

Camp San Luis Obispo, California ARNG

Natural Resources Conservation, Small Installation



SUMMARY

Established in 1928, Camp San Luis Obispo is the primary training site for the California Army National Guard (CAARNG). The mission of the installation is to provide a full spectrum of support for live and constructive training in support of professional development and individual and company level collective training for Army National Guard, Army Reserves, active Army and other military Services. With a total of 5,700 acres, the installation provides a variety of ecosystems for training, including chaparral, scrub, montane, and hardwood-conifer ecosystems, as well as a riparian ecosystem that is the habitat for three federally-listed endangered species.

Natural resources management leadership at Camp San Luis Obispo has enhanced the quality of life for the installation and the community through the installation commitment to community education, the protection and conservation of endangered species, and the prevention of soil erosion that can effect both the training mission and water quality around the installation. Camp San Luis Obispo effectively uses partnering with the interests of natural resources management agencies, private conservation groups, regulatory agencies and the local community to conserve resources while providing an optimal atmosphere for military training. The installation has also leveraged funding from partners to implement INRMP projects. The success of the Camp San Luis Obispo and CAARNG's Natural Resources Conservation Program reflects a strong commitment to the conservation of current natural resources.

“The Camp San Luis Obispo natural resource program proves that a small installation with limited financial resources can use basic conservation principles, extensive partner relationships and imagination to enhance the environment and, consequently, the mission.”

- Tom Vorac, program liaison, U.S. Forest Service

Camp San Luis Obispo Accomplishments:

- Exempted in 2006 from Critical Habitat designation for the California red-legged frog by the U. S. Fish & Wildlife Service based on the implementation of the installation INRMP.
- Awarded the California 2007 Governor's Environmental and Economic Leadership Award for Ecosystem and Watershed Stewardship based on the Dairy Creek erosion control project which stabilized several drainages leading directly to the riparian corridor. Stabilization efforts supported compliance with the Clean Water Act, protected habitat of multiple endangered species and species of concern, and kept training lands available to the war fighter.
- Partnered in 2006 with the Land Conservancy of San Luis Obispo through the Army Compatible Use Buffer Program to acquire 315 acres to prevent urban encroachment on important training areas.
- Reduced fire hazards and fuel loads by conducting prescribed burns on approximately 300 acres annually. Prescribed burning keeps training land suitable for military maneuvers and enhances its use by migratory grassland birds.
- Leveraged over \$441,500 in funding from eight different partners to implement INRMP projects.
- Restored 8,000 native plants on the site of a former chromium mine as part of an erosion control project.
- Controlled the spread of purple star and wooly distaff thistle, invasive species with large spines that hinder the ability of the military to train and can cause injury to Soldiers.

INTRODUCTION

Established in 1928, Camp San Luis Obispo is the primary professional training site for the California Army National Guard (CAARNG). The mission of Camp San Luis Obispo is to provide a full spectrum of support for live and constructive training in support of professional development and individual and company level collective training for Army National Guard. Other entities, including active Army, Army Reserves and other military Services, utilize ranges, training areas and classroom facilities. The installation also hosts the 223rd Infantry Regiment, which is the regional schoolhouse for Non Commissioned Officers and Officer Development. Camp San Luis Obispo has about 400 full-time staff.

Camp San Luis Obispo is a 5,700 acre installation packed with a variety of ecosystems. The chaparral/scrub/montane hardwood-conifer ecosystem covers approximately 32 percent of the training site. The grassland ecosystem covers approximately 47 percent, and the oak woodland ecosystem covers approximately six percent. The riparian ecosystem covers approximately one percent along intermittent and perennial streams. Approximately 44.46 miles of streams help make up the Morro Bay Watershed, which includes 11 percent of Camp San Luis Obispo.

The installation's Integrated Natural Resources Management Plan (INRMP) was completed in November of 2001 and was last reviewed for operation and effect in February of 2007 by statutory stakeholders. Goals and objectives were examined and projects involving soil erosion and endangered species were both updated and developed. Efforts to manage natural resources at Camp San Luis Obispo highlighted in the INRMP have achieved preservation of 3,000 acres – over 60 percent – of the installation in its natural state.

BACKGROUND

The goals and objectives of Camp San Luis Obispo's INRMP include extensive environmental work and initiatives to ensure ranges and training areas are sustained to serve the training needs of the military for both the immediate and long term future. In order to meet training demands, the installation addressed the impacts to threatened and endangered species.

Working with the U.S. Fish and Wildlife Service, the installation currently operates under two biological opinions; one that allows for maintenance of San Benito Creek, and another that addresses grazing in the Chorro Creek bog thistle enclosure.

The goals, objectives, projects and timelines outlined in the INRMP have been incorporated into the installation's Environmental Management System (EMS). The goals and objectives are periodically measured and monitored to ensure progress is being made and that they are still suitable and adequate for the constantly evolving mission of the installation. This proactive management ensures that the installation's senior leadership is aware of and appropriately mitigates risk to the mission and the environment.

The Camp San Luis Obispo natural resources management program is managed jointly between the Conservation Branch of the Environmental Directorate at the State's Joint Forces Headquarters (JFHQ) and the headquarters staff at Camp San Luis Obispo. The conservation branch staff includes a senior environmental planner who also serves as the program manager, four biologists and a cultural resources specialist. Three members of the staff are state employees and six are contractors. The conservation staff is complemented by the integrated training area management (ITAM) coordinator and a land rehabilitation and maintenance (LRAM) specialist.

PROGRAM SUMMARY

A milestone of Camp San Luis Obispo's Natural Resources Management Program was validated in 2006 when the U.S. Fish and Wildlife Service determined that the installation's INRMP provides a conservation benefit to the California red-legged frog and did not designate critical habitat on the installation. The INRMP objective of conserving threatened and endangered species in accordance with the Endangered Species Act also worked to the Army's advantage by ensuring the installation's continued ability to support training and operations.

Another milestone came in 2007 when Camp San Luis Obispo staff completed the Dairy Creek Erosion Control Project. Land was stabilized in multiple

riparian corridors with increased native vegetation and tree plantings to stave off erosion. Camp San Luis Obispo staff complied with the Clean Water Act and the Endangered Species Act by sustaining and protecting these riparian corridors used by multiple endangered species. These efforts won the CAARNG the 2007 California Governor's Environmental and Economic Leadership Award for Ecosystem and Watershed Stewardship. Soil stabilization and erosion reduction efforts meet the INRMP objectives of sustaining training lands through rehabilitation and management of natural resources within the spirit and letter of environmental laws, including the Clean Water Act.



Sustaining and protecting riparian corridors won the CAARNG the 2007 California Governor's Environmental and Economic Leadership Award for Ecosystem and Watershed Stewardship. It also stabilizes the corridors for use as training areas.

To better manage for encroachment and its affects on training and natural resources, the installation began partnering, in 2006, with the Land Conservancy of San Luis Obispo. Camp San Luis Obispo, as part of the Army Compatible Use Buffer (ACUB) program, acquired 315 buffer acres that secure the training mission by preventing urban encroachment. This is the first step of the ACUB process in conserving up to 1,500 acres of land from 72 separate tracts of land, with the primary focus being on land that will affect range operations, followed by land with water rights to the Chorro Reservoir Watershed. The process of installation buffering is an objective of the INRMP, specifically ensuring no net loss in the capability of installation lands to support existing and projected military training and operations.

ACCOMPLISHMENTS

Program Management

The installation ITAM and Natural Resources Management staffs meet regularly with installation training support, ITAM program staff and associated facility operations personnel to:

- Map out suitable locations for training operations and activities, and include timelines.
- Address conservation of training lands and any required restoration efforts.
- Examine other topics (endangered and sensitive species, prescribed burning, grazing issues) that training support needs to be aware of .

The installation uses the National Environmental Policy Act (NEPA) to make informed decisions to determine natural resources impacts on projects like training activities and construction. The INRMP objective of ensuring the Camp San Luis Obispo Natural Resources Program is coordinated with installation organizations is met.

Camp San Luis Obispo has a number of projects within its INRMP to support the installation's goals and objectives. The installation has implemented a large percent of INRMP projects identified over the last two years. To use money most efficiently, the installation has prioritized projects for implementation and has worked hard at pursuing alternate funding streams and methods to accomplish INRMP projects. Partnerships (Table 1) and cost savings related to partnering (Table 2) have allowed Camp San Luis Obispo to implement a number of projects that have saved the installation over \$441,500.

Best management practices learned on Camp San Luis Obispo are translated to other installations in the region, including Camp Roberts Training Site. By providing best management techniques, (erosion control and wildlife management), among multiple installations, funding can be allocated for projects that produce the greatest benefits.

Mission Enhancement

All installation activities at Camp San Luis Obispo are designed to maintain and enhance the quality of training lands for natural resources and Soldiers.

Partner	Cooperative Activity
Central Coast Regional Water Quality Control Board	Testing areas for site drainages and monitoring sediment loads and turbidity.
U.S. Fish & Wildlife Service	Cooperative partner for development and implementation of the installation's INRMP. This includes the management of federally listed T&E species.
California Department of Fish and Game (CDFG)	Cooperative partner for the development and implementation of the installation's INRMP.
Morro Bay National Marine Estuary Program (MBNEP)	Partnership in the management of migratory fish and protection of Morro Bay National Estuary.
California Department of Forestry	Land management in conjunction with Los Padres National Forest and watershed protection.

Activity	Total Funding	Partners	Partner Funding	CAARNG/ NGB Funding
Watershed Assessment	\$155,000	CDFG, MBNEP, Pacific Watershed Associates, CA Polytechnic University	\$143,500	\$11,500
2006 ACUB Program	\$448,000	LCSLO and MBNEP	\$98,000	\$350,000 (federal funding-OSD)
2007 ACUB Program	\$350,000	LCSLO, MBNEP and the City of San Luis Obispo	Unknown at this time	\$350,000 (federal funding-NGB)
CCC Watershed Crew-2007	\$15,000	California Conservation Corps and MBNEP	\$15,000 (grant)	\$0
CCC Watershed Crew-2006	\$10,000	California Conservation Corps and MBNEP	\$10,000 (grant)	\$0
Dairy Creek Management	\$15,000	MBNEP	\$15,000 (grant)	\$0
Cattle/ Wildlife Water Sources Development	\$100,000	NRCS	\$100,000 (grant)	\$11,400
Riparian Fencing	\$60,000	MBNEP	\$60,000 (grant)	\$0

Prescribed burns not only create better habitat for grassland birds, but also reduce fuel loads within live fire impact areas. In the case of Camp San Luis Obispo's erosion control projects, road and land stabilization ensures continued access to training areas, while grazing programs improve area quality by reducing shrubs, which can impede equipment mobility and make traversing training lands unsafe for Soldiers. Camp San Luis Obispo enjoys extraordinary integration and coordination between Command, Environmental, ITAM and Facilities directorates. ITAM and Natural Resources staffs work together with trainers on a daily basis to ensure all environmental and training needs are fully compatible.



Bank stabilization with native vegetation staves off soil erosion.

Land Use Management

The Camp San Luis Obispo grazing lease returns a maximum of \$40,000 to the installation, depending on any work-in-kind performed by the lessee. Use of these reimbursable funds is at the discretion of the commander, but traditionally, monies have been used for projects like pasture and perimeter fencing and cattle guards. The agricultural lease raises approximately \$1,500 a year. This money is received back at the installation in the form of reimbursement dollars that are available for implementing INRMP activities, such as soil erosion and threatened and endangered species projects. Cattle grazing helps reduce wildfire fuel loads (a critical issue in California) and manage impacts of invasive species while creating open pastureland for training.

Camp San Luis Obispo lies within the headwaters of the Chorro Creek watershed, which drains into the protected Morro Bay Estuary, and contains two tributaries that are designated as significant evolutionary units for the federally endangered steelhead trout. Water conservation and erosion/sediment control are critical for steelhead trout and ensures that sedimentation concerns do not interrupt the trout lifecycle.

The remediation at a former chromium mine is in its second year of implementation. The first season (2006) of restoration involved planting approximately 8,000 native plants. Vegetation is monitored continuously with photo points to track plant survival and establish an erosion control baseline. As part of ecosystem management and sustainability, 45 different seed species were collected on site for erosion control. The overall project is stabilizing soils and preventing negative sedimentation impacts to sensitive species in Chorro Creek and Morro Bay National Estuary.

Sustainable land rehabilitation and maintenance is a very important component for the installation's ITAM program. Training lands that are not maintained can become unsuitable for training (e.g., soil erosion, vegetation depletion) and in turn reduce the training footprint on the installation. Maintaining lands suitable for training meets the INRMP objective of ensuring no net loss in the capability of installation training lands to support training.

Forest Management

Camp San Luis Obispo does not have an active forestry program but prescribed burning does occur on impact ranges to reduce fuel loads, maintain ecological health, and improve training site quality. Approximately 300 acres are burned annually, creating ideal conditions for nesting grassland birds and keeping large expanses of training lands open.

Fish and Wildlife

Three federally endangered species (Chorro Creek bog thistle, steelhead trout and California red-legged frog) are found on Camp San Luis Obispo. Habitat exists on the installation for two other species (California condor and Least Bell's vireo) to potentially occur.



Camp San Luis' INRMP protects the California red-legged frog.

There are no state listed species, other than the Chorro Creek bog thistle which is both a state and federally listed species, found on the installation.

Besides the endangered species found on Camp San Luis Obispo, the installation must consider the management of other sensitive species. Seven animals found on the installation are federal species of concern and California Department of Fish and Game Special Concern Species. Thirteen other animals are solely California Department of Fish and Game Special Concern Species.

The team is well aware that ecosystem management is the common goal for both the installation and the state and that natural resources management does not end at the installation fence line. Camp San Luis Obispo has begun to identify areas where the goals of the State Wildlife Action Plan (SWAP) can be incorporated into the installation's INRMP and vice-versa. This includes work with sensitive bird species and the Chorro Creek bog thistle. To assist in the process of communicating with the state and sharing ecosystem oriented concepts, several staff members have attended a DoD sponsored SWAP workshop.

Installation Outreach

Due to the large diversity of migratory birds on Camp San Luis Obispo, the local Audubon Society frequently conducts birding fieldtrips and their annual Christmas bird count on the installation. The establishment of ACUB lands outside the fence line will expand public recreation opportunities, including hiking and biking. Camp San Luis Obispo offers non-profit organizations the opportunity to hike some of the existing trails on the installation.

The Environmental Office staff botanist works with a group of Southern California botanists who share practical information on the management of botanical resources. She also works with the San Luis Obispo Weed Management Area group addressing and coordinating invasive plant species management throughout the county.

Camp San Luis Obispo hosted a workshop put on by the UC Berkeley Jepson Herbarium. Attendees were given a tour of some of the special botanical areas on the installation with emphasis on viewing sensitive species, like the Chorro Creek bog thistle, and education on the installation's management of these species.

ITAM staff has supported the county of San Luis Obispo botanical garden by securing plant material (*Juncus* spp.) to rebuild a Native American structure. This activity supports the INRMP objective of providing human-valued products of renewable natural resources.

Invasive Species Control and Pest Management

Invasive species that harm biodiversity and impinge upon training are being managed both mechanically and chemically, when necessary. Several invasive plant species hinder training at Camp San Luis Obispo, including purple star and wooly distaff thistles, both of which occur over much of the Camp San Luis Obispo training lands. These plants have very sharp spines that can cause pain and injury to troops, especially during dismounted maneuvers. The environmental office and ITAM staff have coordinated their efforts to control these and other invasive plants by mapping invasive locations, prioritizing areas and plants to be treated, developing treatment strategies and funding treatment costs. ITAM and the Environmental Office have also worked together with the California Conservation Corps (CCC) for removal of purple star thistle growing in close proximity to the federally and state endangered Chorro Creek bog thistle. The installation has an up to date pest management plan and an invasive species component of the INRMP that are used to assist



Prescribed burning destroys invasive plants and makes training areas safer for Soldiers.

installation personnel with the control of invasive species and pests. The plans are reviewed annually and updates are made as needed. All application of herbicides and pesticides is done by certified applicators in accordance with state and federal laws.

Conservation Education

Camp San Luis Obispo staff participates in the annual San Luis Obispo Earth Day and Pearl Harbor Day celebrations, manning booths at the events to educate the community about environmental activities at Camp San Luis Obispo. The installation also actively works with local groups, specifically the Boy Scouts, through tree planting and environmental education.

The Grizzly Youth Academy, a 22 week resident program for second chance kids, is located on base. The purpose of the program is to take advantage of the Camp San Luis Obispo environment through hiking and outdoor education. The Camp San Luis Obispo staff provides tours and uses program cadets on some of the installation's projects, like planting native flora, as part of their job shadowing program.

Achievement House is a school for the mentally handicapped and is a base tenant. Natural resources staff have taken participants on nature tours, seed collecting walks and assisted them in growing plants for installation projects, including Dairy Creek restoration and stabilization.

The Camp San Luis Obispo staff is committed to sharing the lessons learned and successes achieved in regards to erosion, soil stabilization and threatened and endangered species management throughout the military. Staff attend the annual ITAM and other conservation conferences and workshops to discuss their land management techniques, stewardship and exchange best practices with multiple military agencies and states.

Community Relations

Community leaders and adult organizations are often invited to tour Camp San Luis Obispo to learn more about installation stewardship, including what training is occurring and its effects on natural resources of the region. The communities around Camp San Luis Obispo expect the installation to be good stewards of the land. By conducting tours of the installation, Camp San Luis Obispo is able to alleviate misconceptions about training impacts on installation lands and educate the public about land management and current projects that prevent soil erosion, control invasive species, establish productive riparian areas and properly manage endangered species.

The California Men's Colony is a state prison that resides just south of Camp San Luis Obispo. The ITAM coordinator has worked inside the prison with vocational landscape department personnel and has provided classroom assistance in native plant

propagation and culture. Plant material grown at the California Men's Colony has been used in projects, including Dairy Creek and mine restoration.

The natural resources staff is heavily active in organizations outside of Camp San Luis Obispo. Wildlife biologists Michael Moore, Jen Moonjian and Paige Farrell are members of the Wildlife Society. The Environmental Directorate's botanist, Jody Olson, is a member of the California Native Plant Society, the California Invasive Plant Council and the California Society for Ecological Restoration. The LRAM Coordinator, Pete Waldburger, is a member of the local chapter of Small Wilderness Area Preserve.

CONCLUSION

Natural resources management leadership at Camp San Luis Obispo has enhanced the quality of life for the installation and the community through their commitment to community education, the protection of listed species and the prevention of soil sedimentation. Components of the Natural Resources Program effectively integrate Camp San Luis Obispo's chain-of-command with the interests of natural resources management agencies, private conservation groups, regulatory agencies and the local community to conserve resources while providing an optimal atmosphere for military training and readiness. The success of the Camp San Luis Obispo and CAARNG's Natural Resources

Conservation Program reflects a strong commitment to the conservation of current resources and supports the military mission. The U.S. Fish and Wildlife Service recognized Camp San Luis Obispo for its efforts towards managing threatened and endangered species and its maintenance of training land through erosion control and stabilization. Camp San Luis Obispo has ensured that sustainable conservation on post will continue, regardless of any staffing changes or change to the military mission.



Problems at Dairy Creek were solved using bank stabilization techniques.