

EXHIBIT E

Recreational Resources

Appendix H

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RECREATIONAL RESOURCES

General

The following exhibit is a summary of recreational uses within the zone of siting feasibility (ZSF) for ocean dredged materials at the mouth of the Columbia River (MCR) and an evaluation of the potential impacts of such disposal on recreational activities.

The area within the ZSF includes some very important recreational resources. Two major state parks are located at the mouth on both sides of the river including Fort Stevens State Park, Oregon, and Fort Canby State Park, Washington. Both parks have facilities for camping, picnicking, swimming and other activities as well as historical interpretive displays. In addition, both parks include large ocean beach areas with beach access facilities. These beach areas receive extensive use for surf fishing, beachcombing, clamming and other beach activities. The Washington shoreline north of Fort Canby State Park is part of the popular Long Beach Peninsula resort area and receives similar uses, as does the shoreline along Clatsop Spit south of Fort Stevens State Park. Both the north and south jetties at the mouth of the river are used for fishing and sight seeing. Recreational fishing for salmon by both private parties and charter boats occurs within the mouth of the river and offshore.

Important recreational resources within the ZSF are shown in figure E-1. Ocean dumping of dredged materials within the ZSF could potentially impact both the recreational uses of beaches and offshore recreational fishing. In addition, ocean dumping could influence recreation through beach nourishment.

Beach Nourishment

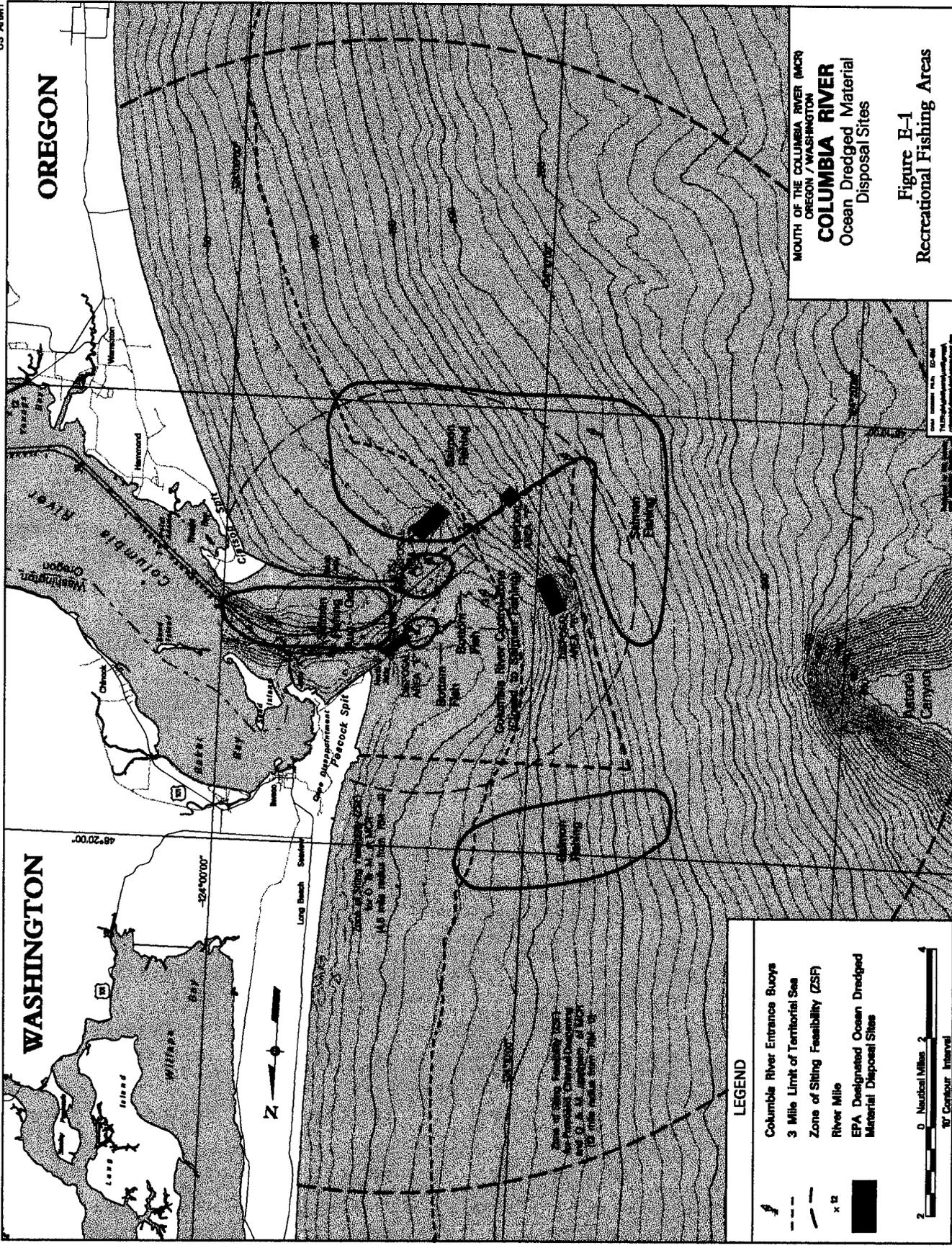
The States of Oregon and Washington have requested nourishment of ocean beaches within the ZSF through accretion of dredged material. Nourishment would increase the beach area available for recreation and protect beach recreation facilities from erosion.

OREGON

WASHINGTON

MOUTH OF THE COLUMBIA RIVER (MCR)
 OREGON / WASHINGTON
COLUMBIA RIVER
 Ocean Dredged Material
 Disposal Sites

Figure E-1
 Recreational Fishing Areas



LEGEND

- Columbia River Entrance Buoy
- 3 Mile Limit of Territorial Sea
- Zone of Siting Feasibility (ZSF)
- River Mile
- EPA Designated Ocean Dredged Material Disposal Sites



Zone of Siting Feasibility (ZSF)
 as prescribed in Federal Register
 Vol. 37, No. 147, 12/15/72
 145 miles radius from 46° 20' N
 124° 00' W

Scale: 1:50,000
 Vertical Contour Interval: 20 Feet
 Horizontal Contour Interval: 100 Feet

Both the Oregon and Washington state parks departments have requested that the dredged materials be placed directly on the beach or in such a place that would nourish the beaches at Fort Stevens and Fort Canby State Parks. However, it is difficult to determine the extent of the effect that disposal in any given area within the ZSF will have on those particular beaches due to the dynamic nature of ocean currents and other factors.

Washington State has requested that as much of the material as possible be placed at the proposed ODMDS E. Material disposed at ODMDS E is expected to move north and possibly accrete the beach at Fort Canby State Park (Benson Beach). Since the proposed ODMDS E will not be able to handle the volume of material produced by long term O&M dredging of the MCR and Columbia River federal navigation channel or construction of a deeper Columbia River channel a deepwater site is also required.

Impacts on Recreational Use of Beaches

Impacts of ocean dumping on recreational use of ocean beaches within the ZSF would most likely be minor. If accretion does occur on the beaches it could cover items of interest to beachcombers. Anything that a beachcomber may be interested in from the dredged materials would probably stay at the ocean disposal site due to its size and weight.

Biologists have not voiced concerns regarding the effects of dredged material placement on clam populations and, consequently, recreational clamming. While it is agreed that accretion would have some impacts, the extent is undetermined. Similarly, surf fishing may be impacted due to accretion since the slope of the beach may be slightly decreased, keeping fish further away from shore.

This analysis assumes the deposition of like-on-like (e.g. sand on sand) material. Accretion on recreational beaches of dredged materials of a significantly different color or texture, such as fine silts, could adversely impact their esthetic appearance. Placement of fine-grained material in ODMDS E is not anticipated.

Impacts on Recreational Fishing or Boating.

According to Washington and Oregon State fisheries agencies, extensive areas of concentrated recreational fishing exist within the ZSF. Salmon fishing, when in season, is concentrated in the entire southern half of the 4.5 nmi. ZSF and out 5 miles offshore in the northern half, with the heaviest fishing occurring along boundary lines marking the channel. Bottom fishing also occurs in the ZSF. Some recreational crabbing occurs within the ZSF primarily close to shore, along the jetties and inside the MCR.

According to local fisherman and U.S. Coast Guard personnel, there have been no reported incidents of conflicts between recreational fishermen or boaters and past dredging operations, and it appears the likelihood of future conflicts are minimal. Further, in the past few years the salmon fishing seasons have been very short and even eliminated in parts of the ZSF. Longer seasons in the future could increase the potential for conflicts.

In addition to the potential physical problem of confrontations between dredges and recreational craft wanting to use the same sealanes, there is also the potential problem of dredges running over fishing lines and crab pots. Shallow waters at disposal sites such as ODMDS E could create navigation problems for small recreational craft unless managed properly.