SAN FRANCISCO-HETCH HETCHY VALLEY CONNECTION

by

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This project will focus on the acquisition of Hetch Hetchy Valley, located in the Sierra Nevada Mountains, as a municipal water source for the population of San Francisco, California. As San Francisco grew, it faced not only the problem of supplying water to its citizens but supplying water at an affordable rate. The acquisition of Hetch Hetchy posed significant challenges to more than just the City of San Francisco. Environmental groups such as the Sierra Club, fought to preserve a wonder of nature from development. The United States Congress struggled with allowing land located within a National Park to be developed by a municipality. The city government of San Francisco faced the challenge of convincing these two groups, in addition to its own constituents, that turning Hetch Hetchy Valley into a reservoir would be the right thing for all involved. This historiography will look at all interests, present their arguments, and attempt to clear the waters of understanding as to how Hetch Hetchy came into being as San Francisco’s water supply.

The lesson plan component resulting from this historiography will be rich in geography and California history. Students participating in the lessons will follow the development of San Francisco as a city and those events leading up to its need to look further abroad than its immediate boundaries for a water supply. Students will also investigate the geographic requirements necessary to sustain an urban development. The lessons will not only focus on geographic locations of San Francisco and Hetch Hetchy Valley, but that of other major California urban centers and the geographic factors that
allowed and continue to allow them to be successful. Finally, the students will look at the social issues put forth in the historiography such as: When does development take precedence over preserving the natural environment? Or does it? How can development coexist with the natural environment?
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SAN FRANCISCO-HETCH HETCHY VALLEY CONNECTION

Water is the cornerstone to civilization and San Francisco is no exception to this requirement. Throughout the history of the San Francisco peninsula, the people that lived in the region struggled to provide enough water for their lifestyle. Long before Anglo-Americans settled California the landscape looked much different that it does today.¹ The oral history of the Indians that inhabited the peninsula, on which San Francisco is presently located, tell of times when it was possible to travel from San Francisco to Marin without touching foot in a waterway:

The Indians say that many moons ago their tribe was rich and powerful, they built cities and tilled the land. In those days all the great valleys of the Sacramento, San Joaquin and Santa Clara were one; they had no outlet where it now is at San Francisco. But the waters rushed into the sea near Monterey through where the Pajaro River runs.

But when the people were great and powerful, the mountains melted and burned up and in the flames the people were most all destroyed. While the mountains continued to burn, the earth shook and great hills fell down and the waters rushed over them into the sea where they do now at San Francisco.²

Geologists suggest a geologic event which changed the flow of the two rivers yet again, this time emptying into the Pacific Ocean at the present location of the Golden Gate and letting in the ocean’s waters to form San Francisco Bay.³

In the high mountains of the Sierra Nevada, the Hetch Hetchy Valley also underwent geologic change that would make it an appealing water source for the future

¹ Ray W. Taylor, Hetch Hetchy: The Story of San Francisco’s struggle to provide a water supply for her future needs. (San Francisco: Ricardo J. Orozco, 1926), 3.
² Ibid, 4.
³ Ibid, 3-8.
generations of San Francisco. The Hetch Hetchy Valley had been formed by the scouring action of glaciers thousands of years preceding the controversy that would embroil the valley. These geologic alterations had forever changed the way in which populations of the San Francisco Peninsula obtained freshwater and tied together the destinies of San Francisco and Hetch Hetchy which set into motion one of the most controversial land preservation battles in the United States.

With the establishment of a permanent settlement by the Spanish in 1776, the San Francisco peninsula began to see a rise in its population. Juan Bautista de Anza founded the Presidio Pueblo and Mission San Francisco in 1776. The military and the civilian settlers of the mission were able to use the local creeks and streams for their water needs. Spanish law dictated that water rights could not belong to an individual. The water rights were passed from the monarch to the entire community. The Spanish settlements in California were to become corporate municipalities and thus would fall under the Plan of Pitic, which stated that the communities’ water would be shared by all residents and one resident did not have right to more water than any other. The Plan of Pitic assured the community and individual water needs would be met with equity and justice. The Secularization Act of 1833 opened the land once occupied by Spanish missions to private interests. The opening of the land led to a trading port in Yerba Buena, present day San Francisco. Increased trade led to a rise in population and by 1849, with the coming of gold miners from throughout the world, the local streams and shallow wells were no longer adequate to supply the thirst of the rising population. While the Spanish-Mexican

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government favored community need for water over individual rights, the new American interests moving into California saw the resource from a profit point of view.\textsuperscript{6} Residents began purchasing water from water peddlers selling by the bucket or the barrel.\textsuperscript{7}

The chaperone of the donkey system was Juan Miguel Aguirre. His supply was first obtained from the Presidio and later from Mountain Lake, and later he utilized a clear natural spring on Washington street near Montgomery . . . Senor Aguirre used to make as much as $30 a day, though he charged only $1 a bucket.\textsuperscript{8}

The rapidly increasing population of San Francisco placed a heavy burden on the water supply available to the residents. Private enterprises, besides the water peddlers in the streets, began forming to help alleviate the shortage of water supply in San Francisco. In 1851 the Sausalito Water and Steam Tug Company began barging water across the Golden Gate from Marin to San Francisco and the Mountain Lake Water Company brought water from Mountain Lake in the Presidio.\textsuperscript{9}

The wealthy families of early American California (Hearsts, Stanfords, and Crockers) first used their power to extract wealth from the Sierra Nevada in the form of gold mining interests. As the profits obtained through gold mining slowed, these same families turned their eyes toward land and water as a way to keep their dynasties alive. Using their accumulated wealth from business and railroad development, Crocker and Stanford saw that unregulated private utilities could provide new profits to their already

\textsuperscript{7} Warren P. Hanson, \textit{San Francisco Water and Power: A History of the Municipal Water Department and Hetch Hetchy System} (San Francisco: City of San Francisco, 1985), 8.
\textsuperscript{8} Taylor, 10.
\textsuperscript{9} Hanson, 8.
wealthy and powerful families.\textsuperscript{10} With holdings in the newly formed Spring Valley Water Works (1860), Leland Stanford and Charles Crocker had found another profitable venture. Spring Valley Water Works rapidly acquired land in and around San Francisco, adding to its ability to collect and store water while also adding to its political clout and ability to set water rates. Tired of being held hostage to high water rates and substandard service, the city of San Francisco began to investigate a municipal source of water to free themselves from investor-owned water companies. In 1871 the city supervisors appointed a committee to investigate an alternative water source for the city. The committee recommended that the city have “absolute control” over its water supply much as Boston, New York, Philadelphia, Chicago, and Washington had already done. Acting upon the committee’s recommendation, the supervisors, in 1877, offered to purchase Spring Valley Water Works for $11 million dollars. Spring Valley demanded the sum of $16 million and the sides could not come to an agreement upon a purchase price.

In the meantime, the city of San Francisco began a search into the Sierra Nevada for a supply of pure water. The search included Lake Tahoe, American River, Blue Lakes, Yuba River, and ultimately Hetch Hetchy Valley. The valley, with its pristine location and perfect architecture for a reservoir, rose to the top of the list as the most likely successor to provide the people of San Francisco the water they increasingly demanded.\textsuperscript{11} The great fire of 1906 provided San Francisco with another reason to pursue a municipal water supply. Many blamed Spring Valley Water Works for the extent of

\textsuperscript{10} Righter, 36-37.
\textsuperscript{11} Ibid, 37-44.
devastation to the city by fire on the lack of water and the lack of water pressure provided by Spring Valley Water Works.

Hetch Hetchy Valley is located in the Sierra Nevada Mountains and like its pursuer, Native Americans first inhabited it before settlers came in search of ways to turn a profit. The Central Miwok and Paiute Indians used the Hetch Hetchy Valley in the summer and fall to collect grasses and acorns as well as to hunt and fish. Early miners in search of gold were probably among the first whites to enter Hetch Hetchy. 12

John Muir first entered Hetch Hetchy in 1871 and said, “Imagine yourself in Hetch Hetchy. It is a bright day in June; the air is drowsy with flies; the pines sway dreamily, and you are sunk, shoulder deep, in grasses and flowers.”13 John Muir fell in love with Hetch Hetchy and would prove to be one of its staunchest protectors in the fight to keep Hetch Hetchy from being the answer to San Francisco’s water problem. John Muir wandered the mountains of the Sierra Nevada and developed a relationship with the area he loved. Yosemite Valley, twenty miles to the south of Hetch Hetchy, had been given protection from privatization through the Yosemite Park Act of 1864. This act made California a trustee of the valley for the federal government but did nothing to protect Hetch Hetchy. It was still in the public domain and could be used for economic gain. With the bulk of gold prospecting finished, many miners turned to sheep herding as a livelihood. The miners returned to Hetch Hetchy to graze their sheep on the abundant grasses of the valley. John Muir became concerned with the overgrazing of the Valley and the surrounding areas and began lobbying for National Park status, which was

12 Ibid, 11-17.
13 Ibid, 11.
achieved in 1890. Hetch Hetchy would become part of the newly formed Yosemite National Park, but lands still existed within the valley that were privately held and would not be protected by the National Park status. The homestead lands located within the valley would give the city of San Francisco an opportunity for ownership in the future. These “inholdings” would prove to be the avenue San Francisco would use to obtain ownership of land in Hetch Hetchy.\textsuperscript{14} The development of Hetch Hetchy as a water source for San Francisco showcased the philosophical division between conservationists and preservationists.

Preservationist Viewpoints

The battle to prevent the damming of Hetch Hetchy Valley was fought by peoples from two schools of thought: preservationists and conservationists. The preservationist viewed the wilderness as something to be saved, in its pure state, for the enjoyment of the people. Preservationists thought wilderness could exist simply for the sake of existing, not just as a resource to be used for some type of further economic gain. According to John W. Simpson, in his book \textit{Dam!: Water, Power, Politics, and Preservation},

Americans at the end of the 1800s began to see the limits and constraints imposed by nature and were concerned about potential natural resource shortages, such as forest and water. By the time of the U.S. census in 1890, no longer could a line be drawn demarcating the frontier on a map of the United States and only one-tenth of the original forested lands in the United States still stood untouched. The land did not seem as...

\textsuperscript{14} Ibid, 22-23.
limitless as it had during the earlier westward movement and people started to question whether environmental exploitation was always a good choice. Simpson’s views of what these Americans thought are vastly different from what the utilitarian conservationists of the time were thinking and espousing to the American public. Simpson, like the American population of the late 1800s, also sees a limit on the resources of our land and a need to rein in the destruction of wilderness for material gain.

San Francisco’s pursuit of Hetch Hetchy as a reservoir site to be used for municipal water and power directly conflicted with the preservationist viewpoint. The preservation of Hetch Hetchy, in its pristine, untouched state, was the goal that needed to be pursued to the end. John Muir led the preservationist movement and became one of its staunchest fighters in the battle to prevent the damming of Hetch Hetchy Valley. In the spring of 1868, Mr. Muir traveled to the western United States from his home on the Wisconsin frontier. Muir was looking for a wilderness in which he could lose himself and admire the greatness that God had put on earth. When Muir arrived by ship to San Francisco it is said that his first words were, “Which way to the wilderness?” Muir thought the best solution to the problems humans faced was a trip to the wilderness. If people could only experience the wild they would better understand their lives and be happier for the experience. John Muir and the Sierra Club saw the threat to Hetch Hetchy as one that had to be stopped, not only to save the beautiful valley they loved but to prevent the setting of a precedent for future incursions into national park lands for

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economic gain. The placement of Hetch Hetchy in a National Park added insult to injury from the preservationist viewpoint. National Park lands were intended to be set aside for the enjoyment of the people and protected from the invasion of economic interests and the destruction that would, in all likelihood, follow these interests. When Muir said, “Dam Hetch Hetchy! As well dam for water-tanks the people’s cathedrals and churches, for no holier temple [Hetch Hetchy] has been consecrated by the heart of man,” he made his position abundantly clear to those who would attempt to use Hetch Hetchy for a water supply in San Francisco.

In a 1909 article titled, “Hetch Hetchy: A Valley of Wonders Now Threatened With Extinction,” Francis M. Fultz, noted naturalist and author, stated that anyone who loved nature and took pride in the magnificent national park system should earnestly protest against the desecration of Hetch Hetchy. Fultz’s description of the valley carpeted with ferns that reach ones shoulders and giant oaks five to six feet in diameter glorify the valley as one that rivaled its neighbor fifteen miles to the south and which had already been recognized as a place worth preserving--Yosemite valley.

At the time San Francisco actively pursued the Hetch Hetchy Valley as a reservoir site, people were already coming to Yosemite Valley to enjoy the beautiful scenery and revel in the mountain atmosphere. By the mid 1870s tourism to Yosemite Valley had topped 2,500 visitors annually and Yosemite Valley was known worldwide, thanks to the

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17 Holway R. Jones John Muir and the Sierra Club, (San Francisco, Sierra Club, 1965) 148.
18 Stephen Fox, American Conservation Movement: John Muir and His Legacy, (Madison, WI University of Wisconsin Press, 1985) 144.
promotional efforts of concessionaires and Yosemite’s board of commissioners, with the result being more pressure by visitors on Yosemite National Park. Roads from Big Oak Flat, Coulterville, and Mariposa were being built to give even more access to Yosemite. John Muir viewed this increased access to Yosemite in a not entirely positive light when he “hoped that Hetch Hetchy will escape such ravages of man as one sees in Yosemite.”20

The public use of the national parks for relaxation and enjoyment was a great goal for the preservationist. Preserving land for the people to enjoy was of great importance in the preservationist viewpoint. In a 1909 article titled, “San Francisco Against the Nation for the Yosemite,” French Strother wrote:

> It is a more spacious campground. A railroad now brings the public to the Yosemite, and that valley is crowded to its capacity every summer with campers. As this travel increases, Hetch Hetchy, and its tributary flat—the Tuolumne Meadows—offer the only other available camping grounds in the Park. These are the best camping grounds in the entire middle range of the Sierra Nevada, as so competent an authority as Mr. John Muir—and every other who knows the whole range—declares.21

The article goes on to further state:

> If San Francisco’s grant of water-privileges be confirmed by the Congress, the Hetch-Hetchy Valley will be made an unsightly and inaccessible lake. . . . Tuolumne Meadows, the largest camping ground in the Park . . . will be made into a reservoir and will be forever closed to the public by San Francisco’s scheme.22

The general preservationist thinking in the early 1900s clearly showed worry over the use of the park if San Francisco got its way with Hetch Hetchy. French Strother continues to hold the preservationist line of reasoning when explaining that the plan to make a

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20 Simpson, 61.
22 Ibid, 11442.
reservoir from the Hetch Hetchy valley would eliminate the usage of this grand area by the general public.

San Francisco, in an effort to please the nature loving public, declared that it would maintain roadways around the lake that would be made when Hetch Hetchy was dammed. If this were true, then the water that San Francisco sought would not be the pure, pristine water it claimed would be available to its citizens. The increased access to the area by way of road would lead to contamination of the water. If San Francisco were really to keep the promise of pure water then the watershed around Hetch Hetchy would need to be kept off limits to motorists and campers. Not only would a beautiful, majestic portion of the park be desecrated, but also a large, desirable portion of the park would be lost to public enjoyment as a result of the area being kept under guard to ensure the purity of the water supply.23

In his book *Pacific Vision: California Scientists and the Environment*, Michael Smith states:

> Advocates for the preservationist position characterize Muir and the Sierra Club as champions of the right of all Americans, living and unborn, to experience the vanishing wilderness. According to this view, Pinchot and the “commodity conservationists” in Washington were misguided by the political machinations of the city of San Francisco, which sought selfish gains at the expense of a priceless national heritage.24

As Smith states, all Americans have the right to enjoy the wilderness experience; if San Francisco were to get its way and use the Hetch Hetchy Valley for a reservoir then the

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23 Ibid, 1143.
rights of Americans could not be fulfilled and thus their battle would be lost to those who stood to gain politically and materially.

(Progressive) Conservationist Viewpoints

The opposing viewpoint to Muir and the preservationists were the conservationists of the Progressive Era. When Gifford Pinchot said, “The first great fact about conservation is that it stands for development,” he gave voice to the conservationists of the Progressive Era. Elmo R. Richardson’s article, “The Struggle for the Valley: California’s Hetch Hetchy Controversy, 1905-1913”, states that Gifford Pinchot, Chief Forester of the United States and one of the principal advisors to President Theodore Roosevelt on issues of conservation, firmly believed that forest lands should be regulated and that no great injury would be done to Yosemite if he approved of the project. As a matter of fact, it seems as though the progressive conservationists viewed the project as one that would certainly not damage the beauty of Hetch Hetchy Valley, but might even improve upon its beauty. Martin Vilas’s 1914 article “How the Raker Act Affects Hetch Hetchy, San Francisco and the Rest of California,” provided an example of this viewpoint:

It is by no means certain that the lake in Hetch Hetchy will not add to the attractiveness of the beautiful valley. Opinions are divided. The lake and its accessories will be the means of bringing thousands to a spot hitherto secluded, isolated, and, to many, inaccessible.

25 Smith, 181.
The conservationists involved with the Hetch Hetchy project believed that their plans to make the valley into a reservoir would certainly fit into the category of “a higher public use” for the area than to let the valley be preserved in its natural state. The conservationists did not argue the fact that Hetch Hetchy was a beautiful place, but they thought the completed project would improve upon the scenic aspects of the valley as well as make the area a more enjoyable and easier place to visit.

John Freeman was hired by the City of San Francisco to design the Hetch Hetchy water system. Freeman was well known in engineering circles around the world. Freeman had shaped the water systems of Boston and New York and shared the same vision as James Phelan, former mayor of San Francisco, regarding the use of Hetch Hetchy for the city’s water supply. Freeman presented his report in 1912. The report produced by Freeman seemed to be one that would justify the Hetch Hetchy over all other available water sources for the City of San Francisco. In his report, he touched upon the possibilities of alternative sources but these were tucked into the back of the report and given minor status, much the same as Marsden Manson, former San Francisco city engineer, had done in his previous 1908 reports on Hetch Hetchy. Freeman stated that the project could be done, and it should be done, on a grand scale and all at once rather than starting with something small and enlarging at a later date:

It costs relatively little more to drive a tunnel for 400 million gallons daily than for 60 million gallons daily . . . So long a project must be a large project with a broad scope in order to work out well: in other words in order to make an aqueduct 172 miles long into this difficult region
commercially successful it must be of large capacity and planned on a generous scale. 28

Freeman was not only all for building the project but building it in such a way as to provide San Francisco with an ample water and power supply well in to the future.

Freeman appeared to have settled the question as to whether the project could or should be done but he also addressed the facet that was most troublesome to the preservationists, that of a beautiful place being reduced to a shambles and desecrated. In regards to the potential beautification of Hetch Hetchy, John Freeman wrote:

The Hetch Hetchy Valley has no conceivable important value except for two purposes: 1) Scenery 2) Water supply. By care in the designs, the use for water supply can be made to add greatly to the scenic value, and … can bring the scenic beauties of the Hetch Hetchy Valley within reach of a hundred-fold more people than would otherwise find it possible to enjoy them during the next quarter or half century . . . If a beautiful region can be brought within the vision of a hundred appreciative nature lovers instead of closed by tie, hardship and expense of the trip to all but one or two, the enjoyment of this beauty has been fifty or a hundred-fold increased, . . . What one finds there today is beautiful, but it is relatively tame and uninteresting in comparison with the far more grand and varied Yosemite.29

With that being said, Freeman threw his hat into the ring with the rest of the progressive conservationists. Hetch Hetchy was a project that would benefit the American public, by utility and with aesthetics.

The progressive conservationist believed that the wilderness had a place and that place was to be used in a responsible way for the benefit of the American public, as summed up by Gifford Pinchot, “the use of natural resources now existing on this

28 Simpson, 159-162
continent is for the benefit of the people who live here now.”30 Many of the people involved in the plan to dam Hetch Hetchy considered themselves to be “conservationists,” although their goals differed from the goals of preservationists who opposed the dam. The conservationists of the Progressive Era based their ideals upon scientific management and utilization of resources for the benefit of the public.31 In the book *Dam!: Water, Power, Politics, and Preservation in Hetch Hetchy and Yosemite National Park*, Simpson states:

To the Progressives, conservation meant the protection of valuable public lands from private ownership and potential abuse, and the wise development of timber, minerals, grazing, water, and recreation on those lands through cooperation directed by government scientists and enlightened bureaucrats.32

The progressive conservationists leaned heavily on the expertise of scientists and engineers as they put together their argument for the dam, whereas the preservationists relied on arguments mainly based upon natural beauty.33

Kendrick A. Clements, historian of environmental history, viewed the aesthetic arguments of the preservationists as ineffective against those in Washington making the crucial decisions. He also states that “the park lovers were woefully inept even in their occasional use of technical data.” In one argument delivered by the opponents of Hetch Hetchy they stated that the use of the valley as a reservoir would necessitate the closing of half the park to avoid polluting the water. The representatives of the city responded by

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30 Smith, 181.
32 Simpson, 153.
33 Clements, 290.
pointing out that many such reservoirs were already built in areas more populous than Yosemite. Clements views such arguments as showing the “scientific ignorance and made themselves ridiculous to people for whom scientific-technical considerations were decisive.” Basing arguments against Hetch Hetchy solely upon aesthetic consideration was obviously not the route to take according to Clements. The conservationist viewed the resources of the land to be used and managed in a scientific way that would benefit the development of civilization and to be saved only until they could be developed for the public’s welfare.34

Many of the pro-dam conservationists were members of the Sierra Club and shared the same feelings for the wilderness, as did the preservationists. Marsden Manson was one of these progressive conservationists and went on to become the City Engineer for San Francisco in 1908. Manson was a scientifically trained engineer and became part of the first generation of engineers to work for public institutions. He, like Muir, enjoyed spending time in the Sierra Nevada. Manson was torn between the two sides in the Hetch Hetchy debate, being an active member in the Sierra Club contributing pieces to its Bulletin and joining outings in the Sierra; but he was also guided by his background in engineering and the need to use that knowledge in providing a service to the public. Manson became a chief proponent of the Hetch Hetchy project. Even though he agreed with the thinking of Muir when it came to the importance of preserving watersheds and

34 Clements, 287-290.
forests, his solutions were far different from those of Muir.\textsuperscript{35} Michael Smith states in his book, \textit{Pacific Vision: California Scientists and the Environment}:

\begin{quote}
[Manson] sounded more like Pinchot, however, when he proposed solutions: turn over all of the state’s forest reserves to the University of California; train professional foresters to oversee them; hire engineers to construct reservoirs to aid in water conservation.\textsuperscript{36}
\end{quote}

Smith considers that Manson’s scientific background perfectly aligned him with the predominate progressive conservationists (Pinchot, Interior Secretary Garfield) of the time and therefore places Manson in the awkward position of defending his ties to the Hetch Hetchy project. In the end, Manson could not reconcile his views with those of the preservationists in the Sierra Club, and he resigned from the club over their opposition to the dam.

Manson was not the only man that felt inner conflict over Hetch Hetchy. President Theodore Roosevelt was a man of the wilderness and had become a friend of John Muir during their camping trips in the West and in particular Yosemite. Roosevelt felt a great appreciation for the wilderness but had difficulty reconciling his political life and ambitions with his personal feelings toward the wilds. In \textit{Dam: Water, Power, Politics, and Preservation in Hetch Hetchy and Yosemite National Park}, Simpson also talks of the conflict that President Theodore Roosevelt felt toward the Hetch Hetchy when corresponding with Gifford Pinchot regarding the Hetch Hetchy project: “Please look

\textsuperscript{35} Smith, 175-176
\textsuperscript{36} Ibid, 176.
over the enclosed letter from John Muir. It does seem to me unnecessary to decide about
the Hetch Hetchy Valley at all at present. Why not allow Lake Eleanor, and stop there?”37

Lake Eleanor was another site, also within Yosemite that could have been used as
the main source of water for San Francisco. Lake Eleanor was located to the north just
over the ridge from Hetch Hetchy. Roosevelt’s plea to Pinchot shows his hesitancy over
granting access to Hetch Hetchy, at least while he was President. Using Lake Eleanor
would buy time and take some of the pressure off Roosevelt's administration regarding
the Hetch Hetchy controversy. Gifford Pinchot’s response:

I fully sympathize with the desire of Mr. Johnson and Mr. Muir to protect
the Yosemite National Park, but I believe that the highest possible use
which could be made of it would be to supply pure water to a great center
of population.38

Pinchot’s response to President Roosevelt also shows he understood the feelings of the
preservationists, even if he could not abide by their single use ideas. Pinchot and
Roosevelt, at one time, could count themselves as friends of Muir, but as their ideologies
grew apart, so did their friendship. The idea of wilderness was not adverse or contrary to
the progressive conservationist but rather it addressed how to best use the wilderness for
the public good. This concept created an ever widening division between the two groups.

Kendrick A. Clements, states in the article “Engineers and Conservationists in the
Progressive Era,” that Gifford Pinchot and Secretary James R. Garfield understood
utilitarian conservationism as the way to best serve the American public. Theodore
Roosevelt appointed Garfield secretary after being critiqued because he was thought to be

37 Simpson, 143.
38 Ibid, 143.
locking up the nation’s resources, not allowing them only to be developed for public use. Garfield was a man that was committed to developing resources, not locking them away such as previous Interior Secretary Hitchcock had done by denying San Francisco’s first application to develop the Hetch Hetchy reservoir. Roosevelt’s perceived alignment with John Muir had to take a backseat to the political pressures that Roosevelt felt when it came to multiple use arguments presented by the engineers endorsing the project.39 The Hetch Hetchy issue was one of the first questions to be brought up nationally in which the two sides of conservation (progressive and preservationist) would conflict: planned development versus preservation.40

Acquisition of Hetch Hetchy

In 1900, when a group of reformers changed the city’s charter, San Francisco started, with greater enthusiasm than previous investigations, to look for alternatives to the Spring Valley Water Works as a steady, reliable source of water. The new city charter required the city to own its own utilities and thus Mayor James Phelan, along with the city engineer and the Public Utilities Commission went in search of a new water supply. The group searched through the Sierra and came to the conclusion that the Tuolumne River could provide the quality and quantity of water that San Francisco needed and the Hetch Hetchy valley, through which the river flowed, would provide the ideal location for a reservoir and dam. Mayor Phelan applied to the federal government for a claim to the Hetch Hetchy valley reservoir site.

39 Clements, 290
40 Ibid, 292
Simply applying for the site did not assure San Francisco of the right to build a reservoir in the Sierra. The Federal Right of Way Act (1901) did permit the development of a reservoir, just like Mayor Phelan wanted, but Interior Secretary Ethan Hitchcock looked at the matter from a different viewpoint, more of a preservationist viewpoint. In 1903, Secretary Hitchcock rejected the plan to build a reservoir in Hetch Hetchy. Secretary Hitchcock did not see the reservoir plan as being the best way to preserve the natural wonders of the park and according to his interpretation of the law the park was to be preserved for its natural beauty and the enjoyment of the American public.41

After being denied the right to build a reservoir in Hetch Hetchy valley, Phelan continued work to gain access to the valley until the Democratic Party lost power in San Francisco when the plan went by the wayside. The new mayor of San Francisco, Eugene E. Schmitz, officially abandoned the Hetch Hetchy proposal, and it stayed dormant until the great earthquake of 1906. With much of the city destroyed by fire, the backers of the Hetch Hetchy plan once again started the rallying for their cause. Now, they claimed, the city of San Francisco had a water emergency and needed to secure an ample supply of water. Hetch Hetchy was a vital part in this plan. In 1907, a new Democratic mayor took office in San Francisco and once again the plan for Hetch Hetchy came to the forefront.42

Marsden Manson, San Francisco’s previous city engineer under James Phelan, went to Washington D.C. to lobby support for the project as a private citizen. Manson received attention from Chief Forester Gifford Pinchot, a staunch conservationist. With

42 Ibid, 189.
the help of Pinchot and the soon to be new Interior Secretary Garfield, Manson was able to meet with President Roosevelt and present his plan to build the reservoir in Hetch Hetchy.43

After Manson’s successful trip to Washington D.C. the Roosevelt administration let the city know it would look favorably on a new application. Gifford Pinchot wrote a letter to Manson:

My dear Mr. Manson:

I cannot, of course, attempt to forecast the action of the New Secretary of the Interior (Mr. Garfield) on the San Francisco watershed question, but my advice to you is to assume that his attitude will be favorable, and to make the necessary preparations to set the case before him . . . If the possibility of a supply from the Sierras is still open, you should, by all means go ahead with the idea of getting it.

Very sincerely yours,
Gifford Pinchot, Forester44

This letter from Pinchot could only have been well-received by Manson and the city of San Francisco. Its implication of Hetch Hetchy as there for the taking was what they had been waiting for all along.

Interior Secretary Hitchcock resigned his position and in his place came James Garfield, a progressive conservationist. President Roosevelt appointed James Garfield, who, environmental historian Simpson says, was a “true believer” and would fit nicely into President Roosevelt’s conservation circle.45

43 Ibid, 189
45 Simpson, 141.
In 1908, Manson resubmitted the plan that Mayor Phelan had presented to Hitchcock in 1903. This time the plan was given limited approval by Secretary Garfield. The plan to convert Hetch Hetchy into San Francisco’s water supply now became viable. Soon after Garfield’s favorable decision the city put forth a ballot measure for a special election asking the San Francisco voters to approve a bond that would enable the city to acquire water rights in Hetch Hetchy. The resulting vote count was in favor of the water system by nearly 6 to 1. The preservationists had been dealt a severe blow towards their cause. The city had done a good job of working behind scenes and keeping their plan out of public view. In fact, it was not until 1905 that the Sierra Club really caught on to San Francisco’s plan for Hetch Hetchy; and, after Secretary Garfield’s approval of the plan, John Muir said that the argument would be “the worst ever.”

The Commonwealth Club of San Francisco held an informational meeting on September 8, 1909 where arguments from both sides of the issue were heard. The meeting was attended by mostly professionals and businessmen who seemed to be largely in favor of the proposal to dam Hetch Hetchy. The Sierra Club presented arguments against the proposal based upon the fact that the natural beauty would be damaged but it was reported that the Commonwealth Club membership responded to this information as fanciful and unsound.

The preservationists, mainly the Sierra Club, did not give up the battle easily. Pamphlets were distributed containing writings on Hetch Hetchy by Muir, photographs of

46 Jones, 100.
47 Clements, “Engineers and Conservationists,” 290.
the valley, and letters were sent to the House Committee.49 The public response to the preservationists’ outcry was overwhelming and led to the Senate Committee withdrawing its resolution. The preservationists may not have won the battle but at least they had won a reprieve.

The time period of 1909-1912 was a tumultuous one for both the conservationists and the preservationists. William Taft became President in 1909 and did carry out the same conservationist land use policies that the Roosevelt administration had. The new Secretary of the Interior, Richard Ballinger, began to look at the Hetch Hetchy plan anew. In his book, *Dam!: Water, Power, Politics, and Preservation in Hetch Hetchy and Yosemite National Park*, environmental historian James Simpson suggests that Taft and Ballinger did not believe in the conservationist cause as did Roosevelt, not to say that the Taft administration was pro-preservationist. Simpson believes the Taft administration was more in favor of big business interests to the detriment of the public and environmental welfare.50 Ballinger proposed to the city of San Francisco that they needed to show a just cause for using Hetch Hetchy over another source. Other sources, such as Lake Eleanor, had been suggested in the past but San Francisco was determined to get the rights to Hetch Hetchy.

Simpson feels that Ballinger requested a rehearing on the matter and seemed fully prepared to revoke the permit given to San Francisco by Garfield. Ballinger seemed to be siding with the preservationists and thought the damming was unnecessary and contrary to the purposes of a national park. At the time of the hearing (May, 1910) Ballinger took

49 Fox, 142-143.
50 Simpson, 152-153.
no action, perhaps, according to Simpson, because irregularities existed in the engineering report Ballinger had requested and these irregularities could cast doubt on the objectivity of the report. Ballinger instead appointed a new commission of army engineers to conduct a study and gave San Francisco until June, 1911 to present data to the Army Advisory Board. The city was to present data to the army commission and this led to the hiring of John Freeman.51

Secretary Ballinger resigned his position in 1911. Was questioning the validity of San Francisco’s claim to Hetch Hetchy the deathnail for Interior Secretaries? The answer to this question may lie in President Taft’s next appointee to replace Ballinger. Walter Fisher was appointed by Taft. Fisher was a friend of Pinchot and a progressive conservationist, but he was also friends with prominent preservationists such as Stephen T. Mather, who later became the first head of the National Park Service.52 The Ballinger hearing was again postponed until 1912. Holway Jones, noted historian of the Sierra Club and John Muir, believes this postponement gave the new secretary time to acquaint himself with the Hetch Hetchy situation and to also see it for himself. During the period between Ballinger’s resignation and the called for hearing in 1912, Jones states that the preservationist were filled with anxiety.53

San Francisco, in the meantime, hired John Freeman to conduct the report requested by Ballinger. When Robert Underwood Johnson, editor of Century magazine and an ardent preservationist, read Freeman’s report he was “appalled by the enormity of

51 Simpson, 156-157.
52 Jones, 127.
the document”. San Francisco had spared no expense when hiring Freeman to prepare the report, something the preservationists could not compete against. The fight between the two sides had started to take its toll on the participants of both sides but the preservationists were the ones that really felt the pressure of the battle. In his book *The American Conservation Movement: John Muir and his Legacy*, historian Stephen Fox, asserts that the battle was a “collision between professionals and amateurs.” In Fox’s view the proponents of the damming project had a professional or political stake in making sure the project went through. Engineers and consultants had been hired by the city to ensure success in the project. Fox goes on further to say the opponents to the Hetch Hetchy project were taking time and financial resources away from their personal and professional lives to fight the dam.54 Fox’s sentiment is illustrated in this quote from the Sierra Club secretary, William Colby:

> We are all persons of small means and we have made considerable sacrifice. The city has employed experts and skilled attorneys at an expense of thousands of dollars because it has a personal advantage to be gained. The fight has been a most unequal one from this standpoint.55

The battle to preserve Hetch Hetchy was proving to be too much for the preservationists monetarily and emotionally. The business of defeating a machine as large as the U.S. government was a daunting task and one that needed far more political and professional support than the preservationists could give.

Historian Holway Jones, asserts that the report filed by Freeman boldly assumed the invasion of the park and questioned whether any other water supply other than Hetch

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54 Fox, 144.  
55 Ibid, 144-45
Hetchy would be adequate.\textsuperscript{56} Despite the impressive document and its assertions for none other than Hetch Hetchy set forth by Freeman and San Francisco, the hearings conducted by Fisher were inconclusive and San Francisco was again given more time to correct data in the report. In January of 1913 the Army Engineer’s report was submitted with the result conceding that Hetch Hetchy was a viable alternative to other water supplies based on the cost to develop being $20 million cheaper than any other.\textsuperscript{57}

The end of the Taft administration was drawing near and still no decisions regarding the fate of Hetch Hetchy had been made. Secretary Fisher ultimately came to the conclusion, “that a permit for this purpose should not be issued by the Secretary of the Interior under the existing law.” In \textit{John Muir and the Sierra Club}, Jones comes to the conclusion that because the Army Advisory Board’s only principal determining factor in granting a permit to San Francisco was based upon cost, Secretary Fisher would not issue the permit.\textsuperscript{58}

Woodrow Wilson’s administration followed Taft. Wilson would appoint a new Interior Secretary and according to historian Stephen Fox, Wilson paid back the city of San Francisco for their support in the election by appointing Franklin Lane.\textsuperscript{59} Lane, whom had been city attorney for San Francisco under Mayor Phelan, approved a bill in favor of the Hetch Hetchy project. In the fall of 1913 The Raker Bill was presented to Congress:

\textsuperscript{56} Jones, 134.
\textsuperscript{57} Ibid, 148-149.
\textsuperscript{58} Ibid, 150.
\textsuperscript{59} Fox, 145.
AN ACT Granting to the city and county of San Francisco certain rights of way in, over and through certain public lands, the Yosemite National Park, and Stanislaus National Forest, and certain lands in the Yosemite National Park, the Stanislaus National Forest, and the public lands in the State of California, and for other purposes. . . such lands in the Hetch Hetchy Valley and Lake Eleanor Basin within the Yosemite National Park, and the Cherry Valley within the Stanislaus National Forest, irrespective of the width or extent of said lands, as may be determined by the Secretary of the Interior to be actually necessary for surface or underground reservoirs, diverting and storage dams.  

On December 6, 1913 the fate of Hetch Hetchy was sealed with a 43 to 25 vote in favor of locating San Francisco’s newest water supply source in the Hetch Hetchy Valley.

The battle had been waged over two differing ideologies: the preservationists wanting the valley to be left untouched and enjoyed by the American public for its natural beauty and the conservationists wanting the valley dammed to serve the public by providing water for the growth of civilization. Across the country people joined on both sides of the controversy to have their opinions heard.

Just as the people directly involved with the fighting of the Hetch Hetchy plan were divided into two schools of thought, it seems as though the reporting of major newspapers fell on either side of the debate. The New York Times took the preservationist viewpoint while the San Francisco Chronicle took up sides with the progressive conservationists. Soon after the bill was presented to Congress, articles began appearing in the newspapers and it became obvious what the mood of the country seemed to be regarding the debate.

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60 H. R. 7207, Sixty-third Congress, first session.
In an editorial titled, “Hetch Hetchy Water Supply,” *The New York Times* had this to say:

Reports show the Mokulumne a better source to provide water for San Francisco…U.S. Army Board did not even do their own finding. They merely passed on data given to them by San Francisco. San Francisco’s present water supply can be more than doubled by expanding existing sources without going to the Sierras . . . Put off Congress for a few more sessions, “the dwellers of San Francisco will not go thirsty.”  

Another editorial titled, “The Steam Roller Halted” stated:

The Hetch Hetchy steam roller did not work smoothly on Saturday and therefore on Tuesday it was withdrawn for repairs. In other words, the Senate voted to postpone to the regular session in December the bill to give over a large part of the Yosemite National Park to the tender mercies of the San Francisco Philistines who know how to "improve" the handiwork of the Creator.

Not only did the newspapers print articles that were in favor of preserving Hetch Hetchy, *The Independent* magazine also took issue with the conservationist attack on the valley:

Foiled in their attempt to secure Hetch Hetchy from a fearless and vigilant public official like former Secretary of the Interior Fisher, the city’s representatives had their Congressman, John R. Raker, introduce a bill which will give them everything they want in Yosemite Park…There is not a shadow of excuse for this vandalism unless our national parks are to be held subject to demand by the nearest greedy municipality that wants to profit by the nation’s greedy foresight.

After the bill had been passed in the Senate, *The New York Times* posted this editorial:

“San Francisco maintained a lobbyist in Washington and was the difference. . . Public opinion and the press was behind the prevention of Hetch Hetchy. If the people had set

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up a lobby they may have won.”64 The editors at *The New York Times* clearly sided with the preservationists in these editorials. The majority of the press in the United States at the time seemed to be on the side of the preservationist, printing opinion regarding the aesthetic side of the argument to preserve Hetch Hetchy. In Fox’s work, *The American Conservation Movement*, he states that hundreds of newspapers and magazines printed articles relating to public opinion being opposed to the project and against setting a precedent which would allow the invasion of a national park. According to Fox, with most of the public opinion being against the Hetch Hetchy project, the battle was coming down to public versus political opinion.65

On the west coast, the story from the press was quite a bit different. In *The San Francisco Chronicle*, the opinion was that of getting the project done. In an article titled, “*Hetch Hetchy Indorsed by Knights of Columbus,*” the viewpoint was very much pro-Hetch Hetchy:

> We need pure mountain water for our great and growing metropolis. Our members have summered in Yosemite and know that the passage of the bill will not deprecate the beauty of the valley but on the contrary will enhance its natural grandeur.66

Once again, the aesthetic issue plays a prominent role, but true to conservationist attitudes of the time, the aesthetics were surely to be improved upon with the project. More arguments in support of the conservationists are seen in the following found in *The San Francisco Chronicle*: Senator Myers from Montana: “…who would rather have a

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65 Fox, 145.
million people suffer for life’s necessities than see Hetch Hetchy utilized for a great city. They are not worth notice and their objections are not worth anything.”

*The San Francisco Chronicle* also was quick to point out the divisions found within the Sierra Club as seen in these remarks by Colonel John C. Currier, President of the Tamalpais Mountaineer Club and member of the Sierra Club:

> I have never been able to understand the position taken by the board of directors of the Sierra Club on this question. And now when they assume to speak for the entire club, they are, in my judgment doing a very unwarranted thing…We believe that the scenic beauty of the Hetch Hetchy valley would be greatly enhanced by its conversion into a lake. . . Camping on the valley floor is now, during a large part of the camping season far from being enjoyable on account of mosquitoes.

Currier goes on, in the same article, to reiterate the conservationists’ agenda regarding public land use in the resolution put forth by the committee he represented:

> The highest purpose to which a National Park can be devoted to the service of the people, and that service can best be fulfilled here by devoting the natural resources of the region, to wit, the surplus waters to the use of the people of San Francisco for a water supply…This committee of members of the Sierra Club, acting for them, earnestly urges the Senate of the United States to grant to the people of San Francisco the territory for water supply purposes thereby conserving the national property and assuring San Francisco an ample supply of pure water.

Much of the press in San Francisco was supportive of the multiple use conservationist viewpoint. The viewpoint put forth by *The San Francisco Chronicle* seemed to be consistent with the wishes of the people of San Francisco, given the fact that in a special election the citizens voted to take on the burden of a bond to build the water system from Hetch Hetchy. The plea for an abundant, pure water supply was foremost in the

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arguments of the conservationists, but the betterment of the landscape was also a prominent consideration in the press of the time.

The dam at Hetch Hetchy was completed in 1923 and named after Michael Maurice O’Shaughnessy, the city engineer hired to design the dam and subsequent water system. Financial difficulty and the simple engineering and construction feat of a gravity powered water system delayed the deliverance of water to San Francisco until 1934. Since that time, the city of San Francisco has enjoyed the pure water they sought at the beginning of the Twentieth Century. Hetch Hetchy still remains within Yosemite National Park. The city of San Francisco, under the conditions of The Raker Act is required to contribute $30,000 annually but contributes over $1 million dollars annually to the park for maintenance and improvement projects to the park.68

Over a century later, the debate over Hetch Hetchy still lives on with preservationists, conservationists, and in the press. Recently there has been a resurfacing of the Hetch Hetchy issue. Former Interior Secretary under Ronald Reagan, Donald Hodel suggested, in 1987, creating “a second Yosemite Valley” to be accomplished by removing the O’Shaughnessy Dam. Hodel’s idea was not met with enthusiasm from then mayor of San Francisco, Dianne Feinstein. Feinstein remarked that removing the dam was “the worst thing since selling arms to the ayatollah (Khomeini).”69 The idea of removing the dam coming from the Interior Secretary of an administration that was not known to be friendly to environmental issues came as somewhat of a surprise. The main

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69 Righter, 219.
arguments against removing the dam, aside from the loss of a water supply, were the same as they had been one hundred years previous when Hetch Hetchy had been chosen as a reservoir site, cost. The people in favor of keeping the dam estimated the costs to be billions higher than those that rallied for the removal of the dam.

_The San Francisco Chronicle_ still adopts the message of the conservationists during the Progressive Era. When the plan to study the restoration of Hetch Hetchy to the valley it once was became public, the paper had this to say:

> The [Sacramento] Bee, in what could charitably be called an intellectual exercise, has taken it upon itself to stage an editorial campaign to drain San Francisco's Hetch Hetchy reservoir upon which 2.4 million Bay Area residents rely for their water and restore the valley in which it rests to its original 1923 untapped condition. While I applaud my friends at the Bee for having some fun with a nearly century-old argument, it appears that the paper is actually serious in its desire to take away the city's (and the region's) precious water and power source. So before another tree is churned at the paper mill on this alleged environmental crusade, let me suggest that the Bee's campaign is all washed up. It is never going to happen.

Hetch Hetchy still finds itself in the middle of a controversy. At the beginning of the Twentieth Century, it seemed, as though public interest, aside from the local San Francisco support, was in favor of preserving Hetch Hetchy. Newspapers and magazines reported against the plan of the dam, but to no avail. The political decision makers were much more persuasive and powerful than the voice of the people. Today, with suggestions from former Interior Secretary Donald Hodel and a study being conducted by the California State Water Commission, it seems as though the political decision makers are at least listening to public opinion regarding the restoration of Hetch Hetchy.

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The *Sacramento Bee* has taken up the position of the preservationists. The *Bee* wrote a string of editorials encouraging a study to be undertaken for the restoration of Hetch Hetchy. The editorials are reminiscent of Muir’s views:

Count us among those whose gut tells them that historic change is in order. In a future California with perhaps 50 million people yearning for natural respites, Hetch Hetchy is more valuable as a meadow surrounded by stunning waterfalls and granite peaks than as a water tank.

The editorial also speaks to the issue which originally made Hetch Hetchy into a reservoir, the lack of political sensitivities to public opinion:

Our gut (and the fact that this preliminary study was done at all) tells us that voices within the Schwarzenegger administration are receptive to a historic re-evaluation of Hetch Hetchy. And there are some significant question marks. New Chief of Staff Susan Kennedy once worked for Sen. Dianne "Hetch Hetchy is San Francisco's Birthright" Feinstein. But in all, minds seem admirably open. So there is reason to hope that the governor will see the future of Hetch Hetchy as a discussion well worth having.71

Just maybe, this time, Hetch Hetchy will get the consideration it deserves. The restoration of Hetch Hetchy is a long way into the future, if at all. Stephen Fox’s portrayal of representing Hetch Hetchy as a public versus political issue may be the key to the Hetch Hetchy controversy. When public opinion is overwhelmingly in favor of something, it would seem to follow that the political opinion would need to follow suit.

The United States has experienced one hundred years of development since San Francisco began its quest for Hetch Hetchy. If Hetch Hetchy’s importance can be gauged by the fact, that not since San Francisco was able to infringe on a national park, has any other municipality been able to use a national park to further its own development goals.

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71 "Hetch Hetchy's moment - State, feds need to support further study of this Yosemite treasure's future,” *Sacramento Bee*, 22 January 2006, Sec. E, p.6.
Political decision making still plays a critical role in the preservation of natural wonders and resources in the United States, but public pressure has been very successful in recent years with blocking incursions on public land that match the scale of Hetch Hetchy. Hetch Hetchy may have been a wake up call for those interested in preserving public wilderness. Since the Sierra Club was formed in the late 1800s, there has been a large increase in the number of organizations that dedicate themselves to policing private and government agencies with an eye on wilderness lands. No longer are the people interested in preserving the wilderness a minority of “nature lovers.” As the United States continues to develop available open space on the market, people are becoming increasingly aware of the need to save wilderness, not only for wilderness’ sake but for humanity’s sake.
THE SAN FRANCISCO-HETCH HETCHY VALLEY CONNECTION LESSON PLAN

Introduction

During the unit of study about California’s water systems and irrigation networks the students will have the opportunity to study the San Francisco-Hetch Hetchy controversy in depth. The Hetch Hetchy controversy was a significant event in American conservationist or environmental policy making.

This lesson plan is designed to meet the California State Standards in the fourth grade. The students using this lesson plan will use Hetch Hetchy and the state of California as a background for learning map skills, analyzing geographic placement of urban centers, and how population growth affected the use of resources in California. Students will also look at the philosophical issues facing the use of resources and the preservation of wilderness areas. Through this lesson plan it is hoped the students will understand that historically there were two schools of environmentalism, conservationists and preservationists, and that each thought they knew the best use of the wilderness for the good of the people. During the course of this lesson the students will understand that the development of California’s urban centers would challenge the ideals that both schools of environmentalism held.

The theme that will be present throughout this lesson will be “What is the best use of wilderness: Conserve or Preserve?” The students will be presented with the arguments from both sides of the environmental battle and will be asked to decide which school of
thought they identify most closely with and why. The topics and timeline for the five days are as follows:

Day One: Students are presented with “Hook” for the lesson. Following the hook, the students will be asked to write about what they thought about the idea presented in the hook.

Day Two: Students will read an excerpt from John Muir’s writing *Mountains of California*, followed by written response to focused questions. Students will read an excerpt from Gifford Pinchot’s book *The Fight for Conservation* also followed by short, focused written response. Students will also write their own short definitions of what they think are the meanings of conservationist and preservationist. Students will be given the definitions to conservationist and preservationist, class discussion to follow.

Day Three: Students will find predetermined locations on a California map and transfer their locations to an outline of California. Students will label locations by name and by latitude and longitude position.

Day Four: Students will analyze the locations of three California urban centers: Sacramento, San Francisco, and Los Angeles. Students will identify geographic landforms that might make each city’s location successful or unsuccessful.

Day Five: Students will examine a timeline of the events leading up to San Francisco’s acquisition of Hetch Hetchy.

Day Six: Students will examine primary documents for and against the Hetch Hetchy project. One is a pamphlet written by John Muir protesting the placement of a
dam in the Hetch Hetchy valley and the other is a cartoon showing John Muir “Sweeping back the flood.” After examining, the students will compare and contrast the messages.

Day Seven: Students will listen to a short lecture and viewing of a timeline documenting the steps taken to grant Hetch Hetchy to San Francisco. Students, pretending to live in 1913, will write a letter to Congress expressing either their support or nonsupport of the Hetch Hetchy Dam.

Day Eight: Students will be evaluated on the Hetch Hetchy lessons and theme of the unit.
Prior Content Knowledge and Skills

Prior to beginning the lessons on Hetch Hetchy, the students will need to be familiar with map skills (key usage, latitude and longitude) and be familiar with general geographic landmark vocabulary such as mountain, valley, river, bay, canyon, etc. Students will also need experience using and interpreting primary documents. Finally, students will need to be familiar with what natural resources are and their importance to civilization.
Discussion of Content Hook

The hook portion of this lesson plan will begin with the reading of a John Muir passage written about Hetch Hetchy Valley. After reading the passage, (maybe more than once), pause and elicit comments on the mental picture that the students received while listening to the passage; ask if they would like to visit such a place. After discussion, allow time for the students to draw a picture of the scene they pictured during the reading. After the students have drawn their pictures, show two pictures from the early 1900s, each of Hetch Hetchy. One of the pictures is of the valley prior to damming and the other is of the Hetch Hetchy Reservoir. Discussion at this point should revolve around which of these pictures best represents the passage written by John Muir and which of the pictures is most like their own. After discussion tell the students that the pictures are taken of the same place but at different times and after a dam had been built. The students should be intrigued by the differences in the pictures at this point and some background can be given on the lessons that they will experience in the next few weeks.
Lesson Content

**Day One:** The hook is the activity that will get the students interested in the concepts to be studied. The hook for the Hetch Hetchy lesson plan involves reading a short passage, drawing a picture related to the passage and then viewing photographs taken of Hetch Hetchy valley.

Hand out and read the passage aloud (at least twice) written by John Muir about his first adventure in Hetch Hetchy valley (Appendix B). Show a picture of John Muir (Appendix B) Begin short discussion of passage. What type of day do you think it was: warm, hot, cold? What color are the flowers? the grasses? How would you feel if you were there? After a few minutes of sharing the discussion the students need to draw a picture of the scene they imagine. Give the students postcard size paper for their drawing. After sufficient time has been given for the drawings, show the two photographs, one at a time and then side by side (Appendix B) Which photograph best represents the passage read? Why?

Lecture: These photographs are of the Hetch Hetchy valley in Yosemite National Park. The first photograph is the valley around 1913 and the second photograph is the same valley after a dam was constructed forming a reservoir in 1923. The reservoir was built to provide water for the city of San Francisco. During the next couple of weeks we will be learning about how this dam came to be and also about the people that wanted the dam and the people that did not want the dam. I would like you to write a paragraph
explaining which of these places you would rather visit and why. Would you rather go to
the valley before the reservoir was built or after the reservoir was built?

Day 2: This lesson will consist of photographic observation and a
compare/contrast of the writings by two very important men involved with the Hetch
Hetchy reservoir, John Muir and Gifford Pinchot. Begin the lesson by showing the
students pictures of John Muir and Gifford Pinchot (Appendix B) Compare the men in
the photographs and the settings of each photograph. Instruct the students to write down
three details they notice about each of the photographs (i.e. manner of dress, location of
photograph, etc). After the students have written down the three details, lead a discussion
concerning which of these men would be more likely to want to protect wilderness, keep
referring the students the location of picture, dress of the men, and poses within the
photograph. Read aloud the excerpt from John Muir’s writing Mountains of California,
(provide the students with a copy or put the excerpt to be read on an overhead). Follow
the reading with a written response to a set questions (these questions will be the same for
both passages read). Read the excerpt from Gifford Pinchot’s book, The Fight for
Conservation, also followed by short, focused written response (Appendix B) Following
the written response time give a short lecture.

Lecture: John Muir and Gifford Pinchot were men who were both involved in the
fate of Hetch Hetchy. John Muir was a man of the wilderness. He spent days on end
wandering the mountains, admiring the wilderness, and examining the details of the
canyons, rocks, and trees. Mr. Muir was the founder of the Sierra Club. The Sierra Club
was a club committed to preserving wilderness areas in the United States for the public to
enjoy. John Muir felt a deep connection to the wilderness areas he wandered and was extremely upset when he found out that San Francisco wanted to put a dam at the mouth of Hetch Hetchy valley to build a reservoir that would provide drinking water for the people of San Francisco. John Muir did not want humans to go into the wilderness and change the landscape for their use. He was against grazing livestock in the meadows of the High Sierra, he did not support commercial endeavors within Yosemite National Park and above all he did not approve of turning Hetch Hetchy valley into a reservoir. John Muir was a preservationist.

Gifford Pinchot was also a man that loved the wilderness but he looked at the wilderness in a different manner than did John Muir. Gifford Pinchot was a forester. He felt like the wilderness needed to be managed for the best use of the people, recreation was part of this management but not the main point. Mr. Pinchot thought that if the natural resources in the wilderness could be used to help develop communities and make life easier for people, then the wilderness was serving its highest purpose. Gifford Pinchot thought it was allowable for livestock to graze the high meadows. He thought that the water flowing through Hetch Hetchy valley could best be used by serving the people of San Francisco as drinking water. He was in favor of turning Hetch Hetchy into a reservoir. Gifford Pinchot was a conservationist.

Following the lecture, instruct the students to write their own short definitions of what they think are the meanings of conservationist and preservationist.

Continue lecture: John Muir was a preservationist. He thought the land that had been set aside as a national park or land that had great beauty should be left untouched by
human development. Leaving the land untouched would allow people to visit and enjoy the wilderness. He believed the wilderness could be a cure for the troubles people faced in civilization. Using the wilderness in this manner he felt was its highest use.

Gifford Pinchot was a conservationist. He thought the land should be preserved until a use had been found for the natural resources it contained. He advocated for the wise use of timber and water. He felt that if the natural resources could be used to help people in civilization, then the wilderness was serving its highest purpose.

End lesson by instructing the students to update their definitions if they think they need to be changed. Collect definitions to evaluate student understanding.

Day Three: This lesson will focus on becoming familiar with the locations of geographic landforms, national parks, and urban centers within California. Provide students with atlases, outline maps of California, and a list of locations to find on the maps (Appendix B). Instruct the students place the items on the list in the correct place within the California outline map. Students will also record the latitude and longitude of key locations (see Appendix B). Maps will include a key and compass rose.

Day Four: During this portion of the lesson the students will analyze the locations of three California urban centers: Sacramento, San Francisco, and Los Angeles. Using the atlases and student made maps from the previous lesson the students will identify the geographic landforms that are in close proximity to each of the landforms. Students will document which geographic landforms are near the urban centers and give a written explanation as to how these landforms could either help or hinder the development of the urban center.
Day Five: This portion of the lesson will consist of students being led through the timeline of the Hetch Hetchy controversy. Each student should be given a copy of the timeline (Appendix B). While going over the timeline, give a brief overview of the main events during the struggle for Hetch Hetchy. After studying the timeline, ask students to write down the date they perceive as being the most important date in the struggle and why they think so.

Day Six: During this portion of the lesson students will examine primary documents for and against the Hetch Hetchy project. One is a pamphlet written by John Muir protesting the placement of a dam in the Hetch Hetchy valley and the other is a cartoon showing John Muir “Sweeping back the flood.” (Appendix B) First present the pamphlet written by John Muir (cover up his signature at the bottom) and ask the students which environmental school of thought the pamphlet represents. After the students have given their opinions, show them the author’s name and confirm the letter was written by a preservationist. Present the cartoon “Sweeping back the flood.” Ask the question: Is this a preservationist or conservationist message? Elicit responses from the students. Discuss the documents with the students during a whole class discussion. Determine the intended audience for each primary document. Questions for discussion: Do you feel that each document gets their point across? How do you think people from each opposing side would respond the documents?

Day Seven: Review the meaning of conservationist and preservationist at the time of the Hetch Hetchy controversy (~1913). Show the Hetch Hetchy photographs to the students one more time. Show the photographs of John Muir and Gifford Pinchot and
review their beliefs concerning the wilderness. Instruct the students to pretend they live in 1913, they will be writing a letter to Congress expressing either their support or nonsupport of the Hetch Hetchy Dam.

**Day Eight: Evaluation (Appendix C)**
APPENDIX A
CALIFORNIA STATE STANDARDS
California State Content Standards Addressed

4.1 **Students demonstrate an understanding of the physical and human geographic features that define places and regions in California.**

4.1.1 Explain and use the coordinate grid system of latitude and longitude to determine the absolute locations of places in California and on Earth.

4.1.2 Distinguish between the North and South Poles; the equator and the prime meridian; the tropics; and the hemispheres, using coordinates to plot locations.

4.1.3 Identify the state capital and describe the various regions of California, including how their characteristics and physical environments (e.g., water, landforms, vegetation, climate) affect human activity.

4.1.4 Identify the locations of the Pacific Ocean, rivers, valleys, and mountain passes and explain their effects on the growth of towns.

4.1.5 Use maps, charts, and pictures to describe how communities in California vary in land use, vegetation, wildlife, climate, population density, architecture, services, and transportation.

4.4 **Students explain how California became an agricultural and industrial power, tracing the transformation of the California economy and its political and cultural development since the 1850s.**

4.4.1 Explain how the Gold Rush transformed the economy of California, including the types of products produced and consumed, changes in towns (e.g., Sacramento, San Francisco), and economic conflicts between diverse groups of people.

4.4.4 Describe rapid American immigration, internal migration, settlement, and the growth of towns and cities (e.g., Los Angeles).

4.4.7 Trace the evolution of California’s water system into a network of dams, aqueducts, and reservoirs

4.5 **Students understand the structures, functions, and powers of the local, state, and federal governments as described in the U.S. Constitution.**

4.5.4 Explain the structures and functions of state governments, including the roles and responsibilities of their elected officials.
APPENDIX B
LESSON CONTENT RESOURCES
Passage to be read in Hook Activity:

“Imagine yourself in Hetch Hetchy. It is a bright day in June; the air is drowsy with flies; the pines sway dreamily, and you are sunk, shoulder deep, in grasses and flowers.”72

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72 Righter, 11.
John Muir, founder of the Sierra Club:
Hetch Hetchy valley prior to the reservoir:

http://www.yosemite.ca.us/library/guardians_of_the_yosemite/hetch_hetchy.html
Hetch Hetchy Reservoir

http://www.yosemite.ca.us/library/guardians_of_the_yosemite/hetch_hetchy.html
Gifford Pinchot, First of head of Department of Forestry

http://memory.loc.gov/ammem/amrvhtml/consarcd.html
John Muir’s pamphlet protesting the damming of Hetch Hetchy:

LET EVERYONE HELP TO SAVE THE FAMOUS HETCH-HECHY VALLEY
AND
STOP THE COMMERCIAL DESTRUCTION WHICH THREATENS OUR NATIONAL PARKS

To the American Public:

The famous Hetch-Hetchy Valley, next to Yosemite the most wonderful and important feature of our Yosemite National Park, is again in danger of being destroyed. Year after year attacks have been made on this Park under the guise of development of natural resources. At the last regular session of Congress the most determined attack of all was made by the City of San Francisco to get possession of the Hetch-Hetchy Valley as a reservoir site, thus defrauding ninety millions of people for the sake of saving San Francisco dollars.

As soon as this scheme became manifest, public-spirited citizens all over the country poured a storm of protest on Congress. Before the session was over, the Park invaders saw that they were defeated and permitted the bill to die without bringing it to a vote, so as to be able to try again.

The bill has been re-introduced and will be urged at the coming session of Congress, which convenes in December. Let all those who believe that our great national wonderlands should be preserved unmarred as places of rest and recreation for the use of all the people, now enter their protests. Ask Congress to reject this destructive bill, and also urge that the present Park laws be so amended as to put an end to all such assaults on our system of National Parks.

Faithfully yours,

November, 1909.

Read carefully pp. 20-21 and help to save the Park.

http://memory.loc.gov/ammem/amrvhtml/consarcd.html
Sweeping back the flood:

"Sweeping Back the Flood." Together with all the city's newspapers, the San Francisco Call was a persistent advocate of the Hetch Hetchy water supply and attacked any group that opposed this use. (Bancroft Library, University of California, Berkeley.)

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73 Jones, 183.
Excerpt from *The Fight for Conservation* by Gifford Pinchot

The first principle of conservation is development, the use of the natural resources now existing on this continent for the benefit of the people who live here now. There may be just as much waste in neglecting the development and use of certain natural resources and there is in their destruction...Conservation stand emphatically for the development and use of water-power now, without delay. It stands for the immediate construction of navigable waterways under a broad and comprehensive plan as assistants to the railroads...The first duty of the human race is to control the earth it lives upon.\(^7^4\)

Excerpt response questions for Muir and Pinchot writings.

1. How does this person feel about the wilderness? Give examples for why you feel this way.

2. How does this person feel about the way people should interact with the environment or wilderness?
Find the following in your atlas and place them on your California outline map.

- Pacific Ocean
- Tuolumne River
- Sacramento River
- San Joaquin River
- Colorado River
- Central Valley
- San Joaquin Valley
- Sierra Nevada Mountains
- Yosemite National Park
- San Francisco
- Los Angeles
- Sacramento

Record the latitude and longitude of the following places:

San Francisco __________________N _____________W

Los Angeles __________________N _____________W

Sacramento __________________N _____________W

Yosemite National Park

____________________N _____________W
Hetch Hetchy Timeline

• 1871 - John Muir first visits Hetch Hetchy

• 1873 - John Muir first writes about the beauty of "Hetch Hetchy Valley," in the Boston Weekly Transcript, March 25, 1873, an article later expanded in the Overland Monthly in the same year.

• 1882 - City of San Francisco begins searching for cheap, plentiful water to serve its growing population, and begins to consider Hetch Hetchy Valley as the location of a reservoir.

• 1890 - Yosemite National Park is established, including Yosemite Valley's less famous cousin, Hetch Hetchy.

• 1890 - San Francisco Mayor James Phelan first proposed damming the valley to create a reservoir for San Francisco.

• 1903 - Mayor Phelan applied to the Interior Department for rights to Hetch Hetchy's water. Secretary of the Interior Ethan Hitchcock denied the request.

• 1904 - First of many Sierra Club "High Trips" to include Hetch Hetchy Valley.

• 1905 - Mayor Phelan again applies for water rights to Hetch Hetchy, and the permit is once again denied. John Muir and William E. Colby launch 8 - year campaign to prevent Hetch Hetchy from being dammed for a reservoir.

• 1906 - The San Francisco Earthquake and Fire gives new impetus to the idea of enlarging the city's water supply.

• 1907 - Sierra Club submits a resolution of the Secretary of the Interior opposing damming of Hetch Hetchy Valley.

• 1908 - Muir writes in the Sierra Club Bulletin that to dam Hetchy Hetchy one "may as well dam for water-tanks the people's cathedrals and churches, for no holier temple has ever been consecrated by the heart of man." Nonetheless, the City's permit was approved by the Interior Department. Eighty-six percent of the voters in San Francisco authorize the Hetch Hetchy project and to provide $600,000 to purchase the "lands, rights, and claims" of Hetchy Hetchy.
• 1909 - When the Taft administration took office, new Secretary of the Interior Richard Ballinger suspended the interior Department's approval for the Hetch Hetchy right-of-way.

• 1910 - Poll of Sierra Club members votes 589 - 161 (79%) in support the Club's position on Hetch Hetchy

• 1912 - Woodrow Wilson is elected President, and appoints former San Francisco City Attorney Franklin Lane as Secretary of the Interior.

• 1913 - New York Times repeatedly opposes damming of Hetch Hetchy, along with most other newspapers in the country. Nonetheless, Congress passes the Raker Bill, allowing flooding of Hetch Hetchy Valley. The bill stipulated that the city could not sell water or power for resale. President Woodrow Wilson signs the bill on December 19.

• 1914 - Last Sierra Club outing to Hetchy Hetchy Valley. John Muir dies on December 24.

• 1923 - Construction of O'Shaughnessy Dam completed, at a cost of $100 million and the lives of 67 men and one woman. The project transports water 160 miles by gravity alone to customers in San Francisco and 32 other Bay Area communities.

• 1924 - San Francisco voters approve a bond proposition for $10 million to pay for a series of tunnels that would deliver water through the Sierra and Coast Range mountains.

• 1928 - San Francisco voters approve $24 million in bonds to help further the Hetch Hetchy Dam Project.

• 1938 - The O'Shaughnessy Dam is raised to its current 430-foot height.

• 1947 - San Francisco voters approve $25 million for a second pipeline for the Hetch Hetchy system.

http://california.sierraclub.org/hetchhetchy/timeline.asp
Hetch Hetchy
Conserve or Preserve?
Final Test

Directions: Fill in the blank for each sentence. Use the words from the list below.

1. The leader of the preservationists was _________________

2. Gifford Pinchot thought that the best use of _________________ was to provide drinking water for the people of San Francisco.

3. Hetch Hetchy is located in _________________.

4. A person who believes that the natural resources found in the wilderness should be used to help communities develop is called a _________________.

5. John Muir was the first president of the _________________.

Sierra Club       John Muir       Conservationist
Yosemite National Park   Hetch Hetchy

Circle the correct answer.

6. San Francisco wanted to use Hetch Hetchy for
   Drinking water       Recreation

7. The first head of the Department of Forestry was
   John Muir           Gifford Pinchot

8. Gifford Pinchot was a
   Conservationist       Preservationist

9. The name of the bill that gave Hetch Hetchy to San Francisco was
   The Raker Bill       The Yosemite Bill
Essay Questions:

A. Describe the reasons the preservationists gave as to why Hetch Hetchy should not be made into a reservoir.

B. Describe the reason(s) Gifford Pinchot gave in support of Hetch Hetchy becoming San Francisco’s water supply.

Alternate Assessment: Choose one of the following.

- Draw a political cartoon which shows the preservationist side of the Hetch Hetchy struggle.

- Write an advertisement for the San Francisco Chronicle which shows the benefits the Hetch Hetchy dam would create for the citizens of San Francisco.
Test Key

1. John Muir
2. Hetch Hetchy
3. Yosemite National Park
4. Conservationist
5. Sierra Club
6. Drinking Water
7. Gifford Pinchot
8. Conservationist
9. The Raker Bill

Essay Questions:

A. Answer should include ideas that relate to the wilderness being set aside to help people relax and escape the pressures of city life, beauty is worth more than using up the land for economic gain.

B. Answer should include the idea that the water the reservoir provided would be used by far more people than would ever visit the valley; the beauty of the valley would not be harmed by the formation of the lake.
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