The Southwest is known for its arid climate, dramatic beauty, and turbulent weather. To the inhabitants who wrest a living from this land, its unpredictability, especially supplying water, provides one of the greatest challenges. The Colorado Plateau and the Four Corners area are consummate examples. The San Juan River is the only major, continuously flowing source of water that courses through Colorado and New Mexico and then crosses into Utah at Four Corners. Melting snows in the spring and intense thunderstorms in the summer and autumn make the river rise and fall sharply. As the moisture pours off the San Juan and Sleeping Ute Mountains in Colorado, and the La Sal and Blue Mountains in Utah, dozens of tributaries swell the tide that scours the riverbanks and tears at the floodplains.

One of the most graphic examples of this phenomenon occurred in the fall of 1941. Between September 9 and October 14, the San Juan River changed from a placid, shallow stream 3 feet deep and 125 feet wide, flowing at 635 cubic feet per second, to a raging torrent 25 feet deep and 240 feet wide, gushing at 59,600 cubic feet per second. The river ravaged hitherto protected floodplains, with only the highest banks able to contain the water. Few irrigation facilities and bridges survived the onslaught. The abrasive action of the stream’s sediment load widened and deepened the channel, while the suspended matter swept down the stream, depositing its refuse as the waters receded. Eventually part of the streambed refilled as the river brought in new sand, silt, and rocks, but it took years to replace what had been removed so quickly.

The implications of depending upon a river like the San Juan are important. Until the government constructed dams to enact flood control, the river had its own say, exercised its own will. Although it could be destructive, at times it was also benevolent, bringing life-giving water and materials to those who came to its banks. The Anasazi used the river and its tributaries for two types of farming: pot and flood irrigation. The Navajos, much more so than the Utes, followed suit, locating their farms along the river bottom. Although the mean annual rainfall, only eight inches in the Aneth area, was lower than on other parts of the reservation, the river provided water continuously, while its lower elevation, 4,700 feet, offered a 161-day growing season.

Getting the water onto the land was a whole other issue. Pot irrigation was inconvenient. Carrying water to fields was time consuming, yet more predictable than dry-farming techniques that depended on moisture in the soil and summer showers to keep crops alive. Irrigation was often more dependable but also entailed hazards. Navajos cleared and prepared their farms in April. Ditches from the river snaked across the floodplain, taking advantage of the natural slope in the land and direction of the river’s flow. The Indians dammed arroyos and worked the waters over the fields in a process repeated once or twice during the summer.

Alluvial fans extending from the mouths of intermittent or continual canyon streams, such as Recapture, McCracken, Montezuma, Allen, and McElmo Creeks on the north side, and Desert, Lone Mountain, and Tsitah Creeks on the south side of the river, encouraged settlements and farming there. Irrigation systems were also easier to install at these places because...
the banks were lower, the soil was rich, and the water was less turbulent.

Other aboriginal farming sites below the Bluff area included the Comb Ridge/Chinle Wash vicinity, Butler Wash, Beaver Creek, and Paiute Farms. Obviously the farther downriver a traveler ventured, the fewer the farms because of steep canyon walls and difficult access. Although most of the farms which developed on these lower floodplains and alluvial fans were small, some were highly fruitful for a subsistence economy. For instance, Jim Joe, a Navajo friendly to the Bluff Mormons, reported in 1904 that he grew ten to twelve tons of corn at his residence at the mouth of Butler Wash.\(^4\)

Paiute Farms, shared by Paiute and Navajo Indians at different times, was another favored agricultural spot. Tucked in the small valley bordering Nugget Creek, a tributary of the San Juan, Paiute Farms sat about a half mile from the river. It provided only a few hundred yards of planting space, with sufficient water to grow corn, pumpkins, and melons. White men passing through the area in 1894–95 noted Navajo homes scattered amid the stands of large cottonwoods. They also mentioned a conspicuous absence of willows. The flood of 1911 washed out these farms, leaving only the name to hint that agriculture had sustained life there.\(^5\)

Obviously geography determined the extent and location of people’s ability to sustain themselves in a sometimes-stingy land. Water in the desert is useless without access, and so the human drama that played along the San Juan pivoted around not only the presence of this precious resource but also the way to get it to the right place, at the right time, in suitable quantities to grow crops. Wide floodplains and a slower river flow offered the best chances for agriculture. Thus, the majority of Native American and Anglo-American agricultural ventures occurred on the upper end of the Lower San Juan near Bluff, Montezuma Creek, and Aneth. But even there, it was a nearly impossible struggle.

Actual planting by Native Americans began in early May and continued through the first part of July, when the “first fruits of the slim yucca
For centuries corn has been a major source of food for the Navajos. Its primary importance is reflected in religious teachings that tell that the holy beings created man and woman from this plant and compare the clan system to its growth. (Milton “Jack” Snow with Andy Tsinnijinni photo, # NA 4-14, Navajo Nation Museum)

burst open.” The Navajos planted corn, then melons, then squash, and finally beans, based upon which had the longest maturation period. The gardener placed anywhere from five to fifteen seeds together in hills; those seeds that did not germinate were said to have been “eaten” by those that did. Men used digging sticks to create a hole approximately four to six inches deep, as women followed behind and placed the seeds. Because livestock was an even more important part of their economy, the Navajos spent a lot of time ranging away from the plots on the river but returned occasionally to weed and water. Sometimes women, old people, and children stayed behind to tend the crops.

This general pattern changed according to specific conditions. Friction with Ute neighbors, demands of the livestock industry, shifting boundaries of the reservation, and a growing population base exerted pressures in different geographical directions. The overall effect was that the Navajos expanded outward from the heart of the reservation to the boundaries. At the same time, Anglo farmers and stockmen on the north side of the San Juan claimed that the public domain belonged to them, since the Indians had their own lands.

Yet Navajo agents did not agree. The government still wrestled with the idea of removing Indians from the reservation and nudging them into mainstream American society as farmers and mechanics. The Dawes Act of 1887 was designed to do just that, and reservations in other parts of the United States were broken into individual allotments. For the Navajos, however, the reservation not only stayed intact but expanded, while relatively few individuals took up allotments.

By 1892 government officials decided to build upon the already-established Navajo pattern of livestock and agriculture. Commissioner of Indian Affairs T. J. Morgan suggested a long-term approach to solving the problem of feeding
and controlling this growing population. First, he believed the reservation should be carefully mapped with an emphasis on springs, water holes, and streams that could provide water for farms and livestock. Next, a system of dams, wells, windmills, and other water-procuring devices should be integrated into a program to make the Navajos self-sufficient. And finally, every effort should be taken to make Indian lands productive so that Navajos would not compete with Anglo neighbors.  

The commissioner charged the army with the task. Lieutenant Odon Gurovitz surveyed the south side of the San Juan and recommended that 260 acres near Bluff be turned into farmlands and that the Mormons supervise the project. This decision was somewhat ironic because the last thing the Latter-day Saints wanted to do was attract more Navajos into an area where conflict with Utes and Navajos had already created bitter years of strife. Still, the river as a constant source of water could not be overlooked, especially since James Francis, a farmer in Fruitland, New Mexico, was already enjoying limited success.

Agent E. H. Plummer begged for money in 1893 to develop the possibilities. He argued that these improvements would act as the carrot to bring the Navajos home, since some people estimated that a third of the population was living off the reservation. Plows, scrapers, wagons, and seed would be another inducement, and if three or four additional government farmers scattered to strategic locations where Navajos clustered, the south side of the river would become a magnet to draw back this transient population.

Constant Williams replaced Plummer as Navajo agent the next year but continued to agitate for farming on the San Juan. On 11 December 1894, he went to Bluff, where he found the Indians “pitiable” because of crop

"Ditches, Droughts, and Disasters" 87
failures over the previous two or three years. It was ironic, however, for Williams to go to Bluff and suggest that large-scale farming was a viable means of livelihood, given the community’s struggle to maintain itself through agriculture. Indeed, by this time, the Mormons had started to depend on the livestock industry, and many had settled away from the San Juan, where water was easier to control.

At this point, it is useful to pause and examine the Mormon pattern of experience that had started in 1880 and continuously faltered and failed up to this time. The settlers’ struggle against the San Juan is a microcosm of what the Navajos encountered in a few short years. When the large Mormon contingent settled in Bluff, it started immediately to plow ditches and prepare for spring planting. Community cooperation and organization characterized this first year, but the ditches were unsatisfactory for a group of people who wanted to move beyond subsistence agriculture.

Some of the settlers cast about for a better solution to the ditch problem. William Hyde activated a large waterwheel, sixteen feet in diameter and twelve feet across, capable of sloshing twenty-three hundred gallons an hour onto the parched red soil of Montezuma Creek. This area was more fortunate than Bluff because it had rock shelves on which to anchor waterwheels, while the latter had to depend upon riprap dams and backbreaking shoveling to keep water on the fields and sand out of the ditches. Soon Harrison Harriman, James Davis, Frank Hyde, William Adams, Samuel Cox, and John Allen had each built a waterwheel on different sections of the river. Allen said of his wheel, “It’s aya fine; I’d wish nothing better.” Adams declared that for less than three hundred dollars, a wheel could be built that would water two hundred acres of land and avoid the cost and labor of ditches. He believed, “These waterwheels are a success and cheaper to keep in repair and less liable to damage.” Indeed the only truly successful farming in 1881 that did not result from using a wheel occurred at the mouth of Recapture Creek.

On the other hand, Frank Hyde later built a waterwheel on a twelve-foot ledge at Rincon, where its service was short lived. He awoke one morning to find the river one hundred yards away and only a dry sandbar where water had previously flowed. The problem of high water/low water plagued both ditch and wheel operations, so it was only a matter of time before the river had its way. In 1884 the unpredictable San Juan claimed its share of wheels, sweeping all of them down the river in a torrential flood.

For a few years preceding this event, canals, ditches, and riprap dams seemed to hold the only possibility of success on stretches of the river where good rock foundations for wheels were not available. As early as 1879, the Mormon exploring party, looking for a place to settle, encountered Henry L. Mitchell in the Aneth area. While Mitchell had many, and would later create many, problems, one of his biggest at this point was his ditch, which he had “surveyed the wrong end up and the water would not follow.” To rectify the situation and raise the water, he tried to dam the entire river by building a barrier. The San Juan was determined not to be conquered and twice swept away the middle forty-foot section. Just when success seemed possible, the water level dropped, leaving the canal high, dry, and useless.

From an environmental standpoint, constructing these dams was ludicrous. The time—six weeks—and the effort—twenty-five men with teams—could not hope to harness permanently a river of that size, power, and unpredictability, given the materials at hand. What made the Mitchell attempt even more important to environmental history was where he got these materials. Eyewitness accounts estimated the dam to be two hundred to four hundred feet long and composed of “over 5,000 loads of young cottonwood trees and rock.” Cutting this many trees and hauling that many rocks from the riverine landscape did nothing but encourage the debilitating effects of erosion.

The Mormons took a similar approach two years later. By 1881 a new canal, costing from twelve to fifty dollars a rod, needed to be dug. The headgate of this ditch was located four miles above the town at Walton’s Slough, where the main canal passed over a long stretch of slickrock. The builders hauled logs, brush, rocks, and earth to construct the riprap channel that extended into the river to funnel the water. Three such walls controlled the water and allowed it to be turned into individual fields.
Men cut cottonwood trees from the riverbank and wove an estimated one thousand of them into the framework to hold tons of rocks and dirt. To encourage cooperation, the leaders sold stock for the new ditch, while church officials allowed some people to be rebaptized as part of the commitment to this new undertaking.

All winter long the men toiled. When April arrived, bringing thoughts of spring planting, the workers channeled the water down the ditch and watched it disappear through the porous walls of riprap. As the spaces filled with sediment, the water inched its way to the fields close to town. In May the river gnawed away the top of the ditch. The water then started to recede, so shovels deepened its course, and the crops succeeded.

The next year problems intensified. Banks broke, ditches filled with sand, crops withered, taxes increased to support the effort, and stockholders appointed new leaders in an effort to save the economy. Erosion also played a part, encouraging townspeople to take turns patrolling the ditch for “boulders the size of a wagon bed to a two story house that had recently rolled down.”

The final straw, however, was the flood of 1884. The river carved up the canal, tore out the headgate, and covered what remained with sand. A year later agriculture ceased to be the primary economic dream of the Bluff Mormons.

The discouraged settlers suggested that the community move away from the river and utilize a more-placid source of water. They considered Yellow Jacket Canyon until they learned that its owners wanted thirty thousand dollars for the land. F. A. Hammond, a newly arrived Mormon leader, decided that the anticipated twenty miles of floodplain farmlands would never materialize as he watched only three hundred acres being farmed successfully. He turned to the livestock industry and encouraged others to do likewise. Bluff blossomed as it shifted its attention away from the brown, roiling waters of the San Juan. Forty years after this farming project started, at an estimated total cost of $150,000 to $200,000,
only 175 acres were still under cultivation and the ditch no longer existed.21

So when Navajo agent Constant Williams stood on the banks of the San Juan and insisted that its waters would be the economic salvation of the Navajos, one has to wonder who he had been talking to; it seemed history was about to repeat itself. Because the one farmer at Fruitland could not help all the Navajos, Williams requested one for the Bluff region. No one ever materialized to fill the position, so the government handed out seed and farm tools only to Navajos living along the Upper San Juan.

Most of these farming projects were small-scale, individualized efforts.22 George M. Butler, superintendent of irrigation, had constructed several ditches on other parts of the reservation, the closest one to Aneth being the Carrizo Creek ditch. Sandoval, a Navajo from the Lower San Juan, rode one hundred miles to Fort Defiance during the winter of 1896 to solicit help in reclaiming some of the “fine tracts of land” near his home. Butler recommended a survey of possible locations.23

Little rainfall, cold springs, and early frosts discouraged the hardiest farmers, but government agents continued to call for surveys and ditches. In 1901 irrigation inspectors estimated that one-third of all the Navajos could prosper on the San Juan if they just had enough ditches.24 In 1902 Samuel Shoemaker, supervisor of ditch construction near Fruitland, received orders from agent George Hayzlett to start a major ditch in the vicinity of Bluff. Shoemaker paid Navajo laborers a dollar a day as the ground thawed and work began. The agent supplied shovels, axes, mattocks, grubbing hoes, augurs, wrenches, hatchets, crowbars, and drills that he hoped would “soon make a mile of ditch in that part of the country.”25

Hayzlett looked at lands above Bluff in the Aneth/Mancos Creek area, where farming would be “far cheaper per acre than any other part of the reservation.” The Navajos there had repeatedly asked for help in creating ditches, and now that the Shiprock Agency brought government assistance closer in the form of William T. Shelton, their wishes could become a reality.26 In 1904 newspapers reported that a prolonged drought had forced even more Navajos from the “interior of their reservation” to the San Juan “where they are farming all along both sides of our river.”27 The time was right for an even grander scheme of government intervention.

Shelton analyzed the situation. He noted that Navajos often constructed ditches that washed out easily at the first high water because the trenches lacked headgates and protective barriers. The one exception in the Four Corners area sat at the junction of Mancos Creek and the San Juan. Eight men labored to build a two-hundred-yard-long, twelve-foot-deep ditch to bring water to fifty acres of a three-hundred-acre tract. Shovels and picks moved the soil, but the Indians had to carry rocks by hand for a quarter mile to create the riprap. The agent believed it was worth the five hundred dollars in labor to build, but “it will no doubt go out at the first high water, not being properly protected.”28 Government farmers could provide guidance to save ditches like this and teach ways to water four times the area.

Shelton looked at the Aneth region next. He realized that Navajos had successfully farmed with a number of small ditches around the mouth of McElmo Canyon. Old Mexican, a Navajo who worked the mouths of both Montezuma Creek and McElmo Canyon, provides a detailed account of what this experience was like. He tells about taking six days to dig a ditch a mile long to his field. Some passersby stopped to criticize his efforts, teasing that “all the people say water never runs up hill,” but he persisted because the soil was good “to raise anything [he] wanted there.”29 It took six days to flood the level field, but by harvesttime, the corn had grown over his head.

Shelton understood the importance of this type of experience. Armed with three thousand dollars for irrigation projects in 1905, he appointed an additional farmer, James M. Holley, to supervise Navajo agriculture and livestock operations. Holley was no stranger to the area. He had come to Aneth in 1899 to open a trading post. During those six years, he had alerted government officials about the conflict over grazing land between white and Navajo stockmen and had even sought a position helping the Indians.30

Once appointed, Holley worked closely with Shelton, but of more importance was his impact on the Navajos as a government farmer.
Old Mexican again provides one of the most detailed accounts of what Holley tried to accomplish. One of his first tasks was to identify the best Navajo workers. The most deserving received tools, such as scythes, scrapers, pitchforks, hoes, and saws, as rewards for following the government program. Holley hoped to teach through example, while prosperous farms became the symbol. Thus, when Old Mexican harvested his foot-high hay field, obtaining a stack “eight steps wide and sixteen steps long, and higher than a hogan,” the government farmer chose him for additional tasks and leadership opportunities. If a person organized a group of men and helped feed them, the time to earn the reward decreased by half. Take, for example, the experience of one crew member:

Slow had a wagon, but he wanted another. He took over a bunch of men; they were driving a horse and cow, and when they got to the place where they were going to work, they killed the horse and the cow to feed these men of his. In seven days they had earned a wagon for him. Three positive results came from this type of labor: These men built the road, improving transportation between Aneth and Shiprock; they worked as a team, creating greater community cohesion; the dispersion of tools ensured greater agricultural success; and the Navajos looked more and more to Holley and Shelton for advice, leadership, and equipment. In fact, Shiprock is still known to older Navajos by the name they gave to Shelton years ago—Nataani Nez, Tall Leader.
Much of Shelton’s work on the river occurred in the fall when the water was low. In 1906 he requested a thousand dollars for men and materials to buttress his fight against the river. He estimated that it would take five hundred loads of brush (a dollar per load), juniper posts (twenty cents each), Indian teams (two dollars per day), Indian laborers (a dollar per day), and barbed wire (five dollars per one hundred pounds). One year later he received five thousand dollars for repairing ditches, headgates, and spillways along the San Juan. He reported there were twelve ditches between Shiprock and Aneth that, when kept in good repair, watered between six thousand and seven thousand acres of fertile land. While he also noted failures, Shelton was generally upbeat in fostering maintenance and development of these liquid lifelines of agriculture.

Five years and one flood (1911) later, Shelton was not nearly as optimistic. He wrote to the commissioner of Indian Affairs that because of the “manner peculiar to local conditions” and “the treacherous nature of this stream [San Juan],” it was impossible to maintain a permanent “heading” on anything but the small ditches, and therefore it was impractical to encourage building permanent homes in their vicinity. He reported that the Indians had solved this problem by reverting to their old planting style: in the late spring, placing seeds in the areas they believed would receive high water and then waiting to see what happened. “If they succeeded in securing enough water for irrigation purposes, they usually raised good crops.” Yet Shelton would not give up his Anglo-American approach to agriculture. The government program persisted for an additional twenty years.

The construction of a government station by Holley on the terrace below the Aneth Trading Post was a symbol of this determined federal intervention. Joseph Heffernan bought the store from Holley after Shelton cautioned the farmer that being a trader and a government employee was incompatible. During the fall of 1906, Holley marshaled the aid of Navajo laborers and set to work. They made adobe bricks from San Juan soil, cement and lumber came from Shiprock, and Holley provided the floor plan.

Actual construction started in the winter. The bricklayer told Old Mexican to heat the water for the cement and keep him supplied with rocks and adobe. In two days, the foundation was completed, and in twenty days, the bricks laid. For his labor, Old Mexican received twenty dollars. That same year Holley built a barn for livestock and the bales of hay and alfalfa he had reaped from his own irrigated fields. The flood of 1933 swept both structures down the river.

As a focal point for the community, the government farmer became increasingly prominent. In most areas of the reservation, the trading post became the center of community activity, but the government farmer, assuming that his personality and attitude were acceptable, became the bridge between Anglo and Navajo society, official policy and Navajo practices.

Holley’s work as a farmer continued. Scabies, ticks, and lice infested the Navajo sheep, so he placed dipping vats at the mouths of McElmo, Montezuma Creek, and Recapture Canyons. At first the Navajos believed this medicine killed the sheep rather than helped them. Shelton tried his best to explain the benefits, but the Indians remained unconvinced. Old Mexican, showing his faith in Holley, suggested the group go talk to him. The farmer must have succeeded because larger and larger herds of livestock descended on the dipping stations.

By the fall of 1908, Holley withdrew as government employee and returned to the life of a trader. J. H. Locke replaced him but lacked Holley’s ability to speak Navajo. In spite of this drawback, the Navajos felt “the new farmer is kind to the Indians and gives them good advice.” He did not stay long, however; a little over a year later, W. O. Hodgson replaced him.

To support this agricultural program, Shelton called a number of Navajos from the Aneth area to Shiprock to ascertain what they needed. They requested help with their ditches, so the agent pointed to Hodgson and said, “This fellow will do the work.” Then he told the Indians to collect a large group of people to get the project under way. The Navajos received a dollar a day for those who chopped trees and two dollars for those who hauled rocks and brush in their wagons. Hodgson had four hundred dollars set aside for the project. Fence posts and wire made the framework for the breakwater. The Navajos planted them in the
shape of a triangle, in which they piled brush and rocks. Two weeks later eight of these structures were finished, but so was the money. The riverbank was only temporarily saved; by the next spring, the water had washed all the work downstream.³⁸

Floods notwithstanding, Hodgson decided to build another ditch. He believed that if he dug deep enough, the water would flow better. Old Mexican cautioned against this proposal, but the farmer insisted that water would run twenty paces from the river. After the workers finished the ditch, the farmer ordered the headgates opened, but the water never went much beyond the entrance to the field. He commanded the workers to dig deeper, but the results were the same. Hodgson then turned to Old Mexican in exasperation and said, “Work it your way. You know more about it. Work it just as you like.” And he did. The Navajo tied seven bundles of brush together, lined the bank with them, then spent three days piling rocks on top. He constructed a dam in front of the old ditch and forced the water over it into the field. His only comment when he was done was, “This Hodgson doesn’t know what he is talking about.”³⁹

In the fall of 1911, disaster struck. People had flocked to Shiprock for the community fair. Heavy rains, however, bogged down the wagons and made setting up displays difficult. Participants watched the river rise, flood over its banks, and fill the fairgrounds. A reservoir upstream broke, adding to the torrent that battered at the adobe walls of the homes, school, and adjacent facilities. The new Shiprock bridge toppled as people moved onto hills nearby. Not until the water started to recede did the onlookers realize the extent of the damage to the school facilities, farms, and orchards.

When the Navajos returned to the Lower San Juan, they found their gardens and ditches obliterated and the ground covered with gravel. Many of the good sites no longer were worth

The Aneth Government Station, as it appeared in the 1920s, was a symbol of productivity and a gathering place for Navajos and Utes. In 1933 the river claimed it and much of the floodplain, ending large-scale agricultural attempts by the government. (San Juan Historical Commission)
farming. The water had even undermined the foundation of the government station, making the house unsafe to live in. Hodgson withdrew to Shiprock until repairs were made, but by then he had developed heart trouble, left the Indian Service, and moved to Phoenix, Arizona.

After the flood, life took up where it had left off. The next year Shelton reported that Navajos had built small irrigation ditches along the river from Farmington to Bluff, a distance of more than a hundred miles. He also pointed out that crops were rarely located near good grazing lands for sheep. Some Indians traveled up to thirty miles to get back to the river to weed and water crops.

In 1914 Herbert Redshaw, the new government farmer, arrived in Aneth. Family members describe him as a “typical old English man.” Dressed in bib overalls and a broad-brimmed hat, and sporting a mustache, he stood more than six feet tall. His steel gray eyes, large feet and hands, and rawboned build gave him a commanding presence, while a corncob pipe filled with George Washington tobacco jutted from his lower jaw. One man quipped that it took more matches than tobacco to keep the pipe operating, as the smoke curled around and colored his hat brim.

To the Navajos, he was T’áá biichijjindii. An exact translation of this name is difficult, but an approximation is His Own Devil. The Indians did not apply this epithet with rancor. Redshaw moved slowly and swayed slightly as he methodically swung his arms and walked; the name creates a feeling that he moved like a dead man returned to life. The name is now applied to the Aneth Chapter, the place Redshaw struggled to develop.

Much of his life was filled with day-to-day, humdrum farming along the river. He lived in the government station, surrounded by forty acres of alfalfa fields and gardens, many of
which Indians planted and maintained. He divided the produce among needy Navajos at harvesttime. His red barn and fences became a landmark to travelers, while his irrigation system proved ingenious. Redshaw not only used the waters from McElmo Creek, but when they weren’t enough, he also drew upon the San Juan. His main ditch was four feet wide and two feet deep, with a headgate that returned much of the water directly to the river, and a smaller stream to flood his fields. This system alleviated the problem of silt buildup. Redshaw encouraged families to settle nearby as he made the government station a center of activity. He held community meetings under the cottonwood trees along the banks of the river and encouraged the Navajos to settle on the floodplains.45

Redshaw often spoke of his dream of damming the San Juan. He hoped to build a dam near Four Corners and eventually another at the mouth of McElmo Creek. The proposed structure would be as high as the surrounding hills with irrigation ditches paralleling both sides of the river. The dams would alleviate much of the danger of floodplain agriculture, which by then was becoming increasingly popular as Navajos farmed every available space along the river. Unfortunately, government shortages of funds and enthusiasm precluded the undertaking.46

Although Redshaw did not realize this dream, he methodically taught Navajos what he considered the proper method of agriculture. He spoke enough Navajo to get by, but for formal occasions, he used Eddie Neskaaii from Shiprock to translate. Harvey Oliver, a Navajo who worked for Redshaw for five years, explains his teaching style: “He would look at it. He did not just walk around, but he told us how to put watermelon seeds in the ground by counting them. Count the corn or the onions, this is what he said. There were distances between each onion that you should be aware of. He told me to learn all of this.”47 Oliver did learn, and by the end of his work with Redshaw, his salary had increased from one to five dollars a day.

By 1924 Redshaw had succeeded in persuading twenty-five families to settle around an irrigation canal that supplied water from the mouth of McElmo Creek.48 He also kept track of the sheep dipping in the spring, though Evan W. Estep, superintendent of the Shiprock Agency, did not find him efficient enough. After telling how sheep dipping was progressing on other parts of the reservation, Estep commented that “Abba Chinda”—Slow Devil, as he translated it—was not ready and had left for Monticello just as a supervisor from Shiprock arrived. The agent threatened that if a quarantine occurred, Redshaw would be blamed and said that “no one ever knew Redshaw to do anything just when it ought to be done or when the other fellow wanted him to do it.” Estep was anxious “to go down there and cuss him out right,” but he also added that this farmer was a “good man . . . likely the best I could get in that out-of-the-way place, but he does get on my nerves at times, and no mistake.”49

Redshaw played a vital role in many of the conflicts during the 1920s. One controversy important to the Montezuma Creek/Aneth area concerned range rights. Cattlemen and sheepherders vied for lands near the northern part of the reservation, and some of the ranchers slipped over the boundaries onto Indian lands. No fence separated property, so Redshaw told the Indians to herd the animals back onto the public domain, which did not sit well with the stockmen. Many of the Anglos thought talk of law and authority a bluff, especially the younger men who lacked “the fair attitude of the old timers.” Redshaw pleaded for immediate government action.50

The agent agreed with the farmer’s evaluation and added that some of these stockmen had been involved for years in stealing Indian cattle and making a handsome profit. White ranchers were also lobbying Congress to open Navajo and Ute lands to livestock grazing.51 Tension increased. The end result of the conflict was the 1933 addition to the Navajo Reservation of the lands adjacent to Montezuma Canyon. What is important to realize is that Redshaw advocated for Navajos, and in some cases Utes, as they battled to maintain or obtain lands. He accompanied the Navajo agent, the Ute agent, and special investigators from Washington. In a few instances, he even retrieved livestock stolen from Navajos. He explained to one Navajo that he was an Englishman, he did not hate Indians, and he would not take their lands.52 He was as good as his word.
In 1931 Redshaw retired. He stayed long enough to complete the census but avoided the trauma of Navajo livestock reduction in the 1930s. It was time for the government farmer to get out of the Indian Service. Redshaw moved to Ucolo, Utah, where he died in 1946. Almost as if the San Juan knew that Redshaw had left and livestock reduction had started, its waters gathered strength to undo what had been accomplished. In 1933 the river once again overflowed its banks, tore out the irrigation ditches, snatched away the headgates, wiped out Navajo farms, swallowed the government station, and forced abandonment of life on the floodplains. It also shifted from the south to the north side of the streambed and cut away every remnant of productive land. The Shiprock Agency withdrew its program of maintaining a resident farmer in Aneth and requested anybody desiring help to come to headquarters. The government’s battle with the San Juan was over.

Was the government farming program a failure? Not really. It fit an era and a need that could not have been filled as successfully by existing programs. The Navajos adapted to it easily because agriculture was already an important part of their economy. The government contributed farm tools and equipment to a people who did not have the money to purchase them; it offered incentive to work as a community, yet rewarded individual efforts; Navajos were motivated to improve agricultural techniques and develop products comparable to those in the white economy; the program served as a vehicle to send children to school, produced a voice for white economy; the program served as a vehicle to send children to school, produced a voice for law and order both on and off the reservation, and supplied men sympathetic to the Navajos’ changing circumstances at the turn of the century. This last contribution was not measurable, like the vanished headgates and ditches along the San Juan, but was just as vital as any of the more tangible items. The river may have won the contest for agricultural lands, but settlement and development continued in spite of it.

In an environmental sense, this era and previous Anglo farming efforts concluded a period of “robbing Peter to pay Paul.” While done with the best intentions, cutting down large numbers of cottonwood trees and tearing out implanted rocks on or near the river only sped the process of erosion from runoff. After removing the root structure provided by the trees, little remained to hold the soil together against the water and waves of the San Juan. While no doubt there had been flooding along the river before the introduction of Anglo-American agricultural methods, it had never manifested the degree of destruction that occurred later. Traditional Navajo farming practices were more capable of “breathing” with the mood or flow of the river; the Anglos wanted control so they could move beyond subsistence into a larger-scale market economy. Thus, the basic difference sprang from the philosophy and worldview of each group.

An important supposition underlying the Anglo-American attitude is that technology plays a primary role in forcing nature to comply with human plans. Brush, rocks, and wire were the basic tools that consistently failed to achieve people’s goal. More sophisticated technology was needed to harness such a river. As early as 1899, Charles Spencer from Mancos announced his creation of a patented pump, run by a forty-horsepower engine, that could lift a continuous four-inch spray of water five hundred feet in the air. Claiming that it could be used for irrigating and placer or deep mining, Spencer believed he had solved the problem of fluctuating water levels by running his pump off an anchored boat. This was to be a “godsend” for farmers on the “San Juan, who on account of the sand and the ever-changing river bed have been obliged to see crops wither and parch for the lack of moisture.” Now the farmers could be rescued by the arms of technology. There is no record about how the pump was accepted, but it appears to have had little impact.

Not until around 1970 did technology provide an answer to the age-old problem of using river water to grow crops. That year the Bureau of Indian Affairs (BIA) completed a survey of possible farmlands bordering the San Juan River. Criteria included the plot being at least eighty acres in size and having a vertical water lift of less than five hundred feet, the soil being free from strong alkaline and saline content, and the land having a gentle slope of less than 10 percent. The BIA identified 52,984 acres that met these guidelines.

Eventually ten different groups, including tribal, federal, state, and private agencies, participated in the project to turn the valley of the
Lower San Juan into a lush agricultural zone managed by local Navajos as a private, cooperative enterprise. In 1971 only 65 acres were under cultivation; in 1974, 370 acres were planted; and when the project reached its height in 1976, about 1,000 acres were yielding crops from five sites on both sides of the river, ranging from the Utah Colorado border to Sand Island below Bluff." Winter wheat, alfalfa, and oats were the main crops.

One site, the Tahotaile (A Wide Expanse of Land That Extends into the River) Farm Co-op, near Montezuma Creek, is an example of the way the program functioned. A 150-horsepower pump forced water from the river through pipes for 550 feet to a fourteen-million-gallon reservoir, where the silt settled to the bottom. Next a rolling sprinkler system of aluminum pipe traversed the graded farmland. Finally, families provided the necessary labor for weeding, harvesting, and marketing the crops.

Four major problems were encountered in the entire operation. The first was the silt that produced wear and tear on the equipment but was mostly removed once it reached the settling reservoir. Another was the meandering of the river, which had a wide streambed in which to roam. A third problem was the fluctuation in the water level, which could vary from day to day, and in some cases, hour to hour. But the fourth and final problem—individuals not being able to work in a cooperative effort—proved to be the final stroke that closed the project. Once the managerial system was relinquished to cooperative group control, individual differences hastened the abandonment of the farms. Again the San Juan was left to run its natural course.

Today the best example of what it takes to utilize the San Juan on a large scale also illustrates the price that must be paid. On the Lower San Juan, some relatively small (one hundred to two hundred acre) Anglo operations employ
hand-moved sprinkling systems to water fields of alfalfa and other crops. The vast majority of Navajo lands, however, lie agriculturally dormant. It is not until near Farmington, New Mexico, that reservation land on a large scale is under the plow.

The Navajo Indian Irrigation Project (NIIP) began in 1970 as part of the tribal-sponsored Navajo Agricultural Products Industry (NAPI). Part of the NIIP infrastructure consists of the Navajo Dam reservoir and a seventy-one-mile canal and pipeline water-delivery system that puts 508,000 acre-feet of water on 110,630 acres of farmland. The project has swallowed $370 million with an estimated $260 million more needed to complete future development. Fiscal reports suggest that it is “profitable” and annually pumps $35 million into the tribal economy.\(^5^7\) How profitable it will be in the future with rising costs and less-available water remains to be seen. What is important is to understand that it took a huge investment in time, money, technology, and materials to harness the San Juan—something that government agents in the past could hardly have comprehended in their wildest dreams. For the Lower San Juan, this dream has remained out of reach.

One issue that lies beyond the scope of this chapter but bears mentioning because of its effect on the Lower San Juan concerns further use of river water by the NIIP. Although the Winters Doctrine (Winters v. United States—1908) provides the guiding principles concerning Native American legal rights to water, major questions still beg to be answered. The doctrine states that the establishment date of a reservation guarantees preemptive appropriative use, nonuse does not justify loss of the water rights, and sufficient water will be available to irrigate agricultural land. While this has not been a major issue along the Utah portion of the San Juan, the NIIP is now being challenged by the Endangered Species Act that prevents further utilization of the water to protect Colorado pikeminnows (squawfish) and razorback suckers, even though only half of the intended irrigation lands are under cultivation.\(^5^8\) More litigation is in sight, directly affecting how much water can actually be taken from the river.

As the San Juan rolls into the twenty-first century, there will probably be just as many efforts to utilize its water for agricultural purposes as there were in the twentieth. There will also be more voices demanding their rights: for a fair share of water, greater recreational use, environmental concerns, or development of other economic schemes. Whatever the river’s eventual fate, it will rest upon a historical legacy of trial and error, boom and bust, reflecting the way that Native people and Anglo-Americans tried to wrest a living from the water and lands along the San Juan.