

Natural Resource Protection

California State Parks is the steward of some of the most diverse ecosystems in the world. With the role of stewardship comes the responsibility to preserve, and when necessary restore, these natural systems of state and national significance.

Current Status

Natural resources within the State Park System and throughout California face a variety of risks. Continuous urban expansion sequesters native plant and animal species into protected sanctuaries with hostile boundaries. The introduction of non-native or exotic species of plants and animals threatens natives. This has resulted in many species of flora and fauna being classified as threatened or endangered, risking extinction without intervention and protective measures. Additionally, natural processes lead to a buildup of fuels and prohibit natural propagation of certain species that depend upon the natural fire cycle for renewal or survival.

■ Lands Contributing to Sustainable Ecosystems

The Department is committed to increasing sustainability of parklands by securing lands that will bridge or link parks to other protected areas. These linkages will buffer the impact of urban residential use and provide meaningful watershed protection. They may also contribute to partnerships with other agencies by meeting regional conservation planning goals.



Herd of elk at Prairie Creek Redwoods State Park



McArthur-Burney Falls Memorial State Park

Measurement Rationale

Measurement is essential for the Department to succeed in its mission to preserve the state's extraordinary biological diversity and protect its most valuable natural resources. Ecosystem measurement is time consuming and difficult, and the challenge for measurement is in the selection of key elements that accurately portray the overall health of each park unit. It requires a mix of the following indicators of ecosystem health.

- Lands contributing to sustainable ecosystems
- Exotic plant and animal species control and management
- Monitoring of flora and fauna
- Restoration of natural processes
- Visitor perception
- Paleontological resource management

■ Exotic Plant and Animal Species Control and Management

Measurement of exotic plant and animal species in California State Parks improved significantly with the creation of the Natural Resources Condition Assessment. In fiscal year 2001-02 the Department collected baseline information from 197 park units representing 94 percent of the natural units in the system. The information collected defines the extent of coverage of the most damaging exotic species of plants and animals found in the units surveyed. The survey introduced measurement of “management units” boundaries based on permanent features unlikely to change. Management units are manageable-sized areas, enabling efficient organization and scheduling of natural resource monitoring and maintenance. Boundaries of management units define logical margins, easily recognizable to experts, that include areas with similar management goals. For example, the management unit boundary may separate a wetland from an upland area, or a beach/dune area from a facilities area. The Department identified 1,064 management units in the 197 parks surveyed.

■ Monitoring of Flora and Fauna

Natural resource monitoring reveals the effects of natural and human processes on natural resources. Information from monitoring identifies potential actions that could mitigate ecosystem degradation. Over the past several years, the Department has developed a Natural Resources Maintenance Program to survey parklands for defined elements of environmental health. Long-term measurement of trends enables State Parks to manage its ecosystems for ongoing health, significance and sustainability, and to eventually restore them to their pre-settlement indigenous state.

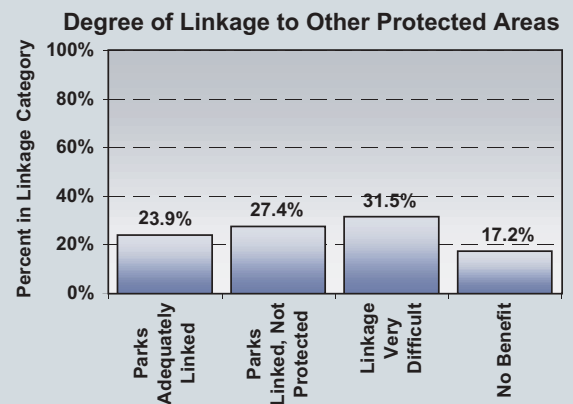


Road removal and peak restoration at Angel Island State Park

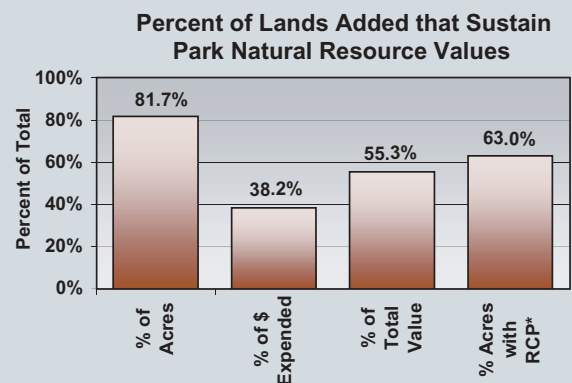


Western tiger swallowtail butterfly at Silverwood Lake State Recreation Area

Data



The chart above depicts the degree that parklands can be or are adequately linked to other protected areas. The chart below illustrates the Department's efforts to secure lands that sustain park natural resource values and their degree of sustainability.



*RCP= Regional Conservation Plans



Coal Canyon acquisition in Chino Hills State Park

■ Restoration of Natural Processes

Central to State Parks' strategy of natural resource restoration is the restoration of natural processes and the removal of artificial processes. Over the past 50 years, wildfire has been effectively excluded from state parklands. However, current land management science has determined that fire is a necessary element in the natural ecological process. Cyclical fire provides for greater biodiversity by allowing the natural succession of vegetation. It also reduces the build-up of large fuel sources, thereby preventing catastrophic fire events. There are also inherent fluctuations in the process of prescribed burning due to numerous variables that affect fire application such as weather, staffing schedules, availability of cooperating agencies, and length of burn season.

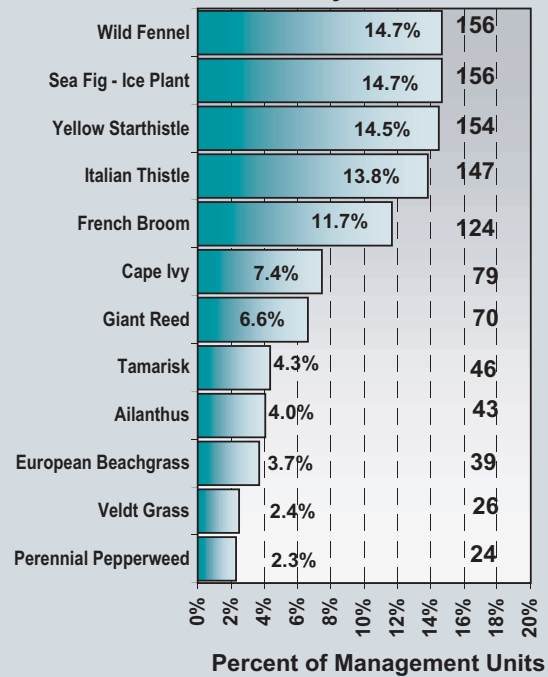
■ Visitor Perception

Building a strong advocacy and constituency is paramount to success in California State Parks. The Department conducts an ongoing visitor survey, containing a seven-year baseline of information on visitor satisfaction with the preservation and protection of natural and cultural resources. Public perception and input helps managers understand how to limit potential damage from human contact as well as determine the degree of advocacy for the department's responses to ecosystem management issues.

■ Paleontological Resource Management

The Department has a number of active paleontological beds, primarily in the desert regions of southern California, where new specimens are still being discovered. Discovery sites are surveyed, monitored, and recorded. Critical specimens are processed and studied in a museum environment, and eventually used to interpret millions of years of changing climate, vegetation, and animal life.

Number and Percent of Management Units with Worst Exotic Plant Species, the "Dirty Dozen"



Exotic species are flora or fauna that were artificially introduced to the native ecosystem and pose a threat to native habitat. This chart depicts the number and percent of management units found to have encroachment from any of twelve exotic species called the "dirty dozen," indicating the prevalence of the threats throughout State Parks. Another chart on page 13 illustrates the degree of infestation of the twelve species. This data is from the Natural Resources Maintenance Program.



Coal Canyon wildlife linkage



Native grassland restoration at Mt. Tamalpais State Park

Measures

■ Lands Contributing to Sustainable Ecosystems

The Department commits to securing lands to sustain currently protected natural resource values. Sustainable additions fall primarily into the following categories:

- 1) Provide, create or protect linkages to existing protected areas,
- 2) Contribute to complete watershed protection, or
- 3) Provide meaningful buffers from urban impacts.

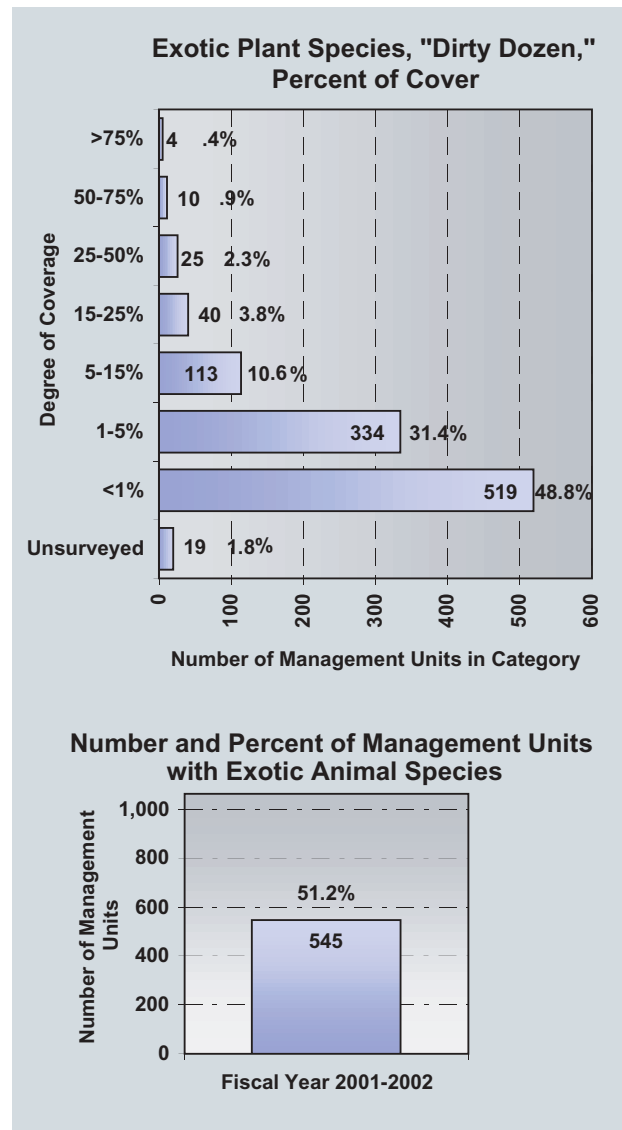
The acquisitions may also contribute to regional conservation planning goals.

By linking natural resource areas of California State Parks to other protected areas, the department can avoid the impact of fragmentation which include major species losses and habitat degradation.

This measure portrays the percentage of land additions meeting park natural resource values. While the largest percentage of total land added supports these values, the most important lands, which are near urban areas, are very costly, making these additions more difficult but with high yield.

■ Exotic Plant and Animal Species Control and Management

Achievement of the control of exotic or invasive species takes place through a variety of eradication processes that reduce or inhibit spread of cover. The Department defined a list of the twelve worst species of exotic plants, referring to them as “The Dirty Dozen.” Choice of these species was made using scientifically-based criteria; The ability to spread rapidly into undisturbed areas; their impact on abiotic (nonbiological) ecosystem processes; biotic community composition; vegetation structure;



Exotic vegetation removal at MacKerricher State Park



Stream macroinvertebrate monitoring at Wilder Ranch State Park

genetic integrity; or their vicinity to rare, threatened, or endangered plants, animals, or sensitive natural communities.

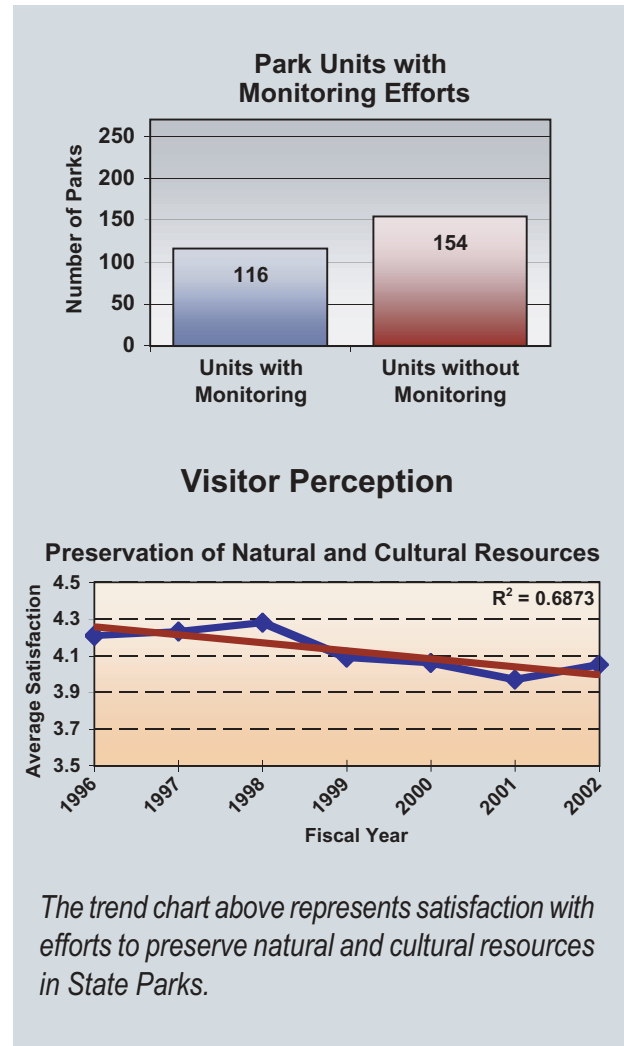
Similarly, nine exotic animals are identified as producing significant impacts on ecosystems.

■ Monitoring of Flora and Fauna

The Inventory, Monitoring, and Assessment Program (IMAP) provides goals, guidance, and standards for evaluation of vegetation, wildlife, and other natural systems within state parks. Scientific data collection methods produce information such as streamwater quality, species distribution of flora and fauna, and numbers of offspring of endangered animals. Monitoring data helps to assess what resources are present and the distribution and quantity of each resource. Trends are tracked so that corrective management actions can be taken when necessary.

■ Restoration of Natural Processes

Prescribed fire and unscheduled wildfires contribute to the health of ecosystems where natural fire cycles have been interrupted. In the five-year period from 1996 to 2001, 88 management units were burned through scheduled prescribed fire, and 79 by unscheduled wildfires. The department is working to understand which remaining management units would benefit most from restoration of the natural fire cycle and anticipates having this data for the next reporting period.



Prescribed fire in Sinkyone Wilderness State Park

■ Visitor Perception

Visitor satisfaction with the degree that natural and cultural resources are preserved and protected is gradually declining, especially from years 1999 through 2002. This corresponds to an increase in park visitation over the same time period.

■ Paleontological Resource Management

During the years 2000 through 2002, 155 of an estimated 102,000 potential discovery site acres were surveyed for new paleontological specimens. The department's policy is to recover fossils only as they become exposed through natural erosion processes.

Data on paleontology in this report applies only to the Colorado Desert District Stout Research Center. Fossils from Red Rock Canyon State Park and others, are housed at UC Berkeley, the Natural History Museum of Los Angeles County, and other facilities throughout the state.

The Museum Collections Facility Index (MCFI) measures the degree to which facilities which house artifacts are in compliance with Departmental standards under several categories of risk. The MCFI measures both indoor and outdoor facilities. Scores for the Stout Research Center remained at 81 percent compliance for paleontology collection storage areas, while efforts continue to get the remainder of the collection into the department's automated registration system.

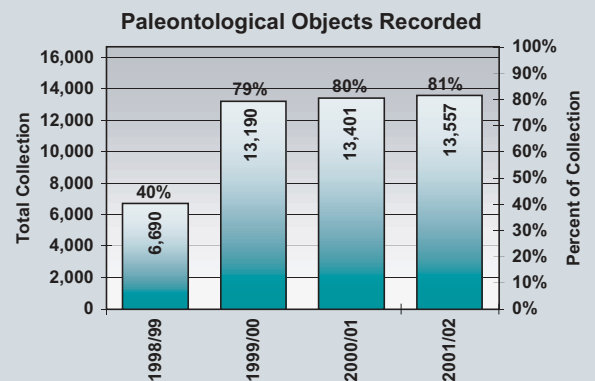
Participation in interpretive programs for paleontology shows a gradual increase, but with a high degree of variation from year to year. Volunteer hours of service for paleontology increased by 15 percent from fiscal year 2000-01 to 2001-02. Volunteers provide a variety of research and interpretation roles for paleontology.



Fossil beds at Red Rock Canyon State Park

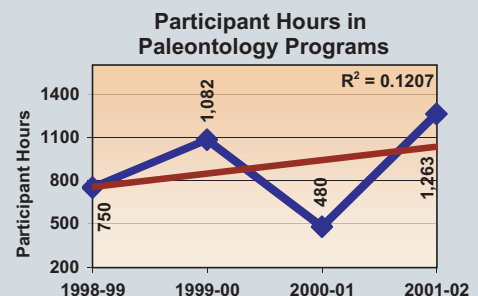


Mammoth tusk found in Anza-Borrego Desert State Park



The chart above shows the cumulative totals of paleontological objects recorded. Of the current known total of over 16,000 specimen, 81% have been recorded into the automated registration system.

Below, visitor participation in paleontology programs varies a great deal from year to year, but shows a gradual increase. Volunteer hours increased 15% last year.



Visitor Comments on Natural Resource Protection

From the California State Parks Visitor Survey 2000-2002

"It's a beautiful well preserved site. Finding a balance that allows humans to enjoy the area and still protect the animals and natural vegetation of habitat must be difficult."

Caswell Memorial State Park, Spring 2002

"More money needed to maintain trails, habitat, and native vegetation."

El Capitan State Park, Summer 2001

"We truly appreciate the efforts to revegetate and reforest this area. Keep up the good work. Maybe in 100 years the campers can enjoy a coastal forest and fine camping."

Andrew Molera State Park, Fall 2000

"My favorite spot on earth!"

Point Lobos State Reserve, Spring 2000

"Wonderful facility. Enjoy the walk on the boardwalk and the beach. I'm glad to see efforts being made to preserve the habitat and environment."

Asilomar State Beach, Summer 2000

"It would be good if you could do a controlled burn to get rid of the foxtail and woods and bring back the wild oats."

San Luis Reservoir State Recreation Area, Spring 2001

"This is a critical bird habitat. Whatever it takes to lower the salt content, maintain the water level and lower the nutrient content of the runoff from irrigation should be done ASAP. The diversity of bird population is rare."

Salton Sea State Recreation Area, Fall 2000

"Our 12 year old girls really enjoyed seeing salt and rock formations and marine life. Thanks!"

Russian Gulch State Park, Summer 2000"

"Need to buy the land around the lake and stop urban building on lakeshores."

Millerton Lake State Recreation Area, Winter 2000

I enjoy very much how Portola is in a very natural state. Very little interference from people as far as amenities go. I feel very much like I am in the forest vs. other places I have gone."

Portola Redwoods State Park, Spring 2000

"I last visited in 1958 as a teenager and found the preservation now of natural resources very satisfactory."

Castle Crags State Park, Summer 2001

"Thank you for labeling tender vegetation areas."

Mount San Jacinto State Wilderness, Spring 2001

"Wonderful resource. This is what makes Ventura County special. I support leaders who preserve this."

Point Mugu State Park, Summer 2000

"Thank you for protection of native coastal dune vegetation. Please continue the program."

Carpinteria State Beach, Spring 2000

"A reasonable balance between preservation and active utilization seems to me to have been reached."

San Onofre State Beach, Spring 2000

"Impressed by efforts to protect fragile areas."

Armstrong Redwoods State Park, Fall 2001

"Beautiful juxtaposition of meadow, orchard and forest maintained well—not overly maintained. Perfect!"

Humboldt Redwoods State Park, Summer 2001