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FINAL REPORT

RECONNAISSANCE SURVEY OF LOWER COLUMBIA RIVER

TASK 2 REPORT: LIST OF SOURCES OF INFORMATION TO EVALUATE

AUGUST 22, 1991

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THE LOWER COLUMBIA RIVER BI-STATE PROGRAM

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IN ASSOCIATION WITH
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TASK 2: LIST OF SOURCES OF INFORMATION TO EVALUATE

1.0 INTRODUCTION

This report provides a listing of sources of information that will be evaluated on point, non-point, and in-place sources of pollutants to the lower Columbia River. Identified and potential sources of information are listed separately for each of these categories of pollutant sources Information sources listed under the pollution categories consist mainly of federal, state, county, and city agencies or departments Sources of information consisting of published articles, reports, unpublished data, and atlases are listed in Section 5.0

The purpose of this report is to provide a concise, detailed listing of the sources of information that will be evaluated to meet the objectives of Task 2 These objectives are to 1) inventory and characterize existing point, non-point, and in-place pollutant sources on the lower Columbia River, and 2) to organize this data in a manner to provide input and guidance in the design and selection of sampling locations for the reconnaissance survey. Additional information regarding how these sources of information will be evaluated, analyzed, and presented is contained in the Work Plan for Task 2

2.0 POINT SOURCES

For the purposes of Task 2, point sources are defined as discrete sources which discharge directly to the waters of the lower Columbia River. As such, discharge from National Pollutant Discharge Elimination System (NPDES) permitted facilities will be evaluated, as well as non-permitted point source dischargers.

2.1 Oregon Dischargers with NPDES Permits

The concentration and composition of monitored pollutants discharged by Oregon NPDES permitees to the lower Columbia River will be characterized by summarizing monitoring data present in Oregon Department of Environmental Quality (DEQ) permit files Two years of data will be evaluated (January 1, 1989 to January 1, 1991) The 26 Oregon NPDES permitees that will be evaluated are listed in Table 1 of the Work Plan for Task 2

2.2 Washington Dischargers with NPDES Permits

The concentration and composition of monitored pollutants discharged by Washington NPDES permitees to the lower Columbia River will be characterized by summarizing monitoring data present in Washington Department of Ecology (DOE) permit files. Two years of data will be evaluated (January 1, 1989 to January 1, 1991) The 30 Washington NPDES permitees that will be evaluated are listed in Table 1 of the Work Plan for Task 2.

2.3 Non-Permitted Point Source Dischargers

While it is generally recognized that some point sources of pollution to the lower Columbia River do not have permits, neither Oregon DEQ or Washington DOE have structured programs to identify these sources These may consist of facilities that are in the process of obtaining NPDES permits, and miscellaneous small dischargers that for various reasons may not currently be regulated by either Oregon DEQ or Washington DOE Pollutant discharge from other non-permitted sources [i e , combined sewage overflows (CSOs) and stormwater discharge pipes], will be addressed in the section on non-point pollution sources An intensive effort to identify non-permitted point sources might involve a boat survey that cross-references identified pipes and outfalls with permitted facilities, or an exhaustive review of business permits and tax records for individuals and facilities residing along the lower Columbia river Unfortunately,

these activities cannot be accomplished within the time and budgetary constraints available for completion of Task 2 Instead, attempts to identify and characterize these sources will rely on the following sources of information

- Applicants that have requested, but not yet received, NPDES permits will be inventoried This information is available in Washington DOE's Southwest regional office and Oregon DEQ's Portland office.

- Washington DOE's Water Resources Program division processes applications for individuals and facilities that seek to withdraw water from the Columbia River. The possibility of identifying non-permitted dischargers by cross-referencing the list of applicants with NPDES files will be investigated Oregon DEQ will be contacted to inquire whether a similar permitting process exists in Oregon

- Other federal, state, county, and municipal agencies, as well as private sources, will be contacted to further attempt to identify, characterize, and assess the magnitude of pollutant loading from non-permitted sources Sources of information will include at least the following: 1) U S Department of Agriculture (USDA) Soil Conservation Service County Offices, 2) state departments of Public Health, 3) cities and municipalities that discharge to the Columbia River, 4) members of the Steering Committee and the Scientific Resource Panel 5) environmental groups associated with the Columbia River Bi-State Program (i.e., Northwest Environmental Advocates and Columbia River United)

3.0 NONPOINT SOURCES

The Washington legislature has defined non-point source pollution as pollution that enters waters from dispersed water-based or land-use activities, including, but not limited to, surface water runoff from agricultural land, urban areas, and forest lands; subsurface or underground sources, atmospheric deposition, and discharges from boats or other marine vessels (Washington State Department of Ecology 1989) The state of Oregon has identified non-point sources of pollutants as substances of widespread origin which run off, wash off, or seep through the ground, eventually entering state waters (DEQ 1988)

This section discusses non-point pollution sources associated with tributaries, land use activities (e g , agriculture, forestry, urban development), urban and stormwater runoff, accidental spills, atmospheric deposition, and marinas. Land-based subsurface sources including hazardous waste sites, landfills, and septic tanks have been termed "in-place" pollutants. Sources of information for these categories are discussed in Section 4.0 Sources of information on non-point pollution for the other categories are listed below

3.1 Major Tributaries

The loading of pollutants from major tributaries to the lower Columbia river will be calculated for tributaries for which river flow data and water column pollutant data are available (See Table 2 in the Task 2 Work Plan for the list of tributaries that will be evaluated). Sources of information to evaluate tributary loading include.

- Washington's Nonpoint Source Pollution Assessment and Management Report

- 1988 Oregon Statewide Assessment of Nonpoint Sources of Water Pollution

- U S Environmental Protection Agency (U S. EPA) STORET database on water quality
- U.S Geological Survey (USGS) database on water quality for the lower Columbia River

3.2 Agricultural Practices

The data analysis report for Task 2 will summarize the land acreage in counties along the lower Columbia River that are devoted to agriculture, and will discuss the types of pollutants that may enter the river from agricultural activities Sources of information will include·

- USDA Stabilization and Conservation Service
- USDA Soil Conservation Service county offices
- 1987 Census of Agriculture
- County Assessor offices
- Washington Department of Natural Resources (DNR)
- Oregon Department of Agriculture
- City planning departments

Data from these sources include acreage in woodland, pasture, hay and cropland Maps of farmland and irrigation-induced erosion may also be available.

3.3 Forestry Practices

The data analysis report for Task 2 will summarize the land acreage in counties along the lower Columbia River that are devoted to forestry, and will discuss the types of pollutants that may enter the river from forestry operations Sources of information will include·

- U S. Forest Service (USFS)
- Forest products companies
- USDA Soil Conservation Service
- Washington Department of Natural Resources (WDNR)
- Washington Department of Fisheries (WDF)
- Oregon Department of Forestry
- Oregon Department of Environmental Quality
- County assessor offices

The USFS has information on forested land acreage, soil erosion due to logging activities, and estimates of nonpoint pollution from forestry practices (e.g., logging, road building) The USFS also has GIS information on land uses adjacent to the Columbia River from Bonneville dam to near Portland USDA Soil Conservation Service county offices have resource inventories that include estimates of the acreage of forest land. Maps of stream bank erosion may also be available Forest products companies can provide information on forest acreage and land use activities on their lands WDNR has information on Washington state owned lands

adjacent to the Columbia River. WDF has information on impacts caused by logging activities (e g , erosion)

3.4 Urban Runoff, Stormwater Discharge, and Combined Sewer Overflows

Characterization of pollutants entering the Columbia River from urban runoff, stormwater discharge, and combined sewer overflows (CSOs) will be evaluated by contacting the following sources of information

- Washington DOE, Water Quality Program, Nonpoint Source Unit
- Oregon DEQ, Water Quality Division, Nonpoint Source Section
- City Engineering Departments and Sewage Treatment Facilities
- Port authorities
- USDA Soil Conservation Service

3.5 Accidental Spills

Occurrences of oil spills along the Columbia River will be summarized in the Task 2 data analysis report Information on these spills will include the date of occurrence, quantity of oil discharged into the Columbia River, and 3) the type of petroleum product spilled This information is available from the following sources

- U.S Coast Guard, Division of Marine Safety
- Washington Department of Energy, Spill Response Program

The U S Coast Guard office in Washington D C maintains a database on the location, quantity, and types of chemicals spilled into marine and aquatic waters. Information from this database can only be obtained by submitting a freedom of information request Washington DOE has a download of this database for the year 1990. Similar information is not available from Oregon DEQ.

3.6 Atmospheric Deposition

The data analysis report for Task 2 will discuss atmospheric deposition of pollutants to the lower Columbia River. Characterization of this source of non-point pollution will be limited to summarizing information available in the scientific literature and applicable data collected during federal and state monitoring programs. Sources of information on atmospheric deposition include the following

- Air Pollution Emissions, Incinerator Emission Section, Washington DOE
- Puget Sound Water Quality Authority
- Environmental Investigation and Laboratory Services, Acid Rain Group, Washington DOE
- National Atmospheric Deposition Program
- Scientific literature

3.7 Marinas

The data analysis report for Task 2 will provide the location of marinas on the lower Columbia River and will discuss the types of pollutants that may enter the river due to the operation of these facilities This information will be obtained from the following sources

Oregon State Marine Board 1989 Oregon boating facilities guide Oregon State Marine Board, Salem, Oregon, 47 pp

Washington State Parks & Recreation Commission 1988 Public boating facilities in Washington State Second edition - 1988 Washington State Parks and Recreation Commission, Olympia, Washington, 64 pp.

Washington State Parks & Recreation Commission 1990 1990 Washington State Recreational Boating Fatalities Final Report Washington State Parks and Recreation Commission Boating Programs Office, Olympia, Washington, 24 pp

4.0 IN-PLACE POLLUTANTS

Data collection efforts for in-place pollutants will focus on identification and characterization of known or suspected land-based sources of pollutants that may contribute to pollutant loading to the lower Columbia River. Three main categories of in-place pollutants will be evaluated

- Superfund and hazardous waste sites located near the Columbia River
- Sanitary landfills located within one mile of the Columbia River
- Potential and/or suspected sources of land-based pollutants

4.1 Established Federal and State Superfund Sites Along the Columbia River

Table 3 of the Task 2 Work Plan lists the Superfund and hazardous waste sites that will be evaluated in the Task 2 data analysis report Information collected for these sites will include at least the following: site location, contaminants of concern, media most likely affected by these contaminants, information available on pollutant transport, and information available on the extent of contamination Information on state and federal Superfund sites and hazardous waste sites will be obtained from the following sources

- Oregon DEQ
- Washington DOE
- U S EPA's Toxic Release Inventory database
- SARA Title III reports
- Washington DNR
- Remedial Investigation/Feasibility Studies (RI/FS)
- Site Records of Decision (RODs)

The federal Superfund sites list provides the names and locations of federal sites State Superfund site lists for Oregon and Washington provide the names and locations of additional sites Information on the types of contaminants present at both federal and state sites, and the potential for transport of these materials off-site will be obtained by examining Records of

Decisions (RODs) and Remedial Investigation/Feasibility Studies (RI/FS). RODs summarize the in-place pollutant problem for a particular site and sometimes contain a brief discussion of potential transport. The RI/FS provides more detailed site characterization and typically contains sections on pollutant transport and contaminant migration.

4.2 Sanitary Landfills

Table 4 of the Task 2 Work Plan lists the landfills that will be evaluated in the Task 2 data analysis report Information collected for these sites will include at least the following site location, contaminants of concern, media most likely to be affected by these contaminants, information available on pollutant transport, and information available on the extent of contamination This information will be obtained from 1) Oregon DEQ, 2) Washington DOE, and 3) Department of Health Districts

4.3 Potential Land-Based Sources of In-Place Pollutants

Information on land-based sites that may be potential sources of pollutants to the lower Columbia River will be obtained by evaluating information contained in CERCLIS and state RCRA lists The CERCLIS list for Oregon and Washington includes both investigated and uninvestigated sites that may have some potential for releasing hazardous substances into the environment Oregon and Washington RCRA lists provide the names of existing facilities that generate or transport hazardous waste. The information in these lists will be summarized by providing a table indicating the number of CERCLIS and RCRA sites in each of the counties adjoining the lower Columbia River

5.0 ADDITIONAL SOURCES OF INFORMATION ON POINT, NONPOINT, AND IN-PLACE POLLUTANTS

The following references provide additional information on sources of pollutants

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Buchman, M F 1987 A review and summary of trace contaminant data for coastal and estuarine Oregon. National Oceanographic and Atmospheric Administration, Coastal and Estuarine Assessment Branch, Seattle, WA. 115 pp.

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Callaway, R J , K V Byram, and G R Ditsworth 1969 Mathematical model of the Columbia River from the Pacific Ocean to Bonneville Dam, Part I theory, program notes and programs Pacific Northwest Water Laboratory, Corvallis, OR 82 pp

Columbia River Estuary Data Development Program 1984. Abstracts of major C R E D D P publications Columbia River Estuary Study Taskforce, Astoria, Oregon. 47 pp + app

Ebel, W J., J W Mullan, and H L Raymond 1989 The Columbia River--toward a holistic understanding In: D P. Dodge (ed) Proceedings of the International Large River Symposium Can. Spec Publ. Fish. Aquat. Sci. 106:205-219.

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McCabe, Jr , G T , and R.J McConnell. 1989 Abundance and size-class structures of Dungeness Crabs in or near frequently-dredged areas in the Columbia River Estuary U S Army Corps of Engineers (Contract DACW57-88-F-0461). 22 pp.

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