

EXHIBIT 2

DEP Issue Profile, *Applications to Dredge or to Dispose of Dredged Material in Coastal Waters* (March 1997).

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Thursday, May 12, 2011

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Issue Profile

Applications to Dredge or to Dispose of Dredged Material in Coastal Waters

March 1997 Phone: (207)-287-3901

Background

Dredging and the management of dredged material are regulated jointly by the Maine Department of Environmental Protection (DEP) and by the U.S. Army Corps of Engineers (ACOE). Permits are required from both of these agencies for any dredging activity. This document has been prepared by the Bureau of Land and Water Quality of the Maine DEP to assist applicants proposing to dredge or to dispose of dredged material in coastal waters of the state.

Dredging and the disposal of dredged material have both long and short term adverse impacts on the marine environment. Short term effects include the degradation of water quality due to increased turbidity, the suspension of toxic contaminants contained within the sediments and the physical removal of marine organisms. Long term effects include the cumulative disturbance caused by the need for periodic maintenance, the removal of soft bottom sediments that provide habitat to economically important species and the possible acceleration of adjacent shoreline erosion. These guidelines are intended to minimize the adverse impacts of dredging to the greatest extent possible.

Applicants proposing to dredge must file a Natural Resources Protection Act application with the DEP. State requirements for collecting and testing sediments are the same as those of the ACOE, and are outlined in the attached testing protocol. Maine's Natural Resources Protection Act and Wetland Protection Rules contain specific language that protects the state's marine habitats and fisheries, including requirements for timing the project and notifying local fisheries interests of planned dredging activities.

Application Process

All applicants must submit an analysis of alternatives for the project as required by the Wetland Protection Rules. The analysis must include information that describes and documents the need for dredging. The analysis must also explore the beneficial use of dredged material or other alternative disposal options before considering offshore disposal. Alternative options for the disposal of dredged material include use in construction projects, beach nourishment, and habitat creation or enhancement. If offshore disposal is proposed, documentation of the review of available alternatives and the justification for their rejection must be provided.

Maintenance dredging of previously-impacted areas utilizing either upland disposal or disposal at an approved ACOE disposal site is the least complex of all dredging activities. If the material is to be placed in a previously-approved upland area, the work may be done under the Department's Permit by Rule program. There are presently three approved offshore disposal areas at Portland, Rockland and Cape Arundel. Assuming that sampling shows the material to be suitable for the chosen disposal method, and that all disposal alternatives have been evaluated, applicants proposing maintenance dredging need only to follow Department recommendations on timing and notification (for offshore disposal) as outlined below.

New dredging, or the proposed use of an offshore site other than the Corps-designated sites in Rockland, Portland or Cape Arundel, requires additional information. In addition to the information outlined below, the applicant must fill out "Part II" of the Natural Resources Protection Act application, which requires a detailed biological assessment of the area to be dredged and/or the area to be used for disposal. The physical impacts of any proposed dredging project must also be investigated. Data must be provided regarding the past and predicted shoaling rate at the site, and the potential impact of dredging on the erosion of adjacent banks and intertidal areas. The investigation must address current patterns, speeds and water circulation, substrate types and impacts, the effect of suspended sediments or particulates, and any potential water column impacts, both

long and short term. The dredging of intertidal areas, or of areas with submerged subtidal vegetation (e.g. eelgrass), is generally not approved. The applicant is strongly advised to contact the Department for a pre-application meeting for new dredging or the proposed use of a non-designated disposal site.

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Timing of the project must coincide with the time of year that will minimize impacts on marine resources. The impact to these resources will be minimized by performing dredging activities at the time of year that avoids anadromous fish runs, shellfish spawning and lobster migration activities. For most projects, this means that dredging must be undertaken between November 1 and April 15.

Notification of fisheries interests is also required by the Natural Resources Protection Act. If the dredged material is to be disposed of at an offshore site, the applicant must publish the proposed route of the barge in a newspaper circulated in the project area when the application is submitted. The proposed route should be published under the headline "Notice to Fishermen" and must clearly describe the route using compass bearings or Loran coordinates. The DEP can then coordinate with local fisheries interests, including a public hearing if necessary, to insure that any impact to the industry is minimized. A copy of the application must be submitted to all municipalities adjacent to the proposed barge route. If the project is not undertaken immediately, the applicant may be required to republish the notice just prior to beginning work.

A dredging lease for projects located on submerged land (below the elevation of low tide) may be required from the Department of Conservation, Bureau of Public Lands (BPL). The Department sends a copy of the dredging application to BPL, and the applicant will be contacted by that agency if a lease is required.

The disposal of dredged material in an upland area is subject to the Maine Solid Waste Management Regulations. Physical and chemical testing guidelines for upland disposal are outlined in the regulations.

Projects undertaken by federal agencies require pre-application, pre-submission and public informational meetings. Federal agencies should contact the Department for more information on these requirements prior to submitting a request for federal consistency review.

TESTING PROTOCOL

For Applicants Proposing to Dispose of Dredged Material in Coastal Waters

The Maine Department of Environmental Protection requires that applicants and federal agencies proposing to dispose of dredged material in coastal waters sample and test the material as outlined in the U.S. Environmental Protection Agency and U.S. Army Corps of Engineers joint publication entitled "Evaluation of Dredged Material Proposed for Ocean Disposal" (1991).

Further requirements for sampling and testing shall be followed as outlined in the interagency publication adopted by Region I of the U.S. Environmental Protection Agency and the New England Division of the U.S. Army Corps of Engineers entitled "Guidance for Performing Tests on Dredged Material to be Disposed of in Open Waters" (1989). Any subsequent relevant ACOE/EPA publications, or amendments or revisions to the existing publications shall be incorporated into these testing guidelines.

The testing procedure consists of a "tiered" approach, whereby sediments are analyzed only to the level of detail required to make a decision on the environmental impact of disposal. Physical, chemical and biological tests are performed on the sediments as necessary to determine the potential for environmental impact. Certain areas, such as those where the material is coarse grained and found in areas of high current or wave velocity (coastal areas with shifting bars and channels), may be exempt from chemical testing based on the results of a physical analysis and an assessment of the potential for contaminated sediments. Areas where chemical test results suggest the possibility of adverse environmental effects from dredging or disposal operations may have to undergo biological testing. Most sites in Maine undergo physical and chemical testing at a minimum. Areas where existing data is available, but is more than 3 years old, may also need to be retested.

The DEP must often review applications for dredging prior to their approval by the Army Corps of Engineers (ACOE). The Department also maintains records of sediment sampling results for state waters. For these reasons, the Department requires that all information gathered in the ACOE/EPA sampling and testing procedure be submitted with the application, including:

1. **Information regarding the dredge site** including: any available information on resources in the area such as the presence of intertidal mudflats, shellfish or eelgrass beds; the results of any prior chemical or physical testing; any available information about the source of the material to be dredged; any evidence of the historical occurrence of spills; the existence of point source discharges in the area; the existence of landfills and EPA Superfund sites in the vicinity of the project that could affect the material to be dredged; the character of marine traffic; and any existing outfalls which may affect the area, including sewage, stormwater, industrial, municipal,

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commercial or residential discharges into the waterway.

2. **The location and depth of all physical and chemical samples.** Sampling plans must be approved by the U.S. Army Corps of Engineers Regulatory Division prior to sample collection. The applicant must demonstrate that the sampling has been designed to give an accurate representation of the area to be dredged. Details of the sampling plan, including the depth(s) represented by the sampling device and the basis for the compositing of samples, must be submitted. Unless valid justification for another sampling method is demonstrated, all core samples must include sediment to the depth of the proposed dredging. Core samples must be visually inspected for the existence of strata. A grain size analysis may be required for each distinct layer observed in the material to be dredged. For some projects, especially areas that exhibit distinct differences in strata and/or have not been previously dredged, chemical or biological toxicity testing may also need to be performed on individual strata. The applicant is encouraged to contact the DEP to discuss the ACOE-approved sampling plan prior to testing.

3. **Sample collection methods and handling.** All sampling must be done with core or grab samplers, depending on the depth of the proposed dredging and the nature of the materials. Field notes must be submitted that describe the sample depth, color, horizons, visual grain size, general cohesiveness and any obvious odors of the sediments. Care must be taken to avoid contaminating the sample through improper sampling techniques. Sampling records must be submitted that document the field collection and chain of custody to the time of analysis. Reports must specify the analytical methods followed. Percent recoveries and blanks and the method used must accompany all results. The laboratory QA/QC plan must be filed as required with the ACOE. The Department may request copies of the laboratory QA/QC on a case by case basis.

For additional information, contact the DEP office closest to you, asking specifically for a staff person in the NRPA program:

Y Portland -- 312 Canco Road, Portland, ME 04103
(207) 822-6300

Y Augusta -- 17 State House Station, Augusta, ME 04333
(207) 287-3901

Y Bangor -- 106 Hogan Road, Bangor, ME 04401
(207) 941-4570

Y Presque Isle -- 1235 Central Drive, Presque Isle, ME 04769
(207) 764-2044

For more information about federal law, contact:

U.S. Army Corps of Engineers
Maine Field Office
RR 2, Box 1855
Manchester, ME 04351
623-8367 or 623-8124

For information on sampling and testing, contact:

U.S. Army Corps of Engineers
New England Division-Marine Analysis Section
424 Trapelo Road
Waltham, MA 02254-9154
(617) 647-8291

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