



Naval Weapons Systems

Training Facility Boardman

Natural and Cultural Resources
Protection and Conservation





For nearly 70 years, the United States military has trained at Naval Weapons Systems Training Facility (NWSTF) Boardman to prepare service men and women and citizen soldiers for deployment and other military missions. Located in north-central Oregon near the Columbia River in Morrow County, Boardman serves as a regional range for military units located in the Pacific Northwest, including naval aviation units stationed at Naval Air Station Whidbey Island, Washington, and units of the Oregon National Guard.

The area contains many natural resources and prehistoric and historic cultural resources. Protecting natural and cultural resources while conducting military training activities has and will continue to be an important goal of the U.S. Navy and the Oregon National Guard.

Defending the Nation and Protecting the Environment

The protection of natural and cultural resources remains an important obligation of the U.S. military while fulfilling its mission to train service men and women and citizen soldiers to be fully prepared and ready for national defense and humanitarian situations. The U.S. military implements protective measures on land to reduce potential effects on the environment from training and testing activities. The Navy and Oregon National Guard are committed to protecting the environment and actively participate in and manage successful environmental stewardship programs.

Natural Resources at NWSTF Boardman

NWSTF Boardman is located in the Snake-Columbia shrub steppe ecoregion, a vast, arid region of about 84,000 square miles extending from eastern Washington through southeast Oregon, Idaho, Nevada, northeast California and western Wyoming.

In the term “shrub steppe ecoregion,” “shrub” refers to the abundant woody plant species present at NWSTF Boardman, such as big sagebrush and rabbitbrush. “Steppe” is a Russian word that means a vast treeless plain.

In Oregon, much of the ecological integrity of the Snake-Columbia shrub steppe has been lost or degraded by conversion of land to irrigated agriculture and livestock grazing. This ecoregion is considered to be endangered from a conservation perspective.

Wildlife Species

Twenty-two species of mammals occur at NWSTF Boardman, 18 of which are expected to breed and occur year-round. Additionally, one amphibian, three lizard and three snake species are found at NWSTF Boardman. Species found at NWSTF Boardman include:

- Vagrant shrew
- Sagebrush vole
- Black-tailed jackrabbit
- Montane vole
- Nuttall’s cottontail
- House mouse
- Washington ground squirrel
- Porcupine
- Northern pocket gopher
- Red fox
- Great basin pocket mouse
- Coyote
- Ord’s kangaroo rat
- Long-tailed weasel
- Western harvest mouse
- Badger
- Deer mouse
- Rocky mountain elk
- Northern grasshopper mouse
- Mule deer
- Pronghorn antelope
- Bushy-tailed woodrat
- Great basin spadefoot toad
- Short-horned lizard
- Northern sagebrush lizard
- Side-blotched lizard
- Racer
- Gopher snake
- Western rattlesnake



More than 80 species of birds are present at NWSTF Boardman, 33 of which nest there. Hawks, eagles and shorebirds are just a few of the bird types found at NWSTF Boardman.

Protecting Threatened, Endangered and Sensitive Species

Several species with high conservation concern potentially occur at NWSTF Boardman (see Table 1). Currently, there are no federally listed threatened or endangered species known to occur at NWSTF Boardman, but the installation is an important population center for the Washington ground squirrel, which has been listed as endangered by the state of Oregon.

Table 1. Threatened, Endangered, Candidate, Species of Concern and Sensitive Species Potentially Occurring at NWSTF Boardman

SPECIES	CONSERVATION STATUS		
	FEDERAL	STATE	
<p>Reptiles</p> <p>Northern sagebrush lizard</p>	Species of Concern	Sensitive – Vulnerable	
<p>Birds</p> <p>Bald eagle</p> <p>Golden eagle</p> <p>Ferruginous hawk</p> <p>Swainson’s hawk</p> <p>Upland sandpiper</p> <p>Long-billed curlew</p> <p>Burrowing owl</p> <p>Loggerhead shrike</p> <p>Brewer’s sparrow</p> <p>Black-throated sparrow</p> <p>Sage sparrow</p> <p>Grasshopper sparrow</p> <p>Willow flycatcher</p> <p>Yellow-breasted chat</p>	<p>Federally protected under the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act</p> <p>Species of Concern</p> <p>Species of Concern</p> <p>Species of Concern</p> <p>--</p> <p>Species of Concern</p> <p>--</p> <p>Species of Concern</p> <p>--</p> <p>Species of Concern</p> <p>Species of Concern</p> <p>Species of Concern</p>	<p>Listed – Threatened</p> <p>--</p> <p>Sensitive – Critical</p> <p>Sensitive – Vulnerable</p> <p>Sensitive – Critical</p> <p>Sensitive – Vulnerable</p> <p>Sensitive – Critical</p> <p>Sensitive – Vulnerable</p> <p>--</p> <p>Sensitive – Peripheral</p> <p>Sensitive – Critical</p> <p>Sensitive – Vulnerable</p> <p>Sensitive – Vulnerable</p> <p>Sensitive – Critical</p>	    
<p>Mammals</p> <p>Washington ground squirrel</p> <p>White-tailed jackrabbit</p>	<p>Candidate for Listing</p> <p>--</p>	<p>Listed – Endangered</p> <p>Sensitive – Vulnerable</p>	
<p>Plants</p> <p>Laurence’s milk-vetch</p> <p>Disappearing monkeyflower</p> <p>Little mousetail</p>	<p>Species of Concern</p> <p>Species of Concern</p> <p>Species of Concern</p>	<p>Listed – Threatened</p> <p>Candidate for Listing</p> <p>Candidate for Listing</p>	

The U.S. Navy proactively engages in management strategies to identify possible impacts from training activities on potentially listed species and strives to minimize these effects. Proposed projects, training activities or other actions are routinely evaluated for potential impacts on species and to ensure compliance with all federal environmental laws and regulations.

The Washington ground squirrel is listed as an endangered species by the state of Oregon and is a candidate for federal listing as a threatened or endangered species. One of the largest remaining collections of Washington ground squirrel colonies occurs at the installation and the adjacent Boardman Conservation Area. It is an important component in the food web for local predators, especially badgers, hawks and golden eagles and is a likely indicator of the health of other species and habitats at NWSTF Boardman. Ground squirrels create burrows that are reused by many species including snakes, lizards, insects and burrowing owls. Additionally, the ground squirrels' burrowing loosens soils, increases water infiltration and air flow in soils, and increases the diversity and productivity of plant species.

Ground squirrel studies and research at NWSTF Boardman have and will continue to be conducted to improve Navy and National Guard knowledge of ground squirrel locations, habitat and natural history. During preparation of the Environmental Impact Statement, the U.S. Navy and Oregon National Guard will coordinate with the Oregon Department of Fish and Wildlife and the U.S. Fish and Wildlife Service to minimize potential effects on the squirrel from the proposed actions.



Photo courtesy of Jody Delavan, USFWS

Habitats at NWSTF Boardman

Eleven major wildlife habitats were identified at NWSTF Boardman in the 1990s. However, the elimination of grazing and several large fires have changed much of NWSTF Boardman since then. The Navy plans to re-map the habitats at NWSTF Boardman in 2013-14. These habitat types support a variety of plant and animal species, including:

- Sagebrush
- Bitterbrush
- Bunchgrass
- Open Low Shrub
- Annual Grass/Forb
- Juniper
- Ponds
- Human Structures/ Disturbed
- Agriculture (Croplands)
- Dune
- Alkali



Promoting Sustainability

Protection of natural and cultural resources is an important obligation of both the Navy and National Guard. Building and maintaining sustainable installations is one of the most challenging tasks facing the military today. The Navy and National Guard have proud records of environmental compliance and stewardship on their installations, but increasingly, environmental management goals are affected by encroachments on and near the installations, such as urban growth, increasing training and testing requirements, deteriorating natural resources, funding uncertainties and aging infrastructure. These challenges affect the military's ability to maintain mission readiness while being a model steward of the environment. Utilizing sustainability principles, the military services are developing integrated strategies that engage all stakeholders to ensure the long-term viability of their installations, thereby positioning themselves to continue their proud record of service to the nation.

The Oregon National Guard practices stewardship with programs to protect endangered species and preserve important habitats, recycle and reduce waste, and be more energy efficient. Some of its conservation efforts and programs for sustainability include:

- Managing natural and cultural resources at three training installations, totaling more than 46,000 acres, and at more than 50 other facilities throughout Oregon.
- Rehabilitating, increasing and continuing to manage endangered species habitat at training installations.
- Partnering regularly with federal, state and nongovernmental organizations to research and manage natural and cultural resources on its installations.
- Establishing proactive and ongoing environmental training programs for personnel with environmental responsibilities.
- Implementing opportunities for pollution prevention in all aspects of operations.
- Establishing and reviewing environmental objectives and targets on a regular basis for continual environmental improvement and mission benefits.
- Complying with all applicable regulatory requirements.

Integrated Natural Resources Management Plan (INRMP)

Under the Sikes Act, the Navy, in coordination with military operators, is required to implement an INRMP and has done so in partnership with the U.S. Fish and Wildlife Service and Oregon Department of Fish and Wildlife. The INRMP is a long-term planning document that guides natural resources management at NWSTF Boardman. Maintaining the health of habitats and wildlife ensures the preservation of the native landscapes and allows military training in a realistic setting. The comprehensive and expansive INRMP is implemented to ensure:

- Sustainability of species and habitats within NWSTF Boardman.
- Balance military training with natural resources management, with the goal of no net loss of the military capabilities at NWSTF Boardman to successfully achieve the military mission.

Partnering for Sustainability

The Navy and National Guard have focused efforts on developing partnerships and coalitions with other government agencies and organizations to better manage and protect natural and cultural resources. The Navy and National Guard recognize that they share common goals, objectives and interests with land conservancies, environmental groups, and federal, state and local government agencies in protecting endangered and threatened species, preserving critical habitat and open space, and promoting energy efficiency and renewable energy sources. Their participation in sustainability programs helps to protect both the environment and the military mission.

The Oregon Department of Fish and Wildlife works closely with the Navy on various wildlife conservation issues at NWSTF Boardman, including:

- Protecting on-site habitat
- Controlling invasive species
- Developing and conducting wildlife and habitat research and surveys

Partners in Flight

Partners in Flight is a collaborative bird conservation effort comprised of over 300 partners, including state and federal agencies, academics and conservation groups, to promote the long-term health of bird species and habitats throughout the Western Hemisphere. The Department of Defense supports and promotes its partnership role through protection of habitats and wildlife, enhancement of biodiversity, and maintenance of healthy and productive natural systems, while remaining consistent with the military mission.



Loggerhead Shrike

Long-billed Curlew

The Nature Conservancy, a nongovernmental conservation organization, co-manages three Research Natural Areas at NWSTF Boardman, under the terms of a cooperative agreement. The Research Natural Areas, established for education and research purposes, were first designated in 1978 and are part of a federal program to preserve areas of high-quality natural resources.

The U.S. Navy and the National Guard recognize that facility development and military training activities may have an effect on historical and cultural resources. These agencies also recognize their obligation, and are committed, to protecting these resources. Protective measures include identifying and assessing potential effects of proposed projects and training activities, avoiding or minimizing potential effects, and mitigating adverse effects on the resources. The Navy and the National Guard are committed to complying with all applicable laws, regulations and policies to ensure the protection of all resources.

Cultural Resources at NWSTF Boardman

Many Native American groups occupied, hunted and gathered, or traveled through the area that is now NWSTF Boardman, including people whose descendents now are members of the Confederated Tribes of the Umatilla Indian Reservation, the Confederated Tribes of Warm Springs and the Confederated Tribes and Bands of the Yakama Nation.

The Navy and National Guard consult with local tribes and tribal organizations regarding Native American resources. Native American resources may include, but are not limited to, archaeological sites, burial locations, sweatlodges/sweathouses, ceremonial areas, cremation circles, caves, mountains, water sources, trails, plant habitat or gathering areas, or any other natural area important to a culture for religious or heritage reasons.

Euroamerican settlement of what is now NWSTF Boardman began in October 1805 when Lewis and Clark traveled down the Columbia River and landed in modern-day Boardman, Oregon. Euroamerican historic archaeological resources include trails, building remnants (foundations), artifact concentrations and subsurface features such as wells, cisterns or privies.

Cultural Resource Management Plans and Surveys

The Navy has prepared various cultural resource management plans to protect and manage the cultural resources at NWSTF Boardman, including:

- Historic and Archaeological Resources Protection Plan
- Archaeological Resources Assessment and Protection Plan for Naval Air Station Whidbey Island

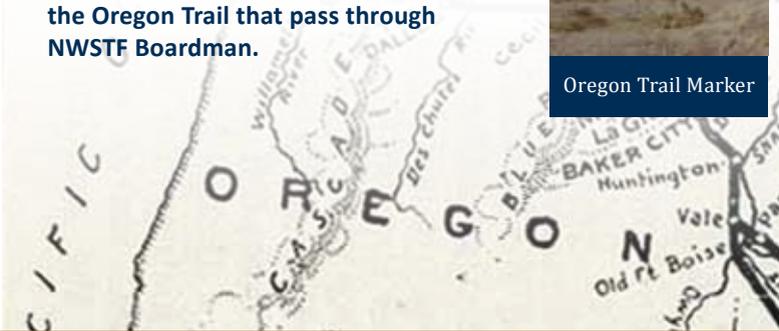
The Historic Oregon Trail

A 10-mile stretch of the Oregon Trail passes through the southern section of NWSTF Boardman. The NWSTF Boardman and Morrow County portion of the Oregon Trail originated as part of an alternate, shorter route to The Dalles, a settlement 80 miles west of NWSTF Boardman, which is recognized as the end point of the Oregon Trail. This route included a 26-mile stretch with only two small springs for water, one of which is Lower Well Springs (currently known as Tub Springs), located near the southern boundary of NWSTF Boardman. This area includes the stone foundation of a 19th-century homestead dwelling associated with Jim McCarty, which was used for sheep and cattle watering from the late 1800s through the 1940s. Wagon ruts are still visible on the trail routes through parts of the range, and a pioneer cemetery from the 1840s associated with the trail is located on the southern boundary of NWSTF Boardman.

The Navy and National Guard's proposed actions would not affect the portions of the Oregon Trail that pass through NWSTF Boardman.



Oregon Trail Marker



Integrated Cultural Resources Management Plan (ICRMP)

An ICRMP is planned for NWSTF Boardman. The goals of the ICRMP will include the following:

- Conduct inventory of all historic resources that are listed in or are eligible for listing in the National Register of Historic Places (NRHP).
- Identify areas where prehistoric archaeological resources may be present.
- Identify any planned future Navy and National Guard actions that may affect NRHP resources.
- Recommend measures to avoid effects on NRHP resources from Navy and National Guard actions.

Archaeological Resource Management Guidelines

The Navy has established guidelines for ongoing management of archaeological resources at NWSTF Boardman, including:

- Maintaining confidentiality regarding the location of the known archaeological resources and providing information only to appropriate personnel.
 - Ensuring that construction, maintenance and training activities avoid any ground-disturbing activities, to the maximum extent practicable, on or near the known archaeological sites and archaeologically-sensitive areas.
 - Conducting additional archaeological investigations to evaluate adverse effects on the resource during training activities that cannot be relocated.
 - Consulting with federally-recognized tribes with ancestral ties prior to ground-disturbing activities or near archaeologically-sensitive areas.
 - Training personnel working on site to recognize potential archaeological sites.
 - Requiring all personnel working on site to report the discovery of any archaeological resources to the appropriate staff.
 - Patrolling known archaeological sites periodically to ensure that the sites have not been illegally disturbed.
 - Adhering to established procedures for consulting with federally-recognized tribes with ancestral ties.
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- Propose management guidelines and standard operating procedures that will allow the Navy to manage the NRHP resources appropriately.
 - Establish procedures to protect prehistoric archaeological resources.
 - Consult with the Oregon State Historic Preservation Office and any other interested parties and accept comments regarding the Navy's proposed management of the NRHP resources.
 - Provide a Programmatic Agreement regarding the ongoing maintenance and management of the NRHP resources.

Environmental Awards

Navy Region Northwest and its installations and the Oregon National Guard have received numerous environmental awards in the last four years due to their strong commitment to environmental protection, conservation and restoration. Some of these awards include:

2006	<ul style="list-style-type: none">▪ Army National Guard Environmental Security Award, Environmental Quality (Oregon National Guard)▪ Chief of Naval Operations Environmental Award, Cultural Resources Team (Navy)
2007	<ul style="list-style-type: none">▪ Army National Guard Environmental Security Award, Environmental Restoration (Oregon National Guard)▪ Secretary of the Army Environmental Award, Environmental Restoration (Oregon National Guard)
2008	<ul style="list-style-type: none">▪ Army National Guard Environmental Security Award, Environmental Restoration (Oregon National Guard)▪ Chief of Naval Operations Environmental Award, Pollution Prevention (Navy)▪ Secretary of the Army Environmental Award, Environmental Restoration (Oregon National Guard)▪ Secretary of Defense Citation for Meritorious Achievement, Environmental Restoration (Oregon National Guard)▪ Secretary of Defense Environmental Award, Pollution Prevention (Navy)▪ Secretary of the Navy Environmental Award, Pollution Prevention (Navy)
2009	<ul style="list-style-type: none">▪ Secretary of the Army Environmental Award, Environmental Restoration (Oregon National Guard)
2010	<ul style="list-style-type: none">▪ Secretary of Defense, Citation for Meritorious Achievement, Environmental Restoration (Oregon National Guard)



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