



Plant Community Monitoring

San Francisco Bay Area National Parks

Resource Brief

Above: A grassland plant community in Pinnacles National Park. Photo by Robert Steers, NPS.

Below: Coastal dune vegetation at Point Reyes National Seashore. Photo by Robert Steers, NPS.



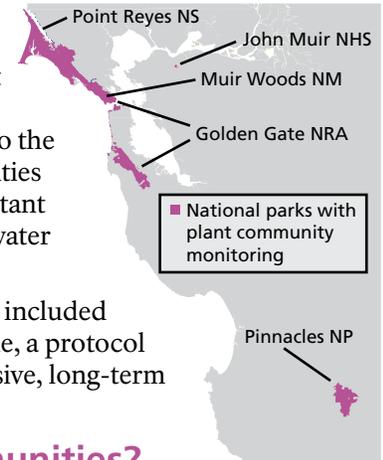
Below: Redwood forest in Muir Woods National Monument. Photo by Jessica Weinberg McClosky.



Why Are Plant Communities Important?

Plant communities create essential habitat for plants and animals. In the San Francisco Bay Area national parks, plant communities provide habitat for more than 160 special status species, from the federally endangered San Francisco garter snake to the endangered Sonoma spineflower. Plant communities are also integral to the functioning of many important ecosystem processes such as carbon storage, the water cycle, and fire regimes.

While several National Park Service projects have included limited forms of vegetation sampling for some time, a protocol has recently been developed to guide comprehensive, long-term plant community monitoring.



Why Do We Monitor Plant Communities?

- To establish baseline conditions for a diversity of plant communities
- To detect changes in plant community structure and species composition over time relative to present-day baseline conditions
- To identify trends in plant health and mortality, woody debris density (potential fuel for fires), invasive plant abundance, and soil cover (leaf litter, etc.)

How Will We Use the Monitoring Data?

- To learn basic community dynamics (succession, variability, etc.), and to relate vegetation changes to changes in climate, land use, and biological interactions
- To guide management decisions related to habitat restoration and species conservation for special status plants and animals
- To inform strategies for responding to natural and man-made disturbances like fires, disease outbreaks, invasive species infestations and climate change

What Have We Learned?

Pilot data was collected between 2011 and 2013 to help refine the methods and logistics for long-term plant community monitoring. 2015 is the first year of formal monitoring. The status of monitored plant communities will be reported after each year, and the data will be analyzed for any changes or trends after a series of samples (re-sampling every three years is being proposed).

To learn more, visit www.sfnps.org/terrestrial
Summary by Jessica Weinberg McClosky, January 2015.

For More Information

San Francisco Bay Area Network Botanist
Eric Wrubel, eric_wrubel@nps.gov

SF Bay Area National Parks Science and Learning
<http://www.sfnps.org/terrestrial>

San Francisco Bay Area Network
<http://science.nature.nps.gov/im/units/sfan/>

