

## NOAA Hazardous Waste Site Report

McKin Company (I-23)  
Gray, Maine  
April 13, 1984

### Location and Nature of Site:

The McKin site is an old sand and gravel pit which may have received hazardous wastes in the 1960's, and was used in 1972 to dispose of the cleanup waste from a major marine oil spill (Figure 1). The site was well-constructed with a fence, incinerator, asphalt lined lagoon, several storage tanks, and a block house to store drummed materials. It is estimated that 100,000 to 200,000 gallons of #6 and #4 fuel oil waste were disposed of here between 1972 and 1979.

In spite of the modern construction, oily waste was spilled contaminating the surface water of the site and the highly permeable soil. Groundwater contamination was reported by the City of Gray, Maine. Extensive surface and groundwater sampling and analysis was conducted between 1979 and 1983. The site is currently under study for remedial action by the U.S. Environmental Protection Agency.

### Proximity of Chemical Hazard to Marine Resources:

Surface and groundwater from the site have been traced to the Royal River, which flows adjacent to the site. The Royal flows 22 miles to the Atlantic Ocean at Portland, Maine. Of the 42-inch annual rainfall, 30 inches is estimated to leave the site as surface flow and the remainder as groundwater flow. Groundwater flow has been measured at 22 feet per day in the vicinity of the site, following the steep gradient to the Royal River. This results in a constant flow of surface and sub-surface water and contaminants to the Royal River.

Oiled sand, rags, seaweed, and equipment are stored at the site and are subject to leaching and transport as tanks and drums rust away and lagoon linings crumble. Samples show organic materials in the surface and groundwaters of the area. Well water was contaminated to such a degree in 1977 that local residents were provided with a water truck and Federal funds to extend city water lines from Gray. Trichloroethylene has been found at 123 to 149 parts per billion (ppb) in site runoff, and 0.81 to 0.18 ppb in the Royal River.

### Marine Resources at Risk:

The rivers in the area of the site support anadromous fish runs and recreational fisheries (Tables 1 and 2).

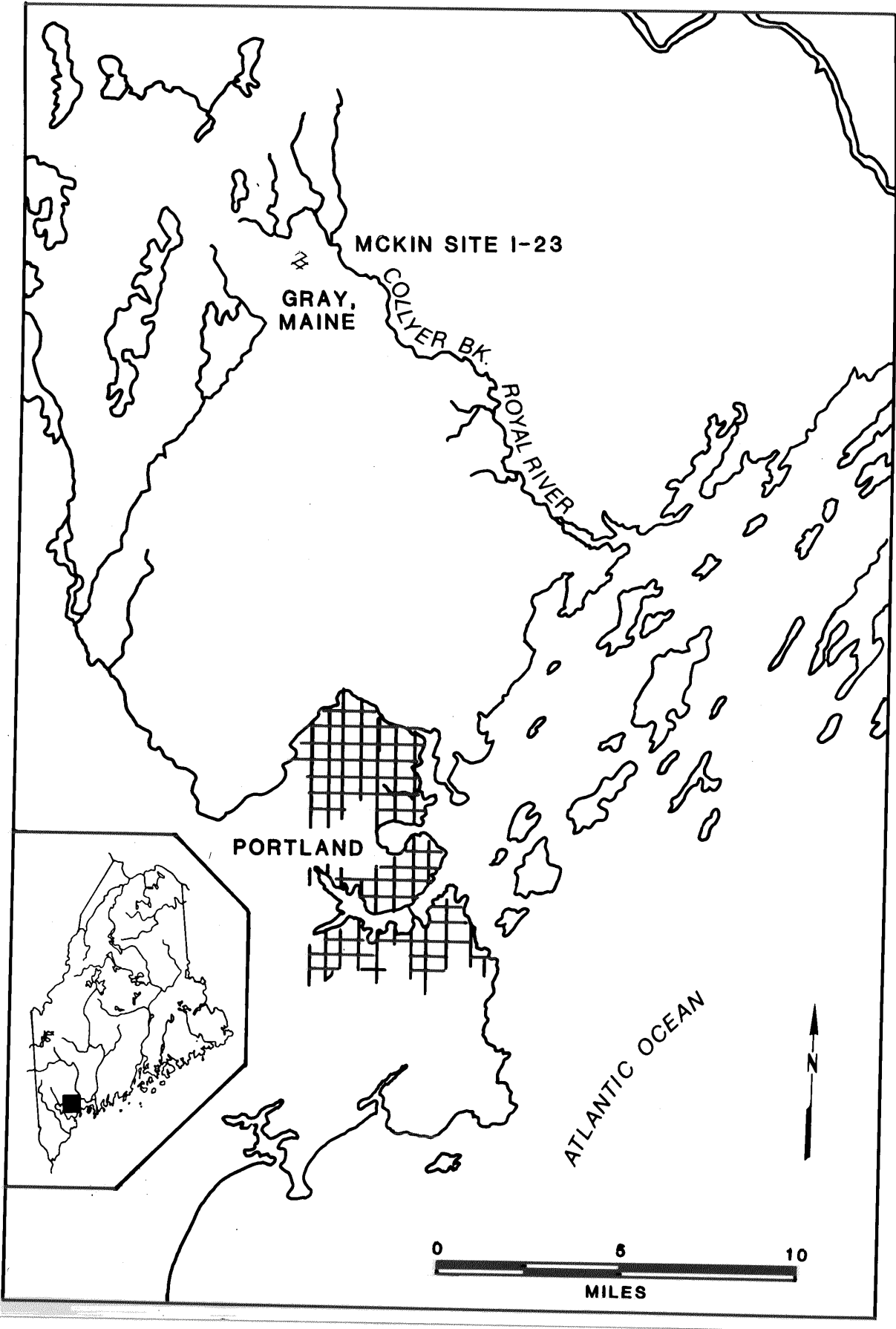


FIGURE 1. Site location.

Table 1. Fishery Resources of the Freshwater Regions  
of the Royal River (1,2)

Finfish Species	Adult Habitat	Spawning Area	Nursery Area	Comm. Fish.	Rec. Fish.	Migr. Route
<u>Anadromous</u>						
Alewife		x	x			x
American shad		x	x			x
Striped bass		x			x	x
Atlantic sturgeon		x	x			x
Shortnose sturgeon		x	x			x
Atlantic salmon		x	x		x	x
<u>Non-anadromous</u>						
White catfish	x	x	x	x	x	
American eel	x			x	x	
Sunfish	x	x	x		x	
Yellow perch	x	x	x		x	
Chain pickerel	x	x	x		x	
Largemouth bass	x	x	x		x	

Table 2. Fishery Resources of the Nearshore Waters  
of Casco Bay Near Portland, Maine (1,2)

Finfish Species	Adult Habitat	Spawning Area	Nursery Area	Comm. Fish.	Rec. Fish.	Migr. Route
White perch	x				x	x
Flounder	x				x	
Northern kingfish	x				x	
Weakfish	x				x	
Atlantic tomcod	x				x	
Black sea bass	x				x	
Atlantic menhaden	x				x	
Seatrout	x				x	
Atlantic herring	x				x	
Bluefish	x				x	
Atlantic salmon	x				x	x
<u>Shellfish</u>						
Hard clam	x	x	x	x	x	
Soft shell clam	x	x	x	x	x	
Blue crab	x	x	x	x	x	
American lobster	x	x	x	x	x	

The Royal River is an anadromous fish spawning and nursery area for the species listed above. The American shad and Atlantic sturgeon are species of special state concern, and the shortnose sturgeon is a species of federal concern.

The Casco Bay area provides habitat for harbor seals and wintering habitat for waterfowl, shorebirds and seabirds, and nesting habitat for double-crested cormorants, arctic terns, common terns, common eiders, great blue herons, and osprey.

Summary of Site-Related Actions

1973, Gray residents find contaminated well water

1977, EPA confirms contamination, Federal funds provided, McKin Company ordered to remove dilapidated tanks, contaminated soil and 200 drums of waste. Local wells capped and emergency water trucked in to local residents.

1979, EPA performs emergency removal action, previously requested of owners.

1980, EPA sampling and Remedial Action Master Plan investigation.

1982, Site placed on National Priorities List

NOAA Reviewer: Sharon Christopherson, SSC - Northeast  
(617)641-2667

References:

1. National Marine Fisheries, 1974. Anglers Guide to the United States 2. Atlantic Coast.
2. U.S. Fish and Wildlife Service, 1980. Atlantic Coast Ecological Inventory.
3. U.S. Environmental Protection Agency. Remedial Action Master Plan, McKin Co. Site. Draft.