



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

DATE: April 27, 1993

New Bedford
17.07
63899

SUBJECT: New Bedford Harbor Superfund Site
First Draft or ROD and Responsiveness Summary

FROM: Edward Reiner, WQE-1900 *E. Reiner*

THRU: Douglas A. Thompson, Acting Chief, Wetland Protection Section *DA*
WQE-1900

TO: Gayle Garmen, New Bedford Harbor Project Manager
HRM-CAN3

The Wetland Protection Section offers the following comments on the New Bedford Harbor Superfund Site Record of Decision and compliance with Section 230.10 of the EPA 404(b)(1) Guidelines.

The proposed remedy complies with Section 230.10(a) of the guidelines and represents the least environmentally damaging practicable alternative (LEDPA). We have reached this conclusion after careful analysis of the various remedial options proposed for the Harbor. My memorandum dated April 24, 1991 explain the basis for our conclusions more fully.

In regard to Section 230.10(c), we concur that the proposed remedy will not cause or contribute to significant degradation of the waters of the United States. The proposed disposal sites will be designed to maximize volume while minimizing the footprint of waters that must be filled. The proposed disposal sites do not contain areas of outstanding natural resource values. They are adjacent to highly developed upland areas and previously filled harbor areas.

We estimate based on past information that the proposed confined disposal site 1 will cause a permanent loss of approximately 3.5 acres of salt marsh¹ and nearly 20 acres of mudflat. The salt marsh exists along certain shoreline areas and in patches. This site is adjacent to previously filled land including the pilot study CDF site. CDF 1 also encompasses the site of the Confined Aquatic Disposal (CAD) pilot project. CDF site 1b will cause a permanent loss of approximately 10 acres of mudflat. The mudflats at these sites, however, contain high levels of sediment contamination, otherwise requiring remediation. The IEP, Inc., June 1988 Wetland Evaluation Report (page 198) rated the New

¹Acreage of salt marsh based on IEP, Inc. June, 1988 Wetland Study Report Table 6.2, page 112.

Bedford cove wetland (now CDF site 1a) in a "lower value" category in comparing 6 wetlands in the estuary area.

CDF 7 has been chosen as it is in a "Designated Port Area" and it primarily affects approximately 12-15 acres of subtidal areas which have been previously altered through port development activities. It has been designed to facilitate post remediation use as expanded port facilities.

Although the areal extent of wetland/mudflat loss associated with CDF construction is similar to other projects which we have found to violate 230.10(c) of the guidelines, the previously disturbed habitats and contaminated sediment quality of the CDF sites militates against such a finding in this case.

In regard to the effects of the proposed remedy on existing mudflats that will be dredged, we recognize that the removal of approximately 1.5 feet of sediments will make much of the estuary too deep to support tidal flat habitat². The June 1988 Wetlands Evaluation Report (page 199) states:

"The loss of tidal flat habitat under the CDF option (as much as 72 acres lost by excavation) would be extremely difficult to compensate for in the near future. The volume of sediment necessary to re-establish grades necessary to become intertidal flat is considerable. Natural deposition would, over time (tens of years) likely restore this. Recolonization is dependent upon substrate conditions and proximity/availability of recruitment areas."

These tidal flat areas, however, are expected to recolonize with an assemblage of shellfish and benthos over three to five years and will still have value and function as a shallow subtidal habitat. The improvement of the substrates chemical quality after dredging will reduce or eliminate the existing adverse effects of the chemical exposure on fish, shellfish, waterfowl and other aquatic food chain organisms, such that the project actually benefits these organisms. Continued sedimentation processes will over a very long term restore some areas to mudflats.

The Draft Responsiveness Summary, comment No. 12 on page 136 states:

"EPA believes these sediments will be recolonized with a healthier and more diverse benthic community. Based on the Corps of Engineer experience in New England, the

²IEP, Inc, June 1988 Wetland Study Report page 189.

time-frame for recolonization is estimated at 3-5 years."

The response to PRP comment No. 3 on dredging on pages 184-185 states:

"EPA acknowledges that extensive dredging in the upper estuary is likely to change some of the intertidal areas, although the general (overall) physical characteristics of the estuary should remain unchanged. EPA also recognizes that organisms currently inhabiting these areas will be destroyed by the remediation process. However, the levels of contamination in these intertidal areas are such that EPA believes the long term benefits of remediating the areas far outweigh the short term impacts. Shellfish, e.g. Mya arenaria and other benthic species will be able to recolonize the post dredging sediments through larval and adult recruitment."

Since the project as a whole improves at least some of the same aquatic values injured by the remedy (e.g., fish and wildlife habitat), we believe these benefits are properly considered in the 230.10(c) analysis.

We find the proposed remedy to also comply with Section 230.10(d) of the guidelines. Unavoidable impacts such as to contaminated salt marsh areas requiring excavation due to PCB contamination exceeding 50 parts per million, will be adequately compensated for by a salt marsh restoration program which will provide for replacement clean sediments and salt marsh plantings. The draft ROD on page 9-9 states:

"Saltmarsh areas that are removed will be restored. By removing the most contaminated sediments, which are the source of PCB contamination to the water and biota, the remedy will enhance the capacity of the saltmarsh, the Estuary, and the site ecosystem as a whole to provide wildlife, fish and shellfish habitat."

Page 10-6 of the draft ROD states:

"In areas where saltmarsh vegetation is removed, the original elevations will be restored. Saltmarsh cordgrass, Spartina alterniflora will be planted in order to restore the lost saltmarsh area."

The restoration of salt marsh removed by excavation, is extremely important in that the increased depth adjacent to the remaining saltmarsh would otherwise potentially lead to increased currents and wave action along the salt marsh edges leading to possible

erosional losses (Table 12-8, page 200 of the June, 1988, IEP, Inc, Wetlands Evaluation Report). The salt marsh restoration plan should to the extent practicable also compensate for the loss of salt marsh at CDF site 1 through appropriate placement of clean dredged sediments in excavated mudflat areas and plantings of salt marsh plants.

The permanent loss of the approximately 42-47 acres of intertidal and subtidal habitat associated with CDF construction at sites 1, 1b and 7 construction will not be directly replaced. However, the functions and values of this lost acreage of aquatic habitat will be adequately offset by the concomitant improvement and enhancement of the remaining aquatic area of the harbor and estuary.³

The loss of mudflats associated with the excavation of 1.5 feet of contaminated sediments represents an adverse impact to a special aquatic site. If these areas are no longer exposed at low tides, their function and values as mudflats would no longer exist. This loss would under normal circumstances need to be fully compensated for by the replacement of suitable sized sediments of suitable quality, so as to restore the physical pre-contaminated habitat. We believe, however, that undertaking a restoration program of this nature, due to the volume of suitable sediments required, expanse of acreage involved, and complexities of placement without causing additional adverse impacts to the estuary, and probable extremely high costs, make undertaking this form of compensation impracticable⁴.

Since the effect of the project as a whole will in my judgment either be negligible or more beneficial than harmful to each of the aquatic resource values protected by the guidelines, additional compensatory mitigation beyond the salt marsh restoration program is not required.

I hope these comments are helpful. If you have any questions or wish to discuss these points, feel free to call me at 565-4434.

³We also expect that additional aquatic habitat enhancement and restoration efforts will be undertaken as part of the Trustee mitigation. Such efforts may include anadromous fish restoration and creation or restoration of salt marsh by removal of previously placed fill or upland excavation.

⁴Section 230.3(q) of the Guidelines defined practicable as follows: "The term practicable means available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes." (Emphasis supplied)

cc: R. Manfredonia, Chief, WQB
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