



Point Reyes National Seashore Fire Management



Historic structures near Drakes Beach



Collecting native grass seed in 2003



Prescribed fire treatment in 2004

Drakes Beach Prescribed Fire--Reducing Fuel to Protect Park Structures and Initiate Grassland Restoration

On September 15, 2004, 70 acres of grasslands and small numbers of shrubs were treated with prescribed fire near Drakes Beach on D-Ranch at Point Reyes National Seashore. This treatment was done to protect park structures and to begin an experimental restoration of coastal grasslands. The grasslands which were treated were removed from grazing allotments in 1998.

Purpose of Treatment

The ecosystem in the Drakes Beach burn unit was dramatically altered by the agricultural practices used in the past. These practices introduced non-native grasses for cattle forage, and likely fertilized the site many times with manure. The use of fertilizer increased the soil nitrogen, giving non-native species an advantage over native species, and making the site over-productive. As a result, a dense non-native annual grassland dominated by Italian ryegrass and Mediterranean barley developed. The dense mulch that had accumulated created an unnatural fuel load, threatening the nearby Ken Patrick Visitor Center, and several historic structures on D-Ranch. This dense mulch also made it difficult for native plant seedlings to penetrate and survive.

Use of Prescribed Fire

Prescribed fire was used to reduce the dense build up of dead non-native annual grasses and prepare the site for seeding with native grass. The burn unit is located near Drakes Beach where beach fires made by visitors create potential for an unplanned wildland fire.

The burn unit was successfully ignited between the hours of 9:00am and 5:00pm and was monitored into the evening. The project was implemented using 40 firefighters and 7 engines. This included partners from Inverness Volunteer Fire Department, Nicasio Volunteer Fire Department, Lava Beds National Monument, Sequoia and Kings Canyon National Park, and Golden Gate National Recreation Area. The overall strategy was to use a slow, backing fire to get good consumption of dead matted grasses which had accumulated in order to reduce fuel and prepare the unit for post-burn seeding with native grass.

Post-burn Seeding

In the spring of 2003, several pounds of native California brome seed were collected at D-Ranch. California brome is a hearty native perennial grass found throughout the Seashore, and a remnant population was found within the burn unit. A grower multiplied the seed to approximately 125 pounds for use after burning. A pilot seeding test project is planned for the winter of 2005. The unit will be reburned in the summer of 2005, and seeded after the fall rains begin. Monitoring plots will be used to determine the effects of burning and seeding.

Benefits of Treatment

The objective of combined burning and seeding treatments is to reduce fuel, and improve the habitat for native species. The endangered Myrtle's silverspot butterfly is one species expected to benefit from these treatments. This butterfly once inhabited much of the California coast. Today, Point Reyes is one of the last places it can still be found. Myrtle's silverspot butterflies lay their eggs near the leaves and stems of violets which grow in coastal grasslands. These violets can be suffocated by competition with non-native annual grasses, such as those found in the Drakes Beach Area. Native grasses which might benefit from this treatment include red fescue which is found near the burn unit and purple needlegrass which is found throughout Point Reyes.

Fuel reduction near Drakes Beach at D-Ranch also enhances fire protection for a historic wooden barn and outbuildings which are important reminders of the area's agricultural past, as well as a rustic visitor center which serves an average of 48,000 visitors per year. The beach area overall receives over 300,000 visitors per year.

Smoke Management

A mailing was sent to 4,500 residents in the surrounding community several weeks in advance of the prescribed fire treatment. This allowed most people to anticipate the smoke generated by the project, resulting in very few complaints. Prevailing winds blew the smoke over the ocean which also minimized impacts to local communities. One surprise was that the smoke entered an air stream over the ocean and was quickly carried southward, causing the most noticeable smoke effect 40 miles away in San Francisco. Fortunately, the media had received news that a prescribed fire was in place and averted mass-concern with a radio broadcast during evening commuter traffic.

Future Application

If the combination of burning and seeding treatments is effective, it may be used on a much larger scale. Approximately 18,000 acres of grasslands within the Seashore are still used for agriculture. If these acres were not being grazed by cattle, a higher fuel load would develop, and other fire management strategies would be needed. In addition, the park would need to prioritize these acres for restoration. Burning and seeding with native grass may be used more extensively in the future.

For More Information:

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