The hometown newspaper for Atherton, Portola Valley, Woodside and Menlo Park.

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WATER

Can we count on it?

2.4 million people in the Bay Area could lose water if an earthquake hits before San Francisco completes its $3.6 billion plan to fix the antiquated water system crossing three earthquake faults

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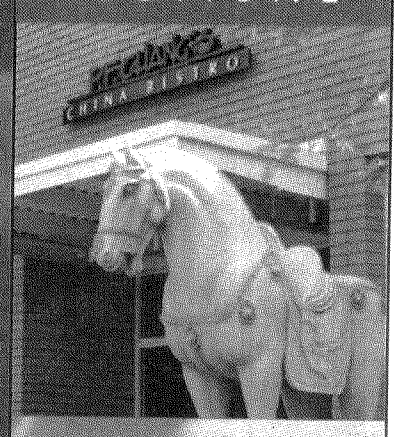
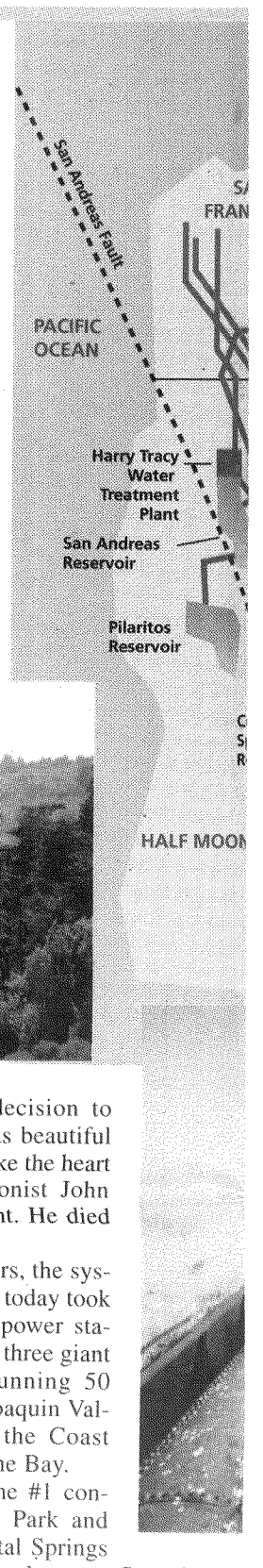
News This Week



WATER: what next?

Major challenges lie ahead for $3.6 billion plan to fix by 2016 the water system for 2.4 million people in four counties



Completed in 1888, Crystal Springs Dam survived the 1906 earthquake. A pump station below it will be replaced in San Francisco's pending repairs, and it may be raised 8 feet to its historic height.

Photo by Marion Softky

By MARION SOFTKY / Almanac Staff Writer

Water is essential to life. What would we do without it?

Let's hope this mantra energizes the people undertaking repair of San Francisco's aging water system before an earthquake, or other disaster, damages pipes and tunnels, putting 2.4 million people in four counties at risk of dry taps for up to 60 days.

The lumbering effort to repair, rehabilitate and expand the system that brings water 160 miles from the high Sierra to faucets in San Francisco, San Mateo, Santa Clara and Alameda counties took a major step forward *last week.*

On May 28, the San Francisco Public Utilities Commission (SFPUC) unanimously approved a 14-year, $3.6 billion capital improvement program to repair, rehabilitate and expand the water system. Commissioners postponed another $1 billion in projects to upgrade San Francisco's sewer systems.

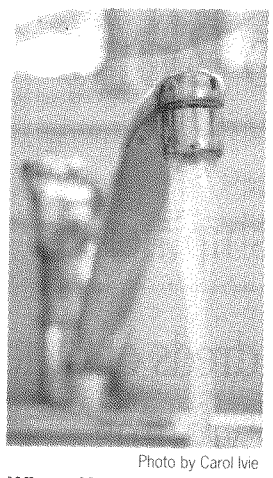


Photo by Carol Ivie

What if you turned on the tap and nothing came out?

Calling the action a "significant step for San Francisco," General Manager Patricia Martel said, "It puts us on a track to address the risks and challenges of the Hetch Hetchy system and our local delivery system."

The new plan now goes to the San Francisco Board of Supervisors for adoption, including possibly placing a bond issue before San Francisco voters November 5.

Whether voters face a $3.6 billion bond issue, or a smaller one, may depend on the fate of a bill carried by state Sen. Jackie Speier, D-Hillsborough, that is still in the Legislature. SB 1870 would create a financing authority that would allow the suburban communities that use two-thirds of San Francisco's water to help pay for the repairs.

In any case, everybody's water bill will go up. If the bond is $3.6 billion, suburban users will see their bills go up about $21 a month over the term of the repair project, says Art Jensen, general manager of the Bay Area Water Users Association (BAWUA), which represents the 29 suburban water agencies that buy their water wholesale from San Francisco. Under BAWUA's contract with San Francisco, rate increases would only appear on bills after specific projects are completed.

The capital improvement plan includes 77 projects to repair, strengthen, and replace aging facilities that carry water across three major earthquake faults: the Calaveras, Hayward and San Andreas. Thirty-seven projects, costing $2.9 billion, would improve the regional system; the rest benefit only San Francisco.

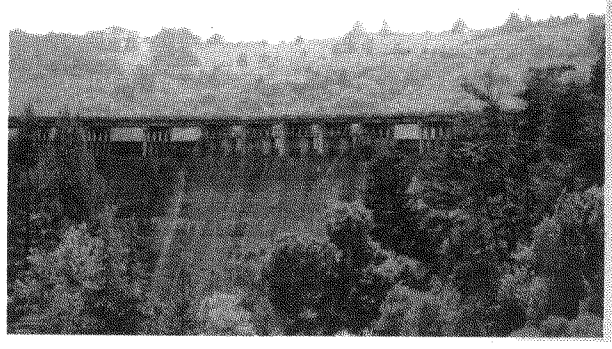
Some of these facilities are really old. The oldest pipeline across the Bay from Newark to Menlo Park, for example, entered service in 1925. In all, the SFPUC operates a regional system made up of 11 reservoirs, two water filtration plants, five pump stations, more than 60 miles of tunnels, and more than 280 miles of pipelines.

Mr. Jensen, frequently a critic of the SFPUC, congratulated the agency. "This is step number one. We are ready to support you," he said. BAWUA represents 1.6 million people who use about two-thirds of the 260 million gallons per day that San Francisco delivers, and pay about two-thirds of the bill.

If a majority of San Francisco voters authorize revenue bonds in November and full financing is secured, the SFPUC has to gear up to carry out a project that is 10 times as large as anything it has managed before. "We're ramping up from spending $20 million a year to $200 million per year," Assistant General Manager William Berry told an outreach meeting in Redwood City last month.

This is the hard part: actually making the projects happen. The steps are numerous, daunting, and likely deadline-stretching.

The SFUC has to: hire a new staff and consultants; award contracts to do design and construction of $3.6 billion in projects over 14 years; go through environmental review; oversee the projects; and complete them — maybe in time.



"Only then is the risk reduced," says Mr. Jensen. "The risk doesn't go away until the project is done."

Meanwhile, Mr. Jensen is pushing to create an emergency plan to manage whatever water is left in the system if an earthquake or crisis disrupts supplies. He's calling on San Francisco, water agencies, cities and counties to develop a crisis-management plan. Who gets what water there is? Firefighters? Hospitals? Employers?

"It's not just a water systems contingency plan — it's a community contingency plan," he said.

An amazing system

It was 1861, and Abraham Lincoln was president, when San Francisco built its first reservoir on Pilarcitos Creek in San Mateo County. The city's population was 78,000.

Since then, growth of the water system has matched and enabled growth of San Francisco, the Peninsula, and Silicon Valley. It is described in "San Francisco Water and Power," published by the city and county of San Francisco in 1994.

Late in the 19th century San Francisco slaked its thirst from the Peninsula via William Bourn's Spring Valley Water Company. Filoli, Mr. Bourn's estate, and the 23,000-acre Peninsula Watershed and lakes, are monuments to that era.

The great 1906 earthquake provided a wake-up call — which is still a warning. The Spring Valley water supply was cut off, and San Francisco burned for three days. The Crystal Springs Dam survived.

In any case, the Peninsula couldn't provide enough water to supply the growing city. It looked to the Sierra.

On December 6, 1913, President Woodrow Wilson signed the Raker Act, authorizing a dam in the Hetch Hetchy Valley of the Tuolumne River in Yosemite National Park. The decision to flood a Sierra valley as beautiful as Yosemite Valley broke the heart of pioneer conservationist John Muir, a fierce opponent. He died the following year.

Over the next 30 years, the system that gives us water today took shape: reservoirs and power stations in the mountains; three giant underground pipes running 50 miles across the San Joaquin Valley; tunnels through the Coast ranges; a pipe across the Bay.

Bay Crossing Pipeline #1 continued through Menlo Park and Redwood City to Crystal Springs Lake. The first Hetch Hetchy water flowed into Pulgas Water Temple October 24, 1934, at 10:12 a.m.

San Francisco's water system has continued to grow, with more pipes and more facilities, to serve the burgeoning population and economy of the Bay Area.

Now, a snowflake that lands on Mt. Dana or Mt. Lyell in Yosemite, can end up in a shower in East Palo Alto, a sterilizer at Sequoia Hospital, or a lawn-watering system in Woodside. Thanks to those snowflakes — and the system that delivers them — San Francisco and its suburbs enjoy some of the best city water in the world.

What needs to be done

But the system is vulnerable — especially to earthquakes.

Bay Crossing Pipeline #1, 60 inches in diameter, was built in 1925. Its 66-inch companion, Pipeline #2, entered service in 1936.

The Irvington Tunnel carries all the water from Hetch Hetchy 3.5 miles near the Calaveras and Hayward faults in Alameda

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Some of the purest city water in the world comes to San Francisco and its neighbors from the Hetch Hetchy Valley in Yosemite National Park.

Photo courtesy of SFPUC

Hetch Hetchy Water System

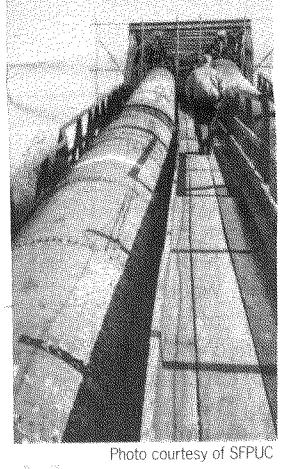


Photo courtesy of SFPUC

San Francisco's water system carries 260 million gallons per day through a network of pipes, tunnels, power stations and treatment plants, from Hetch Hetchy Reservoir in Yosemite National Park to faucets on the Peninsula and the East Bay.

Bay Division water pipelines 1 and 2 cross San Francisco Bay between Newark and Menlo Park. They were built in 1925 and 1936 respectively, and are scheduled for repair and strengthening.

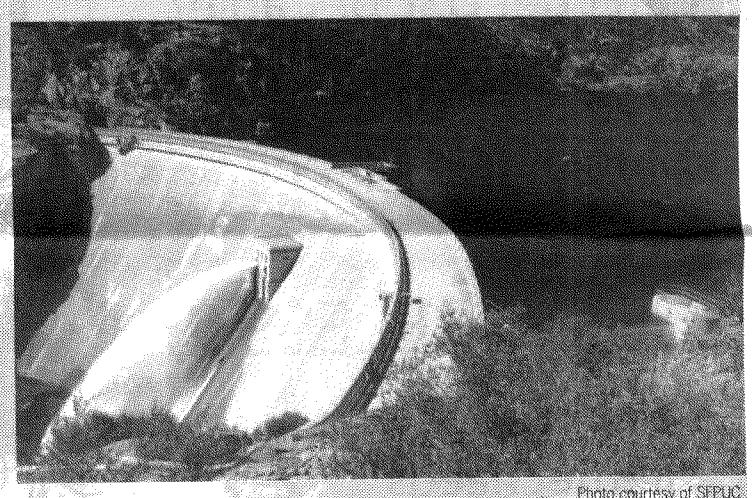


Photo courtesy of SFPUC

Water from San Francisco's Hetch Hetchy Reservoir in the High Sierra sluices through O'Shaughnessy Dam, completed in 1934, on its way to satisfy the thirst of people and businesses in the Bay Area.

WATER FACTS

■ San Francisco's water system delivers 260 million gallons of water a day to 2.4 million people in San Francisco, San Mateo, Santa Clara and Alameda counties. Approximately 70 percent of the water goes to 1.6 million suburban users, who pay 70 percent of the bills.

■ The regional water system conveys water by gravity from the Hetch Hetchy Valley in Yosemite National Park 160 miles to Crystal Springs Lakes above Woodside, and then to San Francisco.

■ The water system has 11 reservoirs, two water filtration plants, five pump stations, more than 60 miles of tunnels, and more than 280 miles of pipelines.

■ About 85 percent of the water delivered by San Francisco comes from Sierra watersheds; the rest comes from local watersheds on the Peninsula and in Alameda County.

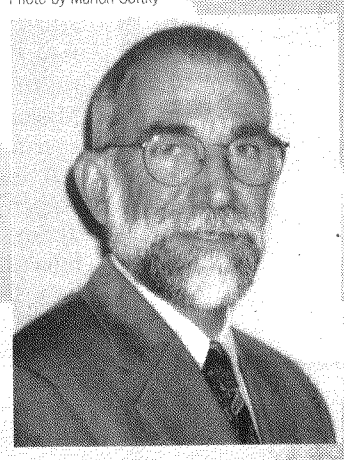
■ The U.S. Geological Survey has estimated a 70 percent likelihood of a 7.0 magnitude earthquake in the Bay Area. Such an earthquake could rupture pipes, contaminate water supplies, and cut off water for up to 60 days.

■ The capital improvement program to repair, replace, strengthen and expand the water-delivery system will cost $3.6 billion over 14 years. The share for regional projects is $2.9 billion; the rest would fix the water system in San Francisco.

■ Demand for water is projected to increase 25 percent over the next 30 years.

Source: San Francisco Public Utilities Commission

Photo by Marion Softky



'We just want to get the system fixed. It's important for 2.4 million people to have water.'

ART JENSEN, GENERAL MANAGER
BAY AREA WATER USERS ASSOCIATION

'We own the system. We operate the system. We don't believe the state should have any say over the operation of the system.'

PATRICIA MARTEL, GENERAL MANAGER
SAN FRANCISCO PUBLIC UTILITIES COMMISSION

Photo courtesy SFPUC

Photo courtesy of SFPUC

Workers lower 42-inch submarine pipeline across Newark Slough in 1925.

◆ **WATER**
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County. It has no bypass — yet. And so on.

The capital improvement program approved by the SFPUC last week, addresses these and other problems with the rickety system. It would upgrade and strengthen facilities, and build in redundancy to assure that water would continue to flow reliably after an earthquake or other disaster.

At the same time, the program would expand the capacity of the system in order to meet future demand, projected to increase 25 percent by 2030. The plan includes adding a "fourth barrel" to the three existing San Joaquin Valley pipelines, and adding another pipeline around the South Bay. "This would increase reliability and redundancy," says Michael Carlin, planning manager for the SFPUC.

A new, larger pump station and bigger pipes below the Crystal Springs Dam would increase both reliability and capacity. In addition, the plan considers raising Crystal Springs Dam eight feet to increase storage capacity in the lakes. "We're talking about raising the dam to its historic height," Mr. Carlin says.

What if?

What if you turned on the tap, and nothing came out?

This is a real possibility. The earthquake may not wait for San Francisco to get its act together, and fix its system. The U.S. Geological Survey has estimated a 70 percent probability of a magnitude 7.0 earthquake within the next 30 years.

Residents and businesses could be without water for five or 10 or 20 days — up to a worst case of 60 days.

What then?

"We need a regional crisis management plan to limit the hardship of such a catastrophe, and cope with its tragic human and economic impact," says Mr. Jensen. "It's fighting fires. It's hospital care — you can't sterilize equipment. It's jobs."

Mr. Carlin promised San Francisco will work with BAWUA on crisis management. "We need to divvy up the water among customers, making sure it goes where it's needed most," he says.

If the Bay Area delivery system holds up in an earthquake, the system can be run backwards, to get water where it's needed most, Mr. Carlin says. "We need to make sure cities can get water to hospitals."

Mr. Jensen is worried about what will happen if local pipe systems are messed up, and stored water can't get to communities that need it. Some communities have less than a day's worth of water in local storage, he says.

Menlo Park is an example of both. Normally, the city water department delivers 3.5 million gallons per day to residents, businesses and institutions in the western and eastern parts of the city, according to Ruben Nino, engineering director.

The Sharon Heights area and SLAC are served by a 5.5 million-gallon reservoir, which could last two days, Mr. Nino says.

But the city has no storage at all in the flatlands, which includes the Willows, Linfield Oaks and Civic Center, and industrial areas, Mr. Nino says. "If San Francisco stops delivering water, there's nothing we can do."

Menlo Park is looking at wells and conducting a study with East Palo Alto of constructing a joint emergency reservoir. If Menlo Park should lose water, Mr. Nino says, "We'd tell everyone to cut use" — especially the big water users such as SLAC, the golf course, Tyco, and SRI.

The California Water Service Co. has better news for its customers in the Bear Gulch District, which serves Atherton, Woodside, Portola Valley, parts of Menlo Park, and adjacent unincorporated areas. "We are in better shape," says District Manager Darin Duncan. "Right now we have at least 30 days of full supplies."

Cal Water has its own 1,200-acre watershed above Woodside, which feeds a 12-million-gallon reservoir in Atherton. It supplies about 15 percent of the water used in the district. Because a lot of pipes cross the San Andreas Fault, the district can switch water from one to another. "We have a lot of redundancy," Mr. Duncan says.

What next?

Now that San Francisco has a plan, the big question is: can it deliver?

"I'm very upbeat about it," Mr. Berry told the audience in Redwood City. "I think all the stars are aligning and something will happen."

Art Jensen and many outside of San Francisco are skeptical. "There is a high risk of the PUC not getting the job done because of historical performance," Mr. Jensen said. "There is great uncertainty what will happen, especially over 14 years."

Members of the Portola Valley Dog Owners' Group and their dogs are, front row from left, Chica, Joanne Klebe, Jackie Starkovich and Andy; back row from left, Paddy, Ellie Mitchell, Briggs, Sue Holderman, Jon Silver and Ted E. Baer "Teddy".

Dog owners seek off-leash dog park at PV Town Center

By Sharon Driscoll
Almanac Staff Writer

Representatives from the Portola Valley Dog Owners' Group recently delivered a 600-signature petition to the Town Council, asking for an off-leash dog park at Town Center.

The petition, which was circulated by Joan Klebe, Jackie Starkovich, Ellie Mitchell, Susan Holderman and Jon Silver, urged the council to "establish a securely enclosed off-leash dog park."

"Off-leash play areas are places where people can socialize with other folks and exercise their dogs in a clean, safe environment without endangering or annoying other people, property, or wild life," said Ms. Holderman.

A town ordinance requires all dogs at Town Center to be on a leash, though the law is sometimes ignored, said Mr. Silver, a former councilman. "There'd be less temptation for people to let dogs off leash in inappropriate areas at Town Center if they had a designated park," he said.

The group offered to work with a committee to make the dog park a reality, and the council forwarded the request to the town's Parks and Recreation Committee for consideration.

But with plans for a Town Hall reconstruction project on hold while geologists try to pin down the location of the San Andreas Fault offshoot known as the Woodside trace at Town Center, it could be a while before this request is realized.

Town Administrator Angela Howard said that decisions on what will go where at Town Center can't be made until results of the fault-exploration project now under way are known, and the council decides how to proceed with its plans to rebuild Town Hall.

ATHERTON WATCH

Trash pickup

Atherton residents will now be able to schedule special trash pickup days with the town's garbage contractor, BFI Waste Systems. Instead of town-wide spring and fall cleanup days, which took place on dates set by BFI, Athertonians will be able to schedule up to two pickups per year whenever they want them.

Cleanup days offer residents the opportunity to get rid of old furniture and other bulky trash that is in excess of their weekly pickup. The Atherton City Council approved the change at its May 15 meeting and amended the town's contract with BFI.

The change is expected to lower costs, discourage illegal dumping and reduce the amount of garbage Atherton sends to the dump, because it is unlikely that every household in town will schedule two cleanup days a year, said Atherton senior planner Lisa Costa Sanders.

Budget meeting

A special City Council meeting to review Atherton's draft operating and capital budget for the coming fiscal year is set for Monday, June 17, at 5 p.m.

The council is expected to then consider the budget at its regularly scheduled meeting of Wednesday, June 19. The special meeting was scheduled in order for the town to have an approved budget in place before the new fiscal year starts on July 1. For information, call 752-0500.