

Fort Ord Environmental Cleanup 2011 ANNUAL REPORT

Fort Ord BRAC Office

July 2012

CLEANUP AT THE FORMER FORT ORD

The environmental cleanup at the former Fort Ord site is required by a federal law known as the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 as amended (CERCLA). This law is popularly known as "Superfund," because it sets up procedures for funding environmental cleanup at hazardous waste sites that are no longer in use. However, at the former Fort Ord, the Army funds the cleanup as the lead federal agency.

The basic steps in deciding what cleanup methods should be used are shown in the table below.

STEP	QUESTIONS BEING ADDRESSED
Remedial Investigation	What level of pollution exists, and where is it located?
Feasibility Study	What are the feasible alternative methods of cleanup? What are their benefits/costs? What are the risks?
Proposed Plan	What cleanup method will be used? This is the main opportunity for community input on the recommended remedy.
Record of Decision	This is the selected remedy chosen after evaluating all alternatives and considering community input.
Five Year Review	Is the cleanup remedy still protective of human health and the environment?

The Remedial Investigation and Feasibility Study are usually combined into a single document known as a Remedial Investigation/Feasibility Study or RI/FS. The Proposed Plan is provided for formal community input. The Record of Decision documents the selected remedy after considering public comments.

The Army performs these studies under the direction of three regulatory agencies. The Record of Decision must be agreed to by the Army, U.S. Environmental Protection Agency (EPA), and California Department of Toxic Substances Control (DTSC). The California Regional Water Quality Control Board (RWQCB) must also agree with any decisions related to groundwater cleanup.

THE ARMY'S FORT ORD CLEANUP PROJECTS

The Army first began investigating soil and groundwater in the mid-1980s and much progress has been made. The cleanup issues at Fort Ord are far too complex to be addressed in a single RI/FS.

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Fort Ord Second Annual Guided Nature Walk inside the Impact Area, May 2011

FORT ORD NATIONAL MONUMENT AND FORT ORD CLEANUP

A portion of the former Fort Ord lands encompassing 14,651 acres was designated as the Fort Ord National Monument on April 20, 2012, for the purpose of protecting and restoring the land and its natural resources. The Army currently manages 7,446 acres of the designated area.

The Army's environmental cleanup work within the areas of the National Monument is designed to support the future reuse of the lands included in the Fort Ord National Monument as a habitat reserve.

The Presidential Proclamation for the establishment of the Fort Ord National Monument specifically states that the implementation of the Installation-Wide Multispecies Habitat Management Plan or the Army's environmental remediation responsibilities will not be affected by the designation.

PARA OBTENER UNA COPIA EN ESPAÑOL, CONTACTE: 831-393-1284

Instead, the cleanup sites were grouped into categories of sites with similar characteristics, and individual RI/FS documents were prepared for each category.

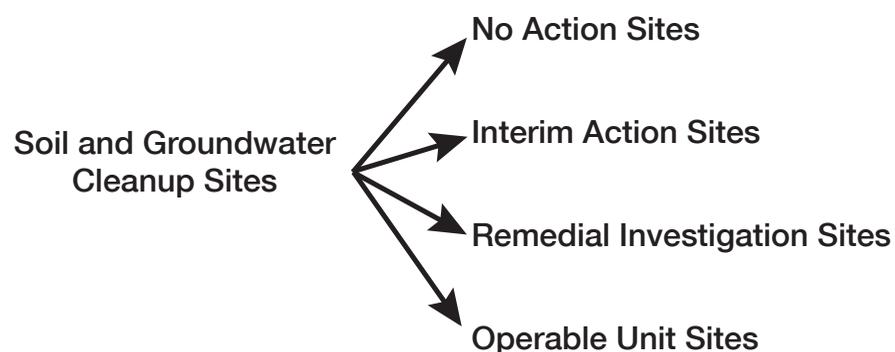
The two basic categories are:

- **Soil and groundwater cleanup sites** — sites where either soil or groundwater were contaminated by surface activities during the time Fort Ord was operated as a military training base.
- **Military munitions response sites** — sites that were used for training in artillery or other explosives and where unexploded ordnance or explosives may remain.

Within each of those categories, additional distinctions needed to be made, as shown below.

SOIL AND GROUNDWATER CLEANUP SITES

The soil and groundwater cleanup sites are broken down further into the following categories:



SOIL CLEANUP 2011 ACCOMPLISHMENTS

Site 39: More than 140,000 cubic yards of soil contaminated with lead and explosive residues were excavated from the impact area and transported to the former Fort Ord landfill. This leaves just two known areas, Range 38 and the remainder of Range 37 to be excavated. See page 5 for details.

GROUNDWATER CLEANUP 2011 ACCOMPLISHMENTS

All remedies are in place, and treatment will continue until contamination is within the agreed upon cleanup standards. The lactate treatment process being used to treat carbon tetrachloride in one area is proving successful. See the story on page 4 for details.

Cumulative treatment performance is shown below for each of the three groundwater treatment plants.

GROUNDWATER TREATMENT SYSTEM* STATUS AS OF DECEMBER 31, 2011

	OU1	OU2/OUCTP	Sites 2/12
Gallons Treated	293.5 million	5.469 billion	1.509 billion
Gallons of Contaminants Removed	3	56	36

*Groundwater extraction and treatment systems only

NO ACTION SITES

Sites that require no further action because no contaminants were released at the site or because the site cleanup activities are excluded under Superfund but covered under a different cleanup program.

INTERIM ACTION SITES

Areas with a limited volume or extent of contaminated soil, such that contaminated soil could be excavated as an interim action (an expedited cleanup activity).

REMEDIAL INVESTIGATION SITES

More complex problems that require significant soil or groundwater cleanup.

OPERABLE UNIT SITES

Geographic areas or specific site problems that have remedial actions ongoing. These sites include:

- Operable Unit 1 (OU1): Fritzsche Army Airfield Fire Drill Area
- Operable Unit 2 (OU2): Fort Ord Landfills
- Operable Unit Carbon Tetrachloride Plume (OUCTP): Carbon Tetrachloride plume

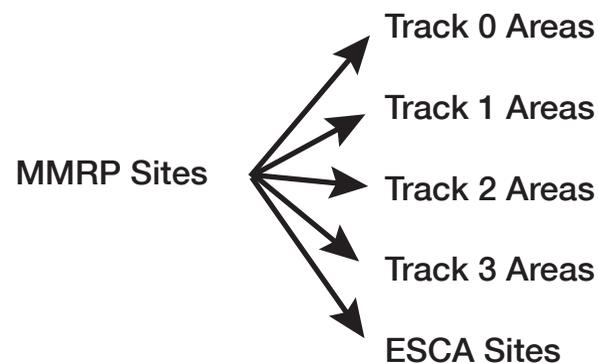
An RI/FS was prepared for each of these categories, and a Record of Decision has been published for each category. Each of the operable units also have their own RI/FS, Proposed Plan and Record of Decision.

MILITARY MUNITIONS RESPONSE PROGRAM (MMRP) SITES

Since 1993 the Army has been identifying sites where artillery or other explosives were fired as part of training exercises. These sites have been identified through archive searches, interviews, and visual inspections. These sites comprise approximately 12,000 acres at the former Fort Ord. Types of munitions and explosives of concern (MEC) found include artillery projectiles, rockets, hand grenades, practice land mines, pyrotechnics, bombs, demolition materials, and other items.

A few areas have undergone sufficient evaluation that they have been released for unrestricted use. Other areas were evaluated and land use controls were applied to support designated future reuse. There is a large area called the "Impact Area Munitions Response Area (MRA)" which is undergoing cleanup and will be transferred to the Bureau of Land Management when the cleanup is complete. The Impact Area MRA is completely fenced and posted with warning signs. The Army is also conducting munitions field investigations in areas outside the Impact Area MRA for places that either have been or will be transferred to the Bureau of Land Management. Safety programs and training are also conducted to notify people of the dangers associated with trespass on these sites.

The MMRP sites have also been divided into different categories based on the characteristics of the munitions and explosives that might be found on the land.



TRACK 0 AREAS

Track 0 areas contain no evidence of MEC and have never been suspected of having been used for military munitions-related activities of any kind. The areas listed in the Track 0 Record of Deci-



Information booth at the 2011 Monterey County Fair displays munitions found at former Fort Ord

sion consist largely of land that was developed for military support or residential use throughout Fort Ord's history.

TRACK 1 SITES

Track 1 sites are areas where military munitions were suspected to have been used but no further action is required because investigation has shown that the suspected training did not occur; that training did not involve explosive items; or that training at these sites involved only the use of practice and/or pyrotechnic items that are not designed to cause injury.

TRACK 2 SITES

Track 2 sites are areas where MEC items were present and a MEC removal action has been conducted. Two of these sites — the Parker Flats MRA and the Del Rey Oaks MRA — have been evaluated, and land use controls were selected in their respective Record of Decisions (RODs). Restrictions include MEC safety education programs for site users, construction support, and restrictions on residential use for specified areas.

TRACK 3 SITES

Track 3 sites include areas where MEC items are known or suspected to be present. The selected remedy for the Track 3 Impact Area MRA includes: (1) vegetation clearance via prescribed burning, (2) technology-aided surface removal of MEC items, (3) sub-surface MEC removal in selected areas, and (4) land use controls. The Impact Area MRA includes a portion of Ranges 43-48 where an interim remedial action was conducted in 2003-2005. Cleanup is ongoing and is expected to last 8 years or more.

Once again, an individual RI/FS and Record of Decision has (or will be) prepared for each of these individual cleanup categories.

ENVIRONMENTAL SERVICES COOPERATIVE AGREEMENT (ESCA)

To facilitate transfer and immediate reuse, the Army transferred property to the Fort Ord Reuse Authority (FORA) as part of an

agreement known as the Environmental Services Cooperative Agreement (ESCA). In this 2007 agreement, FORA committed to completing the evaluation of MEC hazards on approximately 3,340 acres of the former Fort Ord and will take any remedial actions deemed necessary to protect human health and the environment with respect to MEC based on the future uses. The Army provided funding to complete the munitions cleanup under the ESCA.

CLEANUP UPDATES

Here is a quick summary of how each program is progressing, as well as updates on important technical studies that have been completed.

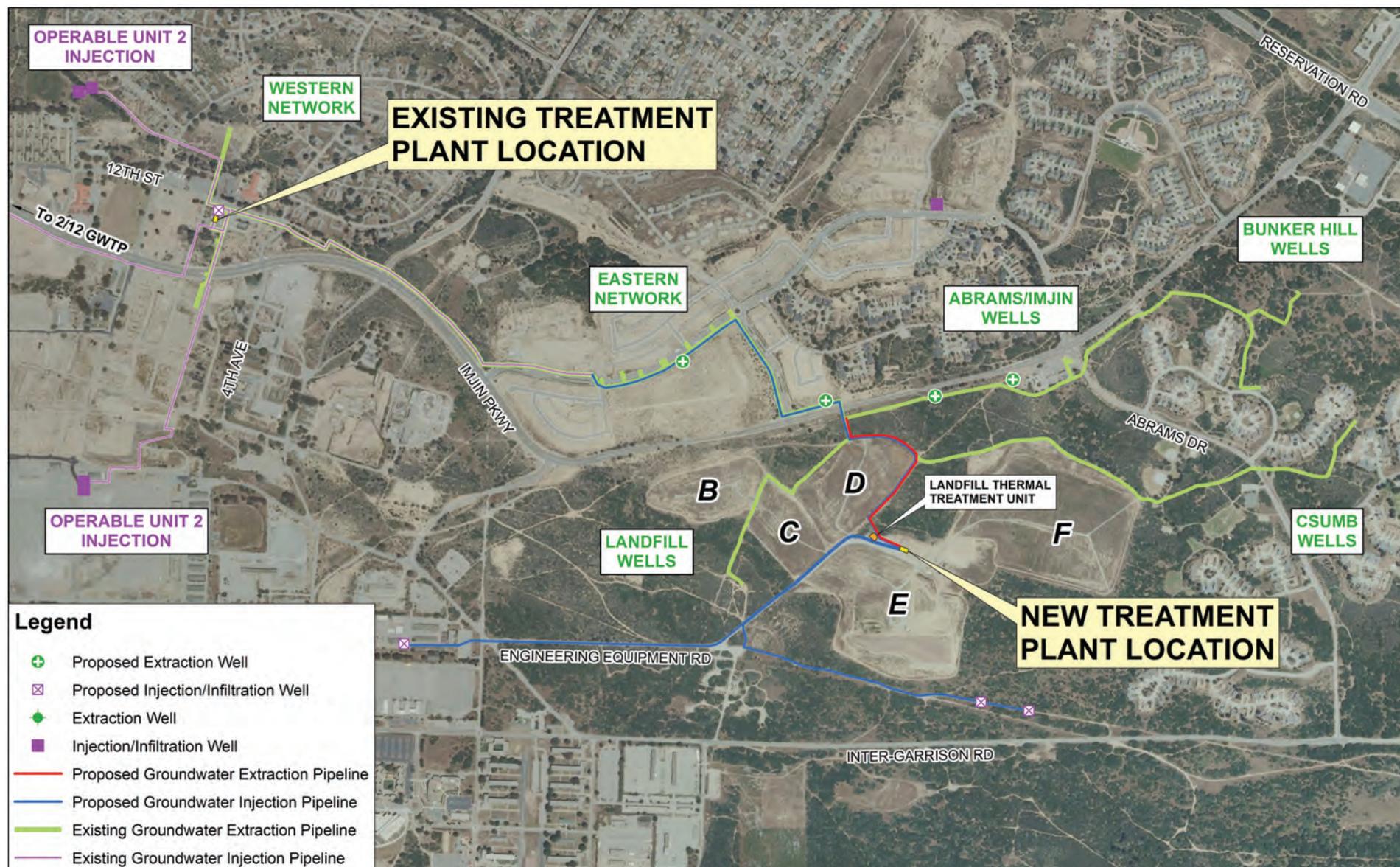
SOIL AND GROUNDWATER CLEANUP SITES

Here are some updates on elements of the soil and groundwater cleanup process:

ARMY MOVING OU2 TREATMENT PLANT

The Army plans to move the treatment plant that currently treats the contaminated water that originated from the OU2 landfill. The treatment plant will be relocated from its current location on 12th Street to a site located between waste cells of the landfill. The land under the current treatment plant has already been transferred to Monterey Peninsula College. Moving the plant will allow for this area to be used by the College. The timing is good because this plant has been operating since 1995 and needs to be refurbished. So the move and refurbishment can be accomplished at the same time. Also groundwater extraction is now focused in the landfill area, with new wells and pipelines planned. The move also consolidates all landfill cleanup operations in one fenced area: gas treatment, water treatment, and landfill cover

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Existing OU2 Treatment Plant and Proposed New Facility

operations and maintenance.

The new treatment plant will use the same treatment approach as the existing plant. Water is extracted using wells. The extracted water is treated with granular activated carbon. The treated water is then re-injected back into the aquifer.

NEW GROUNDWATER TREATMENT APPROACH SHOWS POSITIVE RESULTS

Sometime during Fort Ord's operations, carbon tetrachloride was dumped out on the ground in one location, and over time it percolated into the groundwater. The carbon tetrachloride now forms a contaminated groundwater plume known as Operable Unit Carbon Tetrachloride Plume or OUCTP.

In the past, traditional groundwater treatment to remove contaminants such as carbon tetrachloride has involved extracting the water, then treating it with granular activated carbon. The Army has begun using an innovative approach which involves injecting lactate (a substance similar to milk) into the contaminated water. Naturally-occurring bacteria consume the lactate to begin a series of metabolic processes that break down carbon tetrachloride into by-products such as carbon dioxide.

The Army has recently completed the last planned injection of lactate into the groundwater. The Army is now measuring the effectiveness of this type of treatment, and so far it seems to be effective in reducing levels of carbon tetrachloride.

GROUNDWATER TREATMENT CONTINUES AT SITES 2/12 AND OPERABLE UNIT 1

Groundwater treatment systems are also operational at two other locations: Sites 2/12 and Operable Unit 1. Similar to Operable Unit 2 mentioned earlier, these treatment systems are removing contaminants such as trichloroethene by extracting the water, then treating it with granular activated carbon.

METHANE GAS REMOVAL AT OU2 LANDFILL

During the period that Fort Ord operated as a training facility, it had to deal with solid waste just like any other community. As a result the Army maintained its own landfill. Unfortunately, like many community landfills from this time period, some toxic chemicals migrated into the groundwater beneath the landfill. Therefore the Army is responsible for cleaning up this contamination.

The Army had to address two problems: (1) How to prevent rainwater and other moisture from transporting new contamination from the landfill down into the groundwater, and (2) How to remove the contamination that was already in the groundwater beneath the landfill. The problem of how to prevent new groundwater contamination was solved by putting an impermeable membrane cover on top of the landfill. This keeps water from moving down through the landfill contents and contaminating the groundwater underneath the landfill.

To address the existing groundwater contamination, the Army constructed a groundwater treatment plant. The groundwater is extracted from the ground using extraction wells, treated with granular activated carbon, then the clean water is re-injected back into the ground.

Like all landfills, this landfill produces gas as the materials in the landfill decompose. Landfill gases primarily consist of methane and carbon dioxide. This methane gas can itself pose a problem to people living nearby, so as part of normal maintenance, the Army monitors these gases and has also installed a system to extract and treat these gases. State regulations require that methane not exceed 5% at the landfill perimeter. The Army's monitoring of probes in the ground and air around the facility has shown that there is no impact to the surrounding community.

The Army will continue to monitor and remove gases until the regulatory limit can be reached without further extraction and treatment. This will probably not occur for another 10-15 years.

REMOVAL OF METALS AND EXPLOSIVE RESIDUES IN SOIL AT SITE 39

During the period when Fort Ord was a military training facility, the Army conducted training with various weapons on a number of training ranges. Many of these ranges have now been cleared of munitions and explosives of concern on or near the surface of the soil leaving metals and explosive residue that contaminated the soil. The metals found in the soil include lead, copper, antimony (from bullets). Explosive residues found in the soil include TNT, RDX, and HMX. Other chemicals, such as semi-volatile organics, were not found in the soil at levels of concern.

The Army calls all the areas in the former inland training ranges where there is soil contamination "Site 39." The Army is responsible for cleaning the soil in Site 39 to standards that will protect human health and the environment.

In prior years the Army evaluated the potential impact on human health and identified a remedy which consisted of excavating the contaminated soil and moving it to the former Fort Ord, OU2 landfill. That landfill is currently covered with an impermeable membrane that prevents rain or other moisture from carrying contaminants into the groundwater. The contaminated soils recently removed from Site 39 have been trucked to Cell E, which is a portion of the landfill, where the soil is placed on top of the existing membrane cover. When the cleanup of soil is complete at Site 39, a second membrane will be placed on top of the contaminated soil, bonded to the first membrane, and sealed shut.

About three years ago, the Army completed detailed studies to look beyond human health and consider whether soil contamination could impact plant or animal life. The conclusion was that the cleanup levels for metals and explosive residues needed to be revised to be protective of the plant and animal life but the original plan — removing the soil and placing it in the landfill — remains the best alternative for disposal. Another issue is that much of the habitat in the Site 39 area is Central Maritime Chaparral, which contains many rare, threatened, and endangered species. This habitat can be harmed by too much surface disturbance. The Army has identified those areas to be restored with native species for the conservation of the rare habitat and species.

Excavation of these sites is nearly complete. Excavations are still planned for portions of Range 37 and Range 38. If new areas of contamination are discovered in areas yet to be cleaned up



The Army's former Beach Range Training Area is now a State Park.

for munitions and explosives of concern, additional soil excavations may be necessary.

BEACH RANGE CLEANUP PROTECTS HUMAN HEALTH AND THE ENVIRONMENT

During the time Fort Ord was an active training facility, soldiers were trained in the use of small-caliber weapons at firing ranges in the sand dunes west of Highway 1. As part of the Fort Ord cleanup program, this area was cleaned up to standards approved by three state and federal environmental regulatory agencies, and turned over to the Department of Interior who ultimately transferred the property to the California Department of Parks and Recreation.

Recently, some members of the community have suggested that the cleanup of the sand dunes was inadequate, because bullets are still found in the sand. Bullets remain on the property because the cleanup objective was to remove the contaminated soil where fine particles of lead fragmented off the bullets after impacting the targets and backstops. The objective was to remove the contaminated soil to a level that protects human health and the environment for the intended use as a state park. The property will remain as open space, used for hiking, camping, and recreational uses on designated trails and boardwalks to protect the rare, threatened, and endangered plants and animals.

Why not clean up all the bullets? The cleanup decision resulted in only the removal of lead contaminated soil which posed a risk to human health and the environment. Once the levels of lead in the soil were cleaned up to the standard identified through the Superfund cleanup process, the cleanup was complete.

Once the beach areas were cleaned up, confirmation samples were taken to ensure that the cleanup met the requirements of the CERCLA Record of Decision. Subsequently the Army and regulatory agencies revisited the cleanup in this area to ensure that it wasn't just protective of human health, but also protected plants and animals. Recent ecological monitoring studies demonstrated that the native habitat grows well and is self-sustaining even in areas where concentrations of lead below the cleanup standards can still be found. The results of these ecological monitoring studies were published in 2011 in a report titled: *Final 2011 Habitat Restoration and Monitoring Report, Non-Remediated Areas, Fort Ord Dunes State Park*. This report (Administrative Record number BW-2595A) can be downloaded at www.FortOrdCleanup.com.

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Soil excavation in Site 39

THE ARMY'S MILITARY MUNITIONS CLEANUP

The Army's Military Munitions Response Program currently has two major programs. The first program focuses on munitions cleanup within the Impact Area, the area where most munitions training was conducted. The second focus is on "remaining sites." These are sites outside the Impact Area including land that has already been turned over to the Bureau of Land Management (BLM) and will be part of a large open space/habitat reserve to be managed by the BLM as the recently designated Fort Ord National Monument.

MUNITIONS CLEANUP IN THE IMPACT AREA

Within the Impact Area, the first step before munitions cleanup can occur is to clear the land of brush that blocks the view of dangerous MEC items potentially present on the ground surface. In 2002, after an extended study of alternatives and public process, the Army and the regulatory agencies concluded that the most effective approach for clearing the vegetation was prescribed burns. Prescribed burning is used because it is the safest for cleanup workers, and because the brush — which is the habitat for several rare, threatened, and endangered species — grows back better after a prescribed burn than if it is cut. The Army's 2008 Record of Decision for the Impact Area MRA included prescribed burning as a part of the selected remedy.

Almost every year the Army conducts one or more prescribed burns to prepare land for cleanup.

NO PRESCRIBED BURN IN 2011

No prescribed burn was conducted in 2011 even though a burn had been planned. During site preparation the Army discovered that there were two types of high-explosive artillery projectiles on the surface of the land that, if unintentionally detonated, could make fragments fly far enough to create a hazard for prescribed burn workers. These items required a much greater safety setback-



2011 Munitions Clearance Work using a Schonstedt Magnetometer

MILITARY MUNITIONS CLEANUP 2011 ACCOMPLISHMENTS

Preparation work began for a prescribed burn on Unit 10 in 2012. No prescribed burn was held in 2011 due to safety considerations (see below). MEC remediation is underway at Units 4, 11, and 12.

A significant number of investigations and studies in the remaining sites — prerequisites for future cleanup work — were begun in 2011, particularly focusing on land already turned over to the BLM.

distance than had been planned and exceeded the Army's capabilities to conduct a safe prescribed burn. Because of these specific circumstances, the vegetation in Units 11 and 12 was cut to allow the safe remediation of MEC.

In the Impact Area, prescribed burning remains the safest method for vegetation removal because the total risk exposure for the cleanup workers is less, as compared to mechanical cutting. Specific circumstances under which prescribed burning will not be conducted include: when safety standards require safety standoff distances that exceed the Army's capabilities to conduct a safe prescribed burn, based on specific types of munitions items; and when wildfire risk is too high, based on fuel, terrain and other features.

Native vegetation is rejuvenated by fire, but regenerates a less diverse mix of plants if cut. To address this problem, once the surface MEC have been removed from the areas and the vegetation grows back sufficiently to carry a fire, these two areas will be burned to encourage a successful regeneration of the rare, threatened and endangered fire-dependant plant species. These habitat protection measures were agreed to by the U.S. Fish and Wildlife Service. The areas that were cut have MEC investigations underway.

PRESCRIBED BURNING IN 2012

The Army's prescribed burn plan includes Units 7 and 10; however, only one area (Unit 10) has been selected for prescribed burning during the 2012 burn season or later. Unit 10 is about 327 acres, Unit 7 is about 341 acres. The map on the next page shows the location of Units 7 and 10 as well as areas where prescribed burns have been completed (shown in beige).

The Army published a 2012 prescribed burn plan which includes a burn prescription, an air monitoring plan, and a community notification plan. This document is available in the Administrative Record section of www.fortordcleanup.com.

Prior to each prescribed burn, the Army will complete burn preparations such as establishing primary, secondary and tertiary containment lines; removing combustible surface debris where safe to do so; and designating staging areas and access routes. The preparatory work, once all plans were outlined, was a greater workload than anticipated, so the Army has focused on Unit 10 as the designated prescribed burn area for 2012.

A prescribed burn at Unit 10 will be conducted sometime after July 1 when meteorological conditions meet the burn prescription and safety requirements have been met. Community notification will be provided.

DIRECT NOTIFICATION PROGRAM

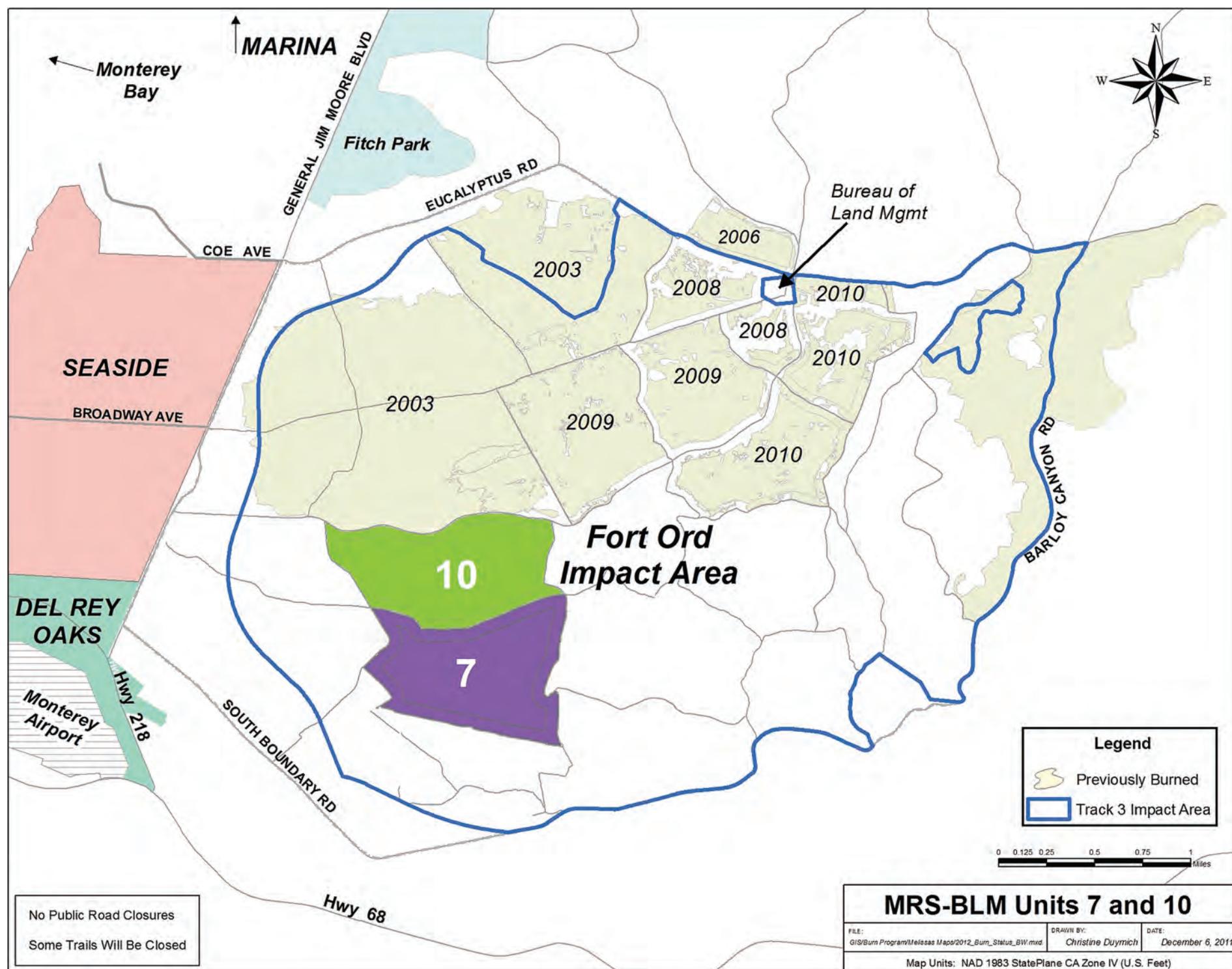
The Army acknowledges that prescribed burns can affect air quality, create ash, and can affect sensitive individuals. Therefore, the Army has taken numerous steps to design prescribed burns to minimize smoke impacts to the surrounding community. This includes conducting the prescribed burns when an appropriate combination of meteorological conditions and moisture levels in the vegetation occurs.

The Army's prescribed burn announcements will include information about how to reduce or minimize exposure to possible smoke from prescribed burns. These precautions include staying indoors with doors and windows closed and limiting outdoor activity when smoke is present. The Army will make the decision to proceed with the burns when optimum burn conditions are anticipated and resources (equipment and personnel) are available.

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2011 Munitions Clearance Work using an electromagnetic metal detector



Unit 10 Proposed for Prescribed Burn in 2012



2011 Nature Walk inside the Impact Area

The Army provides direct notification to individuals who have registered for the program at three points in the prescribed burn process via e-mail, text message (new for 2012), or telephone. Individuals who have enrolled in the Direct Notification Program will be notified (1) when the burn team is mobilized to the site; (2) when the burn is started; (3) and when the burn operation ends. Community members may register for the Direct Notification Program by filling out a form available at www.FortOrdCleanup.com or by calling 1-800-852-9699. Community members must register each year. The Army also notifies the community via such methods as newspaper advertisements, targeted mailing in and around the former Fort Ord as well as press releases.

If there is a favorable weather forecast, the Army will verify other key factors including the availability of fire resources and equipment (such as helicopters). If it looks like weather is appropriate for a burn and equipment and personnel are available, the Army Fire Department will get ready for a prescribed burn by calling in burn equipment and personnel—a process called mobilization. At that time the Army will notify the media and people who have registered for the Direct Notification Program that the mobilization has begun. Once mobilized, burn personnel, equipment, and supplies may be in place and standing by for several days. On the day of the planned burn, the Presidio of Monterey Fire Department will make a decision to proceed with the prescribed burn when optimum burn conditions are developing and all other factors are met. At that time, the Army will notify people who registered for the Direct Notification Program that the prescribed burn has begun.

SURFACE/SUBSURFACE REMOVAL

The Army will be conducting a surface removal of all the land in the Impact Area MRA. Surface removal will address the significant and most immediate danger from the site.

The Army will also conduct subsurface removal in areas where necessary to provide for safe future land management. This includes roads, trails, designated fuel breaks, administrative areas, and areas requiring extensive habitat restoration. Munitions clean-up actions are designed to protect for the intended reuse while minimizing the impact to the native habitat. Subsurface removal areas are designated by a working partnership with BLM and in coordination with EPA and DTSC. Subsurface MEC removal may not be necessary in large portions of the Impact Area that contain protected native habitat where public access will be limited.

COMPLETING THE INVESTIGATION OF REMAINING AREAS

Besides the Track 3 Record of Decision for the Impact Area MRA, several other Records of Decision (Tracks 0, 1 and 2) have been completed addressing significant portions of the former Fort Ord.

The approach for completing the munitions investigation for the remaining areas of the former Fort Ord was developed, and described in the document titled *Final Remaining RI/FS Areas Management Plan, Former Fort Ord, California, dated February 4, 2010*. As part of the evaluation process, the remaining areas were divided into nine geographic areas to facilitate investigation and documentation. Based on an evaluation of each of the nine areas, the Management Plan outlined the following approach: additional field investigation through site assessment where warranted, and completion of the documentation through the Track 1 and Track 2 processes.

The work accomplished in 2011 included:

- BLM Headquarters (MRS-35) was approved for no further action under the Track 1 process.
- MRS-24A, MRS-24C including the Investigation Area, and Parcel E20c.1, a development parcel north of Eucalyptus Road, were approved for no further action under the Track 1 process.
- MRS-34, a former practice rocket range within the former Fritzsche Army Airfield north of Reservation Road, was evaluated. A draft Track 2 Remedial Investigation report was issued in March 2012 for public review.
- The other six geographic areas encompass lands that have been or will be transferred to BLM (not including the Impact Area). The transferred areas are currently managed by BLM as open space for hiking, biking, and other recreation activities. These areas were evaluated and deemed safe for the intended uses when the property was turned over to BLM in 1996. Under the Management Plan, site assessment field investigation was completed in 2011. The six geographical areas will be further evaluated under Track 1 and Track 2 processes. A Track 1 plug-in approval memorandum recommending no further action for a portion of the areas will be made available for a public review in the summer of 2012. The documents associated with the Remaining Areas program can be downloaded from the Administration Record on the FortOrdCleanup.com website.

THE MUNITIONS CLEANUP VIA THE ENVIRONMENTAL SERVICES COOPERATIVE AGREEMENT OR ESCA

To facilitate transfer and immediate reuse, the Army transferred property to FORA as part of an agreement known as the ESCA. In the 2007 agreement, FORA committed to completing the evaluation of MEC hazards on approximately 3,340 acres of the former Fort Ord and will take any remedial actions deemed necessary to protect human health and the environment under future uses. The Army provided funding to complete the munitions cleanup under the ESCA.

In 2011, the ESCA program's field work included field work related to the remedial investigation in the Parker Flats MRA Phase II and the Future East Garrison MRA. Several reports were issued to document the ongoing residential quality assurance pilot test in the California State University Monterey Bay (CSUMB) Off-Campus, Parker Flats, and Seaside MRAs. A continuation of the interim remedial action in Range 47 and evaluation of other areas within the Interim Action Ranges MRA were also initiated

in 2011. For the Group 3 MRAs, the RI/FS evaluation continued in 2011. Once the Group 3 RI/FS is finalized, the CERCLA-required Proposed Plan public meeting will be scheduled for late 2012. For more information and a map of these areas, go to the FORA ESCA Remediation Program website at www.fora-esca-rp.com.

COMMUNITY BENEFITS

Up until its closure in 1994, the former Fort Ord was like a small town. Over 30,000 people resided on the base. The base had over 8,000 buildings, including four schools, a hospital, military and family housing, offices, shopping areas, restaurants, and machine shops, a sanitary landfill, plus an airfield, two golf courses, and other recreation areas. When Fort Ord closed, more than 15,000 jobs were lost. Fort Ord's closure also resulted in a significant loss of residents (37,000+) and economic activity (\$1,000,000,000 per year in current dollars).

Naturally, community leaders were deeply concerned about the potential economic impacts of closure. The one hope was that as land was turned over to the community it would lead to economic development and other community benefits such as open space and recreation.

The reuse plan developed after base closure, designated approximately 2/3 of the Fort Ord land as open space and the remaining 1/3 of the former military based for development.

But before the land could be reused it had to be cleaned up. Portions of the base had soil or

groundwater contamination. Old training ranges were still covered with metal debris and some amount of unexploded munitions and explosives.

The Army, working with environmental regulatory agencies, the US Environmental Protection Agency (EPA), the California Department of Toxic Substances Control (DTSC), and the Regional Water Quality Control Board (RWQCB), has been actively engaged in cleaning up the land, and transferring it to the community as quickly as possible to support designated reuse. Numerous environmental reports and extensive documentation had to be completed before transfers could be made legally.

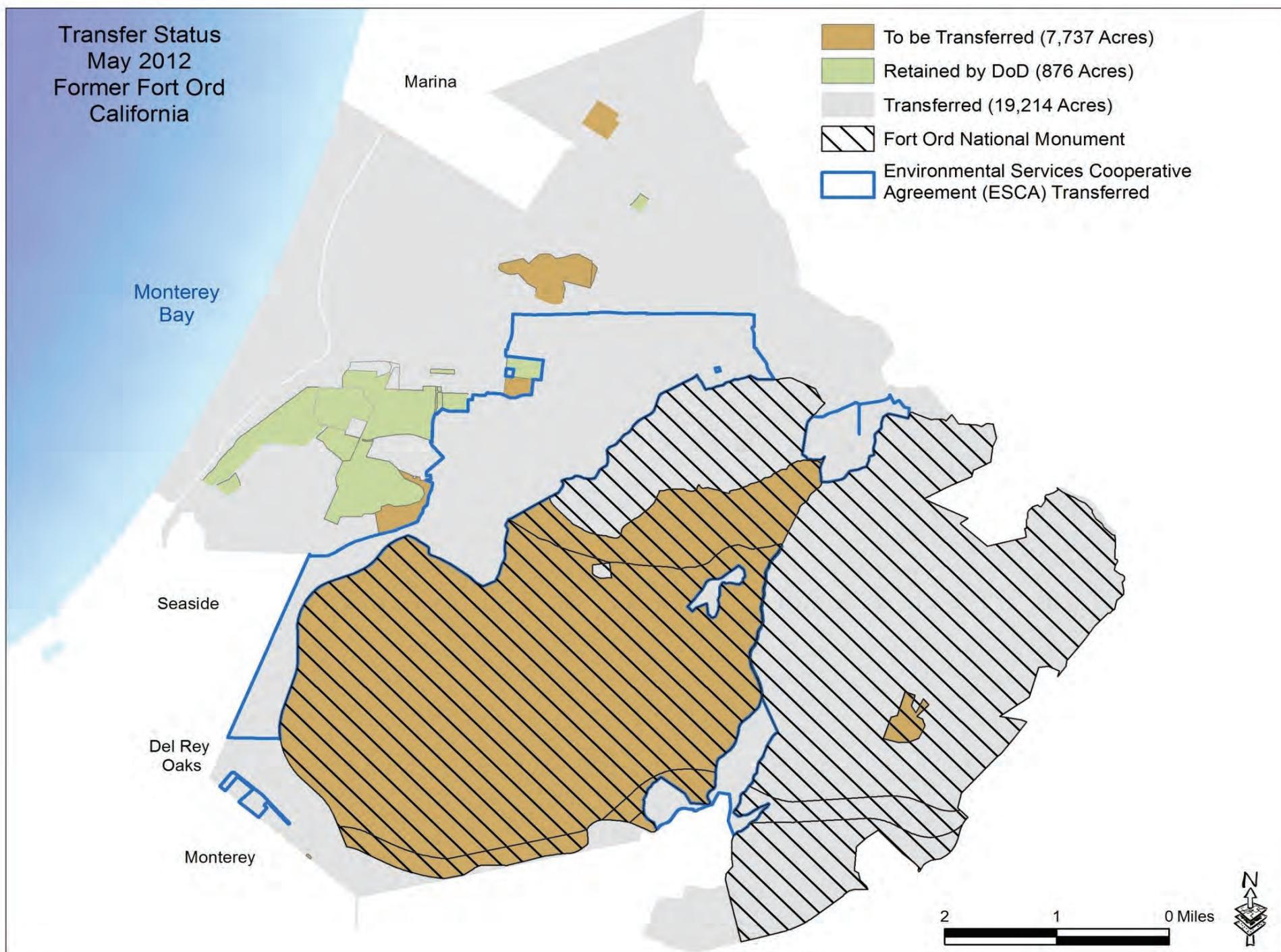
The vast majority of the land that may be developed by the community has now been transferred. Cleanup continues in several large areas, but much of the land that must still be transferred from the Army will be a habitat reserve managed by the BLM as the Fort Ord National Monument.

FORT ORD REUSE AUTHORITY BASE REUSE PLAN

Decisions about future use of the former Fort Ord land are made by local jurisdictions. The Fort Ord Reuse Authority (FORA) was created in 1994 by the State legislature to oversee the civilian reuse and redevelopment of the former Fort Ord military base. It is FORA's responsibility to complete the planning, financing, and implementation of reuse. FORA's Board consists largely of representatives of local governments.

But economic realities have clouded the reuse of the former Fort Ord. Approximately 1,600 people are now employed (through new jobs) at the former military base, only a small fraction of the 18,000 FORA expected by the year 2015. Some of the anticipated

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development of former Fort Ord land has been held up by general economic conditions. For example, several housing projects have been delayed due to the generally poor real estate market. FORA reports that there are a number of projects ready to start when the market bounces back.

The vast majority of the land that may be developed has now been transferred to the community.

reflect current conditions. Revision of the BRP would take place as a separate action after the reassessment is completed, and include all necessary environmental review.

According to FORA, under terms of an agreement with

the Sierra Club, FORA must complete the reassessment by the end of 2012. FORA also indicated that extensive public outreach and engagement will be a key element of the reassessment effort. FORA held a series of five community workshops in May and early June for the initial scoping phase of the reassessment. Additional reassessment workshops are being planned for late summer and fall 2012. Copies of the public presentations from the previous community workshops are posted at www.fora.org, where you can also view the current version of the BRP, link to FORA's Facebook page, and check back for future reassessment updates.

REASSESSMENT OF FORA'S BASE REUSE PLAN IS UNDERWAY

This information is provided by the Ford Ord Reuse Authority (FORA). FORA is beginning a comprehensive reassessment of its 1997 Base Reuse Plan (BRP). The reassessment will evaluate progress toward implementing the BRP, and explore options for making the BRP better meet current and future needs.

To date, only 20% of the physical reuse of Fort Ord envisioned in the 1997 BRP has actually occurred. The local community and Monterey Bay region have changed over the 15 years since the BRP was completed. The reassessment will describe and evaluate progress made toward implementing the objectives the BRP originally identified.

The reassessment will study the existing plan as it relates to current conditions and forecasts. It will also explore whether the objectives and policies in the BRP should be updated to better

THE ECONOMIC VALUE OF OPEN SPACE

About two-thirds of former Fort Ord lands will remain in open space, most managed by the Bureau of Land Management (BLM). Other open space areas include the Fort Ord Dunes State Park managed by the California Department of Parks and Recreation and natural reserves managed by the University of California as well as other areas throughout Fort Ord managed

by other agencies. Recently, portions of Fort Ord managed by the BLM and the Army were designated as a national monument. Open space has many intangible values, but it also contributes to the economic life of the community.

BLM estimates that 100,000 visitors annually utilize Fort Ord's public lands. This figure will grow significantly as more lands are opened up to the public. The BLM estimates that 50% of users are hikers and joggers, 40% are bikers, and 10% are horseback riders.

This translates into benefits for the community. BLM estimates that the former Fort Ord land it manages generates between \$4–\$6 million per year in economic benefits to the community. BLM also notes that:

“Academic research and studies have shown that nearby open space, parks, and outdoor recreation opportunities increase the value of nearby residential and commercial property. In addition, surveys of business owners have consistently identified quality of life, including environmental amenities such as public land, as a key factor in determining where entrepreneurs choose to locate. Similarly, amenities are well-known to be a key factor in the attraction of retirement wealth.”

CLEANUP PROGRAM BRINGS LOCAL JOBS

In the meantime, the cleanup program itself means jobs. The cleanup programs creates employment equivalent to 48 full-time workers. Many of these are high-paid technical jobs.

Most of the cleanup work at the former Fort Ord is accomplished through four contractors: Innovative Technical Solutions Incorporated, Ahtna Engineering Services, Burleson, Tetra Tech, Hydrogeologic Inc, and Chenega Corporation.

Recently, both Innovative Technical Solutions and Ahtna have had jobs available and these were advertised and filled locally. However, because the Fort Ord Cleanup program is a well-established program and jobs in this area are highly prized, the number of new openings each year is small.

Economic benefits to Monterey County and the tri-county area (Monterey, Santa Cruz and San Benito counties) from these six contracts include salaries paid directly to employees as well as payments to local subcontractors and local businesses. To the extent practical, purchasing and subcontracting is also done locally providing opportunities to local vendors/subcontractors. The total economic benefit to the community in the past year is estimated to be in excess of \$8,800,000 and is expected to be at a similar level next year.

FIVE-YEAR REVIEW UNDERWAY

Under CERCLA, the Army must conduct a review every five years of how well the cleanup program is progressing and to insure that the cleanup is still protective of human health and the environment. The Army will conduct this review during 2012, under the supervision of US Environmental Protection Agency, California Department of Toxic Substance Control, and the Regional Water Quality Control Board. This is the third such review at Fort Ord.

The overall goal of the review is to ensure that the cleanup program is protecting human health and the environment. The review will address such questions as:

- Is the remedy functioning as intended and as outlined in the Record of Decision (the document that selects and provides the rationale for the remedy)?
- Are the assumptions used at the time of the remedy selection still valid?
- Has any other information come to light that could call into question the protectiveness of the remedy?

The last review was conducted in 2007. At that time the agencies concluded that for a majority of sites the cleanup remedies that had been implemented were protective of human health and the environment, or were expected to be protective upon completion. At three sites (Site 3, Site 39, and the Interim Action Munitions Response Sites) decisions about the long-term protectiveness were put off pending additional information. At those sites where no final determination could be made yet in the 2007 report, protectiveness was assured by either prohibiting or restricting land use, prohibiting groundwater use where appropriate, or restricting access.

The Army also conducted interviews with local officials, agencies and community members as a part of this process. Following approval of the review report by the regulatory agencies, expected in September 2012, the Five-Year Review Report will be made available to the public via the web site, Administrative Record, and Information Repositories. For more information call (831) 393-1284.

The 4th Five-Year Review will be conducted in 2017.

COMMUNITY RELATIONS PROGRAM

The Fort Ord Cleanup Programs conducts the following community outreach activities:

- Fort Ord cleanup web page: www.FortOrdCleanup.com
- Community Involvement Workshops
- Technical Review Committee meetings
- Public comment meetings
- Information booths at community events
- Door-to-door notifications of upcoming events
- Open houses
- Bus tours
- Presentations
- Annual report
- Monthly mailings
- Publications
- Media relations
- Information repositories, including the Administrative Record.

Interest in the former Fort Ord continues to grow. The number of people accessing the Fort Ord Cleanup program website increased significantly in 2011. More than 800 people participated in 14 bus tours of the site during 2011 — a dramatic increase in numbers over previous years. For upcoming events, go to www.FortOrdCleanup.com.

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Fort Ord Environmental Cleanup

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FORT ORD CLEANUP PROGRAM AGENCY CONTACTS

The Army is responsible for conducting cleanup of the former Fort Ord, but it must do so in a manner that complies with federal and state laws and under the supervision of federal and state regulatory agencies. The Fort Ord cleanup is being conducted under the Superfund or "CERCLA" cleanup process. CERCLA is an acronym for the federal law entitled the Comprehensive Environmental Response Compensation and Liability Act of 1980, also known as Superfund. It encompasses cleanup of soil and groundwater that contain hazardous substances such as metals, pesticides, and other chemical contaminants common to landfills, firing ranges, chemical spills, and other military sites. At Fort Ord, the Superfund cleanup is supervised by the U.S. Environmental Protection Agency, California Department of Toxic Substances Control and the Regional Water Quality Control Board. Under an agreement between the Agencies, each team assigns a representative to a Base Cleanup Team (BCT). This team makes day-to-day management decisions about the cleanup program. Contacts for each of the participating agencies in Fort Ord's cleanup are listed below. The ESCA is an Army grant to FORA for munitions remediation on 3,340 acres that have been transferred to FORA.

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Websites

Army: www.fortordcleanup.com

ESCA: www.fora-esca-rp.com

USEPA: www.epa.gov/aboutepa/region9.html

DTSC: www.dtsc.ca.gov

RWQCB: www.swrcb.ca.gov/rwqcb3