

Work on the River *Employment at the Hoover Dam*

Michelle Follette Turk

ON OCTOBER 20, 2012, I was invited to speak to a delightful group of K–12 teachers for a Northern Arizona History Academy Teaching American History (NAHA TAH) workshop through Northern Arizona University’s Department of History. The talk focused on my research interests on occupational safety and health in twentieth century American industries, reconstructing the history of work at the Hoover Dam through primary source documents. The NAHA TAH workshop also presented me with the exciting challenge to translate my research into a lesson plan. By integrating primary sources in this lesson, students can learn about employment on the Colorado River by becoming a historian, interpreting the documents, and drawing conclusions for themselves.

Richard White’s chapter in *Uncommon Ground*, “Are You an Environmentalist, or Do You Work for a Living” and his book, *The Organic Machine*, provide an excellent discussion on the concept of understanding a place through work. Using the Columbia River as a case study, White introduces us to how human beings knew the river through the work the river demanded of them. The energy of the Columbia River, he writes, was “felt in human bones and sinews.” Accounts of constructing the Hoover Dam were similar. The workers displayed a sense of excitement, struggle, and anxiety towards the Colorado River. They knew the energy of the river and expanded their own energy to harness its mighty power. This relationship ultimately shaped the organization of work.

It is difficult to understand this connection in our modern lives. As White aptly points out, machines do most of our work. We no longer understand work through physical labor. The lesson fosters student understanding of the concept of work during the Great

Depression. Employed Americans during the 1930s were only slightly better off than the unemployed. Since the workforce comprised mostly unskilled laborers hired on a temporary basis, employers offered meager wages and there was little promise of career advancement. Many employees were forced to ignore safety standards to maximize production and retain their jobs, subjecting themselves and their coworkers to dangerous working conditions.

The dire economic situation expedited projects like the Hoover Dam. The history of the dam, however, began long before the Great Depression. Beginning in 1902, government hydrographers and geologists began identifying potential dam sites on the lower Colorado River. By 1923, Congressman Phil Swing and Senator Hiram Johnson led a legislative effort that introduced the first Boulder Canyon Project Act, and in December 1928, President Calvin Coolidge approved the Boulder Canyon Project Act, authorizing the construction of a dam and reservoir 25 miles from Las Vegas, Nevada. It would be the highest dam ever constructed and create the largest reservoir in the world. The dam’s purpose was to impound the surplus floodwaters of the Colorado River for the use of irrigation, regulate the flow of the river to improve navigation, and house a hydroelectric energy plant. The Bureau of Reclamation expected that the project would take six years to complete from the time construction began in 1931, and the first units of operation would be available in 1935.

Six Companies Inc., a joint venture of seven construction companies, secured the main contract in March 1931. The contractor provided employment through the U.S. Employment Service in cooperation with the State of Nevada. Since announcing the construction timeline

in 1930, the Boulder Canyon Project attracted hundreds of unemployed men to Las Vegas. While some were miners and cowboys from the Western range, most had never experienced hard physical labor in a desert climate. Six Companies ultimately began the project six months ahead of schedule and was not equipped to protect its workers from the summer heat or provide adequate housing, sanitary facilities, and medical care. The contractor also authorized the use of gasoline-fueled vehicles underground to construct the diversion tunnels, exposing workers to dangerous levels of carbon monoxide. Eventually, the considerable health risks forced Six Companies to develop a comprehensive occupational safety and health program, and provide other benefits to maintain a healthy workforce. For further reading on the history of Hoover Dam, see Michael Hiltzik, *Colossus: Hoover Dam and the Making of the American Century* (2010); Joseph E. Stevens, *Hoover Dam: An American Adventure* (1990); Michelle Follette Turk, “Dead Roses and Blooming Deserts: The Medical History of a New Deal Icon” (2007); and Guy Rocha, “The IWW and the Boulder Canyon Project: The Final Death Throes of American Syndicalism,” (1978).

This lesson provides a way to understand both the Colorado River and the experience of workers on the river. It also encourages student comprehension of employment during the 1930s. The Great Depression is often characterized as a time where workers were mistreated by employers and in little position to insist on their rights. By studying the documents, students can evaluate if this is an accurate portrayal. Teachers will ultimately be able to convey that there are no absolute answers in historical study. Employment at the Hoover Dam typified both positive *and* negative features. A memorial plaque at the dam sets the number of workers killed during its construction at ninety-six, but the real figure was nearly double. Indeed, damming the Colorado River was a dangerous venture and Six Companies often valued the bottom line over the workers’ lives. But the project also established a precedent-setting effort by Six Companies and the federal government to provide a comprehensive occupational safety and health program, room and board, and competitive wages during a desperate economic time. Most workers felt lucky to have a job and knew they could easily be replaced. The objective of this lesson is for students to view history and the actors within events as complex, motivated by a multitude of factors.

Subject: United States History

Topic: The Hoover Dam

Grade Level: High School

Duration:

Two 55 minute class periods. Students will participate in this lesson in small groups and individually.

Essential Question:

The Great Depression is often characterized as a time where workers were mistreated by employers and in little position to insist on their rights. Was this an accurate characterization?

Objectives:

Students will explain how employment at the Hoover Dam was characterized by both positive and negative features.

Context:

During the Great Depression, the United States experienced widespread unemployment after plummeting stock prices and a virtual stop in industrial production and construction. Employed Americans during the 1930s, however, were only slightly better off than the unemployed. Since the workforce mostly comprised unskilled laborers hired on a temporary basis, employers generally provided meager wages with little promise of career advancement. Many employees were forced to ignore safety standards to retain their jobs, subjecting themselves and their coworkers to dangerous working conditions. The dire economic situation expedited projects like the Hoover Dam, which at the height of construction in June 1934 employed 5,128 workers. Using Hoover Dam as a case study, this lesson encourages student understanding of employment during the Great Depression.

Activities:

Day One

1. Take a 55 minute class period to provide students with a background of the history of the Hoover Dam in the context of the Great Depression. Reading sources for teachers include Michael Hiltzik’s *Colossus: Hoover Dam and the Making of the American Century* (2010); Michelle Follette Turk, “Dead Roses and Blooming Deserts: The Medical History of a New Deal Icon” (2007); and Guy Rocha, “The IWW and the Boulder Canyon Project: The Final Death Throes of American Syndicalism,” (1978). Teachers may also find it beneficial to assign one of the articles to students for homework.

Day Two

1. Begin class by asking students to write a brief response to the essential question.

The Great Depression is often characterized as a time where workers were mistreated by employers and in little position to insist on their rights. Was this an accurate characterization?

2. Ask for one response from a student who answered “Yes” and one from a student who answered “No.”

3. Place the documents in “stations” around the classroom, which students will visit in small groups. Give them 5–10 minutes to read the document and fill in the graphic organizer together. It would probably help to mix the groups so that there are higher achieving students working together with students who may struggle with this assignment.

4. For each document, ask students to answer the following questions:

Who wrote the document? What was their motive? Are they reliable?

What year was the document written? What does that tell us about the document?

Is there anything about the document that is interesting or confusing?

What does the document tell us about the people hired to build the Hoover Dam? What work did they do? What was their life like?

If forced to choose, does the document reflect the mistreatment of the employees?

Assessment

After the students visit all the “stations,” ask them to write an individual reflection that begins with the essential question. Do they think the Hoover Dam employees were mistreated by their employer or presented with an exceptional opportunity? Next, have them explore the relevance of work conditions and the changing nature of work from then to now. How has employment changed since the Great Depression? One way to pique their interest is to have them consider dangerous working conditions in the present and the responsibility that employers and the government have to provide the benefits emphasized in the Hoover Dam example. Linking the content to their lives may also help better engage the material. Ask them how the Hoover Dam employees’ work and benefits compare with their parents’ work and benefits. This activity can be a take-home assignment if they need additional time. Students should be evaluated on the quality and thoughtfulness of their answers, and the ability to compare and contrast the Hoover Dam experience and industry today. An answer that meets expectations should also include evidence from the documents.

Resources

- A. Information to Applicants for Employment at Boulder Dam: Boulder Canyon Project, June 1, 1933, Cahlan Collection, Nevada State Museum and Archives, Las Vegas, Nevada.
- B. Notice to All Employees, *Allbritton v. Six Companies*, McNamee Collection, Nevada State Museum and Archives, Las Vegas, Nevada.
- C. Florence L. Jones, *Las Vegas Review-Journal* Reporter, to the Salt Lake Tribune and Los Angeles Times, Telegram, Cahlan Collection, June 12, 1935, Nevada State Museum and Archives, Las Vegas, Nevada.
- D. Affidavit of J. C. Bowles, *Six Companies Inc. v. A.J. Stinson*, Eighth Judicial District Court of Nevada, No. C-191, November 13, 1931, RG 48 Records of the Department of Interior, Office of the Interior, Los Angeles, Boulder Canyon Project Files.
- E. Dan Costello, *Six Companies Inc. Insurance Department*, to Florence L. Jones, *Las Vegas Review-Journal* Reporter, November 23, 1934, Cahlan Collection, Nevada State Museum and Archives, Las Vegas, Nevada.



MICHELLE FOLLETTE TURK is a contract researcher and adjunct professor in the College of Southern Nevada’s Department of Social Sciences. She earned her doctorate in the history of the twentieth-century American West with specialties in public history from the University of Nevada, Las Vegas. Her book manuscript, “Gambling with Lives: A History of Occupational Health in Southern Nevada, 1905–2010,” explores occupational health in the Las Vegas area over the twentieth century, focusing on the early railroad line construction and maintenance, the building of Hoover Dam, the World War II-era Basic Magnesium plant, the Nevada National Security Site (formerly the Nevada Test Site), and the Las Vegas Strip.

THE HOOVER DAM

Name: _____

Date: _____ Period: _____

	Description	Positive Features	Negative Features
Document A: Employment Information			
Document B: Employee Medical Coverage			
Document C: Strike Telegram			
Document D: Affidavit of J. C. Bowles			
Document E: Fatality Statistics Letter			

INFORMATION TO APPLICANTS FOR EMPLOYMENT AT BOULDER DAM,
BOULDER CANYON PROJECT

The Boulder Dam site is located in upper Black Canyon on the Colorado River about thirty miles southeast of Las Vegas, Nevada, where the river forms the boundary between the States of Arizona and Nevada.

All construction work is being done by contract; hence practically all laborers, helpers, cooks, truck drivers, skilled mechanics, foremen, timekeepers, cost keepers, storehouse men, etc., are being employed directly by the contractors and not by the Government. Employees of the classes listed are usually selected from applicants locally available. The Bureau of Reclamation has nothing to do with the employment of men for the contractors.

Numerous construction contracts have been awarded. Contract for the construction of Boulder Dam and power plant, and the steel power penstocks, which are the principal features of the Boulder Canyon project, have been awarded to Six Companies, Incorporated, 510 Financial Center Building, San Francisco, California, and Babcock & Wilcox Company, Barberton, Ohio, respectively (construction offices located at Boulder City, Nevada). Newspapers and certain technical magazines publish the names and addresses of successful bidders as other principal contract awards are made. Each contract awarded contains a provision that the contractor shall, so far as practicable, give preference at the time of employment, first to qualified ex-service men, and second, to qualified citizens of the United States.

The U. S. Employment Service, under the Department of Labor, in cooperation with the State of Nevada, has established a public employment service at Las Vegas, Nevada, with Mr. Leonard T. Blood as superintendent in charge. The major contractors, Six Companies, Incorporated, and Babcock & Wilcox Company, have announced that all employments will be made through that office, and this is generally true of all other contractors. Interviews, listings, and selections are made by the U. S. Employment Service, and it also assists in supplying the country, through the newspapers, with accurate information concerning the progress of work on the Boulder Canyon project and the demand for workmen. It is estimated that about 3,000 men are now engaged in work on the Boulder Dam and subsidiary contracts. Regardless of frequent warnings issued, large numbers of men have proceeded to Las Vegas and the Boulder Dam site in search of work with the result that a large number of idle men, without means of livelihood, are at Las Vegas awaiting their turn to be employed. Applications now on file with the Employment Service office are more than sufficient to supply workmen needed by the contractors. Therefore, no one should go to the Las Vegas or the Boulder Dam site unless (1) assured of employment upon arrival, or (2) financially able to tide over an uncertain period of unemployment.

6-8177

102
294

Document A. Employment Information (page 1)

Boulder City, Nevada, has been established by the Bureau of Reclamation as the headquarters for the construction of Boulder Dam and appurtenant works. This is a new town, planned and developed by the Government. It is modern in every respect and includes complete water and sewerage systems, street improvements of paving, sidewalks, curbs, and gutters, and an electrical distribution and lighting system. The Bureau of Reclamation has provided office and living quarters for its employees. An area has been set aside for the contractors, in which dormitories for single men and over 650 small houses for workmen with families have been erected. Six Companies, Incorporated, operates a well-equipped general store and in addition there are numerous business establishments conducted by private parties.

A wage scale of 50 cents an hour for unskilled labor, working eight hours, was established by the Six Companies, Incorporated, at the beginning of the task. Miners are paid 70 cents, chuck tenders 62½ cents, muck machine operators \$1, drill doctors 70 cents, electricians 75 cents, jack hammermen 62½ cents, saw filers 75 cents, truck drivers 50 to 75 cents, steam shovel operators \$1.25, powder men 70 cents per hour, and so on.

Six Companies, Incorporated, makes a pay roll deduction of \$1.60 per day for board and lodging for single men housed in the dormitories. Each man has his own individual room.

Six Companies, Incorporated, has built and equipped a modern hospital and has employed the physicians, surgeons, nurses, and attendants, necessary to provide adequate medical attention for its employees.

The organization of the Chief Engineer, Bureau of Reclamation, at Denver, Colorado, where all designs, plans, and specifications for the Boulder Dam and related features are prepared, has been completed and no further increase in this organization is contemplated. During the construction period the Government organization at the dam site will be limited to an engineering, inspectional, and clerical force, which will be very small when compared with the contractor's forces.

Due to the completion of certain reclamation projects, and to the turning over of other projects to water users' organizations for operation, there has been created a surplus of experienced reclamation employees in nearly all grades. These employees are available for transfer or reinstatement when and if needed. As long as this condition prevails, the opportunities for new appointees in the Government organization will be very limited.

The first requisite for consideration for possible appointment to all positions in the Government service above the grade of unskilled laborer is possession of a Civil Service status. Under the law, only those who have qualified and established eligibility through appropriate examination may be certified by the Civil Service Commission to the Bureau of Reclamation for consideration. In the Government service all employees must present themselves at point of duty station at their own expense.

In making employments on Government forces in connection with work authorized by the Act of December 21, 1928, preference is also given, so far as practicable, to ex-service men with Civil Service status, who have had requisite training and experience to satisfactorily fill the positions.

6-8177

TO ALL EMPLOYEES:

Effective November 16th, 1951, Six Companies Inc., has established a Hospital at Boulder City for treatment of employees, which Hospital is in charge of licensed physicians and surgeons.

Hospital and medical attention will be furnished in future under the same provision of cost as formerly paid the Las Vegas Hospital Association viz: \$1.50 per month, distributed as follows:

\$0.50 per man per month for industrial medical, in event of less than a full calendar month deduction to be at rate of \$0.05 per day for the first ten days worked. This charge covers all industrial medical in accordance with terms and conditions of statutes of Nevada and Arizona.

\$1.00 per man per month for non-industrial medical in event of less than a full calendar month deduction to be at rate of \$0.10 per day for first ten days worked. This charge covers medical attention to employees only and does not include medical attention to employees' family. It does not cover Insanity, Venereal Diseases and disorders arising therefrom, injury or sickness arising from the use of intoxicating liquors, Pregnancy and female disorders arising therefrom, narcotics or drugs, attempts at suicide, fighting, pyogenic infections, pyorrea, chronic conditions, tuberculosis, nor illness or injury incurred prior to time of employment or illness or injury arising from infectious or contagious diseases occurring within 72 hours after employee commences work. Treatment will be furnished for period not exceeding six months from commencement of illness, the six months period to include recurrences.

EMPLOYEES apply to other than Six Companies Inc., Hospital after November 16th, shall do so at their own expense.

SIX COMPANIES INC.

By

Gen. Supt.

-- COPY --

Document B. Employee Medical Coverage

WESTERN UNION TELEGRAM

Apr collect

LETTER | RADIOGRAM
 Patrons should check class of service desired; otherwise message will be transmitted as a full-rate communication.

state editor
 salt lake tribune
 salt lake city, utah

los angeles times
 los angeles, california

has been
 a state of strike was declared in boulder city following the submitting
 to the six companies inc., contractors on the boulder dam, of demands for
 increased wages for steel workers and carpenters. six companies
 complied with the request for the restoration of the seven and one half
 initial
 hours working day, cause of the strike, and agreed to put a vote of the
 workman a plan for a six-day week. six companies denied having a
 black list, which workmen had asked to have abolished. but the contractors
 refused to raise wages to one dollar per hour for skilled laborers and
 75 cents for unskilled workmen. when this was announced, the labor
 council declared a strike. However there has been absolutely no demonstrati

CLASS OF SERVICE DESIRED	
DOMESTIC	CABLE
TELEGRAM	FULL RATE
DAY LETTER	DEFERRED
NIGHT MESSAGE	NIGHT LETTER
NIGHT LETTER	SHIP RADIOGRAM

Patrons should check class of service desired; otherwise message will be transmitted as a full-rate communication.

COPY OF WESTERN UNION TELEGRAM

and workmen quietly stay at home or go to the shows while the officials
 are making plans.

Florence lee jones

1 was continuously employed as a shovel operator of Six Companies,
2 Inc., and was working, during all of this time, in the tunnels of
3 Six Companies, Inc., known as Lower No. 1 and Lower No. 2 of the
4 Hoover Dam Project.

5 That during the course of employment affiant was required
6 on each shift to enter the tunnels to shovel muck and load trucks
7 in the tunnel; that on each shift, there would be from one to ten
8 trucks, and on some occasions, affiant has counted as many as
9 eighteen gasoline motor driven trucks, including one caterpillar
10 tractor, in the tunnel at one time; that the operation of these
11 trucks and tractor produced great quantities of carbon monoxide gas;

12 That during the entire month of December, 1931, and for
13 some time prior thereto, affiant and other men have been made sick
14 by the presence of carbon monoxide gas produced by gasoline motor
15 driven equipment and machinery, to such an extent that on many oc-
16 casions, affiant and other men working with him have been faint and
17 sick, and upon nearly every shift that employed affiant, affiant
18 became sick and nauseated and would vomit by reason of said carbon
19 monoxide gas;

20 That conditions above described happen daily and will con-
21 tinue so long as gasoline motor driven trucks and caterpillars are
22 allowed to operate in said tunnels;

23 That said affiant entered upon employment as shovel oper-
24 ator for Six Companies, Inc., on or about the 30th day of July,
25 1931; and that at the time, affiant was in good health, as is shown
26 by the result of the examinations above mentioned; that as a result
27 of being compelled to work in these tunnels he has been affected by
28 the carbon monoxide gas to such an extent that the company's
29 physicians have informed him that his lungs have been affected and
30 that he is tubercular.

31 Affiant says that if this condition exists it is due entire

1 trucks operating in said tunnels;

2 That affiant has been operating shovels similar in con-
3 struction to the one in use by Six Companies, Inc., for about fif-
4 teen years, and during that time, has worked in numerous tunnels,
5 among them being the New York subways, the Edison Project in South-
6 ern California, and other smaller tunnels in different parts of the
7 country; that in none of these tunnels were gasoline motor driven
8 trucks or machinery of any kind operated, and the presence of
9 carbon monoxide gas was never detected by affiant in any tunnel
10 in which he worked, other than the tunnels on the Hoover Dam
11 Project;

12 That on one occasion a fellow workman of affiant, employed
13 in No. 2 Tunnel of Six Companies, Inc., fainted and was taken from
14 the tunnel in an unconscious condition, and for some time afterwards
15 was incapacitated on account of the carbon monoxide gas in the
16 tunnels;

17 Affiant believes that as the tunnels increase in length
18 and as the work requires the use of additional trucks, the condi-
19 tions above described will steadily increase, and the health of men
20 required to work in these tunnels will become affected to a greater
21 degree than at the present time;

22 That at the present time there are no turns in tunnel No.
23 1, but there is one turn in tunnel No. 2, which has a tendency to
24 prevent the free circulation of air through the tunnel; that the
25 said turn in said tunnel No. 2 is between one thousand and twelve
26 hundred feet from the portal.

27 Further affiant sayeth no.

28 J. C. BOWLES

29 Subscribed and sworn to before me this 7th day of January, 1932.

30 LOUISE KING

SIX COMPANIES INC.

BUILDERS OF HOOVER DAM

BOULDER CITY, NEVADA

November 23rd., 1934

OFFICERS

PRESIDENT
W. A. BECHTEL
FIRST VICE PRESIDENT
E. O. WATTIS
SECOND VICE PRESIDENT
H. W. MORRISON
TREASURER
FELIX KAHN
SECRETARY
CHARLES A. SHEA
ASST. SECY AND TREAS.
K. K. BECHTEL

DIRECTORS

W. A. BECHTEL
S. D. BECHTEL
PHILIP HART
HENRY J. KAISER
FELIX KAHN
ALAN MACDONALD
H. W. MORRISON
CHARLES A. SHEA
E. O. WATTIS
H. J. LAWLER
GUY LER. STEVICK

Miss Florence L. Jones
P. O. Box 1577
Las Vegas, Nevada

Dear Miss Jones:

I am enumerating in this letter the data which you requested from Mr. Crowe sometime ago, and trust this is the information you desire.

Fatality List, Boulder Dam. Six Companies Inc.

Rock Slides - - - - -	6
Premature Blast - - - - -	8
Falls - - - - -	17
Falling Rock- - - - -	11
Truck Accident- - - - -	10
Shovel Accident - - - - -	3
Drownings - - - - -	2
Blasting - - - - -	1
Crane Accident- - - - -	2
Electrocution - - - - -	5
Cable Accident- - - - -	1
Falling Material- - - - -	5
Cave-In- - - - -	1
Railroad Accident - - - - -	-1
Concrete Bucket Accident- - - - -	2
Elevator Accident - - - - -	<u>1</u>
 Total - - - - -	 76

Work commenced on this project in March, 1931. During the year 1931, there were 15 fatalities; during 1932, 27 fatalities; during 1933, 22 fatalities; up to the present date in 1934, 12 fatalities. 39 of the total of 76 who were killed on this project were single men, and 39 were married men.

Yours very truly,

SIX COMPANIES INC.

By 
Dan Costello
Insurance Dept.

C/h

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