

Department of Natural Resources

INTRA-DEPARTMENT
MEMORANDUM

DNR DEC 30 1976

..... Spooner

Station

Date..... December 20, 1976.....

IN REPLY REFER TO: 3200

TO: Anthony S. Earl
FROM: L. G. Hansen
SUBJECT: Surface Water Classification (NR 104)
Port Wing, Bayfield County

The Town of Port Wing, in northern Bayfield County, operates a two-cell waste stabilization lagoon. The lagoon is designed to serve a population of 280 persons. At design capacity, the lagoon should provide a 496 day holding capacity. The system is currently serving a population of 250.

The lagoon effluent is discharged to a tributary, 150 yards above its termination in Bibon Lake. Being at lake elevation, this unnamed tributary is perpetually wet at the point of effluent introduction, even during conditions of zero flow.

Bibon Lake is a shallow (3-8 feet), silt and muck bottom, drainage lake of 44 surface acres with an outlet to Lake Superior. The lake is encircled by and is contiguous with a large bog wetland consisting of leatherleaf, tamarack, and tag alder. It supports a northern pike pan fish fishery and is used by migratory waterfowl.

A map and photographs are attached.

RECOMMENDATION

The perpetually wet portion of the Bibon Lake tributary, receiving treated effluent from the Port Wing stabilization lagoon, shall be classified as a continuous stream (NR 104.02(1)(f)).

The perpetually wet portion of Bibon Lake tributary and Bibon Lake shall meet fish and aquatic life standards (NR 102.02).

Port Wing stabilization lagoon effluent characteristics shall be based on an evaluation of water quality necessary to protect fish and aquatic life, taking into account mixing zone and nutrient removal criteria (NR 104.02(4)(b)).

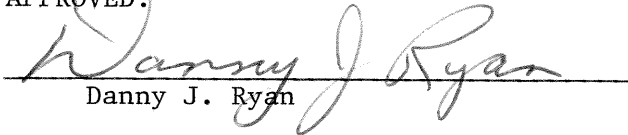


Ted R. Smith

TRS:mm

Attachments

APPROVED:

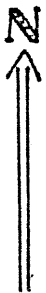


Danny J. Ryan

12/27/76
Date

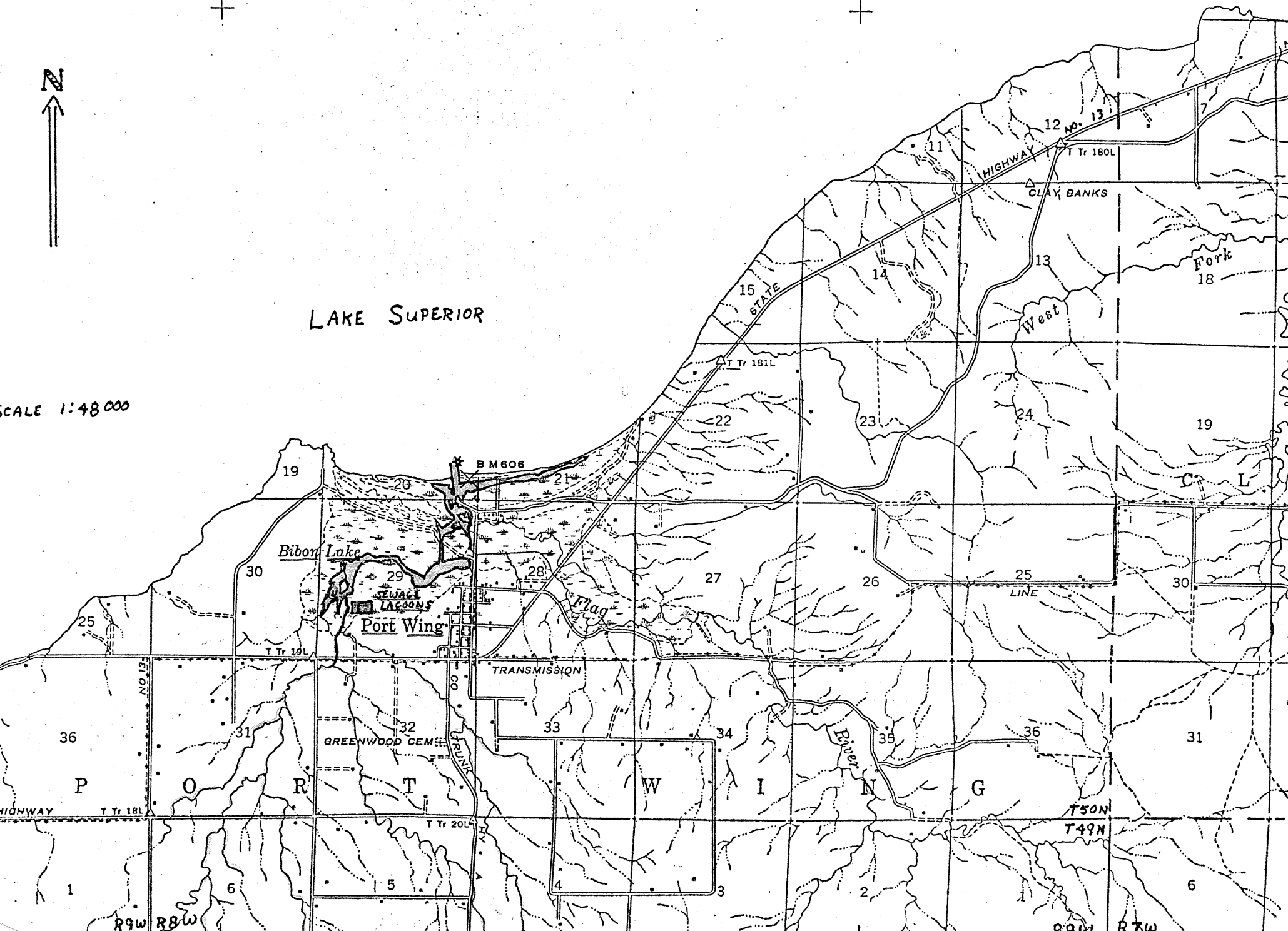
NOTED:

Date



LAKE SUPERIOR

SCALE 1:48 000



PORT WING - NOV. 1976



PORT WING - 1975



TRIBUTARY
ABOVE LAGOON



LOOKING SOUTH FROM
DISCHARGE AREA
(LAGOON TO LEFT)



LOOKING NW FROM
NW CORNER of LAGOON