

**NAVAL AIR STATION FALLON, NEVADA  
NATURAL RESOURCES CONSERVATION – LARGE INSTALLATION  
FY 2011 - 2012**

**INTRODUCTION:**

NAS Fallon occupies approximately 241,000 acres in Churchill County, Nevada. The Main Station consists of 8,670 acres and the rest of the area is occupied by training ranges. The primary mission of NAS Fallon is to provide realistic integrated air warfare training support to carrier air wings, Marine air groups, tenant commands, and training events including joint and multinational exercises. The station features four air-to-ground training ranges (B-16, B-17, B-19 and B-20), an electronic warfare range (Dixie Valley) that make up the Fallon Range Training complex (FTRC). NAS Fallon is home to Naval Strike and Air Warfare Center (NSAWC). It is currently the only Navy facility providing advanced integrated Carrier Air Wing Strike training. Military aircraft from the Navy, Air Force, Marine Corps, and Nevada Air National Guard all train at NAS Fallon. The NAS Fallon base population is close to approximately 3,000 with about 1,130 active duty personnel, 300 civilian Department of Defense (DoD) personnel and at least 1,400 contractor employees. When an air wing is on board for training, the population can increase by as many as 2,000 military personnel.

Pronghorn antelope at Dixie Valley.-Photo by Gary Cottle



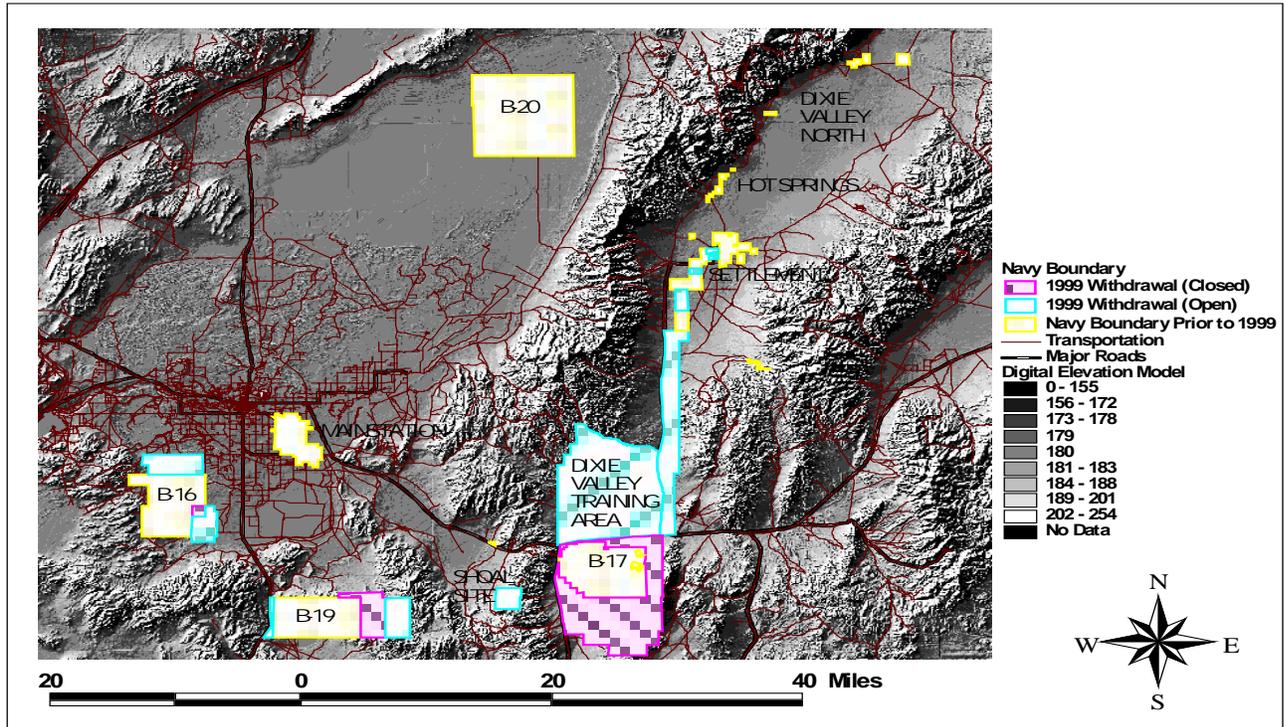
NAS Fallon is located in the high desert of the Great Basin Region at an elevation of 3,965 feet above sea level. The temperature in Fallon averages about 67°F with an annual precipitation of approximately 5 inches per year. Winter temperatures can reach below 0°F and summer highs may exceed 100°F. The Navy landholdings contain a wide variety of plant and animal species. There are 67 species of mammals and 458 species of plants that have been observed on NAS Fallon administered lands. More than 250 species of birds have been recorded

and the area is very popular with bird watching enthusiasts. NAS Fallon is in the Pacific Flyway and thousands of birds migrate through this area and nest in nearby wetlands, including the Stillwater National Wildlife Refuge

On the Main Station, there are 1,451 improved acres, 354 semi-improved acres, 3,000 acres in the Agriculture Outlease Program, and 3,865 acres of rangeland, predominately saltbush and greasewood vegetation. On the FRTC, there are approximately 96,000 acres open to the public and used for outdoor recreation. Outdoor recreation on these lands includes biking, hiking, bird watching, photography, hunting, fishing, and horse-back riding. Limited off-highway vehicle (OHV) use is allowed under joint BLM management in the Dixie Valley Training Area. Wetland and riparian areas on Navy range lands include a stream, 10 ponds, and hot and cold springs, and playas that encompass approximately 63,000 wetland acres. Several small parks

and athletic fields exist in the housing areas on Station. On one of the Station's agricultural lease parcels, there is a two-acre park with a picnic area. An interpretive Nature Trail has been developed on another lease parcel. The trail is approximately three-quarter of a mile long surrounding a pond. Native shrubs and cottonwood trees line the trail. Interpretive signs installed along the trail describe the plants and animals in the Great Basin.

## NAS Fallon-Administered Lands



Map of NAS Fallon's administered lands. The highlighted areas are the Main Station and five training ranges. Pink areas are closed to the public, while green areas have public access.

## BACKGROUND:

The NAS Fallon Integrated Natural Resources Management Plan (INRMP) was completed in June 2006. The US Fish and Wildlife Service (USFWS), Nevada Department of Wildlife (NDOW), and the Bureau of Land Management (BLM) are the major stakeholders and coordinating agencies for the INRMP. Most of the lands surrounding NAS Fallon are managed by the BLM. About 85% of Nevada is owned by federal agencies and the natural resources are managed for multiple use. An update to the NAS Fallon INRMP was begun last year and will be completed in 2013, until then Operation and Effect letters have been signed by all the partner agencies. The INRMP revision allows the NR staff members to reassess the status of the various aspects of its programs, thereby coming up with new solutions to continually improve the program or address newly identified concerns.

Two civilian personnel attached to the Natural Resources (NR) Branch of the Public Works Environmental Division manage the lands at NAS Fallon. NAS Fallon employs a professionally trained staff of specialists in Biology and NR Management. These staff members complete

investigations of natural resource impacts and document compliance with NEPA for projects initiated by NAS Fallon and resident tenant commands. NR staff members work closely with other Public Works Divisions, especially FEAD, Production, and Acquisitions during the contracting, review, development, and implementation of projects. NR staff and all Environmental Division staff attend various project planning meetings. Meeting attendance keeps staff “in the know” early in the planning process and throughout the project. Good communication across departments, including tenant commands and contractors allows staff to address concerns proactively and as new issues arise, thereby avoiding time delays and cost overruns.

NR Program areas include land management of 241,000 acres, agricultural lease program, pest management, and installation landscaping. The NR staffs are members of organizations such as the National Military Fish and Wildlife Association, Society for Range Management, National Arbor Day Foundation, and the Department of Defense Partners in Flight organization. An Environmental Management System (EMS) has been implemented at NAS Fallon; Natural Resource Practices, Aspects and Impacts have been documented as part of EMS efforts. Since 2011, the NR Management Program has focused on training and documentation of all contractors through the Environmental Compliance Assessment Training and Tracking System (ECATTS). Compliance inspections are conducted by the NAS Fallon Environmental Division Staff. Quarterly inspections of agricultural lease lands have been standardized and results incorporated into inspection reports that are regularly communicated to the lessees. The status of the NR Management Program is documented in the annual NAS Fallon Environmental Quality Assessment Report.

NAS Fallon also has several Memorandums of Understanding (MOU) and Memorandums of Agreement (MOA) in place with stakeholders to facilitate conservation activities as outlined in the chart below:

**NAS Fallon’s MOUs and MOAs in place with INRMP Stakeholders**

<b>MOU/MOA PURPOSE/SERVICE</b>	<b>DATE</b>	<b>DURATION</b>
Mgmt of Natural Resources on Navy Administered/Withdrawn Lands	Nov 2007	Indefinite
Navy Aircraft Mishaps and Accidental Release of Toxic Substances on Public Lands	Jul 2002	Indefinite
Cooperative Management of Nelson Bighorn Sheep on Slate Mountain and the Sand Springs Range	Sep 2000	Indefinite
Maintenance Agreement of a Wildlife Water Catchment within Public Land Withdrawal Area Surrounding B-17	Aug 1994	Indefinite
Fire Protection Agreement Between NASF and BLM	Jun 1998	Indefinite
Churchill County Cooperative Weed Mgmt Area Cooperative Agreement.	Feb 2003	Indefinite
Grazing, Vegetation, and Water Resource Mgmt Plan for the Dixie Valley Settlement Area, Churchill County	Aug 2002	Indefinite
Cooperative Agreement between NSAWC and BLM for CSAR Training on Public Lands.	May 1998	Indefinite

NAS Fallon has NR management meetings with the BLM, USFWS, and NDOW regularly. The annual self assessment of the NR Program was an opportunity to fine tune future goals with our partners and to evaluate the past years performance. NAS Fallon was commended by both

partners for another year of accomplishments that included ecosystem enhancement and invasive species control, critical bat habitat protection, and outstanding community outreach.

Dixie Valley Toad found only at Dixie Meadows -  
Photo by Gary Cottle



One area of particular importance is the Dixie Valley Training Range 65 miles northeast of NAS Fallon's Main Station. This unique area was settled in the early 1920's by a small group of families farmed and raised cattle. This unique and isolated area has ponds fed by artesian wells, hot and cold springs at the Dixie Meadows area to the north end of the valley, and a mountain snow fed creek at the Horse Creek area at the eastern foothills. The partner agencies developed the Dixie Valley Pond Maintenance Program to protect the sensitive species, specifically the Dixie

Valley tui chub, (*Gila bicolor* sp. 9), in the ponds and the western (Dixie Valley) toad, *Bufo boreas boreas*, in the Dixie Meadows area. Genetic studies by the University of Nevada, Reno have shown the toad living in the Dixie Meadows Area to be a distinct species. A University of California, Davis professor has studied the tui chub and believes it a unique species that he describes in a letter to the Navy as the Dixie Valley tui chub.

The agricultural lease program at NAS Fallon contains seven (7) parcels of irrigated farmland with water rights. The Station is surrounded by irrigated farmlands which are part of the historic Newland's Irrigation Project. The agricultural lease parcels are on the Main Station airfield buffer zone and the management of the parcels assists with dust control and fire safety on the rangeland buffer zone. Improvements to the Station's agricultural outleasing program include multiple land uses and development of soil and water conservation plans for the lease areas. The conservation plans require the lessees to implement a revegetation program to achieve dust control, noxious weed control, fire abatement, and reduce bird aircraft strike hazard near the airfield to ensure the operational capability of NAS Fallon.

#### **ACCOMPLISHMENTS FY 2011-2012:**

NAS Fallon is proud of these highlights from our NR Program during FY2011 and FY2012:

- \* Ecosystem enhancement and invasive species control at Dixie Valley,
- \* Critical bat habitat protection at Training Ranges 17 and 19, and
- \* Outstanding community outreach

#### Ecosystem enhancement and invasive species control at Dixie Valley:

The distinctively isolated Dixie Valley area has many well-fed ponds. These ponds provide habitat for many species of migratory birds and waterfowl, mammals, amphibians, reptiles, and fish. Of particular importance is a species of fish identified as the Dixie Valley tui-chub. Although this species has not undergone formal identification, the Navy with its partners, USFWS and NDOW, manage this species as unique. Six ponds were targeted for habitat improvements that included creating deep water areas, removing invasive cattails and Russian

olives, improving or repairing well heads, repairing gates and fences, bullfrog removal, and installing a bullfrog exclusion fence at two locations.

Dixie Valley tui chub during survey. –Photo by Gary Cottle



Domonoske Pond, Dixie Valley, after restoration effort. –Photo by Anna Keyzers



Deep areas allow fish to survive the cold winter freezes, and cattail and olive tree removal opens up surface waters, which is important for a variety of waterfowl species that either use ponds for nesting or migratory rest stops. Additionally, over 500 acres of noxious and invasive species such as Russian knapweed and tall whitetop were treated throughout Dixie Valley. Noxious and invasive species of plants decimate the land's potential and impact many sectors of our economy, destroying wildlife habitat and lowering forage value. Repairing wells ensures constant flow of water, necessary for species survival. Bullfrogs are an invasive species and prey on native frogs and small fish species, including the tui chub. Over 500 bullfrogs and tadpoles were removed from one pond. The exclusion fence is designed to prevent unwanted species of amphibians from entering the excluded area; therefore, allowing a more sensitive species such as the tui chub to thrive with less threat of predation. Now that the frogs have been removed, the exclusion fence will prevent bullfrogs from migrating back in and re-establishing a population.

Installed exclusion fence at Turley Pond, Dixie Valley. –Photo by Gary Cottle.



Several BLM grazing allotments are situated in Dixie Valley. Gates and 2500 linear feet of fences were repaired. Fences in good condition are critical to keep grazing cattle from trampling sensitive pond banks and levees. The project enhanced the habitat for two sensitive species and will benefit many other species in the process. Although protection of non-listed species is not mandatory on federal installations, management of these species contributes to the overall health of their natural populations and reduces the likelihood that

these species will be given legislative protection in the future. Enhancing ecological integrity benefits the military mission and long term sustained use of installation lands.

### Sensitive Bat Species Habitat Protection:

A critical bat habitat protection measure was carried out by the preventative closing of abandoned mines at the B-17 and B-19 Training Ranges. Abandoned mines are used as artificial roost sites for a large variety of Nevada's bat species for at least a portion of their lives such as during maternity and pup rearing, or hibernation. Bat populations throughout the nation have recently been threatened by a disease called white-nose syndrome. Caused by a white fungus that grows on the face, wings and bodies of bats, the disease has resulted in up to a 90% die off

Abandoned Mine Shaft and Adit with Bat Compatible Gates Installed. –Photo by Anna Keyzers



at affected areas. The newly identified disease has spread to caves and mines in 19 eastern states since first identified during the winter of 2006-07. It is believed that humans entering mines may unintentionally carry the causative agent from cave to cave on their clothing and gear. The abandoned mines at B-17 and B-19 have potential for ground training incursion, as well as intrusion by gold speculators and recreational cavers. The

NR staff worked cooperatively with NDOW biologists to identify mines used by bats and targeted 10 abandoned mine shafts and adits for bat compatible gate closure. Working closely with the Range Department and the Contacting Officer, staff identified very specific criteria for the Scope of Work and Request for Proposals. The contractor hired to perform the mine closures has many years of experience of closing abandoned mine openings throughout the State of Nevada, where a large number of mines can be found. The gates were custom built to the unique mine openings and landscape each presented. The project closed the mines to future human intrusion while allowing bat ingress and egress to continue. If the disease continues to spread, NAS Fallon has taken advantage of the 'time on our side' to preemptively take action to protect habitat for the health of sensitive bat species.

### Outstanding Partnering and Community Outreach:

Partner agencies contributed time and expense to support Navy efforts by conducting repair work at Dixie Valley. USFWS and NDOW brought in equipment and repaired the water supply ditches to two ponds, while removing cattail overgrowth from a third pond at Dixie Valley. On another project, NDOW and the NSAWC Range Office assisted in the improvement of the riparian area along Horse Creek, which is in the eastern foothills of Dixie Valley. NDOW brought equipment and removed vegetation in three areas to allow water access to wildlife. Depressions will fill with water, improving habitat for brook trout. This type of habitat improvement will benefit recreational fishing in the area that already hosts campsites. The Range Office personnel focused on repairing the road, cattle guard and gate repairs. Further efforts in cooperation occurred when NDOW requested emergency drought assistance for water guzzlers for Big Horn Sheep in the B-17 area and surrounding mountain ranges. NAS Fallon Water Compliance and NR staff coordinated with outstanding support from the Range Office to assist NDOW in this request.

The NR staff either oversees or actively participates in several committees, such as Earth Day, Spring Wings Bird Festival, and National Recycling Day. These various committees refocus our public outreach efforts every year to reach out to children, military families, co-workers, and the local community. Events offer the opportunity to reach out and provide information, give guided tours, tree planting, and event fairs. The more that people know what the Navy does for the local environment, know what the local resources issues are, and know how important the resources are, the easier it will be to accomplish goals and support the mission.

These many efforts bear testimony to the outstanding cooperative and mutually beneficial relationship that NAS Fallon has with its INRMP stakeholders. As a good steward of the lands in the Great Basin ecoregion, NAS Fallon is committed to the protection of the natural resources on Navy-administered lands to facilitate military training, ensure there is no net loss in training areas, and also ensure the resources are available for Public enjoyment, as appropriate.

NAS Fallon's, Gary Cottle, showing local children bird nesting area. –Photo by Anna Keyzers

