



C&TS Dispatch

Vol. 5 No. 5

November 1992

Water Resources Along the Narrow Gauge

BY FANNIE TAYLOR, HERBERT TAYLOR, JR., AND JOE C. JOHNSON

The late Herbert Taylor, Sr., of Alamosa, Colorado, was an employee of the Denver & Rio Grande Western Railroad for fifty years and eleven months, much of that time in the water supply section on the line between Antonito and Chama. He was the best expert on the subject of water resources along the entire D&RGW narrow-gauge line. Mr. Taylor was interviewed in July 1971 by, among others, Joe C. (Swede) Johnson, of Antonito. We thank Mr. Taylor's wife, Fannie, and his son, Herbert Jr., for giving us permission to use material from that interview for our November feature article. The information is from three sources: recollections of Mr. Taylor, Sr.; copies of the layouts from 1905 of individual water systems along the line; and D&RGW records from the early 1920s. (See the related article beginning on page 4, which describes the current water resources.)

— the Editor

Antonito, Colorado

The Denver & Rio Grande Railway began taking water at Antonito before 1883. Notice



The Friends Moonlight Train approaching Cresco water tank on June 13, 1992. The tank was built in 1883 and rebuilt in the early 1980s. It is one of the eight water tanks and standpipes located along the C&TS. Photograph by Spencer Wilson.

of water use was legally posted in 1889, and water rights were conveyed to the railway on March 31, 1889. The first water tank was built before 1883, and a new frame was made for it in 1897.

In 1905 water was drawn from the San Antonio Creek, on railway land at a point about 350 feet from the main line. Water from this source was described as sufficient in quantity and good in quality, except for being in short supply during two months of irrigation. There was a 36-inch upright boiler and a no. 9 Cameron pump at the creek and a 3-inch cast-iron pipe (laid in 1887) leading to the tank.

Sometime in 1905 an additional water supply for the tank was secured from a nearby well, 232 feet deep. The well had a no. 11 pump with cylinders 5 and 1/4 by 36

inches. Power was supplied by a locomotive boiler. The well casing was 5 and 5/8 inches in diameter. The pump was located in a pump house with a 36-foot derrick.

The pre-1883 tank was replaced in 1912. The new tank was used until about 1968, and later it was moved to Lava, replacing the water tank there that burned in the fall of 1971.

Water for locomotives in 1971 was from a

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C&TS Dispatch

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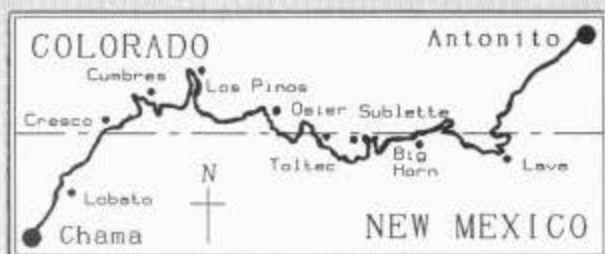
Please write the Editor at:
1307 45th Street, Los Alamos, New Mexico 87544

The **C&TS Dispatch** is published by the **Friends of the Cumbres & Toltec Scenic Railroad, Inc.**, P.O. Box 222, Chama, NM 87520. The **Friends of the Cumbres & Toltec Scenic Railroad** is a New Mexico nonprofit corporation.

The **Friends** is dedicated to the preservation and interpretation of the Cumbres & Toltec Scenic Railroad, a 64-mile-long operating railroad and museum of railroad history and technology between Antonito, Colorado, and Chama, New Mexico. The railroad is owned by Colorado and New Mexico and operated by Kyle Railways, Inc. Volunteers from the **Friends** have been especially active in restoring and preserving equipment and buildings on the line.

Family membership in the **Friends** is \$20.00 per year. All contributions are fully tax deductible and will be gratefully accepted. Please write to us in Chama for information about the **Friends**. The Cumbres & Toltec Scenic Railroad is both a National and a State Registered Historic Site.

Cumbres & Toltec Scenic Railroad



Denver & Rio Grande Railway — 1880 to 1921
Denver & Rio Grande Western Railroad — 1921 to 1970
Cumbres & Toltec Scenic Railroad — 1970 to present

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PRESIDENT'S COLUMN

The Windy Point

It is my sincere pleasure to again report to you on the status of our organization as we end the year of 1992. I could not be more proud of this organization—both what it is and what it is able to accomplish. Each one of you should be equally proud of the role that you have played in our success.

Our membership growth has materially assisted in promoting and fulfilling our mission. During 1992 we again have had a tremendous membership growth. We have had over 200 new members during 1992 and have ended the year with almost 900 members in our organization. I am pleased to report that during 1992 we have been able to publish a new membership brochure, which will make the job of signing up new members even easier in the future. If you have a way to distribute the membership brochures please drop us a postcard or give us a call and we will be pleased to send you some of the brochures.

As you know, our primary mission is to both interpret and preserve the Cumbres & Toltec Scenic Railroad. We have done an excellent job on both aspects of this during 1992. During this year, we have distributed over 10,000 of the walking tour brochures, guiding visitors around the Chama and Antonito railroad yards. These brochures are distributed at no charge, although I am pleased to report to you that we have had a great response in voluntary contributions to pay for the cost of the brochures.

Essential to both our interpretation and preservation roles is the fact that 1992 will be forever remembered on the C&TS as the year of the acquisition of new rolling stock. Of course, we are very proud of the two standard-gauge boxcars that were acquired in 1990, and equally proud of the unique "short" refrigerator car that came to the property in 1991 as a result of our efforts. However, in 1992 the six tank cars from Alaska arrived on the property in March (see May 1992 **Dispatch** Vol. 5 No. 2 for details) and I am most pleased to report to you that in mid-October six double-deck stock cars were moved to the property. We are so appreciative for the generous donation of these extremely historic stock car bodies from Carl Helfin in Alamosa, CO, a gentleman who has long sought to preserve tangible portions of the narrow gauge. More will follow about this important donation and, of course, the **Friends** will need to be involved in the restoration of these cars in the future. You should know, however, that there were very significant costs associated with the moving of the tank cars and the stock cars to the property that you helped pay for with your membership contributions.

Our other main thrust of preservation was highly fulfilled during 1992. Over 160 volunteers came to the property for at least one work session during the year and untold thousands of hours of manpower were put into preserving this property. The last issue of the **Dispatch** went into detail about this, but I would be remiss if I did not mention the tremendous preservation work that was accomplished on the Cumbres snowshed, the stabilization of all of

Continued on page 3



1993 Contributions

One of the most wonderful things about the Cumbres & Toltec Scenic Railroad as a museum is the fact that we have so many wonderful historic objects. Despite the tremendous efforts that the **Friends** has been able to undertake, because there are so many buildings and pieces of equipment on this property, time continues to wear heavily on them. Shown above are the remains of the Cumbres Snowshed in June 1991, just as the **Friends** started our multi-year stabilization and restoration project. Broken beams and roof joists are clearly visible. Contributions to the **Friends** for 1993 will assist in providing the resources and materials so that volunteer labor can continue our work on this important structure. Funds are also needed to make emergency repairs to the roof of the Section House at Cumbres where the snow load during the winter of 1991/92 broke the roof rafters on the north-facing side of the building. Many additional projects need funding for 1993, including the reroofing and restoration of the Section House at Osier, painting of the buildings at Sublette, restoration of the stock pens, and repairs to our newly acquired stock cars. Each member will shortly be receiving their notice of 1993 contributions being due. Your generous financial support to our organization for 1993 will certainly aid in this effort.

The Windy Point

Continued from page 2

the buildings at Sublette, the work on the oil loading dock and tank cars and so many other things in Chama, and the cosmetic and historic work that was done in Antonito. Our Treasurer reports that over \$15,000 was expended on restoration materials and supplies during 1992 (all installed by volunteer labor)—which was again made possible by your generosity in supporting our work.

While 1992 was a wonderful year for the railroad, much more remains to be done. The weight of last winter's snow has seriously damaged the section house at Cumbres.

Years of limited attention have taken a serious toll on the structures at Osier. Although the **Friends** has manufactured new doors for two of the three original stock cars, it was reported to me that on a recent photo freight, one of the doors on the third stock car practically fell off—illustrative of the tremendous amount of work needed on our ancient rolling stock. Next month you will be asked to contribute to our work for 1993. I hope that you will not only continue your previous support but assist us in every way that you can and hopefully increase your financial support if at all possible. Best wishes for a great Thanksgiving and let us all thank God for the benefits we have in this great country.

— Bill Lock

1993 Volunteer Work Sessions

The Board of Directors has announced the dates of the 1993 work sessions. Work Session "A" (the first work session) will begin on Wednesday, July 28, 1993, and continue on Thursday, July 29, and on Friday, July 30. Work Session "B" (the second work session) will begin on Monday, August 2, 1993, and continue on Tuesday, August 3, through Wednesday August 4. It is hoped that there will be volunteers attending both before the first work session and after the second work session. The Board of Directors wants to try these back-to-back work sessions to see if it would be a convenience to many of the volunteers who come for both work sessions. In addition, having the work sessions in this manner allows us to tackle the major work needed on the Osier Section House roof, basically without interruption. We look forward to accomplishing much work on the Railroad during the work sessions this coming summer and hope to see all of you out there. Of course, the Fifth Annual Moonlight Train will be on Saturday, July 31, 1993, so that volunteers from either work session can attend. Also, the Annual Meeting and program has been set for Friday evening, July 30, 1993.

Friends Special Train

The **Friends** Board has approved sponsorship of a special mixed freight and passenger train prior to the beginning of the 1993 season. On Saturday, May 22, 1993, a special train will originate in Chama and travel 45 miles over Cumbres Pass and through Toltec Gorge to Big Horn siding, where the train will be turned and return to Chama. This 90-mile round trip will depart early in the morning from Chama and will be a full day of railroading with numerous photo runbys planned. A box lunch will be provided on board the train. This will be a fundraising event for our work. A portion of the ticket price will be tax deductible and **Friends** members will receive a discount. This trip should be an excellent opportunity for viewing almost all of the Railroad at a unique time of the year (before the season opens) and to take photographs of some of the equipment that the **Friends** has been maintaining over the years.

Water Tanks and Standpipes Along the C&TS

BY EARL G. KNOOB, SAFETY & COMPLIANCE OFFICER, C&TS
PHOTOGRAPHS BY ARTHUR NICHOLS

The water service system on the Cumbres & Toltec Scenic Railroad is basically the same as it was when the D&RGW operated here, with only a few changes since Rio Grande abandonment. The water tanks which are gravity fed, that is, fed by pipeline from a water source higher than the tank, have an overflow built into them so that water continues to flow through the pipeline even when a tank is full. The overflow arrangements keep the tanks from freezing in the winter. The gravity fed water tanks are at Sublette, Osier, Los Pinos, Cumbres, and Cresco.



ANTONITO. Looking east, with the engine house in the background. The redwood water tank was constructed in 1977 when the current yard facility was built and is connected to the Antonito town water system. The original (D&RGW) tank in Antonito was located just north of the Rio Grande station in town. August 2, 1992.



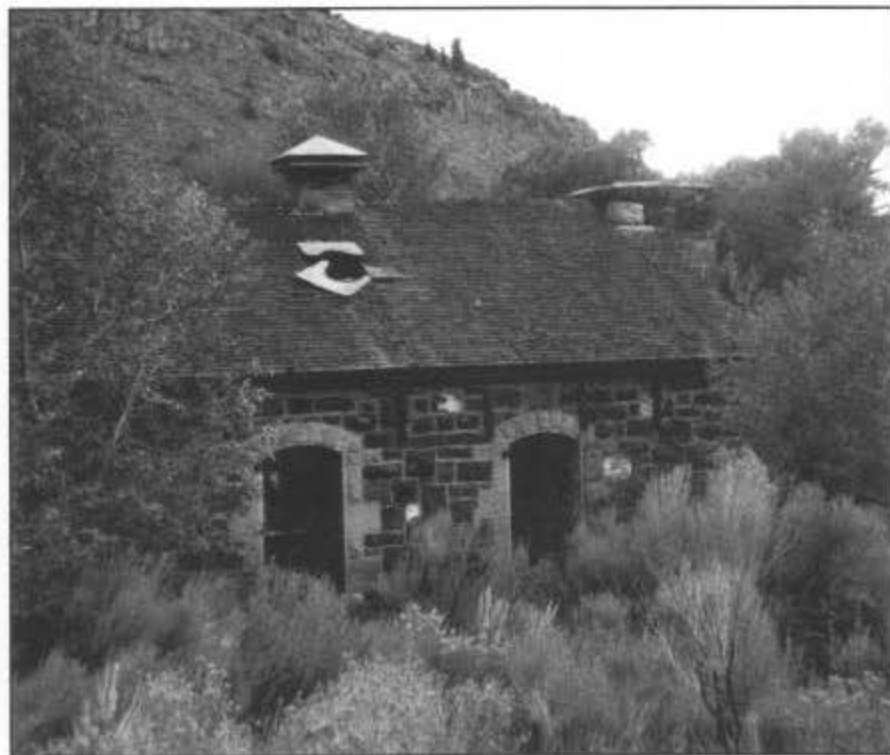
LAVA. This New Mexico State Police photograph (courtesy of Joe C. Johnson) shows the burned out water tank on July 22, 1971. Shortly thereafter, the D&RGW tank at Antonito was dismantled and erected at Lava. During reassembly a small liner was placed inside the tank (approximately 5,000-gallon capacity). A few years ago the pump engine was loaned to the Conejos County Agricultural Museum in La Jara for restoration; the pump itself had disappeared years before. The pipeline from the water tank to the pumphouse is still intact, as is the pumphouse, but the tank is empty and out of service because there is no pump. There are footings for another tank visible just east of the present tank, but whether these footings were for the water tank constructed in 1918 is unknown.



ABOVE LEFT: SUBLETTE. Looking east, with the section house and other structures in the background. The water system at this remote mountain site is the same as that used by the D&RGW. Both eastbound and westbound trains stop at Sublette for water. The original water tank was on the south side of the track, across from the present-day standpipe. July 30, 1992.



ABOVE RIGHT: SUBLETTE. The gauge for the 34,000-gallon underground reservoir on the hillside above the standpipe. July 30, 1992.



RIGHT: LAVA. The stone pumphouse along the Rio de los Pinos.



OPPOSITE TOP LEFT: OSIER. Locomotive no. 487 waits with the Friends Moonlight Train for the return trip to Chama on June 13, 1992. Some packed snow can be seen among the water tank supports. The tank is as it was during Rio Grande days. Sometime in the past the overflow pipe was cut down, and the tank now carries only about six feet of water. The water tank was rebuilt in the early 1980s. Before it was rebuilt, the Osier tank was the last serviceable D&RGW tank to wear its pre-1930s red paint. Normally, the locomotives don't take water at Osier.

OPPOSITE TOP RIGHT: LOS PINOS. The water tank was rebuilt in 1987, and a complete new redwood tank was installed on the old base. The original pipeline remains intact. Westbound trains longer than twelve cars stop here for water to avoid blocking the highway crossing at Cumbres. Los Pinos tank is unique because it is considerably smaller than the other water tanks on the railroad. June 13, 1992.

OPPOSITE BOTTOM LEFT: CUMBRES. The water system remains as it was with the D&RGW. In the late winter of 1989-1990, the pipeline broke near the spring, freezing the system, breaking the pipeline in several places, and draining the underground reservoir. (The pipeline is actually on top of the ground near the lake.) A temporary line of PVC pipe was laid to restore service. The line was repaired in summer 1990. All eastbound trains and westbound trains of less than twelve cars stop at Cumbres for water. Shown here is the standpipe with the car inspector's house in the background. August 1, 1992.

OPPOSITE BOTTOM RIGHT: CUMBRES. Helper locomotive no. 489 taking on water before returning to Chama. June 11, 1992.

TOP RIGHT: CRESCO. The water tank was rebuilt in the early 1980s. During rebuilding a fiber glass liner was installed to a level of about six feet. The liner has a capacity of about 5,000 gallons. The creek that feeds the tank can go dry in the fall and late winter. In fall 1988 the tank did indeed go dry. And during the late winter of 1989-1990, the supply again failed, causing the pipeline and tank to freeze and break. The liner was repaired but the lower part of the pipeline was destroyed. Currently, the water tank is fed by a firehose tapped into the old pipeline. Because of the intermittent character of the stream, the tank is shut down and drained in the winter. Cresco tank is used on occasion by heavy eastbound trains that need extra water to make it up the 4 percent grade to Cumbres. Normally, trains don't stop here for water. The fire-prevention speeder, following the Moonlight Train on the way to Cumbres, June 13, 1992, can be seen.



BOTTOM RIGHT: CHAMA. A liner was installed in the water tank in the late 1970s. The tank is fed by an electric pump in the engine house, and the water is pumped from an underground reservoir north of the shop. The reservoir is filled, in turn, by an electric pump in a well in the meadow below. The water line to the tank also serves the ash pit and fire hydrant north of the coal tippie. At one time there probably was a line to the depot and to a fire hydrant south of it. Originally, the water system was filled from a steam pump in the roundhouse. The electric pump was installed by the Rio Grande at an unknown date (electric power came to Chama in the 1940s). Because the system does not operate twenty-four a day, the Chama water tank is drained in the winter. The tank was one of two double-spout water tanks on the D&RGW narrow gauge, the other was at Cimarron, Colorado. Durango had a tank with an added second spout for the 1951 film "Denver & Rio Grande," but it never functioned (movie props were not limited to "Weed City" at Lobato). To our knowledge, the Chama water tank is the only remaining double-spout tank in North America. The photograph shows the water tank on August 2, 1992.



Cumbres & Toltec Scenic Railroad Compact

The Railroad is owned jointly by the states of New Mexico and Colorado. The Cumbres & Toltec Scenic Railroad Commission, which manages the Railroad, was created on July 1, 1977. It is an interstate agency and is authorized by the Cumbres & Toltec Scenic Railroad Compact, which Congress approved on October 24, 1974. The Railroad Authorities of both states jointly managed the Railroad before 1977.

— the Editor

The state of New Mexico and the state of Colorado, desiring to provide for the joint acquisition, ownership and control of an interstate narrow gauge scenic railroad, known as the Cumbres and Toltec scenic railroad, within Rio Arriba county in New Mexico and Archuleta and Conejos counties in Colorado, to promote the public welfare by encouraging and facilitating recreation and by preserving, as a living museum for future generations, a mode of transportation that helped in the development and promotion of the territories and states, and to remove all causes of present and future controversy between them with respect thereto, and being moved by considerations of interstate

comity, have agreed upon the following articles:

Article I

The states of New Mexico and Colorado agree jointly to acquire, own and make provision for the operation of the Cumbres and Toltec scenic railroad.

Article II

The states of New Mexico and Colorado hereby ratify and affirm the agreement of July 1, 1970, entered between the railroad authorities of the states.

Article III

The states of New Mexico and Colorado agree to make such amendments to the July 1, 1970 agreement and such other contracts, leases, franchises, concessions or other agreements as may hereafter appear to both states to be necessary and proper for the control, operation or disposition of the said railroad.

Article IV

The states of New Mexico and Colorado agree to the consideration of the enactment of such laws or constitutional amendments exempting the said railroad or its operations from various laws of both states as both states shall hereafter mutually find necessary and proper.

Article V

Nothing contained herein shall be

construed so as to limit, abridge or affect the jurisdiction or authority, if any, of the interstate commerce commission over the said railroad, or the applicability, if any, of the tax laws of the United States to the said railroad or its operations.

Ratification of Compact

The legislature hereby ratifies the "Cumbres and Toltec Scenic Railroad Compact" as it is set forth in Section 16-5-1 NMSA 1978 (being Laws 1972, Chapter 19, Section 1) signed at the city and county of Santa Fe, state of New Mexico, on the 11th day of December, A.D. 1974, by Bruce King, as governor of the state of New Mexico, pursuant to Section 16-5-1 NMSA 1978 and signed at the city and county of Denver, state of Colorado, on the 26th day of December, A.D. 1974, by John D. Vanderhoof, as governor of the state of Colorado, under authority of and in conformity with the provisions of Chapter 254 of the Session Laws of Colorado 1973. The consent of congress was given by Public Law 93-467, approved October 24, A.D. 1974, by the senate and house of representatives.

Cumbres and Toltec Scenic Railroad Commission Created

There is created the "Cumbres and Toltec scenic railroad commission," and interstate agency authorized by the Cumbres and Toltec Scenic Railroad Compact. The commission shall be composed of four members, two of whom serve for the state of New Mexico and two of whom serve for the state of Colorado.

35mm Slide Sets

The enclosed list of 35mm slide sets is offered by member Tom Gildersleeve, who is nationally known as one of the premier producers of high-quality, limited edition slide sets. As depicted on the back of his list, one of his dupes was even used to master the cover of the October 1989 issue of RAILFAN AND RAILROAD magazine.

Of special interest to the Friends is his Set 251, "THREE RAIL OPERATIONS ON THE RIO GRANDE NARROW GAUGE." In addition to serving up some really spectacular action photography on this now abandoned section of the narrow gauge, this set also offers such visual treats as a side-by-side shot in Alamosa of standard- and narrow-gauge cabooses, a dual-gauge freight train,

doubleheaded flanger trains (no snow, unfortunately), and a synchronized, multiple-flash night action shot of light engine no. 497 passing the water tank at Antonito.

Tom will donate to the Friends of the Cumbres & Toltec Scenic Railroad 20 percent of the price for all sets sold prior to January 31, 1993. Be sure to use the order blank provided, which will identify you as a member. You can depend on the quality of these slides and help our restoration work at the same time.

Whistle Stop Shop

Members should have previously received a list of Friends merchandise offered for sale and an order blank. Although this list has been sent out in the November Dispatch in

previous years, it was sent out earlier this year so that members would have more time to order before the holidays. If you did not receive a list, please call our Albuquerque office at (505) 880-1200, and we will send you a duplicate.

Narrow-Gauge Convention

Director Roger Siverson reports that there was more than \$600 in merchandise sales and membership donations at the September 1992 National Narrow Gauge Convention in Colorado Springs. Members assisting Roger at the Friends booth were Lyle Anderson, Anne and Frank Burton, Robert Gotthelf, and Cori Slaviero. Plans are already underway for the Friends to have a table at the August 1993 convention in San Antonio, Texas.

Water Resources

Continued from page 1

standpipe and steel pipe spout. The water was from the town, but the water line was the old 3-inch line laid by the railway in 1887. [The present tank is connected to the town water system.]

Lava, New Mexico

The D&RG began taking water from Rio de los Pinos before 1883. The declaration for water rights (amount not stated) was recorded by James Cowler on June 30, 1883. The water rights were conveyed to the railway on June 21, 1883.

In the same year several structures were built below the mesa, where the narrow-gauge line was located, and along the Rio de Los Pinos. They were a stone pumphouse and a pumper's dwelling house. The pumper's house was removed during the 1930s, but the pumphouse (without the pumping equipment) still stands alongside the river.

In 1905 the railway used 12,000 gallons of water at Lava every twenty-four hours.

The pumping equipment consisted of a horizontal, brick-set boiler, 3 by 12 feet; a locomotive boiler; a Worthington pump; and a no. 9 Cameron pump. Three-inch cast-iron pipe led from the river 2,200 feet up the mesa to the water tank.

The original Lava tank was built sometime before 1883, and a new frame was added in 1896. It was replaced in 1918, and the tank burned in the fall of 1971. [The present tank at Lava, which is dry, came from Antonito shortly after the fire.]

Sublette, New Mexico

As with Antonito and Lava, the D&RG began taking water at this location before 1883. F. P. King posted notice on November 7, 1884, claiming 10 inches of water from an unnamed stream about 1,500 feet from the main line. Declaration was recorded January 12, 1885, and water rights were conveyed to the railway at an unspecified date in 1885.

A water tank was built before 1883, and a new frame was added to it in 1897. A 1,600-foot line of 3-inch cast-iron pipe was laid from the source stream to the tank in 1887. About 1900 the pipeline was extended to a spring 2,700 feet from the tank (in 1971 the spring averaged about 8 gallons per minute). When the track through Sublette was realigned in 1937, another small spring was added to the

water supply.

In 1905 the railway used 12,000 gallons of water daily at this site.

The present underground reservoir on the north side of the tracks has a 34,000-gallon capacity and was installed in 1939. When the water tank across the track from the new reservoir and standpipe was torn down, it was discovered that the tank was made of pine instead of the normal redwood.

Toltec, New Mexico

F. P. King posted notice on November 8, 1884, for the use of 10 inches of water from an unnamed stream about 420 feet from the main line. Declaration of water use was recorded on December 3, 1884, and water rights were conveyed to the D&RG on December 1, 1884.

The railway was taking water from this source and had built a water tank at Toltec before 1883. A new frame was added in 1894. In 1886 a 680-foot, 3-inch cast-iron pipe was laid to carry water by gravity from the unnamed stream to the water tank.

In the early 1920s the water supply at Toltec was used only for section crews and for rotary snow plows or trains "bucking snow." The tank was dismantled in the mid 1920s.

Osier, Colorado

Water was secured from a small stream on the land of William Jenkins about 700 feet from the main track. The water was often frozen solid in winter; at such times the ice had to be chopped from the stream with axes and melted for boiler use.

The railway began using the stream at Osier before 1883, abandoned it in 1885, and began using it again in 1891. Notice claiming 10 inches of water was posted by F. P. King on November 28, 1884. Declaration of water use was recorded on December 17, 1884, and rights were conveyed to the D&RG on January 2, 1885.

The wooden tank was built before 1883, and a new frame was installed in 1897.

In 1891 a verbal agreement was made between B. B. Hubbard and Division Superintendent Lydon of the railway and William Jenkins, providing that the company would furnish Jenkins' house with a hydrant and him with occasional trip passes in return for the use of water from his property and right of way for a water pipe line. This agreement was later understood by Jenkins to include also a coal supply for him. The writer of the 1905 report stated that since 1897 the company had supplied Mr. Jenkins with coal at the rate of one ton per month, but that no

passes had been issued to him by the bridge and building department of the railway.

Also in 1891, 700 feet of 2-inch wrought iron pipe was laid from the stream to the tank. In 1917, 3,000 feet of old boiler flues (2 inch) were laid to aid in bringing water to the tank.

Because the stream froze, there was no water at Osier between the following dates.

December 25, 1900, to March 10, 1901

December 26, 1901, to May 1902

December 20, 1903, to April 1904

In 1905 the D&RG used 7,000 gallons of water daily at Osier; the average monthly cost of maintaining the Osier water tank was \$253.59.

In 1921 a new redwood tank, with a 10-inch flow pipe, was erected at Osier. [It is the present water tank, which was rebuilt in the early 1980s.]

Los Pinos, Colorado

Notice of water use was posted by F. P. King on November 3, 1884. Declaration was recorded November 21, 1884, and water rights were conveyed on November 29, 1884. The railway had been taking water here since before 1883.

In 1884, 1,000 feet of 1 and 1/2- and 2-inch wrought iron pipe were laid for a gravity flow line from a spring about 1,000 feet from the main line to a standard wooden tank with a 6-inch flow pipe, which was built in 1884.

The present water tank replaced the original one sometime in 1930 or 1931. [The tank was rebuilt in 1987.]

Cumbres, Colorado

The first and only water tank on top of the pass was built in 1883. It had a 6-inch flow pipe. Eight hundred feet of 2-inch pipe brought water to the tank from the natural lake at the end of the wye. A new frame was added to the tank in 1894, and five years later, to aid in bringing water from the lake, a 16-foot Decorah Steel Windmill was erected on a 30-foot tower to power a 4 by 12 Curtis Pump. By 1905, 3,000 gallons were used daily, but considerably more water was used in the winter when the locomotives were "bucking snow."

The water was reported to be "sufficient in quantity and good" [Herbert Taylor, Sr. said in the 1971 interview that this was only half true—the water contained some unknown substance that made it foam in the boilers].

In 1918 the water source was changed to a spring above Cumbres station. Six thousand

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LETTERS TO THE FRIENDS

Readers are encouraged to write on any topic pertinent to the work of the Friends and the history, preservation, and interpretation of the Cumbres & Toltec Scenic Railroad. Send your letters to the Editor at: 1307 45th Street, Los Alamos, NM 87544. All letters will be acknowledged and some editing may be done to conserve space.

John A. Craft

P.O. Box 43054

17 November, 1992

Birmingham, Alabama 35243

Mr. Bill Lock, President
The Friends of the C&TS Railroad
7801 Academy NE, Building 2, Suite 102
Albuquerque, NM 87109

Mr. Lock:

As you may already know, last month the C&TS treated about 85 of us to a week of freights we won't soon forget. People came from all over the world (18 of our participants were from overseas) to see the show that everyone in Chama so willingly put on. The gods of steam smiled, the sun shined, and we got some terrific pictures and video while having a great time and turning a small profit in spite of ourselves.

The folks at the C&TS put a lot of hard work into those trips. But the efforts of the Friends deserve some recognition too, because without them our train might have been much shorter if it existed at all. The work that your organization does to fight the effects of time on the equipment and structures from Chama to Antonito doesn't get a lot of attention from the railfan world: most of us would rather focus their cameras on the locomotives than on a work crew shingling a roof. But without it, the flavor that draws so many of us back to Chama time and again might have long since disappeared. Be assured that we are grateful for the work that your members do.

A friend passed on your July newsletter detailing the results of the June work session, and while we were in Chama Earl Knoob spoke of some of your efforts to return even more cars to the narrow-gauge rails where they belong. As I said before, we made a profit in spite of ourselves: since making money was not my goal in running the trip, your organization can help me out by accepting this little donation that I hope will help you to realize some of your ambitions a little sooner. Please apply \$20 to a membership for my wife and me; use the remainder for any project that your organization sees fit to fund in its drive to keep the Narrow Gauge spirit alive.

Also enclosed is a donation from Steve Brown, who was present during the freight trips, and I understand Joe Niklas of Denver is also making a contribution.

I've already warned Earl that when the C&TS can provide 463, those six tank cars, and a contingent of stock cars for a freight train, to expect me to return with hat in hand. I'm counting on the Friends to see to it that that day isn't too far into the future. Keep up the good work and who knows -- one day we may even try to recreate a "San Juan."

Sincerely,

John A. Craft

Mr. Craft's "little donation" entitled him and his wife to become Engineer members of the Friends. Also, "The Great Steam Freights" video by Railway Productions (800-248-9670) depicts the freight trips Mr. Craft chartered.

— the Editor

Water Resources

Continued from page 9

feet of old 2-inch boiler flues were laid from the spring to the tank. In 1937 this gravity line was replaced by 6,600 feet of galvanized pipe.

The original 1883 water tank was dismantled in 1940, when a concrete underground reservoir was built and a

standpipe installed on the site of the tank.

Cresco, Colorado

A standard wooden tank was built in 1883; it is still at the original site. Two years later, a 370-foot pipeline was laid with 3- and 2 and 1/2-inch pipe. The water came from a stream fed by a shallow lake of 16 acres about 3 miles from the main track. In order to have sufficient water available and to regulate the flow, 800 feet of 2 and 1/2-inch casing was

laid in 1900 from the lake to a gulch leading to the right of way. The supply was insufficient due to freezing from December 1901 to February 1902 and from December 1903 to February 1904.

Because of aging, the capacity of the Cresco tank had been reduced from about 40,000 to 18,000 gallons by 1971. [The tank was rebuilt in the early 1980s.]

Chama, New Mexico

The D&RG began using water from the Chama River before 1883. Water from the river came to a sump near the roundhouse through 2,000 feet of vitrified tile.

In 1885 a 780-foot-long line of 3-inch cast-iron pipe was laid from the roundhouse to the tank. From the sump the water was pumped to the tank with a no. 9 Cameron pump located in the roundhouse. The original pump was still in the roundhouse in 1971, although an electric centrifugal pump does the work today.

The tank at Chama was built in 1897; it is still in use.

Daily consumption of water at Chama was 50,000 gallons in 1905.

© 1992 by Fannie Taylor,
Herbert Taylor, Jr., and Joe C. Johnson

The standard wooden tank built by the Denver & Rio Grande Railway along the line from Antonito to Chama was 22 feet in diameter and had staves 15 feet tall. Its capacity was 40,000 gallons. The staves were about 2 5/8 inches thick and slightly curved, like staves in a barrel. On the old tanks the staves were held together by malleable steel bands about 4 to 4 and 1/2 inches wide. These bands were discontinued when it was found that they rusted from the inside. Later tanks were held together by steel rods. Some of the older bands may be found at Cresco and Chama.

A system of counterweights and chains was used to raise and lower the water spout. The valve to control the flow of water down the spout was located inside the tank and was controlled by a rope on wooden pulleys on the outside of the tank. The water-level indicator was on the outside of the tank. The position of a cast-iron block in relation to numbers painted on the outside of the tank showed the water level. The block was fastened by a rope over wooden pulleys to a wooden float in the tank. When the tank was empty, for example, the indicator would be at the top of the tank.

MEET DIRECTOR...



Wayne Freeark

SANTA FE, NEW MEXICO

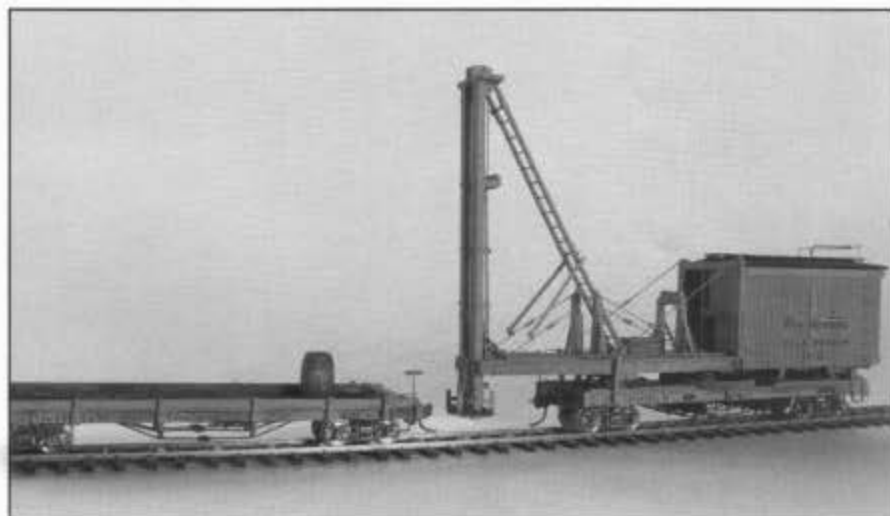
Friends Director, Treasurer, and award-winning model builder Wayne Freeark first encountered the **Friends** during the summer of 1989.

He was in Chama photographing and measuring derrick OP as part of the documentation needed to build a model of it. He saw the **Friends** banner and asked Anne Burton to explain what it was all about. Wayne and his wife, Judy, bought a family membership on the spot. Because the August work session was already full, he couldn't participate that summer.

Wayne attended both work sessions in 1990 and was able to help Roger Siverson finish detailing the real derrick OP, a model of which he had just completed. Twelve inch to the foot scale modeling turned out to be great fun!

In the summer of 1991 Wayne was a work-session team leader, assigned to refurbishing three outfit cars, which he had by then also modeled. He was elected to the Board of Directors in August 1991 and became Treasurer of the **Friends** in February 1992. Wayne was site leader for the Chama yard at both work sessions in 1992.

Wayne's models, which have taken awards at the Narrow Gauge Convention and at the Rocky Mountain NMRA Conventions, are scratch built, largely in basswood, with brass and styrene incorporated as appropriate. They are S scale (3/16 inch to the foot). Many Colorado/New Mexico narrow-gauge railroads are represented in his collection; he has drawn most heavily upon the D&RGW, however, because of the wide availability of drawings and photographs and the proximity of the C&TS. He is currently working on an entire maintenance-of-way train. Completed models include the derrick OP with tender flat, pile driver OB with tender flat, spreader OV (no longer in existence), rail and tie car,



wheel and tie car, flanger OJ, work gondola, and assorted kitchen, bunk, tool, supply, and other outfit cars. Fifteen cars have been built, and there are that many more to go.

Wayne's work on the C&TS, the model building, the study of the history of the narrow gauge, and his library collection are part of an attempt to help preserve a unique bit of Americana before it's all forgotten.

He is aided, abetted, supported, and complemented in these pursuits by his wife, Judy, who helps tote the camera equipment, records the notes and measurements, finds

TOP: Derrick OP with tender flat.

MIDDLE: Pile driver OB with tender flat.

BOTTOM: Spreader OV and outfit car no. 04982. Photographs by Wayne Freeark. Photograph of Wayne Freeark by Bill Lock.

helpful books, and orders materials. She is an accomplished model builder in her own right, specializing in scratch-built models of railroad structures.

Wayne is Professor of Chemistry, Physics, and Mathematics at the College of Santa Fe. A.N.



K-36 locomotive no. 487 in the Chama yard shortly after being repainted in April 1991 and before receiving numbers and lettering. Nos. 487 and 488 powered the Rotary OY work train on May 4, 1991. Photograph by Mark Yates.

STEAM 1991

Headlights stare blankly ahead;
No smoke trickles from their stacks.
Coal ladens the tenders; while
Fresh paint adorns their steel shells.
Quiescence pervades the shops.

They rest...ready...lifeless
Awaiting fire 'n water
To meet and produce life.
Will life come or delay;
This the year or the day?

Diesel soaked wood and coal
Fill the firebox floor.
A spark...a flame...the fire spreads.
The mouth of hell opens wide
To receive a scoop of coal.

No longer silent, they stir
Clanking, banging and belching
As steam mazes through steel veins.
Smoke emanates from their stacks,
And once again they're alive.

Mark Yates



Friends of the Cumbres & Toltec
Scenic Railroad, Inc.
5732 Osuna Road NE
Albuquerque, New Mexico 87109

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C&TS Dispatch

Vol. 5 No. 5

Special Supplement

November 1992

Our Volunteers Have Accomplished Much in Five Years

The major program of the Friends is its three-day summer volunteer work sessions, which are held twice each summer. Since incorporation in 1988, the scope of the projects accomplished by these hardworking volunteers is impressive.

In 1988, 92 volunteers worked at Chama. They cleaned, painted, and did restoration work on the Chama bunk house, refrigerator cars, idler flat car, pipe gondola, stock car, rotary OM, freight cars, and the scale house.

In 1989, 100 volunteers lettered repainted cars, began a museum quality restoration of the decking and cabin of derrick OP, and repaired sills on boom tender car no. 06063 at Chama, and removed 400 feet of dual-gauge track from Alamosa. Along the right of way, they installed mile posts, whistle posts, and crossing signs.

In 1990, 150 volunteers worked at four sites. At Chama, they completed restoration work on derrick OP and the boom tender car, repaired and reroofed caboose no. 0503, repaired a boxcar for use by the Friends, began restoration of bunk cars, lettered repainted cars, and evaluated the scope of work necessary to restore rotary OM. At Cumbres Pass, they stabilized and began repairs on the section house; replaced part of the foundation of the car inspector's house, and began repairs to windows, floor joists, and roof; and installed buttress supports to begin stabilization of the snow shed. At Antonito, volunteers installed 300 feet of the dual-gauge track. Along the right of way, they installed mileposts and painted signs, and at Chama and Antonito they installed numbered posts for the Walking Tour and video display machines in the stations.

In 1991, 188 volunteers worked at five sites. At Chama, they rebuilt the engine house shed, repaired and rehabilitated the interior of two bunk cars, scraped and oiled the newly acquired 30-foot refrigerator car, oiled a portion of the stock yards, painted the fire-hose shed, repaired the stone wall by the

coal tipple, and worked on an inventory/evaluation of all rolling stock. At Cumbres, they began replacement of rotten siding, replaced one bay, and redecked three bays on the snow shed; finished repairs on the section house and painted it; and completed temporary roofing and rehabilitation of siding on the car inspector's house and painted it. At

Sublette, volunteers stripped old roofing from the section house, repaired the under layer, and reroofed it. At Antonito, they repaired, painted, and lettered two standard-gauge boxcars which had been delivered to the dual-gauge track and reassembled and reattached brake rigging on the idler car and replaced its decking. Along the right of way, they installed mileposts and painted state line signs.

In 1992, 164 volunteers worked at five sites. At Chama, they began rehabilitation of the oil loading dock; prepared, painted, and began lettering the six newly arrived oil tank cars; continued rehabilitation of three bunk cars; and installed new siding, a new door, and new window sashes on the coal tipple. At Cumbres, volunteers rebuilt the east porch of the car inspector's house, then replaced most of the siding and a broken roof beam, and continued redecking on the snow shed. At Sublette, they reroofed and replaced rotten shingles on the shingled bunk house, replaced most of the board and batten roof of the coal house, reroofed and rechecked the log bunk house and installed the metal roof ridge and repaired some siding on the section house. At Antonito, work centered around the equipment on display, preparing and painting two K-37 class engines, painting and installing couplers on the idler car, making and installing new doors on the stock

car, and beginning major restoration work on the side drop gondola. Along the right of way, volunteers collected and removed discarded ties from nineteen miles of track; installed mileposts; and painted whistle boards, speed limit, and state line markers.

Mission Statement

Friends of the Cumbres & Toltec Scenic Railroad

The Friends is a nonprofit organization which shares with the Cumbres & Toltec Scenic Railroad (C&TSRR) Commission and the railroad's operator the stewardship of a unique narrow-gauge railroad property of important historic significance and remarkable scenic beauty.

Our mission is to preserve and interpret the railroad and to support the operation of the C&TSRR for the people of Colorado and New Mexico who own it, and for the thousands of visitors who come to be transported back in time through the beauty of the San Juan Mountains.

- "To preserve" means we will acquire, stabilize, and restore historic railroad equipment and structures.
- "To interpret" means we will tell the story of the railroad, its people, and its impact on the communities it served from its construction beginning in 1880 to abandonment in 1968, by means of written, visual, and verbal communication.
- "To support" means we will promote the C&TSRR to visitors and assist the Commission and the operator in such activities as our Board of Directors may find appropriate.

We welcome as members all who share this mission, and who will conduct themselves while on Friends business according to the guidelines set forth by the Board of Directors. Members are encouraged to participate in the preservation, presentation, and support activities authorized by the Board.

In carrying out our mission we:

- recognize that we are the guests of the people of Colorado and New Mexico, and we will maintain positive relationships with the Railroad Commission, the historical preservation agencies of those states, and with the operator of the railroad.
- will manage our affairs responsibly and ethically, and carry out our programs safely and in a professional manner.

Friends' Role is Formally Recognized

Three entities are associated in the operation and preservation of the Cumbres & Toltec Scenic Railroad. The rolling stock, right of way, yards, and buildings are owned by the States of Colorado and New Mexico through the Cumbres & Toltec Scenic Railroad Commission. The Commission has leased the operation of the railroad to Kyle Railways to operate the railroad as a tourist attraction. Kyle Railways maintains the locomotives, passenger cars, and facilities used in that operation but is not responsible for maintaining, exhibiting, or interpreting the historic collection of rolling stock and buildings along the line—this is what the Friends of the Cumbres & Toltec Scenic Railroad has undertaken.

The Friends and its predecessor group have been conducting preservation activities on the property under oral and semi-written arrangements since 1981. This relationship has recently been formalized in a memorandum of agreement recognizing the Friends as the museum support group for the railroad. Anyone performing volunteer work on the railroad must do so under the auspices and supervision of the Friends.

To promote better coordination and cooperation in the evaluation and planning of the historic restoration and historic interpretation of the railroad, including the acquisition of historic equipment, artifacts, and other property, the new agreement creates a Triad Committee composed of a representative of each of the three parties.

One of the first items of business under the new agreement will be the Friends' donation to the Commission of two standard-gauge boxcars acquired in 1990, a 30-foot refrigerator car acquired in 1991, and six oil tank cars and six stock cars acquired in 1992.

Governance

The Friends of the Cumbres & Toltec Scenic Railroad was incorporated as a New Mexico nonprofit corporation in 1988 and received tax-exempt status under section 501(c)(3) of the Internal Revenue Code.

The business of the Friends is conducted by a Board of approximately sixteen Directors, one-half of whom are elected each year for a two-year term. Directors originally were elected at the Annual Meeting of Members, usually held in conjunction with the second of our two summer work sessions, but starting in 1993 will be elected by mail by the full membership.

The officers of the corporation are a President, Vice President, Secretary, and Treasurer, who are elected for one-year terms by the Board of Directors at its annual meeting in the summer. The Board

has an additional regular meeting in February or March, travelling in alternate years to Albuquerque, New Mexico, and Denver, Colorado. The Board meets several other times during the year, via telephone conference calls and in-person meetings.

Agenda planning and other interim business are conducted by the Executive Committee, consisting of the officers and one Director each from Colorado and New Mexico.

Many Committees Participate in Work

At its meeting in March 1992, the Board began a strategic planning process, looking at a variety of ideas generated by Board members for future activities and how they could be accomplished. At its annual meeting in August 1992, the Board constituted committees for the coming year. At its meeting in November 1992, the Board received reports from committee chairs delineating the mission of each committee and the work it hopes to do and each committee's goals for the coming year.

Many of these committees present opportunities for members to be involved in the work of the Friends in ways other than attending the summer work sessions. The Board is eager to discover the interests and resources existing in its membership that can contribute to the preservation and interpretation of this unique historical site. Each of the committee chairs would like to hear from those of you who see an activity in this summary that you would like to pursue.

President Bill Lock chairs the **FUNDRAISING COMMITTEE**, which oversees the sales of books and other merchandise and develops other sources of fund donations and grants.

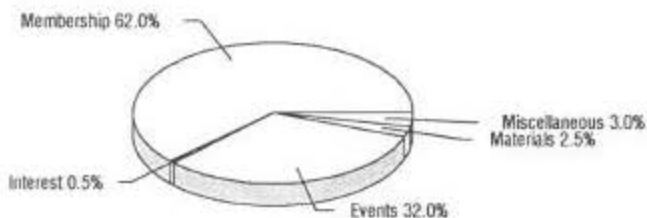
Director Glenden Casteel chairs the **PROJECTS COMMITTEE**, which is responsible for the solicitation of project ideas, the selection of summer work projects, the selection and training of project supervisors, and the assignment of volunteer work crews.

Secretary Wade Hall chairs the **OPERATIONS COMMITTEE**, which is responsible for carrying out the day-to-day support for the summer work sessions, including delivering materials to project sites, monitoring safety, maintaining equipment, registering volunteers, and preparing and delivering food to the sites.

Director John Rupley chairs the **HISTORICAL COMMITTEE**, which prepares the materials necessary to communicate with and obtain the approval of the state historic preservation offices of Colorado and New Mexico for all projects.

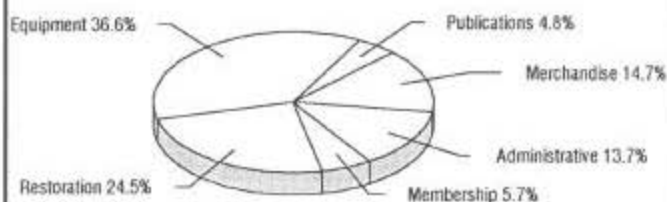
Director Cal Smith chairs the **INTERPRETATION COMMITTEE**, which is responsible for the gathering, organizing, cataloging, and presenting of the railroad's history and the technical and mechanical aspects of past and present railroad operations, as well as for documenting the restoration work done by Friends' volunteers.

Revenues



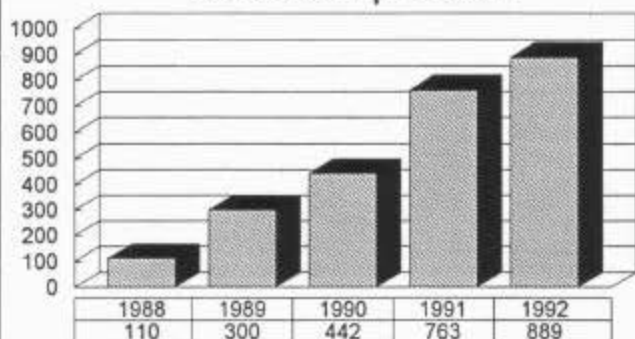
Note: 1992 Preliminary

Expenditures



Note: 1992 Preliminary

Membership Growth



Director Roger Breeding chairs the **LONG-RANGE PLANNING COMMITTEE**, which gathers and develops information for the Board to be used in the formulation of a long-range plan for the collection, restoration, and display of historic equipment; the restoration of historic structures; and the possible building of new museum structures in conjunction with the Commission and the operator.

Member Art Nichols chairs the **PUBLICATIONS COMMITTEE**, which produces the *C&TS Dispatch* and, in conjunction with the Interpretation Committee, a revised *Walking Tour* brochure. With the recruitment of additional staff, this committee would like to assist other committees in publishing their research and chronicles.

Vice President Bill Kepner chairs the **RAILFAN COMMITTEE**, which is responsible for organizing and executing railfan excursions for the purpose of fundraising for the Friends and for promoting the organization at railfan and model railroad conventions.

Director Howard Bunte chairs the **MEMBERSHIP COMMITTEE**, which is responsible for developing increased membership in the Friends, developing increased communication within the membership, and acting as liaison to put willing members with particular skills and interests in touch with committees where they might be of service to the Friends.

Consulting Director Terri Shaw chairs the **ORGANIZATION COMMITTEE**, which is responsible for reviewing the Bylaws and proposing amendments to add or revise the policies and procedures of the Friends and to guide the Board in strategic planning.

Spotlight on Projects Committee

Selecting, planning, and supervising the work that the Friends does each summer is the responsibility of the Projects Committee, which meets throughout the year on a monthly basis. They begin in the fall to solicit ideas for projects for the coming year from Friends members, the Commission, and the railroad operator. If you have ideas to propose to the committee, please contact Clenden Casteel.

The committee rates these potential projects according to a system it has developed that considers cost, projected time to complete, historical approval, difficulty of the project, and importance of the project to the property. Once the list is narrowed, committee members visit the proposed sites to assess materials needed, special equipment required, and other relevant details and to prepare a project sheet outlining each job. In the spring, they prepare a list of materials to be purchased. About that time, they also choose and assign site supervisors and team leaders for the work sessions. As registrations for the work sessions are received, the committee assigns volunteers

to project crews. During the work session, committee members and site supervisors monitor the work and, if needed, make readjustment of crew composition.

Historic Preservation Review

The entire 64-mile right of way of the Cumbres & Toltec Scenic Railroad is listed on the National Register of Historic Places as a Historic Site. As such, both Colorado and New Mexico law mandates that any new building, any rehabilitation of existing structures or rolling stock, and any building or equipment brought on to the property is subject to review by the State Historic Preservation Offices (SHPOs). In the earlier years of the Friends' activities, when the number and scope of our projects was smaller, communication with the SHPOs was informal. In the last two years, the Friends' activities have increased significantly—in 1992 we worked on over 20 separate projects across the line—and so has our involvement with the historic preservation process. The Friends has developed a good rapport with the SHPOs and is building on that foundation.

Each of our projects must be supported by research and documentation of the historic condition of the building or equipment, and the activity that we propose to undertake must follow the guidelines published in the Secretary of the Interior's *Standards for Rehabilitation* and *Guidelines for Rehabilitating Historic Buildings*. The SHPOs are interested in all of our work, whether it is major or minor, because it may affect future projects, adjacent sites, or other items of property that are contemplated for acquisition and incorporation on the railroad property.

In past years, the preparation of materials to be submitted to the SHPOs was handled by the Projects Committee. Today, the Historical Committee has the responsibility of researching and documenting proposed work. This committee will assist the Projects Committee where ideas are needed about how particular work can be accomplished within the Secretary of the Interior's guidelines and in projecting how much time should be planned for historic approval of a particular project.

To carry out its responsibility for documentation, committee members conduct research into the archives of plans, photos, private collections, and written sources. During the next five years, the committee chair hopes this committee will complete the documentation of structures, sites, and equipment and create a backlog of approvals that will support the long- and short-term projects identified by the Board. As part of the Friends' museum function, the committee also hopes to create documentation for aspects of the railroad and its operation that will not be projects. This is an ambitious undertaking and the Friends needs your help. If you are interested in the activities of this committee, please contact John Rupley.



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Board of Directors and Committee Chairs

Roger Breeding
1008 Parkland Place SE
Albuquerque, NM 87108
(505) 260-0820

Bill Kepner
4808 N. Inlet Drive
Ft. Collins, CO 80526
(303) 226-0809 *ed*

Arthur Nichols
1307 45th Street
Los Alamos, NM 87544
(505) 662-4770

Tina Tebbens
8732 E. Mineral Circle
Englewood, CO 80112
(303) 773-6535

Howard Bunte
651 Citadel Avenue
Claremont, CA 91711
(714) 626-0121 *ed*

Fred Knight
40023 Grand Avenue
Cherry Valley, CA 92223
(714) 845-3584

John Rupley
920 Girard NE
Albuquerque, NM 87106
(505) 265-2562

Spencer Wilson
P.O. Box 1939
Socorro, NM 87801
(505) 835-0957

Glenden Casteel
12029 Brentwood Hills NE
Albuquerque, NM 87112
(505) 298-0604 *ed*

Earl Knoob
P.O. Box 541
Chama, NM 87520
(505) 756-2151

Terri Shaw
651 Citadel Avenue
Claremont, CA 91711
(714) 626-0121 *ed*

ed — You can also communicate with these members via Prodigy.

Wayne Freeark
301 Country Club Gardens
Santa Fe, NM 87501
(505) 471-1039

William Lock
5009 Miguel Court NE
Albuquerque, NM 87111
(505) 293-3210

Roger Siverson
3425 University Blvd.
Dallas, TX 75205
(214) 559-2463

New members to the Friends are always welcome. For more information please contact our national office at:

Wade Hall
613 Tony's Alley
Delta, CO 81416
(303) 874-7891

Richard Mathews
P.O. Box 632
Palisade, CO 81526
(303) 464-5890

Calvert Smith
1203 Campbell Circle
Jacksonville, FL 32207
(904) 725-5128 *ed*

5732 Osuna Road NE
Albuquerque, NM 87109
(505) 880-1200

