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Considering Wetlands At CERCLA Sites

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CONSIDERING WETLANDS AT CERCLA SITES

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1.0 INTRODUCTION

Two issues of considerable importance on the nation's environmental agenda are (1) loss of wetlands and other aquatic habitat, and (2) the impacts, potential or actual, to human health and the environment from Superfund sites. Some estimates have indicated that at least 60% of Superfund sites are located in or near wetlands or other sensitive aquatic habitat.[1] As EPA policy and program emphasis evolves to include a greater concern for ecological impacts, the impact of contamination from Superfund sites on wetlands values and functions is receiving greater consideration.

In 1989, the EPA Wetlands Action Plan[2] stated the goal of "no overall net loss of the Nation's remaining wetlands resource base." Since that time, EPA's Wetlands Division in the Office of Water has incorporated this goal in Division activities, including Superfund. The goal was adopted by the 11/93 Interagency Wetlands Working Group, convened by the White House.

EPA approaches wetlands protection within the framework of the Executive Order for Protection of Wetlands (E.O. 11990): avoid the long- and short-term adverse impacts associated with the destruction or modification of wetlands and avoid direct or indirect support of new construction in wetlands whenever there is a practicable alternative. The Office of Solid Waste and Emergency Response (OSWER) Directive 9280.0-02 of August 1985, Policy on Floodplain and Wetlands Assessments for CERCLA Actions, states:

> Under this policy, Superfund actions must meet the substantive requirements of the Floodplain Management Executive Order (E.O. 11988), and the Protection of Wetlands Executive Order (E.O. 11990).

As a Federal Agency, EPA must follow executive orders. The effect of citing these executive orders in CERCLA compliance policy further establishes the expectation that the Agency will follow the requirements of the two orders in developing CERCLA responses.

This guidance aims to provide Superfund site managers and regional wetlands program personnel with policy guidance that will be useful when considering potential impacts of response actions on wetlands at Superfund sites. Successful coordination of the programs will achieve a greater degree of wetlands protection and a more efficient response for remediating Superfund site contamination.

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[1] U.S. EPA. 1989. *Summary of Ecological Risks, Assessment Methods, and Risk Management Decisions in Superfund and RCRA.* EPA-230-03-89-046.

[2] The Action Plan was released under a memorandum from the EPA Administrator dated January 18, 1989.

2.0 BACKGROUND

This section provides general information on wetlands functions and values, and on relevant regulations and laws. This information should help facilitate relationships based on a mutual understanding of each program's purpose, laws, and policies. In this section, as well as the other sections throughout this guidance, reference documents are identified to help the reader find more information on a particular topic.

2.1 Wetlands Functions and Values

As defined in the Federal Clean Water Act regulations (40 CFR Part 232.2(r)) wetlands are:

> Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

Wetlands vary across the country due to regional and local differences in vegetation, hydrology, water chemistry, soils, topography, climate, and other factors. For example, wetlands include coastal marshes along the Atlantic and Gulf coasts; mangrove swamps in Hawaii and southern Florida; red maple swamps, bogs, and fens in northeastern and north central States and Alaska; pocosins in North Carolina; pitch-pine lowlands in southern New Jersey; riparian wetlands of the arid and semiarid West; prairie potholes in Minnesota and the Dakotas; vernal pools in California; playa lakes in the Southwest; cypress gum swamps in the South; wet tundra in Alaska, and tropical rain forests in Hawaii. Wetlands found at Superfund sites may occur naturally or as a result of human influence, such as created lagoons or depressions on top of landfills that have wetland characteristics.

Wetlands typically provide a number of functions that benefit humans and the environment. By absorbing, adsorbing, transforming, or retaining natural pollutants and xenobiotic pollutants which can enter a wetland through runoff, wetlands have a water quality improvement function. Flood water storage and conveyance functions are provided by wetlands. Some wetlands serve as recharge or discharge sites for ground water. Due to the presence of vegetation in these systems, wetlands often provide shoreline and erosion control.

Many commercial and game fish use headwaters, sloughs and inland wetlands as well as coastal marshes and estuaries for nursery and/or spawning grounds. Because of their high productivity, wetlands offer food sources for many species and provide habitat for fish and wildlife, including certain endangered or threatened species. A number of natural products also are produced by wetlands including wild rice, timber, and blueberries. Finally, because of their natural aesthetic value and abundance of bird, waterfowl, and plant species, wetlands also provide recreation and aesthetic enjoyment.

Wetlands are sensitive ecosystems particularly vulnerable to impacts from contamination or from response actions that may occur as part of the Superfund process.

Many wetland systems have been used as dumping sites for hazardous and non-hazardous waste. Because of their relatively low elevation in the landscape, wetlands also may act as a sink or source for contamination flowing overland via surface water or from groundwater discharges.

Information on this topic can be found in the following documents:

- U.S. Fish and Wildlife Service. "An Overview of Major Wetlands Functions and Values", FWS/OBS-84/18, Sep 1984
- U.S. EPA. "America's Wetlands: Our Vital Link Between Land and Water", OPA-87-016, Feb 1988

2.2 Overview of the Clean Water Act Section 404 Program

Section 404 of the Clean Water Act (CWA) regulates discharges of dredged or fill material into waters of the U.S., including wetlands. While this guidance is directed at wetlands, it is important to note that wetlands, like rivers, streams, and interstate lakes, are "waters of the U.S.," and much of the discussion here can be related to those other waters (See glossary for definition of "Waters of the U.S.").

The Section 404 program operates independently of the CERCLA program. Much of the following information about the §404 program, such as the process of obtaining a permit, is not applicable at a CERCLA site. However, the information may be useful in applying §404 as an applicable or relevant and appropriate requirement (ARAR), as discussed further in Section 3.2.

The CWA §404 program is implemented jointly by the U.S. Army Corps of Engineers (COE) and EPA. The COE reviews permit applications and determines whether to issue or deny a permit. EPA's responsibilities include development and interpretation of the §404(b)(1) Guidelines, which are the environmental criteria that must be satisfied before a §404 permit can be issued. Under §404(c), EPA has authority to veto a Corps decision to issue a permit or to otherwise prohibit or restrict the discharge of dredged or fill material to wetlands or other waters of the U.S. EPA also has ultimate authority for determining the geographic scope (extent of Federal jurisdiction) under the CWA; i.e., whether an area is a wetland or other water of the U.S. EPA and the COE share authority for enforcing §404 requirements.

Generally, anyone wishing to discharge dredged or fill material to wetlands or other waters of the U.S. must first obtain authorization from the COE, either through issuance of an individual permit or pursuant to a general permit. Section 404(e) authorizes general permits for categories of activities that are similar in nature and will have only a minimal environmental impact. General permits can be issued on a nationwide, regional, or state level. Nationwide permits (NWP) #38 (Clean-up of Hazardous and Toxic Waste) and #20 (Oil Spill Clean-up) are intended to cover clean-up activities other than CERCLA activities. For this reason, and because permits are not required for on-site CERCLA activities, these NWPs do not apply to response actions at CERCLA sites.

Section 404 regulations define wetlands based on three parameters: vegetation, soil, and hydrology in the form of flooding or soil saturation. Once an area meets the three-parameter criteria and is identified as a wetland, it is necessary to determine if it falls within the geographic scope of the CWA, i.e., whether it is a "water of the U.S." Courts generally have interpreted the term broadly to include all waters the degradation or destruction of which could affect interstate commerce. Thus, waters of the U.S. include wetlands adjacent to interstate lakes, rivers and streams and coastal waters, or isolated waters and wetlands provided their degradation could affect interstate commerce.

Section 404 regulates "discharges" of "dredged or fill material" to waters of the United States. Courts have interpreted the term "discharge" to include both additions and redeposits to the wetland or other water of the United States. Under a revised definition of "discharge of dredged material," issued August 25, 1993 by EPA and the COE 58 Fed. Reg. 45008, discharges associated with mechanized landclearing, ditching, channelization, and other excavation activities that destroy or degrade wetlands or other waters of the U.S. are regulated under §404. This definition specifically excludes from §404 regulation discharge activities that have only de minimis, or inconsequential, environmental effects. The rule also provides that placement of pilings to construct structures in waters of the U.S. will be regulated under §404 when such placement has the effect of a discharge of fill material.

Even though §404 permits are not required for on-site Superfund actions, the substantive requirements of the §404(b)(1) guidelines may be relevant and appropriate. Any off-site activity must meet all requirements of §404, including obtaining permits and compliance with the §404(b)(1) guidelines. See Section 3.2 of this document for discussion of the substantive requirements.

2.3 Overview of CERCLA

The Comprehensive Environmental Response, Compensation and Liability Act of 1980, (CERCLA, or Superfund), as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA), gives EPA broad authority to manage cleanup and enforcement activities at hazardous waste sites. The Office of Solid Waste and Emergency Response (OSWER) promulgated the National Contingency Plan (NCP) which presents the guidelines and procedures for implementing the law. Superfund considers wetlands throughout the response action process. A diagram of the process is shown in Diagram 1 in Appendix 3.

When sites are considered for listing on the National Priorities List (NPL), wetlands should be considered during the Preliminary Assessment and Site Inspection (PA/SI) or during an Engineering Evaluation/Cost Analysis (EE/CA), which is conducted for removal actions. Information gathered during the PA/SI is factored into the Hazard Ranking System (HRS) score. Wetlands are one of the sensitive environments specifically addressed in the 1990 Revised HRS. Sites containing wetlands receive points which contribute to total site score. Sites can be listed based solely on environmental concerns.

Attention to wetlands continues through the Remedial Investigation and Feasibility Study (RI/FS) during the ecological assessment of the site, which is part of the baseline risk assessment and the feasibility study where the impact of the response actions on the wetlands shall be considered. If wetlands are found at the site, impacts from contamination and from potential response actions on these areas must be assessed in the RI/FS. The RI/FS workplan should provide means to collect data for risk assessment and to evaluate potential impacts of various remedial alternatives. OSWER's June, 1991 "Role of the Baseline Risk Assessment" memo further explains why baseline risk assessment must be conducted to characterize current and potential threats to human health and the environment. The results of risk assessment and other information collected during the RI/FS are considered during remedy selection. The decision is documented in the Record of Decision (ROD). The nine criteria used in remedy selection consider short- and long- term risks and are outlined below in Figure 1.

It is important to recognize that <u>*all*</u> *nine criteria are analyzed and balanced in the* selection of the remedy. The remedy selected must meet the first two criteria and best balance the other seven criteria.

Wetlands are considered again during the Remedial Design/Remedial Action (RD/RA) phase. Unavoidable impacts to wetlands must be mitigated to comply with pertinent regulations and executive orders. Examples of mitigation actions are discussed in Section 3.3.1. Wetlands can also be assessed in the post-remedial monitoring phase.

National policy states that wetlands are valuable natural resources of critical importance; accordingly, the unnecessary destruction or alteration of wetlands should be avoided. Laws, regulations, policies, guidelines and executive orders have been developed to minimize wetland loss and destruction. Statutes and regulations applicable or relevant and appropriate to wetlands and water resource protection must be complied with (or waived) under the NCP. The NCP also provides that EPA should consider non-promulgated criteria, advisories, guidance and proposed statutes and regulations issued by Federal and State governments when selecting a remedy. These "applicable or relevant and appropriate requirements" or "ARARs", and "to-be-considered" "TBC" factors are addressed in Sections 3.1 and 3.2, respectively.

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3.0 THRESHOLD CRITERIA FOR REMEDY SELECTION

The NCP sets forth as the national goal of the remedy selection process:

> ... Remedies that are protective of human health and the environment, that maintain protection over time, and that minimize untreated wastes. (40 CFR Section 300.430)

Overall protection of human health and the environment and compliance with applicable or relevant and appropriate requirements (ARARs), or invoking a waiver, are the threshold criteria that must be satisfied for a response action alternative to be eligible for selection. This Section discusses how wetlands should be considered within the analysis of alternatives.

FIGURE 1

NINE EVALUATION CRITERIA
(40 CFR 300.430(d))

1) **Overall protection of human health and the environment** - describes how existing and potential risks from pathways of concern are eliminated, reduced, or controlled through treatment, engineering controls, institutional controls or by a combination of controls.

2) **Compliance with ARARs** - addresses whether an alternative meets its respective chemical-, location-, and action-specific requirements or whether EPA can invoke a waiver for an ARAR.

3) **Long-term effectiveness and permanence** - evaluates performance alternatives in protecting human health and the environment after response objectives have been met and includes:
   - Magnitude of residual risk (untreated waste and treatment residuals)
   - Adequacy and reliability of controls (engineering and institutional) used to manage untreated waste and treatment residuals over time.

4) **Reduction of toxicity, mobility, or volume through treatment** - assesses performance of alternatives in terms of reduced toxicity, mobility, or volume through treatment and whether or not statutory preference for treatment as a principal element is satisfied.

5) **Short-term effectiveness** - addresses the impacts of alternatives on human health and the environment during construction and implementation of the remedy and the length of time until protection is achieved.

6) **Implementability** - assesses degree of difficulty and uncertainties with undertaking specific technical and administrative steps and the availability of various service and materials.

7) **Cost** - addresses costs of construction (capital) and necessary costs of operation and maintenance based on OMB Circular A-94.

8) **State (support agency) acceptance** - evaluates technical and administrative issues and concerns the support agency may have regarding each of the alternatives.

9) **Community acceptance** - evaluates issues and concerns the community may have for each alternative.

3.1 Potential ARARs

Compliance with the ARARs of other environmental laws is a cornerstone of CERCLA. Section 121(d) of CERCLA requires that on-site response actions attain (or waive) standards contained in Federal and state environmental or facility siting laws. The NCP requires compliance with ARARs during remedial actions and at completion. It compels attainment of ARARs during removal actions to the extent practicable, considering situation urgencies. One purpose of Section 121(d) is to avoid displacing contamination at a site from one medium to another, or creating new environmental harm while remediating another. Identification of ARARs is a major consideration in setting cleanup goals, selecting the remedy, and determining how to implement the remedy while assuring protection of human health and the environment.

Chapter 3 of the CERCLA Compliance with Other Laws Manual provides specific guidance for compliance with CWA requirements. However, the diverse characteristics of CERCLA sites preclude generic identification of all prescribed ARARs. By necessity, identification of ARARs is conducted on a site-by-site basis. Refer to documents listed at the end of this section for detail on policies and procedures for implementing ARARs and to foster consistent, nationwide application of these policies. Pertinent sections of the CERCLA Compliance with Other Laws Manual are included below.

3.1.1 CWA Section 404 as a Potential ARAR

As stated in the CERCLA Compliance with Other Laws Manual, Superfund's determination to discharge dredged or fill material into waters of the U.S. should be based primarily on whether the discharge complies with the CWA Section 404(b)(1) Guidelines, promulgated as regulations in 40 CFR 230.10. Under the Guidelines, no discharge of dredged or fill material shall be permitted if a practicable alternative exists to the proposed discharge that would have less adverse impact on the aquatic ecosystem, as long as the alternative does not have other significant adverse environmental consequences (40 CFR 230.10(a)).

Pursuant to 40 CFR 230.10(b), no discharge of dredged or fill material shall be allowed if the discharge:

- Causes or contributes to violations of any applicable State water quality standards;
- Violates any applicable toxic effluent standard or discharge prohibition under CWA Section 307 (Toxic and Pre-treatment Effluent Standards);
- Jeopardizes endangered or threatened species or their habitat designated as critical habitat under the Endangered Species Act of 1973 (see Volume 2 of CERCLA Compliance with Other Laws Manual); or
- Violates requirements to protect any marine sanctuary designated under Title III of the Marine Protection, Research and Sanctuaries Act of 1972.

The Guidelines also prohibit discharge of dredged or fill material that will cause or contribute to significant degradation of the waters of the U.S. (40 CFR 230.10(c)). Where a discharge would significantly degrade the waters of the United States, and there are no practicable alternatives to the discharge, compliance with the Guidelines can be

achieved generally through the use of appropriate and practicable mitigation measures to minimize or compensate for potential adverse impacts of the discharge on the aquatic ecosystem (40 CFR 230.10(d)). "Practicable" is defined in 40 CFR 230.3(q) to mean "available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes."

When §404 is an ARAR

When the response action will result in a discharge of dredged or fill material into a wetland, §404 is applicable and is therefore an ARAR. Examples of such response actions include, but are not limited to, discharging fill material in the wetland to construct roads or a well head treatment facility, consolidating contaminated sediments within the wetland, removing vegetation where the root system seriously disturbs the substrate, or capping a contaminated wetland. Section 404 applies to wetlands determined to be waters of the U.S., and mitigation should be provided in accordance with the §404(b)(1) guidelines. (Consult the water program for further detail on what constitutes a "Water of the U.S.").

Recent regulations expand the definition of what constitutes a discharge of dredged or fill material triggering §404. See 58 FR 45037-38 Aug 25, 1993. They address activities which can affect wetlands significantly through excavation (e.g., dredging), but are designed to minimize spillage of dredged material, therefore not previously under §404. Under these regulations, even operations that involve only excavation will trigger §404 unless they have only de minimis environmental effects. While determinations must be made on a site-specific basis, this change means that most CERCLA responses involving some activity in a wetland will make §404 an ARAR.

Questions have arisen as to whether §404 may be relevant and appropriate where it is not applicable (for example, where fill had been placed in the wetland prior to the cleanup, but no action is taken in the wetland as part of the CERCLA response). While this decision must be made on a site-specific basis, the presence of pre-remedial fill generally does not by itself make §404 relevant and appropriate as a standard for remediating the wetland. Where action is taken in a wetland to address pre-remedial fill, §404 is applicable, as described above. In such cases, the extent of the mitigation or other action required is determined by the extent of the CERCLA action, not the extent of the pre-remedial fill.

Actions beyond those compelled by §404 as an ARAR may be necessary to ensure that the remedy is protective. In addition, note that authorities other than CERCLA may be used to compel a responsible party to take action or restore damaged resources. These include Section 10 of the Rivers and Harbors Act of 1899 (administered by the COE) and the Fish and Wildlife Coordination Act (administered by the U.S. Fish and Wildlife Service and the National Marine Fisheries Service), both of which are explained in the SF Compliance with Other Laws Manual, Vol 1, p.3-30 and Vol 2, p 4-20 respectively. If pre-response fill was placed on site in violation of §404, the Regional Water Management Division and the appropriate District Office of the Corps of Engineers (COE) should be contacted concerning possible CWA enforcement action against the discharger. Information gathered on pre-response fill should include the date

of discharge and whether the fill required or received a §404 permit. If either agency determines that enforcement action and mitigation are appropriate, it may be advantageous to all parties to have any mitigation actions combined with the restoration, replacement, or acquisition of habitat (compensation) requested by the natural resource trustees. All CERCLA compensation for pre-response action fill is the responsibility of the natural resource trustees.

Subpart H of Part of 40 CFR 230 provides a list of possible steps to minimize adverse impacts. It should be noted that Subpart H is a non-exhaustive list of actions that could be taken to achieve the more general requirement under 40 CFR 230.10(d) to "minimize potential adverse impacts of the discharge on the aquatic ecosystem." EPA has wide discretion in determining the precise form of mitigation that may be required at a particular site under §404.

Mitigation in Accordance with the §404 B(1) Guidelines

The types and levels of mitigation necessary to demonstrate compliance with the CWA Section 404 (b)(1) Guidelines are clarified in a Memorandum of Agreement (MOA) between EPA and the Department of the Army. While this MOA is not a "substantive requirement" of the CWA, the Guidelines, which serve as the basis for the MOA, are substantive requirements. Prior to initiating any action which might impact wetlands Regional wetlands staff or the Wetlands Coordinator (listed in Appendix 2) should be contacted for advice on §404 compliance.

The Guidelines require a hierarchial approach to mitigation measures:

1. Impact Avoidance - No activity resulting in a discharge shall be permitted if there is a practicable alternative to the proposed discharge that would have less adverse impact to the aquatic ecosystem, as long as the alternative does not have other significant adverse environmental consequences.

2. Impact Minimization - Once steps have been taken to avoid impacts to the extent practicable, appropriate and practicable steps to minimize the adverse impacts will be required through project modifications and permit conditions.

3. Compensatory Mitigation - Appropriate and practicable compensatory mitigation is required for unavoidable adverse impacts which remain after all appropriate and practicable minimization has been attained. Compensatory mitigation actions include restoring existing degraded wetlands and creating new wetlands. While on-site mitigation is preferred, site-specific conditions may require the use of off-site mitigation. The EPA regional wetlands staff can assist in developing or reviewing mitigation measures and can provide guidance to determine compliance with the substantive requirements of §404 of the CWA.

When the proposed discharge is necessary to avoid environmental harm (e.g. to protect a natural aquatic community from salt water intrusion, chemical contamination, or other deleterious physical or chemical impacts), or when the proposed discharge can

reasonably be expected to result in environmental gain or insignificant environmental losses, it may be appropriate to deviate from the previous sequence.

The §404 mitigation MOA between EPA and the COE states that enhancement, restoration, creation or replacement of wetlands should be based on functional equivalence. Mitigation will be based on an EPA assessment of the values provided by the wetland. The ratio-of-mitigation area to impacted area may vary for the type and conditions of the original wetland and type of mitigation action. Superfund policy is to require a minimum of one acre of wetlands mitigation for each acre of wetland filled.

When response actions are taken in severely degraded wetlands, without affecting the quantity of wetland, a response action which improves the function and value of the wetland may qualify as a one-to-one mitigation. The site manager should always consult with the §404 staff in considering the value of the system and set forth mitigation requirements accordingly.

A higher ratio may be appropriate when wetlands are being created, rather than restored, because of uncertainties in the successful creation of new wetlands. In addition to §404 staff, the natural resource agencies (USFWS, NOAA, states) can be consulted when determining the appropriate amount of replacement or restored wetlands.

If the appropriate mitigation to meet the ARAR cannot be conducted on-site, off-site mitigation may be required. At fund-lead sites CERCLA §104(j) permits EPA to acquire property with Fund money only when the state agrees to accept the transfer of all property interest following completion of the response action. In addition, the state must pay 10% of the cost for remedial actions. The 10% requirement does not apply to removal actions.

3.1.2 Water Quality Criteria and Standards

Section 121 of CERCLA states that hazardous substances, pollutants, or contaminants left on-site at the conclusion of the response action shall attain Federal water quality criteria where they are relevant and appropriate under the circumstances of the release or threatened release. This section also states that remedies must comply with "any promulgated standard, requirement, criteria, or limitation under a state environmental or facility siting law that is more stringent than any Federal standard, requirement, or limitation if applicable or relevant and appropriate to the hazardous substance or release in question."

Whether a water quality criterion is relevant and appropriate depends on the uses designated by the state, which are based on existing and attainable uses. In addition, if a surface water exists, and is impacted at a site, state water quality standards (or federally promulgated standards) may be applicable or relevant and appropriate for determining cleanup levels. Water Quality Standards are determined by the State, based on the Federal Water Quality Criterion and subject to EPA approval. FWQC are generally not relevant and appropriate if the water body is only used for drinking water. See 56 Fed. Reg. (March 8, 1990.)

The Water Quality Standards Regulation requires states to adopt: (1) designated uses, (2) narrative and/or numeric criteria sufficient to protect designated uses, including narrative biological criteria, and (3) an antidegradation policy and implementation methods (40 CFR Part 131, 48 FR 51400, November, 8 1983). General state goals that are contained in a promulgated statute and implemented via specific requirements found in the statute or in other promulgated regulations are potential ARARs. For example, a state antidegradation statute which prohibits degradation of surface waters below specific levels of quality or in ways that preclude certain uses of that water would be a potential ARAR. Where such promulgated goals are general in scope, e.g., a general prohibition against discharges to surface waters of "toxic materials in toxic amounts," compliance must be interpreted within the context of implementing regulations, the specific circumstances at the site, and the remedial alternatives being considered.

Site managers should note that by the end of FY 1993, states should have established water quality standards for wetlands. Some states are including hydrologic criteria, sedimentation/settleable solids criteria, and habitat criteria. Coordination with the wetlands staff, water quality standards staff, or Biological Technical Assistance Groups (BTAGs, see section 4.2) is important to ensure that any applicable water quality standards will be met. See pages 3-9 through 3-14 of the Compliance With Other Laws Manual for additional discussion.

Other documents that may be useful include:

- *U.S. EPA. 1990.* Water Quality Standards for Wetlands - National Guidance *EPA 440/S-90-011*

3.2 TBCs

Many Federal and state environmental and public health agencies develop criteria, advisories, guidance, and proposed standards that are not legally enforceable but contain information that would be helpful in carrying out, or in determining the protectiveness level
of, selected remedies. In other words, "to-be-considered" (TBCs) materials are meant to complement the use of ARARs, not to compete with or replace them. TBCs are not legally enforceable and therefore are not ARARs. Their identification and use are not mandatory.

In conjunction with completion of the baseline risk assessment, where no ARARs address a particular situation, or the existing ARARs do not ensure sufficient protectiveness (e.g., because of cumulative effects due to either multiple pathways for exposure to a contaminant, or multiple contaminants in a single pathway), TBC advisories, criteria, or guidelines should be used to set cleanup targets. In such cases, health advisories or toxicity values, together with standardized exposure assumptions, are used in setting the preliminary remediation goals.

TBCs also may be invaluable in deciding how to carry out a particular remedy. Many ARARs have broad performance criteria but do not provide specific instructions for implementation. Often those instructions are contained in supplemental program guidance.

A partial list of TBCs can be found on page 1-85 of the Compliance with Other Laws Manual. Some examples include NPDES, ground water and water quality guidance documents, policies from the Office of Water, EPA/Army MOAs, and Executive Orders (EOs). EO 11998, relating to floodplain management and EO 11990, relating to wetlands protection, are not legally enforceable, so they are TBC rather than ARAR. However, they differ from other TBCs in that they are orders of the President to all Executive Branch employees, so that even though they are not ARAR under CERCLA they should be complied with. General guidance on how EPA should implement EOs 11988 and 11990 is contained in Appendix A to 40 CFR Part 6; as this is policy, rather than a rule, it similarly has TBC status. More specific guidance for implementing both the EOs and Appendix A policy in the Superfund program can be found in OSWER directive No. 9280.0-02 (August 5, 1985).

Other Documents that address these issues include:

- NCP, 40 CFR Section 300.415(i) (55 FR 8666, 8843) and Section 300.435(b)(2) (55 FR 8666, 8852) (March 8, 1990)
- ARARs Q's and A's: Revised NCP, Pub. No. 9234.2-10/FS, May 1992
- US EPA CERCLA Compliance with Other Laws Manual: Parts I and II (OSWER Directives 9234.1-01 and 9234.1-02)
- Overview of ARARs (Focus on ARAR Waivers) Fact Sheet December 1989, Pub. No. 9234.2-03/FS
- CERCLA/SARA Environmental Review Manual/Reg II, Jan 1988

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4.0 CONSIDERING WETLANDS AT SUPERFUND SITES

Appropriately considering wetlands at Superfund sites requires early identification of wetlands on or near the site. During the Preliminary Assessment/Site Investigation (PA/SI), wetland or soil maps may be consulted to help formulate a general picture of present site conditions. Historical wetlands and soil maps may be used to determine areas which may have been filled. This may lead to the identification of additional areas of contamination during the RI. Information regarding the presence of wetlands and other sensitive areas is factored into the Hazard Ranking Score. This section discusses issues about which Superfund site managers should be aware during early stages of the Superfund process such as identification of wetlands, early involvement of wetlands personnel and Biological Technical Assistance Groups, and other issues to keep in mind during remedy selection.

4.1 Early Identification

Wetland identification is a descriptive analysis of the environment in question to determine if wetlands are potentially present. The initial preliminary identification of wetlands, as well as other sensitive environments, should take place during the PA/SI. However, to ensure that indicators of wetlands have been considered, the site manager should determine the likelihood of the presence or absence of wetlands. There are a number of tools available to help site managers make this determination.

Information contained in site records relating to drainage problems, soil stability problems, deep organic mats, or certain vegetation types, are indicators that wetlands may be on the site. Aerial photographs or a site visit are appropriate levels-of-effort to determine if wetlands are potentially present. Infra-red photography and remote sensing techniques can also be used to identify areas. In addition, National Wetland Inventory (NWI) maps are often available for a study area and are a good reference to indicate the likely presence of wetlands.[3] The U.S. Fish and Wildlife Service (FWS) can be contacted regarding availability of that data. These maps are useful and can be adapted for regional or site specific use. For example, Region 10 has developed a NWI map overlay to map Superfund sites. Region 2 site managers use a similar technique to map Superfund sites by overlaying NWI maps on U.S. Geological Survey (USGS) 7.5 minute quad sheets. The NWI also produces state lists of wetland plants for initial surveys. In addition, the U.S. Department of Agriculture (USDA), Soil Conservation Service (SCS) produces Soil Surveys that provide useful soil information.

If the NWI or Soil Survey indicate that wetlands or hydric soil are present on or adjacent to the site, it is likely that wetlands will be there. A field wetlands determination should then be scheduled as part of the RI to determine more accurately the size, location and function of the wetlands. However, a negative determination of wetlands presence by NWI or the Soil Survey does not necessarily mean wetlands will not be located on or adjacent to the site. Careful attention should be given to ensure

[3] Wetland Inventory Maps are available from the U.S. Fish & Wildlife Service or by calling 1-800-USA-MAPS.

that the study does not exclude hard-to-identify or recently established wetlands. Many Superfund sites, being altered environments, create conditions favorable for newly established wetlands that would not ordinarily be identified by the above sources. A positive field determination will still be required. If it is determined that no wetlands are present on or hydrologically connected to the site, the RI report should state this.

Other sources that may be useful for early identification of wetlands include: EPA Wetlands staff, Army Corps of Engineers (COE) project reports or delineation surveys, field indicators discussed in the COE Wetland Delineation Manual (part 3), soil surveys from the USDA SCS, Environmental Photo Interpretation Center (EPIC) or Environmental Monitoring Surveillance Lab (EMSL) documentation, as well as state and local wetland maps. Local, Federal and state sources who are especially knowledgeable include: FWS Regional and Field Offices, National Marine Fisheries Service Offices, Coastal Zone Management Offices, COE District Offices, US Department of Agriculture Soil Conservation State Conservationist, US Forest Service Offices, Federal Emergency Management Agency Insurance and Mitigation Branch, and various state agencies, local planning agencies and commissions.

4.2 Early Notification of Wetlands Staff and Biological Technical Assistance Groups

Once the site manager has determined that wetlands are potentially present on or near the site, the regional wetlands program staff should be contacted. The wetlands program staff has expertise to assist the site manager in determining if there are wetlands on the site. In many cases, the wetlands personnel can assist with actual field level determinations or evaluation of the ecological impacts. However, to ensure a cooperative effort, an understanding of the expected roles of each program should be discussed at the beginning of the process.

The site manager's use of the Regional Biological Technical Assistance Group (BTAG) is another important part of the process. The regional BTAG, which may go by various names (e.g., Ecological Technical Assistance Group or Site Ecological Assessment Team), is a group of scientists from EPA and other Federal and state agencies that helps with ecological studies and ecological risk assessment at Superfund sites. Members of the group can also provide advice throughout the RI/FS process on issues such as sampling design, monitoring programs, goals and methods. Their role is to promote coordination, consultation and information sharing. BTAGs were established, in part, in response to Superfund Office Directors instructing the Regions to conduct more thorough and consistent environmental evaluations at Superfund sites. Some BTAGs include representatives of the wetlands program who may serve as contacts for coordination and identification of relevant issues throughout the remedial process. See Section 6.1 for examples of such coordination. It should be noted that contacting a Regional BTAG does not relieve the site manager's obligation under the NCP to contact the Natural Resource Trustees. Early contact with the Trustees is also encouraged.

Details on BTAG membership, support services the BTAG can provide, and how to access these services are discussed in the ECO Updates listed in Section 6.1. Each Region has a BTAG coordinator who can be contacted for additional information. (See Appendix 2 for a list of BTAG Coordinators.)

Other documents that address these issues include:

- US EPA. "The Role of BTAGs in Ecological Assessment", ECO Update Volume 1, Number 1; Pub. No. 9345.0-051
- See Section 6.1 of this guidance

4.3 Appropriate Levels of Effort to Consider Wetlands

When beginning the on-site investigation during the RI/FS, the site manager should consider potential wetlands impacts from the response action both on-site and off-site. During this stage, determinations are made about the characteristics of the site, the wastes involved, alternative remedies, projected costs, relative risks, and potential pathways to off-site wetlands. When assessing the protectiveness of the remedy (NCP, first of the nine criteria), Executive Orders and Agency policy require the evaluation of impacts of the action on the wetland.

Wetlands can be identified, characterized, or assessed a number of different ways, depending on the situation. Investigative and analytical wetlands assessments and studies conducted during the RI/FS should be tailored to site circumstances to ensure that the scope and detail of analysis is appropriate in relation to the complexity or nature of site problems. Wetlands analysis may include any or all of the following: wetlands characterization, a wetlands delineation, an assessment of wetlands function, and an assessment of the ecological risk. (see Diagram 2). This section provides an overview of these various approaches available to RPMs with a discussion of when a particular approach may be appropriate. Wetlands staff or the BTAG should be consulted for the particular site in question.

4.3.1 Wetlands Characterization

A wetlands characterization should be undertaken if wetlands have been or will be affected by the contaminant release or impacted by implementing the remedy. Wetlands characterization involves evaluating the ecological structure, hydrology, soil, and conditions of the site. The site's ecological structure should provide information on the vegetation present (emergent, scrub-shrub, tree canopy with scrub-shrub and emergent strata, etc.) as well as the fauna of the area. Information on the cover density of the strata present may also be appropriate. Information on the hydrology of a wetland may include the source of water, the conditions that make the area "wet," and other site characteristics that contribute to the wetlands hydrology. Soil information is often available from USDA SCS soil surveys. Data in these surveys are reliable because the data are extensively field checked prior to publication. If no published survey is available, the site manager should determine whether the SCS has unpublished information available. Factors that affect the condition of a site may include the presence of fine-grained sediment that may precipitate from acid mine drainage after oxidation, or high concentrations of pollutants in the soils. Results of preliminary field samples or direct observation may provide additional data describing on-site conditions.

4.3.2 Wetlands Delineation

The term "delineation" normally refers to on-the-ground identification of the limits of jurisdiction of the CWA §404 regulatory program. EPA and the Corps of Engineers standard for delineation for Superfund sites is the 1987 U.S. Army Corps of Engineers Wetlands Delineation Manual developed by the COE.

Despite the natural variability of wetland plant and animal communities, wetlands generally possess three characteristics: hydric (wet) soils, hydrophytic (wetlands) vegetation, and hydrology, in the form of flooding or soil saturation. Section 404 uses these criteria when it defines wetlands as "areas that are inundated or saturated with surface or groundwater at a frequency or duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions." Wetlands are commonly known as bottomlands, bogs, fens, marshes, sloughs and swamps. Areas described by these terms should be thoroughly investigated for their status as jurisdictional wetlands, although the exact use of these terms varies throughout the US.

A delineation should be performed at the RI/FS stage whenever the response action may adversely impact the wetlands. Delineation may be appropriate also during the pre-remedial design phase. Potential impacts to wetlands from response actions must be determined in order to comply with CWA ARARs (§101, §507). In addition, the extent of wetlands impacts and ecological structure of the impacted wetlands must be known when proposing and evaluating mitigation measures for wetlands impacts.

4.3.3 Ecological Risk Assessment

Assessing impacts from contaminants in any ecosystem is a complex and technical process; therefore, only a brief overview can be provided here. The goals of the ecological risk assessment are to:

1) identify and evaluate any ecological impacts, actual or potential, from the release or potential release;
2) establish clean-up goals that are protective; and,
3) determine the appropriateness of potential remedies.

Since much of the impact to wetlands at Superfund sites occurs as a result of hydrologic impacts (i.e., pathways involving contaminated leachate movement), the assessment of contaminant levels in surface and ground water is a key part of ecological assessment procedures. A number of factors determine the type of studies that should be conducted at a site, including the type of wetland and natural resources potentially impacted, the ecotoxicological properties of the site contaminants, the environmental media that are contaminated, and the areal extent and level of contamination. These factors must all be taken into consideration when any ecological assessment is being planned. The results of the ecological risk assessment should be incorporated into the baseline risk assessment. The wetlands staff, BTAG, or Trustees can provide technical advice on sample design and implementation of assessment procedures.

Both the Ecological Risk Assessment (ERA) and the Natural Resources Damage Assessment (NRDA) may include ecological studies on the effects of hazardous substances on the environment. However, the goals behind these processes are different. The ERA provides information for the remedial decision (nature and extent of contamination). The NRDA is performed by the Trustees to determine injury for calculation of damages. While some of the data collected may be useful to both EPA and the Trustees, the target and method of investigation will differ in some cases because their purposes are different.

Other documents which address this subject in more detail include:

- US EPA. Ecological Assessment of Hazardous Waste Sites: A Field and Laboratory Reference, EPA/600/3-89/013
- US EPA. Risk Assessment Guidance for Superfund, Volume II: Environmental Evaluation Manual, EPA/540/1-89/001
- US EPA. Evaluation of Terrestrial Indicators for Use in Ecological Assessments at Hazardous Waste Sites. EPA/600/R-92/183.
- ECO Update, a series of intermittent bulletins published by the Hazardous Site Evaluation Division, Office of Emergency and Remedial Response on ecological assessments which supplement Risk Assessment Guidance for Superfund, Volume II.
- US EPA. Ecological Assessment of Superfund Sites: An Overview. Vol. 1 No. 2; Pub. No. 9345.0-051 (Dec. 1991)
- US EPA. Developing a Work Scope for Ecological Assessments. Vol. 1 No. 4; Pub. No. 9345.0-051 (May 1992)

4.3.4 Wetland Functional Assessment

A wetland functional assessment evaluates and describes the functions of a wetland, which may include wildlife and waterfowl habitat, water quality improvement, ground water discharge, and other wetland functions and values discussed in Section 2.0. In general, only qualitative methods for the evaluation of these functions exist for wetlands (such as the Wetland Evaluation Technique, also known as WET). The one exception is for the evaluation of wildlife habitat where the Habitat Evaluation Procedure (HEP) provides semi-quantitative data.

Information gathered during the wetland functional assessment is important to support the overall ecological assessment at the site. In particular, the wetland functional assessment can provide important data to evaluate the potential ecological effects of the response action on the wetland. Data collected during this assessment may be factored into the ecological risk assessment and the development of proposed mitigative measures, when necessary.

The wetland functional assessment also may assist in determining the significance or uniqueness of the area. Some wetlands provide habitat opportunities for threatened or endangered species of plants and animals and are designated as State Outstanding Natural Resource Waters. These concerns should be identified at the beginning of the

ecological assessment. In addition to wetlands functions and values discussed earlier, ecological experts ascribe special significance to wetlands because they:

- Contain or support an unusually large number of species or individuals;
- Are extremely productive (such as an important fishery);
- Contain species considered rare in the area;
- Are rare or unusually large;
- Protect water quality in important adjacent or downstream waters;
- Perform important landscape level functions (e.g. migratory corridors).

The Risk Assessment Guidance for Superfund -- Volume II Environmental Evaluation Manual and ECO Updates provide additional guidance on this topic.

The site manager should also define and identify sensitive environments based on a site- and area-specific analysis, keeping in mind the ecological connections between the site and nearby habitats. The BTAG, EPA regional wetlands staff or Natural Resource Trustees can provide valuable technical assistance for this analysis and for the wetland functional assessment.

Documents that can provide additional information include:

- Adamus, P.R., E.J. Clairain, Jr., R.D. Smith, and R.E. Young. 1987. "Wetland Evaluation Technique (WET); Vol. II Methodology." Tech. Rep. Y-87. Waterways Experiment Station, Corps of Engineers, Vicksburg, MS

- Leibowitz, S.G., B. Abbruzzese, P.R. Adamus, L.E. Hughes, J.T. Irish. 1992. "A Synoptic Approach to Cumulative Impact Assessment--A Proposed Methodology." U.S. EPA Office of Research and Development Environmental Research Laboratory, Corvallis, OR, EPA/600/R-92/167

- Simenstead, C.A., C.D. Tanner, T.M. Thom and L.L. Conquest. 1991. "Estuarine Habitat Assessment Protocol." EPA 910/9-91-037. Prepared for EPA Region 10, Puget Sound Estuary Program.

- U.S. EPA. 1989. "Risk Assessment Guidance for Superfund Volume II -- Environmental Evaluation Manual." Office of Emergency and Remedial Response. EPA/540/1-89/001

- U.S. EPA. 1989. "Ecological Assessment of Hazardous Waste Sites." Office of Research and Development. EPA 600/3-89/013

- U.S. Fish and Wildlife Service. 1980. "Habitat Evaluation Procedures (HEP) Manual." Washington, DC

4.4 Potential Impacts from Response Actions

Site managers should consider the wetland data and analysis gathered during the RI when selecting a remedy. Site managers should also consider the potential impacts of the proposed remedy to on-site and adjacent wetland resources. Impacts may include the loss of vegetation, removal of soil or sediment, capping of the site, disruption of surface and/or groundwater flow(s), filling of a wetland to construct an access road, draining, and the like (see Table 1 below). Some of these impacts are temporary while others represent a permanent loss of the wetland resource and its functions. Wetland coordinators and BTAG staff can assist in clarifying how these activities may affect wetland functions. Impacts can be either direct to wetlands due to activities in the wetland or indirect due to activities outside of the wetland that affect the wetland secondarily. An OSWER fact sheet entitled "Controlling the Impacts of Remediation Activities in or Around Wetlands" addresses various technical aspects of this issue. (See citation at the end of this Section).

Table 1
Potential Wetland Impacts Caused By Remedial Alternatives

Response Action Activity	Change Wetland Hydrology	Impact Water Quality	Impact Habitat Quality	Impact Vegetative Community
Capping	X	X	X	X
Grading	X	X	X	X
Revegetation			X	X
Diversion & Collection System	X	X	X	X
Containment Barrier	X	X	X	
Groundwater Pumping	X	X	X	X
Subsurface Drains	X	X	X	X
Excavation & Removal	X	X	X	X
On-site Land Disposal	X	X	X	X
Sediment Removal	X	X	X	X
Containment & Turbidity Control	X	X	X	X
In-Situ Methods	X	X	X	X

Areas that will experience temporary impacts should be identified. Even though temporary impacts are generally less severe than permanent ones, the loss of only a few breeding seasons for an endangered species, for example, can be significant. The impact of temporary disturbances can be evaluated based on general area information, the

wetland assessment results, and with the aid of the BTAG, regional wetlands staff, or Natural Resource Trustees. Whether the impacts are temporary or permanent, plans should be made to fully mitigate or compensate for lost functions by conclusion of remediation.

Direct impacts involving a permanent loss of wetlands, or of certain wetland functions, should be clearly identified. In the case of the direct loss of wetlands, the impact will be measured, most simply, on an acreage basis. Results of the functional assessment will be used to evaluate affected functions. To evaluate the loss of any area, the results should be factored into goals for mitigation.

Indirect impacts to wetlands can sometimes result from a response action that is not necessarily located in the wetland itself. For example, actions that result in a surface or subsurface reconfiguration of a site (i.e., changes in upland slope as a result of excavation) can alter the hydrology of an area and result in physical, chemical and subsequently biological changes to nearby wetlands. Other types of actions that can lead to indirect impacts include ground water pumping and treating, and installation of subsurface drains. See OSWER Fact Sheet "Controlling the Impacts of Remediation Activities In or Around Wetlands" for additional discussion. The permanent and temporary effects of secondary impacts should be considered when selecting the appropriate response action. Protective measures such as Agency policy and 40 CFR Part 6 Appendix A to implement E.O. 11990 as described in OSWER Directive 9280.0-02 should be considered.

Often as remediation activities are being completed, soil or fill will be placed or vegetation replanted in the impacted wetland areas. Care should be taken to ensure that the proper materials are used and sound management practices followed to encourage and enhance, rather than impede, natural recovery of wetland functions similar to those which originally existed. Examples of materials and practices include: use of clean and appropriate fill, installation of silt barriers, use of soil similar to that of the damaged or destroyed wetland area, and revegetation using native or desired wetland plants. The BTAG, regional wetlands staff, and Trustees can provide additional technical assistance to address these concerns. In addition, as noted earlier, §404 is an ARAR when a response action involves placing fill into a wetland.

The ROD should address the impacts to on-site and off-site wetlands resulting from current or potential releases of hazardous substances and impacts from implementation of the selected response action. Information regarding wetlands impacts should be addressed in both the ROD Declaration and Decision Summary sections. The Declaration should include discussion of the major components of the selected remedy that address contaminated wetlands. The Decision Summary should include wetlands discussions where appropriate in the following sections:

- Site History - should include past disposal practices in or affecting on-site and off-site wetlands.

- Summary of Site Characterization - should include summaries of:

  - Wetland(s) acreage and proximity to the site
  - Wetlands delineation
  - Applicable state and Federal wetlands classification

- Surface water drainage patterns and possible discharges from the site, including storm water runoff, leachate seeps, and contaminated shallow ground water, that may affect wetlands
- Occurrences and concentrations of contaminants detected in wetlands sediments and surface water.

- Summary of Site Risks - should include a summary of:

  - The ecological risk assessment, including identification of contaminants of concern, exposure assessment, ecological effects assessments, and risk characterization
  - Any wetlands evaluation studies conducted to determine potential wetlands losses and mitigation activities associated with site response action activities.

- Description of Alternatives - should discuss how each alternative remedy addresses the environmental risks associated with the wetlands areas and/or the extent to which that alternative complies with state and Federal ARARs regarding wetlands protection standards.

- Selected Remedy - should include:

  - Major components of the selected remedy that address contaminated wetlands
  - Reasons the selected remedy is located in or affects wetlands
  - A list of significant facts considered in making the decision to locate in or affect wetlands, including alternative locations and actions.
  - A list of mitigation actions to be taken in response to §404 or other ARARs and TBCs.

- Statutory Determinations - should include:

  - A statement indicating how the selected response action affects or protects the natural or beneficial values of the wetlands
  - A description of the steps taken to design or modify the selected response action to minimize potential harm to affected wetlands.

The Proposed Plan also should include discussions of wetlands. In general, these brief discussions should appear in the same section as those addressed above for the ROD. Because the Proposed Plan is designed to facilitate and solicit public involvement in the remedy-selection process, it is important to include a discussion of the wetlands implications associated with each response action alternative considered as well as the preferred alternative.

Documents that can provide additional information include:

- EPA OSWER Fact Sheet: "Controlling the Impacts of Remediation Activities in or Around Wetlands". EPA 530-F-93-0202.

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5.0 ROLE OF THE NATURAL RESOURCES TRUSTEES

EPA is not a Natural Resource Trustee. The Trustees are designated as the Secretary of Commerce, Secretary of the Interior, Secretaries for land managing agencies (e.g. Department of Interior, Department of Agriculture, Department of Defense, and Department of Energy), state trustees as designated by the Governor of each state, and Indian Tribal chairperson. Trustees are responsible for assessing damages for injury to, destruction of, or loss of natural resources. The Trustees should be involved at the site as early as possible. Participation of the Trustees is important at sites where wetlands are located where the wetlands may have been impacted by the release of hazardous substances or may be affected by the response action.

Although wetlands are not specifically identified as "natural resources" in CERCLA Section 101(16), the individual elements of wetlands: "land, fish, wildlife, biota,... water, ground water... and other such resources..." are included in the definition. Damages to these specific resources, and therefore wetlands, can provide the basis for a Natural Resource Damage claim by Trustees under Section 107(f)(1).

It is important to recognize the different roles and responsibilities of EPA and the Trustees under CERCLA and the National Contingency Plan (NCP). EPA (or at Federal Facilities another Federal agency) is responsible for the assessment of the risk a site (e.g., release of hazardous substance) poses to public health, welfare and the environment. This is a significant factor in determining the extent and degree of site response actions. EPA is also responsible for taking response actions to address the release or potential release of hazardous substances. Remedial action is defined in CERCLA Section 101 (24) and is, either directly or through oversight, an EPA (or another Federal agency) responsibility. On the other hand, when the Trustees have determined that the resources under their trust have been injured and require restoration, these activities become the responsibility of the Trustees. CERCLA, as amended by SARA Section 517, places restrictions on the use of Fund monies for natural resource damage assessment or restoration activities.

The roles and responsibilities of Trustees are outlined in CERCLA Section 107(f)(2) and NCP Subpart G. Section 104 (b)(2) of CERCLA requires that Trustees be "promptly" notified of releases that have, or may have the potential to, impact natural resources. In addition this section requires that "assessments, investigations, and planning" shall be coordinated with Trustees.

Trustees should be asked to participate in developing the scope of work for the RI and in negotiations with the Potentially Responsible Parties (PRPs) for conducting the RI. Should the Trustee require data beyond that which EPA requires for the RI, it is the Trustee's responsibility to negotiate with the PRPs for either collection of the data, or for funding to support data collection. Trustees may also collect data themselves and attempt to recover these costs from the PRPs.

Trustees have a significant role in the settlement process. Section 122(j) requires that Trustees be notified of, and encouraged to participate in, negotiations with the PRPs. Trustees may grant a Covenant-Not-to-Sue for natural resource damages. EPA does not have the authority or responsibility to negotiate on behalf of Trustees. Trustees may agree to a

Covenant-Not-to-Sue where the PRPs agree to undertake "...appropriate actions necessary to protect and restore the natural resources damaged..." by the release. At most sites, it is more efficient and cost effective for the PRPs to conduct restoration or other actions in concert with the response action. PRPs may also be interested in resolving all of their CERCLA liabilities in a single consent decree. Early involvement of Trustees is important to minimize delays in the clean-up process.

It is also the responsibility of Trustees to determine the need for, type of, amount of, and appropriate location of, any "restoration, replacement, or acquisition of equivalent resources" (restoration actions) to be carried out by the PRPs. Trustees also must be prepared to participate in the settlement negotiations with PRPs to achieve the implementation, including the operation and maintenance, of restoration actions.

Where no PRPs have been identified and the Superfund-conducted Response action (RA) will impact wetlands, Trustees, along with the BTAG and Regional Wetlands Staff, should be consulted for their technical knowledge as to potential means of mitigating the impacts of the RA. Mitigation is necessary to satisfy provisions of the CWA Section 404 and related regulations which are generally ARAR.

As was mentioned, CERCLA Section 104(j)(2), Section 517(c) and Section 111(a) and (b) place certain limitations on the restoration, rehabilitation, and acquisition of property using Fund monies. SARA Section 517 and Sections 111(a)(3) and (b)(1) state that Fund money cannot be used for claims resulting from a release or threat of release of a hazardous substance from a vessel or a facility for injury to, or destruction or loss of, natural resources including cost for damage assessment.

Other documents that address this issue include:

- NCP, 40 C.F.R. Part 300, Subpart G
- US EPA - Region 10. Superfund Natural Resource Trustee Notification and Coordination Manual
- The Role of the Natural Resource Trustees in the Superfund Process, Vol. 1 No. 3, Pub. No. 9345.0-051, Mar 1992
- MOU between EPA and NOAA, OSWER Dir. No. 9295.0-02

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6.0 OPPORTUNITIES FOR COORDINATION

There are various opportunities for coordinating wetland and Superfund programs to better address wetlands at Superfund sites. They include Biological Technical Assistance Groups, memoranda of agreement, and training in wetland issues.

6.1 Biological Technical Assistance Groups (BTAGs)

The BTAG is an important mechanism for coordinating activities affecting wetlands at Superfund sites. As previously discussed, these groups exist in all EPA Regions and usually include representatives from different EPA program offices (i.e., wetlands, ESD, groundwater, water quality, etc.) as well as from Federal agencies outside EPA such as the National Oceanic Atmospheric Administration (NOAA) and the Fish and Wildlife Service (FWS). Some BTAGs also include representatives from state agencies. This interagency group provides input on ecological and biological issues to RPMs during the CERCLA process and activities. See Section 4.2 for further discussion.

The Regional structure and operation of the BTAG may vary. For example, individual members of the BTAG may be assigned to individual Superfund sites. The BTAG may have its own budget for ecological risk assessments as well as an inter-agency agreement (IAG) with other Federal agencies such as the FWS or the COE.

In some Regions, BTAG review of the ecological risk assessment is mandatory and the BTAG meets at least once a month to discuss the sites and review documents. For instance, the Region 2 BTAG provides input throughout the process, from work plans for RI/FS through signing of the ROD. One site where the BTAG provided assistance was in central New Jersey. A wetland area adjacent to the site had the potential to be affected by pump-and-treat remediation. The BTAG helped develop a monitoring plan in which an off-site reference wetland with similar habitat conditions would be monitored to determine if changes in the wetland closer to the site were a result of Superfund activities or seasonal fluxes. BTAGs routinely provide recommendations and guidance on ecological issues at Enforcement and Fund lead sites as well as Federal facilities that are being cleaned up.

ECO Updates, a series of bulletins produced by the Office of Solid Waste and Emergency Response, provide additional guidance on BTAG coordination and on ecological assessment. The following can be referenced for additional information:

- The Role of the BTAGs in Ecological Assessment. Vol. 1 No. 1, Pub. No. 9345.051, Sept 1991
- Briefing the BTAG: Initial Description of the Setting, History, and Ecology of a Site. Vol. 1, No. 5, Pub. No. 9345.0-051, Aug 1992

6.2 Training

Professionals in both the Superfund and wetlands programs should rely on one another for respective expertise. This can include training with each program office providing programs to increase understanding.

For example, Region 10 has offered in-house training on wetlands issues for Superfund personnel. The training included a course on wetlands delineation and one on Section 404(b)(1) guidelines. Region 2 has a training course entitled "CERCLA/SARA Environmental Review Procedures," which includes sections on wetlands, BTAGs, and Natural Resource Trustee issues. To date, more than 35 sessions of this course have been presented to EPA regional offices, headquarters, the OSC/RPM Academy, states, Federal agencies, and contractors.

Other training programs on wetland issues are available from a variety of groups:

- EPA offers a Wetlands Delineation Course through the COE. This week-long course concentrates on the Delineation Manual used by the U.S. Army Corps of Engineers and other Federal agencies. Contact the Wetlands Coordinator in your EPA Regional Office for more information (see Appendix 2). Other public and private institutions offer similar courses.

- Courses on wetlands laws and regulations are offered by universities and other public and private organizations.

- Training on wetland function and value assessment, wetland creation and restoration, wetland hydrology and wetland vegetation is offered through local colleges and universities, government agencies, non-profit organizations and private training institutes.

6.3 Memoranda of Agreement

A memorandum of agreement (MOA) or understanding (MOU) between wetland and Superfund programs can be useful in establishing or clarifying procedures and practices for considering wetlands and ecological issues at Superfund sites.

In Region 5 the Waste Management Division and Water Division developed an MOA that establishes principles and procedures to provide appropriate coordination between the Superfund and Water Division programs. The MOA governs CERCLA response actions that affect the water media. It provides for notification to the Superfund program by the Water Division of situations that may require a CERCLA response. Major features include:

1) Early involvement - Triggered by the Waste Management Division, it gives the Water Division opportunity to review action memoranda for removal actions and provides access to National Priority List-candidate packages and initial RI workplans;

2) Articulation of interest areas by Water Division - Interest areas described include projects that potentially impact or involve drinking water; interpretations of maximum contaminant levels and their health effects; treatment requirements for discharges to surface waters; information on the discharge of dredge or fill material to wetlands and other waters of the U.S., and insights on precedent-setting groundwater and underground injection policy issues;

3) Timely consultation and training by Water Division regarding program requirements;

4) Review of CERCLA program guidance by Water Division;

5) Time frames for Water Division reviews of documents;

6) Specific identification by Waste Management Division to the Regional Administrator of actions that would lead to non-compliance with substantive Water Division program provisions;

7) Coordination with state counterparts.

This MOA is entitled "Principles of Waste Management Division/Water Division Coordination for CERCLA Removal and Remedial Actions", July 9, 1991 revision and a copy is provided in Appendix 3.

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GLOSSARY OF TERMS AND ACRONYMS

Administrative Requirements

Those mechanisms that facilitate the implementation of the substantive requirements of a statute or regulation. Administrative requirements include the approval of or consultation with administrative bodies, issuance of permits, documentation, reporting, record keeping, and enforcement.

ARAR (Applicable or Relevant and Appropriate Requirement)

Applicable requirements means those cleanup standards, standards of control, and other substantive environmental protection requirements, criteria, or limitations promulgated under Federal environmental or state environmental or facility siting laws that specifically address a hazardous substance, pollutant, contaminant, remedial action, location, or other circumstance at a CERCLA site.

Relevant and appropriate requirements means those cleanup standards, standards of control, and other substantive environmental protection requirements, criteria, or limitations promulgated under Federal environmental or state environmental or facility siting laws that, while not "applicable" to a hazardous substance, pollutant, contaminant, response action, location or other circumstance at a CERCLA site, address problems or situations sufficiently similar to those encountered at the CERCLA site that their use is well suited to the particular site. In some circumstances, a requirement may be relevant but not appropriate for the site-specific situation.

BTAG (Biological Technical Assistance Group)

A group that provides comment and expertise on ecological issues at Superfund sites. This group often consists of representatives from appropriate EPA program offices as well as from other Federal and state agencies. Some Regions use a different name such as Ecological Technical Assistance Group (ETAG), Peer Review Group, or Superfund Ecological Assessment Team (SEAT).

CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act of 1980 as amended: 42 U.S.C. §§ 9601 - 9657)

The legal basis for the Superfund program. Under CERCLA, the Federal government has authority and funds to respond to uncontrolled hazardous substance sites and releases and potential releases. CERCLA was amended by the Superfund Amendments and Reauthorization Act (SARA) in 1986.

Covenant Not to Sue (CERCLA § 122(j)(2)

A promise by a party not to bring future legal action against another party. The Natural Resource Trustee(s) may agree to a covenant-not-to-sue (an agreement not to pursue damage claims) if "the potentially responsible party [PRP] agrees to undertake appropriate actions necessary to protect and restore the natural resources damaged by ... the release or threatened release of hazardous substances."

CWA (Clean Water Act, 33 U.S.C.A §§ 1251 - 1387)

The goal of the Clean Water Act is to restore and maintain the chemical, physical, and biological integrity of the Nation's waters.

CWA Section 404(b)(1) Guidelines (40 CFR Part 230)

Regulations setting forth environmental criteria that must be satisfied before a Section 404 permit can be issued.

Delineation

see Wetland Delineation

Discharge of Dredged Material

Any addition of dredged material into navigable waters including, without limitation, any addition or redeposit of dredged material, including excavated material, into navigable waters which is incidental to any activity, including mechanized landclearing, ditching, channelization, or other excavation that has or would have the effect of destroying or degrading any area of navigable waters (40 CFR 232.2).

Discharge of Fill Material

Any addition or redeposit of fill material into navigable waters, including the placement of pilings in navigable waters when such placement has or would have the effect of a discharge of fill material (40 CFR 232.2).

Dredged Material

Material excavated or dredged from waters of the United States. (40 CFR 232.2(g).

Ecological Risk Assessment

The measure of contaminant effects on an ecosystem. In the Superfund process, it is used to provide information on ecological impacts that can be used in making remedial decisions.

Engineering Evaluation/Cost Analysis (EE/CA)

An analysis of removal alternatives for non-time critical removal actions. (NCP Section 300.415).

Fill Material

Any "pollutant" which replaces portions of the waters of the United States with dry land or which changes the bottom elevation of a water body for any purpose. (40 CFR 232.2(i)).

Habitat Restoration Plan

See Subpart G - A comprehensive plan for restoration, replacement and compensation of equivalent resources.

HEP (Habitat Evaluation Procedure)

Developed by the U.S. Fish and Wildlife Service, HEP evaluates the suitability of a given area to provide habitat for wildlife through the use of "evaluation species". HEP also can give an indication of the potential for proposed mitigation areas to provide habitat for wildlife through the use of "target species". HEP generally provides semi-quantitative results. Some site-specific information is necessary to apply HEP, such as vegetative types to determine the "cover types" of the area. HEP results are greatly influenced by the selection of evaluation species and target species.

HRS (Hazard Ranking System)

A model used to assess the relative risk at sites; sites that score 28.5 or greater are placed on the National Priority List.

Jurisdictional Determination

Ascertaining the geographic scope of a wetland using the three-parameter approach of vegetation, soils and hydrology as specified in the 1987 U.S. Army Corps of Engineers Wetlands Delineation Manual. A wetland delineation may be used in making a jurisdictional determination.

Mitigation

A February 6, 1990, Memorandum of Agreement (MOA) between the Department of the Army and EPA articulates policy and procedures to determine the type and level of mitigation necessary to demonstrate compliance with the Clean Water Act §04(b)(1) Guidelines. The MOA provides that the Army Corps of Engineers evaluate projects to ensure that mitigation occurs in the following sequence:

1) avoidance of wetland impacts to the maximum extent practicable through the evaluation of alternatives;

2) minimization of impacts by sighting project features such that impacts to aquatic resources are further reduced; and

3) compensatory mitigation of unavoidable impacts through creation or mitigation.

Natural Resource Damages

Damages for injury or loss of natural resources as set forth in 42 U.S.C.A. §9607.

Natural Resource Damage Assessment

A damage assessment conducted by the Natural Resource Trustee for injury to, destruction of, or loss of those natural resources held by the Natural Resource Trustees; such an assessment is required under CERCLA §107(f)(2).

Natural Resource Trustees

As defined by CERCLA, trustees are responsible for assessing damages for injury to, destruction of, or loss of natural resources. Trustees include agencies such as the US Fish and Wildlife Service, US Forest Service, and the National Oceanic and Atmospheric Administration's National Marine Fisheries Service (see Subpart G of NCP).

NCP (National Contingency Plan; 40 CFR Part 300)

The regulations implementing CERCLA.

Non-Time Critical Removal

A removal action taken after a 6-month planning period and the completion of an EE/CA or equivalent, after the lead agency has determined, based on site conditions, that the removal action is appropriate.

NPL (National Priority List; 40 CFR Part 300 Appendix B)

A list of releases or threatened releases to which EPA gives highest priority for further response under CERCLA. The list is an end result of a Hazard Ranking System (HRS) that numerically scores uncontrolled hazardous waste sites. Sites that are not on the list

may still be addressed, but fund monies may not be used for response action at such sites unless an appropriate determination of imminent and substantial endangerment can be made in order to take a response action under §104(a) of CERCLA.

PA/SI (Preliminary Assessment/Site Investigation)
The PA is generally a low-cost initial evaluation intended to give as full and complete a picture of the site as possible. The SI is to better characterize the problems at the site, determine if further actions are required and if the site should be included on the NPL. PA/SI occurs before the HRS.

PRP (Potentially Responsible Party)
Those identified by EPA as potentially liable under §107(A) of CERCLA for cleanup costs. A PRP may be a past or present property owner, generator or transporter of hazardous substances, or one who arranges for disposal.

RD/RA (Remedial Design/Remedial Action)
The RD is the preparation of plans and specifications to accomplish the remedial action; the RA is the implementation of the remedy itself. RD and RA occur after the ROD.

Response Action
A response action under CERCLA may be a remedial action which is a longer-term action consistent with a permanent remedy or a removal action which is generally a short-term action (less than 2 years) that removes an immediate threat to public health, welfare, or the environment. Response actions address releases or threats of release.

RI/FS (Remedial Investigation/Feasibility Study)
The RI/FS provides information about the site that will be considered in the ROD. The RI includes data collection and site characterization; the FS focuses on the development of specific remedial alternatives, based in part on the information contained in the RI.

RPM (Remedial Project Manager)
The individual, generally designated by the EPA region, who directs remedial actions and coordinates all other actions at the site.

ROD (Record of Decision)
The ROD documents the remedy selected for a remedial response, states the rationale for the remedy, and states that requirements of the National Contingency Plan are met. The ROD is published after the completion of the RI/FS.

SARA (Superfund Amendments Reauthorization Act of 1986; 42 U.S.C.A. §11001 et. seq.)
Amendments to CERCLA adopted in 1986 containing a variety of provisions to further implement the Superfund program.

Substantive Requirements
Those requirements that pertain directly to actions or conditions in the environment. Examples include quantitative health- or risk-based restrictions upon exposure to types of hazardous substances and restrictions on activities in certain special locations.

Superfund (Oil and Hazardous Materials Trust Fund)

A trust fund established under CERCLA, which is financed by a special tax on petroleum and chemical industries authorized by CERCLA. The fund is available for site clean up when no viable responsible parties are found or when responsible parties fail to take the necessary response actions.

Time Critical Removal

A removal action completed within 6 months and after the lead agency has determined, based on site conditions, that the removal action was appropriate.

TBCs (To-Be-Considered)

Non-promulgated advisories or guidance issued by Federal or state government that are not legally binding and do not have the status of potential ARARs, but are to be considered in selecting the remedy.

Waters of the United States

This term is defined broadly and includes wetlands adjacent to waters of the U.S. and all other wetlands and waters such as intrastate lakes, rivers, streams, and the like, the use, degradation or destruction of which would or could affect interstate or foreign commerce. For a complete definition, see 40 C.F.R. 232.2(q)(1)-(7).

WET (Wetland Evaluation Technique)

A widely used methodology for evaluation of wetland functions developed by Adamus et. al., 1987, initially for the Federal Highway Administration and later revised by the Army Corps of Engineers. WET assesses the potential of a wetland to carry out wetland functions and the value of those functions. Each function is considered in terms of its social significance, effectiveness of the wetland in performing the function, and opportunity for performance of that function. WET can also be applied to any of three levels depending on the information available and the time available for the analysis.

Wetlands

Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

Wetlands Assessment

An evaluation of the various functions of a wetland. At Superfund sites, this activity may also include an ecological risk assessment which evaluates contaminant impacts on wetlands.

Wetland Characterization

The inventory or description of the ecological structure, hydrology, soils and conditions of the site.

Wetlands Delineation

The on-the-ground determination of the boundary between wetland and upland. This information is often used in making a jurisdictional determination of the limits of the Clean Water Act §404 jurisdiction.

Appendix 1 - BTAG Coordinators

Region 1:
Susan Svirsky
Waste Management Division
USEPA - Region I (HSS-CAN7)
JFK Federal Building
Boston, MA 02203
(617) 573-9649

Region 2:
Shari Stevens
Surveillance Monitoring Branch
USEPA - Region 2 (MS-220)
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Raritan Depot Building 209
Edison, NJ 08837
(908) 906-6994

Region 3:
Robert Davis
Technical Support Section
USEPA - Region 3 (3HW15)
841 Chestnut Street
Philadelphia, PA 19107
(215) 597-3155

Region 4:
Lynn Wellman
WD/OHA
USEPA - Region 4
345 Courtland Street, NE
Atlanta, GA 30365
(404) 347-1586

Region 5:
Steve Ostroka
USEPA Region 5 (5HSM-TUB7)
230 South Dearborn
Chicago, IL 60604-1602
(312) 886-5902

Region 6:
Jon Rauscher
Susan Swenson Roddy
USEPA - Region 6
First Interstate Tower
1445 Ross Avenue
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(214) 655-8513

Region 7:
Bob Koke
SPFD-REML
USEPA - Region 7
726 Minnesota Avenue
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(913) 551-7468

Region 8:
Gerry Henningsen
USEPA - Region 8
Denver Place, Suite 500
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Denver, CO 80202-2405
(303) 294-7656

Region 9:
Doug Steele
Clarence Callahan
USEPA - Region 9
75 Hawthorne Street
San Francisco, CA 94105
(415) 744-1916

Region 10:
Bruce Duncan
USEPA Region 10 (ES-098)
1200 6th Avenue
Seattle, WA 98101
(206) 553-8086

Appendix 2 - Wetland Coordinators

Region 1
Doug Thompson, Chief
Wetlands Protection Section
EPA, Region 1
John F. Kennedy Federal Building
Boston, Massachusetts 02203
(617) 565-4421

Region 2
Daniel Montella, Chief
Wetlands Protection Section
EPA, Region 2
26 Federal Plaza
New York, New York 10278
(212) 264-5170

Region 3
Barbara D'Angelo, Chief
Wetlands & Marine Policy Section
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Philadelphia, Pennsylvania 19107
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Region 4
Tom Welborn, Chief
Wetlands Regulatory Section
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Region 5
Sue Elston, Chief
Wetlands Planning Unit
EPA, Region 5 (WQW-16-J)
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Region 6
Beverly Ethridge, Chief
ESD Technical Assistance Section
EPA, Region 6
1445 Ross Avenue
Dallas, Texas 75202
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Region 7
Diane Hershberger, Chief
Wetlands Section
EPA, Region 7
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Kansas City, Kansas 66101
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Region 8
Gene Reetz, Chief
Water Quality Section
EPA, Region 8
999 18th Street
Denver, Colorado 80202
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Region 9
Phil Oshida, Chief
Wetlands Section
EPA, Region 9
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(415) 744-1972

Region 10
William Riley
Wetlands Section
EPA, Region 10
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(206) 553-1412

Appendix 3 - Diagrams

Diagram 1

INTEGRATED REMEDIAL/ENFORCEMENT PROCESS

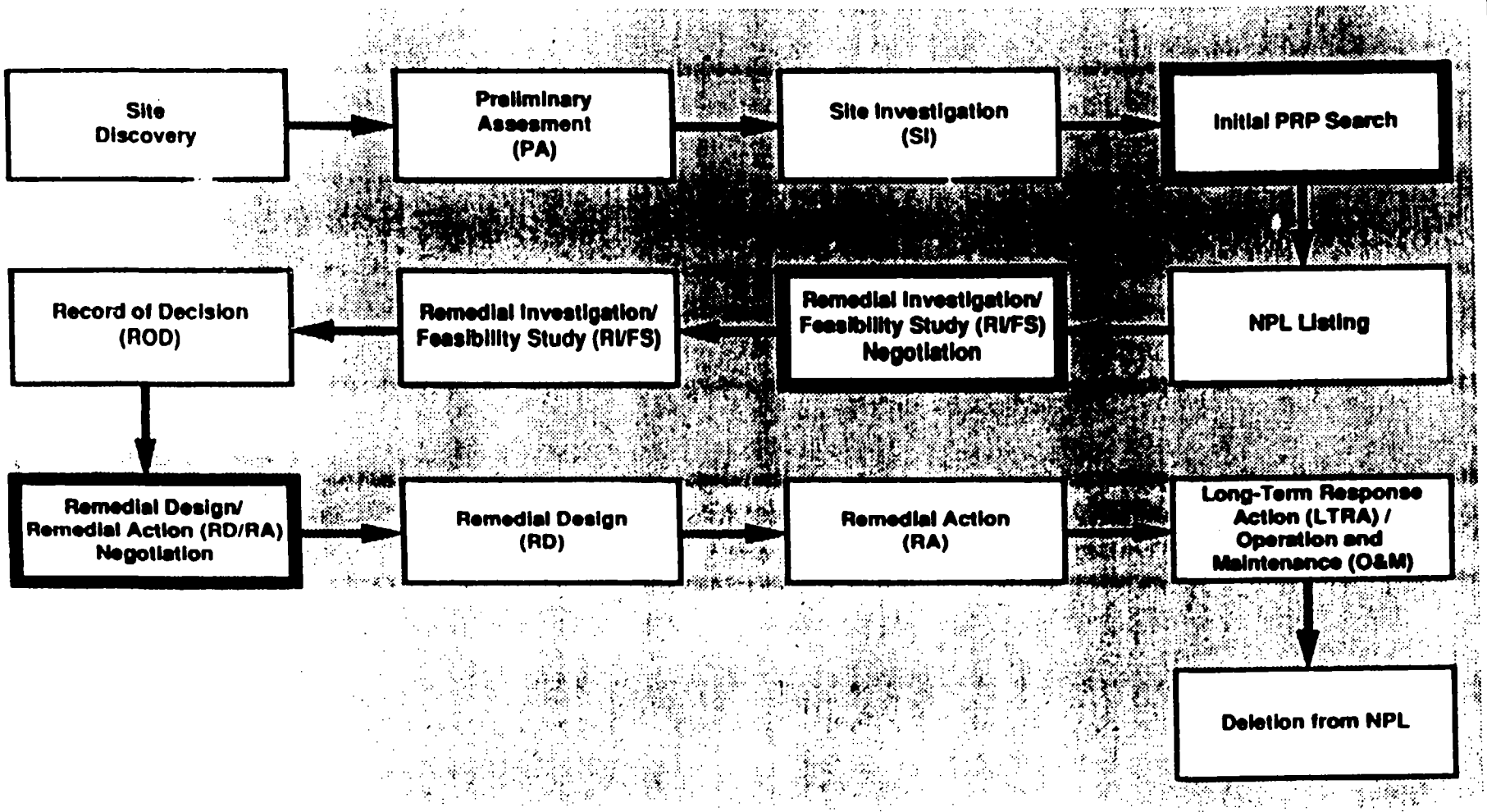
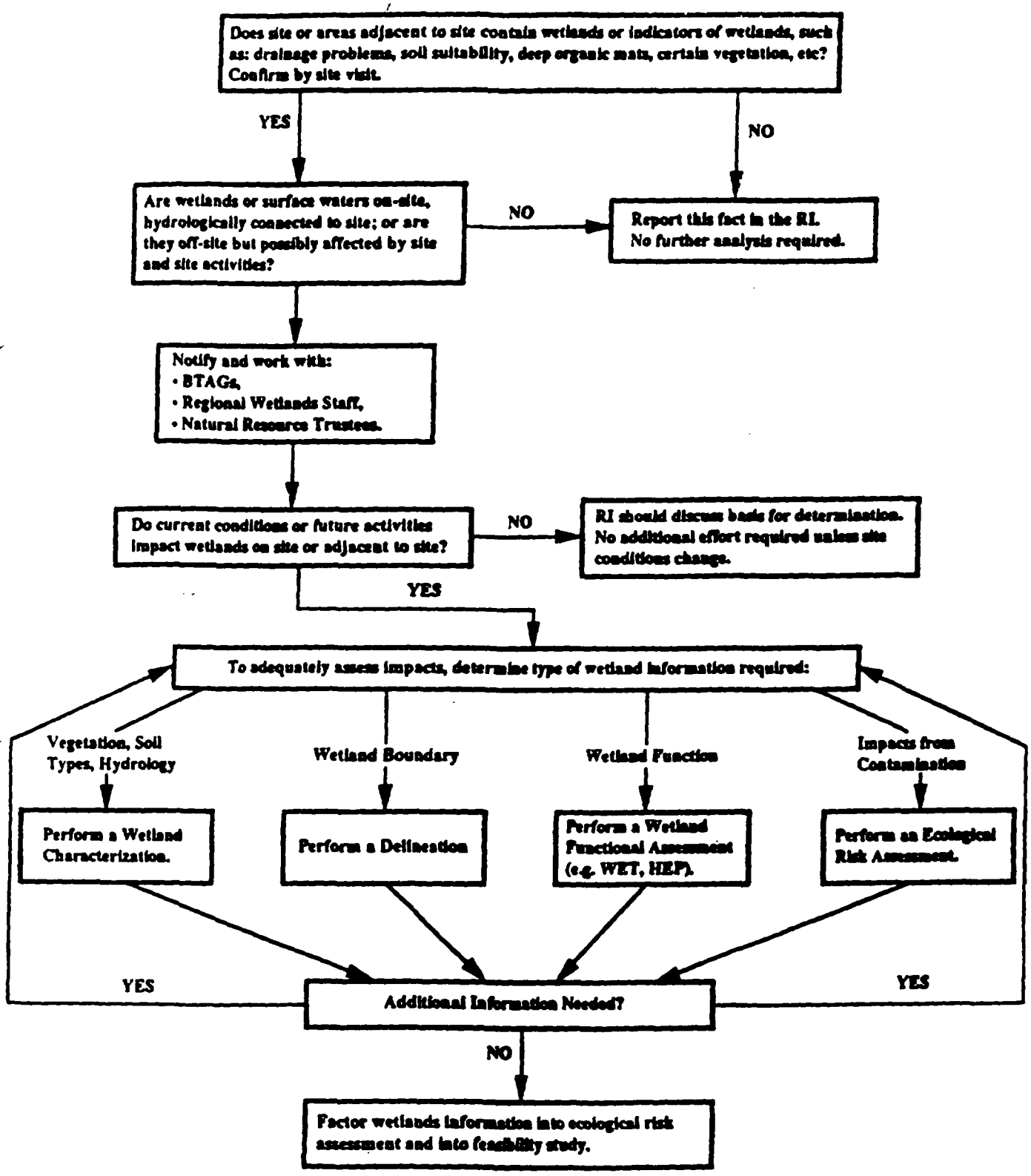


Diagram 2 - Considering Wetlands During RI/FS



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5

DATE: JUL 0 9 1991

SUBJECT: Waste Management Division/Water Division Coordination for Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) Removal and Remedial Actions

FROM: Dale S. Bryson Edward V. Wotten and David A. Ullrich, Director
Director, Water Division for Waste Management Division

TO: See Below

Attached are the revised "Principles of Waste Management Division/Water Division Coordination for CERCLA Removal and Remedial Actions". The Divisions have agreed to these Principles to ensure that appropriate coordination takes place between the Divisions early in each action and to identify water program concerns affecting or affected by these actions.

These Principles are effective immediately. Please read them carefully. If you have any questions, please raise them now for prompt resolution.

Attachment

Addressees:
Norman Neiderguang, Office of Superfund
Robert Bowden, Emergency Response Branch
John Kelley, Remedial Response Branch
Jo Lynn Traub, Superfund Program Management Branch
Kenneth Fenner, Water Quality Branch
Todd Cayer, Water Compliance Branch
Edward Wattenes, Safe Drinking Water Branch
Jerri Anne Garl, Ground Water Protection Branch

cc: Ralph Bauer, Deputy Regional Administrator
Robert Springer, Planning and Management Division
Phyllis Reed, Environmental Sciences Division
Christopher Grundler, Great Lakes National Program Office
Gail C. Ginsburg, Office of Regional Counsel

PRINCIPLES OF WASTE MANAGEMENT DIVISION / WATER DIVISION COORDINATION FOR CERCLA REMOVAL AND REMEDIAL ACTIONS

Objective

The objective of this document is to establish principles that will ensure appropriate coordination between the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) program and the Water Division (WD) for (1) CERCLA removal and remedial actions that affect the water media and (2) alerting the CERCLA program of situations discovered by WD programs that may require a CERCLA response.

Responsibilities

The WD is responsible for advising the Waste Management Division (WMD) of the requirements of the Clean Water Act and the Safe Drinking Water Act applicable to CERCLA projects. The WD is also responsible for providing advice and assistance to the WMD on drinking water criteria and general water quality protection. When WD program staff discover sources that may be contaminating drinking water or resulting in water pollution, they will be responsible for notifying the CERCLA program for potential CERCLA response. The WD is responsible for providing the WMD with sufficient information to enable WMD to provide an adequate investigation and development of an appropriate response.

The WD will refer to WMD all instances of water contamination considered by WD to warrant CERCLA response. These sites will be evaluated by WMD for (1) potential removal activity or (2) prioritization with existing preliminary assessment (PA)/site inspection (SI) workloads associated with National Priority List (NPL) candidacy and qualifications for remedial action. The WMD will advise WD of the initial disposition of all WD referrals within 15 working days and will meet to discuss any site referred if the WD so requests.

The WMD will keep the WD informed of actions taken in response to WD advice and comment.

It is the joint responsibility of the WD and WMD staff to ensure that adequate and timely coordination occurs on all projects. Wherever agreement cannot be reached under the principles of this document, the issues should be raised to higher level supervision. The WD Safe Drinking Water Branch Chief and the WMD Office of Superfund Associate Division Director are responsible for ensuring that the above responsibilities are effectively carried out.

Early Involvement

The WMD and WD will ensure early cooperation on CERCLA projects to identify and resolve issues without unnecessarily delaying needed response actions. To that end, WMD will provide copies of action memoranda for removal actions to WD. The WMD On-Scene

Coordinator (OSC) shall consult with WD representatives during the development of Removal action memoranda wherever there is a question as to the need for, or extent of responses relating to drinking water in specific, or ground or surface water in general.

The WMD will allow WD staff access to National Priority List (NPL) candidate packages and provide copies of the initial Remedial Investigation workplans to WD for review. This will provide WD with early notice of probable Remedial Action and allow WD to advise WMD of any interest in participation in future activities. Many controversial issues are related to the ecological impacts of a given CERCLA site. Since all CERCLA sites have important human health risks, or at a minimum have the potential to impact human health, it is reasonable to assume that all sites will require some level of Water Division review.

Under the procedures described in this section, WD will have the opportunity to surface any sites about which it is aware and to be advised of WMD actions at both removal and remedial sites. The WMD will provide reports and notices of meetings to the WD in time to allow effective WD participation in these projects. The WD will define as early as possible the point and level of involvement it requires in these projects in order to carry out its responsibilities.

Areas of Interest

As a result of the responsibilities noted herein, the WD may participate in the following:

- Projects affecting or potentially affecting the quality of public or private drinking water supplies.
- The interpretation of drinking water health effects information and Safe Drinking Water Act maximum contaminant levels.
- Projects involving or potentially involving the discharge of water to surface waters from point and non-point sources and the establishment of treatment requirements on such projects to comply with water quality standards.
- Projects that involve or potentially involve dredging or filling of wetlands or navigable waters.
- Projects involving precedential ground water policy issues that may be subject to review by the Regional Ground Water Coordinating Committee.
- Projects involving or potentially involving underground injection of waste or reinjection of treated (remediated) ground water.

WMD is interested in reviewing all projects viewed by WD as having a potential for CERCLA response. This effort will be greatly expanded as Remedial Action Plans for the Great Lakes Area of Concern as well as other Regional initiatives become more fully developed.

Consultation

The WD staff will be available to consult with WMD staff on any aspect of a CERCLA project. The WD staff will be responsible for providing timely and complete consultation consistent with WD policy. All consultation should be documented by WD staff with copies provided to both Divisions. Consultation may take place at a variety of times during the development and/or implementation of a project.

Guidance

The WMD has and will continue to provide WD with CERCLA program guidance for review and comment. WD will identify all provisions of CERCLA guidance that conflict with its policies and procedures. If possible, a generic resolution of these differences will be agreed to.

The WD will support WMD internal training initiatives by providing regulation summaries as they become available, and will provide speakers to instruct WMD staff of WD regulations, policies and initiatives having potential effects on CERCLA activities. Training sessions will be coordinated by WMD and attendance will be encouraged by both Divisions.

Distribution of Documents

The Safe Drinking Water Branch has the responsibility of coordination within the Water Division. For projects requiring WD involvement as identified above, the WMD will routinely provide the following documents, Attention: Safe Drinking Water Branch, as they are completed:

WD Sites Referred To WMD

REMOVAL ACTIONS	Action Memo (or whatever is available)
NPL CANDIDATES	Preliminary Assessment/Site Inspection
FINALIZED NPL SITES	Quarterly Summary Report of Site Status

All Sites

GENERAL STATUS/PLANNING	Superfund Comprehensive Accomplishment Plan (1 copy)
[redacted]	[redacted]
REMOVAL ACTIONS	Action Memo (4 copies)
	On-Site Coordinator's Report (1 copy)
[redacted]	[redacted]
NPL CANDIDATES	Access to completed Hazard Ranking System packages
[redacted]	[redacted]
REMEDIAL ACTIONS	Draft and Final Remedial Investigation Scope of Work for NPL Sites (4 copies)
	Draft Remedial Investigation/Feasibility Study, including Applicable or Relevant and Appropriate Requirements (ARAR) (4 copies)
	Proposed Plans (4 copies)
	Draft Record of Decision (ROD)/Enforcement Decision Document (EDD) (4 copies)
	Final ROD/EDD (1 copy)

Meeting Notices

The WMD will routinely inform the WD Safe Drinking Water Branch as early as possible of pre-action strategy meetings or scoping meetings for all sites identified by WD as warranting WD participation. The WD will be notified of all pre-ROD/EDD meetings, and ROD briefings for the Regional Administrator. The WD will attend these meetings if appropriate.

Comments

The WD Safe Drinking Water Branch Chief will provide written comments to the Associate Division Director, Office of Superfund, on documents provided by the WMD within 15 working days of receipt or less if possible. If WMD needs WD comments in less than 15 working days, a shorter review time will be attempted.

Disposition of Comments

The WMD will inform the WD of the disposition of WD comments either in the final decision document or by other means agreeable to both Divisions (e.g., providing a copy to WD of comments made to CERCLA contractors). The WMD will identify to the Regional Administrator all recommendations for action that would lead to noncompliance with the substantive requirements of the Safe Drinking Water Act or the Clean Water Act in the ROD/Negotiated Decision Document/EDD.

Coordination With State Programs

The WD will coordinate its review of CERCLA projects with its counterpart State water programs. The WMD will encourage State CERCLA program counterparts to coordinate with their State water programs as well.