T2N, RIE, Sections 19,29,30

Western Part of Hayden Island

INTRODUCTION

Hayden Island was listed among the potential landfill sites in the MSD Action Plan prepared by Cor-Met in 1974. Nearly all the information below is taken from this report and a August 1979 study for PGE by Cogan and Associates titled: Hayden Island, Phase I: Identification of Workable Alternatives for the Western Portion.

SITE DESCRIPTION, TOPOGRAPHY, RAINFALL

Hayden Island is on the Columbia River about one mile upstream from the Willamette River mouth. The site of interest comprises the western half of the island west of the railroad bridge. The raised railroad embankment screens most of the western half of the island, from the developed eastern half. The site is fairly flat. A ridge at elevation 30 ft at the north boundary slopes down to about 15 ft for a less than 1% slope. Annual rainfall is about 38 inches.

LAND USE, OWNERSHIP

Site is primarily in a natural state with considerable open space and some forest and agriculture use. Also, site of electrical transmission lines for PGE, PP&L, BPA; PGE substation, and the Burlington Northern railroad line. Property owners are shown in map 1. The eastern half of the island is highly developed with a motel. mobile home park, Janzen Beach Shopping Center, and houseboats and other moorages. The land uses visable from the site are mostly industrial (see map 2). The site is zoned multiple use forest district (MUF20); significant environmental concern (SEC) by Multnomah County. PGE is considering several alternatives for future development including industrial, recreational, solid waste landfill.

FLOODPLAIN

Nearly all of western Hayden Island is within the Columbia River 100 year floodplain at 28 ft elevation (see map 2). However, no significant part of the island is in the floodway ie. the area of the channel necessary to carry the regional flood. FIA regulations may permit filling the western portion to above the 500 year flood line at 31 ft elevation.

SITE ACCESS

The site is 29 miles from Rossmans Landfill and 6 miles from St. Johns. It is reachable via I-205 and I-5 or Columbia Blvd. and I-5 respectively. Present access from I-5 interchange past the shopping center, motel, and mobile home court and accross land owned by Hayden Island Inc. which has an interest in some or all of the above. Map 3 shows

existing access and utilities. The land use along this access was of sufficient concern to lead Cogan and Associates to proposed a bridge across the Oregon Slough in their landfill senario (see map 4).

SOILS/GEOLOGY

Hayden Island is composed of and underlain by recent alluvium which extends downward to 180 ft or more. Much of these materials are sands and silts. Soils are silt loams (28, 30 in map 5)or pilchuck sands (18A in map 5) with slow to rapid permiability (0.6 to greater than 20 inch per hour). There is little surface water drainage due to the permiability of the soils. Underground water discharges into the Columbia River or Oregon Slough. Level of the water table varies with the Columbia River level.

FISH AND WILDLIFE

According to the Cogan and Associates report the island is not deemed an environmentally critical area as it contains only common flora and fauna. The shallow areas around the island are of significance as a fish habitat.

ARCHAEOLOGICAL/HISTORICAL SIGNIFICANCE

Apparently the island is of no great historical or archaeological significance.

COSTS, SITE LIFE

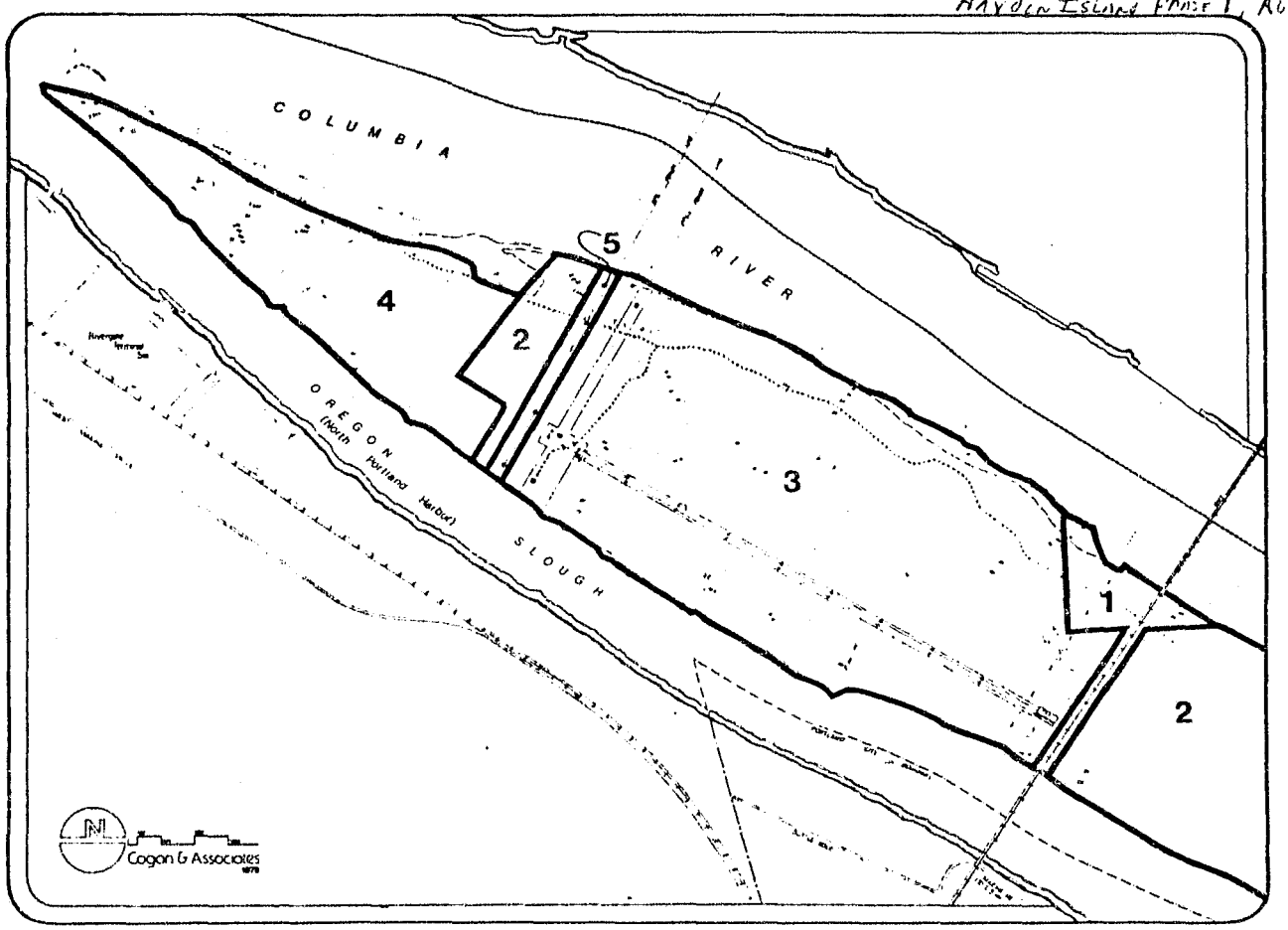
Cover material will have to be imported. One possible source is dredge spoils if any can be spared by the Port of Portland. The Metro September 1978 report, Disposal Siting Alternatives, estimated haul costs to Hayden Island to be $6.46 per ton and disposal costs to be $7.92 per ton in 1977 dollars. Haul costs are based on collection vehicles haul costs from all parts of the Metropolitan region. Disposal costs are based on a site capacity for 10.7 million tons or 21 million cubic yards and 730,000 tons of waste received per year. Site life would be about 15 years. If one assumed a 10% yearly inflation rate and a actual filling rate of 500,000-600,000 tons per year total costs will be $18.70 per ton or greater. Some of the assumptions used to calculate disposal costs are listed in Table 1.

MAP 1

Ownership Map

Fig. 5

Cogan + Associates
Hayden Island Phase I, August 1979

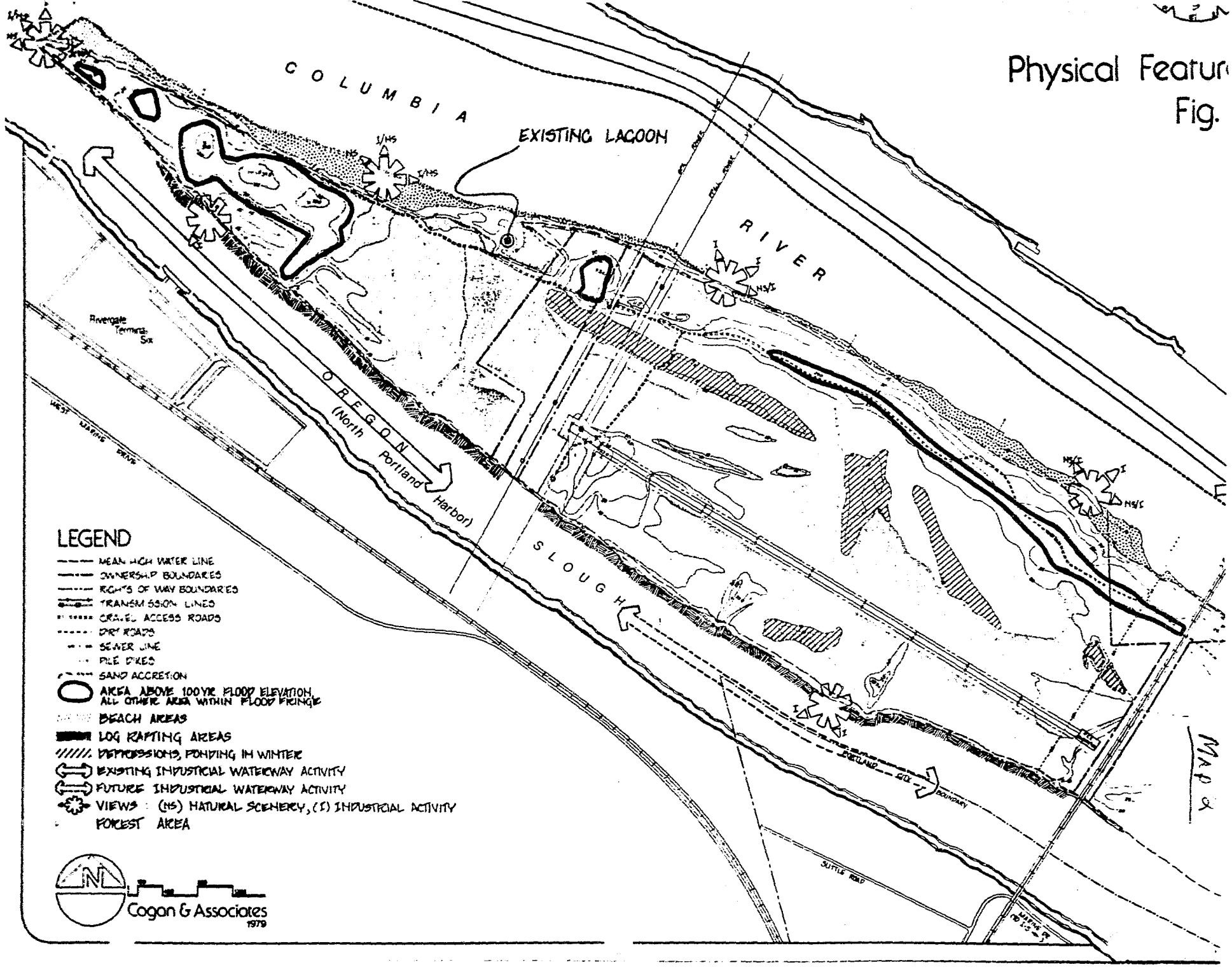


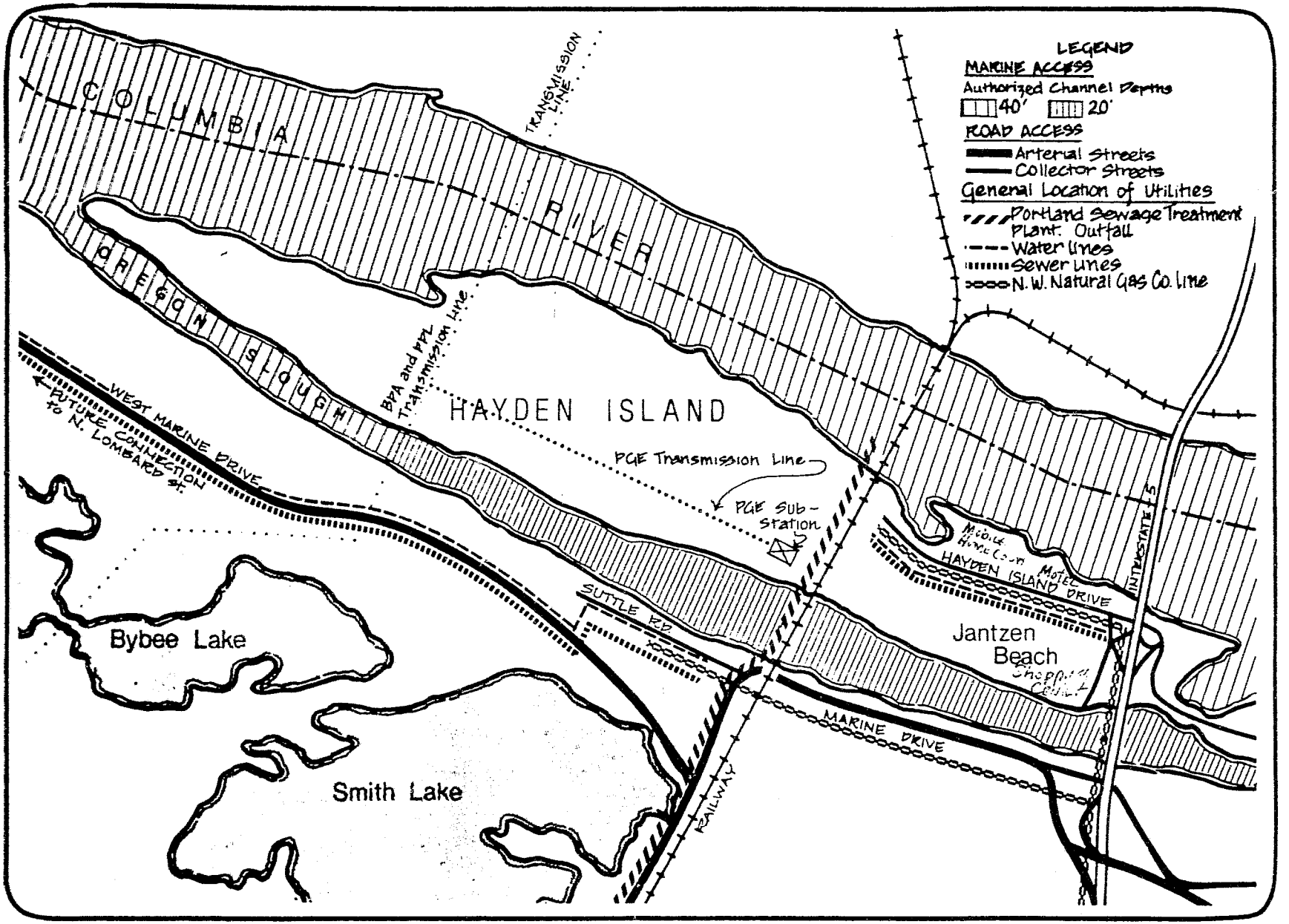
LEGEND

		Approximate Acreage
1.	BURLINGTON NORTHERN, INC.	33 acres
2.	HAYDEN ISLAND, INC.	37 acres (WESTERN PARCEL ONLY)
3.	PORTLAND GENERAL ELECTRIC	486 acres
4.	WESTERN TRANSPORTATION	182 acres
5.	U.S. GOVERNMENT, BONNEVILLE POWER ADMINISTRATION	13 acres
		751 acres total

NOTE: Ownership status of portions of the island where substantial accretion has occured is not clear due to claims of the Oregon State Land Board

Physical Featur
Fig.





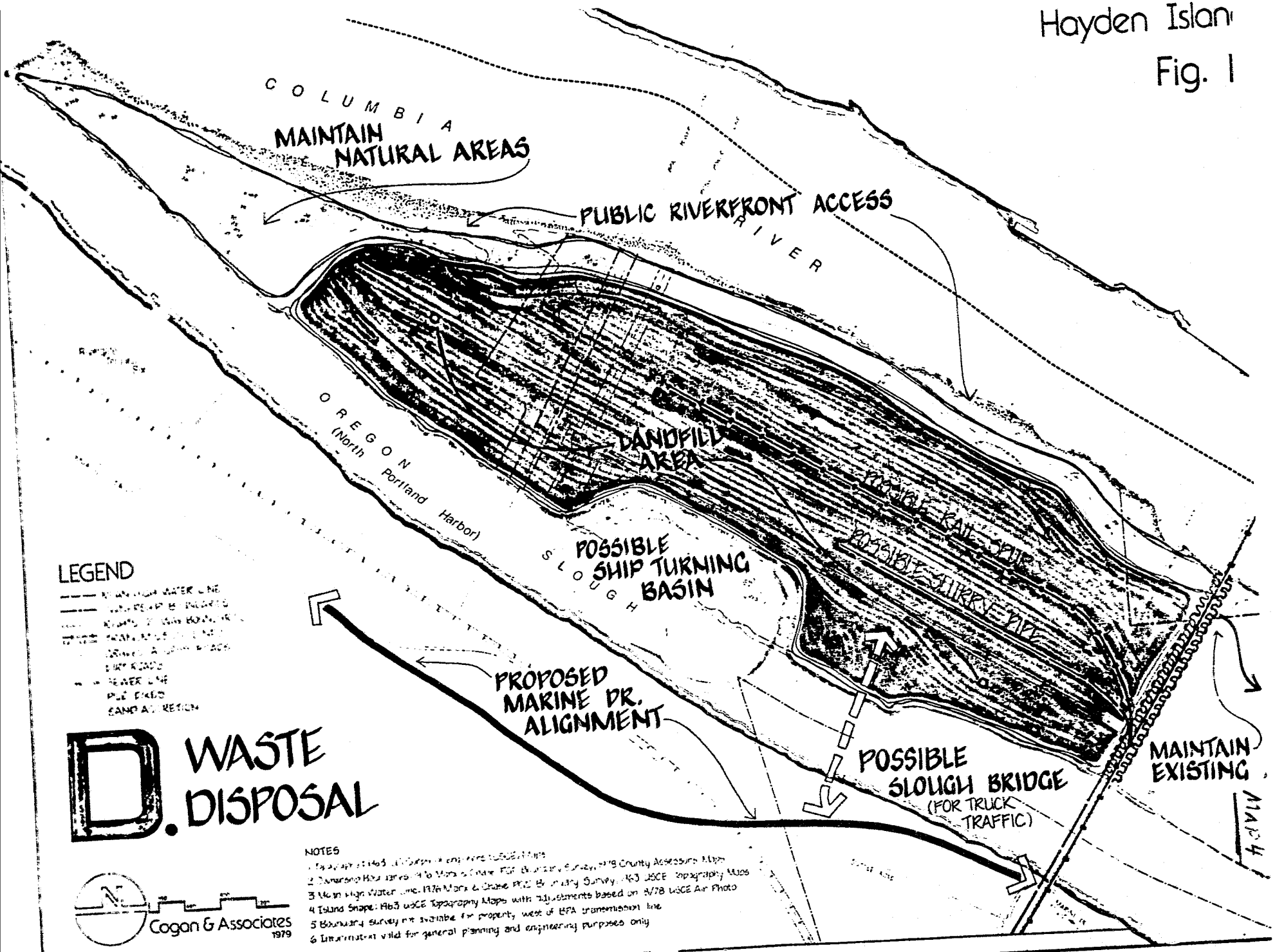
Existing Access and Utilities

Fig. 9

MAP 3

Hayden Islan

Fig. 1



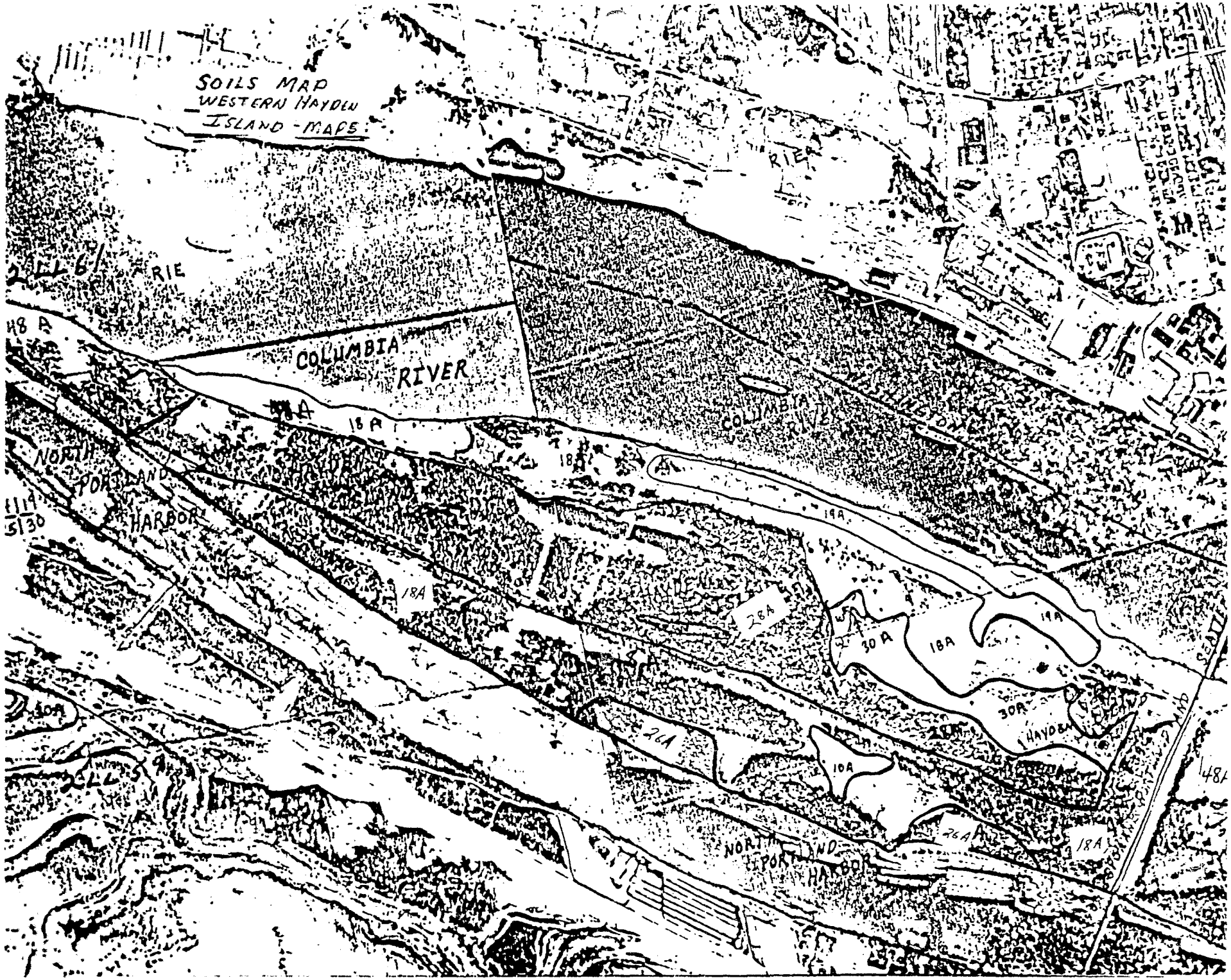

SOILS MAP
WESTERN HAYDEN
ISLAND - MAPS
COLUMBIA
RIVER
COLUMBIA
RIVER
NORTH
PORTLAND
HARBOR
18A
19A
30A
26A
10A
HAYDEN
ISLAND

TABLE 1

METROPOLITAN SERVICE DISTRICT

LANDFILL SUMMARY

NAME OF SITE HAYDEN ISLAND

(1) Perimeter 24,000 FT
(2) Area Bottom 21,000,000 FT²
(3) Area Top 31,000,000 FT²
(4) Depth 15 FT
(5) Percentage of Fence 0
(6) Percentage of Berming 0
(7) Percentage of Diking 200% *
(8) Percentage of Gas Venting 5%
(9) Road Length 5,000 FT
(10) Road Cost $30/FT
(11) Ground Water Seal: ☐ Yes ☒ No
(12) Leachate Collection and Treatment: ☒ Yes ☐ No
(13) Other Costs $500,000
(14) Number of Monitoring Wells 10 EACH
(15) Percentage of Contingency 30%
(16) On-site Cover: ☐ Yes ☒ No

*HIGHER THEN 10FT DIKE; **ROAD WORK ON I-5

DEVELOPMENT COSTS:

(1) Site Building Improvements $300,000
(2) Fence Costs 0
(3) Berming Costs 0
(4) Monitoring Well Costs $2000
(5) Gas Venting Costs $53,000
(6) Road Costs $150,000
(7) Ground Water Seal 0
(8) Leachate Collection and Treatment $450,000
(9) Diking Costs $4,080,000
(10) Cover Costs $23,586,000
(11) Final Cover Costs $15,500,000