrigation water was applied in the area after the end of August. Flow from the wells diminished significantly thereafter in September and October. However, it was but temporary relief. The 1920 "Annual Project History" picked up the theme of seepage conditions at the head of the Wilson Drain again:

As mentioned in the 1919 Project History, since the construction of the Wilson Drain by the Government for the Nampa & Meridian Irrigation District, a portion of the land adjacent to the upper end of the drain remained water-logged. Despite the fact that three flowing wells were drilled in the area in the early fall of 1919, and four more in the spring of 1920, the seepage conditions remained bad. Five more wells were drilled in the late fall of 1920, and these five at the present time are flowing more than the seven previously drilled. At the end of the year all of the wells were flowing a total of 10 cubic feet per second. It will take some time to see what effect the additional wells have in draining this area.

The flow of these wells is into the constructed Wilson Drain, from which a feeder canal diverts at the lower end to water the lands of the Notus extension. Thus, if the constructed flowing wells are not effective in draining the seeped area referred to, they will be put to beneficial use in the irrigation of new lands. *If they do drain this*

¹⁶⁶ Drainage Engineer to Chief of Construction, June 25, 1919, 260-B BOISE PROJECT General Correspondence re Drainage of Lands 260-D, Entry 3, General Administrative and Project Records, 1902-1919, Box 393, R.G. 115. (NMID118)

¹⁶⁷ Boise Project Manager to Chief of Construction, Aug. 16, 1919, General Correspondence regarding Drainage Thru 1929, General Administration and Project Records, 1919-1945, Box 436, R.G. 115. (NMID82)

¹⁶⁸ Boise Project Manager to Chief of Construction, Aug. 16, 1919, General Correspondence regarding Drainage Thru 1929, General Administration and Project Records, 1919-1945, Box 436, R.G. 115. (NMID82)

¹⁶⁹ Annual Project History for Boise Project, Idaho for 1919, Boise, Vol. 11, 1919, Entry 10, Project Histories 1902-1932, Box 34, R.G. 115. (NMID108)

area, they will serve the double purpose of drainage and irrigation. [Emphasis added.]¹⁷⁰

With work like that done on the Wilson Drain and others like it, the creeks whose flows had been altered by the commencement of artificial irrigation in the 19th century were transformed once again. The deepening of their channels and diversion of drainage water into them caused a great increase in flow that became more regular and consistent throughout the months of the year. The construction of the drains also developed *additional* seepage water flows, flows that the District was entitled to recapture pursuant to its 1915 contract with Reclamation and state law. The volume of water developed in these drains was significant. In describing the changed hydrology of the system and the hydrographs created to demonstrate the changes, Reclamation engineer W.G. Steward explained in 1918 that, “the shape of the discharge curves prior to the diggings of the drains is *materially different* from the curves subsequent to drainage.” [Emphasis added.] Referring to the changes in the system that had taken place since the alterations of Indian Creek, Mason Creek, Five Mile Creek and Wilson Creek, Steward noted that “since the drains were dug the crop acreage has been increased due largely to the cultivation of the areas which were previously seeped or swamped. The ground water over the affected area has been lowered and has reached a fairly stable condition so that the main increase in the permanent ground water storage will occur [sic] on the lands above the present drains.”¹⁷¹ Figures 18-21, which demonstrate pre-construction and post-construction discharges for Indian Creek, Five Mile Creek, and Mason Creek, make clear the significance of the hydrological alterations resulting from the drain construction. Similar changes took place on the other drains, as well. Today, many of these drains flow at a depth approaching eight feet. Finally, the construction of the drains also altered the routes of these creeks significantly, the result of which can be seen in Appendices 2 and 3, attached to the end of this report. [See Appendices 2 and 3.]

The following sections indicate original plans for the drains as well as the alterations that took place during construction. In the 1915 contract, the system was separated into five separate drainage systems, which is how they will be described herein.

FIVE MILE DRAINAGE SYSTEM

The drains making up the Five Mile drainage system included Five Mile, Nine Mile, and Sky Pilot drains. Together, the drains made up the biggest section of the initial drainage system in the Nampa & Meridian Irrigation District.

The original plans for Five Mile Creek estimate the stream’s post-construction discharge to be between 62 and 90 second feet, creating a water surface area of between 13.6 and 16.6 feet and a water depth (as opposed to channel depth) of 1.2 – 2.2 feet. The drains were ultimately cut to a

¹⁷⁰ Annual Project History for Boise Project, Idaho, 133-134, Boise, Vol 12, 1920, Entry 10, Project Histories 1902-1932, Box 34, R.G. 115. (NMID109)

¹⁷¹ “Report on How the Return Flow from Land on the South Side of the Boise River is Effected by Drainage, Evaporation, and Reservoir Losses, Supplimentary [sic] to the 1916 and 1917 Drainage Reports for the Pioneer and Nampa-Meridian Districts,” by W.G. Steward, 260-A BOISE PROJECT Drainage of Pioneer Irrigation District 1915-1919 260-A, Entry 3, General Administrative and Project Records, 1902-1919, Box 391, R.G. 115. (NMID110)

depth of about eight feet below the existing creek channels.¹⁷² To accomplish this, 358,920 cubic feet of soil was excavated in order to drain the 27,000+ acres of land in the system.¹⁷³

Nine Mile Creek – previously known as the Eight Mile Creek Lateral – was estimated to generate a nine (9) second feet discharge following construction, with a base width of five (5) feet, water surface of 7.1-7.7 feet, and water depth of between .7 and .9 feet. This drain was also eventually deepened. To accomplish the drainage of 3,150 acres of land, 134,725 cubic yards of material was excavated.¹⁷⁴

The Sky Pilot Drain (or slough) was the smallest of the three in this drainage system. It was planned to carry a discharge of four (4) second feet by giving it a base width of five (5) feet, which would generate a surface water width of 6.8 feet and a water depth of .6 feet. The Service expected to excavate 59,420 cubic yards of material to construct the drain.

Name	Est. Dis. Sec. Ft.	Base Width	Water Surface in feet	Water Depth in feet	Acreage Drained	Cubic Yards	Length in miles	Priority ¹⁷⁵
Five Mile	62-90	10'	13.6-16.6	1.2-2.2	27,165	358,920	12.23	1
Nine Mile	9	5'	7.1-7.7	.7-.9	3,150	134,725	3.64	1
Sky Pilot	4	5'	6.8	.6	1,175	59,420	2.27	3

Work to deepen and widen Five Mile Creek was done in 1915. But the plans for the Five Mile drainage system were altered slightly over the course of the two years of construction. For instance, on November 8, 1915, the Nampa & Meridian Irrigation District Board met and entertained a change proposed by Reclamation Engineer J.L. Burkholder, in charge of drainage construction under the plan approved by the Board on August 25, 1914. Burkholder requested that instead of utilizing the Five Mile Creek channel all the way to the Boise River, that a change in course be made for the Five Mile Drain, diverting it from Five Mile Creek near the center of Section 21, Township 4 North, Range 2 West, and then running it westerly along the foot of the bluff through Sections 21, 20, and 19, ultimately discharging into the Lower Mason Creek Drain as it was then constructed in the NW 1/4 of the NW 1/4 of Section 19, Township 4 North, Range 2 West. The Board approved the change.¹⁷⁶ Additionally, as the construction entered into its final phase, the Nampa & Meridian Irrigation District board approved an extension for Sky Pilot in January 1917, taking it an additional

¹⁷² Board of Engineers to Chief of Construction, Feb. 8, 1916, BOI-530.00-16-02-08 Project Manager's Copy, 5 & 10 Mile Drainage Channels - Coop. Drainage, Feb. 8, 1916, Project Reports, 1910-1955, Box 60, R.G. 115. (NMID90)

¹⁷³ June 1, 1915 Contract between the Nampa & Meridian Irrigation District and the United States of America, Nampa & Meridian Irrigation District archives. (NMID276)

¹⁷⁴ June 1, 1915 Contract between the Nampa & Meridian Irrigation District and the United States of America, Nampa & Meridian Irrigation District archives. (NMID276)

¹⁷⁵ The drains were to be built in order of priority in three groupings. This number refers to the group in which each drain was planned, as described earlier in this report.

¹⁷⁶ NMID Board Meeting Minutes, Nov. 8, 1915. (NMID270)

one-half mile to the southeast, heading near the east quarter corner in Section 4, Township 3 North, Range 1 West.¹⁷⁷

TEN MILE DRAINAGE SYSTEM

The Ten Mile Drainage system, while made up of only one drain, was the second largest in the proposed system. Engineers explained that conditions for the Ten and Five Mile were “essentially different...as the storm run-off from relatively large and un-irrigated areas is naturally tributary to them.”¹⁷⁸ Therefore, extensions and enlargements were necessary. Ten Mile was originally designed to permit a discharge of 34 second feet of water and drain 8,710 acres. To carry this, the creek was to be deepened and widened by excavating 389,950 cubic yards of material in order to create a base width of six (6) feet, a surface width of 9.4-10.8 feet, and a water depth of 1.1 – 1.6 feet.¹⁷⁹

Name	Est. Discharge Sec. Ft.	Base Width	Water Surface in feet	Water Depth in feet	Acreage Drained	Cubic Yards	Length in Miles	Priority
Ten Mile	34	6'	9.4-10.8	1.1-1.6	8,710	389,950	Total: 14.4	1

But more than a year after construction began, it was clear that additional work in Ten Mile Creek would be necessary. In December 1916, the Nampa & Meridian Irrigation District Board recognized that the developing system required the Ridenbaugh Canal to waste “large quantities of water” into Ten Mile Creek at the crossing. To accommodate the volume – at least 50% of the maximum capacity of the Ridenbaugh Canal – the Board authorized the Reclamation Service to construct a reinforced concrete structure at the point where the drain and Ridenbaugh canal intersected in order to allow the water to be “delivered from said Canal into said Ten Mile Drain.” They also approved the extension of Ten Mile Drain for an additional 1.5 miles to the southeast, so that it would head further upstream in Section 33, Township 3 North, Range 1 East. (It was previously designed to head in Section 29). The extension was needed in order to “properly drain lands” further up in the system that were now showing signs of seepage.¹⁸⁰

PURDAM GULCH DRAINAGE SYSTEM

The Purdam Gulch drainage system was the third largest of the set. Planned for the drainage of 11,195 acres, it was engineered to provide capacity for 20-28 second feet of discharge by

¹⁷⁷NMID Board Meeting Minutes, March 7, 1916, 173; Jan. 5, 1917, 250, Nampa & Meridian Irrigation District archives. (NMID270 & NMID272) A 1916 report explained that unlike Five and Ten Mile Creeks the Nine Mile Drain was not subject to a “drainage area above the irrigated land likely to discharge into it,” which confirmed that this was not a natural creek.¹⁷⁷ (See Figure 9.)

¹⁷⁸ Board of Engineers to the Chief of Construction, February 8, 1916, quotes at 2, 9, 260-A BOISE PROJECT Drainage of Nampa Meridian Irrigation District 1915 Thru 260-B, Entry 3, Box 392, R.G. 115. (NMID 115)

¹⁷⁹ June 1, 1915 Contract between the Nampa & Meridian Irrigation District and the United States of America, Nampa & Meridian Irrigation District archives. (NMID276)

¹⁸⁰ NMID Board Meeting Minutes, Dec. 5, 1916. (NMID272)

excavating 120,020 cubic yards of material, providing a base width of five (5) feet, a water surface width of 8-9.8 feet, and a depth of 1-1.6 feet.¹⁸¹

Name	Est. Discharge Sec. Ft.	Base Width	Water Surface in feet	Water Depth in feet	Acreage Drained	Cubic Yards	Length in Miles	Priority
Purdam Gulch	20-28	5'	8.0-9.8	1.0-1.6	11,195	120,020	3.64	2

On August 1, 1916, as the Reclamation Service entered phase two of construction, the Nampa & Meridian Irrigation District approved the Reclamation Service's plan to extend the Purdam Drain beyond its initial end point a short distance to the south, in order "to connect with a natural depression which exists at this point." The drain would now extend across the State highway and across the Interurban Rail Road Company, though still remain in Section 10, Township 3 North, Range 1 West.¹⁸²

ELIJAH SLOUGH DRAINAGE SYSTEM

The Elijah Slough Drainage System was the third largest in the plan and included the Elijah, Joseph, and Aaron drains. Together, they were to drain more than 15,000 acres through the excavation of almost 300,000 cubic yards of material. The Elijah was the biggest of the three, engineered to handle a discharge of between 23 and 33 second feet through the excavation of 123,650 cubic yards of material, creating a base width of five (5) feet, a water surface of 9.8 – 11 feet, and a water depth of 1.2-1.5 feet. The Elijah alone was intended to drain 13,040 acres. The second largest drain in this subsystem was the Joseph drain, constructed to carry only 3.5 second feet of water, although it, too, would be five (5) feet wide at its base, run water at .5 feet, and have a surface width of seven (7) feet. It was intended to drain 960 acres through the excavation of 95,160 cubic yards of material. Finally, the Aaron drain was expected to carry an estimated discharge of four (4) second feet, with a base width of five (5) feet, a water depth of .5 feet, a surface width of seven (7) feet, and an excavation of 79,080 cubic yards. The Aaron was intended to drain 1,140 acres.¹⁸³

Name	Est. Discharge Sec. Ft.	Base Width	Water Surface in feet	Water Depth in feet	Acreage Drained	Cubic Yards	Length in Miles	Priority
Elijah	23-33	5'	9.8-11	1.2-1.5	13,040	123,650	3.68	1
Joseph	3.5	5'	7	.5	960	95,160	2.9	2
Aaron	4	5'	7	.5	1,140	79,080	1.51	3

¹⁸¹ June 1, 1915 Contract between the Nampa & Meridian Irrigation District and the United States of America, Nampa & Meridian Irrigation District archives. (NMID276)

¹⁸² Board Meeting Minutes, Aug. 1, 1916 (NMID272)

¹⁸³ June 1, 1915 Contract between the Nampa & Meridian Irrigation District and the United States of America, Nampa & Meridian Irrigation District archives. (NMID276)

Although the Joseph was meant to be constructed after the Elijah was completed, the Reclamation Service requested permission from the Nampa & Meridian Irrigation District Board in January 1916 to construct a portion of the Joseph Drain before completing all of the class 1 drains, those slated for the first phase of construction. The government wanted to construct the Joseph Drain, a drain which stretched from Section 33, Township 3 North, Range 2 West northwest and drained into the Elijah Slough Drain in Section 20 of the same township,¹⁸⁴ before constructing the Elijah, even though the Elijah was in class 1 and the Joseph in class 2. In January, the Nampa & Meridian Irrigation District Board of directors approved the change. (See Figure 10.)¹⁸⁵ By March 7 of that year, the construction of the Elijah Drain also needed further refinement. Originally designed to end about 1000 feet north of the southeast corner of Section 35, T3N, R2W, Reclamation came to the Board and requested permission to survey and construct an additional 1.5 miles of drain to the southeast in order to "properly drain the land, which naturally drains into this drainage channel." The Board approved the request.¹⁸⁶

A few years following the completion of construction, the Nampa & Meridian Irrigation District Board heard a request from N.L. Moen, the owners of property in the NE 1/4 of Section 2, in T2N, R2W, that the District extend the head of the Aaron Drain to the location where the "natural channel" crosses the Murphy branch of the OSL Rail Road adjacent to his land. He also wanted the District to lower the culvert under the Murphy branch by four feet. The Board asked the Manager to talk to the USRS about making an examination and report on the drainage of this land, and also to provide an estimate.¹⁸⁷ It is unclear whether this extension was ever completed.

WILSON CREEK DRAINAGE SYSTEM

The Wilson Creek drainage system included the Wilson drain and the Orr drain. Together, they were expected to drain approximately 12,000 acres through the excavation of more than 200,000 cubic feet of material. The Wilson drain, with a base width of five (5) feet, was expected to carry a discharge of between 13 and 27 second feet of water. Its water surface width would be 9.8 – 11 feet and its depth would be 1.2 – 1.5 feet. It would drain 10,530 acres through the excavation of 154,336 cubic yards of material. The Orr drain would carry a discharge of 5.1 second feet of water through engineering a base width of five (5) feet. Its water depth would be .5 - .6 feet and its surface width 7.0 – 7.4 feet. It would drain 1,530 acres through the excavation of 53,390 cubic yards of material.¹⁸⁸

Name	Est. Discharge Sec. Ft.	Base Width	Water Surface in Feet	Water Depth in feet	Acreage Drained	Cubic Yards	Length in Miles	Priority
Wilson	13-27	5'	9.8-11.0	1.2-1.5	10,530	154,336	3.79	1
Orr	5.1	5'	7.0-7.4	.5-.6	1,530	53,390	1.51	1

¹⁸⁴ Nampa & Meridian Irrigation District Board Minutes, Jan. 4, 1916, 165, Nampa & Meridian Irrigation District archives, Nampa & Meridian Irrigation District archives. (NMID65)

¹⁸⁵ NMID Board Meeting Minutes, Jan. 4, 1916. (NMID270)

¹⁸⁶ NMID Board Meeting Minutes, March 7, 1916. (NMID270)

¹⁸⁷ NMID Board Meeting Minutes, June 1, 1920. (NMID268)

¹⁸⁸ June 1, 1915 Contract between the Nampa & Meridian Irrigation District and the United States of America, Nampa & Meridian Irrigation District archives. (NMID276)

The Wilson Drain provides another excellent example of the changes in flow brought by the drainage construction. In this case, the discharge of Wilson Creek drain in 1915 was 34,662 acre-feet, but additional excavation totaling 206,049 cubic yards of material and the natural move toward equilibrium between surface and ground water brought that drain's discharge to 54,828 acre-feet at the end of 1916.¹⁸⁹ In fact, the Wilson Drain was never able to fully drain the surrounding lands, and property owners later dug wells in the area – financed in part by the District – to provide further relief, creating an additional water supply voluminous enough to support a fish farm facility.¹⁹⁰

APPORTIONMENT AND ASSESSMENT

By late 1917, much of the drainage work had been completed and had come in significantly under budget. When the District signed the 1915 contract it also decided upon a benefits and assessment schedule that would assess all agricultural landowners in the District equally based on the benefits that would accrue to each tract or subdivision of land. The Board filed its apportionment plan and petition with the District Court in 1915 for confirmation immediately after signing the contract with the United States,¹⁹¹ but the complicated nature of the petition and the number of individuals protesting the plan greatly delayed the settlement. Protestants consisted of landowners in upper portions of the District whose lands were not in immediate need of drainage work and who did not feel that they should be required to pay any part of the system's cost. As part of the legal proceedings that slowly unfolded, a lengthy trial on the petition occurred between November 1917 and January 1918, during which many landowners in the District provided testimony regarding the proposed assessment of their lands.¹⁹² Then, unexpectedly, the judge in charge of the case died, further delaying the process. The courts did finally make a decision regarding the apportionment plan, approving the District's assessments at \$7/acre across the board, the price that landowners would have to pay to maintain the facilities to serve their original intent: drainage of the land and delivery of a secondary supply of storage water.¹⁹³

But just as the court handed down its decision, construction of the drainage system was being completed. A system map created in 1917 following the system's implementation demonstrates the level of human engineering present in the area. (See Figure 14.) A Drainage Investigation report for that year analyzed the total drainage area of the West End, Dixie, Mason Creek, and Five Mile Creek Drain Systems, as well as the Indian Creek system which included the Wilson Creek drain system. D.J. Paul provided a narrative description of the system in his report. The smallest of the areas, the

¹⁸⁹ Discharge of Drains, by D.J. Paul, 1916, part of Annual Project History of Boise Project, Idaho for 1916, Boise, Vol. 8, 1916, Entry 10, Project Histories 1902-1932, Box 33, R.G. 115. (NMID99)

¹⁹⁰ See for example, NMID Board Meeting Minutes regarding Hosack Wells, Nov. 29, 1929 (NMID348); Sept. 4, 1934. (NMID349)

¹⁹¹ Petition in the Matter of the Board of Directors of Nampa – Meridian Irrigation District for the Examination, Approval, and Confirmation of the Assessment, Apportionment, and Distribution of Costs of Certain Works of Said District upon the Lands Within the District," June 5, 1915. Civil No. 3238 (Petition is not actually available, but reference to it was made on the ledger of actions in the case.), Canyon County Courthouse, Idaho. (NMID281)

¹⁹² SHRA has searched for the transcript of this proceeding, but has not been unable to uncover it.

¹⁹³ "Flat Rate is Confirmed," *The Idaho Daily Statesman*, July 11, 1918. (NMID324)

Dixie Drain, had a single tributary drain, the Yankee. The West End Drain's system had two tributaries, the Parker Drain and the Bardsley Drain. Five Mile Creek's system had three tributaries (Ten Mile, Sky Pilot, and Nine Mile), while Mason Creek Drain had five (Solomon, Lower Five Mile, Noble, Madden Spur, and Grimes). The Indian Creek system had the largest number of tributaries (East Caldwell, Moses, Midway, and Nampa drains, along with Indian Creek itself) with Wilson Creek serving as a tributary with tributaries of its own (Orr, Upper Embankment and Jonah Drain) in addition to the Elijah Drain (tributary to Wilson Creek) which was fed by Isaiah, Joseph, and Aaron Drains.¹⁹⁴

With construction complete and a significant amount of money remaining in the budget, the District Board met in November 1917 and agreed that a supplementary contract with the Reclamation Service was in order to address repayment, cost, and additional water supply needed on lands in Nampa. The new agreement specified that the primary drainage construction would be terminated at a cost not to exceed \$340,000 (as opposed to the original cost of \$557,000), leaving some funds from the original budget available to pay any contingent liabilities. The supplemental contract also noted that a new law passed on August 13, 1914 known as the Reclamation Extension Act, would have the effect of extending repayment of charges from the 1915 contract an additional 10 years from the original 10. The same proportion of the final construction costs would be charged to old water right lands in the District as had been contemplated in the original contract, and payments would be due annually. Voters authorized the District to enter the contract on December 11, 1917. By the time the Board determined the benefits for each tract or subdivision for apportionment in September 1918, approval of the flat rate assessment for the first apportionment of benefits had been handed down, and so the Board took the same approach for the supplemental contract. They heard protests from various parties in September, adopted the benefits and assessment schedule in October, and finally entered the contract with the United States on November 5, 1918.¹⁹⁵

1917 was an important year for reasons other than the completion of the drainage work in the Nampa & Meridian Irrigation District. As noted above, the state legislature recognized that there was a drainage "emergency" in the Boise Valley (as noted in House Bill 254), and passed legislation authorizing irrigation districts to pursue the same functions for drainage as they did for irrigation: namely, construction, operation, maintenance, and assessment. That bill was codified in Idaho Code section 43-305 that year. Additionally, on July 2 of that year, Secretary of the Interior Franklin K. Lane also issued a public notice to users under the Boise Project stating that if any additional funds were used to pay for further drainage work, they would be paid for with an increase in the construction costs charged to the users.¹⁹⁶ However, when the Reclamation Service did in fact expend additional funds on drainage *outside* the boundaries of the Nampa & Meridian Irrigation District, it tried to recoup the costs by adding an additional \$1/acre to the operation and maintenance assessment it issued to the District. The District believed this charge to be illegal, arguing that construction costs were fixed by contract and that increases could not be moved over to the operation and maintenance assessment. In protest, the District filed a lawsuit against the federal agency in 1921.

¹⁹⁴ Report on Drainage Investigation of Pioneer and Nampa-Meridian Dist. Of Boise Project, Idaho for the Year 1917, by D.J. Paul, under direction of W.G. Steward, Project Reports, 1910-1955, Box 60, R.G. 115. (NMID92)

¹⁹⁵ Board Meeting Minutes, Nov. 7, 1917; Sept. 3, 1918; Nov. 6, 1918. (NMID272)

¹⁹⁶ 17th Annual Report of the Reclamation Service, 1917-1918 (U.S. Government Printing Office: Washington, D.C., 1918), 129. (NMID379)

In conjunction with the lawsuit, the Nampa & Meridian Irrigation District Board opted not to assess its members for the agency's work and not to pay the bill. In return, the Reclamation Service threatened to withhold irrigation water from the landowners in the District. The court proceeding that resulted between the Service and the District, *Nampa & Meridian Irrigation District v. Bond*, centered on the question of whether the Reclamation Service could charge the district for the drainage work under an "operation and maintenance" umbrella, and in turn, whether the District could assess its members. The District did not believe it could legally do so. The Courts (ultimately, the United States Supreme Court in 1925, which affirmed the two lower court rulings) disagreed with the District, ruling that the Service did in fact have the authority to assess maintenance and operations charges to pay for drainage construction under the Reclamation Act in order to drain all project lands, not only those within the District boundaries:

The irrigation system is a unit, to be, and intended to be, operated and maintained by the use of a common fund, to which all the lands under the system are required to contribute ratably, without regard to benefits specifically and directly received from each detail to which the fund is from time to time devoted.¹⁹⁷

While the lawsuit was winding its way through the courts, drainage demands in the area continued, and Reclamation continued to pay the way while the Drainage Fund still contained funding. An example of continued Reclamation work on drains came soon after initial construction was complete. Mason Creek Drain, which is underlain in part by lava rock and therefore difficult to dredge, had not been dug as deep or as long as some of the landowners had originally desired. Between July and November 1921, the Nampa & Meridian Irrigation District Board met with representatives of the U.S. Reclamation Service, the Pioneer Irrigation District, Carnation Milks Products Co., and the city of Nampa to discuss drainage from a point in the Pioneer District (where a drain was already constructed), through the city of Nampa to a point above the city limits in the Nampa & Meridian Irrigation District.¹⁹⁸ In November, the Nampa & Meridian Irrigation District offered a proposal to: "clean out the old Mason Creek Channel down to rock from the point where said creek crosses the boundary line between the Pioneer Irrigation District and our Irrigation District up said creek to a point where it is possible to construct a deep drainage channel and further proposes to excavate a deep drain from the last described point to the East line of Section 25, Township 3 North, Range 2 West."¹⁹⁹ The proposal recognized that it would be "impossible to construct a deep drain in many places on Mason Creek within a reasonable cost on account of lava rock but hoping that this meeting will result in a contract between all interested parties for the construction of the best possible drain on said creek for the benefit of lands now badly in need of drainage." The Nampa & Meridian Irrigation District Board met again on February 20, 1922 and authorized \$12,000 for the project, directing the Reclamation Service to complete the work.²⁰⁰ But when it became clear that the Reclamation Service was unable to begin the work, the District permitted the Pioneer Irrigation District to construct the drain instead, still utilizing money from the Drainage Fund.²⁰¹

¹⁹⁷ *Nampa & Meridian Irrigation District v. Bond*, 268 U.S. 50 (1925). (NMID378)

¹⁹⁸ NMID Board Meeting Minutes, July 9, 1921; Nov. 1, 1921. (NMID268)

¹⁹⁹ NMID Board Meeting Minutes, Nov. 1, 1921. (NMID268)

²⁰⁰ NMID Board Meeting Minutes, Feb. 20, 1922. (NMID271)

²⁰¹ NMID Board Meeting Minutes, June 6, 1922. (NMID271)

In addition to existing drains, landowners in the District also needed additional drains over the next several years. In 1923, Nampa & Meridian Irrigation District Manager G.A. Remington submitted an annual report to the Board summarizing the current status of seepage in the District and explaining that the conditions again were becoming serious, even in areas with open drains. He predicted that it would be "impossible to avoid additional drainage construction indefinitely," but that more careful use and delivery of irrigation water in cooperation with water users would help delay the need. He also reported that the drainage construction on Mason Creek was under way and would be completed in 1923, exhausting the balance in the Drainage Fund of the U.S. Reclamation Service.²⁰²

Land owners on Five Mile Creek hoped to take advantage of the deepening of Mason Creek Drain in 1923. They approached the Nampa & Meridian Irrigation District Board that March regarding their water rights and water delivery in the hopes that their problems could be solved, explaining that when water was turned into the Five Mile Drain, it caused a greater flow of water than the existing facilities could handle. The land owners requested that the District raise the concrete check in Five Mile Drain to divert the excess water into the newly improved Mason Creek Drain. After the Board members adjourned and investigated the site, they agreed to approve the request if Pioneer Irrigation District would pay one-half the cost of the structure.²⁰³

But with the Reclamation Fund depleted, the District members recognized that additional requests for drainage such as these could be handled more efficiently by examining the District's needs as a whole. Following the court's decision in *Nampa & Meridian Irrigation District v. Bond*, the District met to determine its assessments for 1926. In August, the District Board noted that it needed to raise the amount necessary to "operate and maintain" the property of the District. In response, the Board voted to assess its landowners in three classes, "proportionate to the benefit received by such lands growing out of the operation and maintenance of such works," with the majority – the lands not lying in the towns of Nampa or Meridian – receiving a single, flat rate assessment. The Board noted in the record that those lands, called "Class No. 3," were "equally benefited by the operation and maintenance of the works of the District, and the sum of \$2.20 per acre is hereby levied against such lands."²⁰⁴ Soon after, the Board had to issue another assessment to repay the Reclamation Service for drainage construction costs when those payments came due. Thus, the District assessed its old water right lands (Class A) and its project lands (Class B), at the rate of \$5.40/acre and \$8/acre respectively, to meet the District's annual respective payments due on the old Ridenbaugh lands as well as the newly watered Project lands.²⁰⁵

As the system of assessment was worked out and the continued needs of the landowners were analyzed, the financial statements presented to the Board by the District's treasurer began to break down the balances in a different way, including a new category termed, "N&MID Drainage Fund." This category was distinguished from the "U.S. Maintenance Fund," which was presumably used to pay for the items that fell under that umbrella and for which the Reclamation Service charged the District annually; the "U.S. Storage Water Fund," used to pay the agency for storage water; and the "U.S. Construction Fund," which carried the largest balances and was undoubtedly used to repay the

²⁰² NMID Board Meeting Minutes, Jan. 2, 1923. (NMID271) Drainage issues on Mason Creek continued well into the 1930s, during which wells were dug as a potential solution to the problem. See NMID Board Meeting Minutes Sept. 15, 1936 and Nov. 3, 1936. (NMID350)

²⁰³ NMID Board Meeting Minutes, March 16, 1923. (NMID271)

²⁰⁴ NMID Board Meeting Minutes, Aug. 18, 1925. (NMID377)

²⁰⁵ See NMID Board Meeting Minutes, Oct. 6, 1925. (NMID377)

Reclamation Service for construction of both Arrowrock Dam and the drains contracted for in the 1915 agreement.²⁰⁶ By January 1926, the District's Drainage Fund was already carrying a balance of almost \$10,000.²⁰⁷ Although the Reclamation Service was still improving and enlarging the drains it had constructed pursuant to the 1915 contract, the District had begun collecting money that would allow it to make further strides in drainage should it prove necessary.

Lands in the District continued to require drainage work in the ensuing years, as did lands outside the District and even outside the Project. As such, the District simply used money it collected in its assessments to manage drainage needs within its boundaries. The District also worked with other entities in the area to manage drainage issues collectively. In 1923, for instance, Ada County formed Drainage District #3 (pursuant to enabling legislation passed by the Idaho legislature in 1917²⁰⁸) to drain lands outside of the Boise Project but which were no doubt affected by irrigation on Project lands. Nampa & Meridian Irrigation District's Board met to discuss and investigate the county's plans, including their intent to assess Nampa & Meridian Irrigation District for a portion of the work. Ultimately, the District approved of the Drainage District formation by resolution that summer, although the nature of the continuing relationship between the two is unclear.²⁰⁹ Initial plans of the Drainage District included the construction of a drainage canal paralleling the main Ridenbaugh Canal through the waterlogged portion of the Drainage District, intended to protect Nampa & Meridian Irrigation District against claims for damages on account of seepage from the Ridenbaugh.

ADDITIONAL DRAINAGE IN THE NAMPA & MERIDIAN IRRIGATION DISTRICT, 1926-1960

As noted above, it soon became clear that drainage was going to be an ongoing concern across the entire project region south of the Boise River. Throughout the ensuing several decades, the District continued to assist landowners with the costs of draining their lands. Depending on the property and the severity of the problem, the District helped pay for either new surface drains or drainage wells into which excess flows would be directed through the collection of assessments that went into the District's Drainage Fund. Additional construction as well as maintenance on the original drains also continued.

Nampa & Meridian Irrigation District ultimately provided the services of both a water delivery district as well as a drainage district and assessed their landowners accordingly. As the official drainage entity, then, Nampa & Meridian Irrigation District received many further requests for assistance over the next several decades, and the record makes clear that additional drains were dug, although details of their construction are nonexistent. In addition to the many drains, the District and landowners also began to consider the drilling of wells in the 1920s to reclaim seeped lands. In some cases, it appears that the cost of drains and wells was shared in part by the landowners, while other times the District absorbed the entire expense.

²⁰⁶ NMID Board Meeting Minutes, Oct. 6, 1925. (NMID377)

²⁰⁷ NMID Board Meeting Minutes, Jan. 5, 1916. (NMID377)

²⁰⁸ An Act Provided For the Establishment Of Drainage Districts, And The Construction And Maintenance Of A System Of Drainage, And To Provide For The Means Of Payment Of The Costs Thereof, And Declaring An Emergency (1913) (NMID372)

²⁰⁹ NMID Board Meeting Minutes, Aug. 17, 1923. (NMID271)

Regardless of the financing, it was abundantly clear that parts of the District would soon need more drainage work. Farmers therefore faced a serious dilemma: an ongoing agricultural depression rendered them unable to pay for the needed additional drainage – in fact many of them were having trouble meeting the existing payments required under terms of the 1915 repayment contract with the Reclamation Service – yet they could neither afford for their lands to become unproductive, as they would if the seepage continued to worsen. Lands across the District on Indian Creek, Mason Creek, the Wilson Slough, and below the lower embankment of the Deer Flat Reservoir all needed the drainage relief, and the District manager recommended that the District pursue a new contract with “all possible haste” with the United States in order to help finance the work.²¹⁰ Shortly thereafter, the Board resolved to negotiate with the Bureau of Reclamation²¹¹ to obtain a new contract, which they ultimately signed in 1926.²¹² According to District minutes, a five-year drainage program was outlined in 1929, and by 1931, “considerable work [had] been completed in the way of ditches. Many weeping wells [were] put down, all of which have been very effective and a large acreage has been drained.”²¹³ During that same period, Five Mile Creek underwent additional improvements, and the connection secured between Mason Creek and Five Mile Creek.

Unfortunately, it is unclear exactly how these improvements were financed, and to what degree, if any, the Bureau of Reclamation was involved. However, the historical record seems to suggest that the Nampa & Meridian Irrigation District was constructing many of the additional 69 drains in existence today in the 1920s and 1930s, and sharing the cost for their construction with landowners, paying their portion out of the drainage funds collected through assessments. The details on the drains, as noted above, are scant, but a few specifics are noted in the records that provide certainty as to continued progress. For example, the Board Minutes for December 1937 describe a drainage inspection trip taken by Board members in which they examine the Rachel Drain, the Purdum Drain, a proposed drain on the Frank Rosenlof ranch, the Roundhouse Drain, the Hubbard Drain, and a stub drain to be constructed off the Aaron.²¹⁴ Later in the 1930s, the District applied for a \$20,000+ grant from the federal Public Works Administration for the construction of drainage ditches and drainage wells.²¹⁵ Although we do not know for certain whether the District received the grant, the record makes it clear that beginning in 1941, the expenditures on drainage construction fell precipitously from an average of about \$10,000 annually throughout the decade to less than \$200 in 1941, remaining at minimal levels until 1944, when capital expenditures approached \$5500.²¹⁶ The following year, the Idaho Legislature passed a law permitting irrigation districts to levy their landowners for the purpose of draining any lands within their boundaries.

²¹⁰ NMID Board Meeting Minutes, Jan. 2, 1924. (NMID271)

²¹¹ The name was changed from the Reclamation Service.

²¹² NMID Board Meeting Minutes, Jan. 11, 1924. (NMID271)

²¹³ NMID Board Meeting Minutes, Jan. 6, 1931. (NMID348)

²¹⁴ NMID Board Meeting Minutes, Dec. 28, 1937. (NMID350) Construction of the stub, and payment of half its cost, was agreed to at the January 4, 1938 Board meeting. Another drain, the Tobias, was mentioned in the minutes of February 1, 1938. And the Rosenlof, mentioned in the December 1937 minutes, was shown to be constructed by March 1938. (NMID350)

²¹⁵ NMID Board Meeting Minutes, Aug. 2, 1938. (NMID351) A note of interest: Pioneer Irrigation District applied for and was granted money from this same agency for additional drainage within its boundaries, as well. See Stevens, *A History of Pioneer Irrigation District*.

²¹⁶ NMID Board Meeting Minutes, Feb. 17, 1942, Financial Statement Nampa & Meridian Irrigation District for the Year 1941 (NMID352); NMID Board Meeting Minutes, March 20, 1945, Financial Statement Nampa & Meridian Irrigation District for the Year 1944

Therefore, in August 1945, the Nampa & Meridian Irrigation District adopted a resolution stating the need to create a drainage fund through a new assessment on landowners, to be known as the Drainage Fund of Nampa & Meridian Irrigation District.²¹⁷ How this differed from the earlier Drainage Fund is not clear.

Examination of financial information that appears in the Board minutes over the next several years demonstrates that the construction of drains and wells continued after this resolution was passed and continued into the 1950s, when the District continued to finance the cost of drain construction through the Drainage Fund in an effort to maintain the balance between surface and ground water.²¹⁸ Today (2013), there are a total of 80 drains in the Nampa & Meridian Irrigation District, only 11 of which are drains that were constructed with the U.S. Reclamation Service during the 1916-1920 period. The remaining 69 drains are referred to as "District drains," and were built and paid for in part by the District, and in part by private landowners. Together, the constructed drains allowed crops to again grow on the lands south of the Boise River.

MODERN DRAIN OPERATION IN THE NAMPA-MERIDIAN IRRIGATION DISTRICT

WORK IN PROGRESS

CONCLUSION

It would be difficult to overstate the impact of irrigation on the Boise Valley landscape and hydrology in the 50 years following the first white settlement of the Boise Valley. The planning and toil of many men created irrigation and drainage systems that enabled thousands to settle and make productive use of the vast plains of sagebrush in the Boise Valley.

The 1904 creation of the Nampa & Meridian Irrigation District formalized the organization of many farmers on the lands south of the Boise River, but the completion of the District's irrigation system took several additional decades. Artificial irrigation was responsible for turning sagebrush into productive farmland, a development that began in the 19th century and continued well into the 20th. The drainage problem on these lands stalled the District's progress, as there were no surface channels available to capture the excess water and drain it to the Boise River. Farmers on the swamped lands demanded a drainage system that was constructed by the United States Reclamation Service. By the 1920s, many of these issues had been resolved, and the farmers in the Nampa & Meridian Irrigation District were well positioned to contribute their goods to a growing Boise Valley economy. Although the District's infrastructure continued to be refined over the ensuing century as urbanization encroached onto the farmlands, the system as it existed in the 1920s would persist for many years to come. It was augmented by the District throughout much of the 20th century, and paid for by the farmers through assessments. As the system matured, it

²¹⁷ Idaho Code 42-305-A referred to in the NMID Board Meeting Minutes, Aug. 21, 1945. (NMID 353)

²¹⁸ For example, the financial statement for 1949 shows an expenditure of \$32,398.57 for new drainage construction, while the financial statement for 1950 shows a cost of \$21,031.44. NMID Board Meeting Minutes, Feb. 15, 1949 and Jan. 17, 1950. (NMID354)

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facilitated a balance between surface and groundwater and resulted in a balance that supported great population growth in the valley.

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APPENDIX 1: FIGURES

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APPENDICES 2 AND 3: MAPS SHOWING CHANGE IN CREEK COURSES, 1860S-PRESENT

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APPENDIX 4: HYDROLOGY OF THE BOISE RIVER LANDSCAPE, BY
DAVE SHAW, ERO

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