

<i>SITE</i>	<i>DATES USED</i>	<i>AREA</i>
#1 Orion Street Landfill, North	1950-1975	10 acres
sewage sludge from sewage treatment plant (until 1968) asbestos paints paint residues solvents engine oil hydraulic oil degreasers general trash and rubble pesticides PCBs mercury (source has not been identified)		
Carcinogens Arsenic 1,1-Dichloroethylene/ane Tetrachloroethylene Trichloroethylene Vinyl Chloride		
Non-Carcinogens 2-Butanone 1,1,1-Trichloroethane Xylenes		

#3 Hazardous Waste Burial Area	1960-1973	1/2 acre
alcohol decon agent outdated paints solvents		
Carcinogens Arsenic 1,1-Dichloroethane		

Site 1 was the primary landfill at the base from 1955 to 1975. The landfill covers approximately 8.5 acres and contains two known trenches of refuse, each roughly 700 feet long, 100 feet wide and 20 feet deep. site 3 (Hazardous Waste Burial Area) is contiguous with Site 1 and occupies approximately 0.5 acres. Both Sites border Mere Brook. Most of the contaminated, shallow groundwater originating in the landfill area discharges to Mere Brook.

Groundwater contamination consists of chlorinated solvents, BTEX, and inorganics. Inorganics have also been detected in Mere Brook.

There appears to be two plumes, one from sites 1 and 3 (Landfill Plume) and another apparently originating from sites 4, 11, and 13 (Eastern Plume) which passes beneath the eastern end of Site 1.

The potential exists that the groundwater plume could migrate off-base and impact downgradient domestic wells.



**#2 Orion Street Landfill, South**                      **1945-1955**                      **5 acres**

solvents  
paint residues  
engine oil  
hydraulic oil  
scrap metal  
mercury

Carcinogens  
    Arsenic

This was the primary base landfill, with an on-site incinerator, from 1945 to 1955. It occupies approximately 2 acres and currently is covered with a dense stand of pine. Mercury is the primary contaminant of concern with trace levels of pesticides and elevated levels of organics. There may be an extended Site 2 disposal area which is impacting this site. No remedial actions are recommended at this site because it is not considered to be a public health risk. Both monitoring wells downgradient of the landfill have inorganic concentrations above background levels.

**#5 Rubble and Asbestos Disposal Site**                      **1979**                      **500 sq ft**

asbestos construction debris

**#6 Rubble and Asbestos Disposal Site**                      **unknown**                      **1/2 acre**

general and asbestos construction debris

**#12 Explosive Ordnance Disposal Training Site**                      **Unkn-1986**                      **4 acres**

Demolition residue

**#10 Harpswell Fuel Depot**

It was originally identified as a site but is no longer part of the clean-up program because it is no longer under the jurisdiction of the base. BACSE, however, is concerned about possible contamination from leaks at both the depot and the pipeline.

#7 Old Acid/Caustic Pit /952-1969 1.5 acres

liquid acid/caustic wastes  
waste oil  
transformer oil  
solvents

PAHs  
pesticides (DDT, DDD, DDE)  
inorganics (arsenic, chromium, lead, zinc, mercury)

From 1952 to 1969 this site was used as a liquid waste disposal pit prior to the use of Site 4. It currently is an open field occupying 1.4 acres. Inorganics in the groundwater downgradient of the pit have concentrations exceeding background values.

#8 Perimeter Road Disposal Site 1964-1974 1/2 acre

rubble and construction debris  
general trash  
solvents  
degreasers

Carcinogens  
Arsenic  
Methylene Chloride  
Chloroform  
bis(2-Ethylhexyl)phthalate  
Carcinogenic PAHs

Non-Carcinogens  
Lead  
Zinc

pesticides (DDT)  
chromium  
PAHs  
cyanide (attributed to salt storage pile)

This site is located within 2,000 feet of the Jordan Avenue Wellfield and is bordered by small tributaries to the Androscoggin River. The elevated concentrations of iron, DDT and PAHs in sediment pose a significant threat to aquatic communities in the area.

The RI states that it is highly unlikely that any contaminated groundwater from Site 8 passes beneath the local tributaries toward the Wellfields but BACSE recommends more testing because of the potential adverse impact this site could have on the public health if the wells were contaminated.

19 Neptune Drive Disposal Site

1945-1953

5 acres

general trash paint  
sludge solvents

Carcinogens:

Arsenic

Methylene

Chloride

Carcinogenic PAHs

Benzene

Non-Carcinogens: Lead

Zinc

inorganics (chromium, cyanide, mercury, sodium) pesticides  
(DDD, DDE)

This site consists of a former incinerator and dump located beneath the existing Marine Barracks, and a possible solvent burning or disposal area near building 201.

High levels of PAHs have been detected in sediments along the primary (southern) and northern tributaries at Site 9. This is attributable primarily to usage of fuels in the aircraft and operations area where the base-wide storm drainage is located for hanger and runway areas.

In the southern tributary other semivolatiles compounds and lead have been detected. Groundwater downgradient of the incinerator has inorganic concentrations above background levels. Other groundwater contamination is related to the dump or a solvent disposal area adjacent to Building 201.

Public health risks for children under realistic worst-case conditions were above the USEPA target range. The ecological risk assessment concluded that potential harmful effects were associated with PAH and pesticide contamination at the site. RI identifies data gaps here.

## CONCLUSION

Groundwater contamination is of concern to off-site residents southeast of the base who use drilled wells for their water supply. Two distinct plumes pose a threat to the public health. These are the Landfill Plume generated by Sites 1 and 3 and the Eastern Plume from Sites 4, 11, and 13. The landfill plume does not appear to extend sufficiently far to the southeast to impact off-base domestic wells, but BACSE feels that additional testing is needed to verify this assumption. The eastern extent of the eastern plume remains to be quantified. There are concentrations of contaminants in these two groundwater plumes that exceed federal and/or state drinking water standards.

Sites 8 and 9 may also pose serious threats to the public health and environment and need further study.

This summary was compiled from information contained in the Administrative Record up to the Draft RI (4/90).

- (1) the US Navy in their 2010 Five Year Review Report (which is available at the Curtis Memorial Library in Brunswick) and
- (2) by BACSE in our 2011 *Status of Remediation Report* which is available as a link under "INFORMATION".