The Teton Dam Disaster: Tragedy or Triumph?

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The Teton Dam Disaster: Tragedy or Triumph?

by

F. Ross Peterson
SIXTY-SIXTH HONOR LECTURE
DELIVERED AT THE UNIVERSITY

A basic objective of the Faculty Association of Utah State University is, in the words of its constitution:

to encourage intellectual growth and development of its members by sponsoring and arranging for the publication of two annual faculty research lectures in the fields of (1) the biological and exact sciences, including engineering, called the Annual Faculty Honor Lecture in the Natural Sciences; and (2) the humanities and social sciences, including education and business administration, called the Annual Faculty Honor Lecture in the Humanities.

The administration of the University is sympathetic with these aims and shares, through the Scholarly Publications Committee, the costs of publishing and distributing these lectures.

Lecturers are chosen by a standing committee of the Faculty Association. Among the factors considered by the committee in choosing lecturers are, in the words of the constitution:

(1) creative activity in the field of the proposed lecture; (2) publication of research through recognized channels in the field of the proposed lecture; (3) outstanding teaching over an extended period of years; (4) personal influence in developing the character of the students.

F. Ross Peterson was selected by the committee to deliver the Annual Faculty Honor Lecture in the Humanities. On behalf of the members of the Association, we are happy to present Professor Peterson's paper.

Committee on Faculty Honor Lecture
The Teton Dam Disaster: Tragedy or Triumph?

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F. Ross Peterson*

Six years ago, Charles Peterson and I received a carefully wrapped manuscript in the mail. An enclosed letter described in graphic detail the story of the water-stained box and its contents. The letter was from a graduate student who lived and taught in Sugar, Idaho. This student had written a master’s thesis of questionable merit, and we had rejected it in 1975 and had demanded a complete rewrite. The disgruntled and discouraged author had placed the ill-fated work in a box on the desk in his study. It remained there for nearly one year. Then on June 5, 1976, the Teton Dam collapsed. The surging wall of water and collected debris swept the student’s house away and decimated the contents. The desk, upon which the thesis rested, was never located, but three weeks later, the student was startled when a man drove into his driveway and presented the manuscript box and its water-damaged pages. The man had found the box five miles away on an irrigation ditch bank. Our student resubmitted the thesis, water marks and all, with the implied challenge, “Obviously, God wanted this story told or this too would have been destroyed!” Who were we to reject God’s handiwork?

Sometime later, I read an item in the Logan Herald Journal that quickened my interest again. In her column “Through the Garden Gate,” Cleta Hansen reported that when the flood waters receded, many people feared that the remaining ponds, pools, and stagnant water would become the breeding ground for mosquitoes. According to Hansen, similar to what happened in pioneer Utah, thousands of sea gulls flew in from the southwest, settled on the water, gorged themselves with larvae, and the summer of 1976 was relatively mosquito-free.

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These two related events convinced me that to many the Teton Dam collapse was not just an ordinary disaster. It is true that dams had failed previously and that many more lives had been lost. The 1972 collapse of the dam on Buffalo Creek in West Virginia certainly was more destructive of life as was the 1928 failure of the St. Francis Dam on the Santa Clara River in California.¹

However a closer study of the Teton Dam illustrates a number of unique considerations about this particular dam’s demise. The examination prompted the question of whether or not this was a tragedy or a triumph. Since the ill-fated dam was a Bureau of Reclamation project, this was a genuine federally funded disaster. Ultimately, the government assumed full responsibility for personal and property losses. A claims office was established, and all involved had to file a claim categorizing and evaluating their losses. This process tested the basic honesty of the individuals and also hastened a rush to judgment that made it impossible to assess long-range damage, especially to the land.

Another unique feature of this disaster was that nearly 95 percent of the affected people belonged to the Church of Jesus Christ of Latter-Day Saints (LDS) or Mormons. The similar religious beliefs of the valley residents created an immediate folklore of premonitions, miracles, and divine intervention. Another difference about this disaster was the fantastic volunteer labor force that literally invaded the area immediately after the collapse of the dam. In an unprecedented manner, over forty thousand volunteers performed clean-up work. Friends, relatives, neighbors, coreligionists, and total strangers came into the valley and worked under the direction of federal, state, local, and church authorities.

The Association for the Humanities in Idaho and the Kellogg Foundation funded a massive oral history project administered by Utah State University and Ricks College. During the summer of 1977, one year after the disaster, approximately four hundred interviews were conducted by trained historians. These edited transcripts are the primary sources for this lecture as well as for a book-length study of the Teton Dam disaster. It must be remembered that oral histories are only one type of source and they must be subjected to close scrutiny. Every interviewee wants to be recorded positively; therefore, the transcripts have to be examined for patterns, trends, similarities, and
rare occurrences in an effort to obtain historical objectivity. Even with this qualification, however, the oral interviews are a valuable source in documenting human reactions, feelings, and attitudes about the disaster.

In order to understand why a dam of the magnitude of the Teton failed, it is essential to place that particular project in a historical context. In an age of technological achievement with profound faith in the human ability to control nature, a man-made disaster assumes unique dimensions. It is necessary to analyze what was done wrong and why those mistakes were permitted. This is not done to single out individuals who contributed to the whole, but to show how pressure groups, politicians, and the ever-present pursuit of prosperity contributed to the ultimate failure of the Teton Dam. When people viewed the tremendous, and in some instances, total destruction, some questioned the very foundation upon which Rocky Mountain agriculture is based—irrigation and man-made dams. Believers in the Ten Commandments, the Mormon occupants of the valley were taught to "put no other gods before Me." Yet, for much of their history, these hard-working farmers viewed water as deity. In the late nineteenth century, their progenitors settled the Upper Snake River Valley, where water was and is their economic lifeblood. They fasted and prayed for it, pleaded for the right amount, and exhausted any means to guarantee its reliability. A poem recited in one of the oral histories documents this point.

In the Land of Irrigation,
where the desert blossoms, as a rose.
There dwells a knight in armor,
who everyone loves that knows.
He guides the little streamlets,
to the famished stems and roots.
He carries life on his shovel,
the man in the rubber boots.
He doesn't write great sermons,
nor argue points at court.
He doesn't rush to battle,
and he has not time for sport.
But just to be nearer to nature,
he leaves all other pursuits,
he spends his life out in the open,
deep in his rubber boots.
The river out in the valley,
where men have scarcely trod,
keeps calling, calling to him,
to till her fertile sod.
And the song of the river is music to him,
as he cries for recruits.
So, he hurries away to her service,
shod in his rubber boots.
Sometimes when we quit shouting,
of bravery in battle's flame,
of Lusitania victims and those lost on the Maine,
perhaps we'll sing some praises to him,
who reaped no fruits,
but made the West an Eden,
by toiling in rubber boots. 

Now one of their beloved dams had failed and unleashed a horrendous wave of destruction and once again proved that water controlled the lives of these peculiar people.

The Teton River flows less than eighty miles before it merges with Henry's Fork of the Snake River. With headwaters on the western slopes of the Teton Mountains, the trout-filled stream meanders northward through the beautiful Teton Valley before turning west. The westward course plunges through a canyon that is more than twenty miles long. Although there were some small diversion dams, the Teton was, prior to 1974, a free-flowing stream subject to fast thaws. The very fact that it flowed freely through rich potato-producing farmland meant that farmers coveted its water for both irrigation and flood control.

Irrigation is a way of life in the arid mountain west. The annual precipitation in the Upper Snake Valley is less than twenty inches and most of that comes as snowfall. Consequently, if the spring runoff is not controlled, it is lost forever to some downstream user. There is usually a shortage of water, except when warm early spring weather brings floods. This leads to the ironic reality of a drought-and-flood cycle. Land, close to the river, might flood in May yet the crops might
die a thirsty death in August. That was, and in some areas still is, the reality of farming in the dry Rocky Mountain states.

In the 1880s, Mormon settlers made their way into the Upper Snake River Valley. As in other arid communities settled by the Mormons, farmers organized irrigation districts or companies based on the concept of prior appropriation. Everyone in the district was allotted so many hours of water spaced throughout the summer. They communally maintained the company canal and individually dug the ditches. For those close to the river, the opportunities for success were certainly better because of the water's proximity. Still, there was no guarantee that the desperately needed water would be there during the hot months of August and September.

In 1902, the federal government entered the picture and began to offer alternatives in the West. The Newlands Act created a Bureau of Reclamation to encourage the agrarian development of the western United States. The Bureau worked diligently to provide irrigation for nearly ten million acres in the seventeen western states where it had authority. The Bureau also had responsibilities beyond irrigation including industrial water service, hydroelectric power, flood control, recreation, wildlife and fish enhancement, and even weather modification. However, the Bureau's main business was to build multipurpose dams to provide irrigation water.

Theoretically, the farmers who receive the water are supposed to repay the cost through increased production, hence, an ability to pay more taxes. In reality, irrigation district officials join with Bureau representatives and congressmen in seeking authorization for new dams and auxiliary projects. As long as the nation's taxpayers pick up the immediate bill, then the pork-barrel projects roll through Congress. Most western farmers are appalled by welfare costs in urban areas, yet, ironically, federal dollars have provided them with their economic lifeblood, water. Until June of 1976, the Bureau of Reclamation had a nearly perfect dam construction record, with only the Fontenelle Dam in Wyoming threatening to collapse. After seventy-five years of dam building, the professional Bureau engineers and geologists, as well as experienced construction companies, knew how to build a dam. Their only real mandates were to show a cost efficiency ratio and, since 1969, to issue a detailed environmental impact statement.
As early as 1903, the Bureau investigated the Teton River as a potential dam site. In 1962 following a mid-winter flood, the farmers of the Fremont-Madison Irrigation District sought a federally financed Bureau dam. It took seven years for the project to gain approval and the necessary appropriations. During the Vietnam War years, funding for domestic projects was difficult, and the fact that Representative Ralph Harding, who spearheaded congressional authorization, was defeated in 1964 hurt the dam's chances for money. In 1969, the Environmental Protection Agency (EPA) was authorized and a Teton dam environmental impact statement was required of the Bureau. The fourteen-page draft of the impact statement was circulated in early 1971 to any interested citizen or agency. Immediate conflict erupted between supporters of the dam and a new breed of westerner, the environmentalist.

The statement concisely summarized the purpose of the dam and estimated the cost at fifty-eight million dollars. Without emotion, the Bureau conceded that the new reservoir would inundate seventeen miles of canyon and destroy the native cutthroat trout population. According to the brief study, much of the winter forage ground that supported elk and deer herds as well as other animal life would be eliminated. However, the study stated that the positive aspects far outweighed the negative. The statement concluded by asking the Bureau to consider three alternatives to the proposal: (1) control floods by constructing a series of levees (which the Army Corps of Engineers had investigated in the 1950s); (2) pump groundwater to supply additional irrigation water; and (3) leave it alone. The reports ignored any possible seismic dangers, engineering problems, or geological difficulties. After reviewing the EPA report, the Bureau implemented its original plan and sought bids for the dam.

This decision was not reached without considerable research and investigation. As the Bureau learned more of the Teton Canyon in the 1960s, they discovered several potential problems. As early as 1961 and again in 1963, researchers warned that a reservoir might leak, but these warnings were not included in any of the congressional hearings. The project was authorized prior to the test-well drilling and prior to the excavation that revealed extensive fissures throughout the canyon wall.

By 1969, some Bureau officials questioned the feasibility of the
project. An additional two hundred thousand dollars was appropriated to study if normal methods of sealing the foundation and the walls would be feasible at the Teton Dam. The engineers utilized a technique known as grouting. They drilled several holes in the canyon wall and then poured grout (a mixture of cement, sand, and water) into the holes. When the hole was filled, the grout remained and hardened. Theoretically, this method should keep the fissures from leaking. After the grouting tests, however, some geologists had serious doubts about whether this method would work. Clifford Oteson wrote that because so much grout was poured into the holes without filling them, he had grave questions about the water-holding capabilities of the reservoir. Another geologist, Shirley Pytlak, described a similar test. Instead of grout, an average of 300 gallons of water per minute was pumped into the holes. The holes simply did not fill. Consequently, the Bureau decided to include key trenches. Seventy-foot-deep key trenches were dug under and on each side of the dam. Grout holes were drilled, filled with grout, and then clay was packed into the trenches. Ideally, three grout curtains would prevent leakage into the fissures.

The Bureau should have studied its recent past more closely. The Fontenelle Dam in Wyoming was saved in 1965 because its auxiliary outlets were operating and after the reservoir was drained, eight grout curtains were added to the original two. A few months after the trench decision was reached, Oteson reported that the problem was not solved. Although eight million gallons of water was pumped into one hole over a period of two weeks, the hole was never filled.3

In 1972, amidst a series of court battles in which environmentalists were often branded as extremists, actual construction of the dam began. Not long after initial excavation started, U.S. Geological Survey scientists raised more objections to the chosen site. Dr. David Schleicher expressed deep concern over the seismic risk potential in the area. Schleicher felt that the Bureau's engineers had failed to consider the significant earthquake possibilities in southeastern Idaho. Schleicher also argued that the chances for slumping and sliding would increase because of the nature of the rock and soil around the dam. In April, Schleicher and some of his associates wrote to Robert Robison, the project engineer, and warned that many fault lines crossed the area of the dam site. They suggested that it was likely that
an earthquake would destroy the dam if the design were not altered. Interestingly, Robison never received the original letter. It was turned into a bureaucratic "preliminary report," and the language lost its urgency after editing. In its final form, it was not a warning at all. The Bureau did install seismographs, but no earthquake activity was reported during the period of dam construction.4

A more serious problem arose as several large fissures began to appear, most of them inside the north canyon wall. Some of the cracks were large enough for a person to walk into the bottom of the key trench. One three-by-five foot opening expanded into a cavern nearly forty feet high. Another ten-foot-high fissure extended for approximately seventy-five feet. These numerous cracks and caverns caused the project engineer and the construction company engineers to stop and to analyze the situation. After extensive surveying of the fissures and repeated delays, the engineers agreed to treat the fissure zones to make them "watertight." That meant pouring more and more grout into the holes. As construction progressed, large fissures continued to appear. When an eight-inch-wide fissure was discovered about twenty feet from the spillway area, it required 33,000 cubic feet of grout to fill it. That is enough cement to form a concrete block eleven feet high by thirty feet wide and one hundred feet long. Ultimately, 575,000 cubic feet of grout was dumped into the fissures and holes surrounding the Teton Dam. That was more than twice as much as the original estimate to fill the key trenches and the grout curtains.5

In the summer of 1975, two Bureau geologists warned that the numerous caverns and fissures in the canyon walls posed potential hazards to the welfare of the dam. Robert J. Farina and H. H. Ham feared that the north canyon abutment simply would not stand up to rapid leakage. After they were shown the final design, which included the plans for the three grout curtains, these critics were satisfied that seepage of that volume would never occur.

When the grouting was completed, Bureau officials drilled test wells on both sides of the grout curtains. Water was then pumped under pressure into the upstream wells while the wells located downstream were monitored for water seepage. Bureau officials, Robison and Rod Vissia, the regional director, both testified that the water did not seep through the grout curtains. By the fall of 1975, the Bureau was ready to start filling the new dam. Brochures were
prepared to advertise the multifaceted benefits of the new earth-fill dam, and a scenic outlook on the south rim of the canyon was completed. On October 3, 1975, with the river at its lowest, the reservoir began to fill slowly.

The dam was nearing completion as the water began to climb the canyon walls upstream. At its base, the gigantic earth-fill structure was 1,690 feet thick. From its foundation, it rose to a height of 305 feet. The crest was 35 feet wide and 3,050 feet long. Between the foundation and the crest was 9.5 million cubic yards of compacted clay, silt, sand, gravel, and rockfill. Behind this great dam was to be a reservoir 17 miles long, with a capacity to store nearly 290,000 acre feet of water, or 80 billion gallons. On paper it looked like another grand achievement: supplemental irrigation for 111,000 acres; power to produce 20,000 kilowatts; no more floods; 7,500 acres of newly accessible recreation land; and 2,100 acres for fish and wildlife development. As the spring of 1976 approached, even the skeptics were prepared to make the best of the situation.

Considering all of the difficulties encountered during construction, it is amazing that in March, 1976, project engineer Robison sought permission to exceed the one-foot-per-day limit of filling the dam set by the dam’s designers. The mountains where the Teton’s headwaters are located had a greater snowpack than average that year. Most of the construction was finished, and the outlet tunnel was scheduled for completion on May 1. The engineers viewed the heavy snows as an opportunity to fill the reservoir earlier than the 1977 completion date. This would enable them to test the power turbines in the electrical plant, clear debris from the reservoir, and observe the effectiveness of the grout curtains.

Unfortunately, problems continued to surface. In April, the Bureau determined that 4.8 billion gallons of Teton Reservoir water was leaking somewhere, somehow. After determining that the leakage was probably a result of filling the dam, the Bureau scrapped an elaborate proposal to find out where the water was going. Adding to the uncertainty, other Bureau officials warned in early April that the water table on the north side of the reservoir was rising nearly 100 times the predicted rate. Still, Harold Arthur, the Bureau’s director in Denver, gave the order to double the rate of filling the dam. Arthur, who was to lose his job and become in his words, “the scapegoat,”
knew that the water table was rising, but he felt that it was a normal
development. By early June, the water rose at the rate of four feet a
day (twice the authorized level) and the groundwater in the testing
wells increased at a rate of seven feet per day.

Bureau officials in Boise or Denver were not informed of the sud-
den elevation of the groundwater. The Bureau chief of earth dams,
Richard Bock, said that the unfinished water tunnel would have been
opened as a safety measure if he had known. Arthur's predecessor, D.
P. Bellport, wrote after the Fontenelle experience in Wyoming, that
where unfavorable foundation conditions existed, it was necessary to
fill the reservoir in a slow, controlled manner. Another expert main-
tained, however, that the rate of filling and the dam failure may not
have been related.

In fact, as things developed, the Bureau had no recourse but to let
the dam fill at nature's pace. The outlet tunnel, designed to remove
water from the reservoir, was not finished by the contracted May 1
deadline. Workmen were inside the tunnel preparing it for final
inspection the very morning the dam collapsed. Although the auxil-
iary outlet tunnel was in operation, its capacity was limited. It could
not let water out at a fast enough rate to affect the rapid filling of the
dam.

The Bureau felt secure as the month of June arrived. No leaks
appeared, the rapidly filling reservoir neared its capacity, the outlet
tunnel was almost waterproofed, and the total project was over 90
percent completed. From the final report of the U.S. Department of
the Interior Dam Failure Review group, an accurate chronology of the
first week of June can be reconstructed. The false feeling of security
was destroyed that first week in June as two leaks appeared below the
dam on the north canyon wall. The early leaks, evident on June 3,
were like springs of clear water. These two small leaks were located
1,300 and 1,500 feet downstream from the toe of the dam. When
measured by officials, it was estimated that approximately forty to
sixty gallons per minute was seeping out of each leak. The next day,
Friday, June 4, a small clear leak, flowing approximately twenty
gallons per minute, was located only 150 feet from the toe of the dam.

All of the apparent leaks were near the wall of the north canyon.
In a memo to his superiors, Robison told them that a new spring had
developed. He reported the earlier leaks were still flowing at the com-
bined rate of 100 gallons per minute. Robison promised to keep Harry Arthur "advised" of the situation. Arthur was "advised" long before the memo reached his office. The next day was June 5.⁶

No additional problems were recorded on June 4. No leaks appeared either on the dam's embankment or on the actual abutment. The last Bureau official left at 12:30 a.m. on June 5. Although the next morning was a Saturday, a group of contract personnel and Bureau surveyors were at the project shortly after 7:00 a.m. A few minutes later, they observed two leaks on the right abutment of the dam. Turbid water was pouring from both leaks and an erosion channel was apparent near the base of the dam. Shortly after 8:00 a.m., Robison and other engineers were notified. Five hours after the first observed embankment leaks appeared on the dam's north side, it totally collapsed. Only fifteen hours elapsed between the last close inspection on Friday evening, when no leaks were visible, until the dam failed.

Within a few hours, the flood had run its course to the Snake River and down to the American Falls Reservoir. Over 100,000 acres of farmland were affected and over 13,000 livestock were lost. Millions of dollars worth of farm equipment was destroyed. At least 250 businesses were rendered inoperable. Approximately 783 homes were obliterated and 3,000 damaged. Many of the damaged homes were later demolished. The initial estimate of the losses was placed at one billion dollars. More importantly, six people drowned in the flood and five others died in flood-related incidents.⁷

How all of this affected the residents of the valley is significant. All dislocated individuals related their feelings concerning the losses, and they tried to explain what the disaster meant and what they experienced as they returned to the flooded area. Again, the great difference with the Teton flood is that since there were so few deaths, community grief centered on lost possessions rather than individuals.

Because of their religious convictions, many people tried to explain the failure of the dam in supernatural terms. In other words, why did the Lord let it happen? As they analyzed the hours before the flood, some felt they had been warned by a premonition. Others felt that miraculous events had accompanied the flood. To many, the entire disaster became an intense spiritual experience. Numerous examples of premonitions and miracles were told and retold, and a
distinct folklore of the Teton Dam disaster has emerged and continues to develop.

Many individuals reported dreaming about the disaster prior to its occurrence.

The miraculous thing to me was that this had been a rerun. Years ago I had seen all this happening in a dream. I was up on a hill and something was happening. I couldn't tell what it was. Even the church house was ruined. The whole horrible feeling came back to me. While I was standing on the hill and saw what was happening, the dream came back again.8

Another similar experience was recorded as follows:

One evening, one night, I had a dream. I guess you know I do write some poetry and I wrote in poetic form the experience. I gave a copy of this to one of our colleagues... We read it together... In fact, it was kind of interesting because I was in a position of some official capacity, it seemed in at least two instances in the dream. As it revealed in the poem, one was a church responsibility... and the other was a civil responsibility which I didn't hold until after the collapse of the dam. I read the poem after I had finished writing it and to be truthful, I didn't know what it was talking about. It was not until sometime after the collapse of the dam... when I finally recognized what... I had written... had actually occurred.9

Other premonitions were quite different. One pattern that developed was the premonition on Friday or Saturday morning to obtain more than normal amounts of cash. Money became very important because most of the local banks were going to be closed for a long time. The following four examples document this type of concern:

It was a strange thing... my one daughter and myself were the only ones at home. I'd been working out in the yard and when she got up a little later, I said, "Oh, let's run over to Rexburg and have a bit of breakfast." When we got there, I said, "By golly, I've got to get a check cashed because J.B.'s won't cash a check." When I went to get a check cashed instead of cashing one for maybe $10.00, I cashed one
for $50.00. I never knew why... because it's not a habit to do that. I had $50.00 in my purse and we went to breakfast and we got back home around 10:00 in the morning and I hadn't taken my purse out of the car. I always take it out, but I didn't. We went back out in the yard and worked and we were working there when they came and told us about the flood. I just jumped in the car. So I had some money. It's always been strange to me. I thought there must have been some reason why I wrote that check.¹⁰

Another man had a similar experience with cash.

I had $300.00 in cash but I don't even know why. Now here's something that's interesting and I had been putting that away, just not putting it in the bank or anything...I had it downstairs where it never would have been found again. Something said, just take that $300.00 in cash. So I took it up to my mother's and put it in a drawer up there...I just reached over just before I left and took that and put it in my wallet.¹¹

And finally,

... a neighbor the day before had withdrawn $1,300 from the bank because his brother was coming up and they were remodeling their house. He felt he needed the cash to get the materials he needed. They placed the money in a tin box on their kitchen table and drove away and left it; came back and it was gone. People found it blocks away and returned it to them.¹²

This example highlights both the availability of cash and the phenomenon of lost items being returned to their rightful owners. Another person had a similar experience.

We were out of town when the flood occurred. On Monday when we returned, our son, Doug, went out to see if we had any mail. Big joke! The mailbox was lying in the gutter with a big log from the timber yard on top of it. The door was open and the whole dam full of water had flowed over it. Doug went out and looked anyway and, surprise!
There was a little batch of mail; the *Aberdeen Times*, some letters and wonder of wonders, one from Vicki, our missionary in Italy. The flap was unglued, lying open, but the letter was still inside and was still readable! We all sat down, read it, then went back to work. Doug said the little hook on the mailbox door caught the mail and it was still hanging there when he went for it.

The next day I decided to sort through the rest of it and get rid of the muddy mess. On top was what looked like a buy-through-the-mail insurance advertisement. I nearly threw it out, but decided to open it. Inside were two checks totalling over $1,500 to pay on the surgery I had in March.\(^\text{15}\)

However, not everyone was so fortunate and most people were cashless and left at the mercy of the various governmental and church agencies. Some, however, had no premonitions of disaster and had money. Others had plenty of money, but lost it. One man had sold his pigs at an auction on Friday. He cashed the check for $3,500 and left it in his pants hanging over a chair. In the morning, he put on coveralls and went to deliver fertilizer. He was gone when the water destroyed his house in Wilford. For three weeks after the flood, he searched from one end of the valley to the other. He found four pairs of jeans the same size and brand name of those lost, and he even found his down vest which was on the chair with the pants. The vest had a one dollar bill in the pocket, but the $3,500 was lost forever.\(^\text{14}\)

A Sugar City family reported a different type of premonition.

We had been on a trip for about thirty days to our daughter’s wedding down in Los Angeles. On the way back, we stopped in Nevada where the road takes off going to Salt Lake and up to Twin Falls. We stopped there and slept for an hour. We were debating as to whether to go to Salt Lake and up through Utah and visit our family and be home on Sunday, or whether to come right straight through. We went to sleep and I woke up a couple of hours later and thought to myself, we ought to be home. There are things to do. I turned the car towards Sugar City. We were home about forty minutes before the flood broke. We pulled into the back of the house and unloaded the suitcases out of the car. The first time we had done that in years, unloaded the car...\(^\text{15}\)
This family rescued a bedridden father and left their home. Their house was totally destroyed and the suitcases were never recovered.

It is interesting to examine the reported premonitions that involved other issues than just the flood and disaster. One elderly couple had been asked to go on a LDS mission. They described their premonition:

We had a feeling that something was going to happen and we might not be able to go. We thought maybe it would be some misfortune that would happen in the family... I had a feeling something bad was going to happen. I figured maybe it was going to be one of us that would pass away or get awfully sick and we wouldn't be able to go. For quite a while, every afternoon, I'd go out and walk around the yard and look it all over and wonder why I was doing that every day. It must have been that I knew something was going to happen to it; that it wouldn't be there long.

All of these premonitions illustrate that numerous people felt that there had been a type of divine intervention on their behalf. The warnings of impending disaster or disruption came in a variety of ways, but the recipients, given time to contemplate the events of that week in June, were sure that they had been warned.

The idea of divine intervention did not end with the premonitions. The oral histories are filled with stories of miraculous events that surrounded the flood. Although some individuals discussed events that transpired during the flood, most were concerned with the preservation of important personal items. Many women discussed the loss and subsequent discovery of their rings. Other people were concerned about valuable books, clothing, or material items. However, most interviewed were concerned about their genealogical records, photo albums, and other family documents.

The following examples are used to illustrate this concern of the flood victims. After describing the impact of returning to their mud and manure-filled house, one woman said she wished her house was gone because it was "so ugly and stinky and nothing was where it should be." She continued:

Of course, there was one reason that I hoped and that was because of
our pictures and our genealogy. ...about all I could think about that night was I hope these pictures are still there...I think it [the water] got within about six inches of my treasured picture book and of my genealogy. ...There was only one thing in the front room that was sitting on the floor when the flood hit and was still intact. That was Lyle's genealogy book. It was on a little chord organ bench and evidently floated up and just sat gently back down. That was the only clean thing in the whole front room.17

Another family had their genealogy spread out on a bed. When the water came into the house, the mattress floated up and then settled back onto the silt with all of the records intact.

One Sugar City family described the flood's impact on their house in such a way that the preservation of the genealogical records was described as miraculous. The woman said the water went right through their home and took with it a baby grand piano, books, stereo, couches, beds, silver, china, crystal, tapestries—“everything was just gone. We never did see it.”

She explained by noting:

We were really concerned about our genealogy. We had it in a big pasteboard file box in our family room... .Of course that was one of the things I really wanted to save because I had histories of our people and pictures, many hundreds and hundreds of pictures and things that were really precious to us. When we went in...they were just nothing but a chunk of mud. But we took them, that box, and carried it carefully, so it wouldn't fall to pieces, into the pickup... .I spent all Sunday night washing every page and every picture that was in that file box, washing the mud off of it. I filled a double garage and three rooms...with these washings...the writing is legible and the pictures came out pretty well. So we feel that was miraculous.18

One more instance illustrates that the victims lost some things but had others preserved. One couple lost all of their wedding pictures, certificates, diplomas, and other documents because they were in a cedar chest in a basement. All of the contents were ruined. The husband had brought his genealogy home shortly before the flood.
We thought it was gone, but do you know that two months ago he discovered it in his office. You ask if there was anything miraculous, now I don't know, but he can't remember and I cannot remember, and I know that the first thing he said to me when we went back was, "I brought my genealogy home two days before the flood." She continued, "He cannot remember ever having taken it back and I cannot remember that he ever did either... . We are sure that that genealogy was right in that house when the flood hit.19

Naturally, not everyone was so fortunate. Many people lost all of their records in the flood, but others found them and then lost them.

Our next door neighbor came running up while the flooding was still about to your hips. He had taken his boots and gone down to get his wedding book. He had just been married about a month...and he had the wedding book with all his wedding pictures and was so thrilled 'cause it didn't get hurt in the flood. He stepped in a hole and went down, clear down when he fell, and just got those pictures ruined.20

The very fact that all people involved in the flood did not experience miracles or did not have premonitions caused considerable concern. Many flood victims felt that they were as worthy and deserving as the person who testified of a miraculous event, yet they had not experienced anything special. This concern caused individuals to seek God's involvement in other ways. Most people did feel that they had benefited from divine intervention especially concerning the actual collapse of the dam.

Numerous individuals interviewed had strong opinions about why God had allowed the dam to collapse and about why the disaster had evolved in the manner it did. These people felt the Lord could have prevented the destruction, but instead of doing that He had orchestrated the events of June 5. A year after the disaster, a type of consensus on this issue evolved. Three oral histories summed it up well.

I think the Lord was in on it from the beginning. I really feel that the Lord has used this flood for His own purposes, and I also feel that the
Lord was holding the dam together until Saturday afternoon because it started leaking Thursday and it became apparent, at least to some people, that it was going to break. And if it had broken any other time, it would have been much worse. I don’t think that He could have picked a better time than 12:00 noon on Saturday.\textsuperscript{21}

Another individual responded similarly.

I felt like the timing on it, the fact that it was a Saturday, and that it could have happened many different times than that. Maybe the water could have backed up and it happened in the middle of the winter or maybe a school day. I think maybe there was a divine hand in the timing of it.\textsuperscript{22}

A third example documents the general feeling.

I feel the timing of the break was miraculous because if it had been in the winter or at night, we would have lost a lot more lives. If the whole total dam...had crumbled away, we wouldn’t have a community or people in it. They couldn’t have escaped. It would have come so fast and so deep. That’s where I feel the divine intervention is.\textsuperscript{23}

The interviewed victims of the disaster are probably correct in assuming that if the dam had collapsed at night, during the week, or in the winter, the human loss would have been much greater. They are also probably right in assuming that if the dam had gone completely, devastation would have been total.

There is another aspect of divine intervention that many interviewees discussed. It was their opinion that the dam was allowed to collapse to test the LDS people and the welfare system of their church. And many felt that the Upper Snake River Valley was a perfect site for such a test. Ricks College, a LDS-owned junior college, was there. With its thousands of dormitory rooms and adjacent apartments, few flood victims lacked shelter. The college's food service storehouse was well stocked, and when quickly supplemented by the LDS church, few were without food. Within this setting, it was fairly easy to see if the
family self-help and church-operated welfare system would and could work. The result was, for the most part, successful.

Another unique aspect of this particular disaster was the coordinated clean-up effort. Within hours after the flood, both Idaho Governor Cecil B. Andrus and President Gerald Ford declared the flood area a disaster. This meant that federal and state agencies and resources could be utilized. The Federal Disaster Assistance Administration (FDAA), Red Cross, and Idaho National Guard as well as other federal agencies such as the Small Business Administration, the Bureau of Reclamation, the Soil Conservation Service, the Department of Housing and Urban Development (HUD), and the Army Corps of Engineers moved in quickly. Numerous divisions of state government such as Health and Welfare, Public Works, Employment, and Highways were also involved. These agencies contained several disaster experts, and they were unanimous in their conclusion that never had a clean-up effort gone so smoothly. One reason for the comparative ease was the immediate marriage of church and state. General James Brooks, Idaho's Director of Disaster Services, explained, "The church organization functioned marvelously under these kinds of conditions, and I'd have to say more effectively than most anything I've seen."

The federal and state officials recognized very quickly that the church leaders and the local government leaders in the area were usually the same people. The agencies also learned that the highly organized LDS church could do much of the day-to-day accounting for the individual needs of the victims. This left the government agencies free to work on restoring transportation, electricity, and communication lines. The presence of Ricks College negated the immediate need for housing and food, so the FDAA worked on the larger problems.

The Red Cross established headquarters in the Ricks fieldhouse. The day after the flood, at a church conducted general meeting, Red Cross officials outlined their services. Included in the program were survival kits, cleaning supplies, and certificates redeemable in food and clothing. The food stamp program of the federal government also provided a way to obtain food. Although some LDS people were confused by their church's teachings that they should avoid public welfare, many LDS church leaders took the position that the
federal government was responsible. It was the Bureau of Reclamation's dam, so the victims should take federal assistance. Finally, the First Presidency of the LDS Church advised their people to accept loans and other assistance for rebuilding but to use church sources for food, clothing, and other necessities. In addition, during all of these discussions, meetings, and decisions, local Protestant and Catholic clergymen had access to all LDS facilities and supplies.

Perhaps the most amazing story of the clean-up effort concerns the approximately forty thousand volunteers who made their way into the area throughout the summer of 1976 to assist first in "mucking out" and then in rebuilding. Actually, two different systems evolved for obtaining and handling these volunteers. The first, which was utilized by Ferron Sondregger of the Rexburg North Stake, was to ask a neighboring stake to assist. Each day, he would call the stake presidents and give directions for the next day. The helpers were then directed throughout the various wards. However, there were more volunteers coming on their own and there was a need to coordinate the entire effort, so a new program was initiated one week after the flood. The call was made to stakes throughout southern Idaho, northern Utah, and western Wyoming. Orders were given for so many laborers to come each day. These individuals were bused, at their own expense, to the disaster area. They were then assigned to wards, and ultimately, to individual homes. The volunteers would work eight hours, leave and be replaced by another group the next day. These volunteers were supplemented by Hutterites from Canada, Mennonites from Aberdeen, Idaho, and countless friends and relatives.

On Saturday, June 19, nearly five thousand volunteers invaded the valley. Twenty thousand had come in the first week of the program. During the first week, almost everyone was involved in digging the slimy, dark muck out of the houses. The putrid smell permeated the entire town. The thousands of cheerful volunteers had a fantastic effect on the victims of the flood. Work which would have taken weeks was completed in two days. One woman described her feelings, "I never wept a tear over the loss of our material things, but when I saw and felt the magnitude of the human heart, as it opened to our aid, I wept."
restore power to individual homes. A call was made to the Kaysville,
Utah, area for 150 electricians, and over 400 responded. Several
brought their own trucks, crews, supplies, and donated it all. One
electrician described his response to the request, “When I left my
bishop, he told me if there were any problems, anything that I needed,
just to remember that the bishop would reimburse me through the fast
offering fund. I didn’t come up here to be reimbursed for anything.
I’ve got my truck and my crew and anything that needs to be done
we’ll do it, and we’ll donate it and be happy to do it.”

Another urgent need was for front-end loaders. The Soda Springs
region was asked to supply six and they responded that they were
thinking in terms of more than one hundred. One local church
leader claimed that the volunteers, “literally lifted us up out of the
mud and set us on our feet again…. Without them we never would
have made it.” Hugh Fowler of the FDAA said that the efforts of both
the volunteers and the victims speeded up immensely the work of the
government.

It should be noted that most of the volunteer efforts were concen­
trated on Rexburg and Sugar City, consequently, victims in Wilford
and Roberts felt somewhat ignored. These two communities were in
different LDS stakes and were located some distance from Rexburg
and Ricks College. Since church and government officials in Rexburg
had the first chance to use the volunteers, they did. Wilford and
Roberts were also in different counties, and this, too, explained some
of the negligence.

Still the impact of the massive summer clean-up effort cannot be
fully appreciated by those who did not witness its progress.
Psychologically, the volunteers and the relief agencies created a degree
of optimism. Some of the elderly victims were so traumatized by their
losses that they simply gave up and refused to consider starting over.
Most of the people, however, kept a positive approach and began the
task of rebuilding. After the release of massive reports on why the dam
collapsed, the government took full responsibility and agreed to com­
penstate those whose land, machinery, houses, and livestock had been
damaged or destroyed. Throughout the winter of 1976-77, many peo­
ple sat in HUD trailers and tried to determine their losses.

The Bureau established an office in Rexburg and sent in experts to
assist people in filing claims. Once the claim was agreed to, then the
government would reimburse the claimant. The government officials could approve the claim completely or they could negotiate with the claimant. There were very few blatant cases of attempted fraud, but the claims process was on the whole very difficult for the victims. They were asked to list and value everything lost or destroyed. Some items were difficult to evaluate and others were simply irreplaceable. In addition, there was no way realistically to assess the damage to the soil. Only time would determine that damage. A deadline was established for the submission of claims. By the time this procedure had run its course, the total cost of the flood’s damage was nearly one billion dollars.

Interestingly, very few people would discuss the claims. The interviewees would usually admit to having heard about fraud, but were unwilling to be specific, lest their example be identified. Others were very disturbed by the haste the Bureau required for submission and they were dissatisfied with the settlement. Some individuals went to court where they usually lost the litigation. By the winter of 1976-77, there were continual public meetings and a growing sense of bitterness on the part of those who felt they had been dealt with unjustly.

Senators Frank Church and James McClure pushed legislation through Congress that required the government to pay the claims in a lump sum. This created another tremendous problem. There was an abundance of cash competing for a shortage of materials and services. Consequently, prices rose to horrendous levels. The claim money immediately lost much of its face value as the agreed settlement price proved inadequate to replace destroyed houses, machinery, livestock, and other essentials. The valley assumed the posture of a boom town for nearly a year. Thousands of homes and barns were constructed or repaired. Fences and ditches were replaced. There continued to be a shortage of supplies and qualified builders. The result was shoddy craftsmanship, less than competent construction, and half-finished projects. With the necessary cash on hand, the victims were so anxious to repair and replace that often their sound judgment was lost. As one person stated, “We settled for less because we wanted to get our claim settled so that we could get back to some kind of routine and a family life.”

Another difficulty arose by 1977. Much of the harmony of rebuilding was lost when one neighbor began evaluating another’s
prosperity. One family may have made a decision to repair its truck and tractor, to remodel the house, to replace the outbuildings, but not to worry about the fence. A neighbor may have decided to “total” everything and start from scratch. So a year later, the neighbor had a new house, barn, tractor, pickup, boat, snowmobiles, fences, corrals, and even ditches. Both claims were honest, but the claimants had different perspectives.

In light of this phenomenon, the Associated Press and the Idaho Daily Statesman decided to sue the Bureau. Their goal was to publish the amount of each person’s claim and the total amount that was awarded. The purpose behind the suit was to show Bureau inconsistency in negotiation as well as attempt to prove that some individuals had profited by the flood. To date, the government has won the suits and has been able to maintain privacy concerning specific claims. However, the various cases have continued to be a disruptive influence. Those opposed to disclosure argued that the sense of community would be destroyed by a full revelation of the individual amounts.

It is interesting that so few of the oral histories will discuss the claims and their short- and long-term economic impact. The interviewees will go into great detail recalling their every move during and after the flood. They willingly talk about their feelings as they reentered their disheveled homes and began the process of reconstruction. With some difficulty, the victims analyze life in the HUD trailers or other temporary housing and the complexities of the claims process. Yet, they are shy about openly discussing on tape the private matter of money. Waddy Moore, a past president of the Oral History Association stated the dilemma:

An oral history interview is a poor source for ascertaining the facts or even for establishing the chronology of a story. On the other hand, if you want to know how the respondent feels about the story, or how he or she perceives the event under discussion, or if you are looking for interesting and little known details of anecdotal character, then the oral history interview is a prize source.

There are many aspects of the Teton Dam story that are unresolved. Will the dam be rebuilt? Will the land ever regain its produc-
tive capacity? Will the claims be published? Will the marking of time in the valley return to B.C. and A.D. instead of B.F. and A.F.? However, as I have examined the sources and the interviews, it is the people who are important to the study. They are central to the story, but I am constantly reminded of the conclusion of the late Ruth Barrus's interview. She related how a woman from Utah came to their testimony meeting and thanked the victims of the flood for their great example and related how much their actions were an inspiration. Ruth Barrus said, “When I walked out of there I thought, ‘we’re not that good.’ I don’t want them to get the feeling... We’re human and if we did rise to a height more than what is normal it was because we had a lot of help to do it.” Or as Brad Dalling put it, “Please don’t make us larger than life. We had a job to do and with help, we did it.”

Consequently, the Teton Dam flood is both a tragedy and a triumph. It is tragic in that a man-made disaster caused dislocation, considerable destruction, and death. However, much more importantly, through volunteerism, government, and religion, it was a story of triumph in that a sense of community was maintained.

Although there are many unique aspects to this incident, the significance of the Teton Dam collapse and flood is that man and nature must learn to coexist. People must carefully conserve and carefully utilize natural resources. The scales are balanced lightly, and on occasion, human mistakes can lead to nature's wrath. However, as William Faulkner said in his Nobel Prize Address, “Man will not merely endure; he will prevail. He is immortal not because he alone among the creatures has an inexhaustible voice but because he has a soul, a spirit capable of compassion and sacrifice and endurance... . The writer's duty is to write about these things. It is his privilege to help man endure by lifting his heart, by reminding himself of the courage and honor and hope and pride and compassion and pity and sacrifice which have been the glory of the past.” The Teton Dam story is all of these and it, too, will contribute to the glory of our past.
Footnotes

1. See Kai T. Erikson, *Everything in Its Path: Destruction of Community in the Buffalo Creek Flood* (New York: Simon and Schuster, 1976) and Gerald M. Stern, *The Buffalo Creek Disaster* (New York: Random House, 1976). These studies are based on two different aspects of the aftermath of the disaster in which about 125 people died. Erikson deals with the loss of community and the sociological phenomena associated with the destruction while Stern handles the court cases that ultimately placed blame on the coal company that owned the dam. Charles F. Outland's, *Man-Made Disaster: The Story of St. Francis Dam* (Glendale, California: Arthur H. Clark, 1977, revised edition) studies the collapse of a dam in southern California in 1928. Approximately 400 people were killed during this nighttime disaster.

2. Interview, L.C. "Andy" Anderson, April, 1972, transcript in Ricks College Library Special Collections. Anderson was the Secretary-Treasurer of the Fremont-Madison Irrigation District. He was a long-time advocate of the dam's construction.


7. The statistics are from a Bureau of Reclamation publication entitled "Damage Summary: Teton Flood." A copy is in the author's possession.
8. Interview with Verl Bird, August 7, 1977. All typed oral history transcripts are deposited in three locations: The Idaho Historical Society, Boise, Idaho; the Ricks College Library Special Collections, Rexburg, Idaho; and Utah State University Library Special Collections, Logan, Utah. The interviews were conducted in the individuals’ homes throughout the summer of 1977. Most of the interviews were conducted by Alyn B. Andrus, David Crowder, Richard Stallings, and Christina Sorensen. Their assistance is greatly appreciated. There were a few interviews done by students in an extension class as well. Craig W. Fuller provided an essential service by audit-editing all of the interviews. His contribution to the entire oral history project was most expert and efficient.


10. Interview with Shanna Ricks, June 23, 1977.


14. Interview with Ronald Parkinson, July 8, 1977. This is an excellent interview for a number of reasons, but foremost for its unabashed honesty.


17. Interview with Zeruah Moon, August 18, 1977. It should be mentioned that although most of the interviews were with LDS people, those non-Mormons interviewed were as concerned about personal records as the Mormons.


21. Interview with Margaret Bake, August 30, 1977.


for their coverage of the declaration of emergency and the conclusion that
five Idaho counties be called a disaster area.

25. Interview with General James Brooks, Adj. Gen. Idaho National Guard and
   Director of Idaho’s Disaster Services. This interview is part of a collection
done by Bruce Blumell, LDS Church Historian’s Office. The collected oral
histories are in his possession, and a summation was published. See Bruce D.
*Task Papers in LDS History*, No. 16 (Salt Lake City: Historical Department
of the Church of Jesus Christ of Latter-Day Saints).

26. First Presidency of the LDS Church to Regional Representatives, Stake
    Presidents, and Bishops of Teton River Flood Area, June 21, 1976. Copy in
    author’s possession.

27. Blumell, pp. 32-45.

28. Ruth Barrus, “Teton Saga,” an account of the first month in Sugar City,
    Idaho, following the dam’s collapse. Typescript in author’s possession.


30. Ibid., p. 40.


33. There are numerous examples in the oral histories of people saying that they
    heard of fraudulent claim applications. The interviews were held in 1977, so
    the few actual fraud cases were not known. Some examples would be that a
    person obtained a boat when he did not have one before or that eight people
    claimed the same piece of property. A more common complaint is that the
    Bureau did not give people all they claimed, thus creating the feeling that
    the filed claim was fraudulent. There is also considerable comment about
    the Internal Revenue Service trying to tax the improvements.

34. The Rexburg Standard Journal, a weekly newspaper, is filled with stories of
    this difficulty. Almost every issue from mid-summer on refers to higher
    prices, inflation, and profiteering. See articles in November 9, 1976, and
    December 16, 1976. According to the articles, food and housing outlets were
    the villains. Many natives still boycott some stores because of conceived price
    gouging.

35. Interview with Gloria Greenhalgh, July 8, 1977. Many of the oral histories
discuss this problem in great detail. The Parkinson, Dalling, Kinghorn, and
Barrus interviews are excellent on this point.
36. This is a complicated aspect of the story. Originally, the U.S. Department of the Interior ruled that all claims would be published under the Freedom of Information Act. A citizen's group sued the government demanding that privacy be maintained. A federal district judge, Marion Callister, ruled that the claimants must not have their names disclosed. See Idaho Falls Post-Register, December 19, 1976. Following this decision, newspapers and individuals sued to release the information, but the court refused to change its ruling.


38. Barrus interview.

39. Dalling interview.
