

Environmental Action UPDATE

A Newsletter About Environmental Activities at McClellan

February 2006

Groundwater system expansion complete

The Air Force reached a major milestone last fall in its efforts to clean the groundwater beneath the former McClellan Air Force Base. Over the past two years, workers have been installing 46 new groundwater extraction wells throughout the base. These wells are anticipated to complete the massive groundwater treatment system, which now includes 103 extraction wells.

“We can now say with confidence that the groundwater beneath McClellan is completely contained and captured and presents no threat to the community or surrounding area,” said Paul Brunner, Air Force Real Property Agency senior environmental technical expert.



Workers drill one of the new extraction wells at McClellan.

This system of groundwater extraction wells pulls contaminated groundwater from beneath the ground. The water is then sent to the groundwater treatment plant, located in the western portion of the former base, using above- and below-ground pipelines. The Air Force now has about 6 miles of pipeline feeding groundwater to the treatment plant. The treatment plant is currently treating about 1,600 gallons of water per minute, with a capacity to treat up to 2,000 gallons per minute.

In addition to the new extraction wells, the Air Force has also increased the number of groundwater monitoring wells to more than 575. These wells help the Air Force monitor groundwater contaminant concentrations and movement.

Groundwater treatment began at McClellan in the mid-1980s. The current groundwater treatment system has evolved and changed over time as extraction wells have been installed and technology has advanced.

The original treatment system included 17 groundwater extraction wells, which focused on the most contaminated areas in the western portion of McClellan. During this timeframe, the Air Force also began monitoring the groundwater on and off base,

Please see Groundwater Expansion, Page Two



Media Day

Betsy Weiland, McClellan Restoration Advisory Board Member, speaks at Media Day on Oct. 27.

The event highlighted the successful completion of the groundwater treatment system expansion. Weiland provided a community perspective on the cleanup program at McClellan.

“I’m very pleased to say that the folks from the Air Force as well as the regulatory agencies work very hard to do what’s right and what’s in the best interest of the entire community and taxpayer. McClellan is a complex site involving many disciplines, such as science, geology, risk management and even economics. These people have a very difficult job to do, but so far, I have been very impressed with their diligence as well as the progress being made.”

Paul Brunner, the Senior Environmental Technical Expert for AFRPA, Dexter Cochnauer, AFRPA Senior Representative at McClellan, and Joe Healy from the U.S. EPA also spoke to the audience made up of members of the media, elected officials’ representatives and local community members.

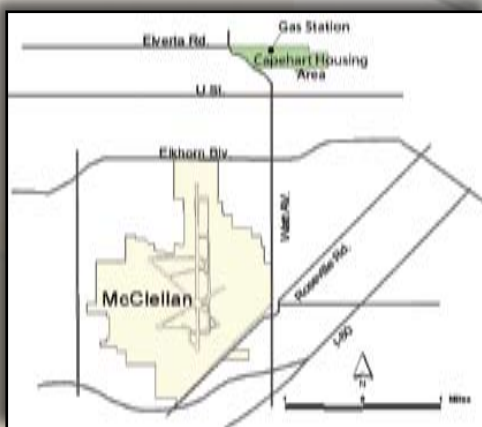


Capehart Gas Station sampling complete

The Air Force performed groundwater and soil sampling on the former Capehart Gas Station located northeast of McClellan. The data collected from the sampling will be used to confirm whether or not further action or sampling is required at the site.

In 1987, the Air Force discovered that about 2,000 gallons of unleaded gasoline escaped from one of the three 10,000 gallon underground storage tanks during the gas station's inventory reconciliation program. Since then, the Air Force has removed the tanks, piping, pump islands and the building at the site.

The Air Force investigated the extent of the contamination and installed and operated two soil treatment technologies, bioventing and soil vapor extraction. Bioventing is a process that increases the rate of biodegradation of contaminants. Soil vapor extraction pulls soil vapor from beneath the ground and removes contamination.



These systems operated at the site from 1994 to 2002. The groundwater investigation was conducted in 2003 to determine if the treatment system has been effective and to evaluate groundwater contamination.

"The previous and current groundwater sampling results have shown that the contamination is below the Regional Water Board water quality limits. We are now going through the process of using the data collected from the sampling to initiate the site closure evaluation and try to reach site closure; which would mean that the Air Force has cleaned up the soil to the required levels," said Doug Fortun, the Air Force project manager for the site.

The sampling included drilling soil borings at various depths to evaluate residual soil and soil gas contamination. Six groundwater monitoring wells were installed in the area to confirm that none of the contamination has

reached the groundwater table.

The Capehart Housing and Gas Station area has been transferred to a private developer.



Dr. William Gibson has been a part of the RAB for over five years as the Technical Community Representative. Dr. Gibson is involved with the Sacramento Environmental Commission as well as the Sacramento community at large. If you are a member of the Technical Community and have any concerns, you can contact Dr. Gibson through email at wrgibson2@comcast.net, or by phone at (916) 483-2005.



Jerome Caston has been a part of the RAB for over one year as the McClellan Park Tenant Representative. Jerome is employed by the USDA Forest Service, which has an office at McClellan Park, and is primarily involved in wildland fire training there. If you are a McClellan Park Tenant and have any concerns, you can contact Jerome through email at jcaston@fs.fed.us, or by phone at (916) 640-1062.



Paul Brunner has been appointed to a new position, Senior Environmental Technical Expert, within AFRPA. The position spans across the entire Agency and will deal with environmental issues. With this change, he will no longer be involved in the daily activities of cleanup and property transfer of the closed Air Force bases in Northern California.



As Brunner moves on to his new role, **Phil Mook** will step into the role of the Program Execution Team Chief. He is now in charge of the cleanup and property transfer of the closed Air Force bases in Northern California, including McClellan. Mook has been with AFRPA for many years, and prior to that he worked environmental issues when McClellan was an active facility.

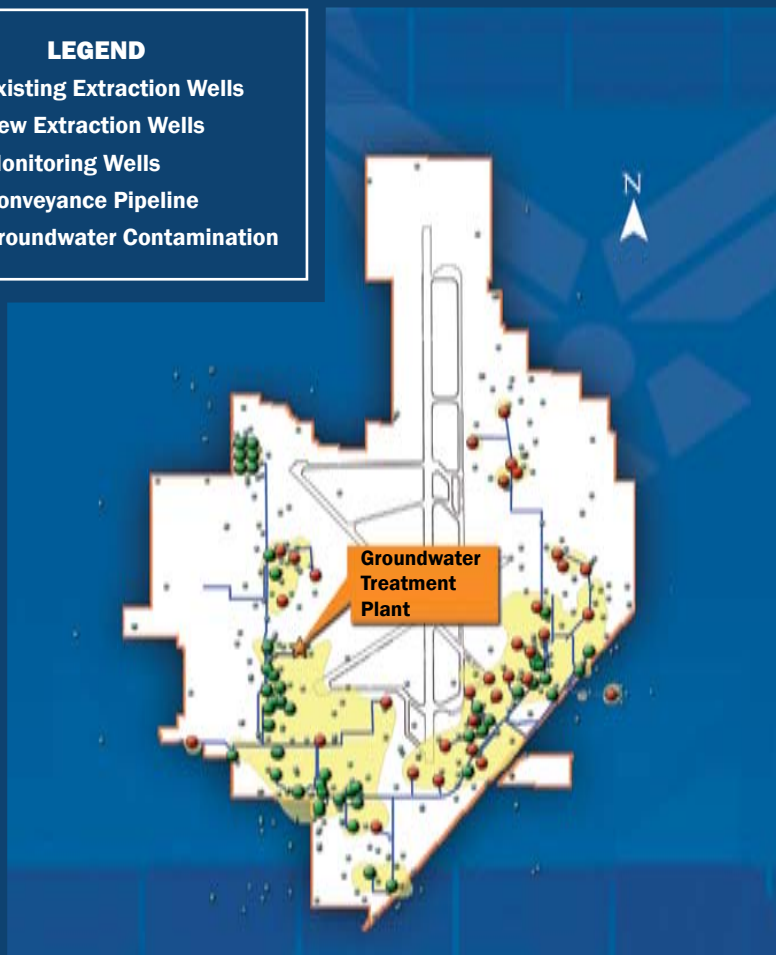


Steve Mayer has taken over the lead role for McClellan as the BRAC Environmental Coordinator, and he will now serve as the Air Force RAB member. Mayer has been leading the soils cleanup program at McClellan and has been involved with the RAB with various projects in the past.

Location of McClellan Groundwater Treatment System

LEGEND

- Existing Extraction Wells
- New Extraction Wells
- Monitoring Wells
- Conveyance Pipeline
- Groundwater Contamination



Groundwater expansion

Continued from page one

the residential areas west of McClellan hooked up to municipal water supplies.

In the 1990s, the Air Force focused on stopping the migration of the groundwater contamination off base, as well as addressing areas of high concentration throughout the base. This led to the Air Force adding 40 more extraction wells to the treatment system.

This most recent expansion is designed to keep the entire area of groundwater contamination from moving in any direction, vertically or horizontally.

So far, more than 62,000 pounds of volatile organic compounds have been removed from the groundwater at McClellan.

"It has taken a lot of work to get to this point, and it's a great success story," Brunner said. "Our goal is to clean up the groundwater and we are committed to doing that. It will take many years, but we have made great progress so far and will continue to look for ways to improve things over time to reach our goal."

Confirmed Site 10 update

Approximately 25,000 cubic yards of excavated soil remain stockpiled in the Confirmed Site 10 (CS 10) weatherization tent. The soil is segregated by type of contamination found in the soil. The remaining stockpiles of soil include low levels of radium and heavy metals.

The final disposition of the soil will be determined in the Focused Strategic Sites Record of Decision, currently scheduled for completion in 2007. A public comment period for this Record of Decision is anticipated to occur in late summer 2006.

As a safety precaution, the Air Force had been conducting continuous air monitoring around the site since 2000, and storm water monitoring since the construction of the tent began in 2001. The Air Force is no longer conducting any soil-disturbing activities inside the tent, and recently determined that this high level of monitoring is no longer necessary. In five years of continuous perimeter air monitoring, the Air Force has never found any elevated readings.

The Air Force will continue to perform quarterly monitoring at the former base fence line. Routine tent maintenance and dust control measures will continue.



Soil stockpiles inside CS 10

Groundwater document dispute resolution

The Air Force and regulatory agencies recently resolved a dispute about the final cleanup remedy for volatile organic compounds (VOCs) in groundwater. The dispute centered around the general issue whether to contain contamination within the former base boundaries or clean up all contamination to drinking water standards.

The Air Force submitted a Draft Final Record of Decision in March 2005. The U.S. Environmental Protection Agency (U.S. EPA) and State of California disagreed with portions of this document and invoked a formal dispute.

Senior leaders within the Air Force, U.S. EPA and State of California worked through the formal dispute process, as detailed in federal regulations. These agencies have agreed to suspend the VOC Groundwater Record of Decision for the time being, as a technical team comprised of the various agencies and local water purveyors work to find the best final solution.

This dispute and subsequent delay of the Record of Decision does not alter the responsibility of the Air Force to finish environmental cleanup, nor does it impact ongoing cleanup efforts.

Next RAB Meeting

Thursday, February 16, 2006, 6:30-8:30 p.m.

Public Comment Period 8 p.m.

North Highlands Community Center
6040 Watt Avenue
North Highlands, CA

Topics of Discussion

- 2006 Budget Update
- Focused Strategic Sites Feasibility Study Update



Please call (916) 643-1250, ext 257

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Top Stories

Groundwater system expansion



Page 1

Capehart Gas Station sampling



Page 3

Creeks sampling



Page 4

Air Force samples on- and offbase creeks

Workers have been out in the creeks just west of McClellan this fall taking sediment samples to help the Air Force determine what contaminants are present that may have originated from McClellan when the former base was an active facility. The sampling was done in Magpie and Don Julio creeks from McClellan to just west of Raley Blvd.

Samples were taken in specific locations chosen to fill in areas called “data gaps”. The Air Force has completed other sampling efforts in the 1990s, and this recently completed round of sampling will give the Air Force and regulatory agencies a more complete picture of what contaminants are in the creeks. Potential contaminants in the creeks include, polychlorinated biphenyls (PCBs), dioxins, pesticides and radionuclides.

In addition to sediment samples, the Air Force also caught crayfish to determine what impacts contamination in the creeks may pose to wildlife.

“Crayfish are bottom feeders and are most likely to have ingested any potential contamination in the creeks. We will analyze what’s in their systems and add that to the information from the sampling efforts to help us get a better understanding of what is in the creeks,” said Molly Enloe, a biologist who oversees all the work that involves natural habitat at McClellan.

Enloe added that the Air Force recognizes that Don Julio and Magpie creeks did carry some contamination off base. The Air Force and regulatory agencies are determining if this residual

contamination merits cleanup action, and if so, how far downstream to take clean up.

“We know that over the many years the base was active that some contamination escaped into the creeks,” Enloe said. “The tough part is to figure out how much of a threat to human health and the environment there is from the residual amounts of contamination still present in the creeks.”

The samples, as well as the crayfish, that were taken this fall are being analyzed. The Air Force will conduct a risk assessment to evaluate how much of a threat the contamination in the creeks poses to human health and the environment. This evaluation is scheduled to be completed in the spring of 2007. Once completed, the Air Force and

regulatory agencies will determine if the creeks need to be cleaned up. This decision is scheduled to be made in 2010 after a public 30-day public comment period.



Magpie Creek

Beaver

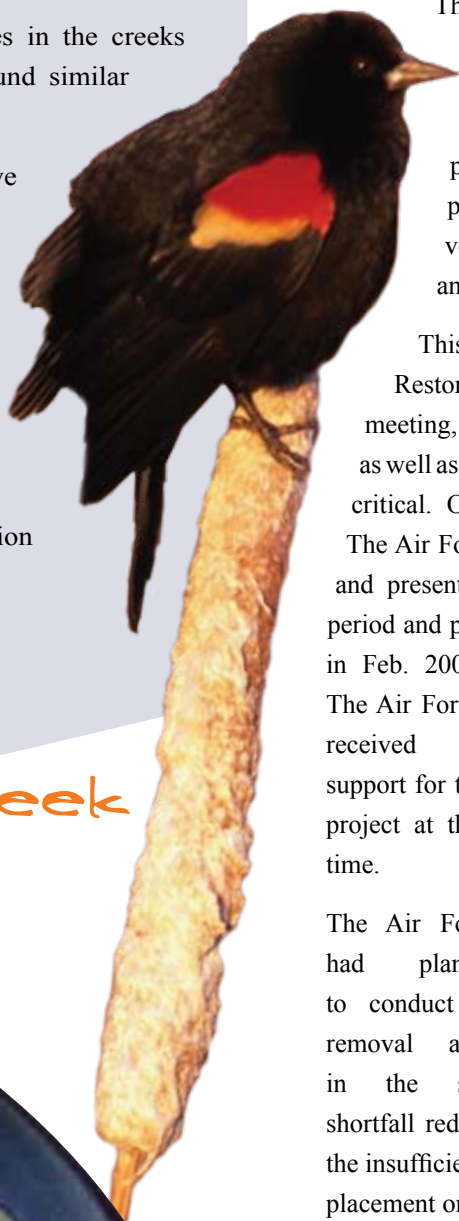


“At this point, there is no indication that the exposure to the low levels of contamination that we’ve found so far warrants an immediate action. But we are doing our due diligence in investigating what’s there,” Enloe explained. “Another factor that will come into play is that creeks in urban areas have similar contamination as what we’re finding in Don Julio and Magpie Creeks.”

The Air Force has taken some samples in the creeks upstream from McClellan, and has found similar contamination at similar levels.

“Even though we know the creeks have contamination before they reach McClellan, that doesn’t mean that once we complete the risk assessment that we won’t clean them up. That’s a decision to be made a few years from now. Right now all we can do is conduct the proper sampling and analysis to get us moving in the right direction to make the best decision possible,” Enloe said.

Don Julio Creek



Creeks tailings project delayed

The proposed project to remove soil tailings piles caused by the 1997 dredging of Magpie and Don Julio creeks on McClellan has been pushed back to at least 2008.

The creeks were dredged to prevent flooding on base, and the soil piles were placed on the banks of the creeks. These soil piles contain various contaminants such as heavy metals, polychlorinated biphenyls (PCBs), chlorinated pesticides, dioxins and radionuclides. This was a voluntary removal action proposed by the Air Force, and fully supported by the regulatory agencies.

This cleanup action was proposed to the McClellan Restoration Advisory Board in Dec. 2003. During this meeting, the Air Force received general support for the project as well as some feedback saying the action was not viewed to be critical. Others questioned whether the project was necessary. The Air Force developed a detailed plan of the cleanup action and presented this during a public comment period and public meeting in Feb. 2004.

The Air Force received support for the project at that time.

The Air Force had planned to conduct the removal action

in the summer of 2006, but an agency-wide funding shortfall reduced the budget from what was expected. Due to the insufficient funding, the project has been delayed based on its placement on the overall priority list of projects to be completed. The Fish and Wildlife Service also sent a letter to the Air Force indicating that they would require compensation if vernal pools are disrupted during the project.

Despite this delay, the Air Force remains on track to complete the Ecological Sites Record of Decision on schedule in 2010. This Record of Decision will determine the final cleanup decision for these creeks tailings piles, as well as other cleanup actions involving the creeks and West Nature Area.



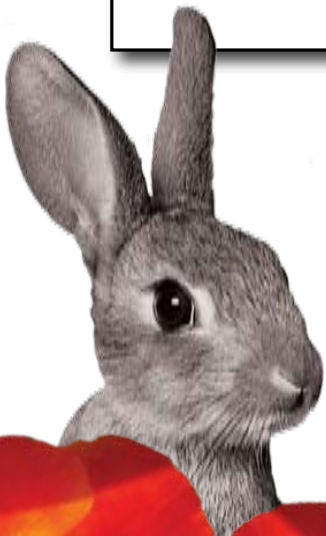
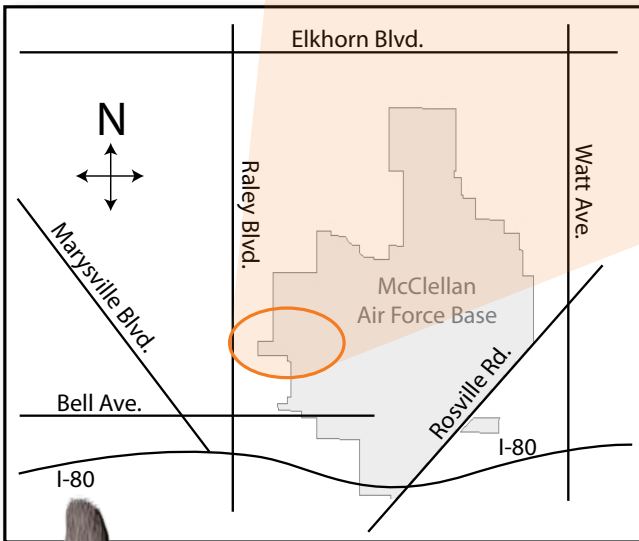
Don Julio Creek

Pond

Raley Blvd.

Vernal Pools

Creek Tailing Piles





■ Magpie Creek



Vernal Pool Fairy Shrimp



Giant Garter Snake



Valley Elderberry Longhorn Beetle

McClellan Protected Species

McClellan is home to a variety of plants and animals living in more than 250 acres of natural habitat areas located around the former base. The Air Force is helping to preserve and protect these areas and the species that live there.

Some of the animals that call McClellan home include; egrets, pheasants, hawks, geese, red-winged blackbirds, river otters, beavers, jackrabbits and snakes.

The natural habitats at McClellan also provide habitat for three protected species of wildlife; vernal pool fairy shrimp, valley elderberry longhorn beetles and giant garter snakes.

Vernal pool fairy shrimp have been found in the vernal pools at McClellan. Vernal pools are a type of seasonal wetland that occur in grassy areas in low spots in the ground.

The creeks and wetlands on McClellan also provide a home for the **giant garter snake**. This snake spends the winter in underground burrows, emerging for the summer in late April or early May.

A stand of elderberry shrubs is located near Don Julio Creek on the western side of the former base. These shrubs are the host plant of the **valley elderberry longhorn beetle**. The beetles spend most of their lives in the larval stage, living within the stems of elderberry plants and feeding on the interior wood. When the adult beetle emerges from the wood in late spring, it leaves a small oval opening in the stem of the plant, which is often the only evidence that the species is present.