

**ORAL HISTORY INTERVIEWS  
YAKIMA PROJECT DITCH RIDERS**

and

**"DELIVERY, TECHNOLOGY, COMMUNITY:  
AN ORAL HISTORY OF YAKIMA PROJECT DITCH RIDERS**

**By James Bailey**

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## Introduction

By Jim Bailey, Ph.D., Historian, U.S. Bureau of Reclamation

Origins of the Yakima Project Ditchriders oral history project go back to 2003, when Bureau of Reclamation archeologist Mark DeLeon, who works out of Reclamation's Yakima, Washington, office, approached me about doing this project. This oral history was one in a set of mitigation measures negotiated between Reclamation and the Washington State Historic Preservation Office over the transfer of several land parcels from Federal to Yakima-Tieton Irrigation District (Y-TID) ownership (Y-TID is the first Reclamation designed and built system on the Yakima Project.) Reclamation acquired these land parcels in the early 1900's as "patrol sites," on which a house, barn, and outbuildings were constructed to house the patrolman and his family, later known as "ditchriders." In 1947, the Y-TID took over the patrol sites when operation of the system transferred from Reclamation to the district, although title remained in Federal hands.

Over the last few decades, expansion of Yakima urban sprawl onto former orchard lands, improvements in the transportation system, and replacement of open laterals by buried pipes made obsolete the necessity for ditchriders and their patrol sites. Mitigation measures to offset the loss of these sites and associated structures from the Federal estate included completing Historic American Buildings Survey (HABS) documentation, developing an exhibit on ditchrider homes, conceiving an interpretive plan for the Yakima Project, and conducting a formal oral history of ditchriders.

Armed with a contact list, a tape recorder, and a couple open-ended questions, over the next few months I contacted eight former and current Y-TID ditchriders, with seven agreeing to be interviewed. All interviews with former ditchriders were done in their homes, while the interview with the one current ditchrider was done in his office. Some interviewees, however, were reticent to talk about their past, while others were more than enthusiastic to participate; such are the hazards of oral history. And as the project got underway, the local newspaper's (*Yakima Herald-Republic*) feature writer scooped the story and did his own piece on oral histories, ditchriders, and their millennia-old profession.

Once interviews were completed and transcribed, I fashioned a narrative history that focused on the changes in water delivery technology over the last century, and how this has affected how ditchriders do their job. This narrative incorporated quotations from the former and current ditchriders on how key technological advances in the means of water delivery, as well as landmark historic events like the eruption of Mount St. Helens, shaped their lives and careers.

The common thread in all interviews: although *how* the job is accomplished has changed drastically over the decades, the primary purpose, that of allocating and delivering water in a timely and professional manner, has not. For Yakima Project ditchriders, customer service is still the number one priority in this century, as in the previous.



## **Delivery, Technology, Community: An Oral History of Yakima Project Ditch Riders**

Theirs is a 7,500-year-old occupation with roots traceable to the first controlled irrigation practices by Sumerian cultures in ancient Mesopotamia.<sup>1</sup> Yet for those with imaginative visual inclinations framed within a contemporary context, “riding ditch” can conjure a colorful, somewhat romantic image of a solitary horseback rider spending long, dusty hours inspecting and cleaning irrigation canals and laterals, opening and closing headgates, calculating and delivering water allocations for the small family farmer’s verdant fields—the Jeffersonian agrarian ideal—then retiring to company housing.

Although the image of the equestrian ditch rider furthering Thomas Jefferson’s agrarian dream is compelling, it is nonetheless archaic and hardly romantic.<sup>2</sup> Like every other American profession, the means of “riding the ditch” have advanced as steadily as technology has progressed. Over the decades, ditch riding has evolved from horseback patrols, hand-written log sheets, telephone booth communications, and open ditch/canal delivery systems to vehicle patrols, computerized databases, cellular phones, and piped, fully-pressurized underground delivery systems. Thus, ditch riding continuously changes to mirror the water delivery technological milieu within which it exists.

In the most basic sense, however, the job remains the same. As an irrigation district employee, the ditch rider is responsible for allocating and delivering water in an accurate, timely, and customer service-oriented manner. The latter fuels another factor not in the standard job description—community involvement—and it is important. Among current and retired irrigation district ditch riders on central Washington’s Yakima Project, there is a consensus: community involvement is important to job satisfaction, more so than technological advances that have increased overall job efficiency.

Along with technological advances, the supply-and-demand dynamic for water in Yakima County has evolved into something more multidimensional than addressing

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<sup>1</sup> See Clive Ponting, *The Green History of the World: The Environment and the Collapse of Great Civilizations* (Reprint, New York: Penguin, 1993) for more on Sumerian contributions to organized irrigation and agriculture.

<sup>2</sup> For an explanation of Thomas Jefferson’s agrarian ideas and their national impact, see Henry Nash Smith, *Virgin Land: The American West as Symbol and Myth*, Rev. Ed. (Cambridge: Harvard Univ. Press, 1978), 128-29.

agricultural needs. As the area's population has skyrocketed in the last decade—and as golf courses and suburban housing tracts have increasingly supplanted farm and orchard acreage—ditch riders find themselves allocating more municipal water to golf course managers and homeowners keeping fairways, greens, lawns, and gardens healthy.<sup>3</sup> To do so is a challenge in this naturally semi-arid region on the gently rolling eastern slope of Washington's Cascade Range, where the glaciated visages of Mount Adams and Mount Rainier stand like monolithic sentinels over pastoral agricultural landscapes.

And it is agriculture, especially apple production, that reigns supreme here. According to the United States Department of Agriculture's (USDA) 1997 Census of Agriculture, Washington State, by far, leads American apple production with 4.8 billion pounds of apples of all varieties harvested annually. Yakima County is Washington's—and the Nation's—leading apple-producing county, with just under 2 billion pounds of apples of different varieties harvested annually on 75,000 acres of irrigated land. Yet the county's agricultural bounty is more diverse than apples: in 1997, Yakima County was second in the nation in cherry and pear production, tenth in grapes, and fifteenth in plums and prunes—all grown on 3,365 farms responsible for 277,589 acres of irrigated lands.<sup>4</sup>

It is the Yakima Project's irrigation district ditch rider who insures that Bureau of Reclamation (Reclamation) water is accurately delivered to the thousands of acres of orchards and vineyards responsible for this voluminous production. As part of a larger history already written about this project (note #4), this oral history examines the careers of former and working ditch riders on the Yakima Project's Yakima-Tieton Irrigation District. It focuses on the people and the job, how they and the job have changed over time, and their speculation about what the future might hold for this profession.

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<sup>3</sup> According to the U.S. Census Bureau, the City of Yakima's population grew by almost 24% from 1990 to 2000 from 54,843 to 71,845—Washington's ninth largest city. In the same time period, Yakima County grew by almost 18% from just under 189,000 to 222,581.

<sup>4</sup> Statistics from the USDA Census of Agriculture, at [www.nass.usda.gov/census/census97/rankings](http://www.nass.usda.gov/census/census97/rankings). It is important to note that the 1992 rankings show Yakima County also leading American Apple production with 1.525 billion pounds of apples, on just under 62,000 irrigated acres. On the other hand, it is also important to note that apple production in Yakima County dropped significantly in 1999; the updated agriculture census is planned for release in mid-2004. This report will use 1997 numbers.

## Yakima Project: Overview<sup>5</sup>

In a pattern similar to other Federal irrigation projects across the mostly arid American West, Washington's Yakima Project arose out of the financial shortcomings and engineering incapacities of private irrigation concerns unable to further develop their projects. At about the time these concerns reached their limits, help arrived. With the 1902 passage of the Reclamation Act, the Federal Government could step in with the financial resources and engineering acumen to further develop stalled private projects and begin new ones. Indeed, many older Yakima Project features existed as private irrigation facilities long before Reclamation's involvement.

Authorized December 12, 1905, the Yakima Project is one of Reclamation's earliest projects, and the second Reclamation project in Washington State (authorized ten days after the Okanogan Project). It provides irrigation, hydropower, and municipal water for relatively narrow strips of land that bookend the Yakima River for 175 miles from its headwaters near Snoqualmie Pass east of Seattle to its confluence with the Columbia River near Richland. An integrated network of reservoirs, diversion dams, pumping stations, canals, and drains, the project delivers water to approximately 464,000 acres of irrigable lands. Major storage facilities include Keechelus, Kachess, and Cle Elum Lakes west of Ellensburg, and Clear, Bumping, and Rimrock Lakes west of Yakima. And, plans are on the table to enhance the project with Black Rock facility, a high dam and reservoir 35 miles east of Yakima that will siphon and hold exchange water from the Columbia River.

Seven separate land units known as divisions (or irrigation districts) make up the project: Wapato, Sunnyside, Roza, Kennewick, Kittitas, Storage, and Tieton. More than 45,000 acres not included in the seven divisions are irrigated by private interests under water supply contracts with Reclamation. The Bureau of Indian Affairs operates Wapato Division, which serves 136,000 acres of irrigated Yakama Indian Reservation lands. Sunnyside Division consists of 103,000 acres that stretches from Parker to near Benton City, while the 72,000 acre Roza Division lies north of the Yakima River from Pomona

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<sup>5</sup> This section is a concise overview of the Yakima Project proper. For a detailed project history and its influence on the surrounding area, see Christine Pfaff, *Harvests of Plenty: A History of the Yakima Irrigation Project, Washington* (Denver: Bureau of Reclamation, 2002.)

to Benton City; both divisions are primarily irrigation-based. Kittitas Division serves 19,000 acres of irrigable land north of Yakima around Ellensburg, while the division furthest to the south, Kennewick Division near Richland, supplies water for 19,000 acres of irrigable lands and the 12,000 kilowatt Chandler Powerplant. The Storage Division oversees all water storage units and flow from all lakes and reservoirs, as well as the natural river flow, for the entire project.<sup>6</sup>

Yet it is the Tieton Division, otherwise known as the Yakima-Tieton Irrigation District, (YTID) that is the focus of the ditch riding experience, mostly because recent rapid urban growth ensures that no other division has so many diverse water delivery responsibilities. One of the Yakima Project's smaller divisions, YTID includes nearly 27,000 acres of irrigable lands immediately west of the city of Yakima between the Naches River and Ahtanum Creek. Water for YTID irrigated lands is diverted from the Tieton River via Tieton Diversion Dam, located eight miles downstream from Rimrock Lake. Water then flows through the main Tieton Canal, is diverted for irrigation and municipal needs, and then drains into Ahtanum Creek 14 miles west of Union Gap.<sup>7</sup>

### **Yakima-Tieton Ditch Riders: Of Methodology and Men**

After extensive background research, in August and October 2003 the author conducted seven oral history interviews in the Yakima area. All interviews were taped and transcribed; original tapes and transcript copies will be deposited in the National Archives and Records Administration, College Park, Maryland, and the Reclamation History Program Office, Denver, Colorado. Out of the seven oral history interviewees, six are former ditch riders, watermasters, or supervisory employees; five are retirees and one is a current employee. Of the six, five worked (and one still works) on the YTID, while one worked for a short time on the Sunnyside Division. The seventh oral history interviewee is a retired Reclamation engineer who resides in Yakima; his perspective is especially invaluable because of his position within the Federal bureau that oversees the project's water allocations. Furthermore, all interviewees are male, which reflects the

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<sup>6</sup> General Yakima Project information taken from [www.intra.usbr.gov/dataweb/html/yakima.html](http://www.intra.usbr.gov/dataweb/html/yakima.html)

<sup>7</sup> Ibid.



fact that women have never worked as ditch riders on the Yakima Project. Thus, what follows are collective vignettes of these ditch riders, their livelihoods, how their job has changed with technological advances, and, most importantly, what drove them to pride through success.<sup>8</sup>

### **Jack Hart: Riding Ditch the Old-Fashioned Way<sup>9</sup>**

Of all the YTID ditch riders interviewed, 87-year-old Jack Hart is the only interviewee that worked exclusively on the old, open canal, unpressurized (electrically pumped) water delivery system. Spry and alert with an open demeanor and warm smile, Hart was eager to share his career experiences. Born in 1916 and raised on his family's farm west of Yakima near Cowiche, Hart spent the first three decades of his life working the family farm and other ranches. Once World War II was underway, Hart headed west for a short time to work at the Tacoma Naval Shipyards. He disliked urbanized western Washington, however, and yearned for the pastoral Yakima country. "You can't take the country boy out of the country. I didn't like it," Hart laughed. After war's end, the country boy returned to Yakima to work the fruit orchards and warehouses.

In 1947, the Tieton Irrigation District paid off their repayment contracts to Reclamation—the first irrigation district in America to do so—then reorganized under Washington State law as the YTID. Tired of warehouse work, Hart inquired about a possible job riding ditch for YTID. Because the hiring official knew Hart was a hard worker with many local ties to valley farmers and ranchers, he was hired in a foreman position. A more challenging task for Hart, however, was learning how to figure water. In hindsight, he praised his on-the-job instructor who "should have been a school teacher because he had all the patience in the world with me, and I was pretty darned dumb." After awhile, all the water calculation information that was thrown his way clicked. "Then it all just comes naturally," he noted.

For his efforts, YTID paid Hart \$190 a month plus a place to live—a ditch rider

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<sup>8</sup> For the purposes of this report, former Sunnyside Division ditch rider Larry Celius was not included, because his tenure as ditch rider was too short—less than 3 years—to be of interpretive value. Long-term employees can give better perspectives of their jobs and changes over time. Nonetheless, Celius' interview contains valuable information, and will be deposited with the other interviews in NARA College Park and with the Reclamation History Program.

<sup>9</sup> Jack Hart interview, Cowiche, WA, 28 August 2003.

house near Tieton. Because earlier ditch riders were Federal workers—and there were not many houses available in the Yakima area—in the early 20<sup>th</sup> Century Reclamation built a series of small, wood frame houses for ditch riders and their families. Although both he and his wife Grace loved living in the house, he acknowledged that there were some shortcomings, including no bathrooms and unlevel floors that caused people to tumble into adjoining rooms if they failed to lean the opposite way. “We had to go in the front door and then you leaned back to keep from winding up in the bedroom,” he noted with a twinge of belated amusement.

After only four years in the old Tieton house, Hart and his family moved into a more modern company home. Located near 96<sup>th</sup> Avenue and Summitview in West Yakima, the masonry block home had three bedrooms, a bathroom, carport, oil heat and a barn. The new house made the old, wood-framed house look like a shack. “It was not a place I could have afforded to have rented if we had been working on our own.... It is a nice place,” Hart said. Although Hart and his family moved out of this home (and back to the family ranch) when he retired in 1981, the YTID still uses the house for ditch rider housing.

The Hart’s new home also stood closer to his ditch riding territory, which he sometimes patrolled on horseback until YTID provided Chevy pickup trucks with two-way radios. He was responsible for two laterals in the area around 40<sup>th</sup> Avenue north to Scenic Drive and one that ran west to Wide Hollow Road. Hart was also quick to point out that even back in the 1950s and 1960s the population was expanding into areas that had been orchards, and that although he had one of the smallest areas to patrol, there were increasing numbers of people to deal with. As part of his job, Hart was literally on-call 24 hours a day, seven days a week, to meet people’s water needs. Although he enjoyed working with people, the constantly ringing telephone peeved him. “And to this day I hate a damn telephone,” the smiling Hart remarked.

Yet most of Hart’s ditch riding duties were mundane: cleaning canals and laterals, calculating water allocations, and paperwork like the infamous green sheets that logged and tracked water usage. Hart acknowledged that although he enjoyed his job, the one thing he dreaded was filling out the green sheets and sorting the paperwork. Another paperwork aspect of the job Hart disliked were the crop reports. Every year Reclamation

required YTID ditch riders to go door-to-door to get crop production information from reluctant customers. To Hart, it was nothing more than a sales job. “I hated those things with a passion,” he said. “It was too much like being a Fuller Brush man ... going around and knocking on everybody’s door. I didn’t like that at all.”

Notwithstanding paperwork and crop reports, however, Hart loved his job. Although he mentions the small things like the district furnishing pickup trucks for their work—and that the area was a good place to raise his family—the one aspect of ditch riding that elicits a big smile was community involvement, a sense of belonging and contributing to a higher community ideal. “The thing I liked best about it,” noted Hart, “was the feeling of being able to contribute to the community. And I think I made more friends with my water users than I did enemies. This ... proved itself at my retirement party.” Hart’s remarks about community involvement and contribution run as a thread of continuity among all ditch riders, former and current.

#### **Leo Heilman: Witness to Technology’s Major Shift <sup>10</sup>**

Unlike Jack Hart, 80-year-old Yakima resident Leo Heilman started as a ditch rider but later advanced to the rank of watermaster—a sort of supervisory ditch rider. Born in 1923 in Hague, North Dakota, Heilman moved to Yakima in 1942 to work at the old Big Y (apple packing) Warehouse’s loading dock. In 1956, a YTID watermaster approached Heilman to see if he was interested in riding ditch. Much like Hart, Heilman was tired of laboring in warehouses and needed more money. He accepted the offer. Starting at ditch riders’ 0700 “reveille,” Heilman’s tasks were essentially the same as Hart’s: keep the ditches clean and allocate water to the farmers. One difference, however: because ditch riders were year-round employees, after the water season ended in late fall, Heilman operated backhoes to help clean canals and ditches in all the other Yakima Project divisions. “We usually worked until the ground froze too tight,” he reminisced.

After fifteen years of riding ditch, in 1971 Heilman advanced to watermaster. During his seventeen years as a YTID watermaster (he retired in 1988) he witnessed the technological shift from open canal delivery systems to the underground, piped and fully

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<sup>10</sup> Leo Heilman interview, Yakima, WA, 28 August 2003.

pressurized system. He welcomed the major switch. “I was glad to see it come. It’s a big water saving. With all them open ditches we lost a lot of water,” he noted. The numbers speak for themselves: with the old system, farmers received about 3.6 gallons per minute, while the new system delivers 4.9 gallons per minute, due to reduced loss from seepage and evaporation.<sup>11</sup>

The new system also made the ditch riders’ job more efficient. “When the pressure system went in,” Heilman remarked, “why, it started getting easier, because all [the ditch rider] had to do was turn the valve...and the farmer’s all ready to go.” And with the pressurized system—which was less wasteful than the old system due to no seepage or leakage—more farmers installed sprinkler systems. “Not too many farms had sprinklers,” Heilman noted, “but when the pressure system went in, boy they went to sprinklers.”

Yet the new technology came with an enormous human cost—the loss of jobs. Once the pressurized system began to take hold, the number of YTID ditch riders steadily declined. When Heilman began watermastering in 1971, he supervised eight to ten ditch riders. This number remained consistent until the mid-1980s, when the new pressurized technology forever changed the job’s nature. With this shift, the need for ditch riders dwindled to a handful because farmers could control their pre-allocated water flows, plus there was no cleaning and maintaining open canals and laterals. “When the pressure system went in, we cut down to four. Then after the pressure system was in operation for a couple years, I think we cut down to two,” Heilman commented. He is almost right. This number has remained consistent since the mid-1980s, for there are currently three ditch riders working the entire 27,000 acre YTID.

Heilman’s career in water delivery and supervision also involved living in the old Reclamation patrol houses for nearly thirty-two years. For the most part, he and his wife liked living in the houses, although he admitted some of them were pretty “run down.” He acknowledged that Reclamation was good in helping to maintain the houses, and that most problems occurred as a result of the long vacancies associated with job elimination. “Whatever needed to be fixed,” Heilman reminisced about Reclamation’s role in house maintenance, “they helped us, gave us the equipment to do it.” Yet implementing the

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<sup>11</sup> Numbers from David Lester, “The Past’s Ebb and Flow,” *Yakima Herald-Republic*, 15 September 2003.

pressurized delivery system not only affected workers, but the houses they lived in. Consequently, as the number of YTID ditch riders dropped, vacancies for the patrol houses climbed.

And, like Hart, Heilman derived great satisfaction from helping the community meet its water consumption needs. Although he admitted that retirement was tough at first, it got easier. “I wanted to go out, and no place to go,” he remarked. “And then after awhile it got easier... I thought thirty-two years was long enough.”

### **Warren Dickman: A Managerial Perspective<sup>12</sup>**

As a YTID manager, it was Warren Dickman’s job to supervise ditch riders like Jack Hart and watermasters like Leo Heilman. Born on the family homestead in Angelas, Kansas, during the Great Depression, Dickman’s family traveled a circuitous route from Kansas to Oregon then back to Kansas, then to Nampa, Idaho, where he graduated from high school. After World War II, Dickman served in the Korean War, then in 1959 headed to the North Unit Irrigation District near Madras, Oregon, to work as a ditch rider. Dickman stayed in Madras until 1967, when he became manager for the Baker Valley Irrigation District. His time in Baker, however, was cut short, for in 1971 he went back to the North Unit to troubleshoot system problems. When a managerial opening occurred at the YTID—and when his former boss could not accept the position due to his poor health—Dickman seized the opportunity.

In 1975, he arrived in Yakima only to find the open irrigation system in serious need of rehabilitation or replacement. YTID harbored visions of rebuilding the entire system at the time, with Dickman seen as sort of a savior with extensive experience from his Oregon days. “Over the years, conservative assessments led to poor maintenance,” he explained. “It needed help.” Yet rather than trying to rebuild or rehab the old pumped system, a new, modern, pressurized system could perform the job a lot more efficiently with less water waste through seepage and evaporation.

Dickman suggested to the YTID board that with the 800-900 feet of fall (vertical feet from source to irrigation) a closed, underground pressurized system would work better with less waste. “[In] the old open system, thirty percent of your diversion was

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<sup>12</sup> Warren Dickman Interview, Tieton, WA, 29 August 2003.

lost,” he observed. “And, with the twelve miles of horseshoe concrete forms and tunnels, you were limited to what you could bring down. When the pressure system came in, there was suddenly 30 percent more water available for the crops.”

Some locals resisted the new technology, but not all. Dickman stressed that although many of the old-time farmers balked at the idea of a new system, the younger farmers—mostly their children—welcomed it once they realized the savings in energy and water. Eventually, those that originally opposed it embraced it, especially in the early 1980s when American agricultural economics were generally depressed and new ideas were met with less skepticism. “Some of the more vocal ones that opposed it [came] up to me later and said it was the best thing that ever happened to them,” stressed Dickman, “because they can raise a better crop with more water.... Trees are healthier, particularly the pears and the cherries.”

And, much like Hart and Heilman, Dickman echoed the sense of community involvement as one of the most satisfying aspects of his career. He derived satisfaction from such simple things as watching the apple crops blossom and harvest—especially if prices were good. “If they had a decent price everybody had a grin on their face, and it was nice to be part of that,” he reminisced. On the other hand, if weather, bugs, or any other factor(s) affected production and caused moods to sink, so too would Dickman’s. “I think then you realized you were part of the community,” he noted. Dickman enjoyed dealing with small family farmers/orchardists and large agribusinesses, with everyone contributing to help the district solve problems. “Everything was a community effort when we had problems,” he laughed.

Regarding the ditch riding profession, Dickman remains optimistic, yet cautious. It depends, he thinks, on many factors: water, the agricultural economy, labor costs, etc. He believes that despite larger factors, there will always be need for the ditch rider within the aegis of agricultural production, for someone will always have to maintain and clean systems—open or closed. “You’ve got to have that individual go down to that canal daily to watch, look for weed jamming, rodent damage, regulate the water levels to distribute to laterals and sublaterals,” Dickman said, “so there’ll be a need for ditch riders on many of the existing projects.”

### **Onnie Perala: The Reclamation Perspective<sup>13</sup>**

Born and raised in northern Michigan, former Reclamation engineer Onnie Perala headed west in 1961 after receiving his B.S. in Civil Engineering from Michigan Tech University. After a two-year stint as a road designer with the Forest Service's Region 6, (Oregon and Washington) in 1963 Perala accepted a position with Reclamation's Snake River Development Office in Boise. Upon arriving in the West, Perala was struck by the immense diversity of its landscapes, from wet to arid and all ecosystems in between. For Perala, it was a learning experience. "I had to relearn everything because the coastal environment and the desert environment are altogether different than the cedar swamps of northern Michigan," he noted.

During his first decade with Reclamation, Perala worked in Planning Hydrology, where he helped develop the first digital water and land use model for the Upper Snake River system from Jackson Lake, Wyoming, to King Hill, Idaho. Because of cutbacks in staffing, in 1973 Perala accepted a position as Operations Manager for the Yakima Project, where he was responsible for overseeing river operation and reservoir regulation. Yet as time progressed, his job involved much more than water regulation. "We were delivering water to the irrigators," he observed, "and as time evolved we also got ... much more involved in providing manipulation of the reservoir releases for fish life."

In addition to water regulation, Perala was also one of the driving forces who pushed for infrastructure modernization. This included replacing the open, electrically pumped system with the closed pressurized system. Perala viewed the irrigation delivery system conversion as essential for Yakima area producers to remain competitive in the expanding technical sphere of agribusiness. Although the conversion ultimately cost \$80 million—and some growers balked at the cost—Perala believes it was worth it, mostly because the new system's underground and fully pressurized design eliminated water waste through evaporation and provided more dependable water to harder-to-reach orchards. "I don't think there's too many users around now who would even consider not having that system, that would want to go back to the old," he noted.

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<sup>13</sup> Interview with Onnie Perala, Yakima WA, 16 October 2003.

Like his peers on the irrigation district, Perala derived the greatest job satisfaction from being part of the larger community, a sense of contribution to this ideal. Yet he views this community in much broader terms than just irrigators. “The water touches so many things,” Perala observed. To him, those who use water for recreation purposes, for irrigation, for maintaining lawns, it does not matter: all are part of a larger community dependent on the resource for relaxation and livelihood. “You really don’t realize how much goes along, as far as activities that deal with the river or on the river,” he remarked. “Dealing with that ... it was satisfying.”

Conversely, like any other job, Perala had his frustrating days. He specifically pointed to the building of expensive “cabins” in the flood plains of rivers, and how he was met with indifference by these homeowners, mostly in the Elk Meadows area near Cle Elum. Not only would people build \$250-300,000 homes in the middle of an obvious flood plain, they would anchor their foundations in questionable ground. “I just shake my head in amazement,” he noted in puzzled overtones, “[in] that how can people come and build there when they’re digging in river cobbles to build their foundation, how can they not think of that? And nothing but water-loving plants all around on both banks. And they’re building a house?” Yet Perala thoroughly enjoyed his career overseeing water delivery, and harbors no regrets about his chosen profession. “I would not have stayed there for that length of time if I had not,” he reminisced.

### **Witnesses to History: Yakima’s “600,000 Ton Headache”**

At about 9:30 AM on a bright and sunny Sunday, May 18, 1980, the clear and sunny Yakima Valley suddenly turned dark as night.<sup>14</sup> Less than one hour earlier, the Cascade stratovolcano Mount St. Helens, located 85 miles due southwest of Yakima, literally blew off its top. The cataclysmic eruption sent one cubic kilometer of ejecta (ash and pumice) up, out, and directly toward Yakima, central and eastern Washington, and the rest of the world.<sup>15</sup> As the pitch-black, menacing ash cloud approached town,

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<sup>14</sup> See “Mount St. Helens III: The Day the Sky Fell” *National Geographic* 159 (January 1981): 50-65. The explosion reduced the mountain’s summit by just over 1,300 feet, from 9,677 feet to 8,365 feet msl.

<sup>15</sup> In the context of volcanic eruptions, one cubic kilometer is a mere belch. When another Cascade stratovolcano, Mt. Mazama in central Oregon erupted in 4600 BC—and helped eventually create the famous Crater Lake—it sent an estimated 42 cubic kilometers of ejecta skyward. *Ibid*, 53.



residents braced for just another intense thunderstorm, for the electrically charged cloud generated spectacular lightning shows.

But rain it was not. Bewildered Yakima residents—who initially had no clue of any eruption—soon discovered that what was falling was not wet, but fine, abrasive, and dusty. Largely composed of microscopic glass particles, the sinister cloud was a huge mass full of cutting edges. All traffic—car, bus, truck, airplane—ground to a standstill. Street lights glowed subdued orange in the eerie mid-day darkness, which lasted nearly six hours. All businesses closed. Confused travelers became stranded. Electric grids shorted out when the ash, a natural conductor, caused transformers to arc.

And the ash continued to fall: within a few hours, over one-half inch of the choking dust had settled in the Yakima area, one of the worst hit in the State. Then-Governor Dixie Lee Ray immediately ordered food and medical emergency assistance to the area, but it was futile; emergency vehicles bogged down in the ashen blizzard, air filters clogged and carburetors gagged. Driving was risky, for motorists could not see beyond their windshields. It was a mess of colossal proportions, and a heavy one at that: one Yakima area grower estimated 35 tons of ash *per acre* had accumulated on his lands, while the final cleanup tally logged nearly 600,000 *tons* of volcanic ash removed from Yakima's roofs, streets, lawns—it was everywhere.

Strangely enough, the eruption's massive fallout minimally affected valley crops. Industrious growers used blowers, sprinkler water, wind machines, speed sprayers, or whatever worked to remove the abrasive dust from trees and crops. Yet losses were minimal due to timing: if the eruption had occurred earlier in the growing season when the apple, pear, and cherry trees were blossoming—or later when those trees were heavy with fruit to be picked—losses would have been total due to suffocation or breakage. The primary difference was that due to the irrigation districts shutting down the water delivery systems for about a month to clean them out (and when sections of the main canal washed out in June), apples were smaller due to this water reduction. It paid off. "There happened to be a pretty good market for small apples that year," Warren Dickman recalled.<sup>16</sup>

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<sup>16</sup> Warren Dickman interview, 29 August 2003.

In being at “ground zero,” YTID ditch riders were literally witnesses to history. Jack Hart recalled how the ash had accumulated to the point that it filled all the laterals. He cited his experience running a back hoe as crucial to cleaning all the ash out of the laterals. Although he felt that the system never returned to normal—and that they did convert to the new system a few years later—the biggest challenge was not cleaning up, but driving to various locations to do the clean up. “It was sure hard on the pickups,” he recalled. “We took our pickups in at least once a week and changed the oil, changed the filters.... Speed limit 15.” Hart also pointed out the fact that if one digs a few inches into the ground, the 30mm ash layer from the eruption still exists.<sup>17</sup>

Warren Dickman remembered how he and Leo Heilman warned everyone to stay at home, and how quickly communications failed. Like Hart, he remembered how the biggest challenge was driving around to perform system inspections. “You could only go down the road fifteen, twenty miles an hour and you’d have to be about a mile between each rig because of the dust and ash,” he noted. When it came time to inspect the main canal (which remained intact until a month later, when water- and ash-soaked runoff washed out some sections) the sheriff initially would not allow his crew through, but later acquiesced. Dickman was also quick to point out the unusual wet weather that summer, undoubtedly caused by the eruption’s affect on weather patterns, helped salvage the fruit crops. “We had an inch of rain here on project in July, just a gentle rain we normally don’t have,” he recalled. “I’ve never seen it rain an inch in July the 28 years I’ve been here. But that helped the fruit.”<sup>18</sup>

Thus, the Mount St. Helens cataclysm is a watershed event in the region’s modern history. Because of the numerous subsequent washouts and “wash-ins” (where runoff debris accumulates in canals and laterals, causing blockages) it forced Reclamation and the YTID to reevaluate the tenuous nature of older, exposed water delivery systems. Furthermore, although the initial ash fall caused the “600,000 ton headache” residents were not prepared for, growers embraced the excess ash that found its way into the valley’s soil base for one reason: volcanic ash is nature’s most efficient moisture retainer.

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<sup>17</sup> Jack Hart interview, 28 August 2003.

<sup>18</sup> Dickman interview.

### **Roy Kelley: To Provide Community Service** <sup>19</sup>

Another retired YTID ditch rider present when St. Helens exploded was Roy Kelley. Born in 1934 in Zinc, Arkansas, the affable Kelley—who currently works as a minister—moved west to Yakima after a short stint in the Marine Corps and Korea. Once in Yakima, he worked the farms as a hired hand, then quickly moved up the ranks to orchard foreman then manager. Yet Kelley yearned for more. In 1978, when he learned the YTID needed a ditch rider, he applied and was hired. He quickly discovered that riding ditch was hard work—lots of cleaning and maintaining by hand. “It wasn’t easy, because back when the old system was in, it was all done by ditches,” Kelley recalled. He also talked fondly about how he and his coworker/friend Jack Hart helped each other out: Kelley would burn ditch debris in Hart’s district, while Hart would use his backhoe skills in Kelley’s district.

Kelley was also present for the system switchover in the mid-1980s, and was elated to see it happen, because it meant less cleaning and maintaining. “Our main job as ditch riders,” he emphasized, “was just to make sure everything was clean, and the water could get from point A to point B.” And although Kelley admitted some apprehension about replacing the old open pumped system with the closed pressurized system—much like the growers—in the end everyone embraced and benefited from modernization: growers got dependable water for less (electric pump) money, and ditch riders could concentrate less on mundane cleaning tasks and focus on customer service and general maintenance.

Like the other YTID ditch riders, Kelley vividly remembers St. Helens. “Some people thought the end of time was coming when that happened,” he joked. “That was an experience for everybody, because we really didn’t know what it was like. We had never been in anything like that before.” Kelley also remembers confused birds trying to fly into his lighted house through the windows in order to escape the hot falling ash. He also remembers the hard work involved when the canal washed out after a hard rain a month

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<sup>19</sup> Roy Kelley interview, Yakima, WA, 15 October 2003.

later. “Man, we went up there and we worked double shifts... altogether around 400 men [working] on that canal,” he reminisced.

Unlike Hart and Heilman, however, Kelley never lived in a patrol house. Because his residence was in his district, his supervisors never pushed him to live in Reclamation housing. It was logical, logistically; the only available house was in faraway Cowiche Canyon, and it seemed illogical for him to live in a house far removed from his working district. “So it worked out great for me that I didn’t have to live in one of their houses,” said Kelly.

And like the other YTID ditch riders, Kelley derived his greatest job satisfaction from being part of the community in which he worked. He views his role as ditch rider as essential not only to the well-being of the crops, but also to the community—the health of one reflects the health of the other. This community service motivated him because it put “food on the table... that gave me the energy to get up real early, because you’d always have to get up early, as a ditch rider.” His only regret was not starting as a ditch rider at an earlier age. “I kind of wished,” reflected Kelley, “that I could have got on there at a younger age and that way I could’ve ... served the community, you know, a little better as far as number of years.” And, although Kelley is proud of his work for the community and his accomplishments, he wishes only one aspect of his job could have been better. “I wish they could have provided better automobiles in the beginning,” he laughed.

### **Ray Thomas: All in the Ditch Riding Family<sup>20</sup>**

Thirty-eight-year-old Ray Thomas is unique in the ditch riding community. As Roy Kelley’s replacement—and the only current ditch rider that agreed to be interviewed for this project—Thomas is the only ditch rider who can claim that a direct descendant had the same occupation. His grandfather, Reed Thomas, worked for Reclamation for 25 years. After he retired, he worked as a horseback-riding ditch rider in the same irrigation district his grandson currently works on, for another 25 years. Grandson Ray is the also the only interviewee to work exclusively on YTID’s modern delivery system.

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<sup>20</sup> Ray Thomas interview, Tieton WA, 29 August 2003

Born and raised in Yakima, in 1983 Thomas graduated from West Valley High School. Thomas originally worked his own horseshoeing business (and still does on the side), but he and his wife yearned for something steadier with decent benefits for his growing family. On occasion, whenever the water bill was due, he would go to the YTID offices and inquire about job openings. His persistence paid off. In 1995, when his predecessor Roy Kelley announced his retirement, Thomas applied for his job. “They handed me an application, which caught me by surprise,” he recalled. Thomas also remembered how smoothly his interview went, and was hired on a trial basis. “I was excited, something different I’d never done,” said Thomas. “I liked the guys I worked with, been here ever since.”

The new job provided unique challenges, for Thomas vividly remembers his learning experiences over the first few years. Because he came in on the new system, understanding where all the underground lines lay, all the valve locations, and how to charge the system were his primary challenges, and it took time to learn. “It takes, oh shoot, three years to learn the valves and go by the maps,” Thomas noted, “and how to charge the system without blowing something out of the ground.” He recalls a certain level of new job jitters, especially when dealing with growers used to Roy Kelley. At first, many growers did not trust Thomas, and insisted that Kelley be there to assist. “I was green, the new guy” he laughed, “so they always wanted [Kelley] ... to make sure I was doing it right.”

A typical work day for Thomas consists of getting his work orders, performing maintenance and flow checks to ensure the system is working properly, especially the water pressure indicators, and measuring and allocating water not just to growers but also for municipal uses, i.e., homeowners attempting to keep their lawns and gardens healthy in this naturally semi-arid region of Washington State. Another important aspect of Thomas’ job are the “dig orders,” in which ditch riders ensure that anyone wishing to perform excavation do not dent or puncture the underground lines—power or water. With dig orders, Thomas stressed that “you can be there all day on a job to all week, depends how big the job is they’re doing.”

Thomas pointed out although no growing happens in the winter, this is his busiest time of the year. “A lot of people don’t realize this,” he noted. Most work involves tasks

that cannot be done in the summer, because the water needs to be shut off to maintain or repair. “We’re down here fixing big mainline valves that we can’t do during the summer because we don’t want to shut down the water,” stressed Thomas, “and those valves can take up two or three days to do.” Additionally, with Yakima’s relentless westward suburban expansion, Thomas and his peers spend winters moving pipes, turnouts, and other irrigation apparatus for road widening projects. “We spend a lot of time doing that through the winters,” he noted.

The population boom and the related suburban sprawl is a huge issue in Yakima. Thomas sees this trend every day, as farm acreage is supplanted for more and more large housing tracts and golf courses. “I see more farm ground going out, more lawn[s], yards going in.... which is sad to see, because I like the old farms. It’s growing pretty fast,” observed Thomas. Most new homeowners are on what are known as “multi-user” water turnouts (akin to a telephone “party line”), which frustrates homeowners because water delivery amounts are reduced and someone always takes more than their entitlement. “Maybe ten people share one turnout. These are ... tough, because one guy usually takes all the water and the other nine are standing there. Then they get us involved in it, and it’s kind of a touchy deal, but we try to work with them through it and try to get them to rotate their days of water,” he stressed. Thomas reiterated that this problem is increasing as Yakima expands, so he and his two ditch riding peers try to talk homeowners into getting their own turnouts and going separate from the “party line,” if possible, just to ease tensions. Thomas also pointed out that the YTID is getting more service calls from homeowners than from growers, a trend likely to continue as Yakima expands.

Despite water-related consumer tensions and other challenges, Thomas loves the outdoor work and teamwork aspects of his job, and that only three ditch riders can cover 27,000 acres so effectively. Like the other interviewees, he derives great pride in being part of a larger community dependent on this resource. And despite technology’s steady advances, Thomas also sees a good future for the ditch rider, for someone will always be needed to allocate and deliver the water and keep the complicated pressurized system working smoothly. He also sees more laptop computer usage in the field, as well as dependence on GPS systems, to aid job efficiency. Yet Thomas’ only words of advice to

new ditch riders: “to be honest and fair with the grower, because that’s who you’re working for.... Never cut them short.”

### **Conclusion: Ditch Riding in Two Centuries**

Through their words, the retired and current Yakima-Tieton Irrigation District ditch riders, managers, and watermasters paint compelling pictures of how an occupation as old as the controlled irrigation practices developed by the Sumerians around 5,500 B.C. has changed so dramatically over the last few decades. From electrically pumped, above ground systems inconsistent in their delivery patterns to pressurized, underground systems that eliminated these inconsistencies, the way ditch riders perform their duties reflects major advancements in water delivery technology. Like every other occupation in America, technology dictates change. Ditch riders are no exception.

And despite technological advances, job security seems safe. Water allocation, delivery, and irrigation systems, no matter how technologically advanced they become, rely on the human factor for management, maintenance, and, most of all, customer service. Thus all interviewees, at every level, see ditch riding as a profession that can continue well into the future. They might not “ride the ditch” in the equestrian context of the term anymore—like Ray Thomas’ grandfather, Jack Hart, and their predecessors did—but they do continue the tradition and livelihood within a modern milieu.

While the means of ditch riding have changed to reflect the times, the ends have not: delivering water in a timely, accurate manner; thinking along the lines of providing prompt and courteous service for a multitude of water user needs; existing with a driving sense of community contribution as motivation for job satisfaction. The thread of continuity here is clear as water from Rimrock Reservoir. All former and current ditch riders, managers, and watermasters that worked (or still work) this irrigation district allude to community contribution as their *raison d’etre*, the inner inspirational force that drives them to success and, ultimately, to pride over a job well done.

