



Drinking Water Investigation Update: McFarland, CA

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY • REGION 9

MAY 2000

Phase 2 Drinking Water Investigation Sampling Results

The U.S. Environmental Protection Agency (EPA) is evaluating the current environmental conditions in McFarland, California, in response to a request from residents. As part of this environmental investigation, EPA is sampling drinking water, soil, and air. In July 1997, EPA began the first phase of the drinking water investigation by sampling the McFarland Mutual Water Company storage tank and all active drinking water wells. In June 1998, during the second phase of the drinking water investigation, EPA collected water samples from drinking water faucets at schools, public parks and buildings, and at several homes located throughout McFarland. EPA also re-tested the storage tank and all active wells during the second phase of the investigation.

EPA OPEN HOUSE

Please Come to Our Open House
4:30 to 7:30 p.m.
Tuesday, June 13, 2000
McFarland Community Center
107 Sherwood Avenue

EPA invites you to attend an open house to discuss sampling results from the Phase 2 drinking water investigation in McFarland, California.

Phase 2 Findings

Your drinking water was tested for more than 300 substances using the best testing methods available, making this one of the most complete chemical analyses of any drinking water system. Analyses were performed at eight different laboratories where stringent EPA testing and review procedures were followed. After

analysis, EPA performed a comprehensive evaluation of the results to ensure that lab procedures were followed correctly.

Most of the more than 300 substances tested were NOT present in any of the samples collected from McFarland's drinking water wells, storage tank, and homes, public buildings or parks. Many of the substances that were

found occur naturally in groundwater (e.g., minerals and metals such as magnesium, arsenic, and iron), and were therefore expected to be present in McFarland's drinking water. Our extensive testing also found some substances which are not naturally occurring. Most of the substances we found in the water were detected below or are treated to below levels of health concerns.

FACTS AT A GLANCE

What EPA did...

- Sampled more than 40 locations within McFarland's drinking water distribution system, all active wells, and storage tank.
- Tested for more than 300 substances.
- Used special methods to detect substances at very low levels.
- Modified methods to look for substances not normally tested for.
- Performed a thorough review of all laboratory data.
- Compared results to drinking water standards or health based criteria which are used to determine the levels of health concern.

What EPA found...

- Most substances were detected below or are treated to below levels of health concern.
- High levels of lead were detected in "first draw" samples from a few faucets. The lead levels of all the samples (after running the water) were below levels of health concern. EPA recommends running your water for at least 30 seconds before using it.

As has been known for years, nitrate levels in Wells #2 and #4 require wellhead treatment to meet the drinking water standards. The existing treatment system is effective in reducing nitrate levels to below levels of health concern. Higher lead levels were found in a few private and public water faucets after the water had not been used for over six hours. The lead levels of all the samples (after running the water) were below levels of health concern. EPA recommends running your water for at least 30 seconds before using it.

Members of the community have expressed ongoing concerns about arsenic, dibromochloropropane, and nitrates: three of the substances found at levels below or treated to below levels of health concern.

Arsenic

Arsenic was found in all samples collected throughout the system. Arsenic may come from natural sources or from other sources such as agricultural applications and mining activities. Because it is a naturally occurring element, arsenic is commonly found in many groundwater wells in the Central Valley and the western United States. The arsenic levels found in McFarland's drinking water wells and faucets meet current federal and state drinking water standards.

Dibromochloropropane (DBCP)

Dibromochloropropane (DBCP) was formerly used as an agricultural chemical and is commonly found in groundwater throughout the Central Valley. DBCP was found at low levels in Wells #2 and #4 and one sample taken from a park drinking water fountain. The levels of DBCP we detected met drinking water standards. Wells #2 and #4 are primarily used in the summer months when water demands are highest.

Nitrates

Our testing confirmed previous findings that high levels of nitrates exist in the groundwater collected from Wells #2 and #4. We also confirmed that the nitrate removal treatment systems on these wells reduce nitrate levels to below levels of health concern. After nitrate removal treatment, the nitrate levels were below levels of health concern in all the water samples collected from faucets throughout town.

Lead

EPA collected samples for lead after a no-water use period of at least six hours ("first draw") at all residential and public sampling locations. High levels of lead were detected in a few "first draw" samples. EPA also collected samples later the same day after running the water. The lead levels of these sample results were compared to the lead levels in the "first draw" samples. The lead levels of all the samples after running the water were below levels of health concern. Therefore, anytime a faucet has not been used for six hours or longer, EPA recommends running your water for at least 30 seconds before using it. The more time water has been sitting in a pipe, the more likely higher lead levels will be present. This is a common condition for many water systems in the United States.

Disinfection By-Products

Disinfection of drinking water is one of the major public health advances of the 20th century. One hundred years ago, typhoid and cholera epidemics were common throughout American cities and chlorination/disinfection was the major factor in reducing these epidemics. The disinfectants (usually chlorine or chlorine-containing compounds) often react with naturally occurring materials in the water to form unintended organic and inorganic by-products, called "disinfection by-products", which may pose health risks. Disinfection by-products are found in virtually all water systems which use a disinfectant. As a result of the disinfection process used in McFarland, some disinfection by-products were detected at levels below levels of health concern.

Additional Water Testing

EPA modified one of the drinking water tests in order to look for substances not normally looked for, and to be able to see chemicals at much lower levels. Because this was a modified test, we obtained a result that we have not yet been able to interpret.

To date we know the following:

- The result is observed in about half of the McFarland drinking water samples we tested.
- We found a similar result in another drinking water system.
- The result is observed only when this modified test is run by a laboratory with special equipment.
- We think the result represents a disinfection by-product because it is observed only in samples after chlorination, and not found in samples before chlorination.

Next Steps

We will continue to:

- Work with the California Department of Health Services (DHS) and other experts to attempt to interpret the result.
- Work with DHS to sample other drinking water systems to determine if this result or substance is common.

Soil Investigation Update

In February 1999, EPA collected surface and subsurface soils samples from a variety of locations in McFarland, including nine commercial facilities, six residences, four schools, and three public areas. We are finalizing the soil sampling results report and will share our findings with the community in the next few months.

Air Investigation

To complete the current environmental investigation, EPA will collect air samples in McFarland. EPA is in the process of preparing a Field Sampling Plan for the air investigation. This is a technical document that describes the methods, procedures, and quality control measures that will be used during the air sampling activities. We expect the Field Sampling Plan for the Air Investigation will be available for public review this fall.



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If you would like to be included on the mailing list to receive future mailings about the McFarland Investigation, please fill out the coupon below and return to:

**Angeles Herrera, Community Involvement Coordinator
U.S. Environmental Protection Agency Region 9
75 Hawthorne Street (SFD-3) • San Francisco, CA 94105**

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(*Optional items)





CONTACTING EPA

If you would like more information, or if you have questions, please contact the following EPA staff members:

Angeles Herrera, Community Involvement Coordinator (415) 744-2185

Alana Lee, Project Manager - Drinking Water and Soil (415) 744-2217

Brunilda Dávila, Project Manager - Air (415) 744-2364

Or please call EPA's toll-free number (800) 231-3075 and leave a message for Angeles. She will return your call. If you wish to remain anonymous, please let us know, and all information will remain confidential.



INFORMATION CENTERS

The Phase 2 drinking water results and other information about EPA's investigation is available at the following locations:

Superfund Record Center
US EPA, Region 9
95 Hawthorne Street, Suite 403S
San Francisco, CA 94105
(415) 536-2000

McFarland Public Library
500 Kern Avenue
McFarland, CA 93250
(661) 792-2318

Beale Memorial Library
Local History Room
701 Truxton Avenue
Bakersfield, CA 93301
(661) 861-2136

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