



City of Menlo Park

Emergency Water Supply Project Frequently Asked Questions

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Question

Answer

First Community Meeting– June 30, 2010

1. Why is this project needed?

The eastern third of the City receives its water from the Menlo Park Municipal Water District (MPMWD). All of the MPMWD's water supply comes from SFPUC's Hetch Hetchy pipelines Nos. 1 and 2, which cross several major faults, including the Hayward fault, en route to the Bay Area. There is no emergency back-up water supply in the eastern portion of the City, so an earthquake could leave many residents in this area without water. SFPUC estimates that a water outage could last as long as 60 days while damage is repaired.

The Emergency Water Supply Project is being developed to ensure water supply reliability for the eastern portion of the City.

2. What will the project involve?

The goal of the project is to provide approximately 3,000 gallons per minute (gpm) of water supply that meets state and federal drinking water standards. Well production rates and water quality will not be known until test wells have been drilled, but the City expects it will take 2 – 3 wells (located on separate sites) to meet the needed emergency supply capacity of 3,000 gpm. The City is pursuing this wells-only approach in response to community and technical concerns about reservoir siting.



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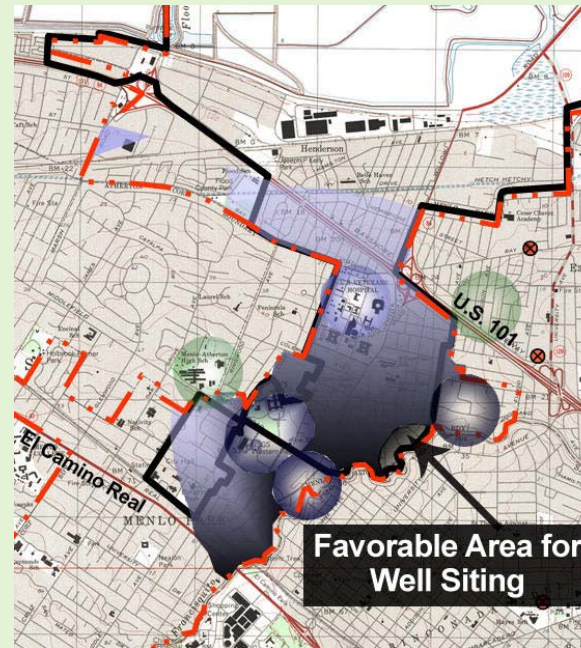
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Question

3. What's happening now, and what are the next steps?

Answer

The first step in the process was to identify the most favorable area for well development, based on hydrogeologic factors. This is shown in the map below.



Within this area, a number of sites may be feasible. The City held two community meetings on June 30, 2010 and September 9, 2010 to solicit input into the well site selection process, and is now working to



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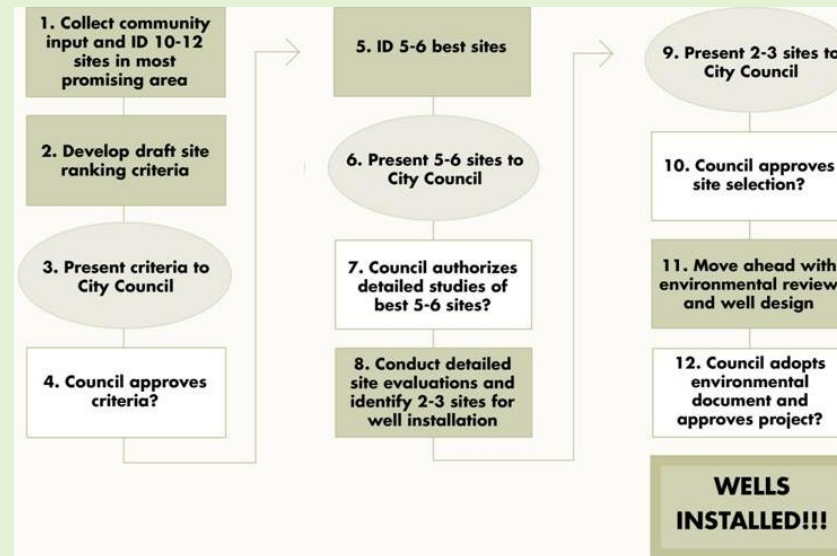
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Answer

develop the details of the process, based on community input, hydrogeology, and engineering constraints

The graphic below shows the anticipated steps in the site selection and project development process. The City team plans to present the process and criteria to City Council for approval in early October.





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4. How can I stay involved in the project planning process?	<p>To stay involved, please</p> <ul style="list-style-type: none">• use the links on the project website to sign up for e-mail updates and project mailings• visit the project website often for additional project information, including FAQ updates• attend City Council sessions (details will be posted on project website and announced via e-mail updates)• come to the next community meeting <p>Contact information for the project is as follows:</p> <p style="text-align: center;">Emergency Water Supply Project City of Menlo Park Engineering Division 701 Laurel Street Menlo Park, CA 94025 P: 650.330.6740 F: 650.327.5497 www.menlopark.org/projects/wellsproject.htm</p> <p>The City's project manager is Pam Lowe, P.E., Associate Civil Engineer. She can be reached at the contact above or by e-mail at phlowe@menlopark.org.</p>
5. How long would construction	The total duration of construction at each site is expected to be about 6 months. This would include



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last?	well drilling as well as construction of the wellhead facilities, access, and site landscaping. During the well drilling phase, drilling would continue for 24 hours/day, for about 3 – 4 weeks. For the remainder of the construction period, work would be limited to 7 am – 5 pm, Monday through Friday. Temporary noise barriers would be provided if they are needed during well drilling.
6. What kind of traffic would be generated by construction?	Traffic would include the heavy trucks used to deliver equipment, materials, and supplies, as well as construction workers' personal vehicles. Once delivered to the site, heavy equipment (such as the drill rig, excavators, graders, etc.) would remain on the site until no longer needed; heavy equipment would not be accessing the site regularly. The construction work force would not be large—probably no more than about 4 – 5 workers would be onsite at any given time. Construction staging would be provided on or adjacent to the sites. Construction workers would also park onsite, or at a designated location nearby. Workers would not be permitted to park on neighborhood streets where it is disruptive to the community.
7. Could this project be incorporated into other projects currently in development?	This approach was suggested by attendees at both community meetings. The City is currently investigating its feasibility and will report back to the community and City Council.
8. Could some of the sites be affected by hazardous materials contamination?	Possibly. Once the “long list” of 10 – 12 possible sites is identified, the site ranking and screening process will include searches of state and federal databases to evaluate the potential for hazardous materials contamination as a constraint on the project. State regulations are very stringent regarding the remediation and reuse of contaminated sites, and well siting will meet or exceed all applicable



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	state standards.
9. Could the project incorporate use of existing wells in the Menlo Park area?	The City is exploring this approach suggested by community members and will report back to the community and City Council on outcomes. Existing wells in the Menlo Park area are privately owned; agreements with well owners would need to be developed to enable shared use, and would only be developed with willing parties. In addition, many of the existing wells are older facilities and/or were installed to serve irrigation needs. As a result, they may not meet current standards for potable supply wells, and because they are smaller-capacity wells, a number of wells would probably be needed if this approach was found to be viable (i.e., if at least some of the wells meet current codes). More information will become available as the engineering team completes the recently initiated study of existing wells.
10. What is the potential for subsidence as a result of pumping from the new wells? How will the City test for subsidence potential, and how can the project protect against subsidence?	Land subsidence occurs when a groundwater basin is in a condition of long-term overdraft. Short-term emergency use will not create an overdraft condition if wells are appropriately sited (i.e., located in areas where the aquifer has the capacity to deliver groundwater at the needed rate). One of the key steps in final site selection will be to drill test wells on the most promising sites, to evaluate actual well yields and ensure that if a production well is installed, it will be able to provide the needed supply without producing local overdraft.



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<p>11. What about noise from construction and operation? What is being done to take noise disturbance into account?</p>	<p>During construction, the City will require contractors to follow noise-reduction practices such as limiting the idling time of equipment, ensuring that all equipment and vehicles have working mufflers, and locating stationary noise-generating equipment as far away from homes and other noise-sensitive land uses as possible. For most of the construction period, work will be limited to daytime business hours (7 am – 5 pm Monday through Friday). The exception will be the well drilling phase—once begun, drilling cannot be interrupted, so work will be continuous 24 hours/day for a period of about 3 – 4 weeks as wells are drilled. Temporary noise barriers will be constructed around the drill sites to reduce the potential for noise disturbance. Throughout the construction period, a hotline will be available to answer questions and respond to any concerns or complaints.</p> <p>Once construction has been completed and the wells become operational, the primary source of noise would be pump operation. Since the wells are for emergency backup supply only, the pumps would not be run continuously, although they would need to be “exercised” for a short period on a regular basis to ensure that they are in good working order and can be brought online quickly in the event they are needed.</p> <p>Pumps would be electric, but a backup power source would be needed in case electricity is interrupted in an emergency. Diesel generators are the standard backup for this type of facility. However, based on community input, the City is now evaluating options for a backup power source other than diesel generators.</p> <p>In addition, the City will be considering the potential for noise disturbance as one of the key factors in selecting well sites. If noise is a concern at the sites selected, the well and emergency power will be constructed in a building with sound attenuation features to reduce disturbance. The City’s</p>



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	engineering team will be developing the facility designs to minimize noise and ensure that City noise ordinance standards are met. More specific information about noise levels and noise buffering approaches will become available as the project moves forward; please continue to check this site for updates.
12. Has the City considered using a green power source instead of diesel generators?	Yes. In response to community input, the City has asked the engineering team to evaluate alternate power sources such as solar power and natural gas, and will report back to the community and City Council on outcomes.
13. Has the city considered using gravity rather than pumping to deliver supply, by constructing an elevated storage tank?	The Eastern portion of the City served by the MPMWD is relatively flat; there are no areas at an elevation high enough that a tank could serve the water system with sufficient pressure.
14. Where would the water in wells come from – would it all be from the aquifer?	Yes, the purpose of the wells is to “tap into” the underground aquifer and allow groundwater to be delivered directly to the City’s water distribution infrastructure. The aquifer is relatively deep (approximately 500 –700 feet below the ground surface).
15. How often will trucks need to access the site for inspection and maintenance?	Inspection and maintenance visits would probably occur about once a month.



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16. What size of trucks would be used for maintenance – pick-up trucks or larger trucks?	Typically, unless major maintenance is needed, inspection and maintenance visits would require only one pick-up truck or similarly sized vehicle. Major maintenance could require larger equipment, but would occur very infrequently (once in 10 years on average).
17. What will the well site look like after construction?	A typical well building is shown in the Powerpoint presentation from the Community Meetings (go to http://www.menlopark.org/projects/wellsproject.htm). However, the facilities constructed for this project will be designed to fit in with the surroundings of the sites that are ultimately selected. Depending on where the facilities are located, this could involve the use of more aesthetic designs and landscaping for a “softer” appearance. More information on the architectural design will be provided after the final sites are selected.
Second Community Meeting– September 9, 2010	
18. Who was noticed for this meeting?	Notices were sent to all Menlo Park residents within the MPMWD’s eastern (“lower zone”) service area, and a 200-foot-wide buffer around the eastern service area boundary within City of Menlo Park boundaries.
19. What magnitude of earthquake is the SFPUC’s Hetch Hetchy system engineered to withstand?	SFPUC’s existing Hetch Hetchy system includes a wide variety of facilities that were built over a period of years; as a result it is difficult to provide a generalized answer that applies to all parts of the system. However, it is safe to say that much of the system was constructed in the early 1900s and therefore substantially predates modern seismic safety codes; studies conducted for SFPUC have shown that there is a very high probability of failure in a major earthquake where Hetch Hetchy pipelines cross the East Bay’s active faults.



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Answer

The seismic reliability objectives of SFPUC’s Hetch Hetchy Water System Improvements Program include the following.

- Meeting current seismic standards. *For SFPUC projects, the design earthquake is identified as part of a project-specific process that considers the seismic setting of a facility, current code requirements, and the facility’s importance to achieving seismic reliability targets.*
- Delivering basic service to the East/South Bay, Peninsula, and San Francisco regions within 24 hours after a major earthquake. *Basic service would provide delivery at a reduced level to at least 70% of all turnouts from the Hetch Hetchy pipelines, but would not necessarily serve all turnouts and would not provide “normal” levels of delivery.*
- Restoring facilities to meet average-day demand within 30 days after a major earthquake.

The Hetch Hetchy upgrades now in progress will result in a substantial long-term improvement on the system’s current reliability but even after the upgrades are completed there could still be a significant delay before full Hetch Hetchy service is restored to the eastern third of Menlo Park in the event of a major earthquake.

More information on SFPUC’s Hetch Hetchy Water System Improvements Program can be found at http://sfwater.org/msc_main.cfm/MC_ID/35/MSC_ID/393.



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<p>20. Where is water for Menlo Park taken out of the Hetch Hetchy system? On the east side of the City? Water isn't "coming back" to the City from Crystal Springs?</p>	<p>Turnouts serving the eastern service area are located in the eastern portion of Menlo Park; water is diverted from the Hetch Hetchy system "upstream" of Crystal Springs Reservoir. It is physically possible for water to be returned to the City from Crystal Springs, but the reservoir serves several other municipalities who would have priority on this supply under their contractual agreements with the SFPUC. As a result, Crystal Springs is not a viable source of emergency supply for Menlo Park.</p>
<p>21. Could the well facilities be entirely underground? Some of the known wells shown on your map have no aboveground facilities.</p>	<p>It is very unlikely that an underground facility would be permitted by the State. State codes require an above-grade wellhead for wells providing potable supply; this reduces the potential for surface runoff to enter the well casing and contaminate drinking water.</p> <p>The maps showing known wells in the Menlo Park area include facilities constructed at different times for a variety of different purposes, including irrigation and groundwater monitoring. Because they were constructed in accordance with different codes, the types of facilities present vary widely. There may also be abandoned wells in the area, where above-ground improvements have been partially or completely removed.</p>
<p>22. What is the potential to bring the other known wells online to provide supply in an emergency?</p>	<p>This possibility was raised at the June 30 public meeting (see Question 9 above) and is being investigated. As discussed above, existing wells in the Menlo Park area are privately owned; agreements with well owners would need to be developed to enable shared use, and would only be developed with willing parties. In addition, many of the existing wells are older facilities and/or were installed to serve irrigation needs. As a result, they may not meet current standards for potable supply wells, and because they are smaller-capacity wells, a number of wells would probably be needed if this approach was found to be viable (i.e., if at least some of the wells meet current codes). More</p>



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	information will become available as the engineering team completes the recently initiated study of existing wells.
23. These wells are being discussed as providing potable water supply. Is this the same type of facility that would provide firefighting supply?	Yes—the same wells would serve all MPMWD customers’ uses, including potable supply and firefighting. The new wells would be connected to the City’s existing water distribution system, allowing supply to be delivered throughout the eastern service area. The need to ensure a reliable backup supply for firefighting is one of the key reasons the City is proposing this project.
24. You talked about well interference as a criterion for siting the new wells, but how much does that matter if the existing wells aren’t being used for potable supply?	The primary concern is that well interference could reduce the ability of the new wells to provide the needed supply.
25. Specific capacity is defined as “gallons per minute per foot of drawdown” – what does “per foot of drawdown” mean?	When water is pumped out of a well, the water level in the well is temporarily lowered— drawdown refers to this reduction in water level. Drawdown is typically measured in vertical feet.



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26. What is the probability that the wells will actually be used?	This is difficult to assess quantitatively. However, the U.S. Geological Survey currently estimates a 31% (approximately 1 in 3) probability of a magnitude 6.7 or greater earthquake along the Hayward – Rodgers Creek fault system in the next 30 years. Such an event would be sufficient to cause significant damage to Hetch Hetchy infrastructure prior to the planned seismic upgrades, and could interrupt service even after the upgrades are completed. More information on earthquake hazards in the Bay Area is available from the U.S. Geological Survey at: http://earthquake.usgs.gov/regional/nca/ucrf/ .
27. What would the project cost, and is cost being considered?	The City has budgeted \$4 million for the project. Cost will be one of the factors (along with technical requirements and community needs) considered in selecting sites and designing the project.
28. In the event of an emergency, are there issues with relying on the existing distribution system? Does it make sense to have an emergency supply if delivery of the supply is problematic?	Please see next question for response; although there are no guarantees of a 100% solution, the project would greatly improve system reliability.
29. What is the probability that our delivery system would still be able to operate after an earthquake large enough to	There is no guarantee that the City’s water distribution system would survive a major earthquake without damage. However, repairs to the City system are within the City’s control and could be initiated quickly in the event of need. Part of the City’s emergency planning includes preparations to ensure that City staff can respond promptly to repair critical damage and restore at least partial service for firefighting and potable supply, prioritizing areas and uses where water is most needed.



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damage the Hetch Hetchy system and cut off Hetch Hetchy supply? (I.e., even with the new wells in place, would MPMWD actually be able to deliver water in an emergency?)	
30. Does the distribution system have isolation valves, and could excess water flow trigger an isolation valve to operate? (I.e., could water be contained to avoid loss of supply after an earthquake?)	The City's existing water delivery infrastructure does have isolation valves. The valves are manually operated and would be closed by City staff in response to damage in a major earthquake, isolating damaged sections of pipe so they can be repaired. The City's Water System Emergency Response Plan also identifies response and recovery protocol, as well as action plans that will be used to respond to emergency events.
31. Can people in the community see what wells look like, for instance, the wells recently installed in Palo Alto? How was the Palo Alto emergency supply	Yes, construction of the City of Palo Alto's new emergency supply wells is nearly complete. More information on that project, including the well locations and architect's renderings, is available at: http://www.cityofpaloalto.org/depts/utl/utilities_engineering/news/details.asp?NewsID=1415&TargetID=262 . The Palo Alto project was developed to meet the same challenge as the proposed Menlo Park project (the need for emergency backup supply in the event of interruptions to imported water supply), but overall system needs are different, in part because of the storage capacity available to



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project different from this one?	serve Palo Alto. As a result, Palo Alto is not constructing stand-alone well facilities—if backup supply is needed, emergency generators and water treatment products would be trucked to the wellheads. This means that the wellhead facilities can be much smaller than the stand-alone facilities required in Menlo Park, where the lack of storage necessitates “plug and play” wells that can be brought online essentially at a moment’s notice. In addition, the Palo Alto well facilities were specifically designed to fit into their particular site surroundings; depending on their location, facilities for sites in Menlo Park could be very different in appearance, depending on where wells are ultimately constructed.
32. What will the well buildings look like?	Please see the response to Question 17 above.
33. Is the City still looking into a storage project?	Storage is not being considered at this time—in response to community concerns, City Council has directed Staff to proceed toward a wells-only project, and Staff anticipate that this approach will be successful (i.e., that a small number of wells—translating to an affordable, low-impact project—will be able to provide the needed 3,000-gpm supply). If test wells are less productive than expected, such that a larger number of sites would be required, it may be preferable to reconsider a storage approach. In the unlikely event that this becomes necessary, additional public meetings would be held to ensure that any additional public concerns are incorporated into the development of a new site screening and selection process.



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34. If there's a disruption in Hetch Hetchy supply, how many days of water supply does the City have?	There is no water storage to serve the eastern third of the City. If supply to this area is interrupted, once the system is depressurized (meaning that residual water in the system has been used), there would be no more supply available. In practice this means that the eastern third of the City would be without supply almost immediately following a major earthquake or other supply interruption.
35. Is there/shouldn't there be a central control system for the City's water supply?	At a larger scale, centralized and automated control systems are ideal, but many smaller water providers throughout the state continue to rely on human controls and manual operation.
36. If the City Council approves the project, how quickly could a project realistically be put into place?	This would depend on project design and location, but assuming an "efficient" site and a smooth environmental review process, it should be possible to construct the project within 12 – 18 months from Council approval.
37. What kind of environmental documentation is needed for this project?	The project will be subject to review under the California Environmental Quality Act (CEQA). The nature of the review – specifically whether an environmental impact report (EIR) is needed – will depend on the sites selected. The City will be reviewing CEQA compliance needs in parallel with the site selection process so that environmental review can be completed efficiently once sites are selected.



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<p>38. I see this project as an excuse to provide more water for development, specifically the Bohannon project. I'd like to see the City provide the numbers behind the emergency water supply project.</p>	<p>Under California law (Senate Bills 610 and 221 of 2001), local jurisdictions may not approve large development projects unless adequate water supply is shown to be available. This entails a thorough and quantitative analysis of existing and future demand vs. known and potential sources of supply, often called a water supply assessment.</p> <p>A water supply assessment consistent with SB610 and SB221 requirements was conducted for the Menlo Gateway (Bohannon – Hotel) project, and concluded that ample supply could be provided from the City's existing water sources and entitlements—no additional supply was found to be necessary to meet the added demand from this project. As required by CEQA and SB610, water demand and supply issues were included in the EIR prepared for the project. The EIR and water supply assessment can be accessed online at http://www.menlopark.org/projects/comdev_iac_EIR.htm.</p> <p>The Emergency Water Supply Project is proposed to address a long-standing system reliability issue that is unrelated to the Menlo Gateway project.</p>