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NAS CECIL FIELD, FL
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FACT SHEET 20 NO FURTHER ACTION PROPOSED FOR LAKE FRETWELL NAS CECIL FIELD FL
4/1/2000
TETRA TECH NUS INC

Naval Air Station Cecil Field

Installation Restoration Program

Fact Sheet 20: No Further Action Proposed for Lake Fretwell

April 2000

This fact sheet was developed to notify the community of the investigations that have been conducted at Lake Fretwell at Naval Air Station (NAS) Cecil Field. These investigations were completed as part of the Installation Restoration Program (IRP) being conducted at NAS Cecil Field. The IRP process at NAS Cecil Field is being accelerated to expedite cleanup and transfer of the property for reuse and redevelopment.

Introduction

Lake Fretwell, located in the southwestern portion of NAS Cecil Field, is approximately 20 acres in size. The location of Lake Fretwell is shown on Figure 1. The lake exists as a result of the construction of an earthen dam across Rowell Creek. Lake Fretwell and Rowell Creek are classified by the Florida Department of Environmental Protection as Class III fresh waters and, as such, are designated for recreation, propagation, and management of fish and wildlife and are not used for drinking water resources.

A recreational complex has been developed along the lake's northeastern shoreline. Wooded areas exist along the lake's western and southeastern shorelines, and along Rowell Creek upstream and downstream of the lake. The wooded areas consist primarily of pine flatwoods habitat along the southeastern and most of the western shorelines, and bottomland hardwood forest along the northwestern shoreline and Rowell Creek. A variety of fish and aquatic species occur in Lake Fretwell, while numerous birds and mammals forage in the lake. A figure of Lake Fretwell is shown on Figure 2.

Lake Fretwell could receive contaminants from several sources via Rowell Creek upstream of the lake. In addition, contaminants from sites in the vicinity of the airfield east of Lake Fretwell could potentially be transported by drainage ditches into the lake.

Investigatons of Lake Fretwell

Surface water and sediment samples were collected in 1993 for chemical analyses and sediment-dwelling invertebrates were collected for analyses of diversity and abundance. In 1995, more sediment and surface water samples, as well as fish samples, were collected for chemical analyses. Sediment samples collected in 1995 were also used for toxicity tests, in which two species of small invertebrates were added in the laboratory to containers containing sediment from Lake Fretwell. After 14 days, the survival and growth of the test organisms was determined. Data from these sampling efforts was used in an ecological risk assessment, which was completed in 1998.

The ecological risk assessment concluded that volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs) were not ecological chemicals of potential concern. The risk assessment further concluded that pesticides, polychlorinated biphenyl compounds (PCBs) probably pose negligible risks to wildlife species that consume fish. The risk assessment also concluded that impacts to sediment-dwelling invertebrates might be occurring at locations where sediment toxicity tests showed low survival of test organisms. However, the toxicity test results were inconclusive, since there were contradictory results between the two species used in the tests, and no adequate explanation for the conflicting toxicity test results could be identified. The NAS Cecil Field Partnering Team decided that further toxicity testing should be conducted to clearly determine the extent of potential sediment contamination in Lake Fretwell. The additional sampling was conducted in June 1999. The samples consisted of sediment and surface water from the lake.

The sediment samples collected in 1999 were used in toxicity tests with the same species of test organisms used in the 1995 toxicity tests. In addition, chemical analyses of sediments and surface water collected in 1999 were also conducted.

The data from 1993, 1995 and 1999 indicate an overall trend of decreasing contaminant concentrations. Specifically, concentrations of pesticides, PCBs, and metals were considerably lower in the 1995 samples than in the 1993 samples. Pesticides and PCBs were not detected in the 1999 data set. Concentrations of metals in the 1999 data set tended to be similar to those in the 1995 data set, but overall, the concentrations were not high.

Survival and growth of test organisms were normal in toxicity tests performed on sediments collected in 1999 from the same locations where survival was poor in 1995 samples. Thus, the results of the recent sediment toxicity tests indicate negligible risks to sediment-dwelling organisms.

Based on the data from three sampling events conducted in 1993, 1995, and 1999, the Navy issued a report in April 2000, which concluded that the potential risks to ecological receptors from contaminants in Lake Fretwell are negligible. The report also concluded that no further sampling or remediation based on ecological risks is warranted.

Information Availability

Information and reports on NAS Cecil Field are placed in the Information Repository at NAS Cecil Field, Building 907 in Jacksonville, Florida when they are completed. This repository contains all program documents, including technical reports prepared in connection with the IRP at NAS Cecil Field and is available for your review. The Administrative Record for NAS Cecil Field is also available for public review. The Administrative Record contains files of specific documents and correspondence that form the basis for site cleanup decisions.

The Restoration Advisory Board (RAB) meets quarterly at the NAS Cecil Field Control Tower, Building 82. Navy and regulatory officials meet with interested community members on a regular basis to discuss NAS Cecil Field's environmental cleanup program. The RAB provides two-way flow of communication between the community and NAS Cecil Field before cleanup decisions are made.

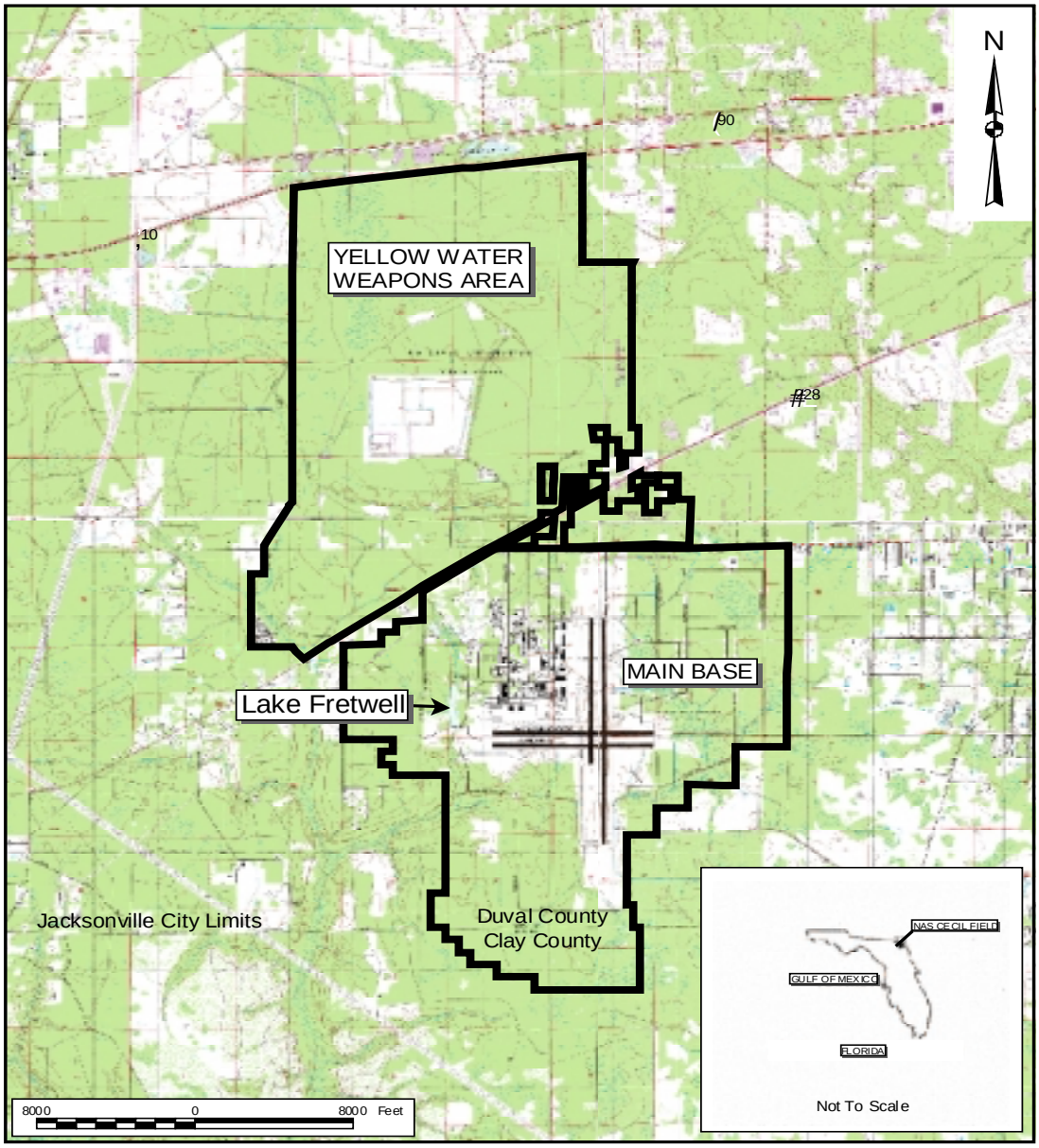

Figure 1. General Location Map

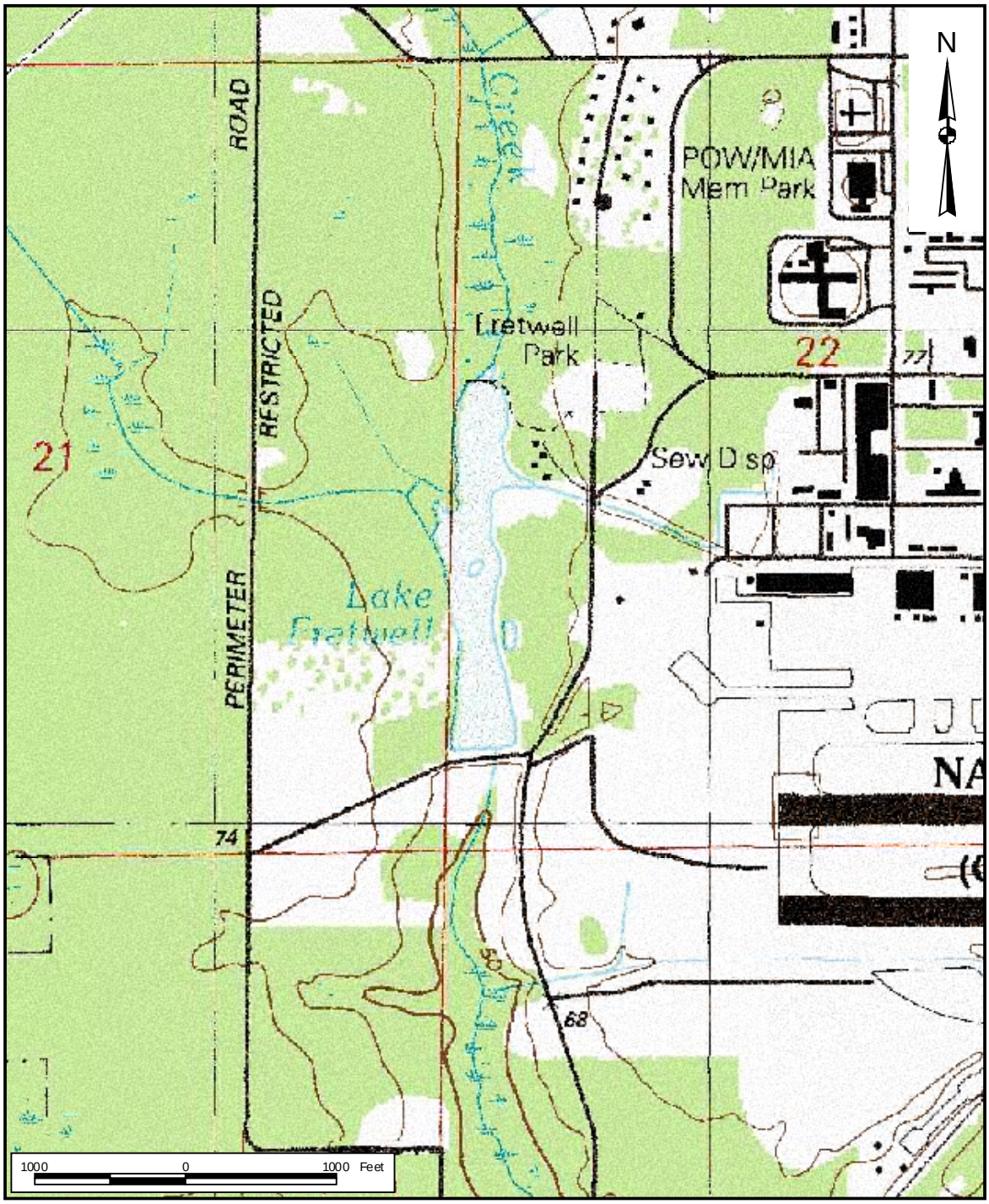

Figure 2. Site Location Map

QUESTIONS? COMMENTS?
NAVAL AIR STATION CECIL FIELD - WHO TO CALL?

We want to hear from you!
The Public is encouraged to submit comments on the Five-Year Review. Comments may be sent to the: Southern Division Naval Facilities Engineering Command, Public Affairs Office, (843) 820-5771.

Naval Facilities Engineering Command,
South Division
P.O. Box 190010
N. Charleston, SC 29419-9019
(843) 820-5771
webmaster@efdsouth.navfac.navy.mil
You can also visit us at our web site
www.cecilfield.com
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Become involved in the environmental program-attend a RAB meeting!
These meetings are held quarterly and are open to the public.
Mark your calendars for the next meeting scheduled for April 25, 2000 at 7:00pm.

Naval Facilities Engineering Command,
Southern Division
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N. Charleston, SC 29419-9019

Place
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