

UNIVERSITY OF OKLAHOMA

GRADUATE COLLEGE

HOLDING TRUE:

AGRICULTURE IN COLORADO'S UPPER GRAND VALLEY

A DISSERTATION

SUBMITTED TO THE GRADUATE FACULTY

in partial fulfillment of the requirements for the

Degree of

DOCTOR OF PHILOSOPHY

By

JEFFREY MICHAEL WIDENER

Norman, Oklahoma

2015

HOLDING TRUE:  
AGRICULTURE IN COLORADO'S UPPER GRAND VALLEY

A DISSERTATION APPROVED FOR THE  
DEPARTMENT OF GEOGRAPHY AND ENVIRONMENTAL SUSTAINABILITY

BY

---

Dr. Fred Shelley, Chair

---

Dr. Richard Nostrand, Co-Chair

---

Dr. Charles Warnken, Outside Member

---

Dr. Karl Offen, Member

---

Dr. Bruce Hoagland, Member

© Copyright by JEFFREY WIDENER 2015  
All Rights Reserved.

*For the farmers in Colorado's Grand Valley  
and for W.E.W., who was more than enough inspiration to finish this story.*

## **Acknowledgements**

Completing a dissertation and earning a Ph.D. is a lot like defeating a bully. Wit and stamina are a must because going for the knees isn't an option. You also have to have support, and I'm more than grateful for the time that individuals in the Grand Valley spent with me talking about their experiences in this precious region. Chief among those people are Julie and Bob Commons, who opened up their home to me, and Priscilla Walker, for her invaluable knowledge, constant willingness to meet with me, and not blocking my email address after I returned to Norman. Harry and Bruce Talbott, on multiple occasions, took time during the harvest to explain to me the significance and delicacy of agriculture in the Upper Valley and also answered countless emails. Rob Bleiberg and Ilana Moir would always make time for me to visit with them about Mesa Land Trust. Max Schmidt at OMID shared his opinions on water and efficiency in the Grand Valley and American West more than once. Chris Kadel at Mesa County helped me obtain and understand geospatial data for the region. The crew at the Loyd Files Research Library in the Museum of Western Colorado were more than accommodating to my research requests and tolerated me for far too long.

No dissertation and Ph.D. could be completed without the assistance of a loyal committee. I offer a special thanks to Dick Nostrand for guiding me through this process even in his retirement, and to Fred Shelley, Karl Offen, Bruce Hoagland, and Charlie Warnken for seeing this study and my doctorate through.

Financial assistance came from the Charles Redd Center at Brigham Young University, the Graduate College at OU, and OU Libraries.

Finally, I'm indebted to my more-than-patient family and friends.

## Table of Contents

<b>Acknowledgements</b> .....	<b>iv</b>
<b>List of Figures</b> .....	<b>viii</b>
<b>Abstract</b> .....	<b>x</b>
<b>Preface</b> .....	<b>1</b>
<b>Framing the Grand Valley</b> .....	<b>4</b>
<b>Exploration and Discovery</b> .....	<b>6</b>
<b>Inspirational Landscapes</b> .....	<b>9</b>
<b>Chapter 1: Agricultural Preservation in Colorado’s Grand Valley</b> .....	<b>13</b>
<b>A Trailblazer in the Grand Valley</b> .....	<b>13</b>
<b>Agriculture in the Upper Grand Valley</b> .....	<b>21</b>
<b>Encroachment and Preservation</b> .....	<b>32</b>
<b>Chapter 2: An End to the Ute Homeland</b> .....	<b>36</b>
<b>A Land Apart</b> .....	<b>36</b>
<b>Making Room: Relocating the Utes</b> .....	<b>39</b>
<b>Chapter 3: Development in the Grand Valley</b> .....	<b>50</b>
<b>Settling the Grand Valley</b> .....	<b>50</b>
<b>Grand Junction: The Hub</b> .....	<b>53</b>
<b>Early Grand Valley Sprawl</b> .....	<b>56</b>
<b>Growth in the Grand Valley</b> .....	<b>58</b>
<b>Chapter 4: Reclamation in the Grand Valley</b> .....	<b>64</b>
<b>Farming: Colorado’s Destiny</b> .....	<b>65</b>

From the River to the Field.....	67
Corporate Greed .....	71
A Better Deal .....	75
The Bureau of Reclamation in the Grand Valley .....	77
<b>Chapter 5: Resource Extraction after the Gold Rush.....</b>	<b>82</b>
<b>Mineral Booms .....</b>	<b>82</b>
Uranium and Vanadium.....	82
Oil Shale .....	84
<b>THE Mineral Bust.....</b>	<b>91</b>
<b>Rebounding in the Valley .....</b>	<b>93</b>
<b>Chapter 6: Western Slope Water Wrangling .....</b>	<b>97</b>
<b>Some Water Background .....</b>	<b>98</b>
<b>Water in a Colorado Drought.....</b>	<b>103</b>
<b>Droughts and Ideas Continue .....</b>	<b>105</b>
<b>Chapter 7: Progress in the Orchard Mesa Irrigation District .....</b>	<b>109</b>
<b>Introduction .....</b>	<b>110</b>
<b>Placing OMID.....</b>	<b>112</b>
<b>A Plan for Progress .....</b>	<b>116</b>
<b>Transitioning Cultural Landscapes of Water Conveyance.....</b>	<b>121</b>
<b>Chapter 8: “Fruitlands Forever:” Mesa Land Trust and the Preservation of</b>	
<b>Agriculture .....</b>	<b>133</b>
<b>Introduction .....</b>	<b>134</b>
<b>Conservation Easements and Land Trusts.....</b>	<b>137</b>
Why Conservation Easements and Land Trusts? .....	139

Toward Understanding the Principles of Conservation Easements and Land Trusts.....	144
<b>Development of MLT.....</b>	<b>148</b>
<b>Progress of MLT: “Fruitlands Forever” .....</b>	<b>152</b>
<b>The Future of MLT.....</b>	<b>155</b>
<b>Chapter 9: Agritourism: Hope for the Upper Grand Valley .....</b>	<b>167</b>
<b>Introduction .....</b>	<b>168</b>
<b>Agritourism in Colorado and in the Grand Valley.....</b>	<b>168</b>
<b>Three Seasons of Upper Grand Valley Festivals.....</b>	<b>175</b>
<b>Traditional and Emerging Agritourism Landscapes in the Upper Grand Valley.....</b>	<b>186</b>
<b>Small Town Development and Community Resources .....</b>	<b>195</b>
<b>Educating for Grand Valley’s Agricultural Future.....</b>	<b>200</b>
<b>Conclusion: The Grand Valley and the American West .....</b>	<b>205</b>
<b>A Changing Cultural Geography of the American West.....</b>	<b>208</b>
<b>The Grand Valley and its Place in the American West.....</b>	<b>215</b>
<b>The Upper Grand Valley in a Changing Region.....</b>	<b>218</b>
<b>Time in “Paradise” .....</b>	<b>221</b>
<b>References .....</b>	<b>225</b>
Archival Collections.....	225
Personal Interviews.....	226
Newspapers.....	227
Government Documents and Publications .....	229
Journal and Magazine Articles .....	236
Books and Other Secondary Resources.....	242



## List of Figures

Figure 1: Mesa County and the Grand Valley.....	2
Figure 2: The Upper Grand Valley in September 2014. ....	3
Figure 3: The Lower Valley and the Upper Valley.....	6
Figure 4: Location map for Colorado’s Western Slope.....	7
Figure 5. Canyon Wind Cellars’s “Riverside Vineyard.” .....	8
Figure 6. Workers inspect peaches coming off the line at Talbott’s. ....	13
Figure 7. The view from a Talbott property. ....	14
Figure 8. Annexation in Grand Junction, 1882-2014. ....	16
Figure 9. Below the Colorado National Monument housing squeezes farmland. ....	18
Figure 10. Bruce Talbott inspects the 2012 peach crop. ....	21
Figure 11. Parker Carlson’s vineyard, just outside his solar-powered winery. ....	28
Figure 12. Fruita showcases its amenities to passersby. ....	31
Figure 13. The Ute homeland and federal land takings.....	41
Figure 14. Communities in the Grand Valley. ....	55
Figure 15. A chicken coop still sits on one property.....	63
Figure 16. A portion of the Grand Valley before crops, circa 1910.....	66
Figure 17. Irrigation ditches in the valley, pre Bureau of Reclamation. ....	72
Figure 18. Grand Valley Irrigation Districts. ....	79
Figure 19. Grand Valley Diversion (also called the Roller) Dam, circa 1920s.....	81
Figure 20. Oil and gas exploration east of Palisade, 1906. ....	83
Figure 21. Aspinnall’s memorial at Veteran’s Memorial Park .....	97
Figure 22. Colorado’s 2010 Population Distribution. ....	100

Figure 23. Precipitation in Colorado, 1981-2010.....	101
Figure 24. Orchard Mesa Irrigation District and the Grand Valley. ....	110
Figure 25. OMID pump house, circa 1900.....	114
Figure 26. OMID pump house (on the right) and power plant (on the left).....	116
Figure 27. An orchard watered by gated pipe and furrows. ....	121
Figure 28. C&R #2 micro-jet irrigation system.....	127
Figure 29. Laborers can work efficiently on a flat surface.....	129
Figure 30. Mesa Land Trust Conservation Easements. ....	155
Figure 31. MLT signage on a parcel with a conservation easement. ....	159
Figure 32. Large homes are going up south of Rettig Farms. ....	163
Figure 33. Lavender is a new cash crop grown in the Upper Valley. ....	178
Figure 34. Palisade Peach Festival in August 2012. ....	180
Figure 35. Colorado Mountain Winefest 2012.....	184
Figure 36. Z’s Orchard commercial kitchen.....	188
Figure 37. Barrel tasting at DeBeque Canyon Winery with owner Bennett Price. ....	191
Figure 38. Anita’s Pantry, her first store. ....	193
Figure 39. Signs like this dot the Byway.....	194
Figure 40. “Tree of Life” barn quilt at Suncrest Orchard Alpacas and Fiber Works...	200

## **Abstract**

This study presents the story of how farmers and agriculture survive in the upper Grand Valley, the eastern end of a 30-mile stretch of the Colorado River Valley—known as the Grand Valley—located on Colorado’s Western Slope. Home to over 2,000 acres of peaches, 1,000 acres of grapes, and around one-fifth of the state’s wineries, the upper Grand Valley has a unique microclimate that is ideal for growing premium peaches and grapes. Still, the valley neighbors the world’s largest deposits of kerogen (in particular, oil shale). The extraction of kerogen, as well as other natural resources, has led to population growth and urban sprawl throughout the Grand Valley. The story is one of tensions, primarily between farmers and developers. Agricultural interests persist, however, despite pressures to subdivide prime, irrigated agricultural land—whether that division is for housing to support the extractive industries or, as has been the case more recently, to support growth associated with the region’s service industries and amenities. As the world around them develops at a furious rate, farmers in the Upper Valley hold true to their way of life through use of efficient irrigation technologies, conservation easements and land trusts, and agritourism. The two versions of progress shaping Colorado’s Grand Valley are examples of the changes that are taking place in areas of irrigated agriculture elsewhere in the American West.

## Preface

*The desert conveys important lessons...  
...the lessons for 'those who see' are to be gained by 'those who look.'*<sup>1</sup>

Agriculture is very likely not one of the top-10 things that come to mind when one thinks about Colorado. Fourteeners, beer, national parks, the Rockies, and, now, marijuana are the more common candidates. Even in 2015 the Colorado Wine Industry Development Board noted on its website that “Whatever comes to mind when you think of Colorado, it probably isn’t [grapes or] wine.”<sup>2</sup> It probably is not peaches either, though the peach-growing heritage is more than a century old in the Centennial State. The Colorado Department of Agriculture, however, has made clear that the “foundation of the state is agriculture.”<sup>3</sup>

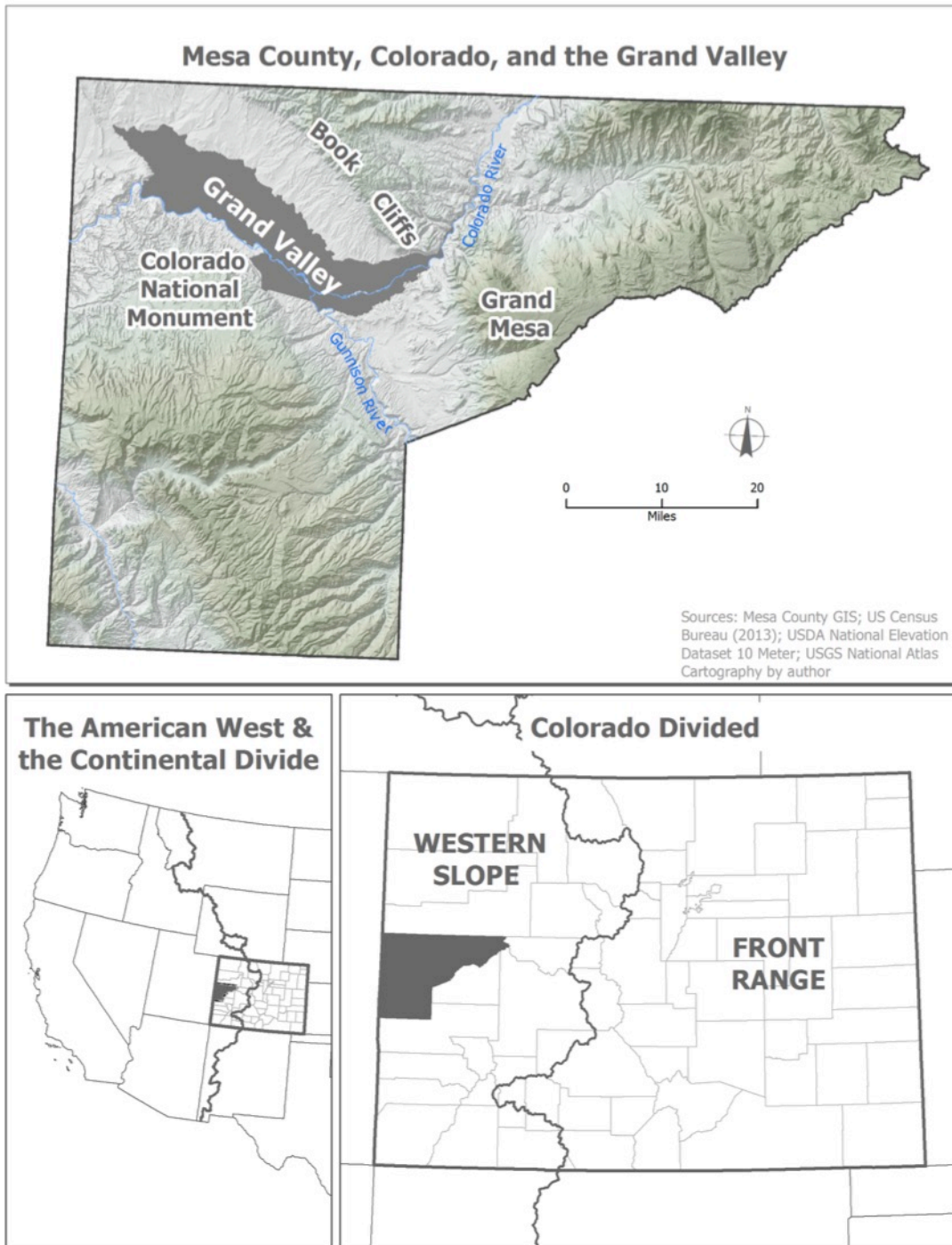
Colorado consistently ranks in the top 10 peach-producing states in the United States (US). Since 1990, the state’s viniculture industry has surged from three wineries and a few dozen acres of grapevines to over 110 wineries and nearly 1,000 acres of grapes. The production of peaches and grapes, however, does not occur in the most populous region of the state—the thirsty Colorado Piedmont, more popularly known as the Front Range. No, Colorado’s Grand Valley, located on the state’s Western Slope—the area that lies west of the Continental Divide—is where farmers grow the majority of the state’s grapes and peaches (Figure 1).

---

<sup>1</sup> James L. Wescoat, Jr., “Watering the Deserts,” in *The Making of the American Landscape, Second Edition*, edited by Michael P. Conzen (New York: Routledge, 2010), 207.

<sup>2</sup> Colorado Wine Industry Development Board, “Colorado: A Beautiful State of Wine,” <http://coloradowine.com> (last accessed April 3, 2015).

<sup>3</sup> Colorado Department of Agriculture, “Agritourism,” <https://www.colorado.gov/pacific/agmarkets/agritourism> (last accessed April 3, 2015).



**Figure 1: Mesa County and the Grand Valley.<sup>4</sup>**

<sup>4</sup> The photographs and cartography are by the author unless otherwise noted.

Historians who have focused on Colorado’s Western Slope have dubbed the region “a land alone.”<sup>5</sup> Perhaps that is why its prime agricultural products are not on peoples’ minds when they think of Colorado. Or, the reason very well could be the statistic that the most common orchard or vineyard here is so small—less than 10 acres. Some people might call these hobby farms or ranchettes, but that is not the case in the Grand Valley. Farmers here with five to 10 acres of peaches or grapes can make decent livings by growing and offering premium products to the public. Then again, however, these farmers could choose to sell their land to developers and basically retire (Figure 2).



**Figure 2: The Upper Grand Valley in September 2014.**

---

<sup>5</sup> Duane Vandebusch and Duane A. Smith, *A Land Alone: Colorado’s Western Slope* (Boulder, CO: Pruett Publishing Company, 1981).

Why is it, then, that all of the farmers here have not fallen victim to development, or what some people might refer to as progress, like their counterparts have in other areas of the American West? The Grand Valley has, in fact, had its fair share of development, but farmers here have remained true to their craft, despite the attractions of the valley's amenities that draw in migrants and despite its proximity to the world's largest concentration of kerogen deposits. It is indeed an incredible story that this arid-desert region supports any agriculture and, perhaps even more remarkably, that so much agriculture remains here today. For these reasons, the Grand Valley and the farmers who live here present a region and citizenry worthy of study—to learn how agriculture has survived in this small, irrigated corner of the American West.

### **Framing the Grand Valley**

The Grand Valley would not have been settled if the Colorado River was not present. The Colorado, formerly called the Grand River, carved the valley as it cut its way from Middle Park, high in the Rockies, toward the Sea of Cortez. The Grand Valley is not a large region by any means. Most locals limit it to the region where reclamation during the late 1880s to the early 1900s made settlement and farming possible.

Divided by the Colorado River, the valley is roughly 30-miles long and three-to-12-miles wide, made fertile by sediment the river deposited over time. All said and told, the valley has about 130,000 acres, but only around 100,000 acres of that land are irrigated. Now, however, as has happened in other regions of the American West, development is consuming that irrigable acreage, already encroaching on nearly one-third of it.<sup>6</sup>

---

<sup>6</sup> The acreages were obtained by calculating area in ArcGIS using vector data from Mesa County and Cropland Data Layers (circa 2014) from the United States Department of Agriculture (USDA).

Mesa County is the eleventh most populous county in Colorado and the most populated county on the Western Slope. While the Grand Valley makes up less than 10 percent of the 2,138,240 acres of Mesa County, the state's fourth largest county in terms of land area, about 70 percent of the county's nearly 150,000 residents live here. Forty-percent of them live in Grand Junction—named after the convergence of the Gunnison and Colorado rivers, it is the largest city on the Western Slope and between Denver and Salt Lake City.<sup>7</sup>

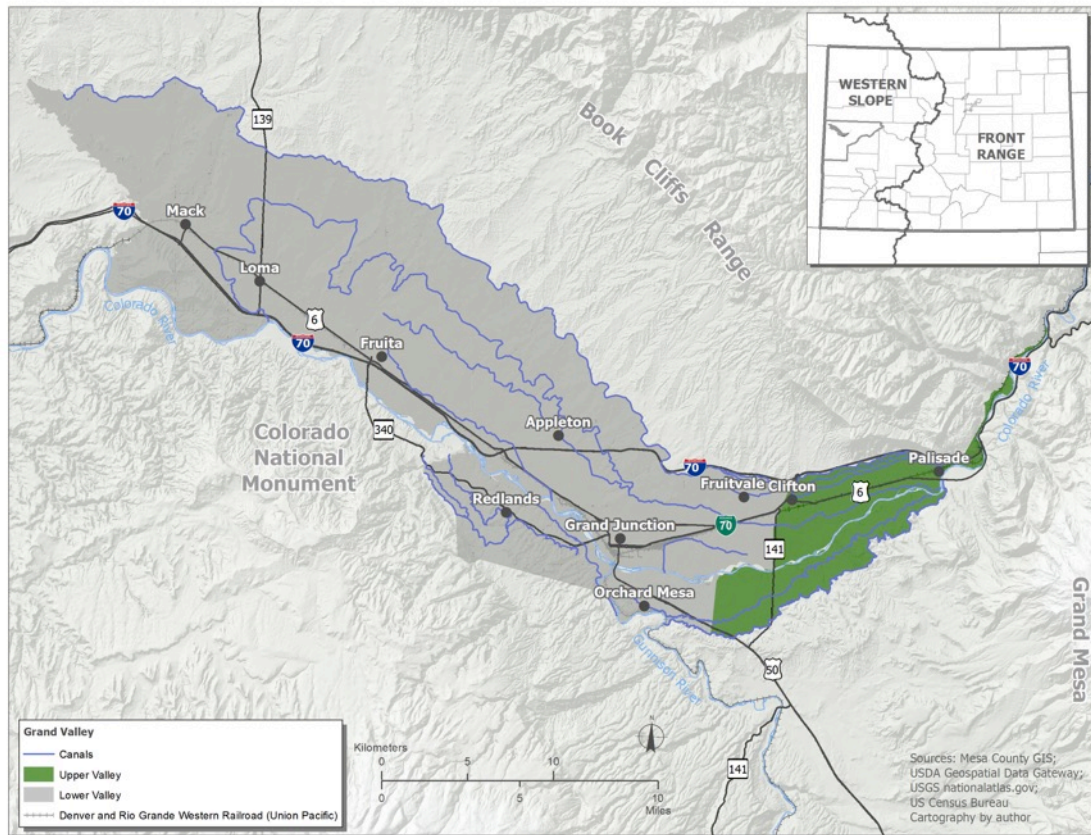
Despite the valley's ongoing urban growth, farmers here still grow a variety of stone fruits, vegetables, and field crops, including alfalfa and corn. The limits of the growing area of these crops, along with the flow of the Colorado River, help define the Grand Valley's sub-regions (Figure 3). The Lower Valley is the larger of the two regions and is the area west of Grand Junction. This area, today, is home primarily to field crops and urban expansion. The Upper Valley, on the other hand, the area east of Grand Junction, is much different from the Lower Valley.

The Upper Valley is narrower and enjoys a unique microclimate that is conducive for growing premium fruits and vegetables. This region contains the majority of Colorado's precious peach orchards and vineyards. As well, one-fifth of the state's wineries are here. Farmers in the Upper Valley are working hard to hold on to their agricultural way of life, and this narrative is the story of their survival and their heritage in this sub-region.

---

<sup>7</sup> Census figures were taken from Google's "Public Data" platform. Rounded figures came from the 2015 update.



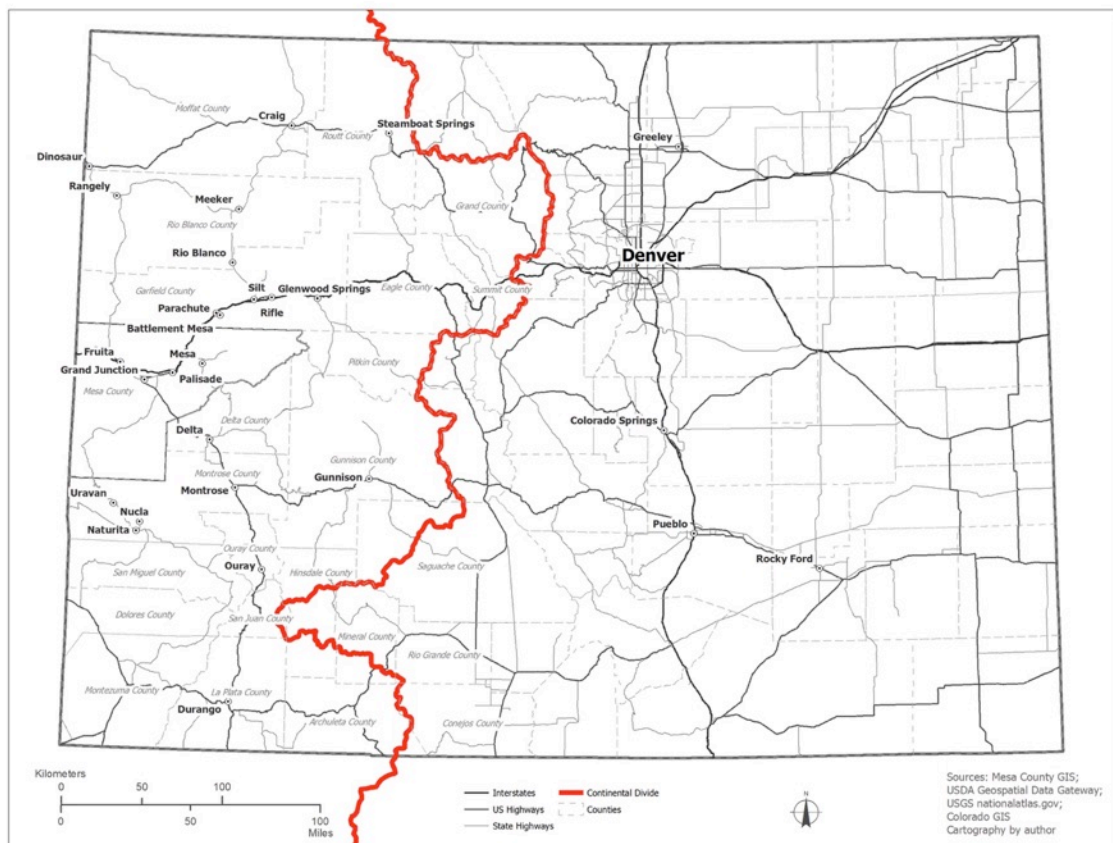


**Figure 3: The Lower Valley and the Upper Valley.**

### Exploration and Discovery

Oddly enough, when I proposed my original idea for a project on wine and agritourism in western Colorado to my dissertation committee, I had never been to Grand Junction, the Grand Valley, or Mesa County. All I knew was that I wanted to study cultural landscape change, land use, and land tenure in the American West. The burgeoning agritourism and wine industry in this area had piqued my curiosity. Shortly after proposing my study, I was informed that the acres of vines in Colorado represented a hobby, not an identity worthy of further study. At that time, I was offered a different focus—studying the geographical consequences in the oil and gas industry in the same region of Colorado, and it was on that basis that my journey began.

Amanda, my wife, and I left Edmond, Oklahoma, for Grand Junction the week of July 4, 2012, so that I could make contacts on the Western Slope and firm up plans to return later that summer to do in-depth interviews. I left the Sooner State thinking I was going to write a cultural and historical geography on the ideas and institutions surrounding the oil and gas industry. In Colorado, I proceeded to visit with a variety of individuals in Grand Junction on July 3<sup>rd</sup> and 5<sup>th</sup> and with mayors and townspeople in Rifle and in Craig on July 6<sup>th</sup> (Figure 4).



**Figure 4: Location map for Colorado’s Western Slope.**

The people I needed to talk to in the oil and gas industry were off work for July 4<sup>th</sup>, so Amanda and I attended the annual Lavender Festival and Fourth of July Parade in Palisade, a quaint farming community in the Upper Valley. We made a day of it, visiting orchards and tasting wines in Colorado’s Wine Country.

The landscapes we saw that day were arresting ones. Towering palisades, plateaus, and mesas displayed several million years of geologic history. These crags provided a surreal backdrop to the arid desert floor, by now converted into an oasis via irrigation technology. Distinct historical and cultural landscapes of well-manicured grapevines, perfectly queued rows of peach trees, picture-perfect historic barns, bustling fruit stands, and well-maintained irrigation canals filled the milieu (Figure 5).



**Figure 5. Canyon Wind Cellars’s “Riverside Vineyard.”**

Wanting to get a better sense of the valley, I pestered owners and workers at wineries and fruit stands with questions about how they were surviving in a region inundated with oil and gas development. Their responses rekindled my interest in this

region's agricultural heritage and its place in the American West. Serendipitous? Perhaps, but not entirely.

On our way back from Craig, after a day of talking to people about the oil shale industry there, I told Amanda that I did not want to write a dissertation on oil and gas. I reverted to my original topic, reframing it as a broader study of agriculture in the Grand Valley—a story that would look at both the development of the fruit and wine industries and would explore the institutions that helped shape and continue to shape this landscape. More specifically, I wanted to know how agriculture and farmers have survived in this small region of the American West in the midst of “progress.”

### **Inspirational Landscapes**

Fieldwork and landscapes can inspire and lead to revelations, and that's my reason for sharing this story. I have a background in history, and my training on how to conduct historical research centered on learning by listening, reading, questioning, and synthesizing large amounts of information, typically from archival collections, in order to argue and support a thesis. In geography, however, my instructors showed me another way of learning—to observe everyday landscapes in the field, essentially a special kind of exploring. Reading, indeed, is a type of observing; but geographers tend to read the Earth's physical and cultural landscapes to flesh out the obscurities that lie within them.

Like archives, landscapes are primary source documents.<sup>8</sup> Landscapes warrant the same attention, questioning, and synthesis, however, that historians devote to the archives. Listening to people deserves a separate line. To understand the world around us, we must talk to and, most importantly, listen to people tell their stories in order to explain

---

<sup>8</sup> Bret Wallach, “Painting, Art History, and Geography,” *Geographical Review* 87, no. 1 (1997): 92. I say this generally. There are the burgeoning fields of *spatial, landscape, and planning history* that are making inroads into geography and that utilize the landscape as a document.

everyday scenes. We must, though, weigh those stories against archival documents and primary sources. So, there I was, seeing what lessons I could learn by looking, reading, and listening in the Grand Valley, trying to flesh out how change affects the land and the people here today.

My decision to revert to a modified version of my original study is because of the landscapes I saw and the stories I heard on July 4, 2012. This gets at the heart, I think, of interpreting cultural landscape change as both a function and goal of integrative power, a framework that geographer James Wescoat, Jr., proposed in 2008. Integrative power in landscape change means paying attention to elements of landscapes that express human love—or respect, if love is too romantic—and wisdom to gain a sense of how humanity has dealt and will deal with the social, economic, and political ideals that shape so many scenes.<sup>9</sup> As Wescoat explained:

Each type of landscape change affects many others, along with larger social and ecological systems. It encompasses manifold interactions and feedback relationships. Its historical and geographic context shapes the forms and meanings of landscape change. Research on landscape change looks backward in time to reconstruct historical geographies of land settlement and resource use, it undertakes synoptic appraisals of the contemporary moment, and it strives to envision more harmonious human-environment relations in the future.<sup>10</sup>

Studying cultural landscape change through the lens of integrative power, then, has the potential to help explain cultures of development. Understanding the culture of development in a specific place is complex because of the many elements it involves. The concept, however, is also practical enough that a play-by-play television announcer for the Oklahoma City Thunder National Basketball Association team can use it to describe

---

<sup>9</sup> James L. Wescoat, Jr., “Introduction: Three Faces of Power in Landscape Change,” in *Political Economies of Landscape Change: Places of Integrative Power*, edited by James L. Wescoat, Jr. and Douglas M. Johnston (Dordrecht, NL: Springer, 2008), 1.

<sup>10</sup> Wescoat, Jr., “Introduction: Three Face of Power in Landscape Change,” 10-11.

what is happening in the growth of the team with the confidence that his audience knows what he means.<sup>11</sup> The broadcaster's use of the phrase is nearly the meaning I am after—building a solid community of players. It is what some residents in the Grand Valley have tried to maintain since its infancy as a settlement—as a Mesa County promotional pamphlet put it, a sense of being “all together.”<sup>12</sup>

Culturist Raymond Williams suggested that culture “may be seen, in itself, as a special kind of map by means of which the nature of the changes can be explored.”<sup>13</sup> The cultural landscape, the mirror that reflects land and life, in the Grand Valley provides that map for this study. And that map, along with three years of research, including over three months of fieldwork in the Grand Valley between 2012 and 2014, led me to three themes on how agriculture has survived in the Upper Valley—irrigation efficiency, land trusts and conservation easements on farmland, and agritourism. These three themes all play roles in agriculture’s survival here, with the foundation being that each farmer and landowner contributes in their own ways to changing patterns in the cultural landscape.

But before those themes are presented, I untangle some of the welter that exists in the cultural landscapes in Grand Valley against a backdrop of its shaping. After introducing the valley in Chapter One, I devote the next five chapters to casting a historical background to present a big picture on land tenure and cultural landscape change in the valley to showcase how the themes that I highlight in chapters seven, eight, and nine came to be so vital. I begin this historical narrative with the forced resettlement

---

<sup>11</sup> National Basketball Association, *Oklahoma City Thunder vs. Philadelphia 76ers*, FSN Southwest, aired January 4, 2013.

<sup>12</sup> Grand Junction Chamber of Commerce (GJCC), *All about Grand Junction and the Grand Valley Colorado* (Grand Junction: GJCC, 1904), 2, Mesa County History Pamphlet File, Loyd Files Research Library (LFRL), Museum of Western Colorado (MWC).

<sup>13</sup> Raymond Williams, *Culture and Society: 1790-1950* (New York: Columbia University Press, 1983), xvii.

of the Utes, moving next to Euro-American occupation, then to reclamation, mineral booms, and finally to water policy

Chapter seven, the first of the theme chapters, tells the story of improving irrigation efficiency for overall water conservation. Changing irrigation methods is not something a farmer has to do, but rather is a careful decision that requires significant investment. Chapter eight addresses a non-regulatory approach to agricultural preservation through conservation easements. This land-saving action is designed to preserve these farming landscapes in perpetuity. Chapter nine looks at how some Grand Valley farmers and other local entrepreneurs are capitalizing on agriculture and tourism as a way to support and preserve their way of life. Each of these themed chapters starts with a slice-of-real-life vignette that will underline the immediacy of this project. It is only through education and a larger understanding of the successes these farmers have enjoyed and the dilemmas that these farmers face that their permanence might be assured in a world that develops around them at a furious rate.

## Chapter 1: Agricultural Preservation in Colorado’s Grand Valley



**Figure 6. Workers inspect peaches coming off the line at Talbott’s.**

### **A Trailblazer in the Grand Valley**

Harry Talbott is a trailblazer in western Colorado’s upper Grand Valley.<sup>1</sup> This fourth-generation farmer and his three sons run Talbott’s Mountain Gold—the largest peach growing and packing facility in Colorado (Figure 6). The Talbotts pick, pack, and ship about 60 percent of Colorado’s commercial peach crop annually—about nine million pounds of peaches—and they grow about 15 percent of the state’s wine grapes.<sup>2</sup> They also produce Talbott’s Mountain Gold apple cider and juice. The Talbotts take

---

<sup>1</sup> “HCT Mesa Land Trust,” <http://youtu.be/pmSoai4HI-k> (last accessed September 30, 2014).

<sup>2</sup> Palmer Land Trust, “Southern Colorado Conservation Awards to Be Presented October 9,” <http://palmerlandtrust.org/node/439> (last accessed September 2, 2014).



tremendous pride in the fact that much of their produce goes from tree to table in 24 to 48 hours. But there is a larger story behind what makes Harry Talbott a trailblazer.



**Figure 7. The view from a Talbott property.**

The Talbotts live and work about 12 miles east of Grand Junction. Their farm on Orchard Mesa is just south of the tiny town of Palisade, a farming community about a half-mile south of the imposing crags of the Book Cliffs Range. Their view is an arresting one (Figure 7). During the 1970s, however, developers from Grand Junction and the wider world kept telling Harry that his farmland would inevitably give way to residential subdivisions.<sup>3</sup> “In ten years, there will be one million people in this valley,” the story went. W. T. Slick, Jr., Exxon’s senior vice president at the time, warned that

---

<sup>3</sup> Harry Talbott (owner, retired, Talbott Farms), in discussion with the author, August 2012.

the development of kerogen, particularly oil shale, in this region “could bring a population equal to the seven-county Denver-Boulder area.”<sup>4</sup> At the time, that prediction would have been close to 1.6 million people.<sup>5</sup>

Nobody, it seemed, would be able to stop the production of billions of barrels of kerogen from the oil shale in the Piceance and Green River Formations. Once processed, that kerogen would be one of the world’s largest sources of oil. Harry, however, told the developers where to go, “and it wasn’t Paradise.”<sup>6</sup>

Some of Harry’s neighbors found the offers to sell to developers too good to resist. Between 1970 and 2012 about 140,000 acres of farmland were lost in Mesa County, which surrounds Grand Junction. The decline was steep, from about 524,000 acres (circa 1969) of farmland to about 387,000 (circa 2012) of the county’s 2 million acres.<sup>7</sup>

The oil shale boom never happened, despite the federal government’s role in appropriating funds and lands to oil giants in western Colorado. In May 1982 Exxon and Shell plugged their leased operations in the Piceance Basin, located in one of the

---

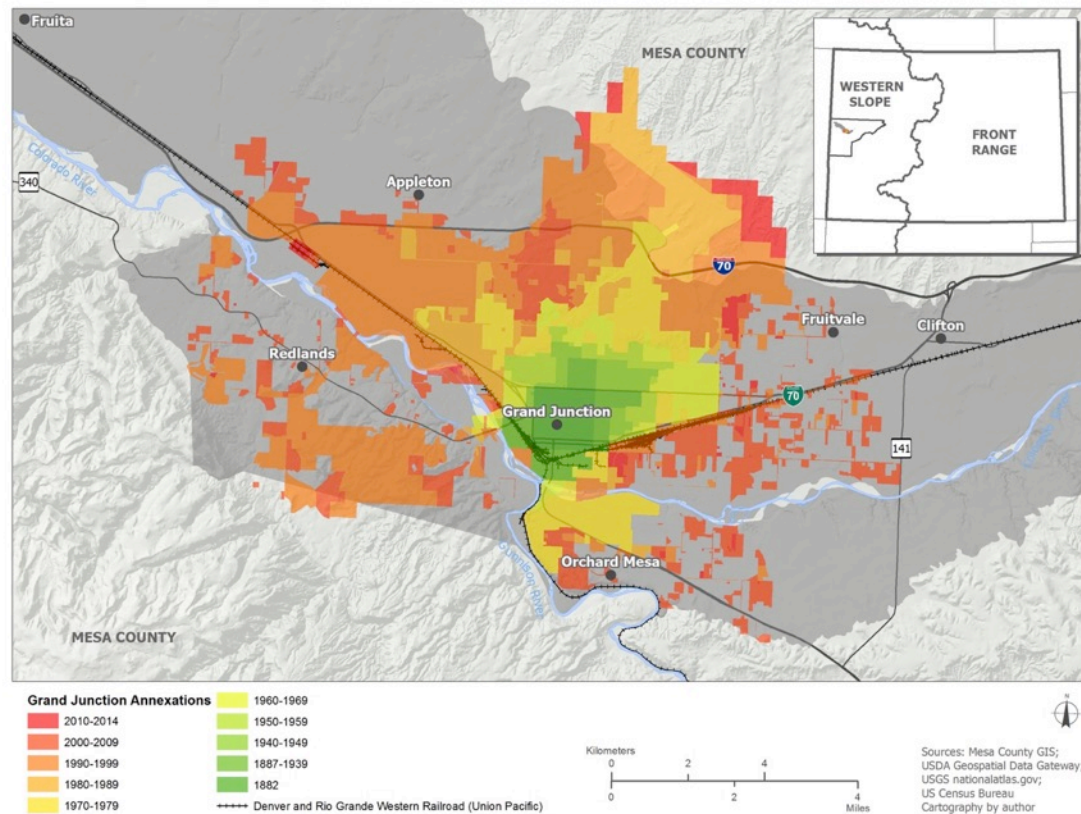
<sup>4</sup> Barbara Taylor, “Colorado Project to House Oil Workers,” *Los Angeles Times*, May 17, 1981.

<sup>5</sup> Figure estimates taken from “Colorado City Population by County,” <http://lib.colostate.edu/research/colorado/City2.pdf> (last accessed July 1, 2015).

<sup>6</sup> Harry Talbott (owner, retired, Talbott Farms), in discussion with the author, August 2012; “HCT Mesa Land Trust,” <http://youtu.be/pmSoai4HI-k> (last accessed September 30, 2014).

<sup>7</sup> USDA Census of Agriculture, “Selected Items: 1969,” “Table 1. Farms, Land, Value,” County Summary, Colorado, 284, <http://usda.mannlib.cornell.edu/usda/AgCensusImages/1969/01/41/483/Table-01.pdf> (last accessed July 13, 2014); USDA Census of Agriculture, “Table 1. County Summary Highlights: 2012,” County Level Data, Colorado, vol. 1 (2012), [http://www.agcensus.usda.gov/Publications/2012/Full\\_Report/Volume\\_1,\\_Chapter\\_2\\_County\\_Level/Colorado/st08\\_2\\_001\\_001.pdf](http://www.agcensus.usda.gov/Publications/2012/Full_Report/Volume_1,_Chapter_2_County_Level/Colorado/st08_2_001_001.pdf) (last accessed July 13, 2014); USDA Census of Agriculture, “Table 1. Historical Highlights: 2012 and Earlier Census Years,” State Level Data, Colorado, vol. 1 (2012), [http://www.agcensus.usda.gov/Publications/2012/Full\\_Report/Volume\\_1,\\_Chapter\\_1\\_State\\_Level/Colorado/st08\\_1\\_001\\_001.pdf](http://www.agcensus.usda.gov/Publications/2012/Full_Report/Volume_1,_Chapter_1_State_Level/Colorado/st08_1_001_001.pdf) (last accessed July 13, 2014).

Naval Oil Shale Reserves set-aside during the early 1900s by the federal government.<sup>8</sup> Workers who had moved into the Grand Valley region to share in the boom left, some with bumper stickers that read “last one to leave Grand Junction, turn off the lights.”<sup>9</sup>



**Figure 8. Annexation in Grand Junction, 1882-2014.**

Most of the oil workers left, but retirees and young professionals began replacing them. Many were attracted to the area by its splendid views, including the Book Cliffs to the north, the Grand Mesa to the east, and the Colorado National Monument (part of the Uncompahgre Highland) to the south and west (Figure 8). Since

<sup>8</sup> Anthony Andrews, “Oil Shale: History, Incentives, and Policy,” *CRS Report for Congress*, <https://www.fas.org/sgp/crs/misc/RL33359.pdf> (accessed April 3, 2015); Frank Nemanich (retired environmental scientist), in discussion with the author, September 2012.

1970, Mesa County's population has almost tripled from about 54,000 to about 147,000 in 2010, only about one-tenth of what had been projected during the late 1970s and early 1980s.<sup>10</sup>

Development has occurred, however. Patterson Road, for instance, one of Grand Junction's busiest thoroughfares, now extends six miles to the east through the old agricultural community of Fruitvale, and Grand Junction continues to annex subdivisions in an eastward creep toward the unincorporated community of Clifton. The road shrinks from five to three lanes, but between Grand Junction and Clifton almost no agricultural land remains.

Instead, between 30 and 31 Roads on Patterson Road, the Cross Orchards Historic Site sits as a reminder of the Cross Orchards Farm, which in the 1920s had over 22,000 apple trees on 243 acres.<sup>11</sup> The codling moth decimated the trees, however, and over the ensuing years the orchard's owners subdivided and sold bits of the farm. The old packing shed remains intact, along with a few farm buildings and some old rail cars and farm equipment. Since the 1970s, the Museum of Western Colorado has managed the surviving 20-acre site as a "living history farm." Funding is a perpetual problem, and the museum has turned to renting the space for weddings and other events. Attendees put up with traffic zooming along Patterson.<sup>12</sup> They also put up with Eastbrook, Jaquette, and Shoshone, the surrounding subdivisions. Fruitvale survives, but only as a place name.

---

<sup>10</sup> Estimates come from US Census Bureau, "Mesa County, CO," [https://www.google.com/publicdata/explore?ds=kf7tgg1uo9ude\\_&met\\_y=population&idim=county:08077&hl=en&dl=en](https://www.google.com/publicdata/explore?ds=kf7tgg1uo9ude_&met_y=population&idim=county:08077&hl=en&dl=en) (last accessed July 1, 2015).

<sup>11</sup> Museum of Western Colorado, "History of Cross Orchards Historic Site," <https://www.museumofwesternco.com/visit/cross-orchards-historic-site/history-of-cross-orchards/> (last accessed July 14, 2014).

<sup>12</sup> Michael Menard (retired, former Curator of Collections and Archives, Loyd Files Research Library), in discussion with the author, September 2012.

Most of Grand Junction's commercial and high-end residential development has taken place in the Lower Valley, which includes West Grand Junction, the Redlands, and Fruita (Figure 9). In 1980, at the height of the oil shale boom, the Mesa Mall opened on the west side of Grand Junction. Now owned by Simon Property Group, the mall has Sears, JC Penney, and Target, as well as Cabela's and a Sports Authority.

Well into the 1990s, cropland surrounded Mesa Mall. No longer. North of the mall, on Market Street, shoppers can visit a Kohl's and a strip mall with a David's Bridal. A PetSmart shares the same parking lot. Grand Junction now has several Safeways and City Markets, two Super Wal-Marts, a Sam's Club, a Lowe's, a Home Depot, and a Best Buy.



**Figure 9. Below the Colorado National Monument housing squeezes farmland.**

Regal Cinemas has a 14-screen movie theater, and a short walk from the cinema toward the Book Cliffs is a Candlewood Suites. Customers with north-facing rooms at

Candlewood see not only the Book Cliffs but an oilfield pipe-supply shop. Just a couple blocks east is a Holiday Inn Express, which offers customers rooms with views of a salvage yard.

The Grand Junction Regional Airport, on the north side of town, is now the state's third largest after those of Denver and Colorado Springs. There are daily flights to and from Denver, Dallas, Houston, Salt Lake City, and Phoenix. Close to the airport, there are 18 hotels. In town, there are another 15. Most are new, but the Melrose Hotel, which advertises itself as the Historic Melrose Hotel, sits about three blocks from the Mesa County Courthouse, the main post office, and the old Grand Junction Depot. One might expect that the Melrose would be a massive block-long building, but it is only two stories and takes up roughly a sixth of a block, a reminder that Grand Junction and Mesa County in 1910 had only a few thousand residents.<sup>13</sup>

Between 1990 and 2000, Grand Junction annexed 14,000 acres, more than 20 square miles. The city got a slogan, too: "Want the best of both worlds—temperate climate and close to the Rocky Mountains? How about the Grand Valley?"<sup>14</sup> Retirement communities appeared, along with supporting services—everything from golf courses and ski-supply companies to doctor's offices. Another black gold boom began in 2000 with advances in hydraulic-fracking technologies. This boom also meant more development—more subdivisions, more big box stores, and more people.

---

<sup>13</sup> University of Virginia Library, "Historical Census Browser: County-Level Results for 1890," <http://mapserver.lib.virginia.edu/> (last accessed July 14, 2014); University of Virginia Library, "Historical Census Browser: County-Level Results for 1910," <http://mapserver.lib.virginia.edu/> (last accessed July 14, 2014).

<sup>14</sup> Barbara Bowman, (Executive Director, Grand Junction Visitors Bureau), in discussion with the author, August 2012.

More people just meant more pressure on farmers like Harry Talbott, who blazed some trails along the way. In 1980, Harry Talbott and two neighbors started the Mesa Land Trust (MLT), known at first as the Mesa County Land Conservancy, to protect what they had built by placing some of their land in conservation easements. The trust to date has secured agricultural easements on over 750 acres of farmland in the Upper Valley, meaning the land can never be developed. In the mid-1980s, Harry also began adopting improved irrigation methods, partly to conserve water but also to increase yields. Other crops were tried, too. Though he was at first hesitant to convert orchards into vineyards, Harry and his sons realized that they could grow excellent wine grapes.<sup>15</sup> His decision to branch out into grape growing has helped build a successful agritourism industry in the Grand Valley, giving farmers a bit more economic ammunition in their battle with developers.<sup>16</sup>

The Talbotts persist in producing their version of gold—Mountain Gold peaches and grapes. The Talbotts are now in their fifth generation of farming here. They continue to enjoy a way of life that they can pass on to their children. And Harry’s grandsons, the sixth generation, are starting to farm and have with plans to enter the hard cider industry.<sup>17</sup> Harry says, “Victory is not certain, you know, you just have to believe that you’re gonna win” (Figure 10).<sup>18</sup>

---

<sup>15</sup> Harry Talbott (owner, retired, Talbott Farms), in discussion with the author, September 2012; Bruce Talbott (vineyard and orchard manager, Talbott Farms), in discussion with the author, September 2012.

<sup>16</sup> Parker Carlson (owner, Carlson Vineyards), in discussion with the author, September 2012.

<sup>17</sup> Bruce Talbott (vineyard and orchard manager, Talbott Farms), in discussion with the author, September 2012.

<sup>18</sup> “HCT Mesa Land Trust,” <http://youtu.be/pmSoai4HI-k> (last accessed September 30, 2014).



**Figure 10. Bruce Talbott inspects the 2012 peach crop.**

### **Agriculture in the Upper Grand Valley**

Colorado's Grand Valley was a sagebrush desert before the US government officially opened the region to settlement in 1882. Almost immediately after the opening, investors and settlers began organizing to fund construction of irrigation canals. Most of these efforts failed, but the roughly 45-mile long Grand Valley Canal and its associated ditches survived and provided water to around 45,000 acres by 1886.



Indiscriminate canal construction plagued the valley, however, creating agricultural and financial problems for residents as well as boosters.<sup>19</sup>

Most of the early farms were tiny—often as small as 10 acres, simply because settlers could not afford the cost of water for 160-acre homesteads.<sup>20</sup> Costs declined in the early 1900s after passage of the Reclamation Act in 1902. Grand Valley residents approached what was then the new Reclamation Service, now the Bureau of Reclamation, to conduct a study of the area. The engineers saw potential in the Grand Valley and approved a feasibility study in 1908. In 1912, Congress funded the Grand Valley Project—not to be confused with the Grand Valley Canal.<sup>21</sup> The project brought water to an additional 33,000 acres in the valley and included not only the construction of the Highline Canal but the remodeling of the Palisade Irrigation District, the Mesa County Irrigation District, and the Orchard Mesa Irrigation District (OMID).<sup>22</sup> It is no exaggeration to say that the Bureau of Reclamation saved agriculture in the Grand Valley. It certainly stabilized it by giving landowners a more secure source of irrigation water.

---

<sup>19</sup> William Joe Simonds, “Grand Valley Project,” (Bureau of Reclamation, 1994), [http://www.usbr.gov/projects/ImageServer?imgName=Doc\\_1305042485344.pdf](http://www.usbr.gov/projects/ImageServer?imgName=Doc_1305042485344.pdf) (last accessed August 29, 2012), 4; Steven F. Mehls, *The Valley of Opportunity: A History of West-Central Colorado* (Denver: Bureau of Land Management, Colorado State Office, 1982), 135-136.

<sup>20</sup> William E. Pabor, *Fruit Culture in Colorado: A Manual of Information* (Denver: Dove and Temple, Book and Job Printers, 1883), 79-82; “Farming Matters,” *The Fairplay (Colorado) Flume*, September 1, 1899; L. A. Shafer, “Irrigation Fructifying Millions of Acres,” *Los Angeles Herald*, July 9, 1905.

<sup>21</sup> US Department of the Interior Bureau of Reclamation (Bureau of Reclamation), “Grand Valley Project,” [http://www.usbr.gov/projects/Project.jsp?proj\\_Name=Grand+Valley+Project](http://www.usbr.gov/projects/Project.jsp?proj_Name=Grand+Valley+Project) (last accessed July 14, 2014).

<sup>22</sup> Bureau of Reclamation, “Draft Environmental Assessment Orchard Mesa Irrigation District Canal System Improvement Project,” (July 2013): 15, <https://www.usbr.gov/uc/envdocs/ea/OrchardMesa/draft-EA.pdf> (last accessed July 15, 2014).

Today, the agricultural industry in the upper Grand Valley is a story of peaches and grapes. All of the orchard and vineyard acreage is irrigated.<sup>23</sup> Harry Talbott's land depends on water from the OMID, one of six in the valley. OMID is one of the three districts that has its water tied to the land: water rights are not transferable and remain with the land. Water users who reside in the boundaries Grand Valley Irrigation Company, by contrast, can buy, sell, and transfer their water rights because the right is not tied to the land.

New programs offered by the Natural Resources Conservation Service (NRCS) spurred the adoption of more efficient irrigation methods and have helped farmers in the OMID.<sup>24</sup> Today, however, OMID channels water to approximately 9,800 users and 4,300 acres.<sup>25</sup> Much of that land is in orchards, but most of the residents are urbanites using water for other, non-agricultural purposes. It is indeed a small miracle that orchards still survive here.

Perhaps it is a miracle that orchards were established here in the first place. The valley only receives about eight inches of precipitation annually, and most of it falls in intense summer storms.<sup>26</sup> Soils are alkaline and so porous that irrigation water quickly seeps below root depth.<sup>27</sup>

---

<sup>23</sup> United States Department of Agriculture (USDA) Census of Agriculture, "Table 24: Selected Crops Harvested: 2012," County Level Data, Colorado, vol. 1 (2012), [http://www.agcensus.usda.gov/Publications/2012/Full\\_Report/Volume\\_1,\\_Chapter\\_2\\_County\\_Level/Colorado/st08\\_2\\_024\\_024.pdf](http://www.agcensus.usda.gov/Publications/2012/Full_Report/Volume_1,_Chapter_2_County_Level/Colorado/st08_2_024_024.pdf) (last accessed July 13, 2014).

<sup>24</sup> Max Schmidt (General Manager, OMID), in discussion with the author, September 2012.

<sup>25</sup> Grand Valley Irrigators, "OMID," <http://www.irrigationprovidersgv.org/OMID.php> (last accessed July 14, 2014)

<sup>26</sup> Simmonds, "Grand Valley Project," 2.

<sup>27</sup> F. V. Hayden, *Tenth Annual Report of the United States Geological and Geographical Survey of the Territories, Embracing Colorado and Parts of Adjacent Territories: Being a Report of Progress of the Exploration for the Year 1876* (Washington, D.C.: Government Printing Office, 1878), 170; USDA, *Soil Survey: Grand Junction Area, Colorado*, Series 1940, no. 19 (Washington, D. C.: Government Printing Office, 1955), 3-6, 30-37.

One thing in the farmers' favor, however, is the Valley's "million dollar breezes."<sup>28</sup> The slopes of Grand Mesa and the Book Cliffs face the sun, and the leeward warming air begins to rise by midday and is replaced by valley air flowing downstream. At night, the process is reversed, and the valley breezes become mountain ones, warmed adiabatically as they descend. The warm air helps protect the crops in the valley, and farmers today give them an assist with wind machines on especially cold nights.

By 2012 Colorado ranked sixth in the nation in peach production, and its approximately 17,000 tons of peaches generated about \$20 million of farm income.<sup>29</sup> Most of this money went to Harry Talbott and his neighbors. Mesa County is Colorado's leader in peach production, contributing more than two-thirds of the state's tonnage. Of the state's 2,800 acres of peaches, almost 1,900 are in Mesa County.<sup>30</sup>

The price per ton of peaches in Colorado has fluctuated from a low in 2004 of \$944 per ton to a high of \$2,000 per ton in 2011. These are premium prices, reflecting the premium quality of the state's peaches.<sup>31</sup> Most of the producers are very small, however: the average peach orchard in Mesa County is about 10 acres, and over 50

---

<sup>28</sup> Harry Talbott (owner, retired, Talbott Farms), in discussion with the author, September 2012; Priscilla Walker (orchard owner; President of Walker Innovations, Inc.; Chair, Palisade Historical Society), in discussion with the author, August 2012.

<sup>29</sup> USDA National Agricultural Statistics Service (NASS) Colorado Field Office, "Colorado Agricultural Statistics 2013," 2, [http://www.nass.usda.gov/Statistics\\_by\\_State/Colorado/Publications/Annual\\_Statistical\\_Bulletin/Final%202013.pdf](http://www.nass.usda.gov/Statistics_by_State/Colorado/Publications/Annual_Statistical_Bulletin/Final%202013.pdf) (last accessed July 14, 2014).

<sup>30</sup> USDA Census of Agriculture, "Table 31: Fruits and Nuts: 2012 and 2007," County Level Data, Colorado, vol. 1 (2012), [http://www.agcensus.usda.gov/Publications/2012/Full\\_Report/Volume\\_1,\\_Chapter\\_2\\_County\\_Level/Colorado/st08\\_2\\_031\\_031.pdf](http://www.agcensus.usda.gov/Publications/2012/Full_Report/Volume_1,_Chapter_2_County_Level/Colorado/st08_2_031_031.pdf) (last accessed July 13, 2014); Land Trust Alliance, "Colorado, Palisade Fruitlands – FRPP Economic Research," (2012): 3, <http://www.landtrustalliance.org/policy/documents/colorado-frpp-report> (last accessed July 14, 2014).

<sup>31</sup> Agricultural Marketing Resource Center, "Peach Profile," [http://www.agmrc.org/commodities\\_products/fruits/peach-profile/](http://www.agmrc.org/commodities_products/fruits/peach-profile/) (last accessed July 14, 2014); USDA NASS Colorado Field Office, "Colorado Agricultural Statistics 2013," 24. Colorado State University researchers have put the average at \$1,700 per ton for Western Slope peaches.

percent of the orchards are less than five.<sup>32</sup> Survival of farms this small almost demands other sources of income, either off-farm or from agritourism.

This is especially true because the establishment of a peach orchard is expensive and unprofitable for the first half-dozen years. Initial costs include land at \$50,000 an acre. Machinery, tools, and an irrigation system for a 10 to 20-acre orchard will cost an additional \$100,000 to \$150,000.<sup>33</sup> An acre supports on average about 545 trees. The cost of those trees depends largely on the choice of varieties and ranges from \$3.50 for a non-patented seedling to \$8 for patented varieties. The average cost of trees per acre is just over \$3,000, and the favored varieties are Suncrests and Redglobes, which originated in California. Crest Havens from Michigan and Glohavens from Oregon do well, too. Half of the Upper Valley peach trees are made up of these varieties, but many others are grown. Talbott's Mountain Gold manages around 30 varieties. Having so many varieties allows the peach harvest to last almost three months, from late June to mid-September. Production costs do not vary much between varieties.<sup>34</sup>

The Western Colorado Research Center estimates annual irrigation costs after the initial set up at about \$300 per acre. Growers can expect to spend about \$220 annually on fertilizer for the first couple of years and then about \$300 per acre per year after that. Keeping weeds and insects down will cost about \$100 per acre initially but

---

<sup>32</sup> USDA Census of Agriculture, "Table 24: Selected Crops Harvested: 2012."

<sup>33</sup> Robert Bleiberg (Executive Director, Mesa Land Trust), in discussion with the author, September 2012; Rod Sharp, Horst Caspari, and Amaya Atucha, "The Cost of Growing Peaches in Western Colorado," 5, <http://www.colostate.edu/Dept/CoopExt/NWR/ABM/costofgrowingpeaches.pdf> (last accessed July 14, 2014).

<sup>34</sup> Bruce Talbott (orchard and vineyard manager, owner, Talbott Farms), in discussion with the author, September 2014.

about \$300 per acre as the peach trees mature. There are also replanting expenses, insurance, taxes, water costs, and equipment repairs to be paid.<sup>35</sup>

According to the budgets worked up by the research center, a peach grower can expect to be in the red until year six—and even for years after that because of high startup costs and limited product sales. Peach sales may begin as early as year four and may amount to about \$5,300 an acre in a good year. Production costs during year four, however, are likely to average about \$5,000 per acre. The next year, a grower may double sales and production, while expenses increase minimally to \$5,100. In year six, a farmer may begin to receive maximum returns from the farm, taking in \$18,500 an acre, about twice production expenses. In sum, a peach grower in Colorado’s upper Grand Valley may in the sixth year of the orchard’s life net a little over \$9,000 per acre and move toward the black. An orchard’s life is about 25 years, though not all of these years will be good ones.<sup>36</sup> The premium wholesale prices, however, suggest that Palisade peaches are among the best in the world.<sup>37</sup>

Today, the Palisade area has over 60 percent of the orchards in Mesa County and is “The Peach Capital of Colorado.” The Agricultural Marketing Resource Center found that in the early-2000s US peach consumers, accustomed to California peaches, were frustrated with “mealy textures, fruit browning, and lack of sweetness... caused by post-harvest chilling injury and lack of ripening prior to harvest.”<sup>38</sup> Such dissatisfaction was good news for Harry Talbott. So has been the surge of interest in the buy-local movement and in healthy eating. The stronger these interests, the greater the appeal of

---

<sup>35</sup> Sharp, Caspari, and Atucha, “The Cost of Growing Peaches in Western Colorado,” 4-11.

<sup>36</sup> Sharp, Caspari, and Atucha, “The Cost of Growing Peaches in Western Colorado,” 4-11.

<sup>37</sup> Agricultural Marketing Resource Center, “Peach Profile.”

<sup>38</sup> Agricultural Marketing Resource Center, “Peach Profile.”

the Palisade peach.<sup>39</sup> Recently, it almost became the official state fruit, but cantaloupe growers in the Rocky Ford area, just east of Pueblo, Colorado, had enough support in the legislature to defeat the peach becoming the state fruit.<sup>40</sup>

The Upper Valley also has landowners who grow grapes. They first did this in the 19<sup>th</sup> century, but Mesa County went dry in 1909. Alcohol consumption was legalized again in December 1933, and grapes came back in the early 1970s.<sup>41</sup> Since the late 1980s, the number of wineries in Mesa County has mushroomed from three to around 30.<sup>42</sup>

Colorado Mountain Vineyards, the first winery in the state, opened in 1978 and has operated under various owners; it is now known as Colorado Cellars Winery and is located about two miles west of the Talbott's packing shed.<sup>43</sup> Plum Creek Cellars, which produced its first 400 cases of wine in 1985, was another early winery in Palisade.<sup>44</sup> A neighbor of Harry Talbott's, Parker Carlson, planted grapes in 1981 and opened the Carlson Vineyards tasting room in 1988 (Figure 11).<sup>45</sup> Harry Talbott and his sons planted grapes that decade also. Colorado's wine production increased by over 300

---

<sup>39</sup> Elisa Bosley, "Why You'll Love Palisade, CO," *Sunset*, August 2013, 23; Agricultural Marketing Resource Center, "Peach Profile."

<sup>40</sup> Land Trust Alliance, "Colorado, Palisade Fruitlands – FRPP Economic Research," 2; Penny Stine, "Palisade Peach Festival," *Vacationland* (supplement to *The Daily Sentinel* (Grand Junction, CO)), May 18, 2014, M43. Palisade is the name often given to refer to the entire Upper Valley, but farmers on Orchard Mesa will not tell you that they are from Palisade because they recognize their homeland as being different from the small town east of Grand Junction.

<sup>41</sup> "Colorado's Unique American Viticultural Areas," [http://www.coloradowine.com/cms/index.cfm/feature/38\\_7/colorados-unique-american-viticultural-areas.cfm](http://www.coloradowine.com/cms/index.cfm/feature/38_7/colorados-unique-american-viticultural-areas.cfm) (last accessed July 12, 2014); Abbot Fay, *The Story of Colorado Wines* (Montrose, CO: Western Reflections Publishing Company, 2002), 5.

<sup>42</sup> Padte and Richard Turley (Owners, Colorado Cellars), in discussion with the author, August 2012.

<sup>43</sup> "Colorado's Original Winery," <http://www.coloradocellars.com/> (last accessed October 11, 2014).

<sup>44</sup> "Our Story," <http://www.plumcreekwinery.com/Our-Story.php> (last accessed October 11, 2014).

<sup>45</sup> "Our History," <http://carlsonvineyards.com/history.html> (last accessed October 11, 2014).

percent in the first decade of the 21<sup>st</sup> century. In 2000, around 400,000 liters of Colorado wine was sold; in 2012, that number surged to over 1.2 million liters.<sup>46</sup> In the Grand Valley, wine production grew by 73 percent in that same decade.<sup>47</sup>



**Figure 11. Parker Carlson’s vineyard, just outside his solar-powered winery.**

Harry’s son, Bruce Talbott, orchard and vineyard manager of Talbott Farms, admitted that he was nervous at first about going into grapes.<sup>48</sup> Now, however, he calls the reemergence of Colorado’s grape and wine industry a “push to keep the area

---

<sup>46</sup> Colorado State University, “The 2012 Economic Contribution of Colorado’s Wine Industry: The Role of Consumers, Wineries and Tourism in the Growth of the Industry,” [http://www.coloradowine.com/cms/index.cfm/feature/282\\_97/economic-contribution-of-the-colorado-wine-inudstry-2012.cfm](http://www.coloradowine.com/cms/index.cfm/feature/282_97/economic-contribution-of-the-colorado-wine-inudstry-2012.cfm) (last accessed April 3, 2015).

<sup>47</sup> Land Trust Alliance, “Colorado, Palisade Fruitlands – FRPP Economic Research,” 4-5.

<sup>48</sup> Bruce Talbott (Orchard and Vineyard Manager, Talbott Farms), in discussion with the author, August 2012.

desirable... Once people are aware of what we have, it makes it much more difficult for someone to come put a subdivision in the middle of all that agriculture.”<sup>49</sup> By 2012, Mesa County growers had 729 acres of grapes on 86 farms—six more vineyards and 163 more acres than in 2007.<sup>50</sup>

Startup needs and costs for grape growers are similar to those for growing peaches. After purchase of the land, initial equipment requirements for 10 to 20 acres—machinery, tools, bird netting needs, and the irrigation system—may run close to \$100,000. Other startup costs include the purchase of vines.<sup>51</sup> Eight hundred to 1,000 may be planted on one acre and may be expected to continue to produce for 50 to 100 years.<sup>52</sup> Grape vines on Bruce Talbott’s vineyard come from Inland Desert Nursery in Washington State, Vintage Nursery in California, and Double A Nursery in New York. Their prices range from \$1.80 to \$4.25 each. While several grape varieties are grown throughout the valley, Riesling has recently displaced Merlot and Chardonnay as the most popular.<sup>53</sup> On top of planting costs, there is also the cost of trellis-building and the application of protective chemicals.<sup>54</sup>

Grape production expenses initially vary from year-to-year. According to budget estimates worked up by Colorado State University researchers, grape growers in the

---

<sup>49</sup> Christie Aschwanden, “From Corn to Cabernet,” *High County News*, August 17, 2009, [http://www.hcn.org/issues/41.14/from-corn-to-cabernet/article\\_view?b\\_start:int=2](http://www.hcn.org/issues/41.14/from-corn-to-cabernet/article_view?b_start:int=2) (last accessed July 14, 2014).

<sup>50</sup> Land Trust Alliance, “Colorado, Palisade Fruitlands – FRPP Economic Research,” 4.

<sup>51</sup> Rod Sharp and Horst Caspari, “The Cost of Growing Wine Grapes in Western Colorado,” (November 2010), 5-6, <http://www.coopext.colostate.edu/WR/costofgrowinggrapes.pdf> (last accessed September 12, 2014).

<sup>52</sup> Richard A. Hamman, Jr., Steven D. Savage, and Harold J. Larsen, “The Colorado Grape Growers’ Guide: 1998 Edition,” *Bulletin 550A* (Fort Collins: Colorado State University Cooperative Extension, 1998), 45, <http://www.ext.colostate.edu/pubs/garden/550a.pdf> (last accessed September 28, 2014); Sharp and Caspari, “The Cost of Growing Wine Grapes in Western Colorado,” 6.

<sup>53</sup> Bruce Talbott (orchard and vineyard manager, owner, Talbott Farms), in discussion with the author, September 2014.

<sup>54</sup> Sharp and Caspari, “The Cost of Growing Wine Grapes in Western Colorado,” 5-6.



Grand Valley can expect in the first year after planting to pay about \$6,400 per acre, with the highest expenses being for the trellises. Year two costs taper off to \$2,600, but expenses jump in year three to around \$5,100, mainly for bird netting. Grape sales may start in year three at four tons per acre with an average selling price of \$1,300 per ton, and they become consistent by year five.

After year three, production expenses hold fairly steady at about \$3,000 per acre. Fertilizing the vines and killing pests runs about \$400 per acre, while labor for weeding, pruning, training, irrigating, and harvesting runs well over \$1,000 per acre per year after year five. In some years, equipment will have to be replaced. While peach growers can expect to return a profit around year six, vineyard owners are not likely to earn a profit until year 10. By the tenth year, grape growers may net, after average production expenses, about \$2,500 per acre.<sup>55</sup>

If growers make wine with their grapes, the numbers tell a very different story. Indeed, the idea of growing grapes, harvesting them, and turning them into wine has caught on across America.<sup>56</sup> In Colorado, vintners can make 375 gallons of wine from an acre's worth of grapes.<sup>57</sup> Grand Valley wines sell at an average retail price of \$14 per bottle. If the grape grower is also the wine maker, the producer, after becoming established, can expect to reap about \$13,000 per acre for the product.<sup>58</sup>

---

<sup>55</sup> Sharp and Caspari, "The Cost of Growing Wine Grapes in Western Colorado," 4-16.

<sup>56</sup> Paul Franson, "Is Colorado the New Washington?," *Wines & Vines* (October 2006), <http://www.winesandvines.com/template.cfm?section=features&content=48734> (last accessed October 3, 2014).

<sup>57</sup> A gallon is equivalent to five 750-milliliter bottles of wine.

<sup>58</sup> Land Trust Alliance, "The Power of Leveraging Local and Federal Dollars to Strengthen Agricultural Land Easement Investments," (2012): 19, <http://www.landtrustalliance.org/policy/documents/frpp-economic-benefits-report> (last accessed July 14, 2014).

Grapes remain a hard business because of the time required and up-front investment. Bruce Talbott said, “About two-thirds of the new entry growers fail within five years and leave; the one third who stay are a big part of our industry.”<sup>59</sup> Today, Palisade is home to around 20 wineries—65 percent of the wineries in Mesa County—and it hosts the annual Colorado Mountain Winefest. Though Grand Junction calls itself Colorado’s Wine Country, the title really belongs to Palisade.<sup>60</sup>



**Figure 12. Fruita showcases its amenities to passersby.**

---

<sup>59</sup> Bruce Talbott (orchard and vineyard manager, owner, Talbott Farms), in discussion with the author, September 2014.

<sup>60</sup> See for instance the iconography on the Grand Junction Visitors & Convention Bureau website: <http://www.visitgrandjunction.com> (last accessed July 14, 2014).

## Encroachment and Preservation

Urbanization in the Grand Valley, as elsewhere, is often only a plat or new amenity away. In the Lower Valley, a grain elevator off Interstate 70 in Fruita pictures one of its amenities with a banner of a mountain biker (Figure 12).<sup>61</sup> From 2000 to 2010, Fruita's population nearly doubled from 6,734 to 12,616. Grand Junction gained 16,580 new residents in that period.<sup>62</sup>

In the Upper Valley, Clifton's population continues to grow quickly. It jumped from 12,671 in 1990 to 17,345 in 2000 to 19,889 in 2010.<sup>63</sup> Orchard Mesa and Palisade saw the addition of about 1,000 residents between 2000 and 2010.<sup>64</sup>

Stores are also opening. Dollar General has recently moved into Palisade, and sewer lines keep expanding into agricultural areas. Mel Rettig, a fruit and vegetable grower whose operation is located about five miles west of Harry Talbott's operation, said that the sewers are framing him in.<sup>65</sup> Mesa County, Grand Junction, Fruita, and

---

<sup>61</sup> Clinton M. Kinney (Fruita City Manager), in discussion with the author, September 2012.

<sup>62</sup> U.S. Census Bureau, "Population Log for Fruita, Grand Junction, and Palisade," <https://www.google.com/publicdata/> (last accessed July 1, 2014).

<sup>63</sup> U.S. Census Bureau American Fact Finder, "Profile of General Demographic Characteristics: Orchard Mesa CDP, Colorado, 2000," [http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=DEC\\_00\\_SF1\\_DP1](http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=DEC_00_SF1_DP1) (last accessed June 28, 2014); U.S. Census Bureau American Fact Finder, "Census 2010 Total Population: Orchard Mesa CDP, Colorado, 2010," [http://factfinder2.census.gov/faces/nav/jsf/pages/community\\_facts.xhtml](http://factfinder2.census.gov/faces/nav/jsf/pages/community_facts.xhtml) (last accessed June 28, 2014); U.S. Census Bureau, "Population Log for Fruita, Grand Junction, and Palisade."

<sup>64</sup> U.S. Census Bureau American Fact Finder, "Profile of General Demographic Characteristics: Orchard Mesa CDP, Colorado, 2000," [http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=DEC\\_00\\_SF1\\_DP1](http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=DEC_00_SF1_DP1) (last accessed June 28, 2014); U.S. Census Bureau American Fact Finder, "Census 2010 Total Population: Orchard Mesa CDP, Colorado, 2010," [http://factfinder2.census.gov/faces/nav/jsf/pages/community\\_facts.xhtml](http://factfinder2.census.gov/faces/nav/jsf/pages/community_facts.xhtml) (last accessed June 28, 2014); "Population Log for Fruita, Grand Junction, and Palisade."

<sup>65</sup> Mel Rettig (owner, Rettig Farms), in discussion with the author, September 2013.

Palisade have urban plans that call for preserving agriculture in the region, but how a place *plans* to develop and how it actually develops can be two different things.<sup>66</sup>

How, then, can Coloradans balance these opposing forces? I have already suggested some of the answers to the question: greater efficiency with improved irrigation methods to save water for conjunctive water use, new markets with agritourism, and—most radical of all—land trusts that prohibit in perpetuity the conversion of farmland to urban uses. Many of the following pages deal in greater detail with these strategies, but a bit more about them may be helpful here.

In the Grand Valley, 94 percent of all irrigated farmland has had some type of engineering improvement, whether through on-farm methods, such as localized irrigation systems, or through lining the canals.<sup>67</sup> Max Schmidt, the current manager of OMID, is quick to point out that the “lucky” residents on Colorado’s Western Slope have senior water rights to the Colorado River, meaning that if authorities issue a call on the river, Grand Valley residents will get water first.<sup>68</sup> Still, 27 million in the US and about 3 million people in Mexico take water from the Colorado River, the flow of which has been in a long-term decline.<sup>69</sup> At some point, even the most senior water rights may be in jeopardy, especially from critical uses such as urban demand.

---

<sup>66</sup> Steve Acquafresca (Mesa County Commissioner (2007-2015)), in discussion with the author, September 2013.

<sup>67</sup> USDA Natural Resources Conservation Service, “Salinity in the Grand Valley: Celebrating 30+ Years, 1979-2012,” [http://www.nrcs.usda.gov/Internet/FSE\\_DOCUMENTS/nrcs144p2\\_060826.pdf](http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs144p2_060826.pdf) (last accessed July 2, 2014).

<sup>68</sup> Max Schmidt, in Panel on Drought and Agriculture, “Natural Resources of the West: Water and Drought,” Colorado Mesa University Water Center Seminar Series, aired online on December 3, 2012; Gary Harmon, “Officials: ‘Not 1 More Drop’ to Front Range,” *The Daily Sentinel* (Grand Junction), September 2, 2013.

<sup>69</sup> Sarah Zielinski, “The Colorado River Runs Dry,” *Smithsonian*, <http://www.smithsonianmag.com/science-nature/the-colorado-river-runs-dry-61427169/?no-ist> (last accessed July 1, 2014).

Meanwhile, MLT has been instrumental in making agricultural land more affordable and in preserving the character of the Upper Valley. How much land does the trust need to protect the agriculture industry here? Members of the trust believe that the fruit and wine industry can survive in the Upper Valley with 1,000 acres conserved, a reduction of 1,000 acres from the initial 1990s estimate. This is a very modest goal: only 1.5 square miles. As of 2014, the trust has preserved 769 acres of fruit land, slightly more than one square mile. By most standards elsewhere in the country, the trust is hoping to preserve little more than a garden, but that garden may be a jewel.<sup>70</sup>

Agritourism makes that jewel more valuable. Statewide “agritourism and recreational services” generated almost \$33 million in income in Colorado in 2007. Revenue decreased according to the 2012 agriculture census to a little over \$28 million, likely attributable to the depressed economy, despite an uptick to 864 farms that provided agritourism activities.<sup>71</sup> Festivals are a huge agritourism activity. The Palisade Chamber of Commerce runs the century-old Palisade Peach Festival, while the Colorado Association for Viticulture and oenology manages Colorado Winefest, both held during the picking seasons—July 15 to September 20 for peaches and starting in the second or third week of September for grapes.<sup>72</sup>

In 2012, several growers and local business owners in the Upper Valley applied for and received a grant to create a Fruit and Wine Scenic Byway (locally known as the

---

<sup>70</sup> John B. Wright, *Rocky Mountain Divide: Selling and Saving the West* (Austin: University of Texas, 1993), 122; Mesa Land Trust, “Lands for Tomorrow: 2012-2013 Annual Report,” 2, [http://www.mesalandtrust.org/MLT\\_AnnualReport\\_2012\\_13.pdf](http://www.mesalandtrust.org/MLT_AnnualReport_2012_13.pdf) (last accessed July 14, 2014); Robert Bleiberg (Executive Director, Mesa Land Trust), in discussion with the author, September 2013.

<sup>71</sup> USDA Census of Agriculture, “Table 7. Income From Farm-Related Sources: 2012 and 2007,” State Level Data, Colorado, vol. 1 (2012), [http://www.agcensus.usda.gov/Publications/2012/Full\\_Report/Volume\\_1,\\_Chapter\\_1\\_State\\_Level/Colorado/st08\\_1\\_006\\_007.pdf/](http://www.agcensus.usda.gov/Publications/2012/Full_Report/Volume_1,_Chapter_1_State_Level/Colorado/st08_1_006_007.pdf/) (last accessed July 13, 2014).

<sup>72</sup> USDA NASS Colorado Field Office, “Colorado Agricultural Statistics 2013,” 26.

Fruit Loop). They now invite visitors to drive or bike a 27-mile route that goes around the Upper Valley's orchards, vineyards, fruit stands, and wineries.<sup>73</sup> Interstate 70 runs right past Palisade. It is about a four-hour drive from Denver, which means that there are plenty of potential customers for businesses along the loop. Signs now direct visitors to the town's wineries, fruit stands, and farms, as well as the loop.

Palisade has a historic Main Street with brick buildings and churches. The town has a handful of restaurants, a small grocery store, public library, post office, two art shops, and an outfitter renting bicycles—even electric ones—to visitors. Fruit and Wine Real Estate tries to sell with every lot and house a sense of place, while the Palisade Historical Society works hard to preserve the community's heritage.

Palisade residents are strongly behind preserving Palisade's "agricultural and small town character," but a town survey has also shown that residents favor developing it as "a recreation and tourist destination."<sup>74</sup> There, again, is the tension: how much development can Palisade stand before people will no longer want to visit or it is no longer the Palisade that people like Harry Talbott will love? It is an example of the problems facing many landscapes in the American West, with a cacophony of old and new land uses, endless sprawl, shrinking open space, drought, and perfect and imperfect policies and politics. Upper Valley residents are actively trying to make the best use of their water and their land to preserve the character of agriculture and to keep Grand Junction's sprawl in Grand Junction. My goal is to look at this one small region in the American West, to learn how the cultural landscape is changing there and to show how some farmers have found solid ways to preserve their way of life.

---

<sup>73</sup> "Palisade Byway Beckons," *The Daily Sentinel* (Grand Junction), May 12, 2012.

<sup>74</sup> Land Trust Alliance, "Colorado, Palisade Fruitlands – FRPP Economic Research," 9.

## Chapter 2: An End to the Ute Homeland

Prior to the 1870s, occupancy of Colorado's Western Slope by white settlers was sparse—so sparse and the region so different from the Colorado Piedmont that politicians contemplated forming a separate state for western Colorado and eastern Utah.<sup>1</sup> The presence of semi-nomadic Ute Indians, combined with the remoteness and aridity of Colorado's Western Slope, discouraged settlement and limited US government reconnaissance efforts.<sup>2</sup> In fact, the region was the last in the state to be settled. After half-hearted attempts at accommodation, the government forced the Utes to relocate mostly into eastern Utah, ending the possibility of Ute and Euro-American peaceful coexistence. Nothing was going to stop the movement westward.

### A Land Apart

During the 1860s and 1870s, the Department of the Interior funded the "Four Great Surveys" of the American West. Each of these reports covered some portion of Colorado, but those of John Wesley Powell and Dr. Ferdinand V. Hayden were especially important in providing some of the first scientific studies of conditions on the Colorado Plateau.<sup>3</sup> Powell's *Report on the Land of the Arid Region of the United States* emphasized the need to conserve the region's limited water supply.<sup>4</sup> During his career, he also tried to protect law-abiding settlers from conniving boosters who flocked to the

---

<sup>1</sup> William Wyckoff, *Creating Colorado: The Making of a Western American Landscape 1860-1940* (New Haven, CT: Yale University Press, 1999), 220.

<sup>2</sup> Wyckoff, *Creating Colorado*, 219.

<sup>3</sup> Wallace Stegner, *Beyond the Hundredth Meridian: John Wesley Powell and the Second Opening of the West* (New York: Penguin Books, 1953), 6-8. The "four great surveys" (King, Powell, Hayden, and Wheeler) all contributed significantly to science and to the benefit of the people (for example, see: "The Beginnings of the U.S. Geological Survey," [http://www.nationalatlas.gov/articles/government/a\\_usgs.html](http://www.nationalatlas.gov/articles/government/a_usgs.html) (accessed November 13, 2012)).

<sup>4</sup> Stegner, *Beyond the Hundredth Meridian*, 202-3; Donald Worster, *A River Running West: The Life of John Wesley Powell* (New York: Oxford University Press, 2001), 114, 203-10. Stegner and Worster made a point of this in their biographies of Powell's career.

region after the passage of the Timber Culture Act in 1873 and the Desert Land Act in 1877.<sup>5</sup> Powell's ideas, however, were no match for the myth of plenitude that dominated what would come to be known as the Gilded Age—a period of increasing speculation, monopolization, and corporate greed.

Prospective settlers much preferred the Hayden survey. According to western Colorado historian Duane Vandebusch, Hayden's motive was to "publish material about Colorado and the Gunnison country that would be of immediate use to anxious miners, settlers, and businessmen."<sup>6</sup> Historian Richard Bartlett argued in his *Great Surveys of the American West* that Hayden filled his reports with "glowing predictions" that "people... loved to hear." It did not matter, according to Bartlett, if those statements "were based upon sound judgment or thorough research."<sup>7</sup> All that mattered was that Hayden's surveys supported the "possibilities for human use and exploitation of the land."<sup>8</sup> Hayden, Vandebusch stated, claimed to have the keys to "unlock the secrets" to the treasures in Colorado and other western states.<sup>9</sup>

Hayden assigned Albert C. Peale, a geologist, to the Grand River Division of the survey. Henry Gannett, a topographer, and James Stevenson, the executive officer of the survey who served as the division's manager of Indian affairs, accompanied Peale.<sup>10</sup>

Together, they explored and helped chart Colorado's Western Slope.

Their 1875 descriptions of the Grand Valley, however, were far from "glowing:"

---

<sup>5</sup> Stegner, *Beyond the Hundredth Meridian*, 202-3.

<sup>6</sup> Duane Vandebusch, *Early Days in the Gunnison Country* (Gunnison, CO: B and B Printers, 1974), 27.

<sup>7</sup> Richard A. Bartlett, *Great Surveys of the American West* (Norman: University of Oklahoma Press, 1962), 12.

<sup>8</sup> Bartlett, *Great Surveys of the American West*, 11.

<sup>9</sup> Vandebusch, *Early Days in the Gunnison Country*, 27.

<sup>10</sup> Hayden, *Tenth Annual Report*, xv-xvi.



With the sole exception of one little trickling stream, strongly alkaline, there is no water in the valley except the Grand River. The Roan [Book] Cliffs send down several streams, but the water sinks very soon after entering the valley. Vegetation is very scanty. In the bottomlands which are very limited, there are fine groves of cottonwoods, and greasewood grows rank and dense. On the hogbacks along the river there is considerable grass, but elsewhere in the valley there is only a scanty growth of sage. The soil is everywhere impregnated with alkali. It is a stiff, heavy clay, which, when dry, has a surface as hard as a board, but, when wet, becomes mud of almost incalculable depth. The upper part of the valley, just west of the Little Book Cliffs, can be easily irrigated from the river, and thus several hundreds of square miles may be made available for agriculture. Farther down, however, the level of the valley rises so much that water from the river cannot reach it. Neither can it be irrigated by artesian wells, as the dip of the strata is away from it. It must remain what it is, utterly valueless, unless a change of climate takes place.<sup>11</sup>

In their report the next year, they reiterated that the Grand Valley was:

...a desert, covered with a sparse growth of stunted sage-brush, which grows in a stiff alkaline soil made from the debris that is washed from the Book Cliffs. Along Grand River in the bottom-land there are groves of cottonwood. A portion of the valley between the Little Book Cliffs and Salt Creek *may be reclaimed by irrigation from Grand River* [italics added]. Beyond Salt Creek the level is too high above that of the river, which is in cañon, to be available for agricultural purposes by irrigation.<sup>12</sup>

Peale and his colleagues concluded that “the valley is not adapted for agricultural purposes, and much less for grazing, unless there should be a change in climate.” They added that other natural resources, including coal, in the area were of too “poor quality...[and] of no economic importance.”<sup>13</sup> The place names that they assigned were

---

<sup>11</sup> F. V. Hayden, *Ninth Annual Report of the United States Geological and Geographical Survey of the Territories, Embracing Colorado and Parts of Adjacent Territories: Being a Report of Progress of the Exploration for the Year 1875* (Washington, D.C.: Government Printing Office, 1877), 345. The area referred to here as “the upper part of the valley, just west of the Little Book Cliffs” refers to the areas around Grand Junction, Fruita, and Loma. Today there is a local region known by that name located north of the Book Cliffs range that supports a horse herd. See “Map of the Grand River District,” F. V. Hayden, *Tenth Annual Report of the United States Geological and Geographical Survey of the Territories, Embracing Colorado and Parts of Adjacent Territories: Being a Report of Progress of the Exploration for the Year 1876* (Washington, D.C.: Government Printing Office, 1878).

<sup>12</sup> Hayden, *Tenth Annual Report*, 170.

<sup>13</sup> Hayden, *Tenth Annual Report*, 173.

equally unappealing to potential settlers: Alkali Creek, Desert Creek, and Muddy Creek, for example.

Settlers and officials looking at maps in Hayden's 1881 *Geological and Geographical Atlas of Colorado and Adjacent Territory* would have drawn a very different conclusion. The "Economic Map of Colorado," for example, classified a large portion of the upper Grand Valley as suitable for agriculture, including present day Orchard Mesa. The cartographers shaded the Uncompahgre Plateau and the Book Cliffs Range to indicate piñon pines and cedars. Several maps in the atlas showed the proposed extension of the Denver and Rio Grande Railroad (D&RG), which would connect Salt Lake City to Ouray. In sum, the atlas depicted the presence of the resources needed for settling the valley—arable land, water sources, timber for fuel and building materials, and a soon-to-be-expanded transportation network.<sup>14</sup>

Bartlett suggested that the reports and maps showed that the Grand Valley could be "safely exploited" and that settlers would not be putting their life savings at risk in an unknown region.<sup>15</sup> The chief problem affecting Euro-American settlement, besides the lay of the land, was that the semi-nomadic Utes still occupied the region. They were, however, about to be removed.

### **Making Room: Relocating the Utes**

The presence of the Utes on the Western Slope blocked the agricultural and mineral potential of the Grand Valley.<sup>16</sup> Removing them, geographer William Wyckoff wrote, would allow "a barren wilderness...[to be]...transformed into a lush and

---

<sup>14</sup> This paragraph derives from my observations of the maps contained in: F. V. Hayden, *Geological and Geographical Atlas of Colorado and Adjacent Territory* (Washington, D.C.: Government Printing Office, 1881).

<sup>15</sup> Bartlett, *Great Surveys of the American West*, xiii.

<sup>16</sup> Wyckoff, *Creating Colorado*, 219-21.

productive province,” a place to satisfy the imagination of boosters, entrepreneurs, and politicians.<sup>17</sup>

The federal government actually started forming plans to relocate the Utes after miners struck gold and silver in the Rocky Mountains in the late 1850s. The taking of Indian lands in Colorado lasted nearly two decades. It began with a “truce,” the 1863 Treaty of Conejos, which restricted the Utes to land west of the Continental Divide.<sup>18</sup> The Conejos Treaty, according to Paul O’Rourke, a historian for the Bureau of Land Management, “set a precedent for future government dealings with the entire Ute tribe.”<sup>19</sup> White settlers started to occupy the Western Slope in 1868, after the government forced the Utes to sign another treaty. This second “agreement” displaced the tribes from areas attractive to miners and limited them to the western third of Colorado Territory (Figure 13).<sup>20</sup>

The government set up agencies to “help” the Utes. The Utes despised mining, plowing, and any other activity that was land-use intensive.<sup>21</sup> These industries “tore up the earth,” and the Utes wanted no part of the “new life the white people were trying to force on them.”<sup>22</sup>

---

<sup>17</sup> Wyckoff, *Creating Colorado*, 222.

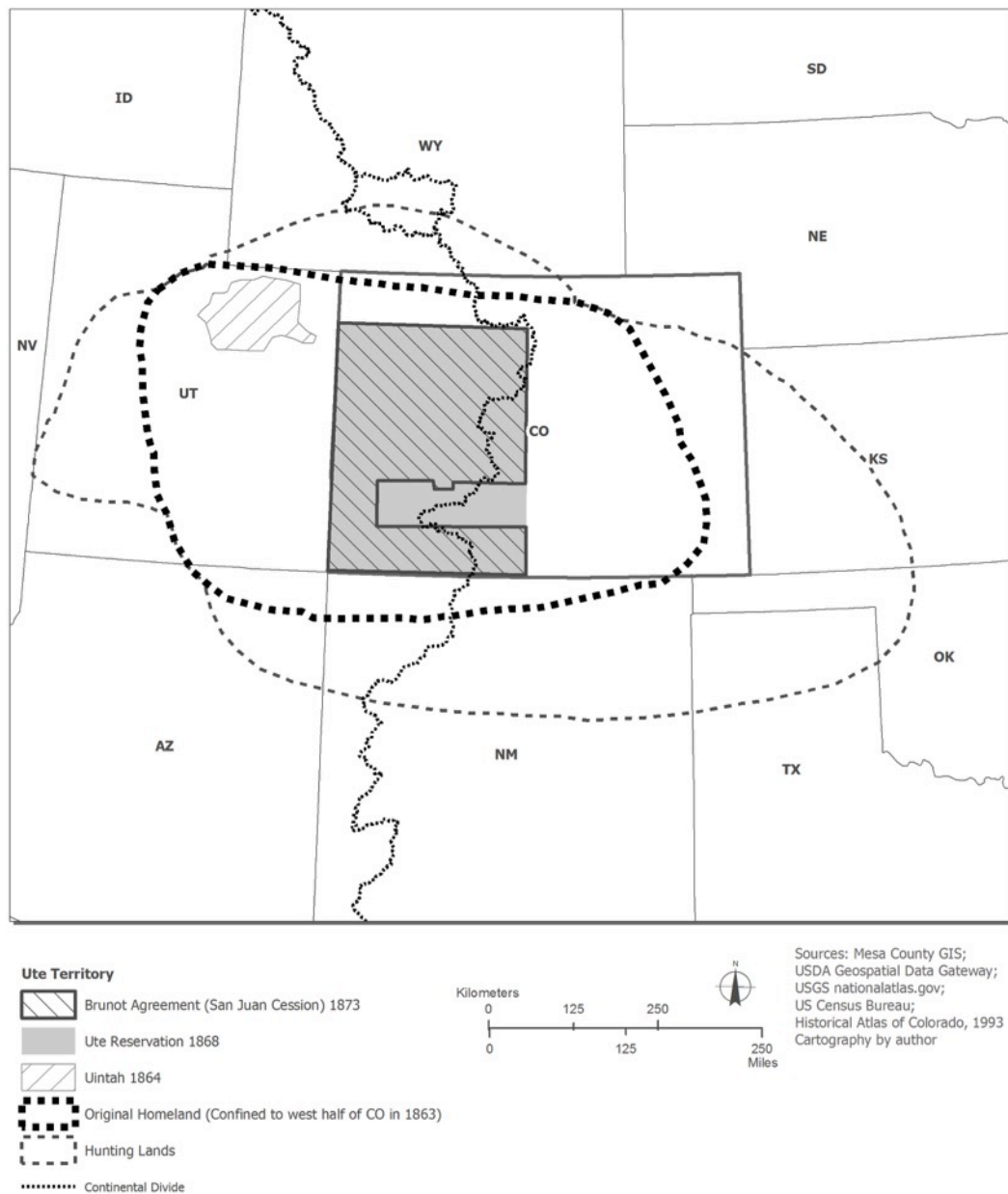
<sup>18</sup> Carl Abbott, Stephen J. Leonard, and Thomas J. Noel, *Colorado: A History of the Centennial State, Fourth Edition* (Boulder: University Press of Colorado, 2005), 113.

<sup>19</sup> Paul M. O’Rourke, *Frontier in Transition: A History of Southwestern Colorado* (Denver: Bureau of Land Management Colorado State Office, 1980), 49.

<sup>20</sup> Thomas J. Noel, Paul F. Mahoney, and Richard E. Stevens, *Historical Atlas of Colorado* (Norman: University of Oklahoma Press, 1993), 45. Please note that this atlas does not contain page numbers; the number listed with this citation refers to the map number and its accompanying information page.

<sup>21</sup> Charles Wilkinson, conclusion to *The Last War Trail: The Utes and the Settlement of Colorado*, by Robert Emmitt (Boulder: University Press of Colorado, 2000), 307, 310.

<sup>22</sup> Wilkinson, conclusion to *The Last War Trail*, 310.



**Figure 13. The Ute homeland and federal land takings.**

By 1868, the White River Agency oversaw the Northern Utes who still roamed the Grand Valley.<sup>23</sup> The government's Los Pinos Agency, established in the early

<sup>23</sup> Mark Miller, *Hollow Victory: The White River Expedition of 1879 and the Battle of Milk Creek* (Boulder: University Press of Colorado, 1997), 2.

1870s, governed the Southern Utes. These agencies, however, did little to protect the tribes and their interests and allowed prospectors to explore minerals in the region.<sup>24</sup>

Miners moved into the San Juan Mountains, which were part of the Ute reservation established in 1868. Quickly, the Utes learned they could not trust Euro-Americans, including Otto Mears, who favored US interests.<sup>25</sup> In 1873, US officials, with the help of Mears, were able to get the Utes to sign a third agreement, the Brunot Treaty. This treaty ceded one-fourth of what was left of Ute lands in present-day southwestern Colorado to the federal government and blocked the tribe from claiming any mineral rights in the San Juan Mountains.<sup>26</sup>

Tensions escalated after Colorado became a state in 1876. In the winter of 1877-1878, the Union Pacific Railroad refused to deliver winter supplies to the Ute reservation because of an unpaid freight bill. The rail company accused Edward F. Danforth, the White River Agent at the time and a man the Utes seemed to favor because he allowed them to continue their traditions, of selling the supplies for a personal profit. Danforth pleaded his and the Utes' case to the Bureau of Indian Affairs, putting the blame on the rail company, but Danforth's plea was too little, too late, and he resigned in early 1878.<sup>27</sup> Robert Silbernagel, author of *Troubled Trails*, described the agent as "a crooked private contractor" and the event as "bureaucratic bumbling on the part of the federal government."<sup>28</sup>

---

<sup>24</sup> O'Rourke, *Frontier in Transition*, 50; Virginia McConnell Simmons, *The Ute Indians of Utah, Colorado, and New Mexico* (Boulder: University Press of Colorado, 2000), 23.

<sup>25</sup> O'Rourke, *Frontier in Transition*, 50.

<sup>26</sup> Abbott, Leonard, and Noel, *Colorado: A History of the Centennial State*, 114; Wyckoff, *Creating Colorado*, 223.

<sup>27</sup> Simmons, *The Ute Indians of Utah, Colorado, and New Mexico*, 180.

<sup>28</sup> Robert Silbernagel, *Troubled Trails: The Meeker Affair and the Expulsion of Utes from Colorado* (Salt Lake City: The University of Utah Press, 2011), 4.

Nathan C. Meeker replaced Danforth at the White River Agency in the summer of 1878. Meeker went to Colorado as an idealist, a reformer who had helped Horace Greeley form his agrarian utopia of Union Colony, a community on Colorado's high plains that today bears Greeley's name. Congress appointed Meeker because of his success in Union Colony.<sup>29</sup>

Meeker was zealous, but he knew nothing about Native American culture. Meeker wanted the Utes to become an agricultural society, like the one he helped establish at Union Colony. The Bureau of Indian Affairs, in fact, directed him to teach the Utes agriculture, develop a school, construct homes on "parcels of land assigned to each family, and start them on the road to civilization."<sup>30</sup>

The White River Agency, however, was not well located for irrigating crops, so Meeker moved the agency downstream to Powell Park (near present day Meeker, named after the agent). The Utes pastured horses there and had a track for shows and races.<sup>31</sup> Meeker successfully carried out and oversaw the building of irrigation ditches at Powell Park, largely without the help of Indian workers. By fall 1878, he had 40 acres under cultivation, much to the dismay of the Utes. They were accustomed to hunting game in the late summer and early fall, then returning to the agency to obtain other goods to survive the winter.<sup>32</sup>

Meeker continued his agricultural pursuits. The spring and early summer of 1879 were unusually cold, however, and the late summer was exceedingly dry and

---

<sup>29</sup> Robert S. McPherson, *As If the Land Owned Us: An Ethnohistory of the White Mesa Utes* (Salt Lake City: The University of Utah Press, 2011), 131; Emmitt, *The Last War Trail*, 46-49.

<sup>30</sup> Robert Emmitt, *The Last War Trail: The Utes and the Settlement of Colorado* (Boulder: University Press of Colorado, 2000), 53.

<sup>31</sup> Simmons, *The Ute Indians of Utah, Colorado, and New Mexico*, 181.

<sup>32</sup> Simmons, *The Ute Indians of Utah, Colorado, and New Mexico*, 181; Emmitt, *The Last War Trail*, 60-67.

hot.<sup>33</sup> Several fires broke out that summer. Frederick Pitkin, Colorado's second governor, was an obdurate supporter of removing the Utes from the Western Slope, and he blamed the Utes for setting the fires.<sup>34</sup>

The Utes became increasingly unhappy with Agent Meeker, who wrote constantly to officials in Washington, D.C., as well as to newspaper reporters. He complained about the Utes and their hunting expeditions, about their constantly leaving the reservation, about their illicit trade with supply shops and military officers outside the agency, and about how stubborn and ignorant they were.<sup>35</sup> On September 29, 1879, over 100 armed soldiers from Wyoming marched into the Ute reservation to quell the reportedly rebellious Indian leaders who thwarted Meeker's "progress."<sup>36</sup> The Utes viewed this intrusion as a direct violation of previous treaties.<sup>37</sup>

Silbernagel argued that the arrival of the soldiers sparked "fears among the Utes for the safety of their wives, their children, and their homeland. Given what had happened in other parts of Colorado [to the Utes, specifically] and in other territories, the Utes had ample reason to be afraid."<sup>38</sup> The Utes attacked the soldiers in the Battle of Milk Creek.<sup>39</sup>

A few miles south, other Utes murdered Agent Meeker and several of his employees on September 29 in what became known as the Meeker or White River

---

<sup>33</sup> Emmitt, *The Last War Trail*, 84-86; Simmons, *The Ute Indians of Utah, Colorado, and New Mexico*, 183.

<sup>34</sup> Wilkinson, conclusion to *The Last War Trail*, 308-09.

<sup>35</sup> Emmitt, *The Last War Trail*, 58-59.

<sup>36</sup> Miller, *Hollow Victory*, 5, 12-13.

<sup>37</sup> Silbernagel, *Troubled Trails*, 1-5.

<sup>38</sup> Silbernagel, *Troubled Trails*, 2.

<sup>39</sup> Miller, *Hollow Victory*, 5; Silbernagel, *Troubled Trails*, 2.

Massacre.<sup>40</sup> The tribe took hostages, including Meeker's wife and daughter. Those events quickly became national news, but on October 21, 1879, the Utes released the hostages.<sup>41</sup> A trial was inevitable, and the Utes hoped that releasing the hostages would work in their favor.<sup>42</sup>

Hearings with the White River Ute Commission, made up of George W. Manypenny, Otto Mears, Alfred B. Meacham, Thomas A. McMorris, and John J. Russell, began on November 12, 1879, at the Los Pinos Agency. The Commission forgave those involved at Milk Creek but decided that those who were part of the Meeker Massacre would have to go to trial.<sup>43</sup> Chief Ouray, the official leader of the Utes (and who has his own namesake town in Colorado), convinced officials it would be fairer to hold the trial in Washington, D.C, even as Colorado Congressman James Belford had already introduced a bill, which ultimately failed, calling for the complete removal of Utes from Colorado.<sup>44</sup> The accused left Colorado on January 7, 1880.<sup>45</sup>

Just before Governor Pitkin left for Washington, D.C., for the trial, reports of gold in the Grand Valley solidified his belief that the Utes would benefit most by moving out of Colorado to the Uintah Reservation in eastern Utah.<sup>46</sup> Gold never panned out, but Colorado Senator Henry Teller proposed relocating the Utes to Indian Territory (present day Oklahoma) or, if that was not possible, to the Uintah Reservation in Utah Territory.<sup>47</sup> Colorado's other Senator, Nathaniel Hill, proposed a resolution that did

---

<sup>40</sup> Richard K. Young, *The Ute Indians of Colorado in the Twentieth Century* (Norman: University of Oklahoma Press, 1997), 30.

<sup>41</sup> Silbernagel, *Troubled Trails*, 4-5, 99.

<sup>42</sup> Silbernagel, *Troubled Trails*, 126.

<sup>43</sup> Silbernagel, *Troubled Trails*, 140.

<sup>44</sup> Silbernagel, *Troubled Trails*, 137.

<sup>45</sup> Silbernagel, *Troubled Trails*, 152-53.

<sup>46</sup> Silbernagel, *Troubled Trails*, 154-55.

<sup>47</sup> Silbernagel, *Troubled Trails*, 153.



pass. It called upon Secretary of the Interior Carl Schurz to negotiate with the Utes for their removal.<sup>48</sup> Secretary Schurz ended up working on an agreement following Senator Hill's mandate but keeping some Utes in western Colorado, specifically in the Grand Valley—an idea that Representative Belford, Senator Teller, and Governor Pitkin did not support.<sup>49</sup>

Nonetheless, the resolution Secretary Schurz wrote moved forward in March 1880. Senator Teller, however, added language that the Secretary of the Interior could “move the Uncompahgre Utes out of Colorado entirely if it was determined that the land in the Grand River valley was not suitable for them.”<sup>50</sup> This agreement became a turning point in the history of US/Native American relations in the American West because the Utes agreed to allot in severalty, meaning each tribal member would have their own piece of property.<sup>51</sup> Secretary Schurz seemed pleased with the deal:

I think, to a great many who have studied the Indian problem with care, that the system of large reservations, as has hitherto prevailed, is not only no longer desirable either in the interest of the Indians or of the whites, but will, in the course of time become utterly untenable. As our white settlements in the West multiply, as the development of the country advances, available lands become more and more scarce and valuable, and so it is not unnatural that to maintain the withholding of large tracts from settlement and development so as to maintain a savage aristocracy in the enjoyment of their chivalrous pastimes, should be looked upon by many as a system incompatible with the progress of civilization and injurious to the material interests of the country.<sup>52</sup>

---

<sup>48</sup> Silbernagel, *Troubled Trails*, 153.

<sup>49</sup> Silbernagel, *Troubled Trails*, 154-55.

<sup>50</sup> Silbernagel, *Troubled Trails*, 157.

<sup>51</sup> Silbernagel, *Troubled Trails*, 156. Indeed, this was the first deal of its kind in this region, but the federal government had begun the policy of allotment in the late 1700s in the northeast. Allotment, however, would not become national policy until the General Allotment Act of 1887, commonly referred to as the Dawes Act.

<sup>52</sup> Committee on Indian Affairs, *Agreement with the Ute Indians of Colorado*, 46<sup>th</sup> Cong., 2d sess., 1880, H. Rep. 1401, 2.

By mid-June 1880, Congress and the Utes' leaders had signed the agreement. The treaty forced the White River Utes to settle on farms, typically of 160 acres, in the Uintah Reservation and forced the Uncompahgre Utes onto agricultural lands near the junction of the Grand and Gunnison Rivers. Before Congress could put the resolution into effect, three-fourths of adult male Utes had to sign it by October 15, 1880.<sup>53</sup> Despite support from Ute leaders for the bill, getting tribesmen to sign was difficult. To hasten things, Otto Mears paid two dollars out of his own pocket to each Ute male who endorsed the resolution.<sup>54</sup> The White River Ute Commission found Mears' actions unlawful and ordered Mears to go to Washington, D. C., to visit with Secretary Schurz. In 1880, newly elected President James Garfield appointed Samuel S. Kirkwood as the Secretary of Interior.<sup>55</sup> Secretary Kirkwood discharged Mears and lauded him for his initiative. In fact, Kirkwood ordered that Mears be repaid the \$2,800 he had given to the Utes in exchange for their signatures.<sup>56</sup>

Removing the Utes gained speed in mid-summer 1881, when Mears and commission members McMorris and J.J. Russell explored the land at the confluence of the Grand and Gunnison rivers—the location of Grand Junction today. Ironically, they were looking for “suitable agricultural lands” for the Utes. In June 1881, they wrote the following to George W. Manypenny, Chairman of the White River Ute Commission:

We examined the land on the Grand River near the mouth of the Gunnison, and found it to be, in our opinion, unsuitable for the Indians for agricultural or grazing purposes. Nothing could be accomplished here in agriculture without irrigation, and the water for that purpose would have to

---

<sup>53</sup> U.S. Senate, *Message from the President of the United States Transmitting a Report from the Secretary of the Interior Containing an Agreement Signed by the Chiefs and Headmen of the Ute Indians*, 46<sup>th</sup> Cong., 2<sup>nd</sup> sess., Senate, Ex. Doc., No. 114; Silbernagel, *Troubled Trails*, 157-58.

<sup>54</sup> Wyckoff, *Creating Colorado*, 225; Silbernagel, *Troubled Trails*, 158.

<sup>55</sup> Silbernagel, *Troubled Trails*, 158.

<sup>56</sup> Silbernagel, *Troubled Trails*, 158.

be taken from the Grand River. The banks on the south side of this stream are from 75 to 100 feet in height, and while an irrigating ditch could be made it would be very expensive and of such a character as to require the most experienced labor to use it with any degree of success. The land on the north side of the river could be more easily irrigated and cultivated, but there is not a sufficient quantity which could be made useful by these Indians to give them the amount required by law. Much of the soil between the Grand River and the Roan Plateau is very sandy and could never be made useful for grazing or cultivation. There is no other land suitable for agricultural purposes within a reasonable distance which could be used in connection with that near the mouth of the Gunnison, and give the Indians the quantity contemplated. The land in this locality which could be made useful for grazing, and especially for winter grazing, is altogether too limited in quantity to comply with the provisions of the law or supply the wants of this band of Indians. The two chiefs who were with us and many others of their tribe who had been in this locality, were very decided in their opposition to the selection of the lands in this valley.<sup>57</sup>

The Commission continued scouting west into Utah Territory.

Mears, Russell, and McMorris decided that the land at the confluence of the Green and White rivers near the Uintah Reservation in Utah was better for agriculture and that the Utes should settle here. In a committee meeting in 1880, Congressman George Ainslie had asked Secretary Schurz about the possibility of the Utes being displaced to Utah and whether the citizens of Utah would support it. Schurz responded:

*A vote of the people...would probably favor having no Indians there; but the Indians must live somewhere, and in justice to them we cannot always be governed by the wishes of people who do not want to have any Indians in their neighborhood. Indians have rights just as well as other men.*<sup>58</sup>

The Utes, at first, were not willing to leave western Colorado and planned to battle it out.<sup>59</sup> On August 29, 1881, however, all Utes, except those confined to the Southern Ute

---

<sup>57</sup> J.J. Russell, Otto Mears, Thomas A. McMorris to George W. Manypenny, letter, November 21, 1881, "Report of the Ute Commission," *Annual Report of the Commissioner of Indian Affairs to the Secretary of the Interior for the Year 1881* (Washington, D.C.: Government Printing Office, 1881), 326.

<sup>58</sup> *Agreement with the Ute Indians of Colorado*, 8. The "just" opinion expressed by Secretary Schurz in this quote certainly has a different slant to it than the one he expressed with the words "untenable," "savage," and "injurious." Perhaps the difference is that the Ute would not stay in his state?

<sup>59</sup> *Annual Report of the Secretary of War for the Year 1881*, vol. 1, *Report of the Secretary of War* (Washington, D.C.: Government Printing Office, 1881), 115-17.

Reservation, left Colorado, while “impatient white settlers” waited anxiously to replace them.<sup>60</sup>

Historians have raised the question of whether or not moving the Utes to Utah was the plan from the beginning. Vandenbusche argued that as early as the late 1700s, before the US even had claim to the American West, “events were already in motion which would lead to the decline and fall of the red men” in this region.<sup>61</sup> Evidence from Colorado officials, Indian agents, and bureaucrats in Washington, D.C., indicated that Euro-American settlers did not want the Utes in the state. Some Utes made an effort at farming, but they were pushed out anyway. Silbernagel noted that the Ute Commission’s survey of “the land’s agricultural potential was wildly off the mark.”<sup>62</sup> White settlers arrived quickly and immediately began to form communities in, irrigate, and farm the historic Ute homeland.

---

<sup>60</sup> Silbernagel, *Troubled Trails*, 164, 166-70.

<sup>61</sup> Vandenbusche, *Early Days in the Gunnison Country*, 3.

<sup>62</sup> Silbernagel, *Troubled Trails*, 163.

## Chapter 3: Development in the Grand Valley

Euro-Americans staked claims at the junction of the Colorado (Grand) and Gunnison rivers—the same area that the White River Ute Commission deemed agriculturally unsuitable—before the federal government announced that the Grand Valley was officially open to public settlement in July 1882. Their actions, of course, were illegal because the Committee on Indian Affairs had agreed with the Utes that only the President could open the old reservation to the public after the General Land Office surveyed their new lands in Utah and after all tribal members had accepted their allotments.<sup>1</sup> News spread that the Utes were uncooperative and that it might take several years to complete the survey.<sup>2</sup>

### Settling the Grand Valley

In early 1882, Albert Johnson, Surveyor General of Colorado, stated that “...settlers who have waited so long for this opportunity are crowding in, and cabins being erected upon their selections with lightening-like [sic] rapidity.” He also pointed to the D&RG connection from Denver to Salt Lake City that would be up and running by January 1883.<sup>3</sup> In Gunnison, men rallied on February 18, 1882, calling for “prompt and decisive action on the part of Congress” to formally declare the lands “open to purchase and settlement.”<sup>4</sup> A memorial submitted by rally attendees stated:

---

<sup>1</sup> Committee on Indian Affairs, *Uncompahgre and White River Ute Indians*, 47<sup>th</sup> Cong., 1<sup>st</sup> sess., 1882, H. Rep. 1304, 2; Secretary of the Interior, letter, transmitting *A Communication from Attorney-General and Report of Commissioner of General Land Office, also Report of Commissioner of Indian Affairs, in Response to Senate Resolution of January 10, 1882, Calling for Information Touching the Opening for Settlement Under the Pre-Emption Laws of the United States of Part of the Ute Reservation in Colorado*, 47<sup>th</sup> Cong., 1<sup>st</sup> sess., Senate Executive Document 108, February 14, 1882, 2.

<sup>2</sup> Committee on Indian Affairs, *Uncompahgre and White River Ute Indians*, 2.

<sup>3</sup> *Annual Report of the Commissioner of the General Land Office* (Washington, D.C.: Government Printing Office, 1882), 338.

<sup>4</sup> *Memorial of a Committee of a Mass Meeting Held at Gunnison, Colo., in Favor of the Late Ute Reservation Being Opened for Settlement*, 47<sup>th</sup> Cong., 1<sup>st</sup> sess., 1882, Mis. Doc. 63, 1.

Several thousand square miles of the finest coal land is known to be within its boundaries. Large and valuable deposits of minerals have been discovered therein. Some of the richest gold and silver mines in the state are located within its limits, to which only a possessory title can now be obtained. Besides, it contains large tracts of fine grazing, agricultural, and timber lands. Its great natural resources have already attracted the attention of the people throughout the country, and men and capital from all parts of the Union are about to come to this new El Dorado.<sup>5</sup>

Colorado Representative James Belford also pleaded the case for settlers:

Since the time of the removal of the Uncompahgre and White River Indians from the State of Colorado, a steady tide of immigration has poured into the reservation, and already a large portion of the best lands in the valleys have been settled upon. Were it not for the influx of settlers from Colorado and other States, this great tract of country, embracing nearly ten million acres of land, would be entirely uninhabited. There are many law-abiding citizens of the United States who desire to make their homes upon these lands, but who will not enter upon them until they can do so under authority of law. Justice to this class requires that the lands should be thrown open to settlement without further delay.<sup>6</sup>

On July 28, 1882, after the Utes had taken their allotments in the Uintah Reservation in Utah, federal officials formally opened the region for settlement. Eleven million acres of land were available.<sup>7</sup> Settlers had to file land claims through the pre-emption, town-site, or coal and mineral statutes. Each claim type had its own technicalities: the pre-emption land law, for example, required an upfront payment of \$1.25 per acre to settle the land.<sup>8</sup>

---

<sup>5</sup> *Memorial of a Committee of a Mass Meeting Held at Gunnison, Colo.*, 2. Those men also mistakenly argued that the Utes held up their end of the treaty but that officials in Washington, D. C., had not and that the bureaucrats were stumbling over their own steps for six months.

<sup>6</sup> Committee on Public Lands, *Indian Lands in Colorado*, 47<sup>th</sup> Cong., 1<sup>st</sup> sess., 1882, H. Rep. 561, 2.

<sup>7</sup> *An Act Relating to Lands in Colorado Lately Occupied by the Uncompahgre and White River Ute Indians*, 47<sup>th</sup> Cong., 1<sup>st</sup> sess., Public Law Ch. 357, *US Statutes at Large* 21-203 (1880), 178; *Annual Report of the Commissioner of the General Land Office* (Washington, D.C.: Government Printing Office, 1882), 40.

<sup>8</sup> *An Act Relating to Lands in Colorado Lately Occupied by the Uncompahgre and White River Ute Indians*, 178.

What about those who had already staked their claims before the Grand Valley became public? The act authorized that early “entries, settlements, or locations made under any law of the United States...shall legally date from the time they were respectively made,” as long as the claimants followed the terms in the land law or laws under which they sought to settle the land.<sup>9</sup> This wording may have led some to believe the homestead and the desert land laws applied, but they did not apply in the Grand Valley until 1891 and 1902 respectively. Until then, homesteaders had to return to a land office and pay for the acreage they had settled on. They then had to satisfy pre-emption land law requirements, including reclamation, to receive title.<sup>10</sup>

Some settlers filed claims on land but never reclaimed it. John Wesley Powell argued that such an “entryman enjoyed the uninterrupted use of the land for grazing or other purposes suited to his ends, without performance of any of the conditions of reclamation on which his entry was founded.”<sup>11</sup> The federal government already knew about this “mischief” but failed to act on the situation.<sup>12</sup>

---

<sup>9</sup> *An Act Relating to Lands in Colorado Lately Occupied by the Uncompahgre and White River Ute Indians*, 178.

<sup>10</sup> *An Act Relating to Lands in Colorado Lately Occupied by the Uncompahgre and White River Ute Indians*, 178; House Committee on Public Lands, *Lands in Colorado Lately Occupied by Indians*, 51<sup>st</sup> Cong., 1<sup>st</sup> sess., 1890, House Rep. 2811, 1; House Committee on Public Lands, *Homesteads in the Ute Reservation*, 57<sup>th</sup> Cong., 1<sup>st</sup> sess., 1902, House Rep. 1275, 1-2; U.S. Senate Committee on Public Lands, *Homesteading the Ute Indian Reservation*, 57<sup>th</sup> Cong., 1<sup>st</sup> sess., 1902, Senate Rep. 1744, 1-3; *An Act Providing for Free Homesteads in the Ute Indian Reservation in Colorado*, 57<sup>th</sup> Cong., 1<sup>st</sup> sess., Public Law No. 155, *US Statutes at Large* 1079-1081 (1902), 384.

<sup>11</sup> House Committee on the Public Lands, *Reclamation of Desert Lands*, 49<sup>th</sup> Cong., 1<sup>st</sup> sess., 1886, H. Rep. 188, 2; John J. Ingalls, *In the Senate of the United States*, 49<sup>th</sup> Cong., 1<sup>st</sup> sess., 1886, S. Mis. Rep. 121, 1.

<sup>12</sup> US Department of the Interior, *Preliminary Report on the Organization and Prosecution of the Survey of the Arid Lands for Purposes of Irrigation*, 50<sup>th</sup> Cong., 2d sess., 1889, Senate Executive Document 43, 12; Committee on Public Lands, *Indian Lands in Colorado*, 47<sup>th</sup> Cong., 1<sup>st</sup> sess., 1882, H. Rep. 561, 2; Kathleen Underwood, *Town Building on the Colorado Frontier* (Albuquerque: University of New Mexico Press, 1987), 33. For further information on land fraud and the public lands see: Everett Dick, *The Lure of the Land: A Social History of the Public Lands from the Articles of Confederation to the New Deal* (Lincoln: University of Nebraska Press, 1970).

## Grand Junction: The Hub

William McGinley, J. Clayton Nichols, and O. D. and Milton Russell were some of the first white men to file claims in the valley. They had waited anxiously at the periphery of the Ute Reservation. Twice they entered too early, were arrested, and then escorted back to the reservation border. The third time was different. They entered the valley, staked their claims, and returned to the land office in Gunnison to receive their patents.<sup>13</sup>

Their actions influenced George Crawford, a man known for organizing towns in Kansas, to travel to the old Ute Reservation. On September 26, 1881, Crawford claimed the Grand Junction town site, which he filed for in Gunnison in mid-October. On October 10, Crawford, along with fellow Kansan Richard D. Mobley, attorney James W. Bucklin, General Manager of the Gunnison Improvement Company M. Rush Warner, and two investors from the eastern states, Allison White, Crawford's half-brother, and H. E. Hood, formed and incorporated the Grand Junction Town Company, which sold real estate and encouraged migration to Grand Junction.<sup>14</sup>

The Denver and South Park and the D&RG railways surveyed possible extensions. The D&RG would connect the valley to the Pacific Coast and to markets on the Atlantic Coast.<sup>15</sup> In exchange for establishing production facilities in Grand Junction, including a depot, and for agreeing to promote the valley, the Grand Junction Town Company provided town shares to the railway companies. This spreading of

---

<sup>13</sup> Underwood, *Town Building on the Colorado Frontier*, 8-9.

<sup>14</sup> Underwood, *Town Building on the Colorado Frontier*, 11.

<sup>15</sup> *The Daily Sentinel* (Grand Junction, CO), *The Stirring Story of a Western Community*, 6, Mesa County History Pamphlet File, LFRL, MWC.



investments relieved the financial burden of some of the Town Company's initial investors.<sup>16</sup>

With the arrival of the railroad, Grand Junction became more than just a town at the confluence of two rivers. It became the hub for commerce west of the Continental Divide and east of the Wasatch Range—a designation it still holds today. Moreover, the railroads served as a catalyst for population growth in the Grand Valley.<sup>17</sup>

Much of Grand Junction's early population came from areas where mining was phasing out. Other residents migrated from the Midwest, where reports of a "Garden of Eden" inspired wanderlust. Advertisements claimed profits on 10 acres of irrigated land in Colorado could surpass total production on their prairie-based homesteads.<sup>18</sup> Several farmers moved from Guthrie Center, Iowa. In fact, until the mid-1920s, an annual Iowa Day celebration was held in either Grand Junction or Palisade. Others came to the Grand Junction vicinity to open businesses that catered to farmers or to work constructing infrastructure—canals, roads, electrical lines, homes, and buildings. When coal mining, oil shale extraction, and later uranium and vanadium mining became popular in the valley and in eastern Utah, businesses sprang up in Grand Junction to serve their needs as well.<sup>19</sup>

---

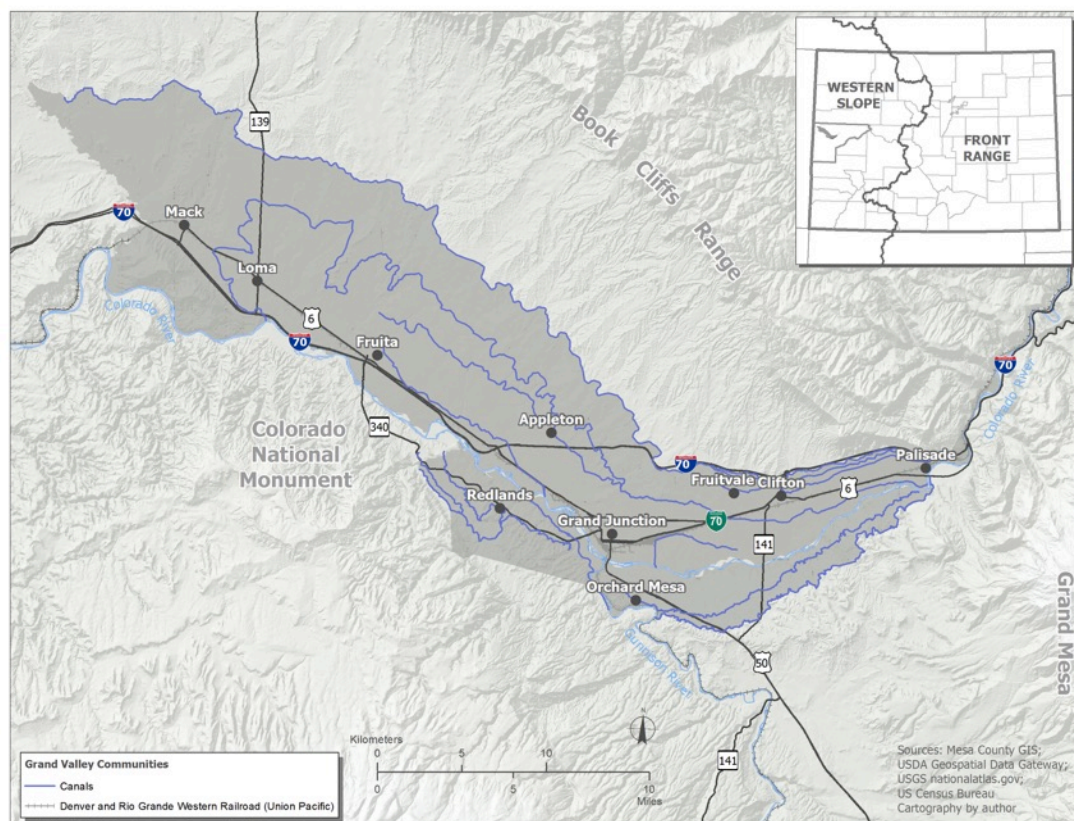
<sup>16</sup> Underwood, *Town Building on the Colorado Frontier*, 11.

<sup>17</sup> Wyckoff, *Creating Colorado*, 83.

<sup>18</sup> William E. Pabor, *Fruit Culture in Colorado: A Manual of Information* (Denver: Dove and Temple, Book and Job Printers, 1883), 79-82; "Farming Matters," *The Fairplay Flume* (Colorado), September 1, 1899; L. A. Shafer, "Irrigation Fructifying Millions of Acres," *Los Angeles Herald*, July 9, 1905; Grand Junction Chamber of Commerce, *The Valley of the Grand: The Place for You* (Grand Junction: Mesa County Historical Society [reprint of a late 1900s promotional pamphlet], 1996) [no page numbers]; Frederick Haynes Newell and Daniel William Murphy, *Principles of Irrigation Engineering: Arid Lands, Water Supply, Storage Works, Dams, Canals, Water Rights, and Products* (New York: McGraw-Hill Book Company, Inc., 1913), 6; William D. Rowley, "Visions of a Watered West," *Agricultural History* 76, no. 2 (2002): 152.

<sup>19</sup> Priscilla Walker (orchard owner, President, Walker Innovations, Inc.; Chair, Palisade Historical Society), in discussion with the author, August 2012.

Historian Kathleen Underwood argued that the land the Grand Junction Town Company sold was relatively inexpensive: that “the price of land was so low in pioneer Grand Junction anyone who wanted to could purchase property.” From the 1880s to 1900, the price for an unimproved lot was around \$10. Improved lots, cleared and with water, sold for \$100. The price of improved and unimproved lots nearly tripled after 1900.<sup>20</sup>



**Figure 14. Communities in the Grand Valley.**

<sup>20</sup> Underwood, *Town Building on the Colorado Frontier*, 108.

## Early Grand Valley Sprawl

Grand Junction was not the only town established in the valley.<sup>21</sup> William E. Pabor claimed and planned Fruita, a town site west of Grand Junction. Prior to his arriving, Pabor wrote two influential texts on fruit culture in Colorado, served as secretary of the Union Colony, and helped plan Colorado Springs.<sup>22</sup> When Pabor entered the Grand Valley in the fall of 1883, he believed the valley was more than capable of supporting a successful fruit industry (Figure 14).<sup>23</sup>

Pabor named the town Fruita to imply his vision of the area. In May 1884, Pabor and T. C. Henry, an investor who funded the capital upfront, founded the Fruita Town and Land Company. Pabor drew up the plans, had the site surveyed, and filed the plat in July.<sup>24</sup>

By 1886, a five-acre orchard with a “perpetual water right” sold in Fruita for \$100 an acre, and other lots sold for \$25 to \$100, much like those in Grand Junction.<sup>25</sup> Growing slowly, Fruita became “a model city of 1500 inhabitants...surrounded by the finest orchards and most prosperous farms in the world,” its promoters claimed in 1911.<sup>26</sup>

---

<sup>21</sup> Merton Nolen Bergner, “The Development of Fruita and the Lower Valley of the Colorado River from 1884 to 1937” (master’s thesis, University of Colorado, 1937), 13; Earlylne Barcus, Irma Harrison, and the Lower Valley Heritage Group, *Echoes of a Dream: The Social Heritage of the Lower Grand Valley of Western Colorado* (Fruita, CO: Fruita Triangle, 1983), 101.

<sup>22</sup> Bergner, “The Development of Fruita...,” 14.

<sup>23</sup> Bergner, “The Development of Fruita...,” 14-15.

<sup>24</sup> Several other sites in the Grand Valley (some still existing and some not, as they were incorporated into the larger Grand Junction, Fruita, and Palisade statistical areas) received toponyms also evoking an agricultural industry—Appleton, Fruitvale, Orchard Mesa, and Vineland, for example.

<sup>25</sup> Bergner, “The Development of Fruita...,” 18. The Fruita Town and Land Company reorganized as the Fruita Improvement Company in 1887 and that group later restructured as the Fruita Realty Company.

<sup>26</sup> The Fruita Bureau of Information, *Fruita, Colorado* (Fruita, CO: The Fruita Bureau of Information, 1911), 37, Fruita Pamphlet File, LFRL, MWC.

In fact, however, Fruita, did not have 1500 residents until sometime after 1950. The 1911 document is a Colorado example of what historian Donald Pisani determined agricultural land speculators and promoters in California were doing during the 1870s and 1880. They would do anything, he wrote, including describing “farming as an easy occupation.” They wanted, after all, to sell as much land as possible.<sup>27</sup> Today, Fruita is one of three incorporated towns in the Grand Valley.

West, northwest of Fruita, along the mainline of the D&RG, is Loma, which the Kiefer brothers founded in the early 1890s in the Lower Valley. Historian Merton Bergner argued that the brothers, who came from a prominent pioneering family in the Grand Valley, led “a colonizing venture...[which] grew out of the efforts of the Fruita [Town and] Land and Irrigation Company to settle the land and sell water to settlers.” Their plan was to tap into the Grand Valley Canal and lengthen it into the Lower Valley, providing settlers with more acres of agricultural land. Their initiative worked, and they extended the canal; however, the pace of settlement was slow and Loma was never incorporated.<sup>28</sup>

West of Loma is Mack. John M. Mack, who was president of the Barber Asphalt Company, developed the town in 1903, but it was not an agricultural community like Fruita and Loma.<sup>29</sup> In the late 1880s, Sam Gilson discovered a vein of gilsonite—a hydrocarbon bitumen rock used in asphalt—that stretches across the state line into eastern Utah border.<sup>30</sup> Gilson purchased all the mineral claims he could in the area.<sup>31</sup>

---

<sup>27</sup> Donald Pisani, *From the Family Farm to Agribusiness: The Irrigation Crusade in California and the West, 1850-1931* (Berkeley: University of California Press, 1984), 126.

<sup>28</sup> Bergner, “The Development of Fruita...,” 23.

<sup>29</sup> Ruby Luton, “The Uintah Railroad Helped Open the Valley Industry,” *The Fruita* (Colorado) *Times*, October 3, 1984.

<sup>30</sup> Gilsonite is a natural asphalt and is found only in the Uintah Basin in northeastern Utah and western Colorado.

Later, the Anheuser-Busch Company became interested in the mineral as a sealer for its distilling barrels, purchased Gilson's interests, and formed the Gilson Asphaltum Company. In 1903, Barber Asphalt Company purchased the mineral claims from the latter firm.

The Barber group decided that building a narrow gauge railroad would be more efficient than transporting the mineral 80 miles via horses and wagons, and a few men who had interest in Gilsonite incorporated the Uintah Railway. Crews built the railroad starting from two different locations—Dragon, Utah, and Mack, Colorado, which was on the D&RG. Mack had a hotel, several homes, a few stores, and some agriculture, including a small market for Grand Valley produce, but the town never incorporated.<sup>32</sup>

In the late 1880s and early 1890s, settlers started moving east of Grand Junction.<sup>33</sup> Colonel Christopher Bower, a businessman, planted a large peach orchard near present day Palisade. In 1893, J. L. Oliver planted the first commercial peach orchard. Settlers formed the town of Palisade in 1895, but it did not incorporate until 1904. Palisade shaped into, and to an extent still is, a close-knit agricultural community. West of Palisade, settlers founded Clifton, which became a hub for shipping and processing fruit on the D&RG railroad during the early 1900s.<sup>34</sup>

### **Growth in the Grand Valley**

The success of orchards in the valley prompted boosters to publish several promotional pamphlets to lure Midwesterners. Newspaper editors and journalists also

---

<sup>31</sup> George H. Stone, "Note on the Asphaltum of Utah and Colorado," *American Journal of Science* (1880-1910) 42, no. 248 (1891): 148-59.

<sup>32</sup> Ruby Luton, "The Uintah Railroad Helped Open the Valley Industry," *The Fruita* (Colorado) *Times*, October 3, 1984.

<sup>33</sup> *The History of Palisade*, vol.1, (Palisade, CO: Palisade Library), 3.

<sup>34</sup> Eileen O'Toole, "Clifton," *Mesa County Historical Society Newsletter* (Summer 2014), 3-5.

endorsed Colorado, especially the Grand Valley, as a fertile place to grow fruit. One wrote, "...Nothing is needed but energy and proper attention to insure success" (1867). Another said, "Our farmers and fruit-growers will reap a rich harvest, and begin to have their fine homes and comfortable surroundings" and that "Fruit will grow here plentifully and of the finest quality..." (1885). The *Aspen Chronicle* reported, "There are varieties of raisin grapes that can be grown in Grand Valley as easily as we grow grain, or potatoes or alfalfa. Winter protection is the only extra labor required. We hope to see thousands of acres devoted to vineyards before the year 1900 dawns (1891)."<sup>35</sup>

There was almost no end to these early boosterish sentiments. A Fort Collins paper ran an article that said, "Colorado will become a second California..., not only because of our present success in fruit growing but also in our future hopes of wine-making" (1898).<sup>36</sup> The editor of a newspaper in Fairplay wrote that they have "always held to the opinion that the day would come when the Grand Valley would be noted less for its large areas in grain and alfalfa than for its orchards and garden lands" (1899).<sup>37</sup>

Farmers intended to substantiate those newspaper accolades in the late 1800s and early 1900s.<sup>38</sup> Between the 1880s and 1930s there was, as Wyckoff noted, "a great deal of agricultural experimentation, failure, and environmental adaption as settlers learned about the limits and possibilities of farming the valleys of the western slope."<sup>39</sup> Farmers in the valley planted 84 different crops to see which varieties would work. For

---

<sup>35</sup> "Colorado A Fruit Growing State," *The Daily Colorado Tribune* (Denver), October 24, 1867; "Colorado As a Fruit Growing Country," *The Fairplay* (Colorado) *Flume*, October 22, 1885; "Raisin Culture in Grand Valley," *The Daily Chronicle* (Aspen), March 25, 1891.

<sup>36</sup> Adrienne Roucolle, "Wine-Making as a Possible Colorado Industry," *The Weekly Courier* (Fort Collins, CO), August 4, 1898.

<sup>37</sup> "Farming Matters," *The Fairplay* (Colorado) *Flume*, September 1, 1899.

<sup>38</sup> James Edward Wright, *The Politics of Populism: Dissent in Colorado* (New Haven, CT: Yale University Press, 1974), 90-102; Wyckoff, *Creating Colorado*, 229; Abbott, Leonard, and Noel, *Colorado: A History of the Centennial State*, 102.

<sup>39</sup> Wyckoff, *Creating Colorado*, 229.

example, they learned that peaches did not do well in the Lower Valley and by 1895 replaced them with apples.<sup>40</sup>

Farmers tried harvesting several southern crops, too, including yams, peanuts, and oats. Oats were initially an important cash crop because oats fueled the horse power needed to keep the mines running.<sup>41</sup> In addition to apples, Lower Valley farmers began experimenting with grains, grasses, and potatoes. Some growers even tried beans, but the prairie dogs “seemed to harvest beans as rapidly as they came into bloom.”<sup>42</sup> Sugar beets did exceptionally well in the Lower Valley, and during the Spanish-American War (1898) the region helped maintain the nation’s sugar supply.<sup>43</sup> That industry lasted nearly two decades, failing after World War I (1914-1918) because of overproduction.

By 1900, fruit farms—peaches, apples, pears, and others—were prominent in the Grand Valley. Its isolation, however, resulted in a higher-than-normal shipment price, which was further complicated because the products demanded specific shipment schedules. Railway and highway development along with technological advancements, such as ice-cooled rail cars, helped with these problems.<sup>44</sup>

In 1910, the valley had over 20,000 acres planted in fruit.<sup>45</sup> The Grand Junction Fruit Growers’ Association and the Mesa County Board of Trade provided assistance to

---

<sup>40</sup> Grand Junction Chamber of Commerce (GJCC), *All About Grand Junction and the Grand Valley Colorado* (Grand Junction: GJCC, 1904), 17, Mesa County History Pamphlet File, LFRL, MWC.

<sup>41</sup> *A Chronology of Grand Valley History*, Grand Valley Pamphlet File, n.d., LFRL, MWC.

<sup>42</sup> Gertrude Rader, “Community Development and Historical Events,” *Journal of the Western Slope* 6, no. 1 (1991), 24.

<sup>43</sup> Grand Junction Chamber of Commerce (GJCC), *All About Grand Junction and the Grand Valley Colorado* (Grand Junction: GJCC, 1904), 17, Mesa County History Pamphlet File, LFRL, MWC.

<sup>44</sup> Priscilla Walker (orchard owner, President, Walker Innovations, Inc.; Chair, Palisade Historical Society), in discussion with the author, August 2012.

<sup>45</sup> Wyckoff, *Creating Colorado*, 230.

farmers in the Lower Valley while the Upper Valley had its own organizations, like the Palisade Fruit Growers' Association and the Palisade Peach Growers' Association.<sup>46</sup>

Fruit production reached its height in the Lower Valley between 1910 and 1915, but caterpillars, grasshoppers, and locusts plagued the industry. A parasitic nematode wreaked havoc on several crops, and the coddling moth decimated the apple orchards, leading farmers here, and in the Upper Valley, to invest heavily in pesticides and insecticides. Workers at the "Bug House" created chemical insecticides, while farmers and ranchers looked for their own remedies, including raising turkeys to eat the pests.<sup>47</sup>

A favorite application was a poisonous lead arsenate mixture.<sup>48</sup> To reduce the risk to consumers, however, the government required farmers to brush the chemical residue off the apples before packing them for market. When that proved ineffective, farmers had to wash fruits sprayed with the compound, which raised their production costs and threatened timely delivery to markets.<sup>49</sup>

Agricultural extension agencies and insectaries across the US and the deputy state entomologist stationed in Mesa County worked furiously to invent other spray mixtures that were not so harmful to humans. Most farmers in the Grand Valley found and complained that the alternatives did not take care of the problem.<sup>50</sup> Furthermore,

---

<sup>46</sup> Mary Rait, "Development of Grand Junction and the Colorado River Valley to Palisade from 1881 to 1931, Part I," *Journal of the Western Slope* 3, no. 3 (1988): 38-39; Wyckoff, *Creating Colorado*, 235; Mehls, *The Valley of Opportunity*, 140.

<sup>47</sup> Rader, "Community Development and Historical Events," 24.

<sup>48</sup> George A. Woolsey, Jr., "An Overview of Grand Valley Fruit Production," 3, Fruit Growing Vertical File, Loyd Files Research Library, Museum of Western Colorado.

<sup>49</sup> Mildred Starr Kelly, "The Starr Orchard," *Lower Valley Heritage* 5 (1977): 33-34, LFRL, MWC; Mehls, *The Valley of Opportunity*, 141.

<sup>50</sup> Rait, "Development of Grand Junction..., Part I," 45-47.



studies released after a few growing seasons found the alternative chemical compounds harmful to non-target species.<sup>51</sup>

Construction problems in the Lower Valley's irrigation networks, combined with poor soils and a rising water table, created an alkali flat there. In 1917, the federal government had to fund and create a drainage network for runoff and wastewater to control the flat.<sup>52</sup> Improvements continue to be made today to mitigate alkali and seepage problems in the Lower Valley.

Despite these problems, by 1920, more than 10 percent of Colorado's crops by value came from the Grand Valley.<sup>53</sup> Owing to inflated production costs—the use of sprays, new laws requiring removal of spray residue before marketing, replacing trees ruined by late or early frosts or from pests—some farmers had to start working an additional job to make ends meet. Some mined coal in the Book Cliffs during the winter, for instance, then managed their crops during the summer.<sup>54</sup>

The farm landscape changed in the 1910s. Dairy, poultry, and swine industries became more important, so farmers in the Upper and Lower Valleys put chicken coops in their orchards.<sup>55</sup> Raising chickens helped the valley become more self-sustaining in order to offset the war-inflated crop prices (Figure 15).<sup>56</sup> As well, diversification helped

---

<sup>51</sup> Therese Schooley, Michael J. Weaver, Donald Mullins, and Matthew Eick, "The History of Lead Arsenate Use in Apple Production: Comparison of its Impact in Virginia with Other States," *Journal of Pesticide Safety Education* 10 (2008): 31-32.

<sup>52</sup> Simonds, "Grand Valley Project," 19.

<sup>53</sup> Wyckoff, *Creating Colorado*, 226.

<sup>54</sup> Priscilla Walker (orchard owner; President, Walker Innovations, Inc.; Chair, Palisade Historical Society), in discussion with the author, August 2012.

<sup>55</sup> Harry Talbott (owner, retired, Talbott Farms), in discussion with the author, September 2012.

<sup>56</sup> Mary Rait, "Development of Grand Junction and the Colorado River Valley to Palisade from 1881 to 1931, Part II," *Journal of the Western Slope* 3, no. 4 (1988): 8.

farmers survive the Great Depression in the 1930s.<sup>57</sup> All of this community and economic development depended greatly on reclaiming land via the Colorado River.



**Figure 15. A chicken coop still sits on one property.**

---

<sup>57</sup> Abbott, Leonard, and Noel, *Colorado: A History of the Centennial State*, 168.

## Chapter 4: Reclamation in the Grand Valley

Success in irrigated agriculture in New Mexico, Utah, Arizona, and California had federal and Colorado officials hopeful that reclamation could make the Grand Valley a prosperous agricultural region.<sup>1</sup> Though the Desert Land Act of 1877 did not take effect in Colorado until 1891, its successful application by farmers in California seemed to promise that “desert lands can be made exceedingly productive” by irrigation and new technology elsewhere, including Colorado.<sup>2</sup>

Defending irrigation development, Senator Newton Booth, a California Democrat, stated in 1877 that “The fact that worthless deserts can be made useful and productive by this means [irrigation] is sufficient to establish its desirability.” Restating common-knowledge, he said: “Experience has shown that the homestead and pre-emption laws afford no means of acquiring title to desert lands. Those laws require settlement and occupation as a prerequisite. Neither settlement nor occupation is possible without water. Irrigation must precede the settlement.”<sup>3</sup> Booth argued that pioneers could never build irrigation networks before receiving title to their land, and no state or local government could afford to do it either.<sup>4</sup> Powell had already voiced nearly that same opinion—that farmers could not afford the construction of an irrigation network from a larger stream and that it would take cooperative or corporate means.

---

<sup>1</sup> Wyckoff, *Creating Colorado*, 222.

<sup>2</sup> Senate Committee on Public Lands, *To Provide for the Sale of Desert Lands in Certain States and Territories*, 44<sup>th</sup> Cong., 2d sess., 1877, S. Rep. 642, 1; Senate Committee on Public Lands, *Sale of Desert Lands*, 1; Anne F. Hyde, “Cultural Filters: The Significance of Perception in the History of the American West,” *The Western Historical Quarterly* 24, no. 3 (1993): 358, 362; Michael P. Conzen and Diane Dillon, *Mapping Manifest Destiny: Chicago and the American West* (Chicago: The Newberry Library, 2007), 65.

<sup>3</sup> Senate Committee on Public Lands, *Sale of Desert Lands*, 1-2.

<sup>4</sup> Senate Committee on Public Lands, *Sale of Desert Lands*, 2; William F. Vilas to John J. Ingalls, letter, March 31, 1888, Senate Committee on the Public Lands, 50<sup>th</sup> Cong., 1<sup>st</sup> sess., 1888, Senate Executive Document 134, 3-6.

## Farming: Colorado's Destiny

In his 1869 promotional and vacation guide *The Switzerland of America*, Samuel Bowles, a journalist from the east coast, envisioned Colorado as an agricultural mecca.

He wrote:

Inexhaustible as is Colorado's mineral wealth; progressive as henceforth its development; predominant and extensive as are its mountains; high even as are its valleys and plains—in spite of all seeming impossibilities and rivalries, agriculture is already and is destined always to be its dominant interest... For agriculture is the basis of wealth, of power, of morality; it is the conservative element of all national and political and social growth; it steadies, preserves, purifies, elevates.<sup>5</sup>

Bowles' ideas echoed what federal officials came to believe—that economic and technological forces could develop the American West.

Settlers here, American studies author Henry Nash Smith suggested, “devoted themselves...to cultivating the earth” with each push westward, noting “they plowed the virgin land and put in crops” and transformed desert lands into “gardens.” Smith explained that the garden epitomized “one of the dominant symbols of 19th-century American society—a collective representation, a poetic idea that defined the promise of American lives,” that it exemplified “group memories of an earlier, a simpler and, it was believed, a happier state of society, long survived as a force in American thought and politics.”<sup>6</sup> Desert gardens lured farming families from the east, where urban, societal, and corporate conflicts were affecting their livelihoods, to the American West.<sup>7</sup>

By 1899, a journalist for the *Fairplay Flume*, published in Park County, Colorado, described the ideal family garden landscape for farmers in western Colorado.

---

<sup>5</sup> Samuel Bowles, *The Switzerland of America: A Summer Vacation in the Parks and Mountains of Colorado* (New York: Samuel Bowles and Company, 1869), 157.

<sup>6</sup> Henry Nash Smith, *Virgin Land: The American West as Symbol and Myth* (New York: Vintage Books, 1957), 138-39.

<sup>7</sup> Donald Pisani, *Water and American Government: The Reclamation Bureau, National Water Policy, and the West, 1902—1935* (Berkeley: University of California Press, 2002), xii-xiii.

It was about a 20-acre farm that had a planting of fruit that could be sold to customers in towns in the mountains. It would include a house, a one-acre poultry yard, two acres of small fruit, an acre of potatoes, two acres of alfalfa, a half-acre of root crops, an acre of corn, two acres of oats, and a half-acre vineyard that contained “the choice California variety...for dessert use, for preserving, [and] for wine.” The remaining 10 acres would be an orchard of 600 trees.<sup>8</sup> The journalist, however, failed to mention two essentials: water rights and an irrigation ditch (Figure 16).



**Figure 16. A portion of the Grand Valley before crops, circa 1910.<sup>9</sup>**

The first settlers who came to the Grand Valley to farm were likely disappointed. Not only did they have to pay for the land, they also had to finance

---

<sup>8</sup> “Farming Matters,” *The Fairplay (Colorado) Flume*, September 1, 1899.

<sup>9</sup> “Photo-No. 33: Unirrigated land to come under Govt Canal (Book Cliffs in Background),” Grand Valley Water Users’ Association Photograph Collection, August 7, 1910, courtesy of the Palisade Historical Society.

reclamation. Barren land was widely available, and in 1882, state and federal officials proposed leasing it to fund reclamation and to entice settlement. This might have provided a potential break to farmers, but there was not enough support in Washington, D.C., for leasing the lands.<sup>10</sup>

Creating an irrigation network from the Colorado River was the only way to effectively settle and farm the valley. Of course, some settlers in the American West who came from regions where rain kept the croplands wet balked at the idea of relying on “something other than nature or God” but most tried to develop a systematic way to share the water to support “ideal farm size, community, and local autonomy.”<sup>11</sup>

“One man alone,” William Pabor explained in *Colorado as an Agricultural State*, “cannot build an irrigation canal many miles in length, and so redeem broad prairie land from the curse of sterility. Seldom can ten men do it, save where the land lies close to the water’s edge. It takes combined energy, skill, and capital to construct them.”<sup>12</sup> Thus, local autonomy would be difficult to achieve until reclamation was successful and water laws were designed and implemented.

### **From the River to the Field**

Western water laws essentially developed from mining laws in California and in Colorado.<sup>13</sup> Historian Donald Pisani noted that governments in the American West, as

---

<sup>10</sup> House Committee on the Public Lands, *Arid and Desert Lands in Colorado*, 47<sup>th</sup> Cong. 1<sup>st</sup> sess., 1882, H. Rep. 197 (Part 1), 1; House Committee on the Public Lands, *Arid and Desert Lands in Colorado*, 47<sup>th</sup> Cong. 1<sup>st</sup> sess., 1882, H. Rep. 197 (Part 2), 1-4; *Leasing of Arid and Desert Lands*, House, 47<sup>th</sup> Cong., 1<sup>st</sup> sess., *Congressional Record* (February 2, 1882): 840.

<sup>11</sup> Bradley Raley, “Colorado’s ‘Island Community’: Irrigation and Industrial Agriculture in Colorado’s Grand Valley, 1882-1920” (Ph.D. dissertation, University of Oklahoma, 2001), 59-60.

<sup>12</sup> William Edgar Pabor, *Colorado as an Agricultural State* (New York: Orange Judd Company, 1883), 13.

<sup>13</sup> Donald Pisani, *To Reclaim a Divided West: Water, Law, and Public Policy, 1848-1902* (Albuquerque: University of New Mexico Press, 1992), 33-68; P. Andrew Jones and Tom Cech, *Colorado Water Law for Non-Lawyers* (Boulder: University Press of Colorado, 2009), 58.

well as the federal government, were watching Colorado and the construction of its water laws closely because it was the first to attain statehood after the 1866 Mining Law.<sup>14</sup>

Colorado's water law, as eventually written up in the state's constitution, looks to prior appropriation, which was officially upheld in the 1855 California *Irwin v. Phillips* mining case.<sup>15</sup> Prior appropriation means the first person to put water to a beneficial use is first in right to that water.

Pisani noted that *Irwin v. Phillips* forced California to reform its water law, but California continued to recognize riparian rights in some mining districts.<sup>16</sup> Coloradans were conscious of the problems this caused in California, so officials in Colorado adopted solely the law of prior appropriation. A contributor to the *Atlas of the New West* framed the results this way: "Prior appropriation is the West's biggest, best-oiled, and most durable machine."<sup>17</sup>

It was natural to assume, however, that prior appropriation would initially create problems between water users, and it did. In 1879 and 1881, state officials established a process for obtaining a decree, which set the all-important priority date. Without that date, "a water right in Colorado has no place on the priority list and is automatically considered the most junior right in the system."<sup>18</sup> When there is not enough water to

---

<sup>14</sup> Pisani, *To Reclaim a Divided West*, 55; Jones and Cech, *Colorado Water Law for Non-Lawyers*, 58.

<sup>15</sup> Jones and Cech, *Colorado Water Law for Non-Lawyers*, 60, 64; Wells A. Hutchins, J.D., *Water Rights Laws in the Nineteen Western States*, vol. 3 (Washington, D.C.: Government Printing Office, 1977), 216.

<sup>16</sup> Pisani, *To Reclaim a Divided West*, 29.

<sup>17</sup> Charles Wilkinson, "Paradise Revised," essay in *Atlas of the New West*, edited by William E. Riebsame (New York: W. W. Norton and Company, 1997), 30

<sup>18</sup> Jones and Cech, *Colorado Water Law for Non-Lawyers*, 22, 66.

satisfy all claimants, junior claimants must stop diverting water from the river or irrigation ditches.<sup>19</sup>

Colorado's water laws, however, have not been bulletproof. Officials revised them every time a "flashpoint" problem occurred, including in the process of obtaining a senior decree.<sup>20</sup> The system, however, "provided a legal framework that prevented chaos during the canal boom" and "offered a model for similar systems in most other western states."<sup>21</sup>

Furthermore, prior appropriation means that it is not fair to take in excess of your share if you do not need it and the law "discourages waste and speculation." But the arid climate and the growing population brought about many complications and challenges to the basic idea, and more specific solutions and definitions were essential for addressing upstream, downstream, diversion, and beneficial use.<sup>22</sup>

Settlers in the valley joined together and dug ditches to get water to their fields and to their communities.<sup>23</sup> These initial diversions, however, were only temporary solutions because they did not allow for future growth and were poorly constructed. Private investors, such as Matt Arch from Colorado and T. C. Henry from Kansas, and companies like Travelers Insurance Company in Connecticut, started taking interest in reclamation and tried to establish control over water during the first couple of decades in the valley. Problems arose locally over who really owned the water rights, how many

---

<sup>19</sup> Jones and Cech, *Colorado Water Law for Non-Lawyers*, 64.

<sup>20</sup> Pisani, *To Reclaim a Divided West*, 56; Jones and Cech, *Colorado Water Law for Non-Lawyers*, 66.

<sup>21</sup> Abbott, Leonard, and Noel, *Colorado: A History of the Centennial State*, 4<sup>th</sup> Edition, 156.

<sup>22</sup> Jones and Cech, *Colorado Water Law for Non-Lawyers*, 62.

<sup>23</sup> Mehls, *The Valley of Opportunity*, 134.



more diversions could be made without exhausting the supply, and who was going to pay for maintenance of the canals after the investors left.

Pisani argued that water speculation in 1870s and 1880s Colorado was even worse than it was in California.<sup>24</sup> In spring 1882, for example, before the government had even officially opened the former Ute territory to white settlement, 21 local shareholders united to fund and commence the work on the first canal—the four-mile Pioneer Ditch, known today as the Mesa County Ditch. Crews completed it at a rapid pace, finishing by late April. There were other ditches constructed, including the Pioneer Ditch, which barely supplied farmers with enough water for irrigating their crops. The Pacific Slope Ditch, finished around the same time as the Pioneer Ditch, channeled water to Grand Junction residents.<sup>25</sup>

In 1882, surveyors, excavators, and investor Matt Arch, also began planning the roughly 45-mile long Grand River Ditch, known today as the Grand Valley Canal. This canal would bring water to over 45,000 acres.<sup>26</sup> Undeniably, Farmers welcomed it so that they could water their land without having to haul water by the bucket from the river to their fields. Private enterprise finished the Grand Valley Canal by 1884.<sup>27</sup>

The building process, however, was not smooth. In the Fruita region, for example, farmers and residents refused to pay the steep water charges that the company

---

<sup>24</sup> Pisani, *To Reclaim a Divided West*, 58.

<sup>25</sup> *The Daily Sentinel* (Grand Junction, CO), *The Stirring Story of a Western Community*, 7, Mesa County History Pamphlet File, LFRL, MWC; Don Davidson, “The Grand River Ditch: A Short History of Pioneering Irrigation in Colorado’s Grand Valley,” *Journal of the Western Slope* 1, no. 4 (1986): 4-5; Brad F. Raley, “Private Irrigation in Colorado’s Grand Valley,” in *Fluid Arguments: Five Centuries of Western Water Conflict*, edited by Char Miller (Tucson: The University of Arizona Press, 2001), 159. There is not, however, a good source that details the early routes of these ditches.

<sup>26</sup> *Mesa County Democrat* (Grand Junction, CO), *History and Business Directory of Mesa County, Colorado, Containing a Description of Its Valleys, Ranges, Ditch Systems, Illustrations and Portraits of Some of the Early Settlers and Prominent Men* (Grand Junction, CO: Mesa County Democrat, 1886), LFRL, MWC, 70.

<sup>27</sup> Bergner, “The Development of Fruita...,” 16; Raley, “Private Irrigation in Colorado’s Grand Valley,” 128, 161.

demanded to finish construction. Instead, citizens organized and decided to construct their own canal—the Independent Ranchman’s Ditch—to water their lands and supply the town with water.<sup>28</sup> Another small group of farmers organized the Pioneer Extension Ditch Company and constructed a canal to water their land northwest of Grand Junction. Both of these cooperative efforts in ditch construction failed within two seasons. Spring floods carried the headgates away (Figure 17).<sup>29</sup>

### **Corporate Greed**

Farmers throughout the valley grew to dislike the idea of eastern capitalists’ funding and potentially having control over their water resources. More often than not, canal companies did not even have enough funding to support their venture.

By 1884, the year the Grand Valley Ditch was considered “completed,” Arch reorganized and sold the company to “new parties, who were [supposedly] backed by an unlimited amount of eastern capital.” This included new investor T. C. Henry of the Colorado Loan and Trust Company. Travelers Insurance Company was another investor.<sup>30</sup> Together, they managed the Grand River Ditch Company (GRDC).<sup>31</sup> The company sold water through “Perpetual Water Rights, not through annual rental, which,” they claimed, “is a constant drain on the purse of the irrigator.” An early history of Mesa County described it this way:

...a Perpetual Water Right for eighty acres, subject only to a slight annual assessment for superintendence and repairs, costs \$10 per acre, or \$800; less than is charged as royalty for the privilege of renting water at so much

---

<sup>28</sup> *The Daily Sentinel* (Grand Junction, CO), *The Stirring Story of a Western Community*, 42-43, Mesa County History Pamphlet File, LFRL, MWC; Bergner, “The Development of Fruita...,” 17, 51.

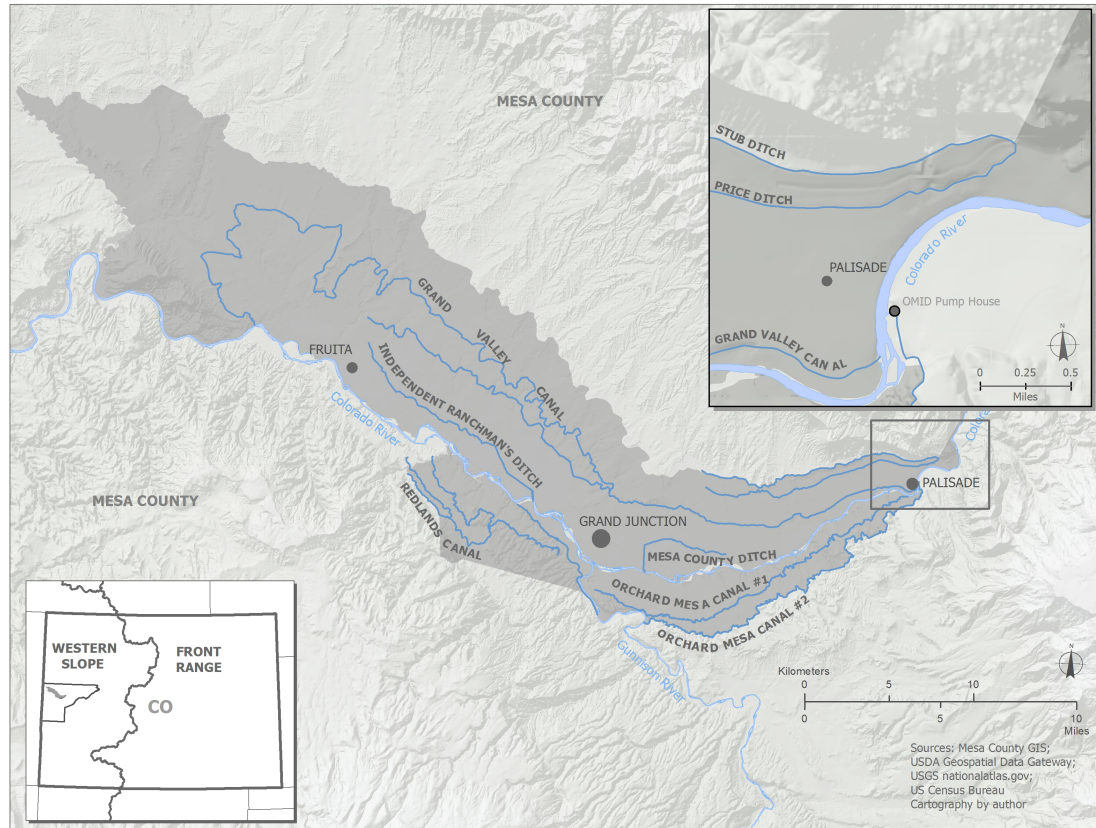
<sup>29</sup> Davidson “The Grand River Ditch: A Short History of Pioneering Irrigation in Colorado’s Grand Valley,” 16; Raley, “Colorado’s ‘Island Community,’” 122.

<sup>30</sup> *Mesa County Democrat* (Grand Junction, CO), *History and Business Directory of Mesa County, Colorado*, LFRL, MWC, 70-71; Davidson, “The Grand River Ditch: A Short History of Pioneering Irrigation in Colorado’s Grand Valley,” 15, 17.

<sup>31</sup> Raley, “Colorado’s ‘Island Community,’” 123.

per acre elsewhere. This cost is spread over five years if desired, so that it is as easy for the farmer to become the owner of a water right as it would be, were he under a rental system, for him to be paying from \$1 to \$2 per acre every year.<sup>32</sup>

But it was not easy. Farmers did not have the capital to pay that kind of money for a water right after they had already invested in the land, yet they needed the water.



**Figure 17. Irrigation ditches in the valley, pre Bureau of Reclamation.**

Boosters and speculators played a role in shaping the belief in this region that “only through corporations having ample means at their command, can lands such as lie in the situation these do, be watered with an assurance that the supple [sic] will not fail

<sup>32</sup> *Mesa County Democrat* (Grand Junction, CO), *History and Business Directory of Mesa County, Colorado*, LFRL, MWC, 72.

in the season of greatest need.”<sup>33</sup> Boosters looked at the lie of the Colorado River for their reasoning, as its flows did not resemble the meanderings of the Cache la Poudre and South Platte on the Front Range:

The swift current has at all times of the year, especially in the summer season, when irrigation is going on, a tremendous force, fatal to all except substantial and expensive headgates. It requires a large yearly outlay of money to protect and keep in working order a canal system such as Grand Valley now possesses; and this is beyond the reach of individuals such as generally occupy frontier farms in Colorado.<sup>34</sup>

The farmers did not need anyone to tell them that. They became well aware that this was much more complicated than moving some dirt with a shovel. They needed help.

In 1886, the GRDC was able to acquire other canals in the valley, putting them under the leadership of George Crawford, founder of Grand Junction, and, Grand Valley Travelers Insurance Company representative, Julius White.<sup>35</sup> Historian Bradley Raley claimed that not only did these companies manage the system, they also expanded it “in anticipation of what land could be farmed successfully, rather than to supply existing farmers.”<sup>36</sup> As a result, a proliferation of canals funneled water to irrigate the valley, but farmers still needed help.

The costs associated with upkeep were unbearable for the investment companies, and the “slight annual assessment for superintendence and repairs” charged to the farmers went from slight to excessive. Basically, the company put the capital burden on its water users, arguing that its users had the funds to pay for water shares

---

<sup>33</sup> *Mesa County Democrat* (Grand Junction, CO), *History and Business Directory of Mesa County, Colorado*, LFRL, MWC, 71.

<sup>34</sup> *Mesa County Democrat* (Grand Junction, CO), *History and Business Directory of Mesa County, Colorado*, LFRL, MWC, 71.

<sup>35</sup> Raley, “Colorado’s ‘Island Community,’” 123.

<sup>36</sup> Raley, “Colorado’s ‘Island Community,’” 128; Raley, “Private Irrigation in Colorado’s Grand Valley,” 168-70.

and canal upkeep. The price for a Colorado miner's inch<sup>37</sup> of water, however, became too steep for farmers, as maintenance costs, greed, and speculation drove the GRDC to raise its prices. With field and crop maintenance, freight costs, land payments, and normal living expenses, farmers and ranchers had very little in their wallets to spend on water.<sup>38</sup>

In 1888, the GRDC went bankrupt. By mandate of a district court, the company had to liquidate its assets. Travelers Insurance, which had the most invested in the system of ditches, purchased the company in a public auction, changed the name to the Grand Valley Canal Company, and hoped that its buyout would alleviate the pressures and appease the farmers.<sup>39</sup> It did not.

Farmers still had little money, as most fruit trees took four to five years to bear fruit. To make matters worse, Travelers Insurance agents continued to "assess farmers additional fees" for maintenance on the canals when the repairs were, in the insurance company's opinion, too great.<sup>40</sup> Farmers were at odds and incensed with this notion since they were barely able to pay the initial established rates and began to fear they might lose all of their water.<sup>41</sup> Raley explained that within two years, the little control that the Grand Valley had over its water seemed lost as Travelers Insurance shifted all "economic control and decision making" to its headquarters in Connecticut.<sup>42</sup>

In 1890, financier T. C. Henry found that Travelers Insurance owed him money from the initial sale. He sued the company. The trial took place in Denver, providing a

---

<sup>37</sup> A Colorado miner's inch of water equals 11.7 gallons per minute. Some water districts in the Grand Valley still allocate water according to this measurement.

<sup>38</sup> Raley, "Colorado's 'Island Community,'" 130-131.

<sup>39</sup> Raley, "Colorado's 'Island Community,'" 130-131; Davidson "The Grand River Ditch: A Short History of Pioneering Irrigation in Colorado's Grand Valley," 21.

<sup>40</sup> Raley, "Colorado's 'Island Community,'" 131.

<sup>41</sup> Raley, "Colorado's 'Island Community,'" 124.

<sup>42</sup> Raley, "Colorado's 'Island Community,'" 130-131.

fairer venue to both parties than did Grand Junction. The court sided with Henry, deemed the public sale of the Grand River Ditch illegal, and ordered that the canal and its assets be returned to the GRDC.<sup>43</sup> The ditch still needed several thousand dollars for repairs and expansion. Getting farmers to pay for a never-completely-satisfactory product would prove to be impossible.<sup>44</sup>

New managers of the canal tried threatening farmers—that if farmers did not pay for it, the water supply would be cut off. But, as Raley described, the farmers organized and figured out that, if only a few landowners paid for the water, which was likely because only a few could afford it, farmers' costs would consequently rise even more. As such, the majority of farmers refused to recompense the ditch company, joined together to collect money for a lawyer to protect their interests, and hoped that a wealthy business would not purchase the canal. They continued receiving water for their fields.<sup>45</sup>

### **A Better Deal**

The farmers' hopes came true. T. C. Henry's own lawyer from the 1890 case with Travelers Insurance sued him for not paying his court fees and won control of the ditch. He approached the farmers in the Grand Valley and offered to sell them the ditch for \$50,000.<sup>46</sup> The farmers took the deal, acquiring a 20-year mortgage to cover a reduced price of \$40,000. They organized the non-profit Grand Valley Irrigation Company (GVIC), with a board of directors voted in by shareholders who possessed water rights. Ironically, the irrigation company assessed and charged water users in

---

<sup>43</sup> Raley, "Colorado's 'Island Community,'" 132; Davidson "The Grand River Ditch: A Short History of Pioneering Irrigation in Colorado's Grand Valley," 23.

<sup>44</sup> Raley, "Colorado's 'Island Community,'" 130-131.

<sup>45</sup> Raley, "Colorado's 'Island Community,'" 134-37.

<sup>46</sup> Raley, "Colorado's 'Island Community,'" 139.

nearly the same manner as the previous canal owners. The difference, however, was that the landowners gained a voice in the management of the water and the canal system.

Raley succinctly wrote that “Local farmers watched as canal corporations financed the larger ditch, but ended up owning the system as the investors lost their money.”<sup>47</sup>

By now, however, the earliest settlers could begin to attest to the superb agricultural qualities of the once barren land.<sup>48</sup> R. W. Shrophire, a farmer who arrived in 1882, stated, “The results, financially and otherwise, have been beyond my expectations in every respect, both in farming and fruit raising.” Hoping to make an impress on the minds of the government officials to increase the water network in the valley, he affirmed, “Irrigation does pay; I would not farm in a country where irrigation is not possible. My land, before cultivation under irrigation, was worth nothing. I have since been offered \$6,000 cash for my 130 acres.” C. W. Steele, one of Grand Valley’s 1881 settlers, remarked that his land went from having no value to being worth \$50 per acre for cultivated fields and \$200 an acre for acreage in orchards. Steele commented that “the possibilities for fruit raising in this section are great. I have lived in southwestern Missouri, and I find Grand Valley, Colorado, far superior.” J. Clayton Nicholas, another early arriver, had a 325-acre ranch on which he grew a variety of crops. He estimated his land to be worth \$50 an acre. Cyrus L. Hughes, a Grand Valley landholder living in Denver, announced that his 80-acre peach orchard in the valley was worth “at least

---

<sup>47</sup> Raley, “Colorado’s ‘Island Community,’” 141.

<sup>48</sup> See Raley, “Colorado’s ‘Island Community’” for the story of local newspaper boosterism in the early years of the Grand Valley.

\$25,000” and that he expected a “yield of \$15,000” from his 14,000 healthy peach trees.<sup>49</sup>

The Panic of 1893 and the depression that ensued deterred further investments in the valley, and the GVIC worked alone for some time to take care of its users’ needs. Even today, in 2015, the GVIC maintains 48,000 shares of water stock and supplies water to over 40,000 acres, or about half of all the irrigated land, in the Grand Valley.<sup>50</sup> Several thousand acres of irrigable land, however, were still available, but it would take the federal government to make it suitable for human occupation.

### **The Bureau of Reclamation in the Grand Valley**

In 1902, the federal government created the Reclamation Service (later renamed the Bureau of Reclamation). Donald Pisani argued that the agency represented an opportunity to plan or, better yet, control development to circumvent the “haphazard, boom-and-bust regime of the nineteenth-century West” by “mov[ing] people to resources as well as resources to people.”<sup>51</sup> The creation of the agency also resulted in the formation of water districts to manage the water and guarantee repayment.

There are six irrigation districts in the Grand Valley today (Figure 18). The GVIC is the oldest district, having incorporated in 1894. Another is the OMID, created in 1904. It manages two canals. The Palisade Irrigation District formed in 1905. It oversees the old Mt. Lincoln Ditch, known today as Price Ditch. The Mesa County Irrigation District developed in 1906 and finished the Stub Ditch, which had failed

---

<sup>49</sup> US Senate, “Rocky Mountain Region and Great Plains,” *Report of the Special Committee of the United States Senate on the Irrigation and Reclamation of Arid Lands*, vol. 3 (Washington, D.C.: Government Printing Office, 1890), 377-79.

<sup>50</sup> For more information see: Grand Valley Irrigators, “Irrigation Entities,” [[http://www.irrigationprovidersgv.org/irrigation\\_entities.php](http://www.irrigationprovidersgv.org/irrigation_entities.php)] (last accessed January 24, 2013).

<sup>51</sup> Donald Pisani, *Water and American Government: The Reclamation Bureau, National Water Policy, and the West, 1902—1935* (Berkeley: University of California Press, 2002), xii-xiii.



initially.<sup>52</sup> In the Lower Valley, the Redlands Water and Power Company and the Grand Valley Water Users' Association formed in 1905.

Secretary of the Interior James R. Garfield, US General Land Office Commissioner Richard A. Ballinger, and Utah Senator Reed Smoot visited the valley in 1907. Representatives in the valley showed the gentlemen acreage that they thought would benefit from additional reclamation. These men must have been impressed with the promise of the valley, as the federal government initiated a topographical and soil survey for the Grand Valley Project in 1908. In 1909, the water districts and irrigators signed a contract with the federal government, commencing the Highline Canal project.<sup>53</sup>

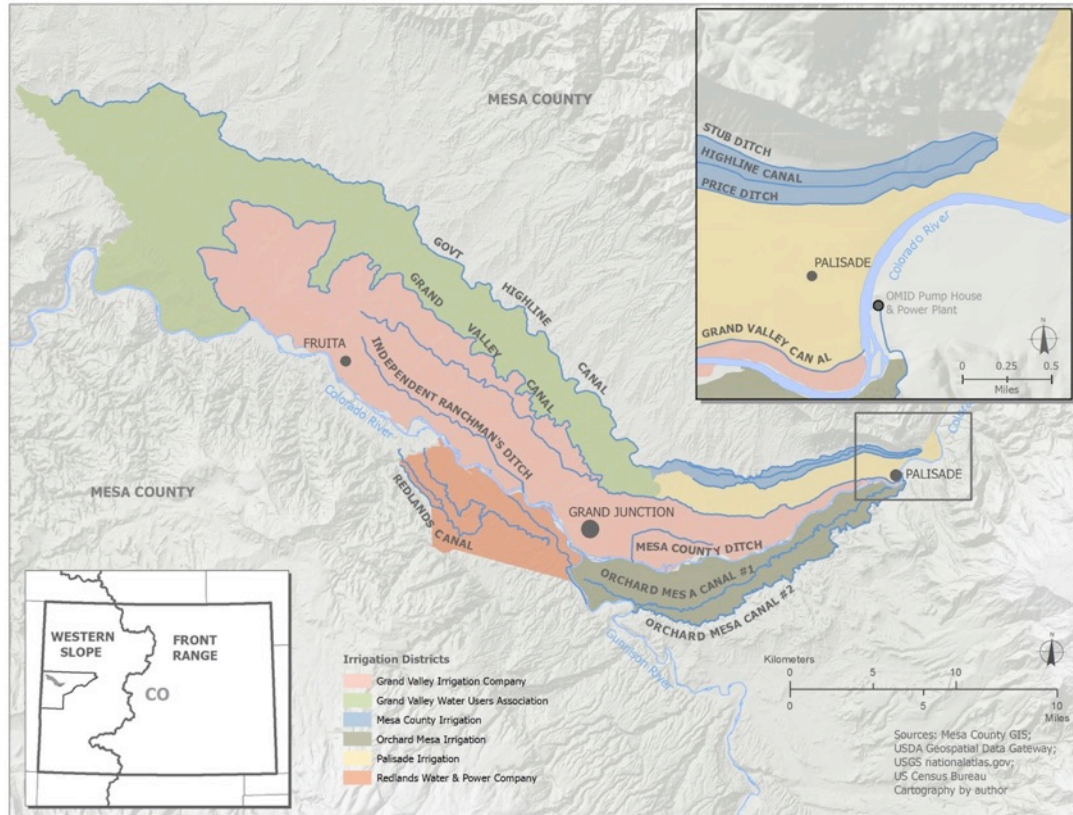
The initial plan for the Highline Canal, however, showed it cutting through developed orchards. Historian Mary Rait explained that farmers in Palisade met with the federal government's engineer and the Grand Junction Water Users' Association to discuss and propose a different route. The farmers learned quickly that the route was not going to change so they organized a land protection group to determine fair land prices, which would provide the government with an idea on what to pay for the affected orchards. The farmers also tried convincing the federal government to take over the Price and Stub Ditches and to construct a canal that skirted the Book Cliffs; the latter, however, was not deemed practical. By mid-1912, the landowners had reached agreements with the Bureau, selling over 180 acres of land for canal right-of-way for over \$200,000.<sup>54</sup>

---

<sup>52</sup> Rait, "Development of Grand Junction..., Part II," 38.

<sup>53</sup> Rait, "Development of Grand Junction,,,,, Part II," 39.

<sup>54</sup> Rait, "Development of Grand Junction..., Part II," 39-40.



**Figure 18. Grand Valley Irrigation Districts.**

The construction of the 55-mile long Highline Canal and some ditch extensions could not have come at a better time because of the setbacks the valley’s young farming industry had suffered during the 1890s. Farmers in the Upper Valley did not suffer as severely as did their neighbors in the Lower Valley. They were protected from inclement weather by the million dollar breezes, they grew a product that had better returns, and the peach industry was not as affected by insects. Farmers in the Lower Valley, on the other hand, were available for wage labor because of the poor farming conditions in this end of the valley, and they hoped to find employment helping build the Highline. The federal government came through, with local contractors hiring local

labor, including farmers.<sup>55</sup> Crews completed the Highline in 1918; however, the government turned water into a portion of the canal in 1915, enticing new settlement.<sup>56</sup>

Farmers reported economic and production gains in just a few years. There were drawbacks, however. Rait noted that “Large scale irrigation creates a debtor community in a way which is seldom realized.”<sup>57</sup> The cost to construct the Highline was about \$6 million. By 1925, the government expected repayment. Landowners asked for an extension. The government granted a 40-year payment plan and lowered the reimbursable portion of the Grand Valley Project to about \$4 million dollars.<sup>58</sup> The Grand Valley Water Users Association, which oversees the Highline today, repaid the government in the 1950s.<sup>59</sup>

Completion of the Highline prompted the Palisade Irrigation District to ask for water from the new canal. The government agreed to “furnish water at a definite rental” to the irrigation district in 1919.<sup>60</sup> In 1921, the OMID also requested government assistance, and it received a contract in February 1922.<sup>61</sup>

Today, these projects remain the arteries of the valley. Those arteries and the precious resource they carry, however, must be managed wisely. It is no longer just a matter of using water for irrigating crops or watering cattle. Today water that flows through the valley must fulfill not only the needs of farmers, endangered species, and a growing urban population in the Grand Valley, it must also satisfy these same needs in

---

<sup>55</sup> Rait, “Development of Grand Junction..., Part II,” 41.

<sup>56</sup> Bureau of Reclamation, “Grand Valley Project.”

<sup>57</sup> Rait, “Development of Grand Junction..., Part II,” 42.

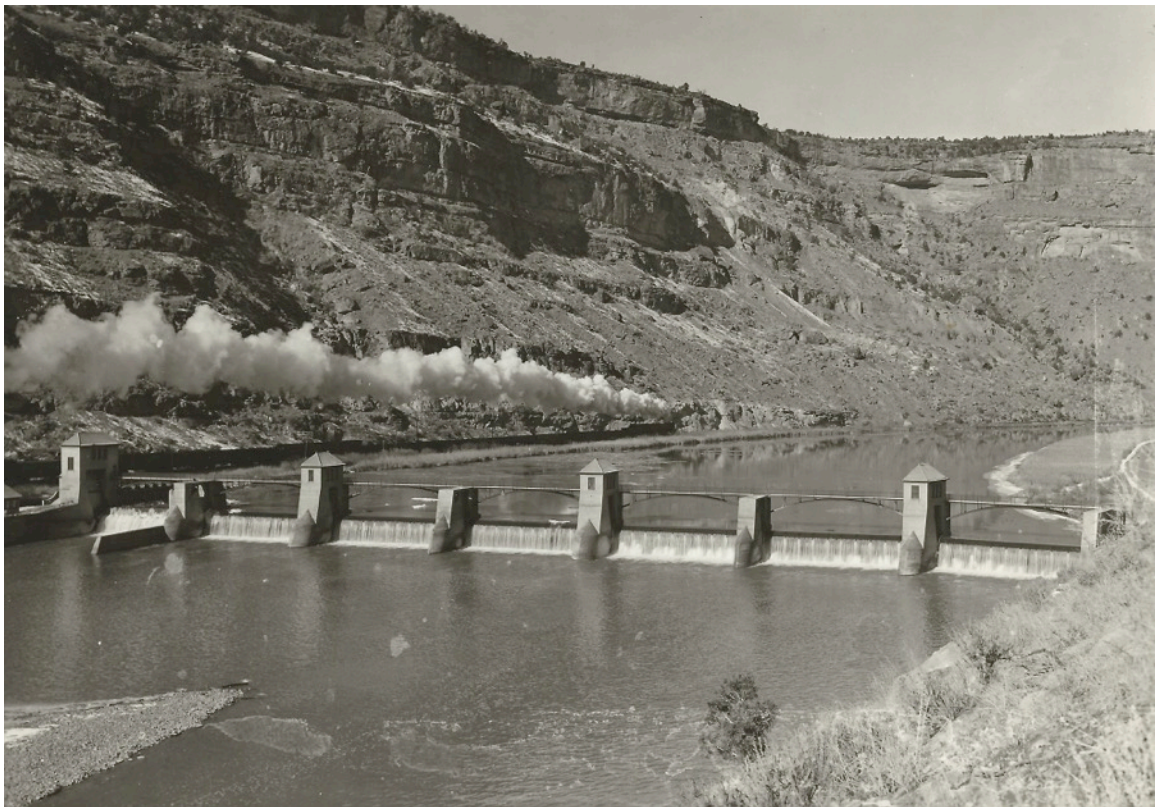
<sup>58</sup> Rait, “Development of Grand Junction..., Part II,” 42; Rader, “Community Development and Historical Events,” 23.

<sup>59</sup> Grand Valley Water Users Association, personal communication with the author, March 3, 2015.

<sup>60</sup> Rait, “Development of Grand Junction..., Part II,” 41.

<sup>61</sup> United States Reclamation Service, *Twenty-First Annual Report of the Reclamation Service, 1921-1922* (Washington, D.C.: Government Printing Office, 1922), 1, 121.

the Lower Colorado River Basin states.<sup>62</sup> Indeed, cities on the Front Range and the larger cities in the Lower Colorado River Basin are looking for more water. Farmers and corporate agriculture reportedly use 80 to 90 percent of all the water in the West.<sup>63</sup> Whether or not they consume all of that water, however, is debatable. Nevertheless, their continued access to that water is in doubt, despite the traditions of “first-in-time, first-in-right” water law. Alongside agriculture, the mining industry also made headway in the valley.



**Figure 19. Grand Valley Diversion (also called the Roller) Dam, circa 1920s.<sup>64</sup>**

---

<sup>62</sup> Raye C. Ringholz, *Paradise Paved: The Challenge of Growth in the New West* (Salt Lake City: University of Utah Press, 1996), 63.

<sup>63</sup> Wilkinson, “Paradise Revised,” essay in *Atlas of the New West*, 29.

<sup>64</sup> Grand Valley Diversion Dam, Bureau of Reclamation photograph collection, courtesy of Palisade Historical Society.

## Chapter 5: Resource Extraction after the Gold Rush

Agriculture in the Grand Valley survived the booms and busts of mining natural resources, but the impacts of these booms and busts were significant to the people and cultural landscape here. Coal mining, for instance, fledged in the Book Cliffs during the late 1800s and early 1900s, belying the reports from Hayden's survey that it was of "no economic importance."<sup>1</sup> The coal industry was short-lived here, however. A 1956 US topographic map of Grand Junction, with a 1969 update, showed seven mines in the valley. The 1981 edition had three. Today, there are no coalmines in the valley.<sup>2</sup>

In the early 1900s, oil and gas exploration started in the Upper Grand Valley, but an early explosion after miners hit a methane patch in 1906 slowed drilling here (Figure 20). In the 1920s, oil companies from the east tried mining oil shale in the Green River formation north of the valley. During this time, boosters continued promoting oil, agriculture, and tourism, all of which attracted more investment and people to the Grand Valley. A recent resurgence in kerogen extraction, has, in fact, encouraged renewed boosterish efforts.

### Mineral Booms

#### *Uranium and Vanadium*

Mineral development has threatened life itself in Grand Junction. By the mid-1950s, uranium and vanadium mining came to the Grand Valley.<sup>3</sup> Grand Junction

---

<sup>1</sup> Hayden, *Tenth Annual Report*, 173.

<sup>2</sup> Topographic maps obtained from: United States Geological Survey, Map Locator & Downloader, [http://store.usgs.gov/b2c\\_usgs/usgs/maplocator/\(ctype=areaDetails&xcm=r3standardpitrex\\_prd&care=%24ROOT&layout=6\\_1\\_61\\_48&uiarea=2\)/.do](http://store.usgs.gov/b2c_usgs/usgs/maplocator/(ctype=areaDetails&xcm=r3standardpitrex_prd&care=%24ROOT&layout=6_1_61_48&uiarea=2)/.do) (last accessed March 1, 2015).

<sup>3</sup> Dennis Lowery, "Grand Slam on the Western Slope," (1962): 26, Grand Junction Pamphlet File, LFRL, MWC; Michael A. Amundson, *Yellowcake Towns: Uranium Mining Communities in the American West* (Boulder: University Press of Colorado, 2002), 5, 21-22; Abbott, Leonard, and Noel, *Colorado: A History of the Centennial State*, 306, 307, 320-321.

became the base for one of the Manhattan Project's processing facilities for uranium. For a while, Grand Junction became known as Grand Junk Town because builders and residents used the uranium waste as aggregate in concrete in new homes and roads. Builders threw the sand-like material in gardens and sand traps at the local golf courses, and left piles of mill tailings adjacent to the river.<sup>4</sup>



**Figure 20. Oil and gas exploration east of Palisade, 1906.<sup>5</sup>**

By the late 1960s, the US had acquired enough uranium for its arsenal. Production slowed, and during the late 1960s and early 1970s, employment

---

<sup>4</sup> Sharon Sullivan, "Colorado River Day Emphasizes Economic Benefits of River," *Grand Junction Free Press* (Colorado), July 27, 2012.

<sup>5</sup> Oil Exploration in the Vinelands, Palisade Library Collection, courtesy of MWC, LFRL.

opportunities were slim.<sup>6</sup> Then, the government found that uranium byproducts were hazardous.<sup>7</sup> Government jobs, tasked workers with monitoring the “most radioactive town in America,” filled the void for about two decades in the valley.<sup>8</sup>

Frank Nemanich, a retired environmental scientist, remembered these years quite well. While he was on his way to Utah to begin a graduate program, he stayed the night in Grand Junction, and when he told someone he had a college education, he was offered a job. He never pursued graduate school. Nemanich said that all homes built and/or remodeled during the uranium period still have to undergo mill-tailing assessments when the homes change hands, even if the home received remediation during the 1970s and 1980s.<sup>9</sup>

### *Oil Shale*

The US government, along with a few state institutions and private companies, including Union Oil, began nearly a decade of oil shale exploration in western Colorado as World War II (1939-1945) was ending. It was not until the mid-1960s that oil shale development started in earnest in areas near the valley.

Colorado’s Colony Oil Shale Project, teamed by The Oil Shale Corporation (Tosco), Standard Oil, Cleveland Cliffs Iron Company, and in 1969 the Atlantic

---

<sup>6</sup> Frank Nemanich (retired environmental scientist), in discussion with the author, September 2012.

<sup>7</sup> Joint Committee on Atomic Energy, “Use of Uranium Mill Tailings for Construction Purposes,” *Hearings before the Subcommittee on Raw Materials of the Joint Committee on Atomic Energy Congress of the United States*, 92<sup>nd</sup> Cong., 1<sup>st</sup> sess. (Washington, D.C.: Government Printing Office), 1-2; Committee on Government Operations, “Radiation Protection,” *Hearings before a Subcommittee of the Committee on Government Operations*, 95<sup>th</sup> Cong., 2d sess., House (Washington, D.C.: Government Printing Office, 1978), 158-160.

<sup>8</sup> Sharon Sullivan, “Radioactive Mill Tailings Still an Issue,” *Grand Junction Free Press* (Colorado), December 4, 2009, [http://www.gjfreepress.com/article/20091204/COMMUNITY\\_NEWS/912039976](http://www.gjfreepress.com/article/20091204/COMMUNITY_NEWS/912039976) (last accessed February 5, 2013).

<sup>9</sup> Frank Nemanich (retired environmental scientist), in discussion with the author, September 2012; Committee on Government Operations, “Radiation Protection,” 158-160; Sharon Sullivan, “Radioactive Mill Tailings Still an Issue,” *Grand Junction Free Press* (Colorado), December 4, 2009.

Richfield Company (ARCO), built a plant near Rifle to “determine if production of oil from shale was technically, economically, and environmentally feasible.” Other companies tried their luck on private lands: Union Oil in Parachute Creek, Occidental Petroleum in Roan Creek, and Superior Oil near the confluence of Piceance Creek and the White River.<sup>10</sup> Though these places are not in the valley, the valley’s population skyrocketed in the late 1970s and early 1980s because the valley was the metropolitan center.

In the 1970s, the Organization of the Petroleum Exporting Countries (OPEC) oil embargo sparked a spike in oil prices. This spark ignited more interest in securing domestic oil reserves. New exploration efforts, made possible only by means of new technologies, began in the oil shale formations surrounding the valley. This was part of President Richard Nixon’s (1969-1974) Project Independence—“a plan to eliminate dependence on foreign oil through immediate development of the Western oil shale reserves”—and an effort to capitalize on the research that had taken place in the region since 1916.<sup>11</sup>

Before the embargo, local governments on the Western Slope had the foresight to recognize that it was only a matter of time before commercial oil shale production would pick up again. County governments—specifically in Rio Blanco, Garfield, and Mesa Counties—began preparing for the possibility of a larger oil shale industry in the early 1970s, forming the Oil Shale Regional Planning Commission in 1971. They later

---

<sup>10</sup> Colorado West Area Council of Governments, *Oil Shale and the Future of a Region: Garfield, Mesa and Rio Blanco Counties, Colorado: A Summary Report* (1974), 1.

<sup>11</sup> Joe Garner, “Bankruptcies Rise, Population Drops: Grand Junction Less Grand After Oil ‘Bust,’” *Los Angeles Times*, November 23, 1984; Andrew Gulliford, *Boomtown Blues: Colorado Oil Shale, 1885-1985* (Boulder: University Press of Colorado, 1989), 48.



coalesced under the Colorado West Area Council of Governments (CWACOG), bringing Moffatt County into the organization.<sup>12</sup>

CWACOG hired consultants to prepare a three-phase study that would look at the social and cultural impacts of the growing industry. The US Bureau of Mines had also conducted an extensive study from 1944-1955 on the possibilities of mining oil shale in western Colorado. Their report, however, focused on the best practices for retorting and refining the oil shale.<sup>13</sup> The report prepared for CWACOG estimated that growth from an oil shale industry could happen rapidly or moderately—though they concluded that it would likely occur somewhere in between—in other words, fast enough that the counties needed to anticipate it.<sup>14</sup>

The social and cultural impacts that occurred were impressive. A *Los Angeles Times* reporter noted that Rangely, a small town located about 90 miles north and west of Grand Junction, was caught in the “Catch 22 that confronts all potential boom towns.” He explained that:

If they're unprepared and energy crash-development ensues, such towns face mini-disasters of the type that afflicted Rock Springs, Wyo., after a big power plant was located there: overflowing schools, overtaxed sewer systems, high rates of crime, child abuse, drug use and divorce, and the aesthetic assault of jerry-built trailer and mobile-home settlements.<sup>15</sup>

Rangely gambled millions of dollars on growth and lost. Today, it is no larger than it was during the 1970s and 1980s.

---

<sup>12</sup> THK Associates, *Impact Analysis and Development Patterns Related to an Oil Shale Industry: Regional Development and Land Use Study* (Denver: THK Associates, Inc., 1974), 3. Today the group is known as the Associated Governments of Northwest Colorado and has added Routt County as a member.

<sup>13</sup> John R. Donnell, *Tertiary Geology and Oil-Shale Resources of the Piceance Creek Basin Between the Colorado and White Rivers Northwestern Colorado*, “Geological Survey Bulletin 1082-L” (Washington, D.C.: Government Printing Office, 1961), 866-867.

<sup>14</sup> THK Associates, *Impact Analysis and Development Patterns Related to an Oil Shale Industry*, 3.

<sup>15</sup> Neal R. Peirce, “West Antes Up for Boom-or-Bust Gamble,” *Los Angeles Times*, September 28, 1980.

Other towns bought into the concept later and experienced population growth and other benefits, not necessarily the ones they were expecting, from the boom. In 1979 energy giant Exxon Corporation purchased a large share—60 percent to be exact—of Colorado’s Colony Oil Shale Project from ARCO. Exxon predicted and warned of growth, and communities readily bought into it. One journalist commented, “Production on the scale Exxon projects would quickly populate huge tracts of barren uplands, engulf existing small towns and add the equivalent of a new Grand Junction a year for two decades or more.”<sup>16</sup>

The company estimated that the five-county area of Colorado’s Western Slope—Garfield, Moffatt, Mesa, Rio Blanco, and Routt Counties—would need 28,000 new residential units to house prospective oil field employees, not to mention even more homes for those who would likely settle in the area to work in other fields needed to support those employees and their families. At the time, the Senior Vice-President of Exxon argued that the sheer scope of the problem was because the Western Slope was sparsely settled to begin with.<sup>17</sup> Cultural historian Andrew Gulliford, in *Boomtown Blues*, noted, “Exxon projected an oil shale industry in Colorado beyond all measure of economical, environmental, or political sanity.”<sup>18</sup> Leaders in Grand Junction and other communities, however, “itch[ed] for the growth that the huge new mining projects may bring.”<sup>19</sup>

---

<sup>16</sup> Neal R. Peirce, “Exxon’s Oil-Crisis Solution Is Monstrous—but So Is Problem,” *Los Angeles Times*, September 21, 1980.

<sup>17</sup> Barbara Taylor, “Colorado Project to House Oil Workers,” *Los Angeles Times*, May 17, 1981.

<sup>18</sup> Gulliford, *Boomtown Blues*, 121.

<sup>19</sup> Neal R. Peirce, “West Antes Up for Boom-or-Bust Gamble,” *Los Angeles Times*, September 28, 1980.

Some people also expressed resentment and worry. For instance, a reporter for the *Los Angeles Times* had already mentioned that this “colonial-style exploitation by outsiders... has long riled Westerners” and that “local leaders would end up personally richer because of the spin-off from megabuck energy investment.” Leaders in Grand Junction, western Colorado’s and eastern Utah’s “energy industry nerve center,” feared a “repetition of the slump that followed Colorado’s 19<sup>th</sup> Century gold and silver boom—that ‘we’ll be left with ghost towns or overbuilt towns that do not have economies to support them.’” These leaders urged towns to work together to manage the potential growth, but the cooperative town building that took place in the valley in the 1880s did not happen this time.<sup>20</sup>

Towns like Rangely never received the population boom or corporate investments they hoped for because workers lived and oil companies invested elsewhere. Instead of funneling the majority of their money into local communities to help with the projected growth as they promised, Exxon built its own 3,000-acre corporate community—Battlement Mesa—near Parachute. The planned community would have eventually had 7,000 homes to support 20,000 to 25,000 people.<sup>21</sup> Battlement Mesa failed, though, when oil prices fell in the early 1980s. To recover some of its losses, Exxon marketed it as a retirement community.<sup>22</sup> Today, the roughly 4,500 residents who live here are more vocal and, for the most part, opposed to the recent uptick in kerogen extraction.

---

<sup>20</sup> Neal R. Peirce, “West Antes Up for Boom-or-Bust Gamble,” *Los Angeles Times*, September 28, 1980.

<sup>21</sup> Neal R. Peirce, “West Antes Up for Boom-or-Bust Gamble,” *Los Angeles Times*, September 28, 1980.

<sup>22</sup> See, Gulliford, *Boomtown Blues*, for the story on Exxon’s impact.

Rangely and Battlement Mesa did not grow as predicted because they lacked housing at the beginning of the boom. Their isolation also made construction slower. Families relocating to this region were looking for amenities, which to this day are still hard to find in Rangely.

Sprawl was occurring in all directions in the valley, however. Developers continually sought farmland to cultivate houses on. Struggling farmers and ranchers looked to sell their acreages at the high prices they were offered.<sup>23</sup> As Harry Talbott explained, it was “enough to have a nice 401K and savings to retire on.”<sup>24</sup>

Negative side effects, of course, developed alongside the population growth. The new jobs generated by the energy boom created several community issues. Police officers, for example, left their posts for better-paying jobs.<sup>25</sup> One journalist warned that the “myriad thorny issues...chief among them the West’s traditional aversion to land-use controls” would have to be addressed to thwart “untrammeled sprawl” and prevent “scars on the land that the descendants of this generation’s boom-towners” would regret “far into the 21<sup>st</sup> Century.”<sup>26</sup>

During the first couple years of the 1980s, Grand Junction experienced another 30 percent population increase during the oil shale boom. To the east, Clifton’s population had increased 84 percent during the 1960s mining booms. Growth slowed to 47 percent during the 1970s, but during the 1980s, Clifton’s population more than

---

<sup>23</sup> Priscilla Walker (orchard owner; President of Walker Innovations, Inc.; Chair, Palisade Historical Society), in discussion with the author, August 2012; Jim Spehar (former Mayor of Grand Junction, former Mesa County Commissioner, journalist), in discussion with the author, August 2012.

<sup>24</sup> Harry Talbott (owner, retired, Talbott Farms), in discussion with the author, August 2012.

<sup>25</sup> Gary Massaro, “Energy Jobs Lure Away Officers Boom Brings Need for More Police,” *The Daily Sentinel* (Grand Junction, CO), March 14, 1982, Fruita History Vertical File, LFRL, MWC.

<sup>26</sup> Neal R. Peirce, “West Antes Up for Boom-or-Bust Gamble,” *Los Angeles Times*, September 28, 1980.

doubled, growing from 5,223 residents to 12,671.<sup>27</sup> Farmers in this region were getting top dollars for their acreages, and development was inching closer to prime farmland. Clifton became a favorite location for developers and residents because it was and still is unincorporated, lessening the tax burden.<sup>28</sup>

As sprawl from the oil shale boom crept eastward into the Upper Valley, farmers and ranchers in Palisade worried that they would lose their way of life because of the competing industry that was thirsty for their water and land. Palisade's population grew from 361 in 1950 to 874 in 1970 to 1,551 in 1980.<sup>29</sup>

West of Grand Junction, Fruita's population increased by 54 percent during the 1970s after decades of slow growth and even periods of decline in population. The rise was 44 percent during the 1980s.<sup>30</sup> Town leaders saw oil shale development as a way to improve infrastructure. One project brought in 377 homes on 350 acres.<sup>31</sup>

With more and more people came demand for more and more water, threatening supplies upon which local farmers had relied for many years. Exxon was buying water rights left and right. Environmentalists and government officials on the eastern slope voiced some concern about water and environmental quality, but they were likely more worried about water issues for different reasons—they wanted some of it too.<sup>32</sup> Farmers had the additional worry that, even though many of them had senior rights to Colorado

---

<sup>27</sup> Colorado Demography Office, "Historical Census Population," [https://dola.colorado.gov/demog\\_webapps/hcpParameters.jsf](https://dola.colorado.gov/demog_webapps/hcpParameters.jsf) (last accessed September 28, 2014).

<sup>28</sup> Keith Fife, Long Range Planning Director, Mesa County, in discussion with the author, August 2012; Dave Thornton, Planner, Mesa County, in discussion with the author, August 2012.

<sup>29</sup> Colorado Demography Office, "Historical Census Population," [https://dola.colorado.gov/demog\\_webapps/hcpParameters.jsf](https://dola.colorado.gov/demog_webapps/hcpParameters.jsf) (last accessed September 28, 2014).

<sup>30</sup> Colorado Demography Office, "Historical Census Population," [https://dola.colorado.gov/demog\\_webapps/hcpParameters.jsf](https://dola.colorado.gov/demog_webapps/hcpParameters.jsf) (last accessed September 28, 2014).

<sup>31</sup> "Fruita Board Offers County Suggestions," *The Daily Sentinel* (Grand Junction, CO), January 14, 1979, Fruita History Vertical File, LFRL, MWC.

<sup>32</sup> Ivars Peterson, "Petroleum Glut Stops Development: Oil Shale Research Center Stands Silent," *Los Angeles Times*, December 16, 1983.

River water, residents and governments in urbanized areas in the Lower Colorado River Basin states and in Mexico might begin pressuring Colorado's government to restrict water usage.<sup>33</sup> As such, this spurred some farmers to unite in 1980, and by 1981, they had organized the MLT, placing some of their farmland into a conservation trust that would prevent future subdivision of the land and guarantee water rights to that preserved acreage.

### **THE Mineral Bust**

In May 1982, farmers in the Upper Valley gained some breathing room, but it was at a devastating expense for some families. On Sunday, May 2, Exxon unexpectedly announced it was going to pull out of the oil shale industry in Western Colorado because of falling oil prices. On Monday, May 3, Exxon employees picked up their last paychecks through a chain-linked fence or through a van window. Thousands of residents were left without jobs and several thousand more were left wondering how they would be affected.<sup>34</sup>

A journalist from the *Los Angeles Times* noted, "The bust came...before the oil shale boom really got underway." The reporter argued that "those in the support industries are perhaps the hardest hit." He described the landscape surrounding the boom that just went bust: "New shopping malls had announced stores that were to open soon. Hundreds of housing units and several large new schools are still under construction. New businesses have just opened."<sup>35</sup> Indeed, Western Slope city officials

---

<sup>33</sup> Barbara Taylor, "Colorado Project to House Oil Workers," *Los Angeles Times*, May 17, 1981.

<sup>34</sup> Bill Curry, "Parachute's Dreams End as Boom Turns to Bust," *Los Angeles Times*, May 4, 1982; Jim Spehar (former Mayor of Grand Junction, former Mesa County Commissioner, journalist), in discussion with the author, August 2012; Gulliford, *Boomtown Blues*, 150.

<sup>35</sup> Bill Curry, "Parachute's Dreams End as Boom Turns to Bust," *Los Angeles Times*, May 4, 1982.

predicted that \$85 million would be lost in their payrolls alone, not to mention the looming costs of over-extending their public services and utilities without a tax base to help cover those costs. To make matters worse, people who had bought properties and homes on the precipice of the projected boom would not be able to recover their investments. Directly and indirectly, Exxon purportedly impacted over 10,000 Western Slope residents on that “Black Sunday.”<sup>36</sup>

The bust in the oil industry made leaders and residents in the valley realize that oil shale was no longer in the big picture for them. Two years after “Black Sunday,” a writer for the *Los Angeles Times* wrote a commanding piece that captured not only the realities of the situation but also the hope and promise. People did stay: “With a garden, a cow, and a part-time job as a salesman at Sears,” one resident decided that his family “can make a go of it...in the Grand Valley, the region of sunshine, clean air, and postcard vistas.” The journalist estimated that, for every one family moving into the Grand Valley (Grand Junction, specifically), around nine families would move out. According to the article, a Grand Junction city planner estimated that the city’s population decreased from 31,000 to around 29,000 and that Mesa County’s population decreased from 94,000 to about 88,000 within two years. Bankruptcies and home foreclosures were on the rise, and Main Street was losing the battle of trying to compete with the newly opened Mesa Mall and other department stores that had opened in anticipation of the boom.<sup>37</sup>

---

<sup>36</sup> Bill Curry, “Parachute’s Dreams End as Boom Turns to Bust,” *Los Angeles Times*, May 4, 1982; Joe Garner, “Bankruptcies Rise, Population Drops: Grand Junction Less Grand after Oil ‘Bust,’” *Los Angeles Times*, November 23, 1984.

<sup>37</sup> Joe Garner, “Bankruptcies Rise, Population Drops: Grand Junction Less Grand after Oil ‘Bust,’” *Los Angeles Times*, November 23, 1984.

On the day Exxon employees picked up their last paychecks, Union Oil announced that it was going to resume construction on a project near Parachute one-fifth the size of the one Exxon had planned. They had “the only major oil shale project under construction in the nation.”<sup>38</sup> They employed about 2,000 workers at the time. Although it was heavily subsidized with taxpayer dollars from arrangements that dated from President Jimmy Carter’s (1977-1981) administration and were embraced for some time during President Ronald Reagan’s (1981-1989) tenure, Union Oil halted its oil shale production in western Colorado in June 1991. This decision came only five years after the company shipped its first batch of synthetic crude oil. The combination of falling oil prices and the company’s own internal problems made the processed kerogen unprofitable.<sup>39</sup>

### **Rebounding in the Valley**

Now almost accustomed to dealing with the growing pains associated with what had been decades of booms—coal in the late 1800s to the 1930s, uranium in the late 1940s to the ‘50s, gas and oil in the ‘60s, oil shale in the ‘70s and early ‘80s, residents in the valley came to regard the bust as an opportunity.<sup>40</sup> The uptick in the local economy during the boom provided many communities with fresh opportunities because they

---

<sup>38</sup> Bill Curry, “Parachute’s Dreams End as Boom Turns to Bust,” *Los Angeles Times*, May 4, 1982.

<sup>39</sup> Douglas Jehl, “Synfuels Sets Funding for 3 Projects,” *Los Angeles Times*, August 22, 1985; Douglas Jehl, “Federal Funds Cut as Popularity Wanes: Synfuels Programs Sputter On,” *Los Angeles Times*, August 24, 1985; Douglas Jehl, “Synfuels Corp. to Delay Aid to 3 Projects: \$744 Million in Subsidies Held Up Pending Review,” *Los Angeles Times*, September 6, 1985; Donald Woutat, “Oil Glut Shakes Up OPEC, Prompts Ties to Customers,” *Los Angeles Times*, December 26, 1988; Donald Woutat, “Unocal Earnings Jump Sharply in 4<sup>th</sup> Quarter, Year,” *Los Angeles Times*, January 31, 1989; “Unocal to Halt Shale Project,” *The New York Times*, March 27, 1991; Richard Turner, “Unocal’s Loss-Plagued Shale Oil Facility To Suspend Operations, Lay Off Workers,” *The Wall Street Journal*, March 27, 1991; Frederick Rose, “Unocal Plans another Round of Asset Sales, Job Cuts,” *The Wall Street Journal*, April 28, 1992.

<sup>40</sup> Joe Garner, “Bankruptcies Rise, Population Drops: Grand Junction Less Grand after Oil ‘Bust,’” *Los Angeles Times*, November 23, 1984.



“got some things done.” Grand Junction built a new airport, new schools, and new streets. These were “blessings” and afforded Grand Junction and the valley the opportunity to grow further without a lot of initial ground clearing. More importantly perhaps, the bust encouraged the region to work to “diversify the economy so that the city [and the region] would never again become so dependent on one industry or one employer.”<sup>41</sup> And they did grow.

From 1980 to 1990, the population numbers began to turn around. For the state as a whole, the population increased by 14 percent. Mesa County also had 14 percent growth over the decade. Grand Junction ended up with only three percent growth. Fruita, on the other hand, saw a 44 percent increase. Clifton doubled, and Palisade grew by 21 percent.<sup>42</sup>

The diversification that occurred in the valley’s economy is similar to what happened in other oil-dependent regions like Oklahoma City and Tulsa in Oklahoma. Taking advantage of its location and identity as the major city for eastern Utahans and western Coloradans, Grand Junction’s medical industry began to grow. Tourism became more important. Local Chambers of Commerce touted the valley for its attractions and its agreeable climate, claiming it was perfect for retirees. Indeed, some out-of-state people and some in-state residents purchased prime Grand Valley properties and homes for one-sixth of what they were going for during the late 1970s and early 1980s. Land

---

<sup>41</sup> Joe Garner, “Bankruptcies Rise, Population Drops: Grand Junction Less Grand after Oil ‘Bust,’” *Los Angeles Times*, November 23, 1984.

<sup>42</sup> Colorado Demography Office, “Historical Census Population,” [https://dola.colorado.gov/demog\\_webapps/hcpParameters.jsf](https://dola.colorado.gov/demog_webapps/hcpParameters.jsf) (last accessed September 28, 2014).

prices rebounded during the mid-to-late 1990s, but they still remained relatively low compared to other Colorado real estate.<sup>43</sup>

Businesses associated with the burgeoning ski industries in Colorado and neighboring intermountain states located in the valley. Weather and climate conditions here enable them to ship supplies without having to worry about excessive snowfall.<sup>44</sup>

A resurgence of interest in producing wine grapes, a trend that has enveloped the nation after a California wine won a blind taste test at a competition in France, took hold also in the valley. A government-backed “Four Corners project” was having success growing grapes in southwestern Colorado. Colorado viticulture reemerged during the 1980s and began flourishing in the 1990s. The wine industry in the Upper Valley increased the region’s agriculture-related attractions.<sup>45</sup>

After September 11, 2001, instability in the Middle East reinstated interest in development of oil shale reserves in Colorado’s Western Slope and in eastern Utah, spiking, once again, population growth in the valley. The downturn in the US economy that started in 2007-2008 and which sent energy prices on a downward spiral, however, played out much differently on Colorado’s Western Slope than did the bust in the 1980s. This time, people who had moved into the Grand Valley more than likely had to stay. The entire country’s economy was in shambles, not just the energy market.<sup>46</sup> In spite of the looming idea that the path to putting a stop to US dependence on foreign oil

---

<sup>43</sup> Jim Spehar (former Mayor of Grand Junction, former Mesa County Commissioner, journalist), in discussion with the author, August 2012.

<sup>44</sup> Keith Fife (Long Range Planning Director, Mesa County), in discussion with the author, August 2012; Dave Thornton (planner, Mesa County), in discussion with the author, August 2012.

<sup>45</sup> Padte and Richard Turley (Owners, Colorado Cellars), in discussion with the author, August 2012.

<sup>46</sup> Priscilla Walker (orchard owner; President, Walker Innovations, Inc.; Chair, Palisade Historical Society), in discussion with the author, August 2012; Bob and Julie Commons (owners, Dreamcatcher Bed and Breakfast), in discussion with the author, September 2012.

goes right through the region surrounding Colorado’s famous fruit and wine country, farmers in the Grand Valley have some security in their way of life because residents are increasingly more cognizant of and grateful for its agricultural heritage—the success of which relies on maintaining rights to water.<sup>47</sup>

---

<sup>47</sup> Robert Bleiberg (Executive Director, Mesa Land Trust), in discussion with the author, September 2013.

## Chapter 6: Western Slope Water Wrangling

A few blocks south of Palisade’s tiny downtown district is Veteran’s Memorial Park. In its southeast corner is a bust of native son Congressman Wayne Aspinall. His face looks out toward the Grand Mesa, which has one of the watersheds from which the valley gets its water (Figure 21).



**Figure 21. Aspinall’s memorial at Veteran’s Memorial Park**

Aspinall’s bust is part of a water feature that honors his contribution to water conservation on Colorado’s Western Slope. The “Palisade Peach,” as he was affectionately known, was a significant player in the water history of the region, making sure that during his tenure (1949-1973) in Washington, D.C., that his home region

received its fair share of the water that flowed toward the Pacific. It makes perfect sense that town members chose to honor Aspinall's legacy in water conservation with a *water* fountain. His words, "In the West, when you touch water, you touch everything," are engraved in stone.

When I first saw Aspinall's memorial in August 2012, however, it was dry. The region had been in a drought since 1999. Grand Junction and Palisade city leaders have worked to conserve water in this arid region for sometime, and some residents have tried conserving water as well. It has been an uphill battle, especially since the BLM began approving leases in 2006 to allow oil and gas companies to drill in and on Grand Mesa and its watershed.<sup>1</sup>

Perhaps these were good reasons for having a dry fountain? It turned out that the fountain was out-of-order, and water returned to it sometime later. Still, that dry fountain represents for me the paradox that exists in the American West. Your eyes tell you that humans have made it appear to have plenty of water, but most of it is in fact quite dry.

### **Some Water Background**

For nearly a century, 80 percent of Colorado's population has lived on the Front Range, and that is still the case (Figure 22). In contrast, 80 percent of the state's

---

<sup>1</sup> Marija B. Vader, "GJ Council Unveils New Plan for Watershed," *The Daily Sentinel* (Grand Junction, CO), June 5, 2003; Mike McKibbin, "'Don't Drill in Watersheds,'" *The Daily Sentinel* (Grand Junction, CO), March 6, 2006; Sally Spaulding, "Trust U.S. with Water, City's Told," *The Daily Sentinel* (Grand Junction, CO), March 13, 2006; Mike McKibbin, "Residents Flood BLM with Water Worries," *The Daily Sentinel* (Grand Junction, CO), March 16, 2006; Mike McKibbin, "State, Fed Agencies' Help Sought on Watershed Worries," *The Daily Sentinel* (Grand Junction, CO), April 27, 2006; Sally Spaulding, "Protests over Grand Mesa Leases Yet to Be Resolved," *The Daily Sentinel* (Grand Junction, CO), April 27, 2006; Mike Wiggins, "Watershed Ordinance Approved," *The Daily Sentinel* (Grand Junction, CO), September 7, 2006; Nancy Lofholm, "BLM Will Allow Oil, Gas Drilling on Grand Mesa," *The Denver Post*, August 4, 2006.

precipitation falls in the higher elevations on the Western Slope (Figure 23).<sup>2</sup> By 2004, however, it could be said that when “someone in Denver drinks a glass of water, 55 percent of the water in that glass comes from the westward flowing Colorado River.”<sup>3</sup>

Water used for agriculture gets more attention. Eighty percent of all water in Colorado goes toward agriculture. This statistic gets used repeatedly by environmentalists and urban planners, but it is a number that farmers in the valley would argue against. Farmers claim that agriculture may use or is guaranteed 80 percent of the water in the state, but agriculture does not consume all of that 80 percent.<sup>4</sup> Farmers in the Grand Valley, for instance, reported that a large percentage of the water they use runs off their land, returns to a canal or to the river, and moves downstream for Lower Basin use.<sup>5</sup>

More efficient water-conveying technologies and more effective watering schedules have enabled some Grand Valley farmers to leave more water in the canals and in the rivers.<sup>6</sup> A changing national and regional economy, however, to one that is based more on services and specialized production than on agriculture, spills over into the ideas of how water should be allocated. People in the valley, for example, are using

---

<sup>2</sup> Chris P. Joufflas, “Water-Wise: Time Has Come for Formulating Statewide Compact,” *The Daily Sentinel* (Grand Junction, CO), May 11, 1986.

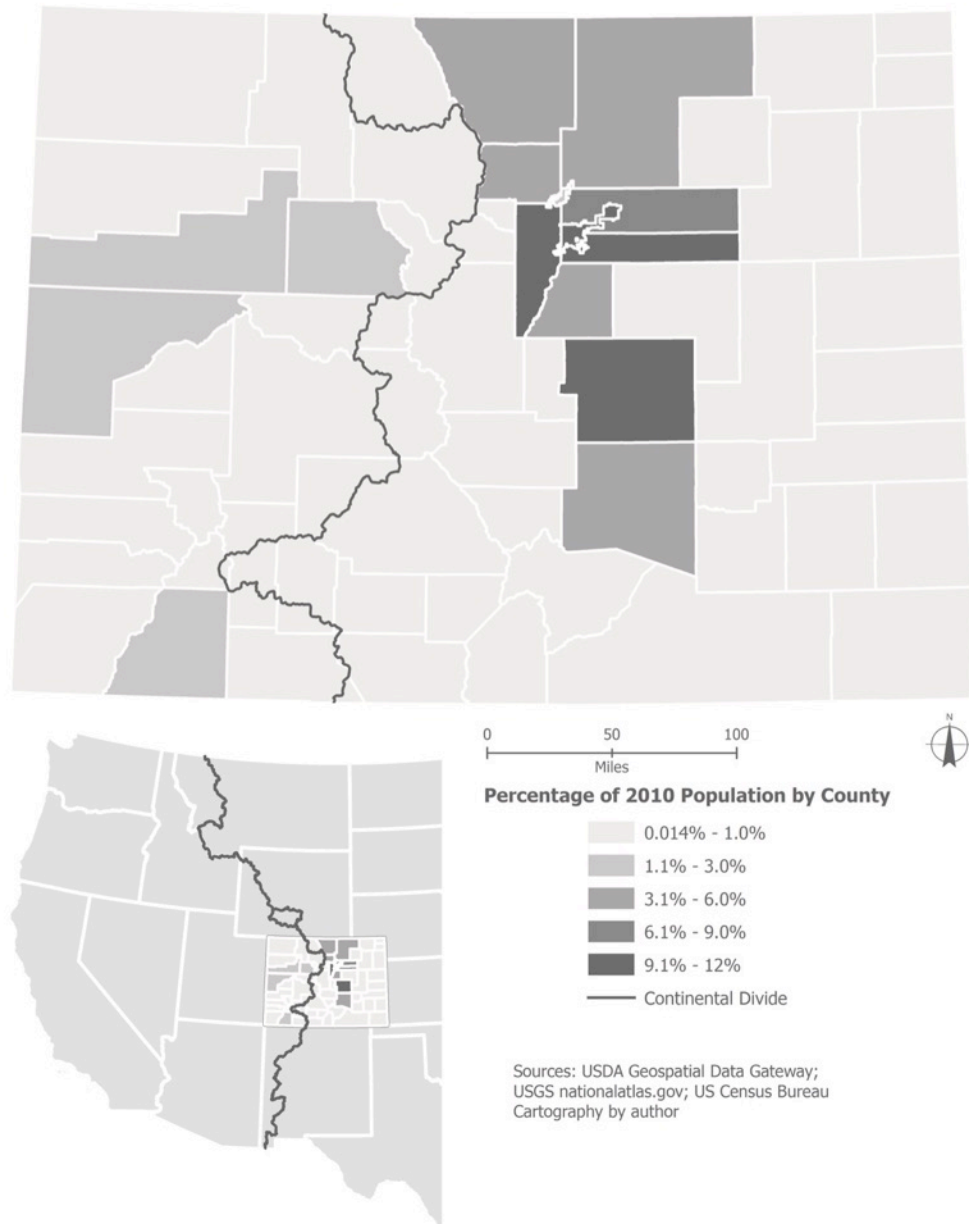
<sup>3</sup> Josh Nichols, “Local Group Gets Look at Issues Upstream,” *Grand Junction Free Press* (Colorado), June 29, 2004.

<sup>4</sup> Trout Unlimited boosted the percentage to 90. See: Trout Unlimited Colorado Water Project, *A Dry Legacy 2: Progress and New Threats in a Drought Year* (Boulder: Colorado Water Project, 2003), 3; likewise, this article: Michael C. Bender, “Owens to Push for Laws to Foster Water Projects,” *The Daily Sentinel* (Grand Junction, CO), December 11, 2002, put the figure between 85-90 percent. 80 percent is what many Grand Valleyers I spoke to agreed on as a starting point.

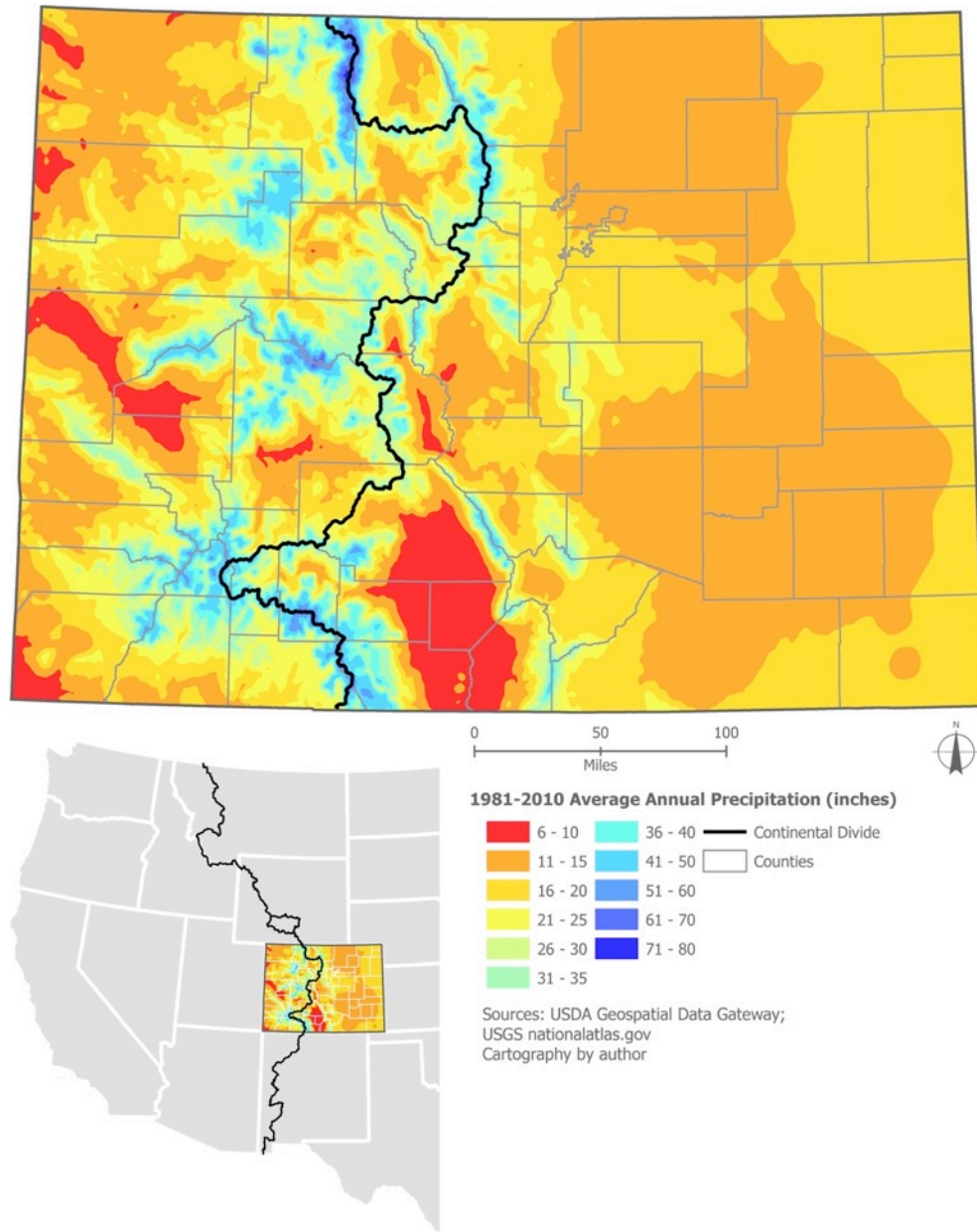
<sup>5</sup> Mark Harris, in Panel on Drought and Agriculture, “Natural Resources of the West: Water and Drought,” Colorado Mesa University Water Center Seminar Series, aired online on December 3, 2012.

<sup>6</sup> Heather McGregor, “Despite High-Dollar Budget, District Keeps Low Profile,” *The Daily Sentinel* (Grand Junction, CO), July 14, 1996; Bruce Talbott, in Panel on Drought and Agriculture, “Natural Resources of the West: Water and Drought,” Colorado Mesa University Water Center Seminar Series, aired online on December 3, 2012.

water that used to go to farmland for their lawns and for recreational activities on reservoirs and in rivers.



**Figure 22. Colorado's 2010 Population Distribution.**



**Figure 23. Precipitation in Colorado, 1981-2010.**



Conservation of American West water resources in order to sustain agriculture, industry, and metropolitan growth were formidable goals of the Bureau of Reclamation and its projects. Projects designed to help struggling farmers get water to their fields during the Dust Bowl era droughts and to provide jobs to those impacted by the Great Depression spun so many pipes and tunnels that the network looks like an intricate spider's web.<sup>7</sup> Since the Great Depression, Western Slope access to Colorado River water has suffered setbacks as conservationists looked to manage water efficiently so as not to "waste" resources for the sake of progress.<sup>8</sup>

During the 1930s, the prolonged drought resulted in large-scale diversions from the Western Slope to the Front Range. In 1934, the Northern Colorado Water Users Association organized to lobby, often successfully, state and federal leaders to fund projects that would divert water over the Continental Divide. In 1937, Congress approved the building of Green Mountain Reservoir in Summit County and the Colorado-Big Thompson Project—the latter completed after WWII.<sup>9</sup> The growth that occurred in the American West after WWII led to other reclamation projects such as the Colorado River Storage Project, which took more water away from the Western Slope.<sup>10</sup>

Ideas about strategically using and specifically securing every drop of water for consumptive and/or beneficial use are still ongoing in this arid to semiarid region, in spite of the Colorado River basin region's current status (circa 2015) as being in the

---

<sup>7</sup> Thomas E. Cronin and Robert D. Loevy, *Colorado Politics and Government: Governing the Centennial State* (Lincoln: University of Nebraska Press, 1993), 67-68.

<sup>8</sup> George Sibley, *Water Wranglers: The 75-Year History of the Colorado River District: A Story about the Embattled Colorado River and the Growth of the West* (Glenwood Springs: Colorado River District, 2012), 2-5, 405.

<sup>9</sup> Marija B. Vader, "Officials Claim Fed Agency Waters Water from W. Slope," *The Daily Sentinel* (Grand Junction, CO), January 7, 2001; Abbott, Leonard, and Noel, *Colorado: A History of the Centennial State*, 383.

<sup>10</sup> George Sibley, "'Water Wrangling' for the West Slope," *Post Independent* (Glenwood Springs, CO), October 28, 2012.

midst of one of the worst, if not the worst, droughts ever recorded. Essentially, a Colorado drought is not the same as a Midwestern drought; as a *Daily Sentinel* writer stated it: “A better definition of drought for Colorado might read: A period of insufficient snowpack and reservoir storage to provide adequate water to urban and rural areas.”<sup>11</sup> Especially dry years invite new ideas.

Water disputes arise constantly. Laws are perpetually changing, and no one knows what Mother Nature will do from year-to-year. Some years, local American West newspapers are heavy with columns commenting on proposed bills and studies, amendments and filibusters, and water checks and rations. Government committees and subcommittees battle it out, while conservation districts across the West butt heads with progressive state and local governments seeking to grow their populations and their industries—channeling the water here while impacting people and places there.

### **Water in a Colorado Drought**

During the late 1970s, the nation was able to see how efficient the reclamation projects in the American West were. Specifically, in 1977, the worst drought in the region since the Dust Bowl era was made even worse because too many people were tapping into the short supply of water. By mid-August of that year, Grand Valley Project managers had to issue a 1908 call on the Colorado River—“all diversions with priority dates after 1908” were shut down, which included diversions “from both the Colorado River main stem above the project’s roller diversion dam in DeBeque Canyon and from tributaries above there.” *The Daily Sentinel* unfurled the incredible give-and-take complexity of the situation:

---

<sup>11</sup> *The Daily Sentinel* (Grand Junction, CO), “Grand Valley Drought & Water Conservation,” <http://www.gjcity.org/WorkArea/DownloadAsset.aspx?id=2147485668> (last accessed December 3, 2013).

Denver may continue...to store inflow of water to Dillon Reservoir and to make diversions from the Blue, Williams, Ford, and Fraser Rivers if an amount of water equal to the flows of those streams is released from Williams Fork Reservoir on the Williams Fork River. The Colorado-Big Thompson project may continue to store or divert flows of the Colorado River above Lake Granby and Willow Creek, provided the Bureau of Reclamation releases an equal amount from Green Mountain Reservoir... John Savage of Grand Valley asked why his junior pump on the Colorado River was shut off when there is water in Green Mountain Reservoir. The only answer The Sentinel could run down was that by placing the call on the river, the Grand Valley Project shifted to the junior appropriators the task of requesting releases... Colorado Springs, Aurora, Pueblo, Colorado Fuel and Iron Co. and other transmountain diverters that do not have reservoirs for release of replacement water have been shut off. The Fryingpan-Arkansas Project quit making diversions through the Charles Boustead Tunnel in the middle of June, when water in the Fryingpan River and tributaries dropped down to minimum amounts of water which must be left in streams under operating principles for the project... Some water does double duty at Vineland. It either generates electricity at the project hydro-electric plant or runs hydraulic turbines that provide power to run pumps lifting water to the Orchard Mesa and goes back into the Colorado River through a canal to a point above the diversion dam of the Grand Valley Irrigation Co. This process is called checking-back. Gates across the tailrace of the power and pumping plant divert the water into the canal taking the water upstream. Because Plateau Creek flows into the Colorado River below the roller dam, the water users in the Plateau Valley were not affected by the call. Ute Water Conservancy District, however, is prepared to replace water being diverted from Plateau Creek by water purchased from Ruedi Reservoir through the Colorado River Water Conservation District. The Redlands Water and Power Co., which diverts water from the Gunnison River in the canyon south of Grand Junction, placed a call on the Gunnison River earlier this summer. Redlands is using what water is available to generate as much power as possible and is buying power from the Public Service Co. of Colorado to lift 70 feet of water to four canals on the Redlands. The Denver Board of Water Commissioners has refused to release 28,662 acre-feet of water stored this year in Dillon Reservoir which the Colorado River Water Conservation District argues must be allowed to flow down the Blue River into Green Mountain Reservoir under terms of 1955 and 1965 stipulations and decrees. A hearing will be held in Federal District Court in Denver Aug. 19 and 20 on the motion of the river district to require Denver to comply with the decrees and release the water.<sup>12</sup>

---

<sup>12</sup> William H. Nelson, "GV Project Issues Water Call on Colorado River," *The Daily Sentinel* (Grand Junction, CO), August 16, 1977.

The 1908 call that occurred in 1977 limited the Front Range's use of Colorado River water, initiating proposals for securing more water that have not stopped coming.<sup>13</sup> Residents on the Western Slope have learned some things—particularly that they needed to pay attention to the water flowing downstream that they did not use but that Lower Basin states were able to use without paying for it.<sup>14</sup> Despite the Western Slope's senior rights to the Colorado River, water managers became exasperated because there is no set division between the Front Range and the Western Slope of the state's 3.9 million acre-feet share of the water as established by the 1948 Upper Colorado River Commission. The only thing in place, dating from over 100 years ago, is that many Western Slope places tied to the Colorado River, such as the Grand Valley, have senior water rights that stipulate set amounts of water they are entitled to, thus enabling river districts to place calls on the Colorado River. Western Slopers are worried about these rights, given that their representation in the political arena, sans Aspinall, has been weakened and that there are no plans for reining in population growth projected to occur on the Front Range.<sup>15</sup>

### **Droughts and Ideas Continue**

Droughts continue to be a catalyst for change. The year 2002 was pivotal for Colorado and was significant for the Front Range because this region was in one of its

---

<sup>13</sup> Sibley, *Water Wranglers*, 312.

<sup>14</sup> Michael Moss, "Battling for Colorado Water: 'Greed, Growth, Power Grabs,'" *The Daily Sentinel* (Grand Junction, CO), July 18, 1982; Bob Silbernagel, "Water Lease Plan Stirring Controversy," *The Daily Sentinel* (Grand Junction, CO), June 20, 1990; Gary Harmon, "McInnis Wants to Tighten the Faucet on California," *The Daily Sentinel* (Grand Junction, CO), January 10, 2002; Sally Spaulding, "Water Pressure: Legal Battle Looms if Drought Lingers," *The Daily Sentinel* (Grand Junction, CO), September 5, 2004.

<sup>15</sup> Chris P. Joufflas, "Water-Wise: Time Has Come for Formulating Statewide Compact," *The Daily Sentinel* (Grand Junction, CO), May 11, 1986; Mike McKibbin, "Growth Doesn't Depend on Water, Board Is Told," *The Daily Sentinel* (Grand Junction, CO), January 16, 2002; Marija B. Vader, "Lawmakers Expect West Slope Water to Be Target," *The Daily Sentinel* (Grand Junction, CO), July 14, 2002; Gary Harmon, "Water Bill down Drain," *The Daily Sentinel* (Grand Junction, CO), February 28, 2004.

worst droughts on record.<sup>16</sup> That year marked the second driest year for the state over the past 40 years (1977 was number one), leading all Colorado River basin states to begin taking stronger water conservation measures.<sup>17</sup> It remains to be seen, however, how the current drought (circa 2015) will rank.

In December 2002, Colorado's government passed Senate Bill 156.<sup>18</sup> This bill allows the owners of water rights to apply through the water courts to gain instream flow rights, with more options for what is considered to be consumptive/beneficial use of water. For example, water in streams, rivers, and lakes could be "used" and maintained for recreational purposes, for the enhancement of picturesque landscapes, and for sustaining fish, wildlife, and other ecosystem-related functions.<sup>19</sup> The bill also helped change the idea that "if you don't use it, you lose it" to one that encourages conservation.<sup>20</sup> A Trout Unlimited representative stated that SB 156 gave "Colorado a powerful new tool to improve the health of its rivers, which is good for the fish, for the anglers," and for other elements associated with the New West economy.<sup>21</sup> The framers of the bill formed it on the idea of conservation easements or land trusts, in which landowners capitulate development rights of their properties in exchange for tax

---

<sup>16</sup> Bruce Talbott, in Panel on Drought and Agriculture, December 3, 2012; Aaron Porter, "Water Wars," *The Daily Sentinel* (Grand Junction, CO), October 14, 2002.

<sup>17</sup> Scott Condon, "Drought of 2012—Sign of Times?," *The Aspen Times*, December 3, 2012.

<sup>18</sup> Gary Harmon, "Water Bill Awaiting Governor's Signature," *The Daily Sentinel* (Grand Junction, CO), May 2, 2002.

<sup>19</sup> Shannon Joyce Neal, "Gov. Undecided on Senate Water Bill," *The Daily Sentinel* (Grand Junction, CO), February 19, 2002; Gary Harmon, "Walcher: It's Time to Change Water Law," *The Daily Sentinel* (Grand Junction, CO), February 20, 2002; Gary Harmon, "Compromise May Leave More Water in Streams," *The Daily Sentinel* (Grand Junction, CO), March 14, 2002.

<sup>20</sup> Gary Harmon, "Farmers, Developers Blast Water Proposal," *The Daily Sentinel* (Grand Junction, CO), April 18, 2002.

<sup>21</sup> "Trout Unlimited Applauds House Passage of SB 156," April 25, 2002, [http://www.tu.org/press\\_releases/2002/trout-unlimited-applauds-house-passage-of-sb-156](http://www.tu.org/press_releases/2002/trout-unlimited-applauds-house-passage-of-sb-156) (last accessed March 28, 2013).

benefits and for the sentiment of helping protect the environment.<sup>22</sup> Not everyone was on board with the proposal, including some farmers and even some environmental groups.<sup>23</sup> The 2012 drought marks the third worst drought year reported in Colorado. The wetter 2011 did keep water storage facilities in better conditions to handle the water shortage, but 2012 reminded Grand Valley residents of water flux.<sup>24</sup>

By 2050, Colorado will likely have a 1.5 million acre-foot shortfall because its population will probably double. Grandiose ideas exist for how to deal with the water side but not for controlling population growth.<sup>25</sup> For example, the Colorado Aqueduct Return Project, better known as the Big Straw Project, conceived by Ralph E. “Butch” Clark, an environmental planner from Gunnison, would move water from the Colorado and Utah borders into the Colorado River basin for Western Slope communities.<sup>26</sup> The idea of piping in water from the Midwest even comes up occasionally.<sup>27</sup> An \$11.2 billion project proposal surfaced in 2012 to build a 670-mile-long pipeline to ship water west from the Missouri River. An article from Oklahoma’s *Tulsa World* warned that “Any plan for diverting significant amounts of water from the Missouri would

---

<sup>22</sup> Gary Harmon, “Compromise May Leave More Water in Streams,” *The Daily Sentinel* (Grand Junction, CO), March 14, 2002.

<sup>23</sup> Gary Harmon, “Farmers, Developers Blast Water Proposal,” *The Daily Sentinel* (Grand Junction, CO), April 18, 2002.

<sup>24</sup> Scott Condon, “Drought of 2012—Sign of Times?”, *The Aspen Times*, December 3, 2012; Bruce Talbott, in Panel on Drought and Agriculture, December 3, 2012.

<sup>25</sup> Summit Economics and The Adams Group, *Water and the Colorado Economy* (December 2009), [http://www.summiteconomics.com/FRWP\\_Econ\\_Final\\_2011910.pdf](http://www.summiteconomics.com/FRWP_Econ_Final_2011910.pdf) (last accessed March 3, 2013), 5, 7-9; Drew Beckworth and Dan Luecke, *Filling the Gap: Commonsense Solutions for Meeting Front Range Water Needs* (February 2011), <http://www.westernresourceadvocates.org/gap> (last accessed January 13, 2013).

<sup>26</sup> Zack Barnett, “Water Project Would Be Big, Bring Boom to Area, Backer Says,” *The Daily Sentinel* (Grand Junction, CO), March 17, 2002; Zack Barnett, “Big Straw Should Be Studied, Says River District,” *The Daily Sentinel* (Grand Junction, CO), April 17, 2002; Mike McKibbin, “River District Continues Backing of Big Straw,” *The Daily Sentinel* (Grand Junction, CO), October 17, 2002; Erin McIntyre, “Sizing up Big Straw: Pros, Cons of Formidable Water Project Are Discussed,” *The Daily Sentinel* (Grand Junction, CO), December 11, 2002.

<sup>27</sup> Marija B. Vader, “Lawmakers Expect West Slope Water to Be Target,” *The Daily Sentinel* (Grand Junction, CO), July 14, 2002.

encounter opposition...in the Midwest given [its own] drought and competition for water resources.”<sup>28</sup>

A number of other issues affecting the Western Slope’s access to Colorado River water exist. These include the decades-long salinity issues and efforts by the Bureau of Reclamation to lower salt levels in water flowing to Lower Basin states and into Mexico.<sup>29</sup> As well, a group was working at one point to raise awareness about arsenic levels in the drinking water, often a problem where mining and agricultural activities take place.<sup>30</sup> Oil shale and gas development will continue to haunt water supplies in this region. Even though Front Range communities and Lower Basin communities are making improvements to use water more efficiently, those enhancements only masquerade the larger issue of uncontrolled growth. Growth and the ensuing effects are felt throughout the state. It is particularly hard for regions that represent our agricultural heritage and that supply us with food for our tables, however, to survive when there is no water. Since the mid-1980s, farmers in the Grand Valley have made efforts to improve their water efficiency, not only to conserve water for conjunctive uses but also to preserve their way of life, a way of life they heartily seek to hold on to. Water use in the OMID is a case in point.

---

<sup>28</sup> “Major Pipeline among Ideas for Aiding Arid West,” *Tulsa World*, December 11, 2012.

<sup>29</sup> US Senator Bill Armstrong, “All Water Not Created Equal,” *The Palisade Tribune* (Colorado), April 8, 1982.

<sup>30</sup> Shannon Joyce Neal, “Group Raises Awareness of Grand Valley Arsenic Levels,” *The Daily Sentinel* (Grand Junction, CO), April 27, 2001.

## Chapter 7: Progress in the Orchard Mesa Irrigation District

*Julie and Bob Commons grew up in Colorado on the Front Range. They married and moved to Alma, a snowy place in Summit County. In 2007, they moved to the Western Slope, fulfilling a longtime dream of staying in Colorado but being able to enjoy a more agreeable climate and stay close to snowmobile country. Now in their fifties, they are third generation Coloradans and all too familiar with Colorado's water problems. Julie recalls being aware of the urban growth squeezing her family and their agricultural land on the Front Range, part of which she still owns. Today, they operate a bed and breakfast near Palisade. The Commons' main use of water, however, is for their lawn and their small vegetable garden.<sup>1</sup> Their neighbor across the street, Linda Lee, has a different perspective.*

*Linda Lee owns a vineyard and a winery. She is also a full-time nurse. She operates her winery out of her home, and her front and back yards are vineyards.<sup>2</sup> In this part of the world, irrigation water rights come with property, but the Commons' water first passes through a headgate and a cistern on Linda Lee's property. Shortly after they moved to Palisade Julie and Bob approached Linda Lee about how their water ration worked. Here's how Julie remembered the story:*

*Julie: "Hi [Linda Lee], we just wanted to know when do you open the gate?"*

*Linda Lee: "I have to make repairs, so I'm not opening it for two weeks."*

*Linda Lee's boyfriend: "That doesn't matter, you could open it up for these guys..."*

*Julie said the facial expression Linda Lee then directed at her boyfriend was the one that can cause a man's voice to fade away quickly—as Julie termed it, a "who-the-hell-are-you-to-decide-anything" look.*

*Julie: "That's OK, just let us know so we can clean the system."*

*Linda Lee's property backs up to Orchard Mesa Canal #2, and gravity pipes water from the canal to Julie and Bob's property as well as to a couple other families on the same headgate. According to Julie, Linda Lee later realized she was in the wrong, because the repairs that she needed to make would not interfere with the Commons' getting their water.*

*While Linda Lee maintains the headgate and the cistern, Julie and Bob are responsible for cleaning the silt and debris from the waste ditch that borders the lower*

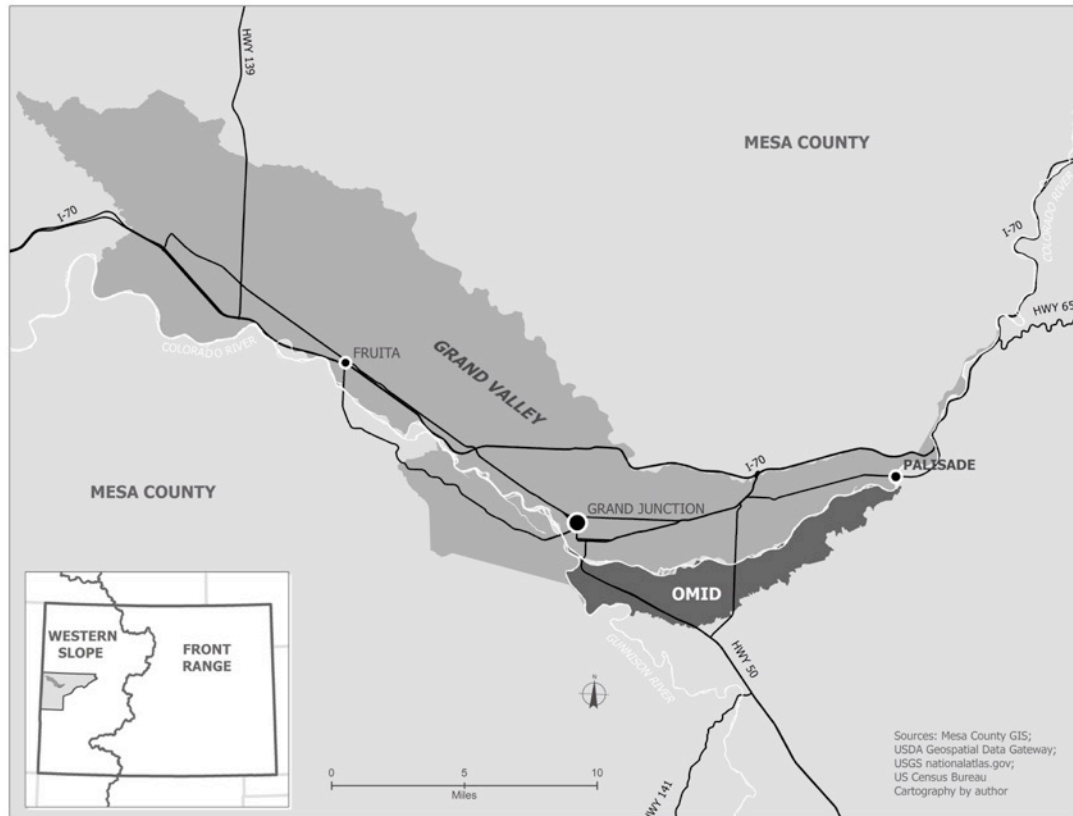
---

<sup>1</sup> Julie and Bob Commons (owner, Dreamcatcher Bed and Breakfast), in discussion with the author, August 2012, September 2013. This chapter was first published in: Jeffrey M. Widener, "Water-Conveyance Technology and the Preservation of Agriculture in Colorado's Orchard Mesa Irrigation District," *Material Culture* 47, no. 1 (2015): 32-57.

<sup>2</sup> Linda Lee Gubbini (owner, Gubbini Winery), in discussion with the author, August 2012.



edge of their land and returns unused/overflow water from Canal #2 to Orchard Mesa Canal #1. Cleaning the irrigation system is very expensive and dirty, and in 2013, the Commons began looking for additional land on which to spread the muck. Luckily, Bob Commons works at a heavy equipment rental company so he gets a discount and knows how to operate the machinery used to remove the silt. After six years of being neighbors, Linda Lee and Julie and Bob have a better understanding of the whole operation.<sup>3</sup>



**Figure 24. Orchard Mesa Irrigation District and the Grand Valley.**

### **Introduction**

The opening story showcases a couple of the landowners who live in the Orchard Mesa Irrigation District (OMID), one of sixteen such divisions in the state that

---

<sup>3</sup> Julie and Bob Commons (owner, Dreamcatcher Bed and Breakfast), in discussion with the author, August 2012, September 2013.

are based on laws passed in 1905, 1921, and 1935), in the Grand Valley in Colorado.<sup>4</sup> The exchange between them reflects the conservative water attitude of some landowners who resent what they regard as non-agricultural water use by “outsiders.” As well, the story presents us with a picture of everyday landscapes and how individuals can be impacted when technology fails to deliver water to each user. It also shows us how water users in OMID work together.

Irrigation in the Grand Valley began with settlers’ building their own individual small pumping systems and various ditches to direct water where they needed it.<sup>5</sup> These early systems required perpetual maintenance, as they were subject to the river’s “tendency to shift its channels within its wide bed with every surge of water” which meant that “a pump could be left high and dry on a sandbar within a matter of hours.”<sup>6</sup> The highly idealistic claims made by boosters about agriculture via irrigation in western Colorado—“under irrigation there is a certainty of yield,” “climatic conditions for strictly high-class crops,” “under irrigation the soil is practically inexhaustible,” “vast quantities of silt from the higher altitudes... [act] as an even coating of fertilizer on the land, so that each year the land becomes better and stronger and produces heavier crops”—were hard for pioneers to resist, bringing in settlers and necessitating a bigger, more organized operation.<sup>7</sup> Irrigation on Orchard Mesa progressed via the work of private investors until it came once again under the control of individual landowners,

---

<sup>4</sup> P. Andrew Jones and Tom Cech, *Colorado Water Law for Non-Lawyers* (Boulder: The University Press of Colorado, 2009), 211.

<sup>5</sup> Alice Wright, “Bringing the Water to Arid Orchard Mesa,” *Westworld* (part of *The Daily Sentinel*), October 31, 1976; House Committee on Irrigation and Reclamation, *Economic Survey of Certain Federal and Private Irrigation Projects*, 71<sup>st</sup> Cong., 2<sup>nd</sup> sess. (Washington, D.C.: Government Printing Office, 1930), 161.

<sup>6</sup> Alice Wright, “Bringing the Water to Arid Orchard Mesa,” *Westworld*, October 31, 1976.

<sup>7</sup> Chamber of Commerce of Grand Junction, “Irrigation,” in *The Valley of Nature’s Richest Favours* (Grand Junction, CO: Mesa County Historical Society, reprinted 1996).

who now work collectively. OMID has grown into an example of more-efficient water management based on the 21<sup>st</sup> century reality that water is no longer guaranteed to be cheap or plentiful (Figure 24).<sup>8</sup>

### Placing OMID

Permeated with Mancos shale, Orchard Mesa rises about 70 to 100 feet above the south bank of the Colorado River. Currently, OMID serves “agricultural and residential customers” in a “rapidly urbanizing area.”<sup>9</sup> In 1976, journalist Alice Wright wrote a very detailed account on the development of OMID for a supplement to Grand Junction’s *The Daily Sentinel*. She began by drawing a picture with words of an area subdivided by fences into small acreages and permeated with areas where “cattle ranged freely in winter” and where bands of sheep grazed and lambled in the spring.<sup>10</sup> She explained that the main reason the land was subdivided into such small pieces was because owners had to pay so much per acre to help finance the first irrigation system, a system that was poorly built and in debt from the start. Investor T. C. Henry was a promoter of the Orchard Mesa Irrigation Company. He acquired the water rights and then sold them to the farmers. According to Wright’s account, Henry pressured investors from Chicago to finance \$2 million to construct the canals. Many farmers ended up being “squeezed out by the enormously high cost of water and the low price of crops,” and “the land they had so laboriously cleared was reclaimed by salt brush.”<sup>11</sup> A 1930 US government publication reported that the early system was never a success.<sup>12</sup>

---

<sup>8</sup> Max Schmidt (General Manager, OMID), in discussion with the author, August 2012, September 2013.

<sup>9</sup> Charles Burt, *Water Resources Conservation Plan for Orchard Mesa Irrigation District* (San Luis Obispo, CA: Irrigation Training & Research Center, revised September 3, 2012), 1.

<sup>10</sup> Alice Wright, “Bringing the Water to Arid Orchard Mesa,” *Westworld*, October 31, 1976.

<sup>11</sup> Alice Wright, “Bringing the Water to Arid Orchard Mesa,” *Westworld*, October 31, 1976.

<sup>12</sup> House Committee, *Economic Survey of Certain Federal and Private Irrigation Projects*, 161.

But it was a start. The physical components of the initial system consisted of a canal that carried water into a forebay from which pipes channeled it down to the pumphouse (Figure 25). There, water turbines pumped the water through two different pipes above the river. Then, a water wheel “lifted water from a ditch into one of the privately operated irrigation systems on Orchard Mesa.” Also part of the system was a “flash-board” dam that was situated “a mile or so above the present roller dam in DeBeque Canyon.” Ed McCormick, a former state representative and son of the system’s first secretary-treasurer, described the flash-boards as a series of “hinged metal plates” worked by pulleys and “cable strung across the stream,” with a man standing in the stream to brace them up in the raised position. The braces could, however, be released from the bank. A ditchrider made daily rounds of the system and was also the one who “turned off the water and locked the headgates” when farmers failed to pay their dues by the deadlines. The system’s problems included a “flume, part dirt and part wood,” subject to frequent “slides... [that were] usually serious.” A blocked canal or a damaged flume meant that farmers received none or only some of the water they needed while the problem was being fixed. Other problems not planned for were runoff and percolation, reasons why the lower part of Orchard Mesa “soon became a sheet of alkali.”<sup>13</sup>

There was never enough money to fix the problems with the system because of the debt incurred with its construction. Residents got together to work toward a reorganization of the system and enlisted the support of the private irrigation operators in the area and of Grand Junction’s business leaders. Residents eventually made a deal to pay off the debt owed to the investors. Of course, the investors did not want to lose

---

<sup>13</sup> Alice Wright, “Bringing the Water to Arid Orchard Mesa,” *Westworld*, October 31, 1976.

money, but there was no way around it. The bondholders finally agreed to a deal that paid them “ten cents on the dollar.”<sup>14</sup>



**Figure 25. OMID pump house, circa 1900.**<sup>15</sup>

After they raised the money for that, residents were ready to work with the Bureau of Reclamation to get their expertise and their financing for the project. They used “\$1 million from the Bureau’s appropriated budget, for which it was to be reimbursed from revenues.” Part of those revenues came from a power plant that the Bureau initially required OMID to put in east of Palisade (Figure 26). A portion of the energy the plant produces goes toward pushing the water into two different lifts that move the water into OMID’s two canals. OMID sold then and still sells the additional

---

<sup>14</sup> Alice Wright, “Bringing the Water to Arid Orchard Mesa,” *Westworld*, October 31, 1976.

<sup>15</sup> Photograph courtesy of Orchard Mesa Irrigation District.

energy and the profits go toward funding improvements to OMID. Indeed, the Bureau money helped OMID change the point of diversion, which solved the problem of the crumbling flume. Federal funds went toward lining the canals to mitigate and control salinity pollution, which remains a concern today, and toward constructing several lateral ditches to carry runoff water back to the river. When Wright wrote her article, OMID was still paying off the debt—the contract was originally for twenty years but the Great Depression, WWII, and the need for maintenance funds over the years (“Operating an irrigation system is a never [sic] ending expense.”) had lengthened the payoff time.<sup>16</sup> OMID paid off the last of the debts in 2012.<sup>17</sup>

OMID “has made possible a diverse agricultural economy, where favorable conditions allow growers to produce orchards, vineyards, vegetables, alfalfa and small grains.” Residents use the water OMID provides for various uses. The two main canals:

...convey water through turnouts to the fields and laterals, which are owned by private landowners. The district’s responsibility ends at the turnouts or lateral headgates [like Linda Lee’s] along the main canals, which can serve areas from less than 1 acre to over 100 acres. Most of the distribution system is open channel but as more housing developments have been built, and as agriculture irrigation converts to more drip/micro irrigation, some laterals have been converted to pipelines.<sup>18</sup>

Today, OMID operates with a “relatively old” infrastructure. Much of OMID relies on “technology and control structures” from the 1920s Bureau of Reclamation remodel. OMID has seen “only minimal improvements done to the main canal system, even though external pressures and operating conditions... have changed dramatically over

---

<sup>16</sup> Alice Wright, “Bringing the Water to Arid Orchard Mesa,” *Westworld*, October 31, 1976.

<sup>17</sup> Max Schmidt (General Manager, OMID), in discussion with the author, August 2012, September 2013.

<sup>18</sup> Burt, *Water Resources Conservation Plan for Orchard Mesa Irrigation District*, 1.

the years.”<sup>19</sup> OMID’s water manager, Max Schmidt (circa 2015), and his crew have an imperative role—to make the best use of the available technology not only to splay enough water for the needs of all of the users but also to conserve water for posterity—that includes a variety of duties.



**Figure 26. OMID pump house (on the right) and power plant (on the left).**

### **A Plan for Progress**

Max relocated to the Grand Valley from southwest Texas. He had farmed there and could no longer take the the Lone Star State’s water politics. Max’s farming experience and water knowledge framed him as a dynamic candidate for managing the

---

<sup>19</sup> Burt, *Water Resources Conservation Plan for Orchard Mesa Irrigation District*, 1.

OMID; his passion and foresight have helped the district and its users move in a new direction.<sup>20</sup>

For years now, OMID, like many other water management districts, has viewed conservation as the best means of making sure there is enough water to go around. In 2004, Greg Trainor, utilities manager of Grand Junction, said, “Conservation produces one of the most precious resources we have—time.” That same year, Rita Crampton, then manager of OMID, avowed, “We need to start educating the young because it needs to be something we don’t think about anymore. We just need to do it.”<sup>21</sup> Indeed it is a learning process. Officials believe there is enough water to supply conjunctive uses for 20-25 years but are concerned about the future. They want to manage demand rather than buy new rights or build new structures.<sup>22</sup> Water managers learned a lot from drought years, especially during the dry spells of 1954 and 1977. Irrigation districts started cooperating more to manage and conserve water although their water uses vary. They stay “in daily communication with the Bureau of Reclamation, the State Engineer, the Weather Service, and the Colorado River Water Conservation District to monitor Colorado River flows.” They watch “to insure [sic] that proper releases are being made from the upstream reservoirs and that the senior decrees are administered within the priority system.”<sup>23</sup>

In keeping with this, OMID, in particular its manager Max Schmidt, is looking carefully at a 2012 Water Resources Conservation Plan developed for OMID by the

---

<sup>20</sup> Max Schmidt (General Manager, OMID), in discussion with the author, August 2012, September 2013.

<sup>21</sup> Josh Nichols, “Importance of Conservation Will Increase,” *Grand Junction Free Press* (Colorado), July 21, 2004.

<sup>22</sup> Sally Spaulding, “Our Water: Handle with Care: Grand Valley Water Providers Already Preparing for Next Generation’s Needs,” *The Daily Sentinel* (Grand Junction, CO), July 10, 2005.

<sup>23</sup> *The Daily Sentinel* (Grand Junction, CO), “Grand Valley Drought & Water Conservation.”



Irrigation Training and Research Center at California Polytechnic State University. Max values this plan because, as developers continue to pave over agricultural land, it serves as a guide for what OMID needs to do to be able to adapt successfully for landscape change and water use demands.<sup>24</sup> The report avowed that the irrigation district “faces critical future challenges that the existing system is incapable of dealing with effectively” and purported that making the suggested changes will solve the system’s current insufficiencies and “put in place a more modern system that will benefit customers and help with regional hydrology needs into the next 50 years or longer.” The plan maintained that “water conservation can be achieved through a combination of physical infrastructure development, seepage reduction, and improved real-time information availability.”<sup>25</sup> A huge positive note about the proposed changes was that “there are no apparent adverse effects to any endangered, threatened, or migratory bird species, or to any cultural or historical resource[s]” to worry about.<sup>26</sup>

To Max, three processes are of the utmost importance for the ultimate objective of successful conservation—communication, cooperation, and knowing/understanding how the system works. Max believes that OMID and most of the residents are doing a good job on those. Over and above the fact that the Bureau of Reclamation requires it, Max likes having a conservation plan specific to OMID, a long-range plan for the future. He works hard to keep information like this updated so that he can use it as a public relations tool. Max especially likes having the board-approved plan because it outlines definite priorities, which are vital for the future of OMID and which his crew

---

<sup>24</sup> Max Schmidt (General Manager, OMID), in discussion with the author, August 2012, September 2013.

<sup>25</sup> Charles Burt, *Water Resources Conservation Plan for Orchard Mesa Irrigation District*, i.

<sup>26</sup> Charles Burt, *Water Resources Conservation Plan for Orchard Mesa Irrigation District*, 5.

can commence as funding becomes available. He has seen some tough times during his tenure: construction of a major project, a flood, and a drought. He agreed that the infrastructure is aging but it still works. According to Max, water is cheap and abundant most of the time, and many elements in the cultural landscape on OMID represent that fact—Midwestern-style lawns, pools, and, of course, a viable and successful agricultural industry. Max firmly stated that users are fortunate that OMID’s water is “tied to the ground,” and he hoped they appreciate that as much as he does. Furthermore, Grand Valley residents have water rights on the Colorado River that are senior to the 1922 Compact that officially allocated the water. Max said, “If there’s water in the river, we get it.”<sup>27</sup>

Max worries about a few things, however. In the 2012 drought, 75-percent of the water flows came from the reservoirs, like Green Mountain Reservoir, not from natural flows—and a lot of that water flow was piped via trans-mountain diversions to the east, leaving all of the state’s reservoirs at below average levels. Max said that they were okay in 2012, but he recalled a day in July when someone just mentioned drought and many urban residents went home, turned on their pumps, and used up too much water.<sup>28</sup> The average water right for urban users is eight gallons per minute per acre, and those home water pumps that water lawns can use that up quickly. Max explained that serving urban areas on a canal system is extremely difficult and time consuming. Too many people use water at the same time and thus many suffer the effects when there is a problem on the system, causing Max and his crew to have to provide service to many people needing service at the same time. Indeed, during the three times I interviewed

---

<sup>27</sup> Max Schmidt (General Manager, OMID), in discussion with the author, August 2012, September 2013.

<sup>28</sup> Schmidt, in Panel on Drought and Agriculture, December 3, 2012.

Max, the phone in his office rang constantly; nearly every time he returned to the table to continue the interview he would say it was an urban issue. He informed me, “Most of the growers typically fix problems on the system themselves, unless it’s a major issue.” Max believes that having the long-range plan for the district may help deal with urban growth; he hopes so, given the irrigation district’s older operational infrastructure.<sup>29</sup> A 25-year comprehensive plan is in the works for the “Orchard Mesa neighborhoods” that anticipates a doubling in population. A stated goal of that plan is to channel “growth inward, thereby preserving as much agricultural land as possible near the edge of the community.”<sup>30</sup>

Max expressed other fears. As he explained it, “Water flows toward money and votes!”<sup>31</sup> On September 26, 2013, Denver Water, Western Slope water providers, and several other local governments signed the Colorado River Cooperative Agreement. Max described it as Denver’s agreement to “pay for the sins of the past and promise not to do it again.” He said it will check what Denver can do. But, at the same time, Max has to ask, where else can Denver go for water? Those senior water rights the Western Slope has now could always be legislated away. The “buying and drying” that is going on—buying agricultural land and turning the water rights it had into urban use—is the biggest danger. Max argues that “all water is not created equal,” that the higher the mountain, the better the water, and that sometimes they do not always get good water for good water. He notes that oil development is not currently such a “big threat, but we

---

<sup>29</sup> Max Schmidt (General Manager, OMID), in discussion with the author, August 2012, September 2013.

<sup>30</sup> City of Grand Junction, Colorado, Planning—Long Range Planning, “Orchard Mesa Plan,” <http://www.gjcity.org/OrchardMesaAreaPlan.aspx> (last accessed January 11, 2014).

<sup>31</sup> Max Schmidt (General Manager, OMID), in discussion with the author, August 2012, September 2013; Schmidt, in Panel on Drought and Agriculture, December 3, 2012.

will definitely need to watch it in the near future.” He explained that agriculture is “our life’s blood,” so OMID and other irrigation districts have full-time attorneys watching changes taking place.<sup>32</sup> But water managers can extend their hands into water management only so far, as ultimately the use of available water rests with the individual.



**Figure 27. An orchard watered by gated pipe and furrows.**

### **Transitioning Cultural Landscapes of Water Conveyance**

When Max talked about declining infrastructure, he was referring to his end of the canal operation. However, some farmers, the ones who seek a guaranteed source of

---

<sup>32</sup> Schmidt, in Panel on Drought and Agriculture, December 3, 2012.

water from that aging infrastructure to support their way of life, are also dealing with antiquated or inefficient irrigation technologies. Some 21<sup>st</sup> century Orchard Mesa agricultural landscapes still exhibit and use historic forms of surface irrigation systems, such as earthen furrows combined with siphon tubes or gated pipes, to channel the water on their orchards, vineyards, and field crops (Figure 27). This form of watering is not as efficient as newer more techno-savvy irrigation systems. As Rob Talbott, a cousin of Harry Talbott, put it, “If everyone’s on furrow irrigation, everyone won’t get water” with today’s conjunctive use water demands.<sup>33</sup> To improve the efficiency of water use and conveyance and the sustainability of farming in general, many farmers here have progressed to localized (drip/micro) irrigation. Although federal and state tax incentives exist for upgrading and replacing a less-efficient watering system with a more efficient one, the decision to convert is strictly a personal one, whether that is for conservation or economic reasons.

The combination of rapidly changing technologies, the support of the federal government, and the sentiment growers have for preserving their way of life aided in the process of significant cultural landscape change in the upper portion of the Grand Valley. When I asked several local growers why they decided to switch water conveyance techniques, I received various similar answers that I can boil down to five primary reasons for the remaking of the agricultural landscape on OMID. Of course, individual farmers added their own twists to the stories of change. First, most farmers wanted a more efficient system that would conserve water and that would apply fertilizers, pesticides, and insecticides more effectively all the while increasing their

---

<sup>33</sup> Rob Talbott (owner, C&R Farms), in discussion with the author, September 2013.

crop yields.<sup>34</sup> Second, growers were looking for ways to attenuate the negative geographical consequences, such as alkalinity and other soil quality problems, which arose on their acreages because of the overextension of water resources.<sup>35</sup> Third, furrow irrigation is simply hard on the bodies of those who have to use and maintain it.<sup>36</sup> Fourth, they wanted a water system that saved them time and thus made it easier to get the perishable fruit out of the valley and into the market in a timelier manner.<sup>37</sup> Finally, and most importantly, nearly every grower I talked to said that these new technologies and government programs provide them with the tools and resources needed to simply keep doing the farming and ranching they love and to keep what they have to pass on to their kids in the future—a perfect example of the integrative power Wescoat was looking at to explain landscape change.

I examined the story of change primarily through the lens of one particular family's experiences with these new technologies. I found the story of C&R Farms representative of the stories of other farming families I talked to in the region. In the late 1970s, Rob Talbott purchased his family's first piece of agricultural land on Orchard Mesa and began operating under the business name C&R Farms. Pleased with the peach industry, over the next several years, Rob and his family purchased 12 additional parcels on Orchard Mesa and began growing more premium peaches and

---

<sup>34</sup> Rob Talbott (owner, C&R Farms), in discussion with the author, September 2013; Bruce Talbott (orchard and vineyard manager, owner, Talbott Farms), in discussion with the author, August 2012, September 2013; Harry Talbott (owner, retired, Talbott Farms), in discussion with the author, August 2012, September 2012, September 2013.

<sup>35</sup> Rob Talbott (owner, C&R Farms), in discussion with the author, September 2013.

<sup>36</sup> Bruce Talbott (orchard and vineyard manager, owner, Talbott Farms), in discussion with the author, September 2013.

<sup>37</sup> Rob Talbott (owner, C&R Farms), in discussion with the author, September 2013; Bruce Talbott (orchard and vineyard manager, owner, Talbott Farms), in discussion with the author, August 2012, September 2013.

other fruits, like pears and apples. In 1985, the Talbotts purchased C&R property #2 (C&R #2).<sup>38</sup>

C&R #2 has a bit of history. The property was originally in peaches, the now-almost-gone Elberta varietal in particular, but the freeze of 1964 wiped out the trees. Those previous owners replaced the Elbertas with corn. The topography of the land, however, proved too flat to get water through the corn from the top end of the field to the bottom end. When the Talbotts bought C&R #2, they replaced the corn with peach trees. Rob ran into the same problem: the peach trees at the bottom end would not receive enough water and, thus, would not produce a good yield. The Talbotts had to use more of their water share for their bottom-end crop, saturating the peach trees on the top of the field. Rob's son Donovan contacted the NRCS, formerly known as the US Soil and Conservation Service, to gather advice about options for applying water more efficiently.<sup>39</sup>

The NRCS had actually begun working on the Grand Valley Salinity Control Project (GVSCP) in 1979, as part of the larger 1974 Colorado River Basin Salinity Control Act that approved funds for improving irrigation networks and preserving agricultural land in Colorado, Wyoming, Utah, and Nevada. The bill also allowed the government to conduct planning studies to mitigate salinity problems in Arizona, California, and New Mexico. In Colorado, the GVSCP was the first of five federal programs to reduce salt loading in the Colorado River. Part of that program included providing farmers in the area support for reducing salinity levels on their acreages by helping them replace inefficient water conveying technologies with more efficient

---

<sup>38</sup> Rob Talbott (owner, C&R Farms), in discussion with the author, September 2013.

<sup>39</sup> Rob Talbott (owner, C&R Farms), in discussion with the author, September 2013.

irrigation systems and helping irrigation districts line and pipe their canals and lateral systems.<sup>40</sup>

Rob and Donovan were among the first growers on OMID to replace their furrow irrigation system with a micro-jet irrigation system under the NRCS's cost share grant program. Cost share meant that about half of the cost would be reimbursed by the federal government. For some farmers, this covered the cost of the supplies needed to convert the field over while other growers used the money for the labor side of installing the system.<sup>41</sup> Traces of the old system on C&R #2 are still visible on the landscape. The cement ditch that parallels F Road is now filled with dirt, giving way to the more technologically sophisticated system that sits on the east side of the field. PVC pipe, an electrical panel, quarter-turn valves, filters, and tanks of fertilizer and pesticides are apparent on C&R #2 from F Road (Figure 28). In the field, localized sprinkler heads—the Talbotts prefer the Olson brand that a man from Utah developed—strung along with a black hose at the base of each row of trees convey water more efficiently and effectively than previous modes of watering. Rob commented that many growers in the valley were skeptical and that few farmers thought micro-irrigation would work. Much to their surprise, the localized irrigation system greatly improved C&R #2, owing

---

<sup>40</sup> Bruce Talbott (orchard and vineyard manager, owner, Talbott Farms), in discussion with the author, August 2012, September 2013; USDA, "NRCS Colorado Grand Valley Salinity Information," Natural Resources Conservation Service, [http://www.nrcs.usda.gov/wps/portal/nrcs/detail/co/programs/?cid=nrcs144p2\\_062764](http://www.nrcs.usda.gov/wps/portal/nrcs/detail/co/programs/?cid=nrcs144p2_062764) (accessed December 3, 2013).

<sup>41</sup> Rob Talbott (owner, C&R Farms), in discussion with the author, September 2013; Anita Hix (owner, Anita's Pantry and Produce), in discussion with the author, September 2013.



to the control and consistency the new technology offered. Several other growers began applying to take part in NRCS's cost share program.<sup>42</sup>

The Talbotts soon realized several other benefits resulting from C&R #2's switch to a new system of watering and began improving the irrigation networks on all of their acreage. One big issue with furrow irrigation is soil erosion. Every year farmers had to disk the land, cutting deeper into the earth each time.<sup>43</sup> The water channeled in the furrow would carry a portion of the topsoil with it, depositing it into drainage ditches, the river, or into Orchard Mesa Canal #1. Because they leveled the land for installation of the micro-jet irrigation system, the Talbotts could now plant a ground cover crop in between rows of trees. They chose alfalfa, which helps sustain the moisture in the ground applied by the micro-jets, particularly in drought conditions, permitting the Talbotts to water their peaches less frequently or for shorter sets, depending on weather conditions. According to Rob, alfalfa's deep root system also improves the soil condition because it prevents soil compaction and allows for better aeration, producing more oxygen and nitrogen naturally without having to use added fertilizers to get the same result. The combination of the micro-jet system and the ground cover crop has also greatly improved the alkalinity levels on their acreage. Rob explained that, to reduce salinity in the fields further and to prevent excess levels from salt loading the rivers and canals, at the end of every growing season, just before OMID turns off the water for the winter, they water continuously for about 48 hours. That long

---

<sup>42</sup> Rob Talbott (owner, C&R Farms), in discussion with the author, September 2013; Bruce Talbott (orchard and vineyard manager, owner, Talbott Farms), in discussion with the author, August 2012, September 2013.

<sup>43</sup> Rob Talbott (owner, C&R Farms), in discussion with the author, September 2013; Bruce Talbott (orchard and vineyard manager, owner, Talbott Farms), in discussion with the author, August 2012, September 2013; Harry Talbott (owner, retired, Talbott Farms), in discussion with the author, August 2012, September 2012, September 2013.

watering schedule saturates the ground and pushes the alkali below the root system, leading to a healthier crop the next year. When farmers fail to do end-of-year watering correctly, the peach trees typically have yellowish hues to their leaves, an indication that the alkaline level in the soil is too high.<sup>44</sup>



**Figure 28. C&R #2 micro-jet irrigation system.**

With the furrow-free land, the Talbotts also revised the way they did end-of-season pruning. When the Talbotts had furrow irrigation, they and their field crews pruned the trees and took the debris down by the river to burn it. Now, they prune the trees and leave most of the debris on the floor. They use a flail chopper to pulverize the limbs, and they burn some of the remains in the field, leaving the ash for its soil

---

<sup>44</sup> Rob Talbott (owner, C&R Farms), in discussion with the author, September 2013.

nutrients. Today, farmers can place peach trees closer together and thus plant more trees per acre, which, of course, results in greater quantities of tree debris. The flail chopper cannot break down all of the debris, so the Talbotts still have to burn some remnants. Nevertheless, Rob believes that the new technology his farm is using has greatly enabled him to reduce the air pollution the burning creates. According to Rob, implementation of micro-jet irrigation combined with the planting of ground cover and the use of the flail chopper has added about two inches of solid organic material to C&R #2.<sup>45</sup>

Rob also thinks that the employment of micro-jet irrigation greatly improved the overall working aspects of the agricultural landscape. Once the Talbotts leveled their furrows, tractor work in between the trees became much easier. Instead of disking, all the Talbotts have to do is mow the ground cover. The Talbotts cannot bale the alfalfa for use as animal fodder because of the fertilizers and pesticides they currently utilize in the fruit production on their acreage. Rob stated more expensive fertilizers and pesticides are available that would permit such use, but he admitted that so far there was not much motivation to make the switch. In addition, the even-surfaced land makes it easier for C&R Farms to get their product out of the field and into the market quicker. Pickers can pull the fruit more quickly now because they are not worried about toppling over on their orchard ladders (Figure 29).<sup>46</sup>

The Talbott's C&R #2 sprinkler system that parallels F Road is not an unusual feature on OMID's agricultural landscapes. In fact, such systems are the norm. Only slight variations exist. Where electricity is not present, growers equip their irrigation

---

<sup>45</sup> Rob Talbott (owner, C&R Farms), in discussion with the author, September 2013.

<sup>46</sup> Rob Talbott (owner, C&R Farms), in discussion with the author, September 2013.

systems with gas generators; others use solar panels, which qualify for certain energy efficient tax rebates and federal and state cost share programs.<sup>47</sup> Most acreages that have localized irrigation units have efficient filters on them to get rid of impurities in the water; some of those filters come from Israel, the world's leader in arid-environment water technology.<sup>48</sup> Some filtration systems are in plain sight, while others are in old sheds or newer storage facilities. When the Colorado River is soupy and muddy from spring runoff and monsoonal rains, these filters help get rid of the mire that can choke hoses and sprinklers.<sup>49</sup>



**Figure 29. Laborers can work efficiently on a flat surface.**

---

<sup>47</sup> Bruce Talbott (orchard and vineyard manager, owner, Talbott Farms), in discussion with the author, August 2012, September 2013.

<sup>48</sup> Harry Talbott (owner, retired, Talbott Farms), in discussion with the author, September 2013.

<sup>49</sup> Harry Talbott (owner, retired, Talbott Farms), in discussion with the author, August 2012, September 2012, September 2013.

Despite the advantages of micro-jet irrigation, there are some drawbacks. The irrigator now has to manage each sprinkler head carefully, instead of managing each furrow. Irrigating crew members carry replacement sprinkler heads and often just use paperclips to remove excess mud, wasp nests, and spider eggs.<sup>50</sup> Filtration systems that clog from river debris can result in burned-up pumps. Though the growers like the consistency of micro-jet irrigation, they do have to be technologically savvy, keep a watchful eye on their equipment and on multiple watering schedules for multiple fields, and be judicious in establishing watering zones and times.<sup>51</sup> Overall, the micro-jet technologies have made more acreage sustainable for farming, helping preserve agricultural land.<sup>52</sup>

In September 2012, the NRCS ended the GVSCP, the first official closure of a salinity control project in the US. The original goal of the program was to improve irrigation on 60,000 acres; but, by 2010, the NRCS realized there were only 47,600 acres of irrigated cropland left in the Grand Valley. The NRCS helped improve irrigation systems on almost 42,000 acres—at a price tag of nearly \$40 million. The majority of the individual fields the NRCS serviced via the GVSCP were five acres or less. In addition, part of the GVSCP included plans to enhance over 1,200 acres of wildlife habitat; during the 30-plus years the program ran, the NRCS restored and/or enhanced over 750 acres. Today, growers in the Grand Valley can still apply for cost share funds via the Environmental Quality Incentives Program established by the 2002

---

<sup>50</sup> Rob Talbott (owner, C&R Farms), in discussion with the author, September 2013; Bruce Talbott (orchard and vineyard manager, owner, Talbott Farms), in discussion with the author, August 2012, September 2013.

<sup>51</sup> Bruce Talbott (orchard and vineyard manager, owner, Talbott Farms), in discussion with the author, August 2012, September 2013; Harry Talbott (owner, retired, Talbott Farms), in discussion with the author, August 2012, September 2012, September 2013.

<sup>52</sup> Rob Talbott (owner, C&R Farms), in discussion with the author, September 2013.

and 2008 Farm Bills, but that program puts them in competition with applicants from throughout the US.<sup>53</sup> Nevertheless, the NRCS and its programs to improve the efficiency of irrigation have been key components of preserving this special place; and farmers and ranchers, like the Talbotts, have taken advantage of them as they seek to preserve their way of life.

Indeed, implementing these new technologies is expensive. The programs of the Bureau of Reclamation and of the NRCS helped shape and greatly aided in sustaining the agricultural life way for farming families. While institutions can set the stage for progress, a person has to be willing to adapt, too, especially when taking action is not cheap. Sustaining the American West and its water, however, depends on the integrative power of those who live in this region.

Fruit growers in Colorado's Grand Valley, particularly on OMID, recognize the region as being "super special."<sup>54</sup> They also seek to keep it that way. Orchard owner Priscilla Walker said it best: "You can grow houses anywhere, but you can't grow Palisade fruit anywhere but Palisade."<sup>55</sup> The efficient use of water is, of course, vital to having a fruit industry that is viable and successful, particularly so, however, in a present day where urban uses and service industries are paving over land and taking the

---

<sup>53</sup> Max Schmidt (General Manager, OMID), in discussion with the author, September 2012, September 2013; Bruce Talbott (orchard and vineyard manager, owner, Talbott Farms), in discussion with the author, August 2012, September 2013; Harry Talbott (owner, retired, Talbott Farms), in discussion with the author, August 2012, September 2012, September 2013.

<sup>54</sup> James Sanders (first generation fruit grower, Peach Shack owner), in discussion with the author, September 2013; Steve Acquafresca (Mesa County Commissioner, 2007-15), in discussion with the author, September 2013; Max Schmidt (General Manager, OMID), in discussion with the author, September 2012, September 2013; Bruce Talbott (orchard and vineyard manager, owner, Talbott Farms), in discussion with the author, August 2012, September 2013; Harry Talbott (owner, retired, Talbott Farms), in discussion with the author, August 2012, September 2012, September 2013; Robert Bleiberg (Executive Director, Mesa Land Trust), in discussion with the author, September 2012, September 2013; Ilana Moir (Land Protection Specialist, Mesa Land Trust), in discussion with the author, September 2013.

<sup>55</sup> Priscilla Walker (orchard owner, President, Walker Innovations, Inc.; Chair, Palisade Historical Society), in discussion with the author, August 2012, September 2012, September 2013.

water rights from it. The development of technologies that make water conveyance more effective are making it easier for farmers to conserve water and preserve agricultural land for future generations. The use of land trusts and conservation easements add to their efforts

## Chapter 8: “Fruitlands Forever:” Mesa Land Trust and the Preservation of Agriculture

*James Sanders is in his mid-thirties. He and his wife, Laura, have a young daughter, Haven. James has lived in Colorado’s Grand Valley since he was nine years old. He used to work in the oilfields near Parachute, a town about twenty minutes northeast of Grand Junction. One evening on his way home from the oil patch, James was in Palisade, stopped by a halted train. While sitting at the tracks, he saw an advertisement touting a farm for sale by Fruit and Wine Realty—a realty company in Palisade that tries to sell a sense of place in the area by advertising with pithy lines such as “Drive your tractor to work.” James visited the realty office, and when he returned home, he told his wife about his “latest” crazy idea: to buy an orchard and become peach farmers. A few months later, the paperwork was in, and James and his family became first-generation peach farmers with a 14-acre orchard.*

*At first, James and his wife kept their full-time jobs and moved into their friend’s basement because, as James explains it, “we were up to our eyeballs in debt.” James admitted that he had thought peach farming would be something easy, but he and his wife quickly learned it was hard work. James reached out to local growers, particularly the Talbott family, and to the local Colorado State University extension for assistance that first year. With the community behind them, James and Laura not only had a successful first season, they had a bumper crop that James’ wife worked to sell in the nearby farmers’ market. In addition, they drove to Denver with a “Honk for Peaches!” sign in their window, pulling over on the side of I-70 to sell bushels of fruit.*

*In 2012, the Sanders family was looking for new avenues to expand their business and to eradicate some of their debt. As such, they turned to Mesa Land Trust (MLT) to learn about their options. MLT came to an agreement with the family on a conservation easement for 13.5 acres of their initial farm purchase, reserving half-an-acre of the property in the easement for their home. The benefits from the easement settlement took the balance of the debt on their \$500,000 purchase to about \$300,000 and provided them with extra funds to purchase more fruitland to expand their business. In particular, they purchased another 19 acres already in a MLT conservation easement. James believes buying land with easements is the only way a first generation farmer can afford to grow in the business—in his case it took a \$1 million property and cut its purchase price in half.*

*Today, the Sanders family farms about 42 acres, which are not adjacent to one another, just west of the town of Palisade—32 of which they own and 10 they lease from another landowner. Peach farming “quickly turned into our passion... We named our daughter, Haven, after one of our favorite peach varieties,” James said. “Agriculture in the Palisade area is super special, and we want to see this part of the valley remain the land of milk and honey,” added James. And for this Grand Valley family, land conservation is at the center of their hearts, as their 32 acres are fruitlands forever.<sup>1</sup>*

---

<sup>1</sup> James Sanders (fruit grower, Peach Shack owner), in discussion with the author, September 2013.



## Introduction

The cover of the 2012-2013 annual report of MLT features a full-page photo of the Sanders family. Inside the report is a story about them and how they came to be peach growers. My opening story about them illustrates several themes. In particular, we learn of a young family that discovered a deep interest in farming and developed a strong desire to preserve the heritage, the land, and that way of life. Second, they sought out and appreciated the support and advice their neighbors provided them. And most importantly, they attribute much of their success to the advantages of conservation easements and land trusts.

Agricultural land in the American West still provides much of the nation with the fresh fruits and vegetables we put on our plates—despite urban development in the US since World War II that has greatly altered the landscape, the family farming occupation, and the production of crops.<sup>2</sup> For years now, farm owners have faced sometimes-hard-to-resist pressure to sell their land for premium prices to developers who want to come in and change the land use—changes that nowadays are often in line with community and county comprehensive plans. Necessarily then, preserving the remaining farmland and even reclaiming some of it that has been lost over the past fifty years is a challenge.<sup>3</sup> Farmland preservation is a big-picture concept: it not only preserves open space for growing food but it also provides wildlife habitat, generates

---

<sup>2</sup> John B. Wright, *Montana Places: Exploring Big Sky Country* (Mesilla: New Mexico Geographical Society, 2000), 96-98; Rebecca Rice-Osterhoudt, “Farmland Preservation in Vermont and the Creative Use of Land Trusts,” *Vermont Law Review* 11, no. 2 (1986): 603; Ian D. Hodge and William M. Adams, “Neoliberalisation, Rural Land Trusts and Institutional Blending,” *Geoforum* 43, no. 3 (2012): 480.

<sup>3</sup> Richard Brewer, *Conservancy: The Land Trust Movement in America* (Lebanon, NH: University Press of New England, 2003), 229-230; Jeffrey G. Buckland, “The History and Use of Purchase of Development Rights in the United States,” *Landscape and Urban Planning* 14 (1987): 244.

employment opportunities, and, in some cases, shapes a tourism destination, as it has in Colorado's Grand Valley.<sup>4</sup>

During the 1980s, Wallace Stegner wrote about the urban growth occurring in the Silicon Valley, growth that included extensive encroachment onto farmlands. He noted that there appeared to be no interest among the computer and technology conglomerates in talking to farmers in the region to determine ways the two opposing worlds might work together to preserve the utilitarian landscapes and lifeways in what was once the "fruit bowl of the world."<sup>5</sup> Stegner wrote:

Habits persist. The hard, aggressive, single-minded energy that according to politicians made America great is demonstrated every day in resource raids and leveraged takeovers by entrepreneurs; and along with that competitive individualism and ruthlessness goes a rejection of any controlling past or tradition.<sup>6</sup>

Stegner found Western sentiment in the region at the time to be "what matters is here, now, the seizable opportunity," which he illustrated with a statement from a Silicon Valley executive: "We don't need any history... What we need is more attention to our computers and the moves of the competition."<sup>7</sup> Farmers, however, use that technology and compete in markets, too.

Just as settlers rushed to claim land in the West on the promise and hope that there was plenty of land for everyone, urban developers work with an analogous promise and hope in their own version of a land run.<sup>8</sup> But farmers have persistent habits

---

<sup>4</sup> Rebecca Rice-Osterhoudt, "Farmland Preservation in Vermont and the Creative Use of Land Trusts," 603.

<sup>5</sup> Wallace Stegner, *The American West as Living Space* (Ann Arbor: The University of Michigan Press, 1987), 75.

<sup>6</sup> Stegner, *The American West as Living Space*, 75.

<sup>7</sup> Stegner, *The American West as Living Space*, 75-76.

<sup>8</sup> William Travis, *New Geographies of the American West: Land Use and Changing Patterns of Place* (Washington, D.C.: Island Press, 2007), 18; Hyde, "The Significance of Perception in the History of the American West," 373-374.

too—and their own thoughts about what needs attention and their own opportunities to pursue. In the upper Grand Valley, farmers and landowners like the Sanders family have resisted the pressure to sell and have taken hold of a movement toward an alternative form of “progress”—one that preserves a way of life and a bucolic scene for the long term rather than one that offers immediate profits.

Colorado’s Grand Valley has experienced rapid urban development, and Mesa County is one of the fastest-growing counties in the state. Agriculture, however, remains viable and is growing as an industry here, especially in the upper Grand Valley. Continuing to preserve the working agricultural landscapes in this region is an ongoing cooperative process of building on the successes and failures of the past and discerning and paying close and prudent attention to needs for the future. Agricultural landscapes in the Upper Valley represent a palimpsest for us to explore how landowners in that region preserve their agricultural scenes in the face of ongoing population growth and the kind of modern thinking about which Stegner wrote.

The scale of farming operations in Colorado’s Grand Valley is quite different from that of California’s San Joaquin Valley or Napa Valley. Colorado’s valley has smaller acreages, and its farms are managed primarily by families, not by corporations. As such, community-building in the Grand Valley has been and remains vital. Author Raye Ringholz argued, “Maintaining a sense of community is a key issue in western towns, whether they are experiencing too much growth or suffering from too little.”<sup>9</sup> Biologist Richard Brewer stressed that where land trusts are working there is at least

---

<sup>9</sup> Raye C. Ringholz, *Paradise Paved: The Challenge of Growth in the New West* (Salt Lake City: University of Utah Press, 1996), 157.

one group with a strong sense of community.<sup>10</sup> Robert Bleiberg, Executive Director of MLT, noted there is “great power in bringing folks together around the vision of preserving this for the future.” He said that the “community has really rallied around that” because “they see this as something worth preserving.”<sup>11</sup> The Sanders family quickly became part of a community in the upper Grand Valley and that has been important to their success and a component of what nurtures their desire to stay and to grow.

In this chapter, I describe conservation easements, which are tools for protecting the land, and the diligence of MLT, formed 30 years ago by three farming families in Mesa County to underwrite and manage the easements. I draw attention to the sentiments of farmers, like James Sanders, and residents in the Grand Valley communities who drive these land protection endeavors. This story is about the love of the land and sheds light on the permanence of agriculture in this region.

### **Conservation Easements and Land Trusts**

A conservation easement is a legal agreement between a landowner and a private or non-profit land trust or “other qualified group that permanently protects the conservation values” of the landowner and his/her property by “limiting or restricting future development.”<sup>12</sup> As architect Anthony Anella and cultural geographer John Wright wrote emphatically, “Now, in plain English: A conservation easement is a family decision to save your ranch [or farm] and leave a legacy of good land.”<sup>13</sup> Anella

---

<sup>10</sup> Brewer, *Conservancy*, 56.

<sup>11</sup> “HCT Mesa Land Trust,” <http://youtu.be/pmSoai4HI-k> (last accessed September 30, 2014).

<sup>12</sup> John B. Wright, “Land Trusts in the USA,” *Land Use Policy* 9, no. 2 (1992): 83; Anthony Anella and John B. Wright, *Saving the Ranch: Conservation Easement Design in the American West* (Washington, D.C.: Island Press, 2004), 7.

<sup>13</sup> Anella and Wright, *Saving the Ranch*, 15.

and Wright also offered a succinct definition of a land trust: a “non-profit conservation organization that uses voluntary methods to produce open landscapes... They are a grass roots expression of people’s dedication to protect ranches, farms, and other undeveloped lands.”<sup>14</sup> Brewer called local land trusts “the most trustworthy repositories of preserved land,” stressing that open land is invaluable, that we are losing it too fast, that we need to do something, and that land trusts are something good to do.<sup>15</sup> In 2007, geographer William Travis stated that non-governmental land protection organizations like land trusts are “the most striking and important innovation in open space and habitat conservation in decades.”<sup>16</sup>

Literature on conservation easements and land trusts on agricultural land in America focuses on several themes, including the benefits of the perpetuation of open space, laws, economic/taxation benefits, “how to” guides, and place attachment. But what is of primary importance is that the two work together to preserve farmland. As evidenced by the body of work of others, these themes offer valid frameworks for essays about these subjects. Concentrating on just one research thread, however, may not emphasize well enough how farmers and ranchers, land, and land trusts coalesce to accomplish a common goal. The dovetailing of all these elements is where we begin to understand the shaping of the cultural geography of conservation easements and land trusts. Few geographers, however, have written about the affects and effects of preserving agricultural land through land trusts and conservation easements and the significance of these dynamic and dynamically preserved cultural landscapes—despite the fact that these institutions and signed agreements deal quite specifically with the

---

<sup>14</sup> Anella and Wright, *Saving the Ranch*, 17.

<sup>15</sup> Brewer, *Conservancy*, 80, 139.

<sup>16</sup> Travis, *New Geographies of the American West*, 228.

personality of place. These research threads interrelate and help lay a foundation for exploring empirically the cultural and geographical contributions of the “why” of conservation easements and land trusts so that we can better understand the personality of place and the persistence of agriculture in Colorado’s upper Grand Valley.<sup>17</sup>

### *Why Conservation Easements and Land Trusts?*

Needs for affordable housing, the presence of abundant natural resources still in the ground, and a desire to compete in a global market impel development in the West. Furthermore, arguments for pushing development into prime agricultural land rest on the ideas that “modern” agriculture leads to degradation of the environment through chemicals, excessive water use, and soil erosion and that population growth, subdivision development, and resource extraction are symbols of progress.<sup>18</sup> Additionally, development has led many farmers and ranchers to sell their acreages for high prices, as some landholders see that transaction as an avenue for a comfortable retirement.<sup>19</sup> Too often, buyers often transform the land into ranchette subdivisions, with homes sitting isolated on large lots.<sup>20</sup> This fragmentation of farmland makes it more difficult for the

---

<sup>17</sup> Craig E. Colten, “Landscape and Place in the *Geographical Review*,” *Geographical Review* 100, no. 1 (2010): 3.

<sup>18</sup> Carol A. Ferguson and M. Akram Khan, “Protecting Farmland Near Cities: Trade-offs with Affordable Housing in Hawaii,” *Land Use Policy* 9, no. 4 (1992): 259-260; Nadine Turpin and others, “Shaping the Landscape: Agricultural Policies and Local Biodiversity Schemes,” *Land Use Policy* 26, no. 2 (2009): 273; J. Matthew Shumway and Richard H. Jackson, “Place Making, Hazardous Waste, and the Development of Tooele County, Utah,” *The Geographical Review* 98, no. 4 (2008): 433.

<sup>19</sup> John B. Wright, *Montana Ghost Dance: Essays on Land and Life* (Austin: University of Texas Press, 1998), 7-10; Jeremy Bryson and William Wyckoff, “Rural Gentrification and Nature in the Old and New Wests,” *Journal of Cultural Geography* 27, no. 1 (2010): 53-57, 60; Peter Walker and Louise Fortmann, “Whose Landscape? A Political Ecology of the ‘Exurban’ Sierra,” *Cultural Geographies* 10, no. 4 (2003): 472.

<sup>20</sup> Travis, *Geographies of the New West*, 164; John B. Wright and Rhonda Skaggs, “Purchase of Development Rights and Conservation Easements: Frequently Asked Questions,” *Technical Report 34* (Las Cruces: New Mexico State University College of Agriculture and Home Economics, Reprinted 2002), 1.

farmers who still farm in the area by undermining their ongoing operations.<sup>21</sup> Furthermore, geographers John Harner and Bradley Benz emphasized the “cumulative effect” of all of these “private decisions to develop the rural landscape [that] eventually damages the overall public good and social benefits.”<sup>22</sup> Before the Great Economic Recession of 2008-2009, Colorado lost 250 acres of farmland each day or about 135 square miles per year to some sort of development.<sup>23</sup> In the Grand Valley, in a similar time frame, about 250 acres, or about half a mile, of irrigated or open land was developed per year.<sup>24</sup> Owing to a slow economic recovery and to the work of land trusts, the rate of loss has slowed quite a bit, but the projected doubling of the Front Range’s population by 2050 means development will have to occur, and where else but primarily on open space acreage.

Land trusts and conservation easements have become more popular avenues for land preservation in the US, a growth arising from the failures of federal, state, and local governments’ land conservation efforts. As Brewer described it, the government “is not always a steadfast partner” when it comes to land conservation.<sup>25</sup> Wright argued that land conservation advocates, including many agricultural landowners, turned and continue to turn towards easements and forming organized land trusts because regulatory planning and institutional controls like zoning and comprehensive plans

---

<sup>21</sup> Elizabeth Brabec and Chip Smith, “Agricultural Land Fragmentation: The Spatial Effects of Three Land Protection Strategies in the Eastern United States,” *Landscape and Urban Planning* 58, no. 2-4 (2002): 255-256.

<sup>22</sup> John Harner and Bradley Benz, “The Growth of Ranchettes in La Plata County, Colorado, 1988-2008,” *The Professional Geographer* 65 no. 2 (2013): 332.

<sup>23</sup> William Shutkin, foreword to Travis, *New Geographies of the American West*, viii.

<sup>24</sup> I derived this number from analyzing the USDA’s cropland datasets. This number is not exact, but an estimate that illustrates the present condition given the data I had to work with.

<sup>25</sup> Cynthia J. Nickerson and Lori Lynch, “The Effect of Farmland Preservation Programs on Farmland Prices,” *American Journal of Agricultural Economics* 83, no. 2 (2001): 341; Richard Brewer, “Conservation Easements and Perpetuity: Till Legislation Do Us Part,” *Law and Contemporary Problems* 74, no. 4 (2011): 141, 147, 278.

failed and still fail to protect agriculture land and utilitarian-based livelihoods.<sup>26</sup> Indeed, many researchers find that land trusts and their conservation easements are purposeful actions among landowners and that the land-saving organizations that accomplish much without much ado.<sup>27</sup> There are some researchers, however, who obfuscate the primarily voluntary nature of conservation easements and land trusts by linking them to the nuances of regulatory land use planning.<sup>28</sup> Land use, zoning, and regulatory planning delineate the ways places can or should be developed; thus, regulatory planning is a control and reasons for how a place should look often come from what some regard as a conspiracy-based political and economic rhetoric.<sup>29</sup> An approach such as placing land in a conservation easement, however, does allow the landowner to consult a land-saving entity and to make an informed decision on how and if the land should be developed.<sup>30</sup>

Land trusts originated in the US in the early 1890s in the New England states and the movement spread during the next 50 years throughout the eastern US.<sup>31</sup> Then, the land trust movement accelerated and diffused owing to the rapidity of development on open space and agricultural land and to increasing interest in protecting the environment.<sup>32</sup> Brewer positioned the rise of interest in land trusts and conservation easements in the 1960s as one of the responses to Rachel Carson's 1962 work *Silent*

---

<sup>26</sup> John Wright, review of *Conservancy: The Land Trust Movement in America*, by Richard Brewer, *Geographical Review* 95, no. 4 (2005): 607.

<sup>27</sup> Wright, *Rocky Mountain Divide*, 13-14; Peter Walker, "How the West Was One: American Environmentalists, Farmers and Ranchers Learn to Say 'Howdy, Partner,'" *Outlook on Agriculture* 35, no. 2 (2006): 129, 133.

<sup>28</sup> Jean-David Gerber and Adena R. Rissman, "Land-Conservation Strategies: The Dynamic Relationship between Acquisition and Land-Use Planning," *Environment and Planning A* 44, no. 8 (2012): 1837.

<sup>29</sup> Patrick T. Hurley and Peter A. Walker, "Whose Vision? Conspiracy Theory and Land-Use Planning in Nevada County, California," *Environmental Planning A* 36, no. 9 (2004): 1531; Peter A. Walker and Patrick T. Hurley, "Collaboration Derailed: The Politics of 'Community-Based' Resource Management in Nevada County," *Society and Natural Resources* 17, no. 8 (2004): 736, 739-741.

<sup>30</sup> Wright, *Rocky Mountain Divide*, 14-25.

<sup>31</sup> Brewer, *Conservancy*, 9-32.

<sup>32</sup> Brewer, *Conservancy*, 32-40.



*Spring*, adding that Carson's book is the "convenient marker for the beginning of public awareness of the environment."<sup>33</sup> Furthermore, Brewer noted that land trusts are positive and get away from the negativity of many environmental movements because they are "proactive."<sup>34</sup>

Agricultural conservation easements are intriguing because they not only preserve open space and habitat for various species, but they also preserve working landscapes and a way of life, a way of life that depends on several elements other than land, including a strong community, plentiful water, farm business-related services, and a supportive market, to remain sustainable.<sup>35</sup> Urgent recognition of the importance of preserving agricultural land, however, did not strike many farmers and ranchers in the American West until the 1970s. As such, during the 1980s and 1990s, land trusts and easements continued to add to their numbers, primarily helped along by growing interest in and willingness of individuals to preserve their land and because of decisions and bills passed by federal and state governments as both groups increasingly recognized their effectiveness and the ineffectiveness of some of the efforts made in the past.<sup>36</sup>

As well, easements help make land more affordable, as illustrated by the story of the Sanders family. A *Trends in U.S. Farmland Values and Ownership* study conducted by the Economic Research Service (ERS) and the USDA found the average price of

---

<sup>33</sup> Brewer, *Conservancy*, 8.

<sup>34</sup> Brewer, *Conservancy*, 290.

<sup>35</sup> Samuel N. Stokes, A. Elizabeth Watson, and Shelley S. Mastran, *Saving America's Countryside: A Guide to Rural Conservation, Second Edition* (Baltimore, MD: The Johns Hopkins University Press, 1997), 21.

<sup>36</sup> Henry E. Rodegerdts, "Land Trusts and Agricultural Conservation Easements," *Natural Resources & Environment* 13, no. 1 (1998): 336; Anella and Wright, *Saving the Ranch*, 17; Buckland, "The History and Use of Purchase of Development Rights in the United States," 244-251; Brewer, *Conservancy*, 9.

farmland in the US doubled from 2000 to 2010—from about \$1,200 to \$2,200 per acre.<sup>37</sup> In the Grand Valley, however, agricultural land in a conservation easement is valued from \$9,000 to \$27,000 per acre whereas similar agricultural land not in a conservation easement is being sold in the range of \$30,000 to \$50,000 per acre to developers for shopping centers or housing subdivisions.<sup>38</sup> The reasons for this wide swing have to do with proximity to the large urban area, Grand Junction, and the region’s “natural amenities;” specifically, the ERS and the USDA found that “high levels of natural amenities have a large positive effect on farm real estate values.”<sup>39</sup>

Reasons why people decide to preserve their land vary, so no universal theory applies.<sup>40</sup> Brewer offered a “general rule”—that “people donate property for preservation out of a love of the land; financial considerations are not unimportant but are secondary.” Brewer called this the “land trust folk principle,” clearly the antithesis of the Silicon Valley executive’s guiding principle about which Stegner wrote.<sup>41</sup> And, some call it place attachment. Economic benefits are a component of a decision to keep, donate, or sell land and of the intrinsic value of easements for farmers and ranchers. Focusing on only the economic benefits belies the remarkable place attachments farmers and ranchers have to the land and their way of life. Sense of place and love of the land are the primary driving forces for taking advantage of this means of saving agricultural landscapes, as the economics of selling the land to a developer would dwarf

---

<sup>37</sup> Cynthia Nickerson and others, “Trends in U.S. Farmland Values and Ownership,” *Economic Information Bulletin Number 42* (Washington, D.C.: USDA, 2012), 2-3.

<sup>38</sup> Robert Bleiberg (Executive Director, Mesa Land Trust), in discussion with the author, September 2012; Harry Talbott (owner, retired, Talbott Farms), in discussion with the author, September 2012a, 2012b.

<sup>39</sup> Nickerson and others, “Trends in U.S. Farmland Values and Ownership,” 22, 27.

<sup>40</sup> Linda Husa, *The Family Ranch: Land, Children, and Tradition in the American West* (Reno: University of Nevada Press, 2009), 232-233.

<sup>41</sup> Brewer, *Conservancy*, 160.

any potential tax benefit.<sup>42</sup> So we must investigate the stories of people who love their way of life, their land, and their children's futures enough to work toward safeguarding their places. Each individual, each place, each land trust, and each conservation easement has its own personality.

*Toward Understanding the Principles of Conservation Easements and Land Trusts*

Understanding what conservation easements are and how land trusts work helps us know the importance of what conservation easements and land trusts do for agricultural landowners. As well, it enables us to appreciate their roles in the shaping of the cultural landscape. When farmers or ranchers sign the documents for preserving land, they expect it to remain agricultural and to accomplish the tasks of preserving open space and habitat. In some cases, the conservation of agricultural land may also extend into historic preservation, particularly when the region "has long been devoted to agricultural uses and faces a loss of historic identity due to development pressures."<sup>43</sup> Therefore, making the case for the importance of land conservation requires educating farmers and public and private entities on the benefits of open space. The Sanders family actively sought such education and benefitted greatly from what they learned.

Concomitant to urban sprawl and the growth in land trusts and conservation easements, the purposes and definitions of what land trusts do matured. Some authors

---

<sup>42</sup> Brewer, Conservancy, 293; Jacob C. Brenner, Stephanie Lavallato, Marin Cherry, and Emma Hileman, "Land Use Determines Interest in Conservation Easements among Private Landowners," *Land Use Policy* 35, no. 1 (2013): 30; Jennifer Eileen Cross, Catherine M. Keske, Michael G. Lacy, Dana L.K. Hoag, and Christopher T. Bastian, "Adoption of Conservation Easements among Agricultural Landowners in Colorado and Wyoming: The Role of Economic Dependence and Sense of Place," *Landscape and Urban Planning* 101, no. 1 (2011): 75-76.

<sup>43</sup> David J. Dietrich and Christian Dietrich, *Conservation Easements: Tax and Real Estate Planning for Landowners and Advisors* (Chicago: American Bar Association Publishing, 2011), 45.

even argue that there is no clear definition of what a land trust is.<sup>44</sup> The definition currently favored by the Land Trust Alliance, a national conservation organization, is: “A land trust is a non-profit organization that, as all or part of its mission, actively works to conserve land by undertaking or assisting in land conservation easement acquisition, or by its stewardship of such land or easements.”<sup>45</sup> That definition is very much different from the much simpler one that they had used in the 1990s—that a land trust is any organization that directly conserves land.<sup>46</sup> But that alteration is understandable, as these organizations needed to change their visions to address successes and failures that come from experience, or, as Brewer termed it, from “social learning.”<sup>47</sup> This changing definition thus reflects larger trends in conservation easement acquisition and land trust formation, as change takes place over time in how land trusts acquire, write the terms, and manage easements as well as in the ways they receive funds to finance the work they do.<sup>48</sup>

Land trusts require funding. James Sanders and his wife chose to place their initial 13.5 acres in a conservation easement in exchange for a payment. MLT paid him for his development rights, which will keep the cost of the land at the agricultural land value instead of the development land value for perpetuity. To an extent, the trust

---

<sup>44</sup> A. M. Merenlender, L. Huntsinger, G. Guthey, and S. K. Fairfax, “Land Trusts and Conservation Easements: Who Is Conserving What for Whom?,” *Conservation Biology* 18, no. 1 (2004): 68.

<sup>45</sup> Land Trust Alliance, “Land Trusts,” <http://www.landtrustalliance.org/land-trusts> (last accessed January 24, 2014).

<sup>46</sup> Merenlender, Huntsinger, Guthey, and Fairfax, “Land Trusts and Conservation Easements,” 68.

<sup>47</sup> Brewer, *Conservancy*, 36, 123.

<sup>48</sup> Merenlender, Huntsinger, Guthey, and Fairfax, “Land Trusts and Conservation Easements,” 67-73.

oversees the land use of the property.<sup>49</sup> Furthermore, land trusts have other expenses for legal work, recordkeeping, and educating the public. Funding, therefore, is a vital aspect of the creation of and the prospects for survival of land trusts.

Throughout the country, much of the funding for land trusts and conservancy groups comes from private and corporate donations and federal grants.<sup>50</sup> The NRCS division of the USDA established funding venues for the conservation of open space, particularly focusing on agricultural and watershed land.<sup>51</sup> Additionally, state governments sometimes step in to help. For example, Maryland instituted the Rural Legacy Program and designated several areas worthy of preserving, aiming to protect as many acres as possible.<sup>52</sup> In Colorado, state officials approved a portion of Colorado Lottery proceeds to go toward the conservation of open space. Since 1992, Greater Outdoors Colorado has managed these funds and awards them to various conservation organizations, such as MLT, through a grant process. Specifically, MLT pursues state and federal grants, has an impressive list of private donors, and raises funds and awareness by sponsoring various fundraising activities, such as theme dinners and picnics.<sup>53</sup> Sources of funding drive and clearly have the potential to politicize land trusts, thus making interesting topics for further research.

---

<sup>49</sup> Robert Bleiberg (Executive Director, Mesa Land Trust), in discussion with the author, September 2012, September 2013.

<sup>50</sup> Buckland, "The History and Use of Purchase of Development Rights in the United States," 244-251.

<sup>51</sup> Robert Bleiberg (Executive Director, Mesa Land Trust), in discussion with the author, September 2012, September 2013.

<sup>52</sup> Tom Daniels and Mark Lapping, "Land Preservation: An Essential Ingredient in Smart Growth," *Journal of Planning Literature* 29, no. 3 (2005): 324; Rebecca Lewis and Gerrit-Jan Knaap, "Targeting Spending for Land Conservation: An Evaluation of Maryland's Rural Legacy Program," *Journal of the American Planning Association* 78, no. 1 (2012): 34.

<sup>53</sup> Robert Bleiberg (Executive Director, Mesa Land Trust), in discussion with the author, September 2012, September 2013.

Many writers base their articles on the idea that conservation easements are documents that authentically save land forever.<sup>54</sup> Some who examine this idea have started to debate whether land trusts and conservation easements will even be able to do what they promote—preserve land in perpetuity—because circumstances simply change, making the future of conservation easements uncertain.<sup>55</sup> For example, viability of agriculture and ranching and the need for forest and wildlife management may wane and/or wax over time.<sup>56</sup> Right now, the Sanders family has agreed to be firm and forever farmers in the Upper Valley. If they or their heirs decide to give up peach farming, they would have to sell out to someone who did, which could become problematic if there were no buyers. Furthermore, since farmland is a working landscape, some farmers do not like the idea of having their development rights restricted—they have seen enough change to know circumstances may necessitate adjustments in the way they are operating their fields at some future point.<sup>57</sup> The design process is at the heart of this debate, as there are many ways to design conservation easements.

Authors, including a few geographers, have produced works about the process of the design of conservation easements for agricultural land, with some saying “easement design is one of the last best chances for ranchers [and farmers] to maintain

---

<sup>54</sup> Laurie A. Wayburn, “Conservation Easements as Tools to Achieve Regulatory Environmental Goals,” *Law and Contemporary Problems* 74, no. 4 (2011): 181.

<sup>55</sup> Jessica Owley, “The Enforceability of Exacted Conservation Easements,” *Vermont Law Review* 36, no. 2 (2011): 262-264; Brewer, “Conservation Easements and Perpetuity,” 249-278; Brewer, *Conservancy*, 175.

<sup>56</sup> Merenlender, Huntsinger, Guthey, and Fairfax, “Land Trusts and Conservation Easements,” 67.

<sup>57</sup> Brewer, *Conservancy*, 233; Wright and Skaggs, “Purchase of Development Rights and Conservation Easements,” 4; Cross and others, “Adoption of Conservation Easements among Agricultural Landowners in Colorado and Wyoming,” 76-78.

their way of life.”<sup>58</sup> Including tax breaks, of course, is one way to entice farmers and land owners to make use of conservation easements. Anella and Wright explained “If tax deductions are claimed, it [the conservation easement] must be forever.”<sup>59</sup> The easements that James Sanders works, for example, are easements in perpetuity. However, there are term-based conservation easements that allow landowners to revisit decisions to place land in easements. That also presents restrictions. Anella and Wright added that few land trusts accept such non-perpetual easements.<sup>60</sup> These ideas highlight the fact that each land trust or easement is an individual unit formed to incorporate the needs and ideas of those involved at a specific time.<sup>61</sup> In Colorado’s Grand Valley, MLT formed during a period of explosive population growth, owing to a boom in the oil and gas industry.

### **Development of MLT**

For decades, common law allowed for the donation of conservation easements. In 1976, Colorado passed the Conservation Easement Act, which allowed a landowner to relinquish their land development rights for a state tax benefit. As well, several federal laws passed, which enabled landowners to gain federal tax credits/incentives for their voluntarily giving up their development rights to their land.<sup>62</sup> Anella and Wright attributed the Tax Reform Act of 1976 and the Tax Treatment Extension Act of 1980 as the first federal statutes that motivated the process of private land conservation by offering owners incentives to give up their development rights. The Uniform

---

<sup>58</sup> Anella and Wright, *Saving the Ranch*, 12-13.

<sup>59</sup> Anella and Wright, *Saving the Ranch*, 31.

<sup>60</sup> Anella and Wright, *Saving the Ranch*, 31.

<sup>61</sup> Wright and Skaggs, “Purchase of Development Rights and Conservation Easements,” 3.

<sup>62</sup> H.W. Anderson, W. Silberstein, M. Cobb, and K. Kindscher, “Conservation Easements in the 10<sup>th</sup> Federal Circuit,” in *Protecting the Land: Conservation Easements Past, Present, and Future*, edited by Julie Ann Gustanski and Roderick H. Squires (Washington, D.C.: Island Press, 2000), 424.

Conservation Easement Act (UCEA) of 1981 went further to establish some consistency among states; however, since Colorado's act preceded the UCEA, the language in Colorado's legislation is different. Many land trust organizations regard Colorado's conservation easement policies as some of the strongest in the nation. As such, many monitor the successes and failures that land trusts have there.<sup>63</sup> Tax benefits that come with the relinquishment of development rights are nowhere close to the payout a landholder could accrue by selling the property to a developer, but they do provide some cushion and options for the landowner.

During the late 1970s and early 1980s, real estate prices in Colorado's Grand Valley spiked, owing to the oil shale boom in the Green River formation, located under eastern Utah, southwestern Wyoming, and northwestern Colorado, that had begun in the mid-1970s during the country's oil crisis. Developers were buying up land, offering farmers and ranchers incredible sums of money so that real estate tycoons could pave it over with housing and strip malls to oblige the new arrivals associated with the oil boom. As the only metropolitan region in that vicinity, much of the growth associated with this boom occurred in Grand Junction and the larger Grand Valley, sprawling towards agricultural land many farmers and ranchers cherished.

According to Harry Talbott, developers "basically told us to get out of the way" but "we told him where to go and it wasn't to Paradise."<sup>64</sup> In 1980, three fruit-growing families in the Grand Valley—Herman Allmaras, Doris and John Butler, and Bonnie and Harry Talbott—joined forces and started Mesa Land Trust (MLT), taking advantage of some of the laws that had just passed by putting conservation easements on their

---

<sup>63</sup> Anella and Wright, *Saving the Ranch*, 17; *Protecting the Land*, 427; Brewer, *Conservancy*, 150.

<sup>64</sup> "HCT Mesa Land Trust," <http://youtu.be/pmSoai4HI-k> (last accessed September 30, 2014).



land.<sup>65</sup> They were following a larger trend among land conservation advocates in the US who were forming land trusts and putting land into conservation easements to allay the loss of open space, particularly farmland, to urban sprawl.<sup>66</sup> However, according to Robert Bleiberg, the Executive Director of MLT, this was the “first land trust in the country that was created, founded by agricultural producers with the goal of conserving agricultural land.”<sup>67</sup> In total, these three landowners placed 25 acres of agricultural land into the first MLT conservation easements, and their reasons for doing so align with Brewer’s “land folk principle.”<sup>68</sup>

The Butlers reminisced about the painstaking process of working through the Internal Revenue Service (IRS) forms. They explained that after filing their easements all of them also worked through IRS audits. Doris, now able to laugh about the frustration, explained that the IRS process went on for six or seven years after their initial claim. In order for the tax benefit to apply, she continued, the amount claimed had to be justifiable and based on an appraiser’s estimate of the value of the land. At the time, those estimates were high because of the increase in real estate prices related to the oil and gas boom. The IRS eventually approved their appraisal and the Talbott’s

---

<sup>65</sup> Doris and John Butler (co-founders, Mesa Land Trust), in discussion with the author, August 2012; Harry Talbott (owner, retired, Talbott Farms), in discussion with the author, September 2012a, 2012b; Robert Bleiberg (Executive Director, Mesa Land Trust), in discussion with the author, September 2012, September 2013.

<sup>66</sup> Brewer, *Conservancy*, 9.

<sup>67</sup> “HCT Mesa Land Trust,” <http://youtu.be/pmSoai4HI-k> (last accessed September 30, 2014); Palmer Land Trust, “Southern Colorado Conservation Awards to Be Presented October 9,” <http://palmerlandtrust.org/node/439> (last accessed September 2, 2014).

<sup>68</sup> Doris and John Butler (co-founders, Mesa Land Trust), in discussion with the author, August 2012; Harry Talbott (owner, retired, Talbott Farms), in discussion with the author, September 2012; Robert Bleiberg (Executive Director, Mesa Land Trust), in discussion with the author, September 2012, September 2013.

appraisal, while Allmaras' appraisal had to be revised before it could go through, owing to a poor initial assessment.<sup>69</sup>

During the IRS audit period, the three founders of MLT continued to educate themselves on the processes of establishing conservation easements and the overall functions of land trusts. In addition, during that time, the Butlers traveled around Colorado to find other individuals and/or groups interested in conserving land. They found a receptive crowd and many of them began working together to start a coalition of land trusts in Colorado that still operates today, protecting acres of open space.<sup>70</sup>

In the late 1980s, the success of MLT began to show. In particular, the Bureau of Reclamation contacted MLT and asked if the organization would oversee four different wildlife areas in Mesa County. They accepted the offer and, over a period of five years, the federal government paid MLT \$500,000 for managing the areas. The management of the four wildlife areas broadened MLT's horizons in open land conservation. Furthermore, this inflow of monies enabled the three founders to rent a building in Palisade in 1993 as a base for their daily operations. As well, they were finally able to hire a director to manage MLT, as before, any doings were voluntary actions of the three founders. In 1994, they employed Robert Bleiberg, who still directs MLT (circa 2015). Today, MLT has moved from Palisade to a house in one of Grand Junction's historical neighborhoods. Since its founding, MLT has secured 206 easements that preserve 64,300 acres. Bleiberg and MLT continue to seek easements on all forms of open land whether that is agricultural property or acreage for establishing

---

<sup>69</sup> Doris and John Butler (co-founders, Mesa Land Trust), in discussion with the author, August 2012.

<sup>70</sup> Doris and John Butler (co-founders, Mesa Land Trust), in discussion with the author, August 2012.

wildlife preserves and public trails. An important part of their work is MLT's "Fruitlands Forever" campaign.<sup>71</sup>

### **Progress of MLT: "Fruitlands Forever"**

When geographer John B. Wright wrote his study on the cultural geography of land trusts in Colorado and Utah, he explored MLT, which was then the only land trust based in Mesa County. At the time of his research, MLT had been around for a little over 10 years. Wright described how farmers in Mesa County joined forces to protect and conserve farms and ranchlands as well as wildlife corridors throughout the valley. By the early 1990s, MLT had placed about 400 acres of premium agricultural land in conservation easements, increasing significantly from the initial 25 acres.<sup>72</sup> Growth slowed, however; by 2009, the 400 acres had grown only to about 492 acres of preserved farmland.<sup>73</sup>

MLT achieved that initial growth in conservation easements and preserved acres in the face of development pressure—"intense demand...for rental housing and trailer park pads," for example—that tried to sprawl into premium farmlands as the valley experienced an influx of people connected to the oil shale industry and amenity-seeking retirees.<sup>74</sup> An informed MLT member told Wright that in order for the valley to sustain a viable peach industry, the Upper Valley and the trust needed around 2,000 acres of preserved farmland. Wright also explained that around that time Mesa County's land use planners tried to establish "regulations designed to limit conversion of agricultural

---

<sup>71</sup> Robert Bleiberg (Executive Director, Mesa Land Trust), in discussion with the author, September 2012, September 2013.

<sup>72</sup> Wright, *Rocky Mountain Divide*, 120-123.

<sup>73</sup> Robert Bleiberg (Executive Director, Mesa Land Trust), in discussion with the author, September 2012.

<sup>74</sup> Wright, *Rocky Mountain Divide*, 121.

land to other uses.” Wright noted “The locals reacted like they’d been gunshot.”<sup>75</sup>

Today, that reaction would not be as strong, since many local residents now realize the importance of the Grand Valley’s agricultural industry, but those feelings do still exist.

By 2009, a reemergence in oil shale and natural gas exploration and the increasing numbers of retired residents in the Grand Valley prompted MLT to reinvigorate its push to preserve working agriculture landscapes in the upper reaches of this region. In particular, MLT launched the Fruitlands Forever campaign. As the name indicates, this campaign focuses primarily on the fruitlands in the upper Grand Valley with the goal being, according to Bleiberg, “to sustain the fruit and wine-grape growing industry into the indefinite future.” The initiative involved thorough research, land use analysis using geographic information systems (GIS), participatory mapping, and discussions with local fruit growers.<sup>76</sup>

MLT’s land development specialist Ilana Moir explained that when MLT held meetings with local growers at the onset of Fruitlands Forever, she would ask the attendees to draw on maps to show where they thought the best agriculture land was in the Upper Valley. Afterwards, she took this information back to her office and digitized it, looking for areas that intersected with the local soils information, which delineates prime and irrigated agricultural land. MLT designated parcels that overlapped with prime agricultural land as important and deserving of their focus in their preservation efforts. Subsequently, she would present her findings at other meetings. The goal of this

---

<sup>75</sup> Wright, *Rocky Mountain Divide*, 122.

<sup>76</sup> Robert Bleiberg (Executive Director, Mesa Land Trust), in discussion with the author, September 2012.

process was to re-determine how many acres of agricultural land that the upper Grand Valley would need to sustain the fruit industry and the industries that support it.<sup>77</sup>

The combination of MLT's research, advancements in irrigation technology, new varieties of peach trees, the burgeoning grape industry, and the prudence of Upper Valley growers enabled MLT to revise the 2,000-acre figure that Wright found in his research in 1990 to 1,000 acres nearly two decades later.<sup>78</sup> In other words, 1,000 acres of preserved, prime agricultural land, according to local growers and MLT, can keep agriculturalists in business and support the related industries, such as irrigation supply shops, tool and heavy equipment stores, fruitstands, hotels, bed and breakfast venues, restaurants, and other businesses associated with the fruit and wine industries.<sup>79</sup> Since the Fruitlands Forever campaign started in 2009, MLT has permanently secured around 10 additional family farms in the Upper Valley, increasing its overall total of permanently preserved family farms to 45. As well, MLT is nearer to that goal of 1,000 acres, having now preserved over 762 acres of prime agriculture land in the upper Grand Valley.<sup>80</sup> Fruitlands Forever and MLT are still works in progress (Figure 30).

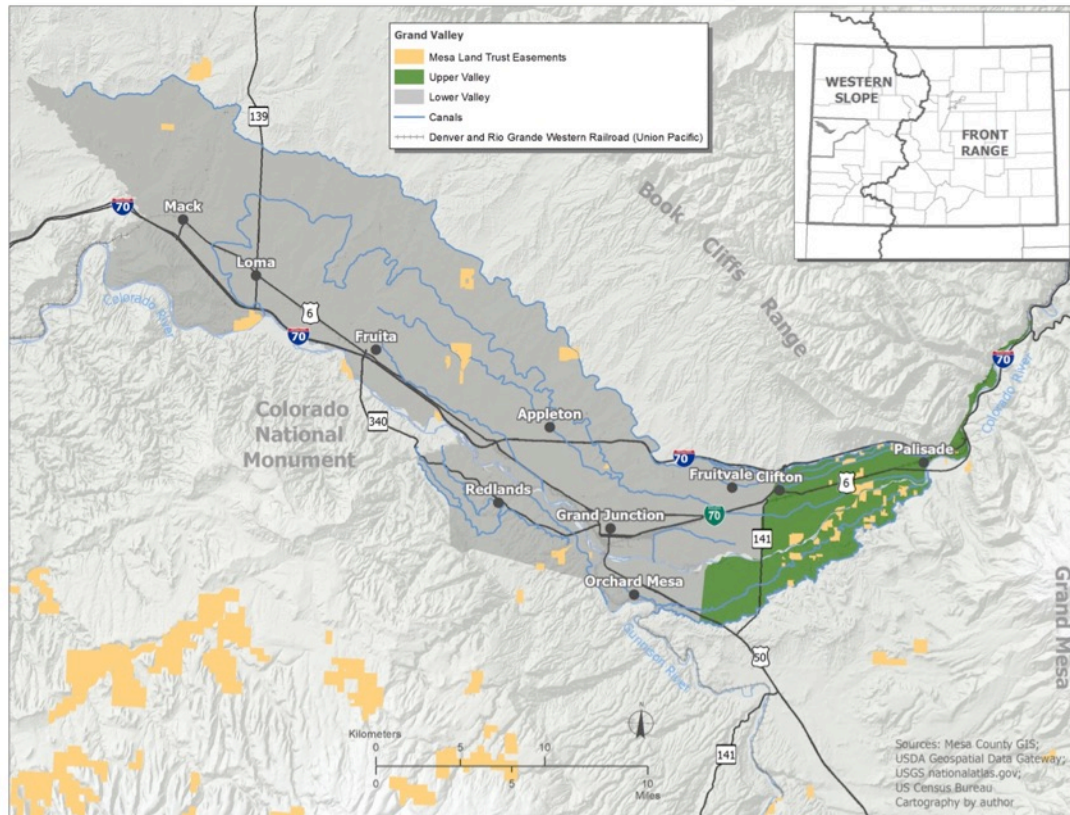
---

<sup>77</sup> Ilana Moir (Land Protection Specialist, Mesa Land Trust), in discussion with the author, September 2013.

<sup>78</sup> Wright, *Rocky Mountain Divide*, 122; Robert Bleiberg (Executive Director, Mesa Land Trust), in discussion with the author, September 2012; Ilana Moir (Land Protection Specialist, Mesa Land Trust), in discussion with the author, September 2013.

<sup>79</sup> Robert Bleiberg (Executive Director, Mesa Land Trust), in discussion with the author, September 2012; Ilana Moir (Land Protection Specialist, Mesa Land Trust), in discussion with the author, September 2013.

<sup>80</sup> Robert Bleiberg (Executive Director, Mesa Land Trust), in discussion with the author, September 2013; Amy Hamilton, "Effort To Save Palisade Farms Bearing Fruit," *The Daily Sentinel* (Grand Junction), April 3, 2012.



**Figure 30. Mesa Land Trust Conservation Easements.**

### The Future of MLT

According to the 2010 National Land Trust Census conducted by the Land Trust Alliance, 47 million acres in the United States are conserved by 1,723 land trusts, up about 10 million acres from 2005 and up 23 million acres from 2000.<sup>81</sup> That is an area more than twice the size of all of the land in national parks in the lower 48 states. According to the same census, land in trusts in Colorado is up 53 percent over the 2005-2010 period, with 1,225,050 acres protected by 38 land trusts as of 2010. Colorado is number three in the nation and number one in the Southwest in acres conserved—with

<sup>81</sup> Land Trust Alliance, “2010 National Land Trust Census: Colorado,” <http://www.landtrustalliance.org/land-trusts/land-trust-census> (last accessed September 13, 2014).

California number one in the nation.<sup>82</sup> Conservation easements and land trusts across America have made huge strides in preserving agricultural land and open space, but the question of what they actually do for farmers is still largely unanswered. Even with the continued push for and earmarking of monies for agricultural land conservation from private, non-profit, and governmental entities, developers still pave over one acre of open space per minute, per day in this country.<sup>83</sup> The American Farmland Trust created a series of maps and other visualizations that highlight the prime agricultural land where development demands remain high. And these visualizations show a distinct pattern throughout the American West—development threats are happening in prime agricultural areas.<sup>84</sup>

Kathy Portner, an employee with the city of Grand Junction for 27-years, admitted sprawl is a problem in the valley.. Portner said that in hindsight, growth expanded too far and it should have been more concentrated.<sup>85</sup> However, development is still in the minds of many Grand Valley residents. During the mid-2000s oil shale boom, *The Daily Sentinel* ran an article reporting on the shock among residents on Orchard Mesa that commercial development did not keep pace with residential development. A realtor for Re/Max said Orchard Mesa is “going to be the next Fruita.”

---

<sup>82</sup> Land Trust Alliance, “2010 National Land Trust Census Report: Colorado,” <http://www.landtrustalliance.org/land-trusts/land-trust-census/state-factsheets/colorado-fact-sheet> (last accessed September 13, 2014).

<sup>83</sup> American Farmland Trust, “Threatened Farmland: What’s Happening to Our Farmland?,” <http://www.farmland.org/resources/fote/> (last accessed September 8, 2014).

<sup>84</sup> American Farmland Trust, “Farming on the Edge: High Quality Farmland in the Path of Development,” <http://www.farmland.org/resources/fote/states/> (last accessed September 8, 2014).

<sup>85</sup> Kathy Portner (Neighborhood Services Manager, City of Grand Junction), in discussion with the author, August 2012.

In 2006, Orchard Mesa stood “at the edge of tremendous [development] potential.”<sup>86</sup> And today, it remains in that stance.

Given Mesa County’s continued population growth and pressure from the oil and gas industry, the Grand Valley continues to face strong development pressure. In response to this pressure, MLT continues to work diligently with local growers to preserve place identity in the Upper Valley. MLT signage on the properties of landowners with conservation easements attest their pride in what they have accomplished in the valley (Figure 31). Work continues but is getting harder. The process of acquiring conservation easements is time demanding. Moir stated that about 70 percent of MLT’s activity comes from people who volunteer to talk to them about preserving their land. The other 30 percent is time that MLT spends going directly to the landowners.<sup>87</sup> As Bleiberg put it, “Sometimes we will approach the landowner and inquire as to what their interest level is in putting land in trust. Most of the time we let them come to us.”<sup>88</sup> Furthermore, Bruce Talbott explained that putting parcels which had funding attached to them, for example federal and state grants, in conservation easements used to be fairly painless. Today, Talbott says, the entire process from application to setting up the tax side of it has become overly burdensome on all parties involved.<sup>89</sup> Bleiberg and Moir voiced a similar concern, noting that when MLT applies for a grant to preserve specific parcels, MLT has to describe the importance of each landscape in the larger scheme of things. Size and location matter: MLT has to consider

---

<sup>86</sup> Marija B. Vader, “Bank, Domino’s Lead Orchard Mesa Development,” *Grand Junction (Colorado) Free Press*, January 9, 2006.

<sup>87</sup> Ilana Moir (Land Protection Specialist, Mesa Land Trust), in discussion with the author, September 2013.

<sup>88</sup> Robert Bleiberg (Executive Director, Mesa Land Trust), in discussion with the author, September 2012.

<sup>89</sup> Bruce Talbott (vineyard and orchard manager, owner, Talbott farms), in discussion with the author, September 2014.



some land more vulnerable to outside development and farmland loss than others—a 15-acre tract versus a five-acre parcel, for instance.<sup>90</sup>

In addition, Mesa County and the cities of Grand Junction, Fruita, and Palisade have put in place what they call conservation buffer zones or green space to keep separate the identity of each city. Designed to limit subdivision of land and development, these corridors guard Grand Junction’s neighboring communities from urban sprawl. MLT, too, has worked to preserve open space in these zones, but funding to keep these and other open spaces viable, to keep development out of them, has started to decline.<sup>91</sup> As such, MLT works diligently on fundraising and holds various social functions to raise awareness on the importance of preserving agricultural lands and open space in perpetuity.

Other important considerations will affect the future of MLT. Land use, zoning, and comprehensive plans are tools for planners, but those tools do little to protect the current landscape in Palisade and in Mesa County although such preservation is an important goal for farmers and many residents. According to Palisade Town Planners Rebecca Levy and Richard Sales, “Most people like that Palisade is not a [Colorado] resort community,” like Vail, Breckenridge, and Aspen. The land use code, however, has a resort community bent. Sales explained part of the reason is that when the valley was booming, they hired a “Telluride planner” to rewrite the land use code.<sup>92</sup>

---

<sup>90</sup> Robert Bleiberg (Executive Director, Mesa Land Trust), in discussion with the author, September 2012; Ilana Moir (Land Protection Specialist, Mesa Land Trust), in discussion with the author, September 2013.

<sup>91</sup> Robert Bleiberg (Executive Director, Mesa Land Trust), in discussion with the author, September 2012, September 2013.

<sup>92</sup> Rebecca Levy (city planner, Town of Palisade) and Richard Sales (city planner, Town of Palisade), in discussion with the author, August 2012.



**Figure 31. MLT signage on a parcel with a conservation easement.**

Considering MLT has a stated goal of preserving 1,000 acres in order to sustain agriculture, I asked Bleiberg and Talbott if it was a major concern whether preserved areas are adjacent to each other. Bleiberg expounded, “Of course, we would love to have contiguous farms and agricultural land parcels preserved, but that’s not really possible.”<sup>93</sup> Bruce Talbott, however, believes that one of the values of conservation easements is that they often do lead to a patchwork landscape of preserved farm parcels, adding:

---

<sup>93</sup> Robert Bleiberg (Executive Director, Mesa Land Trust), in discussion with the author, September 2013; Ilana Moir (Land Protection Specialist, Mesa Land Trust), in discussion with the author, September 2013.

A patchwork of easements makes it much harder for development interests to convince local communities that agriculture[al] land conversion [into urban land uses] is inevitable and that they [the farmers] might as well accept it [growth/development] and be part of the show. A critical mass of easements has a calming effect on the [farming] community.

Talbott went on to describe the patchwork as “a stabilizing factor for the [agricultural] industry.”<sup>94</sup> Harry and Bruce Talbott both agreed that the upper region of Orchard Mesa is protected from development unless their operation fails at some point. Specifically, the “placement of conservation easements” on the Talbotts’ properties means that, for any development to occur, the “blessing” will have to come from the Talbotts—not Mesa County, not Palisade, not Grand Junction.<sup>95</sup>

Conservation easements, however, are not for everyone, and Priscilla Walker’s story is a case in point. Priscilla and her brother inherited their property from their father, Marion Bowman, who had inherited it from his father, George W. Bowman, who had purchased the property in 1893. This property is one of the largest undivided tracts of farmland near the town of Palisade. Walker’s father was a “life-long fruit grower,” and Priscilla fondly remembers working the field and packing the peaches. Walker and her brother currently lease part of their land to an organic peach farmer who owns and operates Kokapelli Fruit Stand, located off Interstate 70, and part to the Herman family, who operate Herman Produce, Valley Fruit, and I-70 Produce fruit stands.<sup>96</sup>

Prior to the Kokapelli and the Herman leases, however, during the oil shale boom, Walker and her brother leased their land to an alfalfa producer. Priscilla recalled

---

<sup>94</sup> Bruce Talbott, e-mail message to author, August 16, 2014.

<sup>95</sup> Bruce Talbott, e-mail message to author, August 16, 2014; Harry Talbott (owner, retired, Talbott Farms), in discussion with the author, September 2014; Bruce Talbott (vineyard and orchard manager, owner, Talbott farms), in discussion with the author, September 2014.

<sup>96</sup> Priscilla Walker (orchard owner; President, Walker Innovations, Inc.; Chair, Palisade Historical Society), August 2012, September 2012, September 2014.

that, in the 1970s and 1980s, Mesa County reworked its master plan and “ignored the existing orchards and saw only development opportunity on our 30-plus acres of alfalfa.” As such, Mesa County rezoned her land at first for medium-density housing and then for high-density housing, owing to the “housing demand in the east end of the valley because oil shale workers were driving to Rifle [50 miles east of Palisade] every day.” Walker explained the rezoning of her land provided the impetus she and her brother needed to put the land back in peaches. Accordingly, in the 1990s, the Walker and Bowman families successfully filed an application with Mesa County to rezone their property into AFT (agriculture, forest, transition). Walker is all for preserving her family’s farmland in perpetuity. While she has nothing against conservation easements and land trusts, she did, however, have concerns about how the land trust proposed to manage her land after an informal conversation she had with MLT’s director, Robert Bleiberg.<sup>97</sup>

As she understood it after meeting with MLT, the trust would do some “trade-offs” with her land, such as breaking it into smaller 5-acre tracts that would be more affordable to first generation farmers—like the Sanders family—with the trade-off being that some of each parcel of land would be reserved for a house and its requisite amenities. That type of land division did not coincide with how Walker envisioned her property in subsequent years. She viewed breaking up any of her land as a “direct blow to farming in the valley” because of that possibility of putting houses on those tracts. “You can grow houses anywhere, but you can’t grow Palisade peaches anywhere,” she

---

<sup>97</sup> Priscilla Walker (orchard owner; President of Walker Innovations, Inc.; Chair, Palisade Historical Society), August 2012, September 2012, September 2014.

added. As well, Walker did not believe making several smaller farms was a sustainable way to preserve an industry.<sup>98</sup>

Mel Rettig, a local grower and fruit and vegetable stand operator on Orchard Mesa near Clifton, also voiced concerns. Even though Rettig sat on the board of directors for MLT and signed several of the conservation easement documents, he does not have any plans to put his land into an easement. He does keep a watchful eye on development. He explained, “We really have to watch where they’re putting in new utility lines—sewer and water, in particular. Once they’re in, it is really easy to connect a subdivision up to them.” Homes and subdivisions are already squeezing out growers neighboring Rettig, whose operation is just off the west side of Highway 141. The City of Grand Junction and Mesa County have started putting in more utility lines adjacent to his property. Comprehensive plans allow for exactly this type of activity. Certainly there are laws that protect Rettig’s right to farm where he lives but being the only farmer in a growing residential area is not how he likes to picture his future. An easement on his land would help keep the acreage in open space and quite possibly in farming, but it would not solve the problem of too much non-farming land use adjacent to his property. Rettig wants to see his land stay in agriculture, but he also wants to make sure he is doing the best thing for his family. For now, he wants to be a positive patch on the landscape by maintaining his farming operation (Figure 32).<sup>99</sup>

---

<sup>98</sup> Priscilla Walker (orchard owner; President, Walker Innovations, Inc.; Chair, Palisade Historical Society), August 2012.

<sup>99</sup> Mel Rettig (owner, Rettig Farms), in discussion with the author, September 2013.



**Figure 32. Large homes are going up south of Rettig Farms.**

Harry and Bruce Talbott are also starting to rethink the effectiveness of land trusts and conservation easements. This notion coming from the family who helped found MLT and that has preserved several of their agricultural acres through the trust is surprising. Besides the “complicated and intrusive” paperwork issues, Bruce noted other reasons why he has lost enthusiasm. One reason is that he and his father feel MLT is starting to go after “boutique” farming operations and “tourism generating landscapes” instead of commercial agriculture enterprises like Talbott Farms. Bruce explained that, with the newer easements MLT is generating, the Talbotts would have to file for a variance to build a structure larger than 2,000 square feet to pack and move their

peaches. Another reason Harry and Bruce have lost some degree of confidence in MLT is because MLT no longer has a commercial agriculture representative on its 16-member board; even though there are two smaller scale farmers on the board.<sup>100</sup> Harry and Bruce believe that the board that currently drives MLT is a group with environmental concerns seeking to preserve scenic and amenity landscapes. Speaking for his family, Bruce said that this “New West” view of farming as an amenity is moving away from the very thing for which MLT was created—helping to make commercial agriculture a viable industry in the valley by preserving land with conservation easements. MLT worked for them when they most needed it, but Bruce says that “it will be interesting to see how the program continues to develop.”<sup>101</sup>

MLT officials, however, expressed that they were still working to preserve land for commercial agriculture. Land trusts have to evolve to adapt to new ideas and changing requirements for preserving land. They look for new ways to put conservation easements on agricultural land and other open land, and the ability to align grant requests with the terminology and ideology of the New West can help. For instance, MLT has a new initiative for preserving open lands that are for more “recreational” uses, such as hiking, biking, and sightseeing. Robert Bleiberg and Ilana Moir said their new initiative is also part of their larger agricultural preservation campaign. They feel that the people who seek recreational amenities on open lands also support local food

---

<sup>100</sup> Bruce Talbott (vineyard and orchard manager, owner, Talbott farms), in discussion with the author, September 2014.

<sup>101</sup> Bruce Talbott (vineyard and orchard manager, owner, Talbott farms), in discussion with the author, September 2014; Harry Talbott (owner, retired, Talbott Farms), in discussion with the author, September 2014.

movements. As such, MLT is hoping to receive more buy-in from them to support the agricultural industry in the valley.<sup>102</sup>

As well, in 2014 MLT received grants to preserve two tracts of land—one that is currently in peaches and another one that is in grapes—from the NRCS’s new Agricultural Land Easements (ALE) program and from Greater Outdoors Colorado. The 37-acre tract planted in peaches will be the first easement MLT has completed that will not include the house that accompanies the agricultural land. This is different from James and Laura Sanders’ place; they have a half-acre for their home and its amenities reserved in their easement. In this specific case, the house is very upmarket, which would make the land impossible for most farmers in the valley to afford. One of the Grand Valley’s most iconic vineyards at Canyon Winds Winery will also receive an easement for 17 acres. Both of these parcels in the Upper Valley are clearly geared more toward commercial agriculture. With these two additions, the Fruitlands Forever campaign is just under 200 acres from its 1,000-acre goal.<sup>103</sup>

Supporters of these preservation efforts hope that the efforts to preserve these agricultural landscapes and lifeways will not stop at that milestone.<sup>104</sup> “Even if land trusts fail to save the Earth,” Brewer wrote, “they will at least have made the Earth a better place than it would have been without them.”<sup>105</sup> Helping people develop their connectedness, their sense of place will play a big part in making the land trust and

---

<sup>102</sup> Robert Bleiberg (Executive Director, Mesa Land Trust), in discussion with the author, September 2014; Ilana Moir (Land Protection Specialist, Mesa Land Trust), in discussion with the author, September 2014.

<sup>103</sup> Robert Bleiberg (Executive Director, Mesa Land Trust), in discussion with the author, September 2014; Ilana Moir (Land Protection Specialist, Mesa Land Trust), in discussion with the author, September 2014.

<sup>104</sup> Robert Bleiberg (Executive Director, Mesa Land Trust), in discussion with the author, September 2014; Ilana Moir (Land Protection Specialist, Mesa Land Trust), in discussion with the author, September 2014.

<sup>105</sup> Brewer, *Conservancy*, 293.



conservation easement movement as it applies to agriculture a success story.<sup>106</sup> Harry Talbott's son Charlie calls land like theirs is "irreplaceable," and that "if we lose it, it will be lost forever."<sup>107</sup> Irrefutably, MLT, has made an impact on Grand Valley farmers and residents who value agriculture and open space. Indeed, some landowners in the Grand Valley will continue to mitigate loss by pursuing conservation easements, while others may branch out into a method like agritourism for holding true in their land of milk and peaches.

---

<sup>106</sup> Brewer, *Conservancy*, 291-293.

<sup>107</sup> "HCT Mesa Land Trust," <http://youtu.be/pmSoai4HI-k> (last accessed September 30, 2014).

## Chapter 9: Agritourism: Hope for the Upper Grand Valley

*Rondo Buecheler is the owner of Rapid Creek Cycles and Sports in Palisade. In addition to renting and selling bicycles and related equipment, Rondo also has a variety of rafts, paddleboards, and kayaks for people to rent or purchase. When I walked into his shop in search of a bicycle tire tube, he was busy with a customer on the phone, so I looked around. I overheard him talking about water levels in the Colorado River. I could tell the customer was giving him a hard time; he pulled up the internet and read to the customer verbatim what the water levels were and how many cubic feet per second would be released upstream to maintain the water levels downstream. Rondo ended his phone conversation with statements similar to this: I'm not going to lose another raft due to its being punctured by rocks because of the low river. Try again in a few weeks.*

*Subsequently, Rondo gave me some attention. I started asking him various questions about the valley and his business. Then he fired some questions back at me. In particular, he wanted to know: why is an Okie doing doctoral level research in the Grand Valley? I told him that I like rural places and agriculture, that I like grapes, wine, and peaches, and that I thought this area offered me something special to explore.*

*I guess he was satisfied with that response because Rondo did not skip a beat; he started talking about his venture but another phone call interrupted our conversation. This time it was someone who bailed on him as a volunteer for his Pedal, Paddle, Pedal race held during the Palisade Peach Festival. I then asked Rondo if he would sit down with me and talk to me about his business and how he viewed the valley. With a quick comeback, he asked if I would help him with his race. I had some free time, so I agreed, and then he agreed to the interview. I made out on that agreement, though—free entry to the Peach Festival, free lunch and beer, and a free breakfast for the interview. I also got my tube at cost.*

*I met up with Rondo a few days after the festival. He needed to test a couple of bicycles customers had rented and had reported as being faulty, so we rode them to the Packing Shed, a local restaurant that has since closed, for breakfast. Rondo asked me what he could tell me that would add to my study. Before we ordered, I explained I had an interest in agritourism. I described to him the current debate among academics about whether agritourism should be considered differently from wine tourism and from rural tourism. I told him that I wanted to contribute to that debate since I was studying a region that offered all three versions of those tourism themes. He just looked at me. Nothing. The waitress came and took our order. Still silent. I could tell Rondo was questioning what I just told him. After he took a couple of sips of his coffee, he told me separating those tourism themes was nonsense. They all relate to each other and, without one, the other would not be as successful. He then stated he viewed his business as part of the agritourism industry in the Grand Valley because it helps support the agriculture industry.<sup>1</sup> Rondo had just put part of my thesis for this chapter into words.*

---

<sup>1</sup> Rondo Buecheler (owner, Rapid Creek Cycles and Sports), in discussion with the author, August 2012.

## **Introduction**

Researchers who argue about what constitutes agritourism, wine tourism, or rural tourism are missing the big picture when they consider these activities individually. Agritourism, as a successful enterprise, is the combination of traditional agritourism activities on and off farms and the impress of community resources. In the American West, development typically sprawls across prime farmland, as strip mall developers, computer conglomerates, and amenity migrants move in. In the upper Grand Valley, agritourism is yet another leitmotif-in-action that helps preserve agricultural landscapes, the farming lifeway, and small town economic development via its festivals and other traditional and innovative agritourism activities. Agritourism activities provide educational experiences to participants on the value of local agriculture, on the need to conserve water, and on the importance of preserving prime agricultural land for the future. Many local growers regard this inherent feature—education—as the most important element for ensuring the sustainability and preservation of their industry.

### **Agritourism in Colorado and in the Grand Valley**

Agritourism is a relatively new term for an old-fashioned activity: connecting travelers in an “authentic” way with agriculture, allowing them to discover “geographically distinctive food, drink and experience.”<sup>2</sup> In 1872, a Colorado Springs newspaper reported, “There is a growing tendency to make Agricultural Fairs attractive to large crowds of sight-seers rather than instructive to farmers, and their success is measured by the number who are admitted to the grounds instead of by the actual effect

---

<sup>2</sup> Copper Blog, “Colorado Agritourism Gets a Helping Hand,” June 7, 2014, <http://www.coppercoloradocondos.com/copper-mountain-blog/post/colorado-agritourism> (last accessed July 12, 2014).

which they have upon the cultivation of the soil or the improvement of stock.”<sup>3</sup> In 1885, another eastern Colorado newspaper stated, “Your true tourist always likes to test the local specialties in food and drink, for without them he feels as if he had hardly known the country. Travelers always enjoy with an especial relish the antelope steak served at railway eating-houses in Colorado and western Kansas on this account.”<sup>4</sup> In 1904, the publication “All about Grand Junction” noted that the town’s “various Peach days and other festival occasions” helped “advertise the valley,” that the Grand Valley Fruit Fair Association provided “amusements... in many forms, as a means of diverting the mind from the routine of every-day life and as a rest from the cares of regular vocations.”<sup>5</sup> Early on, railroads made visiting popular among those who could afford it, but the advent of the automobile began to make tourism a more affordable and more popular activity.<sup>6</sup> And what is implicit in the modern versions of these discovery processes is the highlight that agritourism educates about 21<sup>st</sup> century issues centered on food safety and water and land conservation.

According to a 2001 USDA survey, the top reason people visited a farm was to “enjoy rural scenery.” Other reasons were “learning where food comes from,” “visiting family or friends,” to “watch/participate in farm activities,” to “purchase agricultural

---

<sup>3</sup> “Farming Matters,” *Out West*. (Colorado Springs), September 5, 1872.

<sup>4</sup> Sylvester Baxter, “Vineyards in the Rio Grand (sic),” *The Colorado Transcript* (Golden), April 1, 1885.

<sup>5</sup> Grand Junction Chamber of Commerce (GJCC), *All about Grand Junction and the Grand Valley Colorado* (Grand Junction: GJCC, 1904), 30, Mesa County History Pamphlet File, LFRL, MWC.

<sup>6</sup> William E. Riebsame, ed., *Atlas of the New West: Portrait of a Changing Region* (New York: W. W. Norton and Company, 1997), 72; Judy Walden, Amy Webb, Dan Hobbs, and Kelli Harper, “A Three-Year Action Plan For the Promotion of Agritourism in the State of Colorado,” (April 2013), 5, [http://d3moqqx2p23xht.cloudfront.net/sites/default/files/Assets/LivingInColorado/Documents/H%26Ag\\_PLAN\\_FINAL.pdf](http://d3moqqx2p23xht.cloudfront.net/sites/default/files/Assets/LivingInColorado/Documents/H%26Ag_PLAN_FINAL.pdf) (last accessed July 10, 2014).

products,” to “pick fruit or produce,” or “to hunt and fish.”<sup>7</sup> In 2006, Colorado State University’s (CSU) Cooperative Extension conducted a similar study to explore agritourism specifically in the Centennial State. Researchers found that on-farm educational and nature experiences were the favorite type of agritourism activity with food and culinary activities the second most popular.<sup>8</sup> In 2006, over 13 million people took part in agritourism activities and the total economic impact for the state was \$2.2 billion. These researchers, however, found that the Colorado Tourism Office (CTO) was not doing as much as might have been done for agritourism: “They do not typically consider agritourism to be a part of tourism, and developing this partnership remains a challenge for Colorado agritourism, but a challenge worth pursuing given that CTO has a lot of marketing resources and expertise to share.”<sup>9</sup> Since then, CTO has changed its ways.

In 2012, Colorado ranked 21<sup>st</sup> in the country as the main destination for overnight leisure trips, but number one in the nation for ski trips.<sup>10</sup> The number of people on overnight stay leisure trips to Colorado who took part in winery tours/tastings went from six percent in 2011 to 11 percent in 2012, well above the US average of

---

<sup>7</sup> Joshua Wilson, Dawn Thilmany, and Martha Sullins, “Agritourism: A Potential Economic Driver in the Rural West,” *Colorado State University Cooperative Extension Economic Development Report EDR 06-01*, February 2006, [http://www.agmrc.org/media/cms/edr0601\\_cda89b9a1e15e.pdf](http://www.agmrc.org/media/cms/edr0601_cda89b9a1e15e.pdf) (last accessed July 10, 2014).

<sup>8</sup> William Gascoigne, Martha Sullins, and Dawn Thilmany McFadden, “Agritourism in the West: Exploring the Behavior of Colorado Farm and Ranch Visitors,” *Western Economics Forum*, Fall (2008): 19, <http://ageconsearch.umn.edu/bitstream/92849/2/0702002.pdf> (last accessed July 10, 2014).

<sup>9</sup> “Exploring Consumer Preferences and Travel Plans for Agritourism in Colorado,” 7-8, <http://www.ams.usda.gov/AMSV1.0/getfile?dDocName=STELPRDC5064320> (last accessed October 2, 2014).

<sup>10</sup> Longwoods International, “Colorado Travel Year 2012 Final Report,” (May 2013), 75, 79, <http://www.colorado.com/sites/colorado.com/master/files/2012Visitor%20FinalReportonline.pdf> (last accessed July 10, 2014).

seven percent.<sup>11</sup> From 2002 to 2007, the number of farms in Colorado with some kind of agritourism and recreational services went from 867 to 679 but income nearly tripled, from \$12,042,000 to \$32,913,000.<sup>12</sup> From 2007 to 2012 the number of farms with some kind of agritourism and recreational services went to 864, almost back to the 2002 count, even though overall revenue decreased by about 15 percent.<sup>13</sup>

In 2014, Laura Grey, Director of Heritage and Agritourism for the CTO explained that “Farmers and ranchers have no idea how fascinated urban America is in what they do. Even the most basic things that a farmer can do, like irrigation, is fascinating. People want to come and they want to pay them to know about this.” Grey wants to get the word out. She stated, “I think the outside world has no idea how aggie we are. I really don’t. We have huge numbers nationally in ag and I don’t even think Coloradans are aware of that.” Currently, Colorado ranks fourth in the nation in agritourism revenue.<sup>14</sup> Al White, executive director of the CTO, said:

With the ongoing support of the legislature and our industry partners, tourism and agritourism in Colorado continues to reach the next level of success. While visitors may first think of our world-class skiing or climbing our fourteeners when they think Colorado, we're also becoming known for our craft beer, wine and spirits, farmers' markets, farm and

---

<sup>11</sup> Longwoods International, “Colorado Travel Year 2012 Final Report,” (May 2013), 163-164, <http://www.colorado.com/sites/colorado.com/master/files/2012Visitor%20FinalReportonline.pdf> (last accessed July 10, 2014).

<sup>12</sup> United States Department of Agriculture (USDA) Census of Agriculture, Chapter 2: State Level Data, vol. 1, “Table 6: Income From Farm-Related Sources: 2007 and 2002,” 2007, [http://www.agcensus.usda.gov/Publications/2007/Full\\_Report/Volume\\_1,\\_Chapter\\_2\\_US\\_State\\_Level/st99\\_2\\_006\\_006.pdf](http://www.agcensus.usda.gov/Publications/2007/Full_Report/Volume_1,_Chapter_2_US_State_Level/st99_2_006_006.pdf) (last accessed July 13, 2014).

<sup>13</sup> United States Department of Agriculture (USDA) Census of Agriculture, Chapter 2: County Level Data, Colorado, vol. 1, “Table 6. Income From Farm-Related Sources: 2012 and 2007,” 2012, [http://www.agcensus.usda.gov/Publications/2012/Full\\_Report/Volume\\_1,\\_Chapter\\_2\\_County\\_Level/Colorado/st08\\_2\\_006\\_006.pdf](http://www.agcensus.usda.gov/Publications/2012/Full_Report/Volume_1,_Chapter_2_County_Level/Colorado/st08_2_006_006.pdf) (last accessed July 13, 2014).

<sup>14</sup> Luke Runyon and Harvest Public Media, “Working Out the Kinks to Rebrand Colorado As an Agritourism Destination,” June 26, 2014, <http://www.kunc.org/post/working-out-kinks-rebrand-colorado-agritourism-destination> (last accessed July 10, 2014).

ranch stays, U-pick fruit and vegetables, homesteading workshops and more.”<sup>15</sup>

According to a study authorized by CTO that looked at travel in Colorado from 1996-2012, Mesa County is its own travel district. Mesa County has a 1.6 percent share of the state’s total overnight stay earnings. Total direct overnight travel spending in 1996 was \$112.5 million, in 2002 was \$133.2 million, and in 2012 was \$269.2 million, with the highest year in the period being 2008 with \$272.8 million.<sup>16</sup> In the Grand Valley, small business owners recognize that they have two or three seasons to make the most of their attractions.<sup>17</sup>

Colorado’s agritourism industry is mainly a summer and fall attraction—seasons that correspond to crop growing and harvesting. Fall has been considered a slow tourist season for the state—with winter unquestionably being the most popular time for visitors. As researchers pointed out, however, opportunities exist even in winter for agritourism activities. Colorado economists argued that agritourism activities during winter months could serve as “diversions for those accompanying skiers, but who do not ski, such as wine tastings, sleigh or horseback rides, snowmobile excursions and holiday farm or ranch getaways.”<sup>18</sup> Furthermore, in Palisade, agritourism is a community-supported activity. For example, residents have worked hard to develop recreation-oriented opportunities that go “hand-in-hand with agritourism,” like Rondo’s

---

<sup>15</sup> Luke Runyan and Harvest Public Media, “Working Out The Kinks To Rebrand Colorado As An Agritourism Destination.”

<sup>16</sup> Dean Runyan Associates, “Colorado Travel Impacts 1996-2012,” June 2013, [http://www.deanrunyan.com/doc\\_library/COImp.pdf](http://www.deanrunyan.com/doc_library/COImp.pdf) (last accessed July 10, 2014).

<sup>17</sup> Rondo Buecheler (owner, Rapid Creek Cycles and Sports), in discussion with the author, August 2012; Bob and Julie Commons (owners, Dreamcatcher Bed and Breakfast), in discussion with the author, September 2012.

<sup>18</sup> Dawn Thilmany, Martha Sullins, and Alex Ansteth, “Of Wine and Wildlife: Assessing Market Potential for Colorado Agritourism,” *Economic Development Report* (Fort Collins: Colorado State University Extension, 2007): 3, [http://digitool.library.colostate.edu/R/?func=dbin-jump-full&object\\_id=111418](http://digitool.library.colostate.edu/R/?func=dbin-jump-full&object_id=111418) (last accessed October 3, 2014).

bike shop, which rents bicycles to visitors who want to pedal the scenic byway; the bed and breakfasts that offer sleeping quarters and more in the agricultural area; and the float trips provided by Palisade Wine Country River Trips.<sup>19</sup>

The Colorado Department of Agriculture and the CSU extension have worked together for “a number of years” and the CTO works with these organizations to promote and help develop agritourism events. The statewide unclaimed property tourism promotion fund monies go toward marketing agritourism, making Colorado one of the few states to have specific funding for promoting agritourism.<sup>20</sup> CTO has put in place a three-year “Come to Life” action plan for promoting agritourism with the stated goal of rural economic development. The plan defined agritourism as:

...the practice of engaging in activities, events, and services that have been provided to consumers for recreational, entertainment, or educational purposes at a farm, ranch, or other agricultural, horticultural, or agribusiness operation in order to allow consumers to experience, learn about, and participate in various facets of agricultural industry, culinary pursuits, natural resources, and heritage.<sup>21</sup>

The plan’s guiding objectives are:

- 1) putting a spotlight on Colorado agritourism businesses that are visitor ready,
- 2) stimulating the development of fresh and new high-quality agritourism experiences for travelers, and
- 3) supporting regional clusters of businesses that are working together to develop and promote agritourism.<sup>22</sup>

Colorado sorts its agritourism activities into three general classifications: on-farm or ranch, food-based, and farm or ranch heritage and history activities.<sup>23</sup> As shown

---

<sup>19</sup> Penny Stine, “Agriculture and Tourism Still a Mainstay in Palisade,” *The Daily Sentinel* (Grand Junction, CO), May 13, 2011.

<sup>20</sup> Walden and others, “A Three-Year Action Plan For the Promotion of Agritourism in the State of Colorado,” 6-7.

<sup>21</sup> Walden and others, “A Three-Year Action Plan For the Promotion of Agritourism in the State of Colorado,” 3.

<sup>22</sup> Walden and others, “A Three-Year Action Plan For the Promotion of Agritourism in the State of Colorado,” 4.



by the surveys mentioned, people are more interested than ever in where their food comes from and in the process of growing food. A growing number of people are “no longer content to impersonally pick up a box of peaches or a half-bushel of green beans, [and] conscientious consumers are researching farms, engaging farmers and touring and dining in their orchards. If they can’t get the dirt underneath their fingernails themselves, they at least want to see for themselves how it gets there.” They can have these experiences in a variety of ways, and Colorado’s Grand Valley is one region that offers a little bit of everything in the way of agritourism activities. As Carol Zadrozny of Z’s Orchards in Palisade put it, “Agritourism places have their own niches.” She said, “For High Country (Orchards and Vineyards), you see high-tech, computer-driven stuff. When you go to Alida’s (Fruits), you get to talk to Farmer Bob (Helmer). If you come to Z’s, it’s like going back to Grandma and Grandpa’s farm.”<sup>24</sup>

The Agri-Tourism link on the Palisade Chamber of Commerce website touts “apples, apricots, cherries, pears, plums, melons, chili peppers, heirloom tomatoes, herbs and more” grown in the area. One can also read that Palisade is the Wine Capital of Colorado and that it offers biking, river float trips, hiking, disc golf, closeness to the Grand Mesa and the Colorado National Monument, and an historic downtown—besides various arts and festivals. Specifically,

Palisade’s agricultural businesses offer a great opportunity to learn firsthand how fruit, wine and farm products are grown from the ground up, then prepared and sent to market. Take your pick of tours: orchards and farms, vineyards and wineries, brewery or distillery. Indoor tours of wineries, distillery and brewery operations capture the craftsmanship of

---

<sup>23</sup> Colorado Department of Agriculture, “What is Agritourism,” [http://www.colorado.gov/cs/Satellite/ag\\_Markets/CBON/1251624660769](http://www.colorado.gov/cs/Satellite/ag_Markets/CBON/1251624660769) (last accessed August 14, 2014).

<sup>24</sup> “Visitors Inquisitive about How their Food Is Produced,” *The Daily Sentinel* (Grand Junction, CO), September 2, 2011.

beverage-making. In addition, you can learn about lavender uses, milling alpaca wool, hops processing, packing ripe peaches, conventional and organic orchards, packaged fruit producers, fruit stands, and vineyards brimming with an assortment of wine grapes.<sup>25</sup>

Town planners said, “The overall cultural belief system in Palisade is that Palisade is an ag center and that people value the ag industry,” and the scope and the variety of the offerings support that assessment.<sup>26</sup> As such, Palisade presents a venue for exploring agritourism landscapes which represent the work being done by committed farmers and supportive townspeople in Colorado’s upper Grand Valley.

### **Three Seasons of Upper Grand Valley Festivals**

The Upper Valley has a lot to celebrate and its festivals do a good job of publicizing its agricultural attractions. Festivals are a tradition here and are increasing in number and in popularity. Grand Junction held its first annual Peach Day festival in 1890, an event currently held each year in Palisade.<sup>27</sup> While the Palisade Peach Festival and Colorado Mountain Winefest are the most well-known festivals that take place in the Grand Valley, the region is now hosting several farm-product-related festivals during the spring, summer, and fall. Notably, according to *The Daily Sentinel* in 2010, the Palisade Chamber of Commerce made a deliberate effort to “weave agritourism into its festivals... Each festival schedule lists local orchards and farms open for tours that day...” Grand Junction Downtown Development Authority spokeswoman Kathy Dirks noted that many places benefit, including her city, from the festivals, “especially the businesses that actively seek to get people in” during them. Grand Junction Visitor

---

<sup>25</sup> The Palisade Chamber of Commerce, “Agri-Tourism,” <http://palisadecoc.com/co/agri-tourismnew> (last accessed July 10, 2014).

<sup>26</sup> Rebecca Levy (city planner, Town of Palisade) and Richard Sales (city planner, Town of Palisade), in discussion with the author, August 2012.

<sup>27</sup> Wyckoff, *Creating Colorado*, 230.

and Convention Bureau spokeswoman Jennifer Grossheim-Harris said they encourage new festivals and they encourage them to be more than one day so that the hotels will benefit too.<sup>28</sup> These festivals not only significantly help the Palisade and Grand Valley communities financially, they also contribute in an important and entertaining way to educating the general public on the importance of agriculture to this fruitful region.

The Palisade International Honeybee Festival is the first agritourism-related festival to take place in the calendar year and occurs in April. The festival began in 2010. The festival places emphasis on “a healthy honey bee population worldwide” and works to raise awareness of “its impact on agriculture and society.”<sup>29</sup> Among the activities at the 2014 event was a spelling bee, a costume contest, educational presentations, live entertainment, and various visiting street vendors. Special Bee Bus Tours included stops at an art show, at the Meadery of the Rockies, where honey wine is made, and at the Wine Country Inn.<sup>30</sup>

An event with a festival-like atmosphere that takes place once in late April and once in early May is the Barrel Tasting, an opportunity to sample wine before it is bottled. The Barrel Tasting is limited to 425 people. Parker Carlson, owner of Carlson Vineyards, stated that this event “gives people a chance to understand connections between the vintner and the wine.” He noted that this event is “about the only festival I really enjoy anymore” because he appreciates the opportunity it gives him to interact with and educate visitors in a more intimate, slower-paced setting.<sup>31</sup>

---

<sup>28</sup> Emily Shockley, “Summer Festival Season Kicks Off,” *The Daily Sentinel* (Grand Junction, CO), April 16, 2010.

<sup>29</sup> “About the Festival,” [http://palisadehoneybeefest.org/About\\_Us.html](http://palisadehoneybeefest.org/About_Us.html) (last accessed October 11, 2014).

<sup>30</sup> “Schedule (Calendar),” [http://palisadehoneybeefest.org/Schedule\\_\\_Calendar\\_.html](http://palisadehoneybeefest.org/Schedule__Calendar_.html) (last accessed October 11, 2014).

<sup>31</sup> Parker Carlson (owner, Carlson Vineyards), in discussion with the author, August 2012.

Palisade hosted its first Colorado National Bank Brews & Cruise Festival in May 2014. This event, which was scheduled again for 2015, featured a bike ride, music, food, and a beer garden sponsored by the Palisade Brewing Company. There was a street dance on Friday evening and a festival on Saturday in Memorial Park that featured the opportunity to sample beer from over 20 breweries from Colorado's Western Slope and Front Range and food and merchandise from several local and regional vendors. Attendees who wished to sample the alcoholic beverages, like the Palisade Brewing Company's Dirty Hippy, paid \$25 to enter the festival, and those who did not want to sample forfeited \$10.<sup>32</sup>

In June, Palisade's Riverbend Park fills up with campers for the Bluegrass and Roots Festival, first held in 2008. Attendance in 2013 set a record at 2,200.<sup>33</sup> In 2014, this three-day event featured "yoga, music workshops, jam sessions, local wines, craft beers, hand-mixed drinks, delicious foods, artisan goods, a kid's activity tent, and guided hikes and bike rides to natural, cultural and archaeological sites." The shows are general admission with seating on the lawn and ticket prices for the event vary from \$32 to \$160 depending on the number of days desired.<sup>34</sup> The Bluegrass and Roots Festival is sponsored by the town and is a family-oriented, "shoulder season" event that occurs before the first crop typically is harvested.<sup>35</sup>

---

<sup>32</sup> "Colorado National Bank Brews & Cruise Festival," <http://www.palisadeturism.com/events/item/colorado-national-bank-brews-cruise-festival-and-palisade-gran-fondo> (last accessed October 11, 2014); "Palisade Must-Dos," *Vacationland* (supplement to *The Daily Sentinel* (Grand Junction, CO), May 18, 2014, M23.

<sup>33</sup> Penny Stine, "Palisade Bluegrass and Roots Music Festival," *Vacationland* (supplement to *The Daily Sentinel* (Grand Junction, CO), May 18, 2014, M37.

<sup>34</sup> "Venue," <http://www.palisademusic.com/venue/> (last accessed October 11, 2014); Stine, "Palisade Bluegrass and Roots Music Festival," M37.

<sup>35</sup> Rebecca Levy (city planner, Town of Palisade) and Richard Sales (city planner, Town of Palisade), in discussion with the author, August 2012.

In July 2011, the non-profit Lavender Association of Western Colorado (LAWC), created in 2009, sponsored Colorado’s first Lavender Festival to “show people the many uses of lavender.”<sup>36</sup> Palisade’s Lavender Festival continues to be the state’s only lavender celebration and reflects a new agricultural industry on the Western Slope (Figure 33).



**Figure 33. Lavender is a new cash crop grown in the Upper Valley.**

It all started when Kathy Kimbrough of LAWC visited a similar festival in Sequim, Washington, and returned with ideas for the Palisade-based group. She explained that “two species are currently grown in the area. English lavender is used for

---

<sup>36</sup> Kelly Gillis-Johnson, “Lavender: Love and Learn,” *Beacon Senior News* (Grand Junction, CO), July 9, 2012; “Welcome to the Lavender Association of Western Colorado,” <http://www.coloradolavender.org/> (last accessed October 11, 2014).

oils, cooking and potpourri... French lavender, or lavandin, a hybrid lavender, is mostly just used for the perfume industry.” She stressed that “this is not a celebration for farmers alone.” The Festival, held during the prime blooming season for lavender, features “tours of lavender farms [in the Grand Valley], a visit to an art studio and lavender gardens, a wine reception, local lavender lunch, and a lesson on farming techniques.” In addition, there are opportunities for visitors to “make lavender wands, lavender wreaths, and lavender bundles” and enjoy “vendors, live entertainment, music and food.” There are seminars about “growing tips, the history of lavender, aromatherapy, essential oils, and cooking with lavender.”<sup>37</sup> Barbara Bowman, Executive Director of the Grand Junction Visitors Bureau, noted the great potential in having the lavender festival in July, as previously there was no event in that month.<sup>38</sup> In 2013, the third year for the event, John and Carol Mueller, owners of The Lavender Lady and Friends Boutique in Palisade, served lavender-infused water and lavender margaritas made from their own mix at their festival booth on Saturday. Other vendors offered “infused cooking oils, treats, soaps, sachets, aromatherapy products and even bug sprays.” Ten Palisade wineries and lavender farms participated in the lavender-focused tours on Sunday of the event.<sup>39</sup> Moreover, the LAWC website proclaims, “Bees love lavender,” so it is likely many honeybees participated as well.<sup>40</sup>

In August, the most famous and historic festival in the Grand Valley takes place—the Palisade Peach Festival. Traditionally, the festival took place in September,

---

<sup>37</sup> Kelly Gillis-Johnson, “Lavender: Love and Learn,” *Beacon Senior News* (Grand Junction, CO), July 9, 2012.

<sup>38</sup> Barbara Bowman, (Executive Director, Grand Junction Visitors Bureau), in discussion with the author, August 2012.

<sup>39</sup> Amy Hamilton, “Potions, Lotions and Oceans of Lavender,” *The Daily Sentinel* (Grand Junction, CO), July 14, 2013.

<sup>40</sup> Lavender Association of Western Colorado, <http://www.coloradolavender.org/> (last accessed October 15, 2014).

largely celebrating the end of the peach harvest, which historically took place in August because farmers only grew one variety of peaches, Elbertas. Since, the 1960s, the festival has occurred in early-to-mid-August. Although most growers are in the middle of picking their peaches, visitors have the opportunity to see the working agricultural landscapes throughout the Upper Valley. Renee Herman noted the significance of the Peach Festival to the region, “It’s one of our biggest revenues... And that’s what keeps Palisade, and, I think, the Junction area going” (Figure 34).<sup>41</sup>



**Figure 34. Palisade Peach Festival in August 2012.**

---

<sup>41</sup> Kattey Ortiz, “Peach Farmers in Palisade Prepare for Their Favorite Time of Year,” *KREXTV*, August 15, 2014, <http://www.westernsloopenow.com/story/d/story/peach-farmers-in-palisade-prepare-for-their-favori/38910/-HN54pXAbEuxc8XS2czEsA> (last accessed October 17, 2014).

Peach Fest has the highest attendance of the festivals. Some 14,000 people attended the 2013 Peach Festival.<sup>42</sup> For the 2014 event, 15,000 locals and visitors swarmed Palisade's Riverbend Park.<sup>43</sup> Events for the 2014 celebration ranged over four days and included a peach recipe contest, a baseball game, a Biggest Beauty Peach Contest, a parade, live music, a peach-eating contest, games and a coloring contest at the "Jake's Jungle" children's area, a pancake breakfast, a free ice cream social, walking tours, the Palisade Peach Plunge down the Colorado River, two Feast in the Fields dinners, the Bag Jump, the crowning of the Peach Queen and the naming of the Town Grouch, and opportunities to view merchandise from numerous vendors.<sup>44</sup> Because of the good 2014 peach crop, planners hoped to include a drawing for a basket of peaches every half hour during the Saturday festival. The previous year, the drawings had been limited to once per hour. The price of admission to the main event, the Saturday festival, was \$5.<sup>45</sup>

Palisade also hosts a wine-related festival in September during the grape harvest.<sup>46</sup> In terms of tourism revenue generated for the Grand Valley, Colorado Mountain Winefest is the biggest festival of the year, with an economic impact in 2013 around \$750,000 to \$1 million. It started in 1992 in Veterans Memorial Park in Palisade

---

<sup>42</sup> Ortiz, "Peach Farmers in Palisade Prepare for Their Favorite time of Year."

<sup>43</sup> "Mark your Calendars! Next Years (sic) Peach Festival Will Be August 13-16<sup>th</sup>, 2015," <http://palisadepeachfest.com/pf/> (last accessed October 11, 2014).

<sup>44</sup> "Peach Festival Schedule," <http://palisadepeachfest.com/pf/peach-festival-schedule/> (last accessed October 11, 2014).

<sup>45</sup> "Palisade Peach Festival," *Vacationland* (supplement to *The Daily Sentinel* (Grand Junction, CO), May 18, 2014, M43.

<sup>46</sup> Doug Caskey, "Colorado Wine: Rooted in History," *Colorado Business Review* 78, no. 4 (2012): 4.



with five wineries and with an attendance of about 500.<sup>47</sup> In 2012, Palisade was ninth on the list of the top US wine destinations on TripAdvisor’s “2012 Travelers’ Choice Wine Destination List.”<sup>48</sup> Thus, the now four-day destination event has become much larger and has had to move to the much larger Riverbend Park. The event now requires the assistance of about 300 volunteers. In 2012, attendance for Winefest was about 5,000. In 2013, the event grew to 5,846 attendees representing 38 states. Forty-seven Colorado wineries took part in the festival and offered 423 different wines for sampling. In 2013, 23 of the wineries signed the Colorado Appellation Pledge to support bringing only “Colorado-grown wines” to Winefest, and that pride holds true today.<sup>49</sup>

Besides residents working hard to just get the word out, several pieces of important legislation have helped the industry and the festival over the years. In 1990, state politicians enacted the Colorado Wine Industry Development Act, creating “a continuously appropriated funding stream from a penny per liter excise tax on all wine sold in the state, an additional \$0.01-\$0.05 per liter sliding scale excise tax on wine produced by Colorado wineries, and \$10 per ton on grapes and other produce used by Colorado wineries to make wine.” In the last few years, funds have amounted to more than \$600,000 per year. One-third of the money generated each year goes toward research and another third goes toward promoting the industry. Doug Caskey, Executive Director of the Colorado Wine Industry Development Board (CWIDB), called this legislation “the single event that moved Colorado’s wine industry further ahead of the

---

<sup>47</sup> Caitlin Row, “Colorado Mountain Winefest Attracts Record Numbers to Palisade,” *Grand Junction Free Press* (Colorado), September 24, 2013; Sandie Cooper (Executive Director, CAVE) and Cassidee Shull (Program Director, CAVE), in discussion with the author, August 2012.

<sup>48</sup> “Colorado’s Wine Ranking Nothing to Whine About,” *Denver Business Journal*, October 16, 2012.

<sup>49</sup> Caitlin Row, “Colorado Mountain Winefest Attracts Record Numbers to Palisade,” *Grand Junction Free Press* (Colorado), September 24, 2013.

other Four Corner states.”<sup>50</sup> Caskey also lauded the work of Ron Binz, a former leader of the CWIDB, and former State Senator Ron Teck in helping with appropriate legislation. In the late 1990s, a question was raised about the legality of allowing “consumers to carry wine samples from booth to booth.” According to Caskey, Binz “drafted a very strong bill that created the wine festival permit within the Colorado Liquor Code, CRS 12-47-403.5, allowing multiple wineries to share a single permit for festival premises as well as addressing liability issues. This allows them to put on all of the events that we have come to love.”<sup>51</sup>

A few years after that there was a question about whether the Colorado Association for Viticulture and Enology (CAVE), a non-profit trade association, could legally sell “tickets to an event licensed by commercial, independent wineries.” Caskey said that Teck:

...introduced a bill within the last few weeks of the session that allows a non-profit organization to get a special events permit and sell tickets for happenings that are co-located with the premises of a wine festival permit. As the bill was introduced at the last possible minute, it may have been one of the fastest passed pieces of legislation on record, all thanks to the strong support of then-Sen. Ron Teck.<sup>52</sup>

Winefest includes cooking demonstrations, live performances, arts and crafts, locally made ciders, and wines from around 50 state wineries (Figure 35).<sup>53</sup> Other activities associated with Winefest include learning about food and wine pairings first-hand at local restaurants for less than \$20 per person, a comparative wine-tasting at Palisade’s Wine Country Inn, a chocolate and wine-tasting event also held at the Inn,

---

<sup>50</sup> Doug Caskey, “Colorado Wine: Rooted in History,” 4.

<sup>51</sup> Ben Weinberg, Wine, Chocolate and Food in the Vineyards of Western Colorado,” *The Colorado Statesman* (Denver), September 19, 2013.

<sup>52</sup> Ben Weinberg, Wine, Chocolate and Food in the Vineyards of Western Colorado,” *The Colorado Statesman* (Denver), September 19, 2013.

<sup>53</sup> Sandie Cooper (Executive Director, CAVE) and Cassidee Shull (Program Director, CAVE), in discussion with the author, August 2012.

and a day of winery tours. Visitors have opportunities to learn about “Colorado’s unique terroir,” to discover common aromas of wines, to learn specifics about “Navigating Colorado Wine Country,” and even to participate in an “introduction to grape growing.”<sup>54</sup> And, one of the highlights is the grape stomp event; in 2013 Talbott Farms donated 600 pounds of grapes for that event.<sup>55</sup> The cost of admission to the main festival in 2014 was \$45 for wine-tasters and \$25 for non-drinkers.<sup>56</sup>



**Figure 35. Colorado Mountain Winefest 2012.**

---

<sup>54</sup> Ben Weinberg, “Wine, Chocolate and Food in the Vineyards of Western Colorado,” *The Colorado Statesman* (Denver), September 19, 2013; Brittany Markert, “Colorado Mountain Winefest Infused with Tasting Options in Palisade, Colorado,” *Grand Junction Free Press* (Colorado), September 16, 2014; “Colorado Mountain Winefest,” <http://www.winecolorado.org/events/mountain-winefest/> (last accessed July 10, 2014).

<sup>55</sup> Caitlin Row, “Colorado Mountain Winefest Attracts Record Numbers to Palisade,” *Grand Junction Free Press* (Colorado), September 24, 2013.

<sup>56</sup> “Colorado Mountain Winefest,” <http://www.winecolorado.org/events/mountain-winefest/> (last accessed July 10, 2014).

Colorado Mountain Winefest also features a bicycle event. The Tour de Vineyards began in 1993 with about 300 bicyclists. In 2013, over 800 riders represented 11 states, with 10 percent more female riders than male. For 2014, the event fee for the 25-mile ride was \$55 and that included a T-shirt, some peaches, and a brunch after the ride.<sup>57</sup>

The proceeds of this festival support much of the work of CAVE, particularly its annual regional trade conference. The event is well-advertised and passes go on sale months ahead of the event.<sup>58</sup> Caskey stated he believes “the most successful way to convert to drink Colorado wines is to taste it. The Winefest is the best place to go for it, and it’s a great event for the growing industry.”<sup>59</sup> Certified sommelier and noted wine writer Ben Weinberg has said, “I highly recommend you take this unique opportunity to taste Colorado’s wines.”<sup>60</sup> City planners Rebecca Levy and Richard Sales call it “a great asset to the community” and say that it is helping the Grand Valley get a “stay crowd.” Levy and Sales noted that people often book their rooms for the next year before they leave town.<sup>61</sup>

In October 2014, the first two-day Quilt and Fiber Art Festival took place in Palisade’s Memorial Park. Cindy and Mike McDermott, owners of Suncrest Orchards Alpacas and Fiber Works in the Upper Valley, along with other alpaca raisers used to

---

<sup>57</sup> Brittany Markert, “Colorado Mountain Winefest Infused with Tasting Options in Palisade, Colorado,” *Grand Junction Free Press* (Colorado), September 16, 2014; Caitlin Row, “Colorado Mountain Winefest Attracts Record Numbers to Palisade,” *Grand Junction Free Press* (Colorado), September 24, 2013; Colorado Mountain Winefest,” <http://www.winecolorado.org/events/mountain-winefest/> (last accessed July 10, 2014).

<sup>58</sup> Caitlin Row, “Colorado Mountain Winefest Attracts Record Numbers to Palisade,” *Grand Junction Free Press* (Colorado), September 24, 2013.

<sup>59</sup> Brittany Markert, “Colorado Mountain Winefest Infused with Tasting Options in Palisade, Colorado,” *Grand Junction Free Press* (Colorado), September 16, 2014.

<sup>60</sup> Ben Weinberg, “Wine, Chocolate and Food in the Vineyards of Western Colorado,” *The Colorado Statesman* (Denver), September 19, 2013.

<sup>61</sup> Rebecca Levy (city planner, Town of Palisade) and Richard Sales (city planner, Town of Palisade), in discussion with the author, August 2012.

celebrate the fiber festival during the Palisade Peach Festival. The alpaca coalition approached the Palisade Chamber of Commerce after the 2013 Peach Festival, stating they had seen a decline in the number of participants attending the fibers showcase and pointed out that people do not think about purchasing winter clothing in August. The two-day event featured related activity classes for \$10; admission to view fiber art demonstrations and visit art and food vendors was free.<sup>62</sup>

### **Traditional and Emerging Agritourism Landscapes in the Upper Grand Valley**

While festivals bring large numbers of visitors to the valley, traditional agritourism landscapes are also very popular attractions for locals and outsiders. Traditional agritourism landscapes include u-picks, which are one of the oldest types of on-farm agritourism activities, farm tours, roadside produce stands, and farmers markets.<sup>63</sup> Newer agritourism landscapes in the Upper Valley consist of the Colorado Fruit and Wine Byway, the Palisade Brewery, Palisade's Peach Street Distillers, a meadery, alpaca farms, lavender farms and shops, and, of course, several wineries.

In the Upper Valley, a few growers allow visitors to pick their products on their own. Mel Rettig is one. His parents had a u-pick on the farm when they managed it and Rettig wanted to keep the tradition. Rettig has had his for about a decade, and u-pickers primarily come in to pick his tomatoes and peppers. At the time of our talk, which was before the new liability legislation, Rettig admitted that he was "always worried about the liability." As well, our talk was a few days after the arrest of the Jensen brothers, from Holly, Colorado, near Rocky Ford on the Front Range, for the 2011 cantaloupe-

---

<sup>62</sup> Juliann Adams, "Quilt and Fiber Arts Festival Calling for Vendors," *Peach Town News* (Palisade, CO), September 12, 2014, <http://peachtownnews.com/quilt-and-fiber-art-festival-calling-for-vendors/> (last accessed October 1, 2014).

<sup>63</sup> Walden and others, "A Three-Year Action Plan For the Promotion of Agritourism in the State of Colorado," 15.

sourced listeria outbreak. This was one of the worst foodborne illness occurrences in US history, so he was referring to that type of danger, too. He told me he hoped his customers will continue to have “common sense” about personal safety and food safety. “The best we can do is do all we can to minimize problems,” Rettig maintained.<sup>64</sup>

Bruce Talbott, however, explained that Talbott Farms no longer allows u-pickers in their orchards—participants too often caused damage to the fruit, the trees, and their infrastructure. They squeezed the peaches too hard and bruised them, they snapped branches when trying to reach the higher fruit, and they stepped on the irrigation systems, breaking sprinkler heads and lines. For the Talbotts, “it’s just not worth it to explore agritourism” in that on-farm sense. The Talbotts do, however, have a store on the east side of their packing shed in which they sell their fresh fruits, apple juice, and ciders.<sup>65</sup>

Just as legislation helped the wine industry, there was a need for legislation to help the agritourism industry. Farmers interested in having agritourism activities have had to worry about liability issues. People can get hurt when they come on a property and participate in activities that get their hands dirty. And that is one of the points of agritourism—providing hands-on experiences.

Carol Zadrozny of Z’s Orchard, for example, was “ready to capitalize on the growing interest in food.” Carol added a commercial kitchen so that visitors would be able to not only pick their own food but also cook a meal on site (Figure 36). Carol soon found out her insurance company did not like this idea because of the potential for injury for which she would be liable. At the time, Zadrozny maintained that a lawsuit

---

<sup>64</sup> Mel Rettig (owner, Rettig Farms), in discussion with the author, September 2013.

<sup>65</sup> Bruce Talbott (orchard and vineyard manager, owner, Talbott Farms), in discussion with the author, September 2012.

could easily put them out of business.<sup>66</sup> She will always need to have insurance, of course, but she can now feel more comfortable about offering activities like that one and like her agri-tours that highlight their operation to visitors.



**Figure 36. Z's Orchard commercial kitchen.**

In June 2014, Colorado Governor John Hickenlooper (2011-present) signed HB 1280, which reworked previous laws protecting farmers by limiting liability for accidents related to tourism activities to protecting them in “agricultural recreation

---

<sup>66</sup> Luke Runyon and Harvest Public Media, “Working Out The Kinks To Rebrand Colorado As An Agritourism Destination,” June 26, 2014, <http://www.kunc.org/post/working-out-kinks-rebrand-colorado-agritourism-destination> (last accessed July 10, 2014).

activities” or agritourism activities.<sup>67</sup> Essentially, HB 1280 “enhances civil liability protections for farms, ranches and other rural properties that offer tourist activities as a way to supplement their agricultural income” by giving farmers “additional protections against lawsuits if they post a sign regarding the risks of the activities and get participants in activities like horse riding to sign a statement.” The CTO helped warrant the bill, “saying it will help to foster a small but growing industry.” Republican Representative Tim Dore stated that he believes the new bill “will help the agritourism industry grow in Colorado,” calling agritourism a “valuable economic driver” in rural areas of the state. “Businesses will be able to have the security they need to expand and the piece [sic] of mind to participate in the agritourism activities,” added Dore.<sup>68</sup>

A variety of other activities are available for agritourists who want to experience agritourism and purchase fruits, vegetables, wines, and value-added Grand Valley products. Wineries, with their tasting rooms and product/gift shops, also bring in people for concerts, meetings, weddings, birthday parties, and classes (Figure 37). Many wineries, the meadery, the Palisade Brewery, and the Peach Street Distillers, which offers peach and pear brandy, Jackelope Gin, and Goat Artisan Vodka, are open for business all year.<sup>69</sup> There are about 18 Upper Valley fruit stands noted on the Colorado Fruit and Wine Byway map; however, the list of those who paid to get on that list does not accurately portray the true number of stands that dot the landscape depending on the

---

<sup>67</sup> Copper Blog, “Colorado Agritourism Gets a Helping Hand,” June 7, 2014, <http://www.coppercoloradocondos.com/copper-mountain-blog/post/colorado-agritourism> (last accessed July 12, 2014).

<sup>68</sup> Ed Sealover, “Hickenlooper Signs Five Final Business Bills on Last Possible Day,” *Denver Business Journal*, June 6, 2014.

<sup>69</sup> “Palisade Must-Dos,” *Vacationland* (supplement to *The Daily Sentinel* (Grand Junction, CO)), May 18, 2014, M23.



time of year.<sup>70</sup> Some stands are in historic packing sheds. Others take up a small amount of square footage in larger, modern-day packing sheds as the Talbotts do with their Mountain Gold products. Some operate stands located off their farm property such as Alida's Fruits. This stand uses locally grown fruits to manufacture value-added products such as jams, jellies, syrups, and salsas. These are made in Palisade and sold along with fresh fruit and vegetables at retail outlets in downtown Grand Junction and East Orchard Mesa and through an online store. The business receives customers from all 50 states and many international visitors according to the owner.<sup>71</sup> Yard stands vary. Some growers set up shop in garages attached to their homes. One might also see a temporary structure built at the end of a driveway. Signage, brightly painted buildings and décor, and just the knowledge of the presence of mouth-watering fruit and vegetables will snag passersby to fruit stands.

---

<sup>70</sup> Palisade Chamber of Commerce, "Palisade & East Orchard Mesa Area Map: The Heart of Colorado Fruit & Wine Country" (Palisade, CO: Palisade Chamber of Commerce, 2015).

<sup>71</sup> Land Trust Alliance, "Colorado, Palisade Fruitlands – FRPP Economic Research," 2012, 6, <http://www.landtrustalliance.org/policy/documents/colorado-frpp-report> (last accessed July 14, 2014).



**Figure 37. Barrel tasting at DeBeque Canyon Winery with owner Bennett Price.**

Anita Hix has been in the Upper Valley for 15 years, opening her first stand, Anita's Pantry and Produce, in 1999. Her stand is an old packing shed sitting just a few feet—space enough to get a few moderate-sized vehicles in the parking lot—off F Road on Orchard Mesa. Peach orchards hug her stand and her storefront offers a beautiful view of Grand Mesa. “People will stop at my place because it looks like a circus,” she explained. Anita has made a name for herself over the last 15 years among the local growers from whom she purchases her produce and among her customers. Anita not only sells produce but also various homemade salsas. Anita's exceptional customer service and business savviness enabled her to open her second stand in 2013 outside of

Palisade on US Highway 6, just where it winds its way to meet up with the Interstate 70 eastbound on-ramp. Specifically, Anita says she “goes the extra mile.” “Customers can order several boxes of peaches and I can set them to ripen upon their arrival,” Anita explained. As well, she will store her customers’ purchases for them until they are ready to pick them up—either at the end of their stay in a hotel across town or after they have pedaled the Colorado Fruit and Wine Byway (Figure 38).<sup>72</sup>

There are also three farmers’ markets held throughout the Grand Valley that locals and visitors can attend. Fruita, a growing community west of Grand Junction, has its town market on Saturdays at the civic center from 8:00-noon from late-June to mid-September. Grand Junction blocks off Main Street on Thursday nights from 5:30-8:30 from mid-June to late-September. In Palisade, parts of Third Street and Main Street are blocked off on Sundays from 10:00-2:00 from mid-June to mid-September so pedestrians may stroll through the streets to get fresh produce. All of these farmers’ markets have music, artwork, clothing, and family-friendly activities, but Palisade’s offers something a bit more special—the opportunity to take a carriage ride through peach and wine country for \$35-50 per person.

---

<sup>72</sup> Anita Hix (owner, Anita’s Pantry), in discussion with the author, September 2013.



**Figure 38. Anita's Pantry, her first store.**

The newest and perhaps the most novel agritourism attraction/activity is the Colorado Fruit and Wine Byway. The Byway showcases what the Upper Valley is all about and Sandie Cooper and Cassidee Shull of CAVE firmly believe that this will help MLT in their Fruitlands Forever endeavor.<sup>73</sup> Recently, in May 2014, a group from CTO's Agritourism and Heritage Program took a two-day tour of agritourism attractions in Grand Junction, Fruita, and Palisade, as part of their work "to develop a marketing plan and work to promote agritourism throughout the state."<sup>74</sup> One of the

---

<sup>73</sup> Sandie Cooper (Executive Director, CAVE) and Cassidee Shull (Program Directory, CAVE), in discussion with the author, August 2012.

<sup>74</sup> Amy Hamilton, "Valley's Rural Roots Run Deep," *The Daily Sentinel* (Grand Junction, CO), May 15, 2014.

things they were looking over was the “Fruit and Wine Scenic Byway” in Palisade, the result of what Cooper called a “grassroots community effort.”<sup>75</sup> The ribbon-cutting for this project was held on May 11, 2012.



**Figure 39. Signs like this dot the Byway.**

Steve Menke (circa 2015) is the state enologist and was responsible for securing the first funding for the project. He got grants of \$20,000 in 2010 and \$20,000 in 2011, with about half of the money coming from the Colorado Department of Agriculture and the rest coming from CAVE, local governments, and local businesses. At the opening, he said, “I think it behooves all of us to think about this as a first step in a permanent

---

<sup>75</sup> Penny Stine, “Agriculture and Tourism Still a Mainstay in Palisade,” *The Daily Sentinel* (Grand Junction, CO), May 13, 2011.

kind of agritourism effort.” The Byway is 27 miles long and has at least 90 signs advertising the route. Cooper stressed the importance of the signs in getting people off Interstate 70 and other highways. She said, “We wanted something that would help do some branding of routes and provide safety measures and ways to help market businesses along those routes.”<sup>76</sup> The Byway has car, bike, and foot routes and includes access to “wineries, orchards, lavender shops, alpaca farms, and more” (Figure 39).<sup>77</sup>

### **Small Town Development and Community Resources**

Agritourism, just like other forms of tourism, benefits from having this variety in the available activities, from having other attractions nearby, from having complementary businesses that indirectly support it, and from promotion—and all of the above support communities economically. The CTO plan for action noted all of these as factors for success.<sup>78</sup> Juliann Adams is the executive director of the Palisade Chamber of Commerce. She knows firsthand about the community effort that is an essential part of what is ongoing in the Grand Valley. She sees that Palisade is becoming known for its “festivals, the bluegrass festival, the lavender festival, peach fest, wine fest” and that the Fruit and Wine Byway gives tourists “greater access to all the good things that grow and are made in Palisade.” She summed up the experience with:

A lot of people like just getting out and biking through the area, maybe stopping and making it a wine tour in combination with different orchards. Most of our area is flat and not very intense so you can really enjoy yourself, stop in at an alpaca farm, a lavender farm, a winery, an orchard.

---

<sup>76</sup> “Palisade Byway Beckons,” *The Daily Sentinel* (Grand Junction, CO), May 12, 2012.

<sup>77</sup> “Agritourism Must-Dos,” *Vacationland* (supplement to *The Daily Sentinel* (Grand Junction, CO), May 18, 2014, M21.

<sup>78</sup> Walden and others, “A Three-Year Action Plan for the Promotion of Agritourism in the State of Colorado,” 3-4.

We've got such diverse agriculture. And at the end of the day, you can relax at the distillery and brewery.<sup>79</sup>

The agritourism survey conducted in 2006 by CSU indicates that “people are attracted to an area by its natural amenities and this, in turn, spills over into participation in agritourism activities in these areas...”<sup>80</sup> Colorado is a dream state in terms of natural amenities. For the Grand Valley, the Rocky Mountains, the Grand Mesa, the Colorado National Monument, and the historic Colorado River are all within half-a-day's driving distance. Denver is a four-hour drive away. Weather is a natural amenity, of course, and Grand Junction boasts that it was named one of the eight sunniest cities in the US by TourismReview.com.<sup>81</sup>

Numerous businesses in the Palisade region not directly associated with the growing, shipping, and processing of agricultural products support agritourism and are supported by agritourism. Despite the fact that the Palisade Chamber of Commerce homepage says, “Play and Stay in Palisade... Life Tastes Good! Here... all Year Long!,” Palisade is realistically, at this point anyway, a three-season tourist destination.<sup>82</sup> Local business owners like Rondo Buecheler and Julie and Bob Commons agree that the winter months and even the early spring and late fall shoulder seasons are slow business-wise.<sup>83</sup> Julie Commons commented that “There's room in the inn by the

---

<sup>79</sup> Rachel Sauer, “PALISADE: Bask in the Glow of Orchards, Vineyards and Art,” *Vacationland* (supplement to *The Daily Sentinel* (Grand Junction, CO)), May 18, 2014, M22.

<sup>80</sup> William Gascoigne, Martha Sullins, and Dawn Thilmany McFadden, “Agritourism in the West: Exploring the Behavior of Colorado Farm and Ranch Visitors,” *Western Economics Forum* (Fall 2008), 16, <http://ageconsearch.umn.edu/bitstream/92849/2/0702002.pdf> (last accessed July 1, 2014).

<sup>81</sup> “Grand Junction Announces Five Ways to Fall in Love with Fall,” <http://www.visitgrandjunction.com/grand-junction-announces-five-ways-fall-love-fall-0> (last accessed October 16, 2014).

<sup>82</sup> “Palisade Chamber of Commerce,” <http://palisadecoc.com/co/local-attractions> (last accessed October 16, 2014).

<sup>83</sup> Rondo Buecheler (owner, Rapid Creek Cycles and Sports), in discussion with the author, August 2012; Bob and Julie Commons (owners, Dreamcatcher Bed and Breakfast), in discussion with the author, September 2012.

first week of October.” She added “They [Front Range residents] are just too scared to drive over the [Vail] pass.” Indeed, Julie has always worked a second job since opening up the Dreamcatcher Bed and Breakfast to keep her family out of the red.<sup>84</sup>

Rondo explained that he, too, takes on a second and sometimes a third job to make ends meet. When he is not renting and selling bikes and paddleboards, he gives tours down the Colorado River. And in the winter months, he gives ski lessons on the slopes at Powder Horn Ski Resort.<sup>85</sup>

Their businesses indirectly support agriculture, and such community resources are imperative in maintaining an agritourism industry. In 2008, Wine Country Inn opened its doors. The inn is situated between vineyards and Interstate 70. The 80-guestroom hotel has a gourmet restaurant and a smaller pub-style restaurant on its grounds, which may keep some visitors from branching off the grounds. After all, Palisade has only a handful of restaurants, and a couple of them are open only on Fridays and Saturdays. One of the only restaurants open seven nights a week is at the Palisade Brewery, so it has its own agritourism flair. Some bed and breakfast owners, such as Julie and Bob Commons, worried that the inn would destroy their businesses. But Julie framed it this way, “People who stay in hotels will always stay in hotels.” She continued, “Luckily for our small businesses, the hotel is always double-booking, and they’ll refer their outraged customers to us.” Julie also commented that, when visitors

---

<sup>84</sup> Julie Commons (owner, Dreamcatcher Bed and Breakfast), in discussion with the author, September 2012.

<sup>85</sup> Rondo Buecheler (owner, Rapid Creek Cycles and Sports), in discussion with the author, August 2012.



staying with her on a night in the Sunday-Thursday timeframe asked where to eat, she typically points them to Grand Junction.<sup>86</sup>

Recently, Town of Palisade leaders said they were going to phase in \$1.2 million in improvements to the downtown square area to make it more attractive for retail businesses. The improvements would take place in-between the festivals so they would not affect temperaments negatively. These anticipated additions encouraged some locals to consider investing in downtown store frontage. For instance, Cory Johnson talked about opening a sushi restaurant in a former coffee shop. In May 2014, Johnson was waiting for clearance from the Mesa County Health Department.<sup>87</sup>

Indeed, visitors expect certain amenities when they travel with leisure in mind. For agritourism and for Palisade's economic well-being, more investments like what the Town of Palisade proposed are needed. Palisade may be able to round out its calendar with events in other months; it already does feature Halloween activities and pumpkin patches, a Chocolate Walk of downtown in November, and various Christmas activities. More advertisement on the opportunities for winter activities in the upper Grand Valley would be a step in the right direction.

Advertisement is vital all year long. According to the Longwoods International "Colorado Travel Year 2012 Final Report," 71 percent of those who planned their leisure trips to Colorado used the internet for trip planning purposes.<sup>88</sup> On the internet, one can find Grand Junction's *The Daily Sentinel* annual "Vacationland" supplement, various CTO Come to Life website offerings, like the new Colorado Roots guide or

---

<sup>86</sup> Julie and Bob Commons (owner, Dreamcatcher Bed and Breakfast), in discussion with the author, September 2012.

<sup>87</sup> Penny Stine, "New Festivals, New Business Ventures Keep Palisade in a Celebratory Mood," *The Daily Sentinel* (Grand Junction, CO), May 8, 2014.

<sup>88</sup> Longwoods International, "Colorado Travel Year 2012 Final Report," 175.

“app” for “local-food eaters, craft-beer lovers, scenic-byway drivers, fresh-fruit pickers, history-museum browsers, tiny-lamb petters, dude-ranch fanciers and everything in between,” and excellent results for searches on Grand Junction and Palisade.<sup>89</sup> In summer 2013, Palisade was featured in a two-page spread in *Sunset* magazine.<sup>90</sup> In June 2014, Mesa County was featured in a 36-page article in *US Airways Magazine*, available online and in print in airline seatbacks, with the expectation that over 6 million passengers would fly US Airways that month and perhaps view the article.<sup>91</sup> The CTO action plan is solidly behind promotion, planning on working on marketing, regional roadshows, online resources, peer mentors, matching grants, quality standards, and legislation to bolster agritourism’s niche in Colorado’s tourism industry.<sup>92</sup>

Most of all, however, businesses recognize the value of working together, and they are making leaps in that. Recently, businesses in the valley have joined the Quilt Trail, a tradition beginning in Ohio and led in the US by residents in two North Carolina counties. The objective is for tourists to visit structures that have depictions of quilts on them—“flat blocks of wood painted to look like quilts and affixed prominently to the side of a barn” or some type of other visible structure. Barbara Webster, from Quilt Trails of Western North Carolina, called the quilt squares “a history repository,” noting they “tell the story of the site where they hang, so in a way we are giving a voice to the land and the buildings... I like to think of the blocks as mirrors of who we are.”

Webster maintained quilt trails bring in a specific clientele who will spend money in

---

<sup>89</sup> “Colorado Roots,” <http://www.colorado.com/roots> (last accessed July 14, 2014).

<sup>90</sup> Elisa Bosley, “Why You’ll Love Palisade, CO,” *Sunset*, August 2013, 23-24,

<sup>91</sup> Mesa County Headlines, “US Airways Magazine to Feature Mesa County,” March 12, 2014, <http://blog.mesacounty.us/2014/03/us-airways-magazine-to-feature-mesa.html> (last accessed July 14, 2014).

<sup>92</sup> Walden and others, “A Three-Year Action Plan For the Promotion of Agritourism in the State of Colorado,” 22-23.

local businesses, potentially benefiting communities across the US.<sup>93</sup> It is a bit too early to tell how much of an increase there will be in visitors and in revenue in the Grand Valley from its additions to the Quilt Trail, but local businesses such as Suncrest Orchards Alpacas and Fiber Works, Dreamcatcher Bed and Breakfast, Kokopelli Fruit Stand, and several others have indeed created another reason to visit this special agricultural region that encourages visitors to learn about its heritage (Figure 40).



**Figure 40. “Tree of Life” barn quilt at Suncrest Orchard Alpacas and Fiber Works.**

### **Educating for Grand Valley’s Agricultural Future**

Agritourism is blooming across the US, and, in the American West, many farmers are seeing this additional activity on their landscapes as a valuable enterprise.

---

<sup>93</sup> Barbara Webster, “What is Quilt Trails All About?,” <http://quilttrailswnc.org/What-is-Quilt-Trails-All-About.pdf> (last accessed October 15, 2014).

The economic importance is a given. But, perhaps just as important is that agritourism activities educate those who partake in them. Biologist Richard Brewer was talking about land trusts and protecting land when he said, “Education, education, education.”<sup>94</sup> That refrain should be echoed for agritourism. Indeed, Martha Sullins, a CSU Extension specialist in agriculture and business management, said agritourism “is a tremendous opportunity for farmers and ranchers if they can find the right fit. We all eat, and it’s a great way to introduce people to other aspects of farming, including ecology and environmental management.”<sup>95</sup>

Agritourism may be one of the most encouraging means in recent years to inform citizens about agricultural heritage, to teach them about where their food comes from, and to show them why it is important to protect the resources needed for agriculture to be sustainable, especially land and water. The problem of too much growth on prime agricultural land, the significance of drought and the need to use available water in the best ways possible, and the obligation to have something good to leave our children are not easy themes to demonstrate to individuals who label making a dollar in the quickest way possible as progress. Agritourism puts the important, and often unnoticed, work of farmers in an attractive package for those who visit. If visitors listen closely enough, they can understand the love farmers have for their land and their life. Visitors can taste, see, hear, touch, and smell their way to a new appreciation for agricultural landscapes. Steve Flynn, a Colorado winery owner, said, “We see ourselves as an integral part of protecting the land for agriculture. So whenever anyone comes through on a tour, we show them where our grapes are grown and we share how

---

<sup>94</sup> Brewer, *Conservancy*, 229.

<sup>95</sup> Stacy Nick, “Farms, Fans Eat up ‘Agritainment,’” *The Coloradoan* (Fort Collins), August 10, 2014.

important those growers [are] to our state. This is more than about just my business.”<sup>96</sup>

Bruce Talbott, too, argued agritourism allows smaller growers extra options for income, but he acknowledged agritourism as a phenomenal opportunity for education—and to Bruce, education is the most important factor for the continued success of farming.<sup>97</sup>

Brewer also noted that saving farmland may not be as “cool” as saving natural land.<sup>98</sup> Perhaps, agritourism can change that, particularly since there has been a rebirth in the foodie movement and tremendous growth in the wine, craft beer, and spirits industry. Perhaps, in the American West, this movement will help make people aware that not every landscape needs to be developed in the modern sense, that being packed to the brim with housing, shopping venues, or with other uses is not always a version of progress that we need. The more people know about where food comes from the more they appreciate the work involved, the people who do the work, and the heritage behind it all.

The Utes once roamed the Grand Valley. Settlers once dug miles of ditches to move water where they needed it. Men called “stiltwalkers” used to strap on tall stilts to be able to prune trees and pick fruit. In order to have ice to use for shipping fruit in the old days, plots of land were deliberately flooded during the cold weather. Blocks of ice were cut from these frozen ponds and put into special compartments on rail cars.<sup>99</sup>

Farmers are using new ways to purchase and preserve land, new ways to move and conserve water, and new ways to introduce visitors to their products and their lifeways.

---

<sup>96</sup> Jason Blevins, “Colorado Elevates Agritourism As Yet Another Reason to Visit,” *The Denver Post*, June 22, 2013.

<sup>97</sup> Bruce Talbott (orchard and vineyard manager, owner, Talbott Farms), in discussion with the author, September 2012.

<sup>98</sup> Brewer, *Conservancy*, 227.

<sup>99</sup> “HCT Mesa Land Trust,” <http://youtu.be/pmSoai4HI-k> (last accessed September 30, 2014).

This is all part of the heritage of the Grand Valley—heritage that growers are building on and are excited to share with those who come to see what they have built and taste what they have grown. Perhaps agritourism can help make farmers and farmland “cool” in the eyes of this current generation that too quickly defaults to more instant means of gratification.

The land and life in the upper Grand Valley is special. But this kind of special is only appreciated by those who live it and by those who take advantage of opportunities to explore, listen, and learn. Colorado’s upper Grand Valley is a tiny example of the modern American West. The region has experienced it all—the phasing out and in of the Old West, booms, busts, droughts, recessions, and the phasing in of the New Wests. Farmers in the upper Grand Valley have a formula for conserving farmland and water and for preserving their way of life. The Upper Valley community works hard largely because they believe in what they are doing and because they have seen the successes so far. They have something valuable to leave in the hands of their children. They have something valuable to contribute to conservation and preservation efforts in their state, in their country, and in their world. And that is the point. They have held true to achieve it.

A few days after I interviewed Layne and Marian Brown, two growers who consider themselves to be “peach ranchers” and not farmers, I ran into them as I was running on the road adjacent to one of the Upper Valley’s orchards. They were on their way to feed their neighbor’s horses and we exchanged a few words. After they wished me luck on finishing this project and just before he pulled away, Layne reminded me

that I had had the fortunate “chance to spend time in paradise.”<sup>100</sup> I learned exactly what he meant.

---

<sup>100</sup> Layne and Marian Brown (peach “rancher,” retired), in discussion with the author, September 2012.

## Conclusion: The Grand Valley and the American West

In *Rivers of Empire*, historian Donald Worster, using the Friant-Kern Canal in the Great Central Valley of California as a window, reached conclusions that put limits, likely unintentionally, on understanding the intricacies of places and regions in the American West—irrigation districts, in particular—by centering too much emphasis on the influence of the techno-environmental elements on the overall picture. Specifically, Worster suggested that there was “nothing harmonious, nothing picturesque about the western world that has developed beside the irrigation ditch,” that “there is little peace or tidiness or care, little sense of a rooted community,” that “there is not equitable sharing of prosperity,” and that “the human presence here often seems very much like the tumbleweeds that have been caught in...fences.”<sup>1</sup>

A year after Worster’s initial publication of *Rivers of Empire* in 1985, James Parsons’ “A Geographer Looks at the San Joaquin” appeared in the *Geographical Review*. Parsons let readers know that he simply liked looking at the San Joaquin Valley. He said the region was rich in “promise, for exploration and discovery, for landscape appreciation, and for the study of changing human imprints.”<sup>2</sup> Parsons described the character of the valley in ways that he hoped would prove that richness—not to prove that the valley fit some mold or platform created by someone else.

Geographer Larry Ford characterized the type of place interpretation that Worster provided us with as “all concrete, with no chance for deviating meanders.” Ford warned geographers about these types of studies that saturate regional and place

---

<sup>1</sup> Donald Worster, *Rivers of Empire: Water, Aridity, and the Growth of the American West* (New York: Oxford University Press, 1992), 6.

<sup>2</sup> James J. Parsons, “A Geographer Looks at the San Joaquin Valley,” *Geographical Review* 76, no. 4 (1986), 388.



writing, suggesting that, while it is tempting to “critique the world through a particular theory [or framework], we run the risk of being ever distanced from actual people and places.” Ford continued, “If we use an abstract conceptual framework to examine place characteristics that are themselves abstractions... we pile up sophisticated analyses that are far too internally consistent to capture the real chaotic world.”<sup>3</sup> Parsons, on the other hand, considered land and life in the shaping of the cultural landscape and found “excitement,” “subtle beauty,” and “grandeur” in the continuous evolution of the San Joaquin.<sup>4</sup>

Building on these two opposing ways of reading cultural landscapes in the American West, my study focused on land and life in Colorado’s Grand Valley. In particular, it described how farmers in the Upper Valley have preserved their way of life, their landscapes, and their industry for posterity amid the chaos of changes taking place around them—amenity migration, exurbanization, rural gentrification, and natural resource development. Developing an understanding of their preservation process required looking at landscape change as a function and goal of integrative power—a view that looks not only at the impress of social and political controls on the cultural landscape but also the stamp of human love.<sup>5</sup> This study, thus, builds on several threads in the vast array of literature on the American West that interprets the personalities of places.

My interpretation of the personality of the Grand Valley involved observing closely, participating in daily life, and listening to the people who have lived their lives

---

<sup>3</sup> Larry R. Ford, “Building Biographies: To Know Cities from the Inside Out,” *The Geographical Review* 91, nos. 1-2 (2001): 380.

<sup>4</sup> Parsons, “A Geographer Looks at the San Joaquin Valley,” 389.

<sup>5</sup> Wescoat, Jr., “Introduction: Three Faces of Power in Landscape Change,” 17-19.

here and who have a keen sense of the changes that have occurred in this small, irrigated region of the American West. I also explored archival documents as a vital supplement and counterweight to what I saw and the personal stories that I heard.<sup>6</sup> This study highlighted the emotions and affect of the people in the Grand Valley and how they negotiated their everyday dilemmas. It is rooted in the geographic traditions of location, place, and human-environmental interaction, and it seeks to justify for the Grand Valley what James Parsons said of the San Joaquin—that it should be appreciated for its own sake.

My interpretation is also rooted in the more recent traditions shaped by writers of the “New” American West. Writing on the New West has two strands. First is the New Western History program, which is a revisionist, bottom-up approach to describing the historic and current antagonistic forces in the region—conquest, gender roles, and environmental degradation, for example. Then there is the “New West School” with its own research agenda carried out by geographers, demographers, political scientists, planners, and sociologists. The “New” school focuses on themes that center on changing patterns of land uses and land tenure affected by a changing economic base in the region—one that has shifted from a utilitarian-based economy, what we commonly think of as the “Old West,” to one that centers more on a service-based economy—an outcome related to becoming more integrated with the global economy. This economic transformation has brought unprecedented change to the personality of the American West. Some of its sub-regions have already developed beyond capacity and there are no

---

<sup>6</sup> For a summary on the importance of backing field observations with archival research, see: Karl B. Raitz, “Field Observation, Archives, and Explanation,” *The Geographical Review* 91, nos. 1-2 (2001): 121-131; Cole Harris, “Archival Fieldwork,” *The Geographical Review* 91, nos. 1-2 (2001): 328-331.

signs of that growth's slowing down any time soon.<sup>7</sup> Geographers who study the West adopt and adapt both of these traditions not only to provide relevance to their studies but also as starting points for meandering and showcasing their own themes on the places and regions they explore.

### **A Changing Cultural Geography of the American West**

Worster's critique of the Central Valley illustrated one treatise of the New Western History program which the "Gang of Four," William Cronon, Patricia Limerick, Richard White, and Donald Worster, established in the 1980s. Instead of focusing on ideals of the Old West—frontiers and imperialism, for example—their version of New Western History paid attention to conquest, marginalized peoples, and environmental degradation.<sup>8</sup> Worster laid out his thinking along these lines:

1. Pay attention to our ancestors and "find in them the origin of the problems and questions that plague us today;"
2. "Achieve a more complete, honest, and penetrating view of those ancestors" to find the "flaws and ironies in their achievements; to question their and our successes, to explore other points of view and discover new values;"
3. "Free ourselves from unthinking acceptance of official and unofficial myths and explanations; and
4. "Discover a new regional identity and set of loyalties, more inclusive and open to diversity..., more compatible with a planet-wide sense of ecological responsibility."<sup>9</sup>

Worster's approach to understanding the West has emphasized the techno-environmental elements so much so that he has painted a quite unappealing picture of some scenes in the American West as he sought "to discover a new regional identity

---

<sup>7</sup> Travis, *New Geographies of the American West*, 28-29.

<sup>8</sup> Jerome Frisk and Forrest G. Robinson, "Introduction," in *The New Western History: The Territory Ahead*, edited by Forrest G. Robinson, (Tucson: The University of Arizona Press, 1997), 1-5.

<sup>9</sup> Donald Worster, *Under Western Skies: Nature and History in the American West* (New York: Oxford University Press, 1992), 17-18.

and set of loyalties.”<sup>10</sup> Besides bringing to our attention the technological mastery of the environment, his work has showcased progress in the region as solely driven by economic values—whether from agribusiness or economic development vis-à-vis the federal government—and at the cost of depleting the environment.<sup>11</sup> Both of these economic propellers have played roles in the development of the West and have contributed greatly to the depletion of natural amenities here, but technological mastery over the environment, economic development with federal assistance, and environmental degradation occurred in every regional division of the US, growing stronger, I might add, with each push westward.

So why has the floodlight of this New American West captured the limelight for so many writers? Do these iterations, in which peoples’ perspectives and their interactions with the environment seem to take a backseat to “progress,” tell us the full story of the personality of regions in the American West today? Nearly every landscape, as geographer Bret Wallach simply stated, “is made for money.”<sup>12</sup> Undeniably, people have to make a living. But the cultural landscape mirrors so much more than that, so many subtleties we miss out on if that is too much of the focal point.

Richard White, for instance, has tried for some time to push for a different interpretation for understanding relationships between humans and nature in the American West. He suggested, in *The Organic Machine*, that we look for and emphasize blurred boundaries and impurities and “find, paradoxically, along those

---

<sup>10</sup> Worster, *Under Western Skies*, 18.

<sup>11</sup> See: Worster, *Under Western Skies*, 79-92; Worster, *Rivers of Empire*, 1-16; Worster, “New West, True West: Interpreting the Regions,” *Western Historical Quarterly* 18, no. 2 (1987): 141-156.

<sup>12</sup> Bret Wallach, *A World Made for Money: Economy, Geography, and the Way We Live Today* (Lincoln: University of Nebraska Press, 2015), vii-xvi.

blurred and dirty boundaries ways to better live with our dilemmas.”<sup>13</sup> White’s focus has primarily been on how people have come to know nature through labor. This approach, in my opinion, gets at the heart of recognizing the shaping of the West as a process, which, in turn, helps move us away from reading the West as merely a static region of “capitalism gone rampant.”<sup>14</sup>

More recently, Patricia Limerick focused on a blurred boundary, as she explored the ingenuity and innovativeness of Denver Water as it negotiates the need to provide decreasing amounts of water and still maintain adequate services to a growing population. Limerick argued that the population in the West is “dependent on, complicit with, and indebted to the organizations and institutions that disrupted the ecosystems and disturbed the landscapes that, a little late in the game, we came to treasure.”<sup>15</sup>

Limerick went on to say that this is a:

...paradox that is not going to go away, and it is a source of much mischief if denied and evaded. Handled with honesty, the paradox provides the best footing we have for moving toward a more honest and productive relationship to natural resources and the managers to whom, for so long, we delegated the responsibility to acquire those resources and to supply them to us on demand.<sup>16</sup>

William Cronon reminded us, “Stories about the past are better... if they increase our attention to nature and the place of people within it.”<sup>17</sup> An emphasized interpretation of a human relationship with resources and with past and present managers in the American West is certainly quite different from the New Western History program established in the 1980s that influenced so many writers for the past

---

<sup>13</sup> Richard White, *The Organic Machine: The Remaking of the Columbia River* (New York: Hill and Wang, 1995), xi.

<sup>14</sup> Parsons, “A Geographer Looks at the San Joaquin Valley,” 374.

<sup>15</sup> Patricia Limerick, *A Ditch in Time: The City, the West, and Water* (Golden, CO: Fulcrum Publishing, 2012), 4.

<sup>16</sup> Limerick, *A Ditch in Time*, 4.

<sup>17</sup> William Cronon, “A Place for Stories: Nature, History, and Narrative,” *Journal of American History* 78, no. 4 (1992): 1375.

generation. After all, all things must be added to and even revised to address change—not only changes in landscape but also changes in thinking. Limerick explained, “Like the material infrastructure we inherit from the past, in light of the extraordinary and disorienting pace of change in our world today, ingenuity and foresight themselves require maintenance, reinvestment, and constant redesign.”<sup>18</sup>

White and Limerick have indeed moved toward a deeper understanding of the intricate history of the West. White called landscapes that highlight a new set of dichotomies that blur the boundaries, “hybrid landscapes.”<sup>19</sup> Geographer Blake Harrison called them “middle landscapes.”<sup>20</sup> Most geographers, however, just call them cultural landscapes and understand that they have to be read like a text to grasp their representations. Cultural landscapes are, then, visible, purposeful expressions of land and life. They are also scenes that many historians glance over, thus missing out on key elements to understanding not only the parts of but also the whole of a region.<sup>21</sup>

---

<sup>18</sup> Limerick, *A Ditch in Time*, 9-10.

<sup>19</sup> Richard White, “From Wilderness to Hybrid Landscapes: The Cultural Turn in Environmental History,” *The Historian* 66, no. 3 (2004): 558, 564.

<sup>20</sup> Blake Harrison, *The View from Vermont: Tourism and the Making of an American Rural Landscape* (Lebanon, NH: University of Vermont Press, 2006), 16.

<sup>21</sup> Good places to start are: Peirce Lewis, “Axioms for Reading the Landscape: Some Guides to the American Scene,” in *The Interpretation of Ordinary Landscapes: Geographical Essays*, edited by D.W. Meinig (New York: Oxford University Press, 1979), 11-32; D.W. Meinig, “The Beholding Eye: Ten Versions of the Same Scene,” in *The Interpretation of Ordinary Landscapes: Geographical Essays*, edited by D.W. Meinig (New York: Oxford University Press, 1979), 33-48; Peirce Lewis, “Learning from Looking: Geographic and Other Writing about the American Cultural Landscape,” *American Quarterly* 35, no. 3 (1983): 242-261; Keith H. Basso, *Wisdom Sits in Places: Landscape and Language Among the Western Apache* (Albuquerque: University of New Mexico Press, 1996); Richard H. Schein, “The Place of Landscape: A Conceptual Framework for Interpreting an American Scene,” *Annals of the Association of American Geographers* 87, no. 4 (1997): 660-680; John R. Stilgoe, *Outside Lies Magic: Regaining History and Awareness in Everyday Places* (New York: Warner and Company, 1998); Richard Schein, “A Methodological Framework for Interpreting Ordinary Landscapes: Lexington, Kentucky’s Courthouse Square,” *The Geographical Review* 99, no. 3 (2009): 377-402; Mitch Rose, “Landscapes and Labyrinths,” *Geoforum* 33, no. 4 (2002): 455-467; Don Mitchell, “Cultural Landscapes: The Dialectical Landscape—Recent Landscape Research in Human Geography,” *Progress in Human Geography* 26, no. 3 (2002): 381-389; and Don Mitchell, “Cultural Landscapes: Just Landscapes or Landscapes of Justice?,” *Progress in Human Geography* 27, no. 6 (2003): 787-796.

The “New West School” takes these cultural landscapes under consideration and often pitches them as the “new” antagonists.<sup>22</sup> Much attention has been given to the effects brought about by the increasing population in the rural West—the affects on both its land and life.<sup>23</sup> The reverberating effects of exurbs on plant and animal life, of rural gentrification on ranching and farming families, and of resort zones on communities are all popular themes, too.<sup>24</sup>

Expansion, however, is uneven. Some counties in the American West are struggling to attract new investment and people.<sup>25</sup> Some writers on the New West call this new growth simply another regional “boom,” but geographer William Travis disagreed.<sup>26</sup> “The western development experience,” Travis wrote, “is not a series of boom-and-bust cycles, but rather a history of cumulative expansion that will probably

---

<sup>22</sup> Scout Calvert, “West of Eden: Resource Wars and Nature-Cultures in the American West,” *Science and Culture* 21, no. 1 (2012): 130, 133.

<sup>23</sup> See for example: Peter B. Nelson, “Rural Restructuring in the American West: Land Use, Family and Class Discourses,” *Journal of Rural Studies* 17, no. 3 (2001): 395-407; William J. Parton, Myron Gutmann, and William Travis, “Sustainability and Historical Land-Use Change in the Great Plains: The Case of Eastern Colorado,” *Great Plains Research* 13, no. 1 (2003): 97-125; Peter A. Walker, “Reconsidering ‘Regional’ Political Ecologies: Toward a Political Ecology of the Rural American West,” *Progress in Human Geography* 27, no. 1 (2003): 7-24; and Donald Worster, “The American West in the Age of Vulnerability,” *Western Historical Quarterly* 45, no. 1 (2014): 5-16.

<sup>24</sup> See for example: Paul F. Starrs and John B. Wright, “Great Basin Growth and the Withering of California’s Pacific Idyll,” *The Geographical Review* 85, no. 4 (1995): 417-435; Rina Ghose, “Big Sky or Big Sprawl? Rural Gentrification and the Changing Cultural Landscape of Missoula, Montana,” *Urban Geography* 25, no. 6 (2004): 528-549; Paul Robbins and April Luginbuhl, “The Last Enclosure: Resisting Privatization of Wildlife in the Western United States,” *Capitalism Nature Socialism* 16, no. 1 (2005): 45-61; Jeremy Bryson and William Wyckoff, “Rural Gentrification and Nature in the Old and New Wests,” *Journal of Cultural Geography* 27, no. 1 (2010): 53-75; Paul Robbins, Stephen Martin, and Susan Gilbertz, “Developing the Commons: The Contradictions of Growth in Exurban Montana,” *The Professional Geographer* 64, no. 3 (2012): 317-331; and Christopher Post, “Heritage, Amenity, and the Cultural Landscape of the Changing Rural American West,” *Journal of Cultural Geography* 30, no. 3 (2013): 328-355.

<sup>25</sup> See for example: William Wyckoff, “Postindustrial Butte,” *The Geographical Review* 85, no. 4 (1995): 478-496; J. Matthew Shumway and Samuel M. Otterstorm, “Spatial Patterns of Migration and Income Change in the Mountain West: The Dominance of Service-Based, Amenity-Rich Counties,” *The Professional Geographer* 53, no. 4 (2001): 492-502; and Michael De Alessi, “The Contraction and Expansion of the Rural West,” *Rural West Initiative*, <http://web.stanford.edu/group/ruralwest/cgi-bin/drupal/content/rural-west-demographics> (last accessed May 14, 2015).

<sup>26</sup> See for example: Nelson, “Rural Restructuring in the American West,” 395-407; and Grant D. Jacobsen and Dominic P. Parker, “The Economic Aftermath of Resource Booms: Evidence from Boomtowns in the American West,” *The Economic Journal*, doi: 10.1111/eoj.12173.

continue for the foreseeable future.”<sup>27</sup> This gets at what Elliot West explained in his presentation at the Agricultural History Society meeting in Provo, Utah, in 2014: that the American West was “born modern.”<sup>28</sup> In other words, the region came in new when the first settlers arrived, and that newness continues to evolve.

Geographers and historians perhaps spend too much time trying to define the borders of the West—whether it lies west of the Mississippi River, the 98<sup>th</sup> Meridian, or the 100<sup>th</sup> Meridian—instead of focusing on the actual expansion or contraction occurring in the area. Geographers William Wyckoff and Lary Dilsaver argued that historians have “struggled with new ways to unify the West, . . . [and] are uneasy with their task.”<sup>29</sup> Let us agree that the West is, as historical geographer D. W. Meinig stated, “a set of dynamic regions,” each of which deserves thorough exploration.<sup>30</sup> In particular, Meinig called for looking at the West as being made up of several regions and sub-regions, and he encouraged finding within those sub-regions commonalities that can help describe the West’s shaping in relation to the larger nation.<sup>31</sup>

Cultural and historical geographers have built upon Meinig’s call and the New West themes that I discussed above to add to our understanding of this dynamic place, providing us with frameworks on how to “read” the American West. Wyckoff’s latest volume *How to Read the American West: A Field Guide*, for instance, provides us with descriptions of 100 “characteristic landscape features” organized under eight larger

---

<sup>27</sup> Travis, *New Geographies of the American West*, 8.

<sup>28</sup> Elliott West, “The Great Flip-Flop: Western Agriculture in the Connected Age,” *Agricultural History Society Annual Meeting*, delivered in Provo, UT, June 21, 2014.

<sup>29</sup> William Wyckoff and Lary Dilsaver, “Defining the Mountainous West,” in *Defining the Mountainous West: Explorations in Historical Geography*, edited by William Wyckoff and Lary Dilsaver (Lincoln: University of Nebraska Press, 1995), 6.

<sup>30</sup> D. W. Meinig, “American Wests: Preface to a Geographical Interpretation,” *Annals of the Association of American Geographers* 62, no. 2 (1972) 159.

<sup>31</sup> Meinig, “American Wests,” 182-184.



themes, including “Nature’s Fundament,” “Places of Special Cultural Identity,” “Landscapes of Federal Largesse,” and “Playgrounds,” that help with areal interpretation.<sup>32</sup> Wyckoff and Dilsaver recognized five ways to define the commonalities that belong to the delimited “Mountainous West”—an area that has significant physical *barriers* that limited settlement and exploration, that has *islands of moisture* where the majority of precipitation falls but is diverted to other places, that has *zones of concentrated resources* subject to continued exploitation, that has areas of *governmental control* to manage public lands, and that has areas offering *a restorative sanctuary* for “spiritual regeneration.”<sup>33</sup> Geographers Terry Jordan, Jon Kilpinen, and Charles Gritzner took a similar cultural landscape approach that looked at the origins of relics in the Mountain West to understand the material shaping of the region.<sup>34</sup>

Wyckoff also provided us with *Creating Colorado*, a book-length synthesis on the specialness of the Centennial State. In it, he described five themes—doctrine of first effective settlement, meeting ground of many cultures, capitalism and liberal individualism, nature matters, and political institutions—that contributed specifically to the shaping of Colorado’s sub-regions.<sup>35</sup> William Travis in his *New Geographies of the American West* showcased four developmental trends—metro-zones, exurbs, resort zones, and the gentrified range—which reflect our modern day material culture but that are currently contributing to the depletion of the vast resource base in the land of hope and opportunity.<sup>36</sup>

---

<sup>32</sup> William Wyckoff, *How to Read the American West: A Field Guide* (Seattle: University of Washington Press, 2014), 4-5.

<sup>33</sup> Wyckoff and Dilsaver, “Defining the Mountainous West,” 20-41.

<sup>34</sup> Terry G. Jordan, Jon T. Kilpinen, and Charles F. Gritzner, *The Mountain West: Interpreting the Folk Landscape* (Baltimore, MD: The Johns Hopkins University Press, 1997), 6-10.

<sup>35</sup> Wyckoff, *Creating Colorado*, 8-13.

<sup>36</sup> Travis, *New Geographies of the American West*, 32-67.

Geographers and historians have indeed provided us with guidance on how to begin framing our own studies. Individual geographers, however, have to pop out the lenses of others and discover their own themes that make up the personality of the places they are exploring to add to the discussion. No two landscapes are exactly alike. How can we help but be excited that there is, as geographer Christopher Salter have stated, genuinely “no bad landscape?”<sup>37</sup> After exploring all of these paths that I have laid out, I propose that there are places in the American West—even alongside the irrigation ditch—where we should take a closer look at how people negotiate the everyday cultural landscape—the mirror that reflects human-environmental relationships with the past and present.<sup>38</sup>

### **The Grand Valley and its Place in the American West**

When I began this project, I had never been to Colorado’s Grand Valley. It was, for me at least, simply a result of serendipity that, built on my curiosity, love for exploration, and need for discovery, I focused on agriculture and the farming life way. As well, it helped that the Grand Valley and the Western Slope of Colorado have little written about them in their contexts as regions of the American West. Most tracks seemed to me to point toward Denver, the state’s mining legacy, including the oil and gas industry, the mountains, or the ills that are plaguing rural places in the state, such as amenity migration and exurbanization. But in the Grand Valley, there was something more.

---

<sup>37</sup> Christopher L. Salter, “No Bad Landscape,” *The Geographical Review* 91, no. 1-2 (2001): 105.

<sup>38</sup> Thomas J. Schlereth, “Material Culture Research and Historical Explanation,” *The Public Historian* 7, no. 4 (1985): 23; D. P. Tolia-Kelly, “Material Culture,” in *International Encyclopedia of Human Geography*, edited by Rob Kitchin and Nigel Thrift (Amsterdam, NL: Elsevier, 2009), 500.

Part of what made Colorado so special in the American West, Meinig argued, was that it was one of the last places settled by Euro-Americans.<sup>39</sup> As such, I had to go back to the beginning to understand the shaping of this region: how did Euro-American settlement even begin in the Grand Valley? It was another story of conquest, indigenous displacement wrought by the federal government and a repositioning of the territory of the Utes to the advantage of Euro-Americans, and of boomers and sooners waiting to stake their claims to the newly opened lands.

It did not take long for newcomers to this valley to develop towns and establish an irrigation network to divert water from the Colorado River and into the fields. Like other regions in the American West, the Grand Valley experienced growing pains with private investors handling water rights and building irrigation infrastructure. Private control ended in the early 1900s as the federal government established the Bureau of Reclamation to oversee the reconstruction of irrigation.<sup>40</sup> One may call it technological mastery over the environment or environmental degradation, but the irrigation network in the valley made land and life possible, leading to the development and peopling of several communities.

These communities and residents were instrumental to the nation during the Great Depression, during WWII, and in its aftermath. Many people headed to California to pick fruit during the bad times, but some also stopped in the valley to pick crops. The

---

<sup>39</sup> Meinig, "American Wests," 165-66.

<sup>40</sup> For seminal works on private investors and the federal government impress on irrigation see: Donald Pisani, *To Reclaim a Divided West: Water, Law, and Public Policy, 1848-1902* (Albuquerque: University of New Mexico Press, 1992) and Donald Pisani, *Water and American Government: The Reclamation Bureau, National Water Policy, and the West, 1902—1935* (Berkeley: University of California Press, 2002).

repercussions of WWII, however, ended up threatening the valley's farming heritage and its environment.

Grand Junction was a center for processing uranium for the Manhattan Project. After the war, interest in securing oil for national security burgeoned, and the federal government along with private enterprise began substantial exploration and mining for kerogen in the Naval Oil Reserves in Colorado, Utah, and Wyoming. The Oil Embargo of 1973 further propelled this interest, leading to a "boom" reminiscent of the mining years in the "Old" West. Since Grand Junction was the hub for this area, development centered here, and the only place for it to grow comfortably was in the city's periphery, then made up of prime farmland. As exploration for oil shale waned and the industry's workers left, amenity migration and service industries began infilling the Grand Valley. Some of this movement has been based on nostalgia for the Old West kept alive by Hollywood.<sup>41</sup>

So, here I am, once again, at my central question: how have farmers and agricultural landscapes survived in the Grand Valley amid this development and the tensions of the New West? New West authors, running the gamut from scholars penning for academic journals to writers for *High Country News*, document the overall story of how farmers have gone from being a majority to a marginalized sub-minority in the American West over the past century. The consequences that come with the development of farmland are also well covered. Where there is a gap, however, is in narratives of how farmers are coming to terms with what many feel is progress and

---

<sup>41</sup> Patricia Nelson Limerick, "The Shadows of Heaven Itself," essay in *Atlas of the New West: Portrait of a Changing Region*, edited by William E. Riebsame (New York: W. W. Norton and Company, 1997), 158.

finding ways in the growth machine to march to a different beat. Limerick, addressing the inroads into rural land, found that:

In the twenty-first century, the habit of mind that pits rural interests against urban interests proves to be distinctly un-useful. In down-to-earth reality, urban well-being and rural well-being are more intertwined than they are distinct or reciprocally injurious. A thriving rural world is an asset for a neighboring city; the proximity to open space is, after all, a principal reason why people want to live in a city like Denver. Ranching and farming are essential forces in the preservation of the West's open horizons. Moreover, a growing enthusiasm for local food production offers an expanding market for farmers in the vicinity of cities, adding another argument for pursuing the hope of a shared urban and rural prosperity.<sup>42</sup>

### **The Upper Grand Valley in a Changing Region**

Based on Grand Valley farmers' and residents' stories, I found that part of agriculture's story of survival in the Upper Valley revolved around three themes, each of which required a personal choice among farmers to adapt and/or adopt: implementing efficient irrigation technologies, embracing non-regulatory land use controls, and restructuring their operations to entice agritourism. Another component of agriculture's survival here that weaves its way through the whole story is that farmers and their neighbors have worked together, sharing an emotional sentiment toward preserving their way of life. That sentiment seems to bolster and hasten their acceptance of the implementation of new irrigation technologies and of government programs that help them with their transition to newer farming methods.

Farmers in the Grand Valley are not like windblown tumbleweeds caught in fences of their irrigation districts as Worster described in his observations. They are conscious of the changes taking place around them and trying to adjust to the conjunctive uses of land and water. Irrigation technology has greatly reduced the

---

<sup>42</sup> Limerick, *A Ditch in Time*, 269.

amount of water farmers use to water their crops, leaving more water in the canals and thus the river for Lower Colorado River Basin states. The choice to convert from surface systems, including gated pipe and furrow networks, is an expensive one. On average, farmers in the valley spend about \$2,500 per acre for irrigation systems. Even though USDA grant programs may allow farmers to apply for some cost sharing, a farmer still has to pay around half of the purchase price.

Placing a conservation easement on a parcel of agricultural land is even more radical. In exchange for tax incentives and other rebates, including those from a land trust organization, farmers give up development rights to the land in perpetuity. Once a conservation easement is placed on the land, theoretically, it cannot be removed. Some people see conservation easements as the only way some open space environments will remain true in the future, as traditional regulatory approaches to land use do not appear to be working well in the preservation of the environment. What happens if someone does not want to farm? What happens if a buyer cannot be found when the farmer is ready to sell? These are only a few of the questions one has to think about before making this decision.

The final way farmers are working to preserve their landscapes and way of life is by restructuring their working landscapes to attract tourists. Agritourism is an industry that has caught on in rural areas across the US. In Colorado, the state government is actively seeking to promote it as yet another reason to visit America's Switzerland. The Grand Valley has become a destination for tourists to visit peach orchards, vineyards, and wineries and to enjoy festivals that celebrate the region's heritage.

Karl Raitz argued that micro-scale studies were geographers' best hope for bringing "fresh answers" to explaining behavior and describing differences between groups of people.<sup>43</sup> To classify farmers in the Grand Valley as simply a group of people who are farming only to make money is a sure-tell indication that the intricate stories some of these farmers tell have not been listened to. Those stories lead to a very different view of what is at first glance the very scene Worster described in his book.

It is true that there are agricultural landowners in the Upper Valley who are in it only for profit. Today, however, my sense is that there is a larger landowner base with different values, a base focused on the land ethic that Aldo Leopold described in his classic essay "The Farmer as a Conservationist"—that conservation "is keeping the resource in working order..., is a positive exercise of skill and insight, not merely a negative exercise of abstinence or caution." The farms of these Upper Valley residents epitomize Leopold's idea that "the landscape of any farm is the owner's portrait of himself."<sup>44</sup>

Richard White explained that we often know nature through work but that we have a tendency to separate the two when we are talking about the environment.<sup>45</sup> Harry and Bruce Talbott explained that they are not going to farm themselves out of business.<sup>46</sup> They have to look toward the future, whether that involves adjusting

---

<sup>43</sup> Karl Raitz, "Themes in the Cultural Geography of European Ethnic Groups in the United States," *The Geographical Review* 69, no. 1 (1979): 94.

<sup>44</sup> Aldo Leopold, "The Farmer as a Conservationist," in *The River of the Mother of God and Other Essays by Aldo Leopold*, edited by Susan L. Flader and J. Baird Callicott (Madison: University of Wisconsin Press, 1991), 257, 263. 255-265

<sup>45</sup> Richard White, "Are You an Environmentalist or Do You Work for a Living?:" Work and Nature," in *Uncommon Ground: Rethinking the Human Place in Nature*, edited by William Cronon (New York: W.W. Norton & Company, 1996), 171-185.

<sup>46</sup> Harry Talbott (owner, retired, Talbott Farms), in discussion with the author, September 2012; Bruce Talbott (vineyard and orchard manager, Talbott Farms), in discussion with the author, September 2012.

watering schedules and irrigation methods to meet water supply and demand or whether that is putting conservation easements on their land to thwart potential subdivision and development. In order to survive, they have to use all of what they have learned about nature through their work and take care of their farming ecosystem.

### **Time in “Paradise”**

James Parsons explained that the historical and cultural geographic tradition is:

...the scholarly attention devoted to ordinary landscapes and regions. No theory, however, explains the magnificent heterogeneity of elements that compose a place. When cultural geographers distill and evaluate their cumulative observations of a landscape, value judgments are involved at every turn. Selectivity is necessary to avoid being completely mired in particulars. Emotion, aesthetics, and intellectual content inevitably overlap. In a manner similar to the probing of the character of an individual or a group, cultural geographers seek to know the personality of a geographical space by examining its physical form, its inhabitants, and their relationship with both the land they occupy and the world beyond, most profitably in historical perspective.<sup>47</sup>

The stories embedded in the making of cultural landscapes help flesh out the historical perspective, and, when landscapes are read carefully, we can learn about the “concrete impact of cultural and economic forces upon specific localities.”<sup>48</sup> Good regional geography shows that not all places are the same. Humans in different areas have different values. Emotive, personal relations with the land influence the character of different environments and contribute to a region’s personality.<sup>49</sup>

Enjoying the places we write about encourages us to put forth particulars that can stand on their own in a world becoming more full of universals. While focusing only on universals has its place in scholarship and creative activities, the personalities of

---

<sup>47</sup> Parsons, “A Geographer Looks at the San Joaquin Valley,” 371.

<sup>48</sup> Wyckoff and Dilsaver, “Defining the Mountainous West,” 11.

<sup>49</sup> Steve Pile, “Emotions and Affect in Recent Human Geography,” *Transactions of the Institute of British Geographers* 35, no. 1 (2010): 5, 10.



places and the bonds that humans have with the land too often get short shrift. And here, again, I can return to Worster. Postulations without stories lead to findings such as his—that there is nothing harmonious around an irrigation ditch in the American West. The techno-environment, conquest, and environmental degradation are all indeed important topics for studying and framing the West, but as Cronon suggested, “Human interests and conflicts create *values* in nature that in turn provide the moral center for our stories.”<sup>50</sup> Those stories are seeds that start the garden of place.

Wescoat encouraged us to look at the integrative power that contributes to shaping a place. As we explore cultural landscape change in the upper Grand Valley through integrative power at the individual level, we can understand the individual care, emotion, and commonalities in the region that contributed not only to the formation but also to the preservation of these agricultural landscapes.<sup>51</sup> Such humanities-based scholarship has the power to bring the particular and universal sides together to help us make sense of everyday landscapes and places. And, as I have illustrated here, the integrative power in Colorado’s Grand Valley is much like what Parsons described when he wrote of the San Joaquin. In the Grand Valley, there is the impress and identity of an agricultural community where the cultural landscapes show the personal emotions of the past and present. Its aesthetic agricultural scenes are present symbols of a resolute past. How they remain true here in the future is a story still unfolding.

It is true that my dissertation has many of the threads that writers of the New West constantly focus on, yet I am hesitant to call this a New West historical and cultural geography. The purpose of the New West platform, whether that is the history

---

<sup>50</sup> Cronon, “A Place for Stories,” 1369.

<sup>51</sup> Wescoat, “Introduction: Three Faces of Power in Landscape Change,” 17-19.

program or the school, was to get writers of the American West, whether they are social scientists, humanists, or lay people, to think more critically about the region, about its tensions—racial, governmental, environmental, developmental. And, I think now, those tensions more readily come to mind in my generation's interpretations of the American West.

My point here is not to deride the New West lens in any way. I simply suggest that we pay less attention to drawing a horse to the same trough of water and more to focusing on a continuously changing American West. Doing so, I think, will allow us to discover blurred boundaries for areal interpretation—where we can deliberately study and illustrate the processes that make up the messiness of everyday life here. Oddly enough, we may find that how we address and describe that messiness will help us understand the tensions and dilemmas, and un-blur the boundaries of this quixotic set of regions, including the one I have studied.

So, I'll call this a regional geography of a place that I had the opportunity to get to know in the American West. But this story is not finished. It will need constant revision, as opinions and the weather change daily, bringing about new laws and policies that will either help or hinder farmers in the Upper Valley.

If conditions allow us to continue to tell the story of Colorado's upper Grand Valley as an agricultural region, constant fieldwork, companionships, conversations, education, and trust will be needed. Sometimes, we geographers are lucky to discover landscapes that become palimpsests for us to see and peel back the layers of transformative changes if we try. I got lucky. The Upper Valley is definitely not a land

alone, and its personality shines in its cultural landscape. That view reminds me that I spent time in what some people here call “Paradise.”

## References

### *Archival Collections*

(\* Denotes source consulted but not cited.)

Chamber of Commerce of Grand Junction. 1996. (reprint of an early 1900s pamphlet). "Irrigation." In *The Valley of Nature's Richest Favors*. Grand Junction, CO: Mesa County Historical Society.

*A Chronology of Grand Valley History*. n.d. Grand Valley Pamphlet File, Loyd Files Research Library (LFRL), Museum of Western Colorado, Grand Junction (MWC).

*The Daily Sentinel* (Grand Junction). 1915. *The Stirring Story of a Western Community: Mesa County Colorado Its Pioneer Days and Its Wonderful Development*. Grand Junction, CO: *The Daily Sentinel*. Mesa County History Pamphlet File, LFRL, MWC.

The Fruita Bureau of Information. 1911. *Fruita, Colorado*. Fruita, CO: The Fruita Bureau of Information. Fruita Pamphlet File, LFRL, MWC.

Grand Junction Chamber of Commerce (GJCC). 1904. *All about Grand Junction and the Grand Valley Colorado*. Grand Junction: GJCC. Mesa County History Pamphlet File, LFRL, MWC.

Grand Junction Chamber of Commerce. Reprint of a late 1900s promotional pamphlet. *The Valley of the Grand: The Place for You*. Grand Junction: Mesa County Historical Society.

*The History of Palisade, vol.1*. n.d. Palisade, Colorado: Palisade Library.

Kelly, Mildred Starr. 1977. "The Starr Orchard." *Lower Valley Heritage* 5. LFRL, MWC.

Lowery, Dennis. 1962. "Grand Slam on the Western Slope." Grand Junction Pamphlet File, LFRL, MWC.

*Mesa County Democrat* (Grand Junction). 1886. *History and Business Directory of Mesa County, Colorado, Containing a Description of Its Valleys, Ranges, Ditch Systems, Illustrations and Portraits of Some of the Early Settlers and Prominent Men*. Grand Junction, CO: Mesa County Democrat. LFRL, MWC.

Woolsey, Jr., George A. "An Overview of Grand Valley Fruit Production." Fruit Growing Vertical File, LFRL, MWC.

*Personal Interviews*

- Acquafresca, Steve. 2013. Mesa County Commissioner (2007-2015), September.
- Bleiberg, Robert. 2012. Executive Director, Mesa Land Trust, September.
- \_\_\_\_\_. 2013. Executive Director, Mesa Land Trust, September.
- \_\_\_\_\_. 2014. Executive Director, Mesa Land Trust, September.
- Bowman, Barbara. 2012. Executive Director, Grand Junction Visitors Bureau, August.
- Brown, Layne and Marian. 2012. Peach “ranchers,” retired, September.
- Buecheler, Rondo. 2012. Owner, Rapid Creek Cycles and Sports, August.
- Butler, Doris and John. 2012. Co-founders, Mesa Land Trust, August.
- Carlson, Parker. 2012. Owner, Carlson Vineyards, August.
- Commons, Julie and Bob. 2012. Owners, Dreamcatcher Bed and Breakfast, September.
- \_\_\_\_\_. 2013. Owners, Dreamcatcher Bed and Breakfast, September.
- Cooper, Sandy and Cassidee Shull. 2012. Executive Director and Program Director, Colorado Association for Viticulture and Enology, August.
- Fife, Keith. 2012. Long Range Planning Director, Mesa County, August.
- Gubbini, Linda Lee. 2012. Owner, Gubbini Winery, nurse, August.
- Hix, Anita. 2013. Owner, Anita’s Pantry and Produce, September.
- Kinney, Clinton M. 2012. Fruita City Manager, September.
- Levy, Rebecca and Richard Sales. 2012. City planners, Town of Palisade, August.
- Moir, Ilana. 2013. Land Protection Specialist, Mesa Land Trust, September.
- \_\_\_\_\_. 2014. Land Protection Specialist, Mesa Land Trust, September.
- Nemanich, Frank. 2012. Retired environmental scientist, September.
- Portner, Kathy. 2012. Neighborhood Services Manager, City of Grand Junction, August.
- Rettig, Mel. 2013. Owner, Rettig Farms, September.
- Sanders, James. 2013. Owner, Peach Shack (first generation farmer), September.

Schmidt, Max. 2012. General Manager, Orchard Mesa Irrigation District, September.

\_\_\_\_\_. 2013. General Manager, Orchard Mesa Irrigation District, September.

Spehar, Jim. 2012. Journalist, former Mayor of Grand Junction, former Mesa County Commissioner. August.

Talbott, Bruce. 2012. Orchard and Vineyard Manager, Talbott Farms, August.

\_\_\_\_\_. 2013. Orchard and Vineyard Manager, Talbott Farms, September.

\_\_\_\_\_. 2014. Orchard and Vineyard Manager, Talbott Farms, September.

Talbott, Harry. 2012. Owner, retired, Talbott Farms, August.

\_\_\_\_\_. 2012. Owner, retired, Talbott Farms, September.

\_\_\_\_\_. 2013. Owner, retired, Talbott Farms, September.

\_\_\_\_\_. 2014. Owner, retired, Talbott Farms, September.

Talbott, Rob. 2013. Owner, C&R Farms, September.

Thornton, Dave. 2012. Planner, Mesa County, August.

Turley, Padte and Richard. 2012. Owners, Colorado Cellars, August.

Walker, Priscilla. 2012. Orchard Owner; President, Walker Innovations, Inc.; Chair, Palisade Historical Society, August.

\_\_\_\_\_. 2012. Orchard Owner; President, Walker Innovations, Inc.; Chair, Palisade Historical Society, September.

\_\_\_\_\_. 2013. Orchard Owner; President, Walker Innovations, Inc.; Chair, Palisade Historical Society, September.

\_\_\_\_\_. 2014. Orchard Owner; President, Walker Innovations, Inc.; Chair, Palisade Historical Society, September.

### *Newspapers*

*The Aspen Times*

*Beacon Senior News* (Grand Junction, CO)

*The Colorado Statesman* (Denver)

*The Colorado Transcript* (Golden)

*Colorado West* (Grand Junction)  
*The Coloradoan* (Fort Collins)  
*The Daily Chronicle* (Aspen)  
*The Daily Colorado Tribune* (Denver)  
*The Daily Sentinel* (Grand Junction, Colorado)  
*Denver Business Journal*  
*The Denver Post*  
*The Fairplay* (Colorado) *Flume*  
*The Fruita* (Colorado) *Times*  
*Glenwood* (Colorado) *Post*  
*Grand Junction* (Colorado) *Free Press*  
*High Country News* (Paonia, Colorado)  
*Los Angeles Herald*  
*Los Angeles Times*  
*The New York Times*  
*Out West* (Colorado Springs)  
*The Palisade* (Colorado) *Tribune*  
*Peach Town News* (Palisade, Colorado)  
*Post Independent* (Glenwood Springs, Colorado)  
*\*The Salt Lake Tribune*  
*Tulsa World*  
*The Wall Street Journal*  
*The Weekly Courier* (Fort Collins, Colorado)

*Government Documents and Publications*

*An Act Providing for Free Homesteads in the Ute Indian Reservation in Colorado.* 1902. 57<sup>th</sup> Cong., 1<sup>st</sup> sess., Public Law No. 155, *US Statutes at Large* 1079-1081.

*An Act Relating to Lands in Colorado Lately Occupied by the Uncompahgre and White River Ute Indians.* 1880. 47<sup>th</sup> Cong., 1<sup>st</sup> sess., Public Law Ch. 357, *US Statutes at Large* 21-203.

\**An Act to Provide for the Sale of Desert Lands in Certain States and Territories.* 1877. Public Law Ch. 107, *US Statutes at Large*.

*Annual Report of the Commissioner of the General Land Office.* 1882. Washington, D.C.: Government Printing Office.

*Annual Report of the Secretary of War for the Year 1881.* 1881. vol. 1, *Report of the Secretary of War.* Washington, D.C.: Government Printing Office.

\*“The Beginnings of the U.S. Geological Survey.” n.d.  
[http://www.nationalatlas.gov/articles/government/a\\_usgs.html](http://www.nationalatlas.gov/articles/government/a_usgs.html). Last accessed November 13, 2012.

City of Fruita. 2008. “Community Plan 2008.”  
<http://www.fruita.org/documents/cd/Fruita%20Community%20Plan%202008.pdf>. Last accessed June 29, 2014.

City of Grand Junction. 2014. “Orchard Mesa Plan.”  
<http://www.gjcity.org/OrchardMesaAreaPlan.aspx>. Last accessed January 11, 2014.

Colorado Demography Office. “Historical Census Population.”  
[https://dola.colorado.gov/demog\\_webapps/hcpParameters.jsf](https://dola.colorado.gov/demog_webapps/hcpParameters.jsf). Last accessed September 28, 2014.

Colorado Department of Agriculture. 2012. “The Contribution of Agriculture to Colorado’s Economy: An Executive Summary.” <http://www.colorado.gov>. Last accessed July 14, 2014.

\_\_\_\_\_. 2014. “What is Agritourism.”  
[http://www.colorado.gov/cs/Satellite/ag\\_Markets/CBON/1251624660769](http://www.colorado.gov/cs/Satellite/ag_Markets/CBON/1251624660769). Last accessed July 10, 2014.

\_\_\_\_\_. 2015. “Agritourism.” <https://www.colorado.gov/pacific/agmarkets/agritourism>. Last accessed April 3, 2015.



- Colorado West Area Council of Governments. 1974. *Oil Shale and the Future of a Region: Garfield, Mesa and Rio Blanco Counties, Colorado: A Summary Report*.
- Committee on Government Operations. 1978. "Radiation Protection." *Hearings before a Subcommittee of the Committee on Government Operations*, 95<sup>th</sup> Cong., 2d sess., House. Washington, D.C.: Government Printing Office.
- Committee on Indian Affairs. 1880. *Agreement with the Ute Indians of Colorado*, 46<sup>th</sup> Cong., 2d sess., H. Rep. 1401.
- \_\_\_\_\_. 1882. *Uncompahgre and White River Ute Indians*, 47<sup>th</sup> Cong., 1<sup>st</sup> sess., H. Rep. 1304.
- Committee on Public Lands. 1882. *Indian Lands in Colorado*, 47<sup>th</sup> Cong., 1<sup>st</sup> sess., H. Rep. 561.
- Doesken, Nolan J., Roger A. Pielke, Sr., and Odilia A. P. Bliss. 2003. "Climate of Colorado." *Climatology of the United States No. 60*.  
<http://ccc.atmos.colostate.edu/climateofcolorado.php>. Last accessed December 18, 2012.
- Donnell, John R. 1961. *Tertiary Geology and Oil-Shale Resources of the Piceance Creek Basin Between the Colorado and White Rivers Northwestern Colorado*, "Geological Survey Bulletin 1082-L." Washington, D.C.: Government Printing Office, 1961.
- Hamman, Jr., Richard A., Steven D. Savage, and Harold J. Larsen. 1998. "The Colorado Grape Growers' Guide: 1998 Edition." *Bulletin 550A*. Fort Collins: Colorado State University Cooperative Extension.  
<http://www.ext.colostate.edu/pubs/garden/550a.pdf>. Last accessed September 28, 2014.
- \*Hayden, F. V. 1877. *Ninth Annual Report of the United States Geological and Geographical Survey of the Territories, Embracing Colorado and Parts of Adjacent Territories: Being a Report of Progress of the Exploration for the Year 1875*. Washington, D.C.: Government Printing Office.
- \_\_\_\_\_. 1878. *Tenth Annual Report of the United States Geological and Geographical Survey of the Territories, Embracing Colorado and Parts of Adjacent Territories: Being a Report of Progress of the Exploration for the Year 1876*. Washington, D.C.: Government Printing Office.
- \_\_\_\_\_. 1881. *Geological and Geographical Atlas of Colorado and Adjacent Territory*. Washington, D.C.: Government Printing Office.

- \*High Plains Regional Climate Center. n.d. "Historical Climate Data Summaries."  
[http://www.hprcc.unl.edu/data/historical/index.php?state=co&action=select\\_state&submit=Select+State](http://www.hprcc.unl.edu/data/historical/index.php?state=co&action=select_state&submit=Select+State). Last accessed November 13, 2012.
- House Committee on Irrigation and Reclamation (HCIR). 1930. *Economic Survey of Certain Federal and Private Irrigation Projects*, 71<sup>st</sup> Cong., 2<sup>nd</sup> sess. Washington, D.C.: Government Printing Office.
- House Committee on the Public Lands. 1882. *Arid and Desert Lands in Colorado*. 47<sup>th</sup> Cong. 1<sup>st</sup> sess., H. Rep. 197 (Part 1 and Part 2).
- \_\_\_\_\_. 1886. *Reclamation of Desert Lands*. 49<sup>th</sup> Cong., 1<sup>st</sup> sess., H. Rep. 188.
- \_\_\_\_\_. 1890. *Lands in Colorado Lately Occupied by Indians*. 51<sup>st</sup> Cong., 1<sup>st</sup> sess., House Rep. 2811.
- \_\_\_\_\_. 1902. *Homesteads in the Ute Reservation*. 57<sup>th</sup> Cong., 1<sup>st</sup> sess., House Rep. 1275.
- Hutchins, J.D., Wells A. 1977. *Water Rights Laws in the Nineteen Western States*, vols. 1-3. Washington, D.C.: Government Printing Office.
- Ingalls, John J. 1886. *In the Senate of the United States*, 49<sup>th</sup> Cong., 1<sup>st</sup> sess., S. Mis. Rep. 121, 1.
- Joint Committee on Atomic Energy. 1971. "Use of Uranium Mill Tailings for Construction Purposes." *Hearings before the Subcommittee on Raw Materials of the Joint Committee on Atomic Energy Congress of the United States*. 92<sup>nd</sup> Cong., 1<sup>st</sup> sess. Washington, D.C.: Government Printing Office.
- Leasing of Arid and Desert Lands*. 1882. House, 47<sup>th</sup> Cong., 1<sup>st</sup> sess., Congressional Record (February 2).
- Mehls, Steven F. 1982. *The Valley of Opportunity: A History of West-Central Colorado*. Denver: Bureau of Land Management, Colorado State Office.
- Memorial of a Committee of a Mass Meeting Held at Gunnison, Colo., in Favor of the Late Ute Reservation Being Opened for Settlement*. 1882. 47<sup>th</sup> Cong., 1<sup>st</sup> sess., Mis. Doc. 63.
- Nickerson, Cynthia and others. 2012. "Trends in U.S. Farmland Values and Ownership," *Economic Information Bulletin Number 42*. Washington, D.C.: USDA.
- Oklahoma Cooperative Extension Service HLA-6244. n.d. "Planting and Early Care of the Peach Orchard."  
<http://pods.dasnr.okstate.edu/docushare/dsweb/Get/Document-1026/HLA-6244web.pdf>. Last accessed July 14, 2014.

- O'Rourke, Paul M. 1980. *Frontier in Transition: A History of Southwestern Colorado*. Denver: Bureau of Land Management, Colorado State Office.
- Russell, J.J., Otto Mears, Thomas A. McMorris to George W. Manypenny. 1881. Letter, November 21. "Report of the Ute Commission." *Annual Report of the Commissioner of Indian Affairs to the Secretary of the Interior for the Year 1881*. Washington, D.C.: Government Printing Office.
- Secretary of the Interior. 1882. Letter, transmitting *A Communication from Attorney-General and Report of Commissioner of General Land Office, also Report of Commissioner of Indian Affairs, in Response to Senate Resolution of January 10, 1882, Calling for Information Touching the Opening for Settlement Under the Pre-Emption Laws of the United States of Part of the Ute Reservation in Colorado*, 47<sup>th</sup> Cong., 1<sup>st</sup> sess., Senate Executive Document 108, February 14.
- Sharp, Rod, Horst Caspari, and Amaya Atucha. 2014. "The Cost of Growing Peaches in Western Colorado." <http://www.colostate.edu/Dept/CoopExt/NWR/ABM/costofgrowingpeaches.pdf>. Last accessed July 14, 2014.
- Simonds, William Joe. 1994. "Grand Valley Project." [http://www.usbr.gov/projects//ImageServer?imgName=Doc\\_1305042485344.pdf](http://www.usbr.gov/projects//ImageServer?imgName=Doc_1305042485344.pdf). Last accessed August 29, 2012.
- State Demography Office Colorado Department of Local Affairs. n.d. "Population Trends: Colorado Water Congress." <http://www.colorado.gov/cs/Satellite?blobcol=urldata&blobheadername1=Content-Disposition&blobheadername2=Content-Type&blobheadervalue1=inline%3B+filename%3D%22Colorado+Water+Congress.pdf%22&blobheadervalue2=application%2Fpdf&blobkey=id&blobtable=MungoBlobs&blobwhere=1251736005395&ssbinary=true>. Last accessed June 29, 2014.
- Thilmany, Dawn, Martha Sullins, and Alex Ansteth. 2007. "Of Wine and Wildlife: Assessing Market Potential for Colorado Agritourism." *Economic Development Report*, 07-15. Fort Collins: Colorado State University Extension.
- US (Bureau) of Reclamation Service. 1922. *Twenty-First Annual Report of the Reclamation Service, 1921-1922*. Washington, D.C.: Government Printing Office, 1922.
- \_\_\_\_\_. 2013. "Draft Environmental Assessment Orchard Mesa Irrigation District Canal System Improvement Project." <https://www.usbr.gov/uc/envdocs/ea/OrchardMesa/draft-EA.pdf>. Last accessed July 15, 2014.

- \_\_\_\_\_. n.d. "The Law of the River." *Managing Water in the West*.  
<http://www.usbr.gov/lc/region/g1000/lawofrvr.html>. Last accessed February 18, 2013.
- \_\_\_\_\_. n.d. "Grand Valley Project."  
[http://www.usbr.gov/projects/Project.jsp?proj\\_Name=Grand+Valley+Project](http://www.usbr.gov/projects/Project.jsp?proj_Name=Grand+Valley+Project).  
 Last accessed July 14, 2014.
- US Census Bureau. 1990. "1990 Census of Population and Housing."  
[www.censtats.census.gov/cgi-bin/pl94/pl94data.pl](http://www.censtats.census.gov/cgi-bin/pl94/pl94data.pl). Last accessed June 28, 2014.
- \_\_\_\_\_. 2000. "Profile of General Demographic Characteristics: Clifton CDP, Colorado."  
[http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=DEC\\_00\\_SF1\\_DP1](http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=DEC_00_SF1_DP1). Last accessed June 28, 2014.
- \_\_\_\_\_. 2000. "Profile of General Demographic Characteristics: Orchard Mesa CDP, Colorado."  
[http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=DEC\\_00\\_SF1\\_DP1](http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=DEC_00_SF1_DP1). Last accessed June 28, 2014.
- \_\_\_\_\_. 2010. "Census 2010 Total Population: Clifton CDP, Colorado."  
[http://factfinder2.census.gov/faces/nav/jsf/pages/community\\_facts.xhtml](http://factfinder2.census.gov/faces/nav/jsf/pages/community_facts.xhtml). Last accessed June 28, 2014.
- \_\_\_\_\_. 2010. "Census 2010 Total Population: Orchard Mesa CDP, Colorado."  
[http://factfinder2.census.gov/faces/nav/jsf/pages/community\\_facts.xhtml](http://factfinder2.census.gov/faces/nav/jsf/pages/community_facts.xhtml). Last accessed June 28, 2014.
- \_\_\_\_\_. 2014. "Population Log for Fruita, Grand Junction, and Palisade,"  
[https://www.google.com/publicdata/explore?ds=kf7tgg1uo9ude\\_&ctype=l&strail=false&bcs=d&nselm=h&met\\_y=population&scale\\_y=log&ind\\_y=false&rdim=country&idim=country:US&idim=state:08000&idim=place:0831660:0856970:0828745&ifdim=country&hl=en&dl=en&ind=false&icfg](https://www.google.com/publicdata/explore?ds=kf7tgg1uo9ude_&ctype=l&strail=false&bcs=d&nselm=h&met_y=population&scale_y=log&ind_y=false&rdim=country&idim=country:US&idim=state:08000&idim=place:0831660:0856970:0828745&ifdim=country&hl=en&dl=en&ind=false&icfg). Last accessed July 1, 2014.
- \_\_\_\_\_. n.d. "Mesa County, CO."  
[https://www.google.com/publicdata/explore?ds=kf7tgg1uo9ude\\_&met\\_y=population&idim=county:08077&hl=en&dl=en](https://www.google.com/publicdata/explore?ds=kf7tgg1uo9ude_&met_y=population&idim=county:08077&hl=en&dl=en). Last accessed July 1, 2015.
- US Congress. 1882. Senate. *Memorial of a Committee of a Mass Meeting Held at Gunnison, Colo., in Favor of the Late Ute Reservation Being Opened for Settlement*. 47<sup>th</sup> Cong., 1<sup>st</sup> sess., February 28, 1882.
- US Department of Agriculture (USDA). 1955. *Soil Survey: Grand Junction Area, Colorado*, Series 1940, no. 19. Washington, D. C.: Government Printing Office.

- \_\_\_\_\_. 1969. "Table 1. Farms, Land, Value." County Summary, Colorado.  
<http://usda.mannlib.cornell.edu/usda/AgCensusImages/1969/01/41/483/Table-01.pdf>. Last accessed July 13, 2014.
- \_\_\_\_\_. 2007. "Table 6: Income From Farm-Related Sources: 2007 and 2002." Chapter 2: State Level Data, Colorado, vol. 1.  
[http://www.agcensus.usda.gov/Publications/2007/Full\\_Report/Volume\\_1,\\_Chapter\\_2\\_US\\_State\\_Level/st99\\_2\\_006\\_006.pdf](http://www.agcensus.usda.gov/Publications/2007/Full_Report/Volume_1,_Chapter_2_US_State_Level/st99_2_006_006.pdf). Last accessed July 13, 2014.
- \_\_\_\_\_. 2007. "Table 32. Fruits and Nuts: 2007 and 2002." Chapter 2: County Level Data, Colorado, vol. 1.  
[http://www.agcensus.usda.gov/Publications/2007/Full\\_Report/Volume\\_1,\\_Chapter\\_2\\_County\\_Level/Colorado/st08\\_2\\_032\\_033.pdf](http://www.agcensus.usda.gov/Publications/2007/Full_Report/Volume_1,_Chapter_2_County_Level/Colorado/st08_2_032_033.pdf). Last accessed July 13, 2014.
- \_\_\_\_\_. 2012. "Table 1. County Summary Highlights: 2012." Chapter 2: County Level Data, Colorado, vol. 1.  
[http://www.agcensus.usda.gov/Publications/2012/Full\\_Report/Volume\\_1,\\_Chapter\\_2\\_County\\_Level/Colorado/st08\\_2\\_001\\_001.pdf](http://www.agcensus.usda.gov/Publications/2012/Full_Report/Volume_1,_Chapter_2_County_Level/Colorado/st08_2_001_001.pdf). Last accessed July 13, 2014.
- \_\_\_\_\_. 2012. "Table 1. Historical Highlights: 2012 and Earlier Census Years." Chapter 1: State Level Data, Colorado, vol. 1.  
[http://www.agcensus.usda.gov/Publications/2012/Full\\_Report/Volume\\_1,\\_Chapter\\_1\\_State\\_Level/Colorado/st08\\_1\\_001\\_001.pdf](http://www.agcensus.usda.gov/Publications/2012/Full_Report/Volume_1,_Chapter_1_State_Level/Colorado/st08_1_001_001.pdf). Last accessed July 13, 2014.
- \_\_\_\_\_. 2012. "Table 7. Income From Farm-Related Sources: 2012 and 2007." Chapter 1: State Level Data, Colorado, vol. 1.  
[http://www.agcensus.usda.gov/Publications/2012/Full\\_Report/Volume\\_1,\\_Chapter\\_1\\_State\\_Level/Colorado/st08\\_1\\_006\\_007.pdf](http://www.agcensus.usda.gov/Publications/2012/Full_Report/Volume_1,_Chapter_1_State_Level/Colorado/st08_1_006_007.pdf). Last accessed July 13, 2014.
- \_\_\_\_\_. 2012. "Table 6. Income From Farm-Related Sources: 2012 and 2007." Chapter 2: County Level Data, Colorado, vol. 1.  
[http://www.agcensus.usda.gov/Publications/2012/Full\\_Report/Volume\\_1,\\_Chapter\\_2\\_County\\_Level/Colorado/st08\\_2\\_006\\_006.pdf](http://www.agcensus.usda.gov/Publications/2012/Full_Report/Volume_1,_Chapter_2_County_Level/Colorado/st08_2_006_006.pdf). Last accessed July 13, 2014.
- \_\_\_\_\_. 2012. "Table 24: Selected Crops Harvested: 2012." Chapter 2: County Level Data, Colorado, vol. 1.  
[http://www.agcensus.usda.gov/Publications/2012/Full\\_Report/Volume\\_1,\\_Chapter\\_2\\_County\\_Level/Colorado/st08\\_2\\_024\\_024.pdf](http://www.agcensus.usda.gov/Publications/2012/Full_Report/Volume_1,_Chapter_2_County_Level/Colorado/st08_2_024_024.pdf). Last accessed July 13, 2014.
- \_\_\_\_\_. 2012. "Table 31: Fruits and Nuts: 2012 and 2007." Chapter 2: County Level Data, Colorado, vol. 1.  
[http://www.agcensus.usda.gov/Publications/2012/Full\\_Report/Volume\\_1,\\_Chapter\\_2\\_County\\_Level/Colorado/st08\\_2\\_031\\_031.pdf](http://www.agcensus.usda.gov/Publications/2012/Full_Report/Volume_1,_Chapter_2_County_Level/Colorado/st08_2_031_031.pdf). Last accessed July 13, 2014.

- \_\_\_\_\_. 2013. "NRCS Colorado Grand Valley Salinity Information."  
[http://www.nrcs.usda.gov/wps/portal/nrcs/detail/co/programs/?cid=nrcs144p2\\_062764](http://www.nrcs.usda.gov/wps/portal/nrcs/detail/co/programs/?cid=nrcs144p2_062764). Last accessed December 3.
- USDA National Agricultural Statistics Service (NASS) Colorado Field Office. 2013. "Colorado Agricultural Statistics 2013."  
[http://www.nass.usda.gov/Statistics\\_by\\_State/Colorado/Publications/Annual\\_Statistical\\_Bulletin/Final%202013.pdf](http://www.nass.usda.gov/Statistics_by_State/Colorado/Publications/Annual_Statistical_Bulletin/Final%202013.pdf). Last accessed July 14, 2014.
- USDA Natural Resources Conservation Service. n.d. "Salinity in the Grand Valley: Celebrating 30+ Years, 1979-2012."  
[http://www.nrcs.usda.gov/Internet/FSE\\_DOCUMENTS/nrcs144p2\\_060826.pdf](http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs144p2_060826.pdf). Last accessed July 2, 2014.
- US Department of the Interior. 1889. *Preliminary Report on the Organization and Prosecution of the Survey of the Arid Lands for Purposes of Irrigation*. 50<sup>th</sup> Cong., 2d sess., Senate Executive Document 43, 12.
- US Senate. 1880. *Message from the President of the United States Transmitting a Report from the Secretary of the Interior Containing an Agreement Signed by the Chiefs and Headmen of the Ute Indians*. 46<sup>th</sup> Cong., 2<sup>nd</sup> sess., Senate, Ex. Doc., No. 114.
- US Senate Committee on Public Lands. 1877. *To Provide for the Sale of Desert Lands in Certain States and Territories*. 44<sup>th</sup> Cong., 2d sess., S. Rep. 642.
- \_\_\_\_\_. 1888. *Letter from the Secretary of the Interior, Transmitting, In Response to Senate Resolution of February 13, 1888, Report Concerning the Irrigation of Certain Lands*. 50<sup>th</sup> Cong., 1<sup>st</sup> sess., Senate, Ex. Doc. 134.
- \_\_\_\_\_. 1902. *Homesteading the Ute Indian Reservation*. 57<sup>th</sup> Cong., 1<sup>st</sup> sess., Senate Rep. 1744.
- Walden, Judy, Amy Webb, Dan Hobbs and Kelli Helper. 2013. "A Three-Year Action Plan For the Promotion of Agritourism in the State of Colorado."  
[http://d3moqqx2p23xht.cloudfront.net/sites/default/files/Assets/LivingInColorado/Documents/H%26Ag\\_PLAN\\_FINAL.pdf](http://d3moqqx2p23xht.cloudfront.net/sites/default/files/Assets/LivingInColorado/Documents/H%26Ag_PLAN_FINAL.pdf). Last accessed July 14, 2014.
- Wright, John B. and Rhonda Skaggs. 2002 (Reprinted). "Purchase of Development Rights and Conservation Easements: Frequently Asked Questions." *Technical Report 34*. Las Cruces: New Mexico State University College of Agriculture and Home Economics.
- Vilas, William F. to John J. Ingalls. 1888. Letter, March 31. Senate Committee on the Public Lands. 50<sup>th</sup> Cong., 1<sup>st</sup> sess., Senate Executive Document 134, 3-6.

*Journal and Magazine Articles*

- \*Abruzzi, William S. 1985. "Water and Community Development in the Little Colorado River Basin." *Human Ecology* 13, no. 2: 241-269.
- Andrews, Anthony. 2015. "Oil Shale: History, Incentives, and Policy." *CRS Report for Congress*. <https://www.fas.org/sgp/crs/misc/RL33359.pdf>. Last accessed April 3, 2015.
- Bosley, Elisa. 2013. "Why You'll Love Palisade, CO." *Sunset*, August: 23-24.
- Brabec, Elizabeth and Chip Smith. 2002. "Agricultural Land Fragmentation: The Spatial Effects of Three Land Protection Strategies in the Eastern United States." *Landscape and Urban Planning* 58, no. 2-4: 255-268.
- \*Brace, Catherine and Hilary Geoghegan. 2010. "Human Geographies of Climate Change: Landscape, Temporality, and Lay Knowledges." *Progress in Human Geography* 35, no. 3: 284-302.
- Brenner, Jacob C., Stephanie Lavallato, Marin Cherry, and Emma Hileman. 2013. "Land Use Determines Interest in Conservation Easements among Private Landowners." *Land Use Policy* 35, no. 1: 24-32.
- Brewer, Richard. 2011. "Conservation Easements and Perpetuity: Till Legislation Do Us Part." *Law and Contemporary Problems* 74, no. 4: 249-278.
- Bryson, Jeremy and William Wyckoff. 2010. "Rural Gentrification and Nature in the Old and New Wests." *Journal of Cultural Geography* 27, no. 1: 53-75.
- Buckland, Jeffrey G. 1987. "The History and Use of Purchase of Development Rights in the United States." *Landscape and Urban Planning* 14: 237-252.
- Calvert, Scout. 2012. "West of Eden: Resource Wars and Nature-Cultures in the American West." *Science and Culture* 21, no. 1: 129-134.
- Caskey, Doug. 2012. "Colorado Wine: Rooted in History." *Colorado Business Review* 78, no. 4: 4-5.
- Colten, Craig E. 2010. "Landscape and Place in the *Geographical Review*." *Geographical Review* 100, no. 1: 1-5.
- Cronon, William. 1992. "A Place for Stories: Nature, History, and Narrative." *Journal of American History* 78, no. 4: 1347-1376.
- Cross, Jennifer Eileen, Catherine M. Keske, Michael G. Lacy, Dana L.K. Hoag, and Christopher T. Bastian. 2011. "Adoption of Conservation Easements among Agricultural Landowners in Colorado and Wyoming: The Role of Economic

- Dependence and Sense of Place.” *Landscape and Urban Planning* 101, no. 1: 75-83.
- Daniels, Tom and Mark Lapping. 2005. “Land Preservation: An Essential Ingredient in Smart Growth.” *Journal of Planning Literature* 29, no. 3: 316-329.
- Davidson, Dan. 1986. “The Grand River Ditch: A Short History of Pioneering Irrigation in Colorado’s Grand Valley.” *Journal of the Western Slope* 1, no. 4: 1-30.
- \*de Wit, Cary W. 2013. “Interviewing for Sense of Place.” *Journal of Cultural Geography* 30, no. 1: 120-144.
- \*Edwards, G. Thomas. 1981. “Irrigation in Eastern Washington, 1906-1911: The Promotional Photographs of Asahel Curtis.” *The Pacific Northwest Quarterly* 72, no. 3: 112-120.
- \*Fahey, John. 1993. “Irrigation, Apples, and the Spokane Country.” *The Pacific Northwest Quarterly* 84, no. 1: 7-18.
- Ferguson, Carol A. and M. Akram Khan. 1992. “Protecting Farmland Near Cities: Trade-offs with Affordable Housing in Hawaii.” *Land Use Policy* 9, no. 4: 259-271.
- Ford, Larry R. 2001. “Building Biographies: To Know Cities from the Inside Out.” *The Geographical Review* 91, nos. 1-2: 380-387.
- Franson, Paul. 2006. “Is Colorado the New Washington?” *Wines & Vines*, October. <http://www.winesandvines.com/template.cfm?section=features&content=48734>. Last accessed October 3, 2014.
- Gerber, Jean-David and Adena R. Rissman. 2012. “Land-Conservation Strategies: The Dynamic Relationship between Acquisition and Land-Use Planning.” *Environment and Planning A* 44, no. 8: 1836-1855.
- Ghose, Rina. 2004. “Big Sky or Big Sprawl? Rural Gentrification and the Changing Cultural Landscape of Missoula, Montana.” *Urban Geography* 25, no. 6: 528-549.
- \*Gollehon, Noel and William Quinby. 2000. “Irrigation in the American West: Area, Water and Economic Activity.” *Water Resources Development* 16, no. 2: 187-195.
- \*Graf, William L. 1992. “Science, Public Policy, and Western American Rivers.” *Transactions of the Institute of British Geographers* 17, no. 1: 5-19.
- \*Hanlon, James, Ellen Hostetter, and Chris Post. 2011. “Everyday Landscapes: Past and Present, Presence and Absence.” *Material Culture* 43, no. 2: 1-5.



- Harner, John and Bradley Benz. 2013. "The Growth of Ranchettes in La Plata County, Colorado, 1988-2008." *The Professional Geographer* 65 no. 2: 329-344.
- Harris, Cole. 2001. "Archival Fieldwork." *The Geographical Review* 91, nos. 1-2: 328-331.
- \*Hart, John Fraser. 1982. "The Highest Form of the Geographer's Art." *Annals of the Association of American Geographers* 72, no. 1: 1-29.
- \*\_\_\_\_\_. 1983. "More Gnashing of False Teeth." *Annals of the Association of American Geographers* 73, no. 3: 441-443.
- Hodge, Ian D. and William M. Adams. 2012. "Neoliberalisation, Rural Land Trusts and Institutional Blending." *Geoforum* 43, no. 3: 472-482.
- Hurley, Patrick T. and Peter A. Walker. 2004. "Whose Vision? Conspiracy Theory and Land-Use Planning in Nevada County, California." *Environmental Planning A* 36, no. 9: 1529-1547.
- \*Hurt, Douglas A., Jeffrey S. Smith, Matthew R. Engel, Jeffrey E. Roth, and James M. Stevens. 2001. "La Cultura de la Acequia Madre: Cleaning a Community Irrigation Ditch." *The North American Geographer* 3, no. 1: 5-28.
- Hyde, Anne F. 1993. "Cultural Filters: The Significance of Perception in the History of the American West." *The Western Historical Quarterly* 24, no. 3: 351-374.
- \*Jackson, John Brinckerhoff. 1966. "An Engineered Environment." *Landscape* 16, no. 1: 16-20.
- Jacobsen, Grant D. and Dominic P. Parker. 2014. "The Economic Aftermath of Resource Booms: Evidence from Boomtowns in the American West." *The Economic Journal*. doi: 10.1111/eoj.12173.
- \*Kearns, Gerry. 1998. "The Virtuous Circle of Facts and Values in the New Western History." *Annals of the Association of American Geographers* 88, no. 3: 377-409.
- Lewis, Peirce. 1983. "Learning from Looking: Geographic and Other Writing about the American Cultural Landscape." *American Quarterly* 35, no. 3: 242-261.
- Lewis, Rebecca and Gerrit-Jan Knaap. 2012. "Targeting Spending for Land Conservation: An Evaluation of Maryland's Rural Legacy Program." *Journal of the American Planning Association* 78, no. 1: 34-52.
- \*Meinig, Donald W. 1954. "The Evolution of Understanding an Environment: Climate and Wheat Culture in the Columbia Plateau." *Yearbook of the Association of Pacific Coast Geographers* 16: 25-34.

- \_\_\_\_\_. 1972. "American Wests: Preface to a Geographical Interpretation." *Annals of Association of American Geographers* 62, no. 2: 159-184.
- Merenlender, A.M., L. Huntsinger, G. Guthey, and S. K. Fairfax. 2004. "Land Trusts and Conservation Easements: Who Is Conserving What for Whom?." *Conservation Biology* 18, no. 1: 65-75.
- Mitchell, Don. 2002. "Cultural Landscapes: The Dialectical Landscape—Recent Landscape Research in Human Geography." *Progress in Human Geography* 26, no. 3: 381-389.
- \_\_\_\_\_. 2003. "Cultural Landscapes: Just Landscapes or Landscapes of Justice?." *Progress in Human Geography* 27, no. 6: 787-796.
- \*Muir, Richard. 1998. "Landscape: A Wasted Legacy." *Area* 30, no. 3: 263-271.
- Nelson, Peter B. 2001. "Rural Restructuring in the American West: Land Use, Family and Class Discourses." *Journal of Rural Studies* 17, no. 3: 395-407.
- Nickerson, Cynthia J. and Lori Lynch. 2001. "The Effect of Farmland Preservation Programs on Farmland Prices." *American Journal of Agricultural Economics* 83, no. 2: 341-351.
- Owley, Jessica. 2011. "The Enforceability of Exacted Conservation Easements." *Vermont Law Review* 36, no. 2: 261-302.
- Parsons, James J. 1986. "A Geographer Looks at the San Joaquin Valley." *Geographical Review* 76, no. 4: 371-389.
- Parton, William J., Myron Gutmann, and William Travis. 2003. "Sustainability and Historical Land-Use Change in the Great Plains: The Case of Eastern Colorado." *Great Plains Research* 13, no. 1: 97-125.
- Pile, Steve. 2010. "Emotions and Affect in Recent Human Geography." *Transactions of the Institute of British Geographers* 35, no. 1: 5-20.
- Pisani, Donald J. 1983. "Reclamation and Social Engineering in the Progressive Era." *Agricultural History* 57, no. 1: 46-63.
- \_\_\_\_\_. 2003. "Federal Reclamation and the American West in the Twentieth Century." *Agricultural History* 77, no. 3: 391-419.
- Post, Christopher. 2013. "Heritage, Amenity, and the Cultural Landscape of the Changing Rural American West." *Journal of Cultural Geography* 30, no. 3: 328-355.
- Powell, John Wesley. 1890. "Institutions for the Arid Lands." *Century Illustrated Magazine* 40, no. 1: 111-116.

- Pursell, Jr., Carroll W. 1983. "The History of Technology and the Study of Material Culture." *American Quarterly* 35, no. 3: 304-315.
- Rader, Gertrude. 1991. "Community Development and Historical Events." *Journal of the Western Slope* 6, no. 1: 6-51.
- Rait, Mary. 1988. "Development of Grand Junction and the Colorado River Valley to Palisade from 1881 to 1931, Part I." *Journal of the Western Slope* 3, no. 3: \_\_\_\_\_.
- \_\_\_\_\_. 1988. "Development of Grand Junction and the Colorado River Valley to Palisade from 1881 to 1931, Part II." *Journal of the Western Slope* 3, no. 4: 4-55.
- Raitz, Karl B. 1979. "Themes in the Cultural Geography of European Ethnic Groups in the United States." *The Geographical Review* 69, no. 1: 79-94.
- \_\_\_\_\_. 2001. "Field Observation, Archives, and Explanation." *The Geographical Review* 91, nos. 1-2: 121-131.
- Rice-Osterhoudt, Rebecca. 1986. "Farmland Preservation in Vermont and the Creative Use of Land Trusts." *Vermont Law Review* 11, no. 2 : 603-629.
- Robbins, Paul and April Luginbuhl. 2005. "The Last Enclosure: Resisting Privatization of Wildlife in the Western United States." *Capitalism Nature Socialism* 16, no. 1: 45-61.
- Robbins, Paul, Stephen Martin, and Susan Gilbertz. 2012. "Developing the Commons: The Contradictions of Growth in Exurban Montana." *The Professional Geographer* 64, no. 3: 317-331.
- Rodegerdts, Henry E. 1998. "Land Trusts and Agricultural Conservation Easements." *Natural Resources & Environment* 13, no. 1: 336-340.
- Rose, Mitch. 2002. "Landscapes and Labyrinths." *Geoforum* 33, no. 4: 455-467.
- \*Rothman, Hal. 1994. "The Sky's the Limit? Technology and the American West." *Technology and Culture* 35, no. 1: 168-173.
- Rowley, William D. 2002. "Visions of a Watered West." *Agricultural History* 76, no. 2: 142-153.
- Salter, Christopher L. 2001. "No Bad Landscape." *The Geographical Review* 91, nos. 1-2: 105-112.
- Schein, Richard H. 1997. "The Place of Landscape: A Conceptual Framework for Interpreting an American Scene." *Annals of the Association of American Geographers* 87, no. 4: 660-680.

- \_\_\_\_\_. 2009. "A Methodological Framework for Interpreting Ordinary Landscapes: Lexington, Kentucky's Courthouse Square." *The Geographical Review* 99, no. 3: 377-402.
- Schlereth, Thomas J. 1985. "Material Culture Research and Historical Explanation." *The Public Historian* 7, no. 4: 21-36.
- Schooley, Therese, Michael J. Weaver, Donald Mullins, and Matthew Eick. 2008. "The History of Lead Arsenate Use in Apple Production: Comparison of its Impact in Virginia with Other States." *Journal of Pesticide Safety Education* 10, no. 1: 22-53.
- \*Scott, Joan W. 1991. "The Evidence of Experience." *Critical Inquiry* 17, no. 4: 773-797.
- Shumway, J. Matthew and Richard H. Jackson. 2008. "Place Making, Hazardous Waste, and the Development of Tooele County, Utah." *The Geographical Review* 98, no. 4: 433-455.
- Shumway, J. Matthew and Samuel M. Otterstorm. 2001. "Spatial Patterns of Migration and Income Change in the Mountain West: The Dominance of Service-Based, Amenity-Rich Counties." *The Professional Geographer* 53, no. 4: 492-502.
- Starrs, Paul F. and John B. Wright. 1995. "Great Basin Growth and the Withering of California's Pacific Idyll." *Geographical Review* 85, no. 4: 417-435.
- Stone, George H. 1891. "Note on the Asphaltum of Utah and Colorado." *American Journal of Science* (1880-1910) 42, no. 248: 148-159.
- \*Tuan, Yi Fu. 1976. "Humanistic Geography." *Annals of the Association of American Geographers* 66, no. 2: 266-276.
- Turpin, Nadine, Pierre Dupraz, Claudine Thenail, Alexandre Joannon, Jacques Baudry, Serge Herviou, and Peter Verburg. 2009. "Shaping the Landscape: Agricultural Policies and Local Biodiversity Schemes." *Land Use Policy* 26, no. 2: 273-283.
- Walker, Peter A. 2003. "Reconsidering 'Regional' Political Ecologies: Toward a Political Ecology of the Rural American West." *Progress in Human Geography* 27, no. 1: 7-24.
- \_\_\_\_\_. 2006. "How the West Was One: American Environmentalists, Farmers and Ranchers Learn to Say 'Howdy, Partner.'" *Outlook on Agriculture* 35, no. 2: 129-135.
- Walker, Peter and Louise Fortmann. 2003. "Whose Landscape? A Political Ecology of the 'Exurban' Sierra." *Cultural Geographies* 10, no. 4: 469-491.

- Walker, Peter A. and Patrick T. Hurley. 2004. "Collaboration Derailed: The Politics of 'Community-Based' Resource Management in Nevada County." *Society and Natural Resources* 17, no. 8: 735-751.
- Wallach, Bret. 1997. "Painting, Art History, and Geography." *Geographical Review* 87, no. 1: 92-99.
- Wayburn, Laurie A. 2011. "Conservation Easements as Tools to Achieve Regulatory Environmental Goals." *Law and Contemporary Problems* 74, no. 4: 175-197.
- White, Richard. 2004. "From Wilderness to Hybrid Landscapes: The Cultural Turn in Environmental History." *The Historian* 66, no. 3: 557-564.
- White, W. Thomas. 1986. "Main Street on the Irrigation Frontier: Sub-Urban Community Building in the Yakima Valley, 1900-1910." *Pacific Northwest Quarterly* 77, no. 3: 94-103.
- Widener, Jeffrey M. 2015. "Water-Conveyance Technology and the Preservation of Agriculture in Colorado's Orchard Mesa Irrigation District." *Material Culture* 47, no. 1: 32-57.
- Worster, Donald. 1982. "Hydraulic Society in California: An Ecological Interpretation." *Agricultural History* 56, no. 3: 503-515.
- \_\_\_\_\_. 1987. "New West, True West: Interpreting the Regions." *Western Historical Quarterly* 18, no. 2: 141-156.
- \_\_\_\_\_. 2014. "The American West in the Age of Vulnerability." *Western Historical Quarterly* 45, no. 1: 5-16.
- Wright, John B. 1992. "Land Trusts in the USA." *Land Use Policy* 9, no. 2: 83-86.
- \_\_\_\_\_. 2005. Review of *Conservancy: The Land Trust Movement in America*, by Richard Brewer. *Geographical Review* 95, no. 4: 607-609.
- Wyckoff, William. 1995. "Postindustrial Butte." *The Geographical Review* 85, no. 4: 478-496.
- Zielinski, Sarah. 2010. "The Colorado River Runs Dry." *Smithsonian*, October. <http://www.smithsonianmag.com/science-nature/the-colorado-river-runs-dry-61427169/?no-ist>. Last accessed July 1, 2014.

#### *Books and Other Secondary Resources*

- Abbott, Carl, Stephen J. Leonard, and Thomas J. Noel. 2005. *Colorado: A History of the Centennial State, Fourth Edition*. Boulder: The University Press of Colorado.

- “About the Festival.” n.d. [http://palisadehoneybeefest.org/About\\_Us.html](http://palisadehoneybeefest.org/About_Us.html). Last accessed October 11, 2014.
- Adler, Sy. 2012. *Oregon Plans: The Making of an Unquiet Land Use Revolution*. Corvallis: Oregon State University Press.
- Agricultural Marketing Resource Center. n.d. “Peach Profile.” [http://www.agmrc.org/commodities\\_\\_products/fruits/peach-profile/](http://www.agmrc.org/commodities__products/fruits/peach-profile/). Last accessed July 14, 2014.
- American Farmland Trust. n.d. “Colorado” <http://ww.farmland.org/programs/states/co/default.asp>. Last accessed July 14, 2014.
- \_\_\_\_\_. n.d. “Farming on the Edge: High Quality Farmland in the Path of Development.” <http://www.farmland.org/resources/fote/states/>. Last accessed September 8, 2014.
- \_\_\_\_\_. n.d. “Threatened Farmland: What’s Happening to Our Farmland?.” <http://www.farmland.org/resources/fote/>. Last accessed September 8, 2014.
- Amundson, Michael A. 2002. *Yellowcake Towns: Uranium Mining Communities in the American West*. Boulder: University Press of Colorado.
- Anderson, Heidi A., William M. Silberstein, Matthew B. Cobb, and Kelly Kindscher. “Conservation Easements in the Tenth Federal Circuit.” In *Protecting the Land: Conservation Easements Past, Present, and Future*, edited by Julie Ann Gustanski and Roderick H. Squires, 423-442. Washington, D.C.: Island Press, 2000.
- Anella, Anthony and John B. Wright. 2004. *Saving the Ranch: Conservation Easement Design in the American West*. Washington, D.C.: Island Press.
- \*Athearn, Robert. 1976. *The Coloradans*. Albuquerque: University of New Mexico Press.
- \*Babe, Robert E. 2006. *Culture of Ecology: Reconciling Economics and Environment*. Toronto: University of Toronto Press.
- Barcus, Earlynn, Irma Harrison, and the Lower Valley Heritage Group. 1983. *Echoes of a Dream: The Social Heritage of the Lower Grand Valley of Western Colorado*. Fruita, CO: Fruita Triangle.
- \*Bardell, Jr., Paul H. 2009. *Peaches and Politics in Palisade, Colorado: A Town Shaped by Its Canals, Roads, and Bridges*. West Conshohocken, PA: Infinity Publishing.com.

- Bartlett, Richard A. 1962. *Great Surveys of the American West*. Norman: University of Oklahoma Press.
- Basso, Keith H. 1996. *Wisdom Sits in Places: Landscape and Language Among the Western Apache*. Albuquerque: University of New Mexico Press.
- Beckworth, Drew and Dan Luecke. 2011. *Filling the Gap: Commonsense Solutions for Meeting Front Range Water Needs*. February.  
<http://www.westernresourceadvocates.org/gap>. Last accessed January 13, 2013.
- Bergner, Merton Nolen. 1937. "The Development of Fruita and the Lower Valley of the Colorado River from 1884 to 1937." Master's thesis, University of Colorado, Boulder.
- Bowles, Samuel. 1869. *The Switzerland of America: A Summer Vacation in the Parks and Mountains of Colorado*. New York: Samuel Bowles and Company.
- Brewer, Richard. 2003. *Conservancy: The Land Trust Movement in America*. Lebanon, NH: University Press of New England.
- Burt, Charles. 2012. *Water Resources Conservation Plan for Orchard Mesa Irrigation District*. San Luis Obispo, CA: Irrigation Training & Research Center, revised September 3.
- "Colorado Mountain Winefest," n.d. <http://www.winecolorado.org/events/mountain-winefest/>. Last accessed July 10, 2014.
- "Colorado National Bank Brews & Cruise Festival." n.d.  
<http://www.palisadetourism.com/events/item/colorado-national-bank-brews-cruise-festival-and-palisade-gran-fondo>. Last accessed October 11, 2014.
- "Colorado Roots." n.d. <http://www.colorado.com/roots>. Last accessed July 14, 2014.
- Colorado Wine Industry Development Board. 2015. "Colorado: A Beautiful State of Wine." <http://coloradowine.com>. Last accessed April 3, 2015.
- "Colorado's Original Winery." n.d. <http://www.coloradocellars.com/>. Last accessed October 11, 2014.
- "Colorado's Unique American Viticultural Areas." n.d.  
[http://www.coloradowine.com/cms/index.cfm/feature/38\\_7/colorados-unique-american-viticultural-areas.cfm](http://www.coloradowine.com/cms/index.cfm/feature/38_7/colorados-unique-american-viticultural-areas.cfm). Last accessed July 12, 2014.
- Conzen, Michael P. and Diane Dillon. 2007. *Mapping Manifest Destiny: Chicago and the American West*. Chicago: The Newberry Library.

- Copper Blog. 2014. "Colorado Agritourism Gets a Helping Hand." June 7, <http://www.coppercoloradocondos.com/copper-mountain-blog/post/colorado-agritourism>. Last accessed July 12, 2014.
- \*Cosco, Jon M. 1995. *Echo Park (Colorado): Struggle for Preservation*. Boulder, CO: Johnson Books.
- \*Cosgrove, Denis. 1990. "An Elemental Division: Water Control and Engineered Landscape." In *Water, Engineering and Landscape: Water Control and Landscape Transformation in the Modern Period*, edited by Denis Cosgrove and Geoff Petts, 1-11. London: Belhaven Press.
- \*Crawford, Stanley. 1993. *Mayordomo: Chronicle of an Acequia in Northern New Mexico*. Albuquerque: University of New Mexico Press.
- Cronin, Thomas E. and Robert D. Loevy. 1993. *Colorado Politics and Government: Governing the Centennial State*. Lincoln: University of Nebraska Press.
- De Alessi, Michael. "The Contraction and Expansion of the Rural West." *Rural West Initiative*. <http://web.stanford.edu/group/ruralwest/cgi-bin/drupal/content/rural-west-demographics>. Last accessed May 14, 2015.
- Dean Runyan Associates. 2013. "Colorado Travel Impacts 1996-2012." [http://www.deanrunyan.com/doc\\_library/COImp.pdf](http://www.deanrunyan.com/doc_library/COImp.pdf). Last accessed July 10, 2014.
- Dick, Everett. 1970. *The Lure of the Land: A Social History of the Public Lands from the Articles of Confederation to the New Deal*. Lincoln: University of Nebraska Press.
- Dietrich, David J. and Christian Dietrich. 2011. *Conservation Easements: Tax and Real Estate Planning for Landowners and Advisors*. Chicago: American Bar Association Publishing.
- \*Earle, Timothy and David E. Doyel. 2008. "The Engineered Landscapes of Irrigation." In *Economies and the Transformation of Landscape*, edited by Lisa Cliggett and Christopher A. Pool, 19-46. Lanham, MD: AltaMira Press.
- Emmitt, Robert. 2000. *The Last War Trail: The Utes and the Settlement of Colorado*. Boulder: University of Colorado Press.
- "Exploring Consumer Preferences and Travel Plans for Agritourism in Colorado." <http://www.ams.usda.gov/AMsv1.0/getfile?dDocName=STELPRDC5064320>.
- Farmland Information Center. "Colorado Statistics." <http://www.farmlandinfo.org/statistics/Colorado>. Last accessed July 14, 2014.



- \*Flack, J. Ernest. 1984. "Increasing Efficiency of Nonagricultural Water Use." In *Water Scarcity: Impacts on Western Agriculture*, edited by Ernest A. Englebort and Ann Foley Scheuring, 133-150. Berkeley: University of California Press.
- Frisk, Jerome and Forrest G. Robinson. 1997. "Introduction." In *The New Western History: The Territory Ahead*, edited by Forrest G. Robinson, 1-15. Tucson: The University of Arizona Press.
- Gascoigne, William, Martha Sullins, and Dawn Thilmany McFadden. 2008. "Agritourism in the West: Exploring the Behavior of Colorado Farm and Ranch Visitors." *Western Economics Forum*.  
<http://ageconsearch.umn.edu/bitstream/92849/2/0702002.pdf>. Last accessed July 1, 2014.
- "Grand Junction Announces Five Ways to Fall in Love with Fall." n.d.  
<http://www.visitgrandjunction.com/grand-junction-announces-five-ways-fall-love-fall-0>. Last accessed October 16, 2014.
- "Grand Junction Visitors & Convention Bureau." <http://www.visitgrandjunction.com>. Last accessed July 14, 2014.
- Gulliford, Andrew. 1989. *Boomtown Blues: Colorado Oil Shale, 1885-1985*. Boulder: University Press of Colorado.
- Harris, Mark. 2012. "Natural Resources of the West: Water and Drought." Panel on Drought and Agriculture, Colorado Mesa University Water Center Seminar Series. Aired online on December 3.
- Harrison, Blake. 2006. *The View from Vermont: Tourism and the Making of an American Rural Landscape*. Lebanon, NH: University of Vermont Press.
- \*Hart, John Fraser. 1995. "Reading the Landscape." In *Landscape in America*, edited by George F. Thompson, 23-42. Austin: University of Texas Press.
- \*Harvey, Mark W. T. 2000. *A Symbol of Wilderness: Echo Park and the American Conservation Movement*. Seattle: University of Washington Press.
- "HCT Mesa Land Trust." 2014. <http://youtu.be/pmSoai4HI-k>. Last accessed September 30, 2014.
- \*Hundley, Jr., Norris. 2009. *Water and the West: The Colorado River Compact and the Politics of Water in the American West, Second Edition*. Berkeley: University of California Press.
- Hussa, Linda. 2009. *The Family Ranch: Land, Children, and Tradition in the American West*. Reno: University of Nevada Press.

- \*Jerla, Carly, Kiyomi Morino, Rosalind Bark, and Terry Fulp. 2011. "The Role of Research and Development in Drought Adaptation on the Colorado River Basin." In *Water Resources Planning and Management*, edited by R. Quentin Grafton and Karen Hussey, 423-438. Cambridge, UK: Cambridge University Press.
- Jones, P. Andrew and Tom Cech. 2009. *Colorado Water Law for Non-Lawyers*. Boulder: The University Press of Colorado.
- Jordan, Terry G., Jon T. Kilpinen, and Charles F. Gritzner. 1997. *The Mountain West: Interpreting the Folk Landscape*. Baltimore, MD: The Johns Hopkins University Press.
- Land Trust Alliance. 2011. *2010 National Land Trust Census: A Look at Voluntary Land Conservation in America*. <http://www.landtrustalliance.org/land-trusts/land-trust-census>. Last accessed September 13, 2014.
- \_\_\_\_\_. 2011. "2010 National Land Trust Census Report: Colorado," <http://www.landtrustalliance.org/land-trusts/land-trust-census/state-factsheets/colorado-fact-sheet>. Last accessed September 13, 2014.
- \_\_\_\_\_. 2012. "Colorado, Palisade Fruitlands – FRPP Economic Research." <http://www.landtrustalliance.org/policy/documents/colorado-frpp-report>. Last accessed July 14, 2014.
- \_\_\_\_\_. 2012. "The Power of Leveraging Local and Federal Dollars to Strengthen Agricultural Land Easement Investments." <http://www.landtrustalliance.org/policy/documents/frpp-economic-benefits-report>. Last accessed July 14, 2014.
- \_\_\_\_\_. 2014. "Land Trusts." <http://www.landtrustalliance.org/land-trusts>. Last accessed January 24, 2014.
- Leopold, Aldo. 1991. "The Farmer as a Conservationist." In *The River of the Mother of God and Other Essays by Aldo Leopold*, edited by Susan L. Flader and J. Baird Callicott, 255-265. Madison: University of Wisconsin Press.
- Lewis, Peirce. 1979. "Axioms for Reading the Landscape: Some Guides to the American Scene." In *The Interpretation of Ordinary Landscapes: Geographical Essays*, edited by D.W. Meinig, 11-32. New York: Oxford University Press.
- Limerick, Patricia Nelson. 1997. "The Shadows of Heaven Itself." In *Atlas of the New West: Portrait of a Changing Region*, edited by William E. Riebsame, 151-178. New York: W. W. Norton and Company.
- \_\_\_\_\_. 2012. *A Ditch in Time: The City, the West, and Water*. Golden, CO: Fulcrum Publishing.

- Longwoods International. 2013. "Colorado Travel Year 2012 Final Report."  
<http://www.colorado.com/sites/colorado.com/master/files/2012Visitor%20FinalReportonline.pdf>. Last accessed July 10, 2014.
- "The Lower Colorado Watershed." n.d.  
<http://www.rcet.org/twd/students/ela/lowercolorado.html>. Last accessed July 1, 2014.
- \*MacColl, E. Kimbark. 1995. "The Battle to Control Land Use: Oregon's Unique Law of 1973." In *Politics in the Postwar American West*, edited by Richard Lowitt, 203-220. Norman: University of Oklahoma Press.
- "Mark your Calendars! Next Years (sic) Peach Festival Will Be August 13-16<sup>th</sup>, 2015."  
 n.d. <http://palisadepeachfest.com/pf/>. Last accessed October 11, 2014.
- \*McMillin, T. S. 2011. *The Meaning of Rivers: Flow and Reflection in American Literature*. Iowa City: University of Iowa Press.
- McPherson, Robert S. 2011. *As If the Land Owned Us: An Ethnohistory of the White Mesa Utes*. Salt Lake City: The University of Utah Press.
- Meinig, D.W. 1979. "The Beholding Eye: Ten Versions of the Same Scene." In *The Interpretation of Ordinary Landscapes: Geographical Essays*, edited by D.W. Meinig, 33-48. New York: Oxford University Press.
- Mesa County Headlines. 2014. "US Airways Magazine to Feature Mesa County."  
 March 12. <http://blog.mesacounty.us/2014/03/us-airways-magazine-to-feature-mesa.html>. Last accessed July 14, 2014.
- Mesa Land Trust. n.d. "Lands for Tomorrow: 2012-2013 Annual Report."  
[http://www.mesalandtrust.org/MLT\\_AnnualReport\\_2012\\_13.pdf](http://www.mesalandtrust.org/MLT_AnnualReport_2012_13.pdf). Last accessed July 14, 2014.
- \*Miller, Char. 2009. "Continental Divides." In *River Basins of the American West: A High Country News Reader*, edited by Char Miller, 9-13. Corvallis: Oregon State University Press.
- \*\_\_\_\_\_. 2010. "Into the West." In *Cities and Nature in the American West*, edited by Char Miller, 1-13. Reno: University of Nevada Press.
- Miller, Mark. 1997. *Hollow Victory: The White River Expedition of 1879 and the Battle of Milk Creek*. Boulder: University Press of Colorado.
- Museum of Western Colorado. n.d. "History of Cross Orchards Historic Site."  
<https://www.museumofwesternco.com/visit/cross-orchards-historic-site/history-of-cross-orchards/>. Last accessed July 14, 2014.

- National Basketball Association. 2013. *Oklahoma City Thunder vs. Philadelphia 76ers*. FSN Southwest. Aired January 4.
- Newell, Frederick Haynes and Daniel William Murphy. 1913. *Principles of Irrigation Engineering: Arid Lands, Water Supply, Storage Works, Dams, Canals, Water Rights, and Products*. New York: McGraw-Hill Book Company, Inc.
- Noel, Thomas J., Paul F. Mahoney, and Richard E. Stevens. 1993. *Historical Atlas of Colorado*. Norman: University of Oklahoma Press.
- \*Nye, David E. 1999. "Technologies of Landscape." In *Technologies of Landscape: From Reaping to Recycling*, edited by David E. Nye, 3-17. Amherst: University of Massachusetts Press.
- Ortiz, Kattey. 2014. "Peach Farmers in Palisade Prepare for Their Favorite Time of Year." *KREXTV*. August 15.  
<http://www.westernslopenow.com/story/d/story/peach-farmers-in-palisade-prepare-for-their-favori/38910/-HN54pXAbEuxc8XS2czEsA>. Last accessed October 17, 2014.
- O'Toole, Eileen. 2014. "Clifton." *Mesa County Historical Society Newsletter* (Summer): 1-6.
- "Our History." n.d. <http://carlsonvineyards.com/history.html>. Last accessed October 11, 2014.
- "Our Story." n.d. <http://www.plumcreekwinery.com/Our-Story.php>. Last accessed October 11, 2014.
- Pabor, William Edgar. 1883. *Colorado As an Agricultural State*. New York: Orange Judd Company.
- \_\_\_\_\_. 1883. *Fruit Culture in Colorado: A Manual of Information*. Denver: Dove and Temple, Book and Job Printers.
- The Palisade Chamber of Commerce. n.d. "Agri-Tourism."  
<http://palisadecoc.com/co/agri-tourismnew>. Last accessed July 10, 2014.
- Palmer Land Trust. 2014. "Southern Colorado Conservation Awards to Be Presented October 9." <http://palmerlandtrust.org/node/439>. Last accessed September 2, 2014.
- "Peach Festival Schedule." n.d. <http://palisadepeachfest.com/pf/peach-festival-schedule/>. Last accessed October 11, 2014.
- \*Petts, Geoffrey. 1990. "Water, Engineering and Landscape: Development, Protection and Restoration." In *Water, Engineering and Landscape: Water Control and*

- Landscape Transformation in the Modern Period*, edited by Denis Cosgrove and Geoff Petts, 188-208. London: Belhaven Press.
- Pisani, Donald. 1984. *From the Family Farm to Agribusiness: The Irrigation Crusade in California and the West, 1850-1931*. Berkeley: University of California Press.
- \_\_\_\_\_. 1992. *To Reclaim a Divided West: Water, Law, and Public Policy, 1848-1902*. Albuquerque: University of New Mexico Press.
- \* \_\_\_\_\_. 1996. *Water, Land, and Law in the West: The Limits of Public Policy, 1850-1920*. Lawrence: University Press of Kansas.
- \_\_\_\_\_. 2002. *Water and American Government: The Reclamation Bureau, National Water Policy, and the West, 1902—1935*. Berkeley: University of California Press.
- Raley, Bradley Frank. 2001. "Colorado's 'Island Community': Irrigation and Industrial Agriculture in Colorado's Grand Valley, 1882-1920." PhD diss., University of Oklahoma, Norman.
- \_\_\_\_\_. 2001. "Private Irrigation in Colorado's Grand Valley." In *Fluid Arguments: Five Centuries of Western Water Conflict*, edited by Char Miller, 156-177. Tucson: The University of Arizona Press.
- \*Reisner, Marc. 1993. *Cadillac Desert: The American West and Its Disappearing Water*. New York: Penguin Books.
- \*Reisner, Marc and Sarah Bates. 1990. *Overtapped Oasis: Reform or Revolution for Western Water*. Washington, D.C.: Island Press.
- Riebsame, William E., ed. 1997. *Atlas of the New West: Portrait of a Changing Region*. New York: W. W. Norton and Company.
- Ringholz, Raye C. 1996. *Paradise Paved: The Challenge of Growth in the New West*. Salt Lake City: University of Utah Press.
- \*Rivera, José A. 1998. *Acequia Culture: Water, Land and Community in the Southwest*. Albuquerque: University of New Mexico Press.
- \*Rodriguez, Sylvia. 2006. *Acequia: Water-Sharing, Sanctity, and Place*. Santa Fe, NM: School for Advanced Research Press.
- \*Rosenberg, Norman J. 1984. "Improving Land and Water Use Practices." In *Water Scarcity: Impacts on Western Agriculture*, edited by Ernest A. Englebert and Ann Foley Scheuring, 204-217. Berkeley: University of California Press.

- \*Rothman, Hal K. 2001. "Water and the Western Service Economy: A New Challenge." In *Fluid Arguments: Five Centuries of Western Water Conflict*, edited by Char Miller, 336-337. Tucson: The University of Arizona Press.
- Runyon, Luke and Harvest Public Media. 2014. "Working Out The Kinks To Rebrand Colorado As An Agritourism Destination." June 26. <http://www.kunc.org/post/working-out-kinks-rebrand-colorado-agritourism-destination>. Last accessed July 10, 2014.
- "Schedule (Calendar)." n.d. [http://palisadehoneybeefest.org/Schedule\\_\\_Calendar\\_.html](http://palisadehoneybeefest.org/Schedule__Calendar_.html). Last accessed October 11, 2014.
- Schmidt, Max. 2012. "Natural Resources of the West: Water and Drought." Panel on Drought and Agriculture, Colorado Mesa University Water Center Seminar Series. Aired online on December 3.
- \*Schulte, Steven C. 2002. *Wayne Aspinall and the Shaping of the American West*. Boulder: University Press of Colorado.
- \*Sherow, James Earl. 1990. *Watering the Valley: Development along the High Plains Arkansas River, 1870-1950*. Lawrence: University Press of Kansas.
- Sibley, George. 2012. *Water Wranglers: The 75-Year History of the Colorado River District: A Story about the Embattled Colorado River and the Growth of the West*. Glenwood Springs: Colorado River District.
- Silbernagel, Robert. 2011. *Troubled Trails: The Meeker Affair and the Expulsion of Utes from Colorado*. Salt Lake City: The University of Utah Press.
- Simmons, Virginia McConnell. 2000. *The Ute Indians of Utah, Colorado, and New Mexico*. Boulder: University Press of Colorado.
- Smith, Henry Nash. 1957. *Virgin Land: The American West as Symbol and Myth*. New York: Vintage Books.
- Stegner, Wallace. 1953. *Beyond the Hundredth Meridian: John Wesley Powell and the Second Opening of the West*. New York: Penguin Books.
- \_\_\_\_\_. 1987. *The American West as Living Space*. Ann Arbor: The University of Michigan Press.
- Stilgoe, John R. 1998. *Outside Lies Magic: Regaining History and Awareness in Everyday Places*. New York: Warner and Company.
- Stokes, Samuel N., A. Elizabeth Watson, and Shelley S. Mastran. 1997. *Saving America's Countryside: A Guide to Rural Conservation, Second Edition*. Baltimore, MD: The Johns Hopkins University Press.

- Summit Economics and The Adams Group. 2009. *Water and the Colorado Economy*. December.  
[http://www.summiteconomics.com/FRWP\\_Econ\\_Final\\_2011910.pdf](http://www.summiteconomics.com/FRWP_Econ_Final_2011910.pdf). Last accessed March 3, 2013.
- Talbott, Bruce. 2012. "Natural Resources of the West: Water and Drought." Panel on Drought and Agriculture, Colorado Mesa University Water Center Seminar Series. Aired online on December 3.
- THK Associates. 1974. *Impact Analysis and Development Patterns Related to an Oil Shale Industry: Regional Development and Land Use Study*. Denver: THK Associates, Inc.
- Tolia-Kelly, D. P. 2009. "Material Culture." In *International Encyclopedia of Human Geography*, edited by Rob Kitchin and Nigel Thrift, 500-504. Amsterdam, NL: Elsevier.
- Travis, William R. 2007. *New Geographies of the American West: Land Use and the Changing Patterns of Place*. Washington, D.C.: Island Press.
- Trout Unlimited. 2002. "Trout Unlimited Applauds House Passage of SB 156." April 25. [http://www.tu.org/press\\_releases/2002/trout-unlimited-applauds-house-passage-of-sb-156](http://www.tu.org/press_releases/2002/trout-unlimited-applauds-house-passage-of-sb-156). Last accessed September 1, 2012.
- \_\_\_\_\_. 2003. *A Dry Legacy 2: Progress and New Threats in a Drought Year*. Boulder: Colorado Water Project.
- Underwood, Kathleen. 1987. *Town Building on the Colorado Frontier*. Albuquerque: University of New Mexico Press.
- University of Virginia Library. n.d. "Historical Census Browser: County-Level Results for 1890." <http://mapserver.lib.virginia.edu/>. Last accessed July 14, 2014.
- \_\_\_\_\_. n.d. "Historical Census Browser: County-Level Results for 1910." <http://mapserver.lib.virginia.edu/>. Last accessed July 14, 2014.
- Vandenbusche, Duane. 1974. *Early Days in the Gunnison Country*. Gunnison, CO: B and B Printers.
- Vandenbusche, Duane and Duane A. Smith. 1981. *A Land Alone: Colorado's Western Slope*. Boulder, CO: Pruett Publishing Company.
- "Venue." n.d. <http://www.palisademusic.com/venue/>. Last accessed October 11, 2014.
- \*Walker, Peter and Patrick T. Hurley. 2011. *Planning Paradise: Politics and Visioning of Land Use in Oregon*. Tucson: The University of Arizona Press.

- \*Wallach, Bret. 1996. *Losing Asia: Modernization and the Culture of Development*. Baltimore, MD: The Johns Hopkins University Press.
- \_\_\_\_\_. 2015. *A World Made for Money: Economy, Geography, and the Way We Live Today*. Lincoln: University of Nebraska Press.
- Webster, Barbara. n.d. "What is Quilt Trails All About?." <http://quilttrailswnc.org/What-is-Quilt-Trails-All-About.pdf>. Last accessed October 15, 2014.
- "Welcome to the Lavender Association of Western Colorado." n.d. <http://www.coloradolavender.org/>. Last accessed October 11, 2014.
- Wescoat, Jr., James L. 2008. "Introduction: Three Faces of Power in Landscape Change." In *Political Economies of Landscape Change: Places of Integrative Power*, edited by James L. Wescoat, Jr. and Douglas M. Johnston, 1-25. Dordrecht, NL: Springer.
- \_\_\_\_\_. 2010. "Watering the Deserts." In *The Making of the American Landscape, Second Edition*, edited by Michael P. Conzen, 207-228. New York: Routledge.
- West, Elliott. 2014. "The Great Flip-Flop: Western Agriculture in the Connected Age." *Agricultural History Society Annual Meeting*. Delivered in Provo, Utah, June 21.
- \*White, Gilbert F. 1984. "Problems, Findings, and Issues." In *Water Scarcity: Impacts on Western Agriculture*, edited by Ernest A. Englebert and Ann Foley Scheuring, 427-484. Berkeley: University of California Press.
- \*White, Richard. 1991. *It's Your Misfortune and None of My Own: A New History of the American West*. Norman: University of Oklahoma Press.
- \_\_\_\_\_. 1995. *The Organic Machine: The Remaking of the Columbia River*. New York: Hill and Wang.
- \_\_\_\_\_. 1996. "Are You an Environmentalist or Do You Work for a Living?." Work and Nature." In *Uncommon Ground: Rethinking the Human Place in Nature*, edited by William Cronon, 171-185. New York: W.W. Norton & Company.
- Wilkinson, Charles. 1997. "Paradise Revised." In *Atlas of the New West: Portrait of a Changing Region*, edited by William E. Riebsame. New York: W. W. Norton and Company.
- \_\_\_\_\_. 2000. Conclusion to *The Last War Trail: The Utes and the Settlement of Colorado*, by Robert Emmitt, 297-322 . Boulder: University Press of Colorado.
- Wilson, Joshua, Dawn Thilmany, and Martha Sullins. 2006. "Agritourism: A Potential Economic Driver in the Rural West." Colorado State University Cooperative Extension Economic Development Report, EDR 06-01.



[http://www.agmrc.org/media/cms/edr0601\\_cda89b9a1e15e.pdf](http://www.agmrc.org/media/cms/edr0601_cda89b9a1e15e.pdf). Last accessed July 10, 2014.

Williams, Raymond. 1983. *Culture and Society: 1790-1950*. New York: Columbia University Press.

\*Wittfogel, Karl A. 1956. "The Hydraulic Civilizations." In *Man's Role in Changing the Face of the Earth*, edited by William L. Thomas, Jr., 152-164. Chicago: The University of Chicago Press.

Worster, Donald. 1992. *Under Western Skies: Nature and History in the American West*. New York: Oxford University Press.

\*\_\_\_\_\_. 1994. *An Unsettled Country: Changing Landscapes of the American West*. Albuquerque: University of New Mexico Press.

\_\_\_\_\_. 1995. *Rivers of Empire: Water, Aridity, and the Growth of the American West*. New York: Oxford University Press.

\_\_\_\_\_. 2001. *A River Running West: The Life of John Wesley Powell*. New York: Oxford University Press.

Wright, James Edward. 1974. *The Politics of Populism: Dissent in Colorado*. New Haven, CT: Yale University Press.

Wright, John B. 1993. *Rocky Mountain Divide: Selling and Saving the West*. Austin: University of Texas Press.

\_\_\_\_\_. 1998. *Montana Ghost Dance: Essays on Land and Life*. Austin: University of Texas Press.

\_\_\_\_\_. 2000. *Montana Places: Exploring Big Sky Country*. Mesilla: New Mexico Geographical Society.

Wyckoff, William. 1999. *Creating Colorado: The Making of a Western American Landscape 1860-1940*. New Haven, CT: Yale University Press.

\_\_\_\_\_. 2014. *How to Read the American West: A Field Guide*. Seattle: University of Washington Press.

Wyckoff, William and Lary M. Dilsaver, eds. 1995. *The Mountainous West: Explorations in Historical Geography*. Lincoln: University of Nebraska Press.

Young, Richard K. 1997. *The Ute Indians of Colorado in the Twentieth Century*. Norman: University of Oklahoma Press.