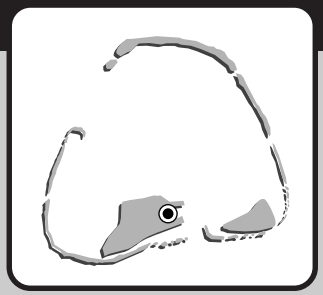
# Midway Naval Air Facility
## Midway Island



**Engineering Field Division/Activity:** PACDIV
**Major Claimant:** COMNAVFACENGCOM
**Size:** 1,535 Acres
**Funding to Date:** $14,148,000
**Estimated Funding to Complete:** $200,000

**Base Mission:** Provided aviation support services; currently inactive
**Contaminants:** Heavy metals, pesticides

| Number of Sites: | |
|---|---|
| CERCLA: | 39 |
| RCRA Corrective Action: | 0 |
| RCRA UST: | 0 |
| Total Sites: | 39 |

| Relative Risk Ranking of Sites: | | | |
|---|---|---|---|
| High: | 3 | Not Evaluated: | 5 |
| Medium: | 7 | Not Required: | 16 |
| Low: | 8 | | |

**BRAC III**

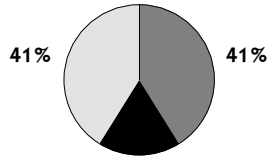
**Sites Response Complete: 16**

## EXECUTIVE SUMMARY

The Naval Air Facility (NAF) Midway is located on an atoll 1,100 miles northwest of Oahu, Hawaii. The Midway Islands are at the northwestern end of the Hawaiian archipelago but are not part of the state of Hawaii. Midway consists of two main islands, Sand Island and Eastern Island, and several smaller islets, enclosed within a coral reef. The islands have been under the jurisdiction and control of the Navy since 1903. In 1940, the Navy established a Naval Station at Midway. The islands became famous during World War II through a decisive battle between the United States and Japan in 1942. The islands were virtually abandoned after World War II. In 1957, the airfield facilities on Sand Island were expanded to create a Pacific airborne early warning base. In 1978, the Naval Station was redesignated as the Naval Air Facility. In early 1996, the islands were transferred to the U.S. Fish and Wildlife Service for use as a National Wildlife Refuge. The Navy operated and maintained facilities and provided services and materials to support aviation activities. Operations Included aircraft and vehicle maintenance, communications, dry cleaning, pest control, and materials storage and disposal. Contaminated sites identified at Midway NAF consist of landfills, disposal areas, storage areas, a former power plant, transformers, a rifle range, the inner harbor, and pesticide spills areas.

Midway is surrounded by the Pacific Ocean and enjoys a tropical climate. There are no active streams on either Sand Island or Eastern Island. The Midway Atoll is designated as a National Wildlife Refuge. As such, there are no urban areas or urban populations in the island chain. While operating as a Naval Air Facility, only military personnel were resident on the islands. Now that the U.S. Fish and Wildlife Service owns the property, only their personnel and occasional tourist groups are present. Contaminant migration through surface water to the Pacific Ocean is a concern. Also, groundwater contamination of well water is possible but not likely.

The main source of contamination is DDT, DDE, and PCB in soils and marine debris potentially containing hazardous substances (i.e. drums, hydraulic equipment, gas cylinders, engines).




**Current Status Of Sites**

| | |
|---|---|
| Studies Underway | 16 |
| Cleanups Underway | 7 |
| Response Complete | 16 |
| TOTAL | 39 |

Migration pathway of the contamination is surface and subsurface soil, sediment exposure, and surface water exposure.

Receptor(s) most likely to be affected by contamination include migratory birds, the endangered Hawaiian Monk Seal and the threatened Green Sea Turtle.

An Information Repository was established at University of Hawaii at Manoa in April 1995. Due to the remote location and sparse population of Midway, there are no local community issues. NAF Midway Island does not have a RAB due to the unique situation of having no state regulatory agencies or affected community.

Of the 39 sites identified, 16 require No Further Action (NFA) and are considered Response Complete. Sixteen are in the study phase. Seven are in the cleanup phase. There are 39 IRP sites.

Removal actions complete:

There are no restoration sites identified to remove lead based paint or lead based in the soil. LBP was abated with the BRAC Construction building demolition project. LBP was considered part of the demolition debris and no special treatment was required. LBP in soil was only removed to prevent nesting migratory birds from ingesting paint chips. As part of the bldg. demolition project, 6 inches of soil was scraped around the immediate perimeter of the buildings. The area to be scraped was determined per building by the OIC and the US Fish and Wildlife Refuge Manager. To date, majority of the buildings were demolished and minimal surface soil required scraping. There are IR sites where contaminated soil was removed for pesticides/PCB.

The Draft Site Inspection Report was completed in 1995. Of the 100 areas of concern, 39 were selected for investigation under the Installation Restoration Program (IRP). The BCT identified 19 sites as requiring No Further Action (NFA). RI will be conducted at 7 sites. Cleanup will include removal and disposal of PCB equipment, drums, debris, surface soil, and placement of caps on landfills. All IRP actions will be completed by June 1997, except for long term monitoring of the landfills.

Close partnering between the Project Team members comprised of the USF&WS, NOAA, NMFS, EPA Region IX and the Navy produced significant cost savings through cooperative decision making regarding the Navy's

# MIDWAY NAF
# EXECUTIVE SUMMARY

cleanup effort. Collectively, the Project Team members decided to select solidification of PCB/DDT/DDE contaminated soil on-island vice off-island shipment and disposal which has saved the Navy approximately $2 million.

**BRAC** - Midway NAF was recommended for closure by the 1993 Base Realignment and Closure (BRAC) commission. It was closed as a Naval Air Facility in 1993 and transferred to the U.S. Fish and Wildlife Service (USF&WS) in 1996. The USF&WS will maintain the property as a National Wildlife Refuge.

## RELEVANT ISSUES

### ENVIRONMENTAL RISK

**HYDROGEOLOGY** -The Midway coral atoll was formed from an active volcano. Soils are very fine carbonate sands. The main source of fresh water on Sand Island is collected in a rainwater catchment area, chemically treated and filtered then stored for distribution. A shallow, brackish aquifer exists but no longer contributes to the drinking water supply. Groundwater is expected to be in dynamic equilibrium with the surrounding sea water. If water is pumped from the aquifer at a rate greater than the recharge rate, saltwater intrusion will occur. Groundwater levels at Midway are not expected to be more than several feet above mean sea level near the center of the islands. Water levels are expected to be lower during periods of low rainfall and heavy well pumping. Seven of thirteen groundwater production wells on Sand Island are active. These wells produce brackish water which is blended with fresh water during periods of low rainfall. The wells obtain water from the shallow brackish groundwater lens. Surface water is limited to the Pacific Ocean and the lagoon area. There are no active streams on either Sand Island or Eastern Island. The sites identified at Midway NAF could contaminate the shallow aquifer. Runoff from the sites could migrate to the Pacific Ocean. There is a potential for direct contact by humans or wildlife to contaminated soil.

**NATURAL RESOURCES** - The Midway Islands are designated as a National Wildlife Refuge. Most animal species found here are protected. Marine waters of Midway Atoll provide habitat for a rich variety of fish, seals, turtles and birds. Two endangered species identified at Midway are the Hawaiian Monk Seal and the Short Tailed Albatross. The Green Sea Turtle has been identified at Midway and is a threatened species.

The nesting albatross found on Midway Island are protected under the Migratory Bird Treaty Act. The nesting albatross are found to be at risk due to dermal and inhalation exposure to PCB, DDT and DDE contaminated soils at various sites. Removal Actions been completed.


**RISK** - A baseline Ecological risk assessment is currently being performed at the Bulky Waste Landfill. Results are expected in the 4th quarter of this fiscal year. A screening human health risk assessment has been performed and shows no risk to present and future inhabitants of Midway Island. The Relative Risk Site Evaluation Model ranked 3 sites as high risk, 7 sites as medium risk, and 8 sites as low risk. 5 sites were not ranked and 16 are not required. The medium ranked sites were so ranked because of the impact to protected wildlife caused by the elevated levels of DDT, DDE and PCB in soil and it's migratory potential to the ocean and marine life and exposure pathways to terrestrial life. An ATSDR Public Health Assessment has not been performed.

### REGULATORY ISSUES

**LEGAL AGREEMENTS** - Midway NAF is not listed on the NPL. Site cleanup is following the legal requirements of CERCLA, RCRA, the Endangered Species Act, the Migratory Bird Treaty Act, the National Environmental Policy Act, and the Toxic Substances Control Act.

Interagency agreements: 1) A Transfer Memorandum of Understanding (MOU) with the Department of Interior United States Fish and Wildlife Service (USF&WS) has been developed. 2) Phase Plan with the Department of Interior United States Fish and Wildlife Service (USF&WS) has been developed.

**PARTNERING** - A Project Team includes the USN, USF&WS, NMFS, NOAA and EPA Region IX. The BRAC Cleanup Team (BCT) includes the USN and EPA Region IX.

### COMMUNITY INVOLVEMENT

**RESTORATION ADVISORY BOARD** - Midway NAF does not have a Restoration Advisory Board (RAB) due to its unique situation of having no state regulatory agencies or affected community. However, all stakeholders are participating as members of the BRAC Cleanup Team (BCT).


**COMMUNITY RELATIONS PLAN** - There is no Community Relations Plan (CRP), since there is no public on Midway Island.

**INFORMATION REPOSITORY** - An information Repository was developed. In April 1995 an information repository was located at the University of Hawaii at Manoa, Hamilton Library, Pacific Collection , 2550 The Mall, Honolulu, Hawaii 96822.

### BASE REALIGNMENT AND CLOSURE


**BRAC** - In 1993, Midway NAF was recommended for closure by the Base Realignment and Closure (BRAC) commission. Navy operations ceased in September 1993. Midway was transferred to the U.S. Fish and Wildlife Service (USF&WS) on 22 May 1996. About 8% of the property is currently undergoing remediation.

Midway Island was placed in caretaker status under BRAC III. A BRAC Cleanup Team (BCT) was formed in 1993. The BCT has representatives from the Navy and EPA Region IX. The BCT meets quarterly. The BCT has set economical as well as protective cleanup standards. Likewise has determined effective and economical cleanup and disposal methods.

**DOCUMENTS** - In February 1995, the BRAC Cleanup Plan, Update #1, was published.

The final Environmental Baseline Survey was completed in March 1994 and classified the property as follows:

| Environmental Conditions of Property Classification | | | | | | |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2 acres | 0 acres | 1,350 acres | 31 acres | 123 acres | 22 acres | 7 acres |

**REUSE** - The property was transferred on 22 May 1996 to the U.S. Fish and Wildlife Service for use as a National Wildlife Refuge.

**FAST TRACK INITIATIVES** - The Midway NAF cleanup includes fast track initiatives such as hot spot removals, overlapping phases, improved contract procedures, a team approach, and innovative technologies (i.e. stabilization of contaminated soil and disposal on-island which saved the Navy millions of dollars in transportation and disposal cost.)

# MIDWAY NAF

## HISTORICAL PROGRESS

### FY84

**Site 1** - The landfill was leveled to comply with Navy flight regulations. The piled-up waste was encroaching on the required 750-foot-from-center runway clearance.

### FY88

**Sites 1-3** - A Preliminary Assessment (PA) identified these sites and recommended further study for all three.

### FY91

**Sites 1-8 and 10-5** - Identified in a second PA.
**Sites 9 and 16** - These sites were discovered during the Environmental Compliance Evaluation (ECE) subsequent to the 1991 PA.

### FY93

Initiated all UST Tank removals

### FY94

**Sites 18, 20-25, 33, 34, 40, 42, 44, 47, 49-56, 59, 93 and 94** - These sites were identified during the Environmental Baseline Survey (EBS).

### FY95

**Sites 9, 10, 12, 13, 20, 24, 34, 42 and 53** - Studied.
Initiated Interim Removal Action to Remediate PCB/DDT/DDE and contaminated soils.
**Sites 1, 2, 8 and 25** - Initiated Interim Removal Action to remove potentially leaking marine debris items from the ocean floor.
**UST Tanks** - Completed all tank removals and initiated soil/GW remediation

## PROGRESS DURING FISCAL YEAR 1996

### FY96

**Site 3** - completed IRA.
**Sites 1, 2, 8 and 99** - Initiated Marine Debris Removal Action.
**Sites 1-3, 7, 11, 22, 23, 33, 44, 45, 47, 49, 50, 51, 52, 54, 64, 65, 97, 98 and 100** - Completed the PA/SI.
**Sites 11, 22, 23, 45, 47, 49, 50, 51, 52, 54, 64, 65, 98, 100 and UST 1** - Response Completed (RC).

## PLANS FOR FISCAL YEARS 1997 AND 1998

### FY97

**Sites 1, 2, 4, 8, 12, 13, 20, 24, 25, 34 and 42** - Will complete the PA/SI.
**Sites 9, 10, 12, 13, 20, 24, 34 and 42** - Removal action completed.
**Sites 2, 3 and 4** - The capping will be completed.
**Sites 7, 8, 11 and 97** - Drum removal will be completed by the Midway Island BOS (PMC).
**Sites 1, 2, 8, 9, 13, 53 and 99** - The RI/FS will be completed.
**Sites 1, 2, 8 and 99** - Removal Actions will be completed. Marine debris removal and capping of out-falls will be completed. Soil Removal will be underway, expected completion FY97.
**Sites 1-5, 7, 8, 12-16, 20, 24, 25, 33, 34, 42, 44, 53, 97 and 99** - Will have Response Complete (RC).
**Site 2** - Initiate Long Term Monitoring of landfill.
**UST** - GW/Soil remedial actions will be completed

### FY98

All cleanup actions are expected to be completed during FY97, so no action is planned for FY98.

## PROGRESS AND PLANS

| CERCLA | FY95 and before | FY96 | FY97 | FY98 | FY99 | FY00 | FY01 | FY02 and After |
|---|---|---|---|---|---|---|---|---|
| PA / SI | 7 | 21 | 11 | | | | | |
| RI / FS | | | 7 | | | | | |
| RD | | | | | | | | |
| RAC | | | | | | | | |
| RAO | | | | | | | | |
| IRA | | 1(1) | 15(16) | | | | | 1(1) |
| RC | 1 | 15 | 22 | | | | | 1 |
| Cumulative % RC | 3% | 41% | 97% | 97% | 97% | 97% | 97% | 100% |