



# Water Quality Monitoring

## San Francisco Bay Area National Parks

### Resource Brief

**Above:** The West Union Creek watershed in Golden Gate National Recreation Area's Phleger Estate has five water quality monitoring sites. A total of 49 sites are monitored throughout the San Francisco Bay Area national parks. Photo by Mason Cummings.

**Below:** A freshly collected *E. coli* sample from the Olema Creek watershed. High concentrations of *E. coli* may indicate pathogenic bacteria contamination of the water body—a human and wildlife health risk. Photo by Katie Wallitner, NPS.



## Why Is Water Quality Important?

Freshwater quality affects people's enjoyment of San Francisco Bay Area national park resources, and plays a direct role in the health of aquatic habitats. It also affects the plants and animals that depend on these habitats, including threatened and endangered species like California freshwater shrimp, coho salmon, steelhead trout, and the California red-legged frog.

In 2006, the National Park Service began monitoring freshwater quality under a long-term monitoring plan developed for the Golden Gate National Recreation Area, John Muir National Historic Site, Muir Woods National Monument, Pinnacles National Park and Point Reyes National Seashore.



**Above:** Watersheds with water quality monitoring.

## Why Do We Monitor Water Quality?

- To determine the range, variability, and trends in water quality parameters (water temperature, pH, conductivity, dissolved oxygen, turbidity, nitrate, total Kjeldahl nitrogen, and pathogenic indicator bacteria) for priority streams
- To learn the extent to which priority water bodies in the parks meet federal and state water quality standards

## How Do We Use the Monitoring Data?

- To establish a baseline that can be used to detect and assess the effects of specific instances of contamination or erosion
- To guide and evaluate projects to improve water resources, such as the restoration of Redwood Creek

## What Have We Learned?

Water quality monitoring alternates watersheds every two years, so after eight years, each water body will have had four years of monitoring. As a result, it is too soon to draw conclusions about long-term trends in water quality. Still, the data provide a glimpse into current watershed conditions across the parks. While most monitoring locations commonly meet water quality objectives, certain sites exhibit high failure rates for specific water quality parameters. For instance, Franklin Creek, in the most urban of the monitored watersheds, has often failed to meet water quality standards for most measured parameters.

To learn more, visit [www.sfnps.org/water\\_quality](http://www.sfnps.org/water_quality)  
Summary by Katie Wallitner and Jessica Weinberg McClosky, September 2014.

## For More Information

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