



Restore Hetch Hetchy

IN YOSEMITE NATIONAL PARK

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Sacramento Bee publishes major series on Hetch Hetchy

"I am excited by the fact that some people who have genuine environmental credentials like Restore Hetch Hetchy have taken this on. I admire them for what they're doing. I think in the end they have a strong possibility of getting a study - hopefully, an honest study." -- Donald Hodel, President Reagan's Interior Secretary, quoted in the *Sacramento Bee*, August 30, 2004

Beginning on Sunday, August 22nd, the *Sacramento Bee* newspaper began a major series of editorials and articles running over several weeks to engage its readers in a lively discussion about the possibility of restoring Yosemite's Hetch Hetchy Valley.

Earlier this summer, Ron Good, Executive Director of Restore Hetch Hetchy, met with the *Sacramento Bee's* Associate Editor, Tom Philp,

at Hetch Hetchy. They spent the afternoon strolling along the trail above the O'Shaughnessy Reservoir and enjoying Hetch Hetchy's great granite walls and booming waterfalls, Tueeulala and Wapama, that were putting on a glorious show.

Here are some excerpts from the *Sacramento Bee's* editorials regarding the possibility of restoring Hetch Hetchy Valley, the place John Muir called "a grand landscape garden, one of Nature's rarest and most precious mountain temples:" *Here's the best-kept secret of Yosemite Valley: It has a twin.*

It is called Hetch Hetchy, derived from the Indian name for its native meadow grasses. But despite its grandeur and its presence in a park that is a national treasure, few people know Hetch Hetchy exists and few visit it.

There is a reason for this remarkable obscurity. Hetch Hetchy is underwater.

No wonder, then, that Hetch Hetchy is today the least visited natural feature in the 1,189-square-mile Yosemite National Park. In one survey of Yosemite's popular sites, Hetch Hetchy finished last, below "other." No other national park has such a centerpiece jewel that is locked away from the public, both by the ranger's key at 9 p.m. every day and by 300 feet of sparkling, clear Sierra water.

But Hetch Hetchy today is truly an unusual case and Californians can dare to regard the [O'Shaughnessy] dam in a new way. If they look carefully at water and electricity options, they may just find the dam more expendable than the lost valley below. It is possible to imagine a different future, one that restores the glories of Hetch Hetchy to the

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public while satisfying the legitimate municipal demands on this river. As coming editorials will explain, San Francisco doesn't have to lose water for Hetch Hetchy to be reclaimed. But Hetch Hetchy's restoration will involve more than San Francisco's interests. It cannot occur as an isolated political act. There would have to be a water package to address the needs of every interest. The many public purposes of the Tuolumne River - its spectacular Yosemite watershed, the downstream water demands of San Francisco, electricity, Modesto flood control, Turlock agriculture - all are pieces of an intricate puzzle. The upcoming challenge is to fit them together - for the benefit of Californians and, where Yosemite National Park is concerned, for the benefit of all Americans. In short, Californians don't have to be prisoners of a 90-year-old debate. Change is coming to the river. As part of that evolution, it is no longer unthinkable to imagine reuniting Yosemite's twin valleys. Something magnificent and unexpected could actually happen. A river could be allowed to run free through a glacial valley, just as it did before Congress locked it away nine decades ago. Seventeen years ago, Interior Department Secretary Donald Hodel had a provocative idea for Hetch Hetchy, Yosemite Valley's smaller twin:

Dismantle the dam that has kept the valley underwater since 1923, thus restoring the granite peaks and signature waterfalls to the national park system and the American public.

What Hodel needed to make his case didn't exist then, but it does today. That ally is CALVIN, a new, water-modeling computer program also known as the California Value Integrated Network.

With a blissful ignorance of politics and conventional wisdom, CALVIN concerns itself largely with two questions: How much water can be delivered, and with what plumbing?

Using state and federal dollars, the University of California, Davis, invented CALVIN in 2001 to calculate how changes would affect a water system. It has come in handy in other California water quandaries thanks to its dispassionate, outside-the-box view of the world.

Last year, the minds behind CALVIN tried an interesting exercise. They programmed CALVIN to consider Hodel's idea. CALVIN punched a virtual hole in a virtual Hetch Hetchy dam. It added a virtual pipe and a virtual pump downstream. CALVIN then calculated whether San Francisco would be short of water.

The results surprised its human operators. CALVIN found minimal impact. Hetch Hetchy's dam, CALVIN announced, is expendable.

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Secretary Hodel's idea seemed like folly back in 1987. Today, CALVIN reports that his wasn't an outlandish proposal after all. A Yosemite National Park with two spectacular valleys wide open for the public? Twin valleys

reunited? Hetch Hetchy regained?

Imagine the possibilities. Donald Hodel did in 1987, though unsure of how to make them a reality. Californians can imagine them again today, with the

knowledge that they are within reach.

To read the entire text of the series of *Sacramento Bee* editorials and articles, please visit their website: www.sacbee.com



Restoration of the Tuolumne River in Hetch Hetchy Valley Using Natural Materials

By Mark Cederborg,
Chair of RHH's Restoration Committee

Although the most obvious and primary goal of Restore Hetch Hetchy is removal of the O'Shaughnessy Dam, the organization's name implies much more than that. In fact, the dam removal and re-engineering of the water delivery system will mark the start of a long-term healing process for Hetch Hetchy Valley. The degree to which humans are involved in this healing has yet to be determined, but the opportunities for aiding and accelerating the natural processes are extensive. It is exciting to consider that we will be able to apply tried

techniques in ecological restoration to one of the most spectacular river valleys in the world. How receptive to restoration will Hetch Hetchy Valley be after dam removal and draining of the reservoir? The reality is that the valley will be a moonscape, totally denuded of vegetation. There will be several roadways, quarry pits and other remnants of dam construction. The good news is that there is very little (approximately two inches) of sediment at the upper end of the valley. When the water is drained, we expect the river to find its historic channel meandering through the valley.

Water that was standing will now be flowing through the Tuolumne River and its tributaries. The erosive forces will return to the streambanks, presenting a challenge in the first few years to those implementing the restoration. Protecting the soils from eroding and



Mark Cederborg

sending sediment downstream will be the highest priority as the water recedes during the draining process. The conventional methods of using 'hard' engineered bank protection such as rock and concrete are not only undesirable in a national park, they are being removed along the Merced River in Yosemite Valley.

Fortunately the ancient tradition, now coined 'soil bioengineering', of using natural, locally available materials to stabilize streambanks has made a comeback in the last 20 years, and is now widely



Live willow pole cuttings for revegetation

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accepted as an alternate to conventional rock and concrete. In fact, soil bioengineering methods are being required by permitting agencies and designed into public work projects across the United States. Following are several examples of these techniques.

Brush mattress. This method uses long branches (4' – 6' length), cut from live plant material (e.g. willow), densely layered, staked, roped, and cinched on a streambank. The stakes may also be part or all live cuttings from local plants (typically willow). The material may be left

uncovered, or may be buried in soil or gravel and covered with erosion control fabric and then staked. A number of types of fabric are used, generally consisting of biodegradable materials and designed to handle a variety of slopes and flow velocities. Typically, the live cuttings and branches will root into the bank and aggressively establish a thicket of brush, providing roughness to slow the stream flow, stabilizing the soil with a thick mat of roots, and providing shading and cover for wildlife habitat.

Vegetated soil lifts (VSL). VSLs are one of the most intensive soil bioengineering techniques. Constructing a

VSL involves bank excavation and reconstruction, replacing the soil in layers, or 'lifts', consisting of 8" to one foot of soil, compacted and wrapped in erosion control fabric, with live branches densely layered in between the soil lifts. This creates a sloped face with rows of branches protruding perpendicular to the slope



Vegetated soil lifts

face. The majority of the branch lengths are buried between the soil lifts, allowing the cuttings to root through the fabric. This locks the fabric in place and creates a very stable slope face with immediate slope protection from the fabric, and long term protection from the establishment of the plants. A further benefit of these structures is their ability to hold a steep slope and their resistance to high velocity flows.

Live staking. This method simply involves installing cuttings of plant species that are adapted to rapid establishment in an active

stream channel. Species such as willow, cottonwood, and dogwood are used, with willow being the most common. The stakes are typically planted on a regular spacing, such as 3-foot centers in areas where roughness and rapid rooting are desired to slow flow and stabilize soils. Live stakes are also used to soften the conventional hard

engineering techniques; they are planted in the void spaces of rock slope protection, or layered in the rock during its placement.

Numerous other restoration techniques have been developed and successfully established in a variety of stream environments. Creativity plays a large role in the

development of new techniques, but as they are tested, the results are actually used to engineer these structures into stream stabilization and restoration projects. Soil bioengineering will be an important tool in restoring the Tuolumne River to a naturally functioning river channel, while protecting the downstream habitat from damage due to excessive sediment loading.



RHH was represented at the "Wild T Party" in Sonora this summer celebrating the 20th Anniversary of the designation of the Tuolumne River as a national Wild & Scenic River. Unfortunately, there's about a 6-mile stretch of the river through Hetch Hetchy Valley that is not (yet!) designated Wild & Scenic. Left to right: Ron Good, RHH Executive Director; Bob Hackamack, Chair of the RHH Technical/Engineering Committee; and, Spreck Rosekrans, member of the RHH Technical/Engineering Committee and a Senior Water Policy Analyst with



Environmental Defense. Both Bob Hackamack and Jerry Meral, a member of the RHH Board (not pictured) were instrumental in the Wild & Scenic

designation of Tuolumne River and continue to serve on the Board of the Tuolumne River Trust.



RHH Board member, Kay Pitts (right), and Glenn Ovitt (center) talk with a visitor at our Free Speech table in Yosemite Valley this summer. RHH Executive Director Ron Good also helped staff the table. They passed out RHH newsletters, newspaper articles and editorials, and bumper stickers, and received many signatures on our petition to encourage Hetch Hetchy's restoration.



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Meet Our Board: Bill Resneck, Chair of the RHH Legal Committee

Bill Resneck's keen interest in Hetch Hetchy Valley and Yosemite grew out of his frequent whitewater rafting trips on the Tuolumne River from the late 1970s to the late 1990s. Since flows on the Tuolumne depend on releases from upstream dams, Bill became curious about the exact nature of the Tuolumne's upper watershed adjacent to Yosemite Valley. Spending many summers with his family at the City of Berkeley's Tuolumne Summer Camp, Bill found his way to Hetch Hetchy Valley, where he hiked and got a good, close look at O'Shaughnessy Dam. When Spreck Rosekrans, Vice-Chair of Restore Hetch Hetchy, asked him to join the Board of Directors, Bill readily agreed. Bill inherited his interest in environmental causes from his father and his uncle. Bill grew up in Marion, Indiana, and his father and uncle donated funds to help purchase a 160-acre camp in southern Wabash County where the Marion school corporation would provide environmental training. Bill graduated from Oberlin College in 1967 with a degree in political science and economics. He then earned a law degree from Indiana University Law School in 1970, where he graduated Magna Cum Laude and first in his law school class of 175. While at law school, he was a member of the Board of Editors of the Indiana Law Journal. After

law school, Bill moved to San Francisco to join a downtown San Francisco law firm. Bill left the firm in 1975 to strike out on his own and has been in private practice for the last 30 years. He focuses on civil litigation, and his specialty is representing people injured either on the job or in a personal injury accident. Most of Bill's outdoor activities growing up were confined to the tennis courts, where he later won the Ohio Athletic Conference doubles championship. He was first taken on a whitewater rafting trip in 1977, and he quickly fell in love with rivers — and through rivers, with the outdoors. Tempering the high-pressure intensity of a litigation practice with frequent whitewater rafting trips, Bill soon developed a profound love of rivers and wilderness. In the 20 years he spent whitewater rafting, Bill ran rivers throughout the western United States, including Alaska. His first environmental cause was Friends of the River's unsuccessful effort to stop the construction of New Melones Dam and the flooding of the Stanislaus River. He now finds it fitting to focus his energies on dismantling a now unnecessary dam in Hetch Hetchy Valley. His education in water-related issues was similar to reverse engineering: like most city dwellers, he gave little thought to the delivery of water beyond turning on a



Bill Resneck

faucet. Over time, he came to appreciate the complexity of California's various water delivery systems, but he was persuaded that the San Francisco water system could function properly without the permanent flooding of a Yosemite-like valley high in the Sierra. Once he understood this, joining Restore Hetch Hetchy was a natural step. Bill would like to help leave a restored Hetch Hetchy Valley as a conservation legacy for his children and grandchildren, just as his father and uncle left such a legacy in Indiana. Bill maintains his private law practice in Orinda and lives in Lafayette with his wife Ellen, a financial planner with American Express who is in a position to help with planned giving to support Hetch Hetchy's fundraising efforts. They have two children, Joshua, 23, and Rachel, 17.



Please Use Our Website Catalog To View the Items Described Below at www.hetchhetchy.org.

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- Please send __ copies of landscape artist Albert Bierstadt's poster/painting of Hetch Hetchy Valley. I am enclosing \$20 for each poster (postage included), or have entered my credit card information below.
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- Please enroll me as a new member or renew my Restore Hetch Hetchy membership.**

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EASTERN MADERA COUNTY CHAMBER OF COMMERCE SUPPORTS HETCH HETCHY FEASIBILITY STUDY

Earlier this year, the Eastern Madera County (Oakhurst-area) Chamber of Commerce passed a Resolution supporting the completion of a Feasibility Study regarding Hetch Hetchy's restoration.

The Resolution supports "appropriate state and federal funding for the preparation of a feasibility study to examine 'win-win' options for restoring Yosemite National Park's Hetch Hetchy Valley, increasing travel and tourism in Yosemite's gateway communities, and addressing the water and power concerns

of the Turlock and Modesto irrigation districts and the San Francisco Bay Area." Many thanks go to Beverly Scott, Chamber President; Bernard Berrier, member of the Board; and, Russ Holcomb, Chamber Executive Director, for their efforts in having this Resolution adopted.



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RESTORE
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The expiration date of your membership is located near your name and address at the bottom of this page.

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RHH volunteer Dan Lucas (right) staffed our information table at the Sacramento State Earth Day celebration. Thanks Dan!

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