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U.S. Department of the Interior

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Pinnacles National Monument Fire Management



Bottomlands Prescribed Fire – First Step Toward Restoration

The 130-acre Bottomlands Prescribed Fire on newly acquired lands at Pinnacles National Monument was successfully completed on June 9, 2009. This burn was the first in a series of treatments that are being done to restore a 2,000 acre parcel near the east park entrance which includes increasingly rare valley oak savannahs, wetlands, native buckwheat and chaparral. These natural values are threatened by a dense 50-acre monoculture of invasive, non-native yellow starthistle (*Centaurea solstitialis*), which developed as a result of previous land use and altered stream flow. Prescribed fire has been shown to effectively to control yellow starthistle when burning is properly timed and is used in combination with other treatments.

The primary resource management objective of the Bottomlands restoration project is to remove 90% of the yellow starthistle after three years of treatment which will include a combination of prescribed fire, herbicide and / or mowing. Over the 3 year period, a series of 1 meter square plots in the project area will also be treated with different seeding mixes, soil preparation and sowing methods to help determine the best strategy for larger scale seeding with native species.

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The 130-acre burn was divided into 5 subunits. The burn was carefully timed to kill yellow starthistle before new seeds were dispersed. The burn objectives of consuming 90% of the light surface fuels and 70% of the thatch were achieved. In addition to yellow starthistle, the fuels included other non-native weeds, notably summer mustard (*Hirschfeldia incana*) and annual grasses such as wild barley (*Hordeum murinum*), and ripgut brome (*Bromus diandrus*). However, the southern part of the burn unit also contained a significant amount of native wildrye (*Leymus triticoides*), a perennial rhizomatous grass.

Collaboration was evident in all aspects of the Bottomlands project which is jointly funded by the National Fire Plan, and the National Park Service Natural Resource Preservation and Protection program. Revegetation and ongoing weed removal will also involve a substantial number of volunteers. The prescribed burn itself was conducted by fire crews from the S. F. Bay Area National Parks, Bureau of Land Management Hollister Field Office and Fort Ord, and CalFire San Benito-Monterey Unit.

The Bottomlands Prescribed Fire ushered in a new era of prescribed fire at Pinnacles National Monument, which had an active program in the 1980's and 1990's, and last used prescribed fire in 1999. After reorganizing to a multi-park fire program, and several years of fire management planning, prescribed fire itself has been restored at the park, as a vital tool for resource management.

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