Fact Sheet

SIX MILE CREEK AREA OF CONCERN

Former Griffiss Air Force Base, Rome, New York - July 2003

Public Meeting
August 5, 2003
5:00PM
Plumley Auditorium, MVCC, Rome Campus

Summary of Proposed Plan

Public Comment Period July 24, 2003, to August 23, 2003

Background

Griffiss Air Force Base (AFB) is a former United States Air Force (Air Force) installation covering approximately 3,552 acres in the lowlands of the Mohawk River Valley in Rome, Oneida County, New York. In 1987, the United States Environmental Protection Agency (EPA) added Griffiss AFB to the National Priorities List, and in 1990 the Air Force, the New York State Department of Environmental Conservation (NYSDEC), and the EPA entered into a ***Federal Facilities Agreement (FFA)***. In 1993, Griffiss AFB was designated for realignment under the federal Defense Base Closure and Realignment Act and was subsequently deactivated. Under the terms of the FFA, the Air Force is required to identify ***Areas of Concern (AOCs)*** on base, conduct a Remedial Investigation (RI), and recommend remedial actions. The public participates in the process and is encouraged to comment on the remedial action proposal.

FFA - an agreement between the EPA, the NYSDEC, and the Air Force to evaluate waste disposal sites at the former Griffiss AFB and perform remediation if necessary.

Area of Concern (AOC) - a location where hazardous substances are or may have been placed or may be located.

Six Mile Creek Description

Six Mile Creek (SMC) measures approximately 8,400 feet on base, with an additional 7,200 feet within the runway culvert, and continues off base for approximately 2 miles (see Figures 1 and 2). The creek is about 8 feet wide and 3 feet deep prior to entering the base and about 20 feet wide and 4 feet deep after leaving the base. The on-base portion of SMC serves as a surface water runoff and storm water drainage system for the base. Surface water runoff and leachate from various landfills flow to and drain directly to the creek. Portions of the base storm water system discharge to the on-base lower portion of the creek and to the culverted section via Rainbow Creek. SMC is classified as a Class C stream. The best usage is fishing, where waters shall be suitable for fish propagation and survival.

Summary of Site Activities

Investigations to identify potential contaminants and determine the extent of contamination have been conducted at SMC, the aqueous film-forming foam (AFFF) lagoon, Rainbow Creek, and the off-base portions of the creek.

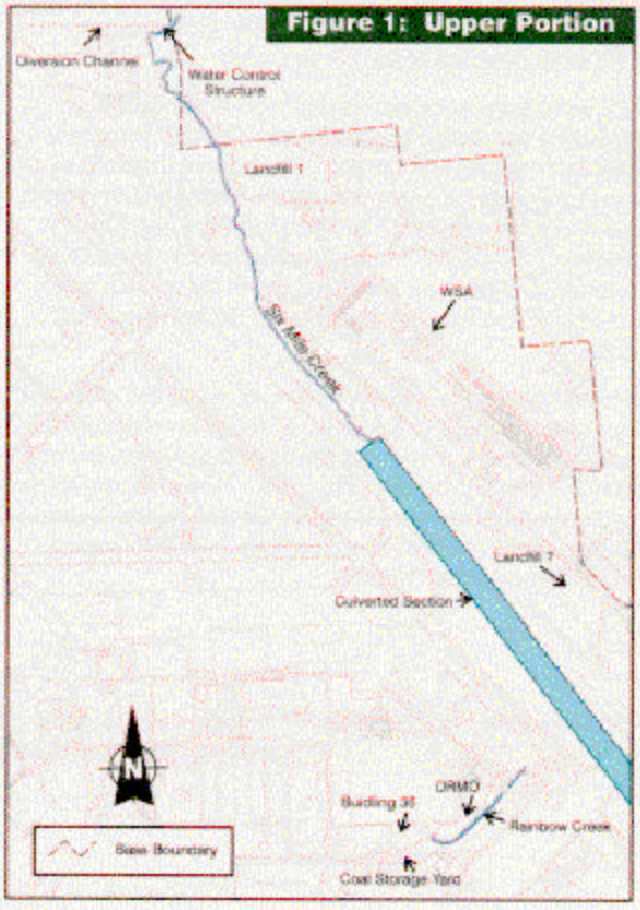
Preliminary studies of SMC that included soil, sediment, and fish tissue sampling were performed in 1981 and 1988. In 1994 and 1995, a remedial investigation (RI) including an aquatic survey and surface water, sediment, and fish tissue sampling was performed. In 1995, NYSDEC conducted surface water sampling and a macroinvertebrate community analysis in SMC downstream of the base boundary. Supplemental investigations (SI), including surface water and sediment sampling, were performed in 1997 and 1998 and a visual inspection of the habitat quality of SMC was performed in 1999.

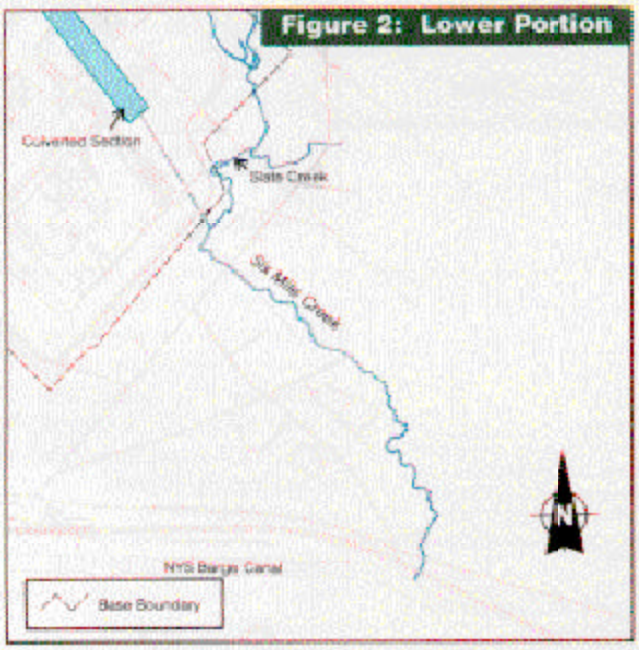
PCBs
A family of man-made chemicals that were used as insulating fluids in electrical equipment and in hydraulic and heat transfer fluids. In this country, most PCBs were sold as mixtures called Aroclors until their manufacture was banned in the 1970s.

PAHs (polycyclic aromatic hydrocarbons)
A group of heavier organic compounds (e.g., pyrene and phenanthrene) that are ubiquitous in the environment and are formed by the incomplete combustion of organic materials such as wood or fossil fuels.

Contamination is present in surface water, sediment, and fish tissue samples at certain locations in Six Mile Creek. The contaminants primarily consist of PCBs in fish tissue samples collected during the RI; PCBs, PAHs, several metals, and pesticides in the sediment, and SVOCs in the surface water.

Figure 1: Upper Portion





Summary of Site Activities (Cont.)

PCBs were previously identified as entering Six Mile Creek through Rainbow Creek. However, Rainbow Creek is not expected to contribute contamination to Six Mile Creek in the future due to a sediment removal action performed there in 1997 and other removal actions at nearby sites. PCBs have not been detected above screening criteria in the surface water of Six Mile Creek and no PCBs were detected in the Barge Canal.

PAHs have been consistently detected in the sediment but, during the SI, the highest levels of PAHs were found in the most upgradient sample. PAHs were detected in the surface water at one downstream location and several other SVOCs were found in both the upper and lower portions of the creek. Several pesticides that exceeded screening criteria were also detected in the surface water at an upgradient location as well as in the leachate from Landfill 1.

Arsenic, copper, and mercury were found in the sediment in the upper portion of Six Mile Creek at levels exceeding screening criteria. Lead was found in the runway culvert and in the lower portion of the creek. However, the highest lead concentrations were found in the upgradient sediment samples. Iron and aluminum both exceeded screening criteria in the surface water.

Summary of Site Risks

The SMC risk assessment evaluated potential exposures to recreational receptors. Carcinogenic and noncarcinogenic risks were associated with consumption of fish from the creek due mainly to the presence of PCBs, pesticides, manganese, antimony, and dieldrin in the fish tissue. The New York State Department of Health (NYSDOH) evaluated this information and does not feel that the human health risk is as high as indicated because the only fish species with appreciable amounts of contamination was the creek chub, which is not consumed by humans. The risks from exposures to sediment and surface water did not exceed EPA's acceptable risk levels.

Exposure Pathways - Recreational Receptors

- Incidental ingestion of surface water
- Dermal contact with surface water
- Incidental ingestion of sediment
- Dermal contact with sediment
- Ingestion of fish from Six Mile Creek

Preferred Remedial Alternative

The proposed alternative for TMC includes:

- Continued remediation of sources of contamination to the creek.
- Long term monitoring of the creek environment for a period of at least 30 years.

Remediation has been completed at several areas along the Rainbow Creek tributary and at Landfill 7 adjacent to SMC and is currently underway at Landfill 1 and Landfills 2/3. Because of the high quality of the habitat along the creek, it is more beneficial to the environment as a whole to address remediation of sources of contamination rather than performing direct remedial action on the creek sediments, which would present a significant disruption to the flora and fauna living in or near the creek.

A long-term monitoring (LTM) program, including surface water, sediment, and fish tissue sampling, will be implemented to determine whether or not the remedial actions reduce the contaminant levels. The EPA, NYSDEC, and NYSDOH will be involved in the review of the data generated during the LTM program. Five-year reviews will be performed by the Air Force, in conjunction with the EPA and NYSDEC, to ensure the remedy is still performing as planned and is protective of public health and the environment.

Administrative Record Available - Document file located at 153 Brooks Road, Griffiss Business and Technology Park (315) 330-2275 and Information Repository at Jervis Public Library, Rome, NY (315) 336-4570