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NARPM Presents...ARARs for Protection of Ecological and Historical Resources

Sponsored by: EPA Office of Superfund Remediation and Technology Innovation

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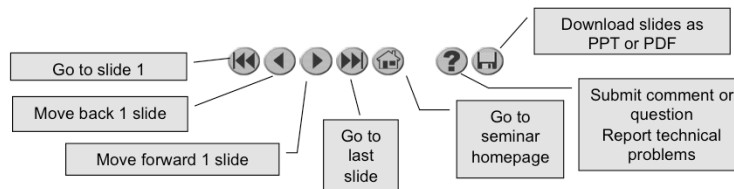
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2

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ARARs for Protection of Ecological and Historical Resources



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4

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CERCLA ARARs 101:

Overview on Identification, Communication, Analysis and Compliance

CERCLA Degree of Cleanup

- Under Section 121(d)(1) remedial actions shall attain a degree of cleanup which assures protection of human health and the environment.
- Remedial actions shall attain ARARs: any standard, requirement, criteria, or limitation under federal environmental law or more stringent promulgated standard, requirement, criteria or limitation under State environmental or facility siting law that is legally '**applicable**' to the hazardous substance (or pollutant or contaminant) concerned or is '**relevant and appropriate**' under the circumstances of the release.
- Remedy shall attain ARARs unless in limited circumstances it is determined one of the waivers specified in Section 121(d)(4) can be invoked. [See *also* 40 CFR §300.430(f)(1)(ii)(B) and (C)]

CERCLA Section 121(d)(2)(A)

(d) Degree of cleanup

- (1) Remedial actions selected under this section or otherwise required or agreed to by the President under this chapter shall attain a degree of cleanup of hazardous substances, pollutants, and contaminants released into the environment and of control of further release at a minimum which assures protection of human health and the environment. Such remedial actions shall be relevant and appropriate under the circumstances presented by the release or threatened release of such substance, pollutant, or contaminant.
- (2) (A) With respect to any hazardous substance, pollutant or contaminant that will remain onsite, if—
- (i) any standard, requirement, criteria, or limitation under any Federal environmental law, including, but not limited to, the Toxic Substances Control Act [15 U.S.C. 2601 et seq.], the Safe Drinking Water Act [42 U.S.C. 300f et seq.], the Clean Air Act [42 U.S.C. 7401 et seq.], the Clean Water Act [33 U.S.C. 1251 et seq.], the Marine Protection, Research and Sanctuaries Act [16 U.S.C. 1431 et seq., 1447 et seq., 33 U.S.C. 1401 et seq., 2801 et seq.], or the Solid Waste Disposal Act [42 U.S.C. 6901 et seq.]; or
 - (ii) any promulgated standard, requirement, criteria, or limitation under a State environmental or facility siting law that is more stringent than any Federal standard, requirement, criteria, or limitation, including each such State standard, requirement, criteria, or limitation contained in a program approved, authorized or delegated by the Administrator under a statute cited in subparagraph (A), and that has been identified to the President by the State in a timely manner,
- is legally applicable to the hazardous substance or pollutant or contaminant concerned or is relevant and appropriate under the circumstances of the release or threatened release of such hazardous substance or pollutant or contaminant, the remedial action selected under section 9604 of this title or secured under section 9606 of this title shall require, at the completion of the remedial action, a level or standard of control for such hazardous substance or pollutant or contaminant which at least attains such legally applicable or relevant and appropriate standard, requirement, criteria, or limitation. Such remedial action shall require a level or standard of control which at least attains Maximum Contaminant Level Goals established under the Safe Drinking Water Act [42 U.S.C. 300f et seq.] and water quality criteria established under section 304 or 303 of the Clean Water Act [33 U.S.C. 1314, 1313], where such goals or criteria are relevant and appropriate under the circumstances of the release or threatened release.

ARARs Waivers under CERCLA

- (1) the *preferred* alternative is an interim measure and will become part of a total remedial action that will attain the ARAR;
- (2) compliance with the requirement will result in greater risk to human health and the environment;
- (3) compliance is technically impracticable from an engineering perspective;
- (4) will attain a standard of performance that is equivalent to that required under the otherwise applicable standard, requirement, or limitation;
- (5) with respect to state requirement, the state has not consistently applied the promulgated requirement in similar circumstances at other remedial action within the state; or
- (6) for fund-financed actions, cost outweighs need for protection.

ARAR Compliance under NCP

- Overall **protection of human health and the environment and compliance with ARARs** are *threshold requirements* that each remedial alternative must meet in order to be eligible for selection. [Ref 40 CFR §300.430(f)(1)(i)(A)]
- On-site remedial actions selected in a ROD must attain those ARARs that are identified at the time of ROD signature or provide grounds for a waiver. [Ref 40 CFR §300.430(f)(1)(ii)(B)]
- The ROD shall describe the federal and state ARARs that remedy will attain or will not meet, the waiver invoked, and the justification for invoking the waiver. [Ref 40 CFR §300.430(f)(5)(ii)(B) and (C)]
- Removal actions shall comply with ARARs to the extent practicable considering the exigencies of the situation. [Ref 40 CFR §300.415(j)]
- Consider urgency of the situation and scope of the removal action.

ARARs Purpose

- ARARs – ‘Applicable’ or ‘Relevant and Appropriate’ Requirements
- CERCLA §121(d) added by Congress with 1986 SARA which codifies EPA’s approach to compliance with other laws.
- EPA uses standards from other environmental laws to help select cleanup levels and design response actions at CERCLA sites.
- ARARs are enforceable substantive standards, requirements, criteria or limitations borrowed from other federal or state environmental statutes and regulations.
- Compliance with ARARs often determines the cleanup standard at a site or certain requirements that the remedial approach must meet depending on the location or actions taken at the site.
- ARARs divided into three categories for ease of identification
 - **Chemical-specific**
 - **Location-specific**
 - **Action-specific**

10

Substantive v. Administrative

- On-site actions need only comply with 'substantive' aspects of ARARs. [Ref CERCLA § 121(d)(2)(A) and § 121(e)(1)]
- Off-site remedial action must comply with both substantive and administrative of applicable requirements, including obtaining permits etc.
- **Administrative requirements** are mechanisms that facilitate the effective implementation of the substantive requirements of a statute or regulation.
- Includes approval of, or consultation with regulatory agency, issuance of permits, documentation, reporting, recordkeeping, and enforcement.
- Consultation with other agency recommended (despite not required) for most Location-specific ARARs.
- Cleanup must comply with CERCLA administrative procedures for monitoring frequency, reporting, and oversight.

‘Applicable’ Definition

- **‘Applicable requirements’** – means those cleanup standards, standards of control, and other substantive 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 found at a CERCLA site.
Only those state standards that are identified by a state in a timely manner and that are more stringent than federal requirements may be applicable. [40 CFR § 300.5]
- A requirement is applicable if the specific terms or jurisdictional prerequisites of the law or regulation directly addresses the circumstances at the site. [See 53 FR 51437 Dec.21, 1988]

'Relevant and Appropriate' Definition

- **'Relevant and appropriate' requirements** – means those cleanup standards, standards of control, and other substantive 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, remedial action, location, or other circumstance found 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.

Only those state standards that are identified by a state in a timely manner and that are more stringent than federal requirements may be relevant and appropriate. [40 CFR § 300.5]

(1) Chemical-specific ARARs

- Health- or risk-based numerical values or methodologies which when applied to site-specific conditions, result in the establishment of numeric values.
- These values establish an acceptable amount or concentration of a chemical that may remain in, or be discharged to, the ambient environment.
Examples: Safe Drinking Water Act MCLs for groundwater, Clean Water Act AWQC for surface water, State cleanup levels for soil.
- Identified early in the CERCLA process and used along with the Baseline Risk Assessment to determine the “Contaminants of Concern”.
- “The lead agency shall... Initiate the identification of potential federal and state ARARs, and as appropriate, other criteria, advisories, or guidance to be considered.” [Ref 40 CFR § 300.430(b)(2)(9)]

Role of ARARs in Cleanup Goals

- Cleanup goals establish acceptable exposure levels that are protective of human health and the environment.
- Developed considering chemical-specific ARARs and risk-based levels (for systemic toxicants and known or suspected carcinogens).
- For carcinogens, the 10^{-6} risk level shall be used as the point of departure for determining remediation goals for alternatives when:
 - ARARs are not available, or
 - ARARs not sufficiently protective because of the presence of multiple contaminants at a site or multiple pathways of exposure. [Ref 40 CFR §300.430(e)(2)(i)(A)(2)]
- SDWA MCLGs (set above zero) or MCLs shall be attained for ground or surface waters that are a current or potential sources of drinking water, where relevant and appropriate under the circumstances of the release. [Ref 40 CFR §300.430(e)(2)(i)(B)]

(2) Location-specific ARARs

- Restrictions on hazardous substances or the conduct of response activities solely based on their location in a special geographic area.
- Examples of special locations include wetlands, watersheds, floodplains, sensitive ecosystems/habitats, coastal zones, historic places.
- Consider Endangered Species Act, National Historic Preservation Act, Wilderness Act, Coastal Zone Management Act, Wild and Scenic Rivers Act, as well as any implementing regulations, or Executive Orders (TBC).
- Identified during the Remedial Investigation phase – “Lead and support agency shall identify their respective potential ARARs related to the location of and contaminants at the site in a timely manner.” [Ref 40 CFR 300.430(d)(3)]

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Location-specific ARARs/TBC

NHPA of 1966 – Requires action take into account effects on properties included or eligible for National Register of Historic Places.

Endangered Species Act – Requires action to avoid jeopardizing the continued existence of listed endangered or threatened species or modification of their habitat.

Fish and Wildlife Coordination Act – Requires action to protect fish and wildlife from actions modifying streams or lakes.

Clean Water Act Section 404 – Prohibits discharge of dredged or fill material into navigable waters and protection of aquatic resources.

Executive Order 11988 - Floodplain Management and **Executive Order 11990** – Protection of Wetlands.

State siting requirements such as “No landfills in sensitive areas”

17

(3) Action-specific ARARs

- Technology- or activity-based requirements or limits on actions taken with respect to particular hazardous substance (includes many RCRA requirements).
- These requirements are triggered by a particular remedial activity (e.g., excavate, store, treat, dispose, emit, discharge, close, cap with waste in place, etc.)
- Identified in the Feasibility Study - Each remedial alternative will likely have some different Action-specific requirements.
- Requires knowledge of how other environmental programs such as RCRA, TSCA, CAA and CWA regulate.
- Action-specific requirements do not themselves determine the remedial alternative; rather, they indicate how a selected alternative must be achieved.

To be considered (TBC) category

- Under 40 CFR § 300.400(g)(3) both lead and support agencies may, as appropriate identify other advisories, criteria, or guidance “to be considered” for a particular release.
- TBCs are not potential ARARs because neither promulgated nor enforceable. However, proposed standards may be TBC.
- Considerable agency discretion in identifying TBC.
- May be necessary to consult TBCs to interpret ARARs or to determine preliminary remediation goals when ARARs do not exist.
- Examples include health advisories, reference doses, EPA and State guidance (e.g. USACE Nationwide Permit #38).
- TBC must be attained to the same extent as ARARs if included in final ROD.

Identification of ARARs/TBC

- The lead and support agencies shall identify requirements 'applicable' to the release or remedial action. [Ref 40 CFR § 300.400(g)(1)]
- If not applicable, then agencies shall evaluate whether requirement is 'relevant and appropriate'. [Ref 40 CFR § 300.400(g)(2)]
- Evaluation of shall consider eight factors in paragraphs (g)(2)(i) through (g)(2)(viii).
- Does requirement address problem or situation sufficiently similar to the circumstances of the release, or remedial action contemplated?
- During scoping of the RI the lead agency shall initiate identification of potential federal and state ARARs and, as appropriate other criteria, advisories, or guidance to be considered (TBC). [Ref 40 CFR 300.430(b)(9)]

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Basic Questions for I.D. of ARARs

Does the remedy restore groundwater and/or cleanup contaminated soils, (i.e., meet remediation goals in the media)?

Is the remedy performed *in-situ* or *ex-situ* with treatment system?

Is there a discharge into surface water or emission into air from a treatment system?

Is the OU located within floodplain, wetland, critical habitat, historical district, or other special location?

Does action “generate” waste (i.e., removed from AOC or actively managed) or leave waste-in-place (e.g., landfill closure)?

What type of remediation waste (e.g., RCRA hazardous, TSCA PCB, Rad, etc.) and secondary waste (PPE, treatment residuals) is generated?

How is the waste managed (i.e., staged, stored, treated, capped, transported, disposed, etc.)?

21

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Identification of Federal ARARs

- Based upon federal environmental laws and implementing regulations for media or waste type.
- Commonly used regulations include those from:
 - RCRA Subtitle C and D programs
 - CWA NDPEs and stormwater permits programs
 - SDWA primary drinking water standards
 - CAA NESHAPs for asbestos and radionuclides
 - TSCA PCB disposal
- Typically, EPA contractor develops overly inclusive list with general citations that require review by RPM and attorney.
- Proper identification requires knowledge of how the federal environmental programs operate and *Best Professional Judgment*.
- EPA *Compliance with Other Laws Manual* provides many examples of ARARs from federal programs.

Limitations for State ARARs

- CERCLA Section 121(d)(2)(A) establishes threshold requirements for state standard, requirement, criteria or limitation (including any siting standard).
- Under 40 CFR § 300.400(g)(4) only state standards that meet following requirements can be potential ARARs:
 - 1) promulgated;
 - 2) identified by the state in a timely manner; and
 - 3) are more stringent than federal requirements.
- Requirement must be consistently applied by the state.
- General goals that express legislative intent but are non-binding are not ARARs.
- State guidelines, advisories will not be ARAR but may be “to be considered” (TBC) guidance. [Ref 40 CFR § 300.400(g)(3)]

Limitations for State ARARs con't

- **Promulgated** – means that the standards are of general applicability and are legally enforceable; established by state legislature or agency rule making process.
- **“General applicability”** – meant to preclude state requirements targeted for CERCLA sites; requirement must apply to all remedial situations.
- **“Legally enforceable”** – refers to state law or regulation which contains specific enforcement provisions or otherwise enforceable.
- **“More stringent”** – meant to distinguish existing federal requirement or acknowledge exclusive state standard with no federal counterpart which is considered new requirement (e.g., FDEP soil cleanup target levels).
- *NOTE:* State regulations under Federally authorized programs are considered to be federal requirements.

Notification of ARARs

- The lead and support agencies shall identify their specific ARARs for a particular site. [Ref 40 CFR § 300.400(g)(5)]
- Agencies shall notify each other, in a timely manner as described in 40 CFR § 300.515(d), of the requirements they have determined to be 'applicable' or 'relevant and appropriate'.
- When identifying a requirement as an ARAR, the lead and support agency shall include a citation to the statute or regulation from which the requirement is derived.
- Notification of ARARs shall be according to procedures and timeframes specified in 40 CFR § 300.515(d)(2) and (h)(2).
- EPA shall notify state if it does not agree that a certain standard is an ARAR.

Communication on ARARs

- The lead and support agencies shall discuss potential ARARs/TBCs during the scoping of the RI/FS. [Ref 40 CFR § 300.515(h)(2)]
- The lead agency shall request in writing potential ARARs/TBCs from the support agency no later than the time that site characterization data are available.
- Support agency shall communicate in writing those potential ARARs/TBCs to the lead agency.
- The lead agency shall request in writing the support agency to identify additional ARARs for remedial alternatives prior to comparative analysis in the FS.
- Agencies shall consult to ensure ARARs/TBC updated as needed.
- State is considered “expert” on its own laws and regulations.
- EPA shall respond to state comments or disagreements about state ARARs. [Ref 40 CFR § 300.515(d)(3) and (4)]

Analysis of ARARs

- ARARs are to be compiled based upon **site-specific conditions** and circumstances of the release as well action contemplated.
- It is not sufficient to provide a general “laundry list” of statutes and regulations that might be ARARs.
- Once state and lead agency provides potential ARARs, EPA must evaluate to determine accuracy.
- Use *best professional judgment* to decide if ‘applicable’ or ‘relevant and appropriate’.
- **Applicable?** – purely objective determination based upon review of the jurisdictional prerequisites.
- **Relevant and Appropriate?** – Use eight factors listed in 40 CFR § 300.400(g)(2). Is the requirement well suited for site?

NCP Factors for R&A Determinations

“The pertinence of each of the following factors will depend, in part, on whether a requirement addresses a chemical, location, or action. The following comparisons shall be made, where pertinent to determine relevance and appropriateness:

(i) the purpose of the requirement and the purpose of the CERCLA action;

(ii) the medium regulated or affected by the requirement and the medium contaminated at the CERCLA site;

(iii) the substances regulated by the requirement and the substances found at the CERCLA site;

(iv) the actions or activities regulated by the requirement and the remedial action contemplated at the CERCLA site;

R&A Factors con't

(v) any variances, waivers, or exemptions of the requirement and their availability for the circumstances at the CERCLA site;

(vi) the type of place regulated and the type of place affected by the release or CERCLA action;

(vii) the type and size of structure or facility regulated and the type and size of structure or facility affected by the release or contemplated by the CERCLA action;

(viii) any consideration of use or potential use of affected resources in the requirement and the use or potential use of the affected resource at the CERCLA site.”

[Reference 40 CFR § 300.400(g)(2)]

ARARs Determinations

- More flexibility in making 'relevant and appropriate' (R&A) determinations.
- A requirement may be relevant, but not appropriate because of the site circumstances.
- In some circumstances only a portion of the requirement may be deemed R&A and others not appropriate (e.g., RCRA Landfill liner for waste capped-in-place).
- **Requirement must be both 'relevant' and 'appropriate'** to be considered an ARAR.
- Once requirement determined to be R&A, then it must be complied with to the same degree as if it were applicable.
- EPA has sole responsibility and final decision making authority to select or waive ARARs in the ROD.

Documenting ARARs

- Chemical- and Location-specific ARARs/TBCs should be included in RI Report or EE/CA for removal actions.
- Action-specific ARARs related to each remedial alternative must be included in the Feasibility Study and EE/CA.
- All ARARs/TBCs must be included in the ROD and should be included in Action Memorandum.
- Key ARARs should be described in the ROD for each alternative and/or the selected remedy.
- *Compliance with ARARs* Section in ROD should provide summary of the statutory requirement and describe site-specific ARARs or explain basis for a waiver.
- Detailed listing of the three types of ARARs for the selected remedy should be presented in Table(s).

ARARs Description Example

APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS

Section 121(d) of Comprehensive Environmental Restoration, Compensation, and Liability Act (CERCLA) of 1980, as amended, specifies, in part, that remedial actions for cleanup of hazardous substances must comply with requirements and standards under federal or more stringent state environmental laws and regulations that are applicable or relevant and appropriate (i.e., ARARs) to the hazardous substances or particular circumstances at a site or obtain a waiver [see also 40 *Code of Federal Regulations (CFR)* 300.430(f)(1)(ii)(B)]. ARARs include only federal and state environmental or facility siting laws/regulations and do not include occupational safety or worker radiation protection requirements. In addition, per 40 *CFR* 300.400(g)(3), other advisories, criteria, or guidance may be considered in determining remedies (so-called To-Be-Considered [TBC] guidance category).

In accordance with 40 *CFR* 300.400(g), the U.S. Department of Energy (DOE), Tennessee Department of Environment and Conservation (TDEC), and U.S. Environmental Protection Agency (EPA) have identified the specific ARARs and TBC for the selected remedy. The selected remedy complies with all ARARs/TBCs directly related to implementing the selected actions but will invoke the interim-measure ARAR waiver under CERCLA 121(d)(4)(A). Tables B.1, B.2, and B.3 list respectively the chemical-, location-, and action-specific ARARs for remedial actions in the selected remedy. A brief summary of the remedial actions and associated ARARs/TBCs follows.

CHEMICAL-SPECIFIC ARARs/TBC. Chemical-specific ARARs provide health- or risk-based concentration limits or discharge limitations in various environmental media (i.e., surface water, groundwater, soil, air) for specific hazardous substances, pollutants, or contaminants and are listed in Table B.1 and discussed below.

Surface Water. Upper East Fork Poplar Creek (UEFPC) is designated under Rules of the TDEC Chapter 1200-4-4 for *Fish and Aquatic Life, Recreation, and Livestock Watering and Wildlife* uses. The numeric ambient water quality criteria (AWQC) and narrative criteria for the protection of human health and aquatic organisms under Rules of the TDEC Chap. 1200-4-3-.03 are ARARs that will be addressed as part of the final action for UEFPC. Excavations of contaminated surface soils/streambed sediments and removal of contaminated storm sewer sediments is planned to reduce releases of mercury into UEFPC. However, the selected remedy will not attain instream the *Recreation* (organisms only) AWQC for mercury (51 ppt), which is the most stringent criterion for mercury.

ARARs Description Example con't

LOCATION-SPECIFIC ARARs/TBC. Location-specific requirements establish restrictions on permissible concentrations of hazardous substances or establish requirements for how activities will be conducted because they are in special locations (e.g., wetlands, floodplains, critical habitats, streams). Table B.2 lists federal and state location-specific ARARs for protection of sensitive resources.

Aquatic Resources. Removal of contaminated streambed sediments and floodplain soils may involve diversion of stream flow, bank stabilization, removal of riparian vegetation, and dredging. All land-disturbing construction activities (e.g., excavation, trenching, soil covers) with the potential to impact surface waters from storm water runoff will be designed and implemented using best management practices and erosion and sedimentation controls to comply with storm water control and aquatic resource alteration requirements. The adverse effects of the water-related projects on fish and wildlife resources should be considered as well per the Fish and Wildlife Coordination Act. Additionally, the Clean Water Act (CWA) of 1972, as amended, Section 404 requirements for protection of aquatic resources at 40 *CFR* 230.10 must be met if the action involves any discharges of dredged or fill material into aquatic ecosystems.

Floodplains. The selected remedy includes excavation of contaminated floodplain soils and streambed sediments to reduce releases and minimize contaminant levels to acceptable risk-based cleanup levels. Actions must avoid, to the extent possible, adverse impacts to floodplains, in accordance with Executive Order 11990 and 10 *CFR* 1022. Mitigation measures listed in 10 *CFR* 1022.12(a)(3), which include minimum grading requirements, runoff controls, and design and construction constraints, would be implemented.

Chemical-specific ARARs Example

CHEMICAL-SPECIFIC ARARs
 POTENTIAL SOURCE OF CONTAMINATION 47
 NAVAL AIR STATION JACKSONVILLE
 JACKSONVILLE, FLORIDA

Requirement	Citation	Status	Synopsis	Evaluation/Action To Be Taken
Florida Groundwater Classes, Standards, and Exemptions	Chapter 62-550 and 62-550.420, Florida Administrative Code (FAC)	Applicable	This rule designates the groundwater of the state into five classes and establishes minimum criteria. This rule also specifies that Classes I and II must meet primary drinking water standards listed in Chapter 62-550, FAC.	This rule was used to classify groundwater and establish cleanup goals for groundwater. Groundwater at this site is considered a potential source of drinking water (Class G-II).
Florida Drinking Water Standards, Monitoring and Reporting	Chapter 62-550.310, FAC	Relevant and Appropriate	This rule provides primary drinking water standards and maximum contaminant levels (MCLs) for public water supply systems.	Cleanup goals for some of the contaminants of concern (COCs) in groundwaters are based upon USEPA MCLs listed in the Table 4 of this rule.
Florida Contaminant Cleanup Target Levels	Chapter 62-777.170, FAC	Relevant and Appropriate	This rule provides default criteria in tables and an explanation for deriving cleanup target levels (CTLs) for soil, groundwater and surface water that can be used for site rehabilitation (i.e., cleanup).	CTLs for groundwater in Table I of this rule were used to establish cleanup goals for some of the COCs in groundwater at this site. Soil CTLs in Table II for Leachability Based on Groundwater Criteria were used to establish cleanup goals for some of the soil COCs.
Florida Contaminated Site Cleanup Criteria – Alternative Soil CTLs	Chapter 62-780.110(5), FAC	Relevant and Appropriate	Allows derivation of apportioned Alternative CTLs to represent site-specific exposures rather than using Default Residential and Industrial Soil CTLs listed in Table II of Chapter 62-777 FAC.	Alternative Soil CTLs for Commercial/Industrial use were developed for some of the soil COCs at this site.
Florida Contaminated Site Cleanup Criteria – Alternative Soil CTLs	Chapter 62-780.680(2)(a)(i)-(v), FAC	Relevant and Appropriate	This rule provides that Alternative Soil CTLs shall be apportioned where more than one contaminant is present in the soil in the unsaturated zone at the site.	Apportioned Alternative Soil CTLs were developed for some of the soil COCs at this site based upon FDEP Technical Report [See below].
Florida Contaminated Site Cleanup Criteria – Alternative Soil CTLs	Chapter 62-780.680(2)(a)(i)-(j), FAC	Relevant and Appropriate	This rule provides that where the 95% UCL approach is utilized, maximum soil concentrations shall not exceed three times the applicable soil CTLs [apportioned pursuant to 62-780(3)(a)(i)].	The requirement was considered in determining soil areas for excavation to meet the Alternative Soil CTLs.

Location-specific ARARs Example

LOCATION-SPECIFIC ARARs
OU 5, SITE 16 RECORD OF DECISION
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA
PAGE 1 OF 2

Requirement	Citation	Status	Synopsis	Evaluation/Action to be Taken
Clean Water Act (CWA) 404 Regulations, Guidelines for Specification of Disposal Sites for Dredged or Filled Materials	40 CFR Part 230.10	Applicable	These regulations apply to discharges of dredged or fill material into U.S. waters, including jurisdictional wetlands. Federal agencies must minimize potential adverse impacts.	The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) response action will remove and restore approximately 0.17 acre of wetlands.
Fish and Wildlife Coordination Act	16 United States Code (U.S.C.) 662(a)	Relevant and Appropriate	Requires that the U.S. Fish and Wildlife Service or National Marine Fisheries Service, and related state agencies be consulted prior to structural modification of any body of water, including wetlands.	CERCLA response action involves the alteration of a wetland. These agencies would be consulted to determine protective measures to prevent loss of wildlife resources.
National Environmental Policy Act (NEPA) Regulations, Wetlands, Floodplains, etc.	40 CFR Part 6, Appendix A, Section 6(a)(5)	Applicable	These regulations contain the procedures for complying with Executive Order 11980 on wetlands protection. Appendix A, Section 6(a)(5) states: "If there is no practicable alternative to locating in or affecting the floodplain or wetlands, the Agency shall act to minimize potential harm to the floodplain or wetlands. The Agency shall also act to restore and preserve the natural and beneficial values of floodplains and wetlands as part of the analysis of all alternatives under consideration."	CERCLA response action will remove and restore approximately 0.17 acre of wetlands.

Action-specific ARARs Example

Table B.1. ARARs and TBC guidance for UEFFC Soil and Scrapyard, Oak Ridge, Tennessee (cont.)

Medium/action	Requirements	Prerequisite	Citation(s)
Action-specific			
<i>General construction standards—site preparation, excavation, etc. activities</i>			
Activities causing fugitive dust emissions	<p>Shall take reasonable precautions to prevent particulate matter from becoming airborne; reasonable precautions shall include, but are not limited to, the following:</p> <ul style="list-style-type: none"> • use, where possible, of water or chemicals for control of dust; and • application of asphalt, oil, water, or suitable chemicals on dirt roads, materials stockpiles, and other surfaces that can create airborne dusts. <p>Shall not cause or allow fugitive dust to be emitted in such a manner as to exceed 5 min/h or 20 min/d beyond property boundary lines on which emission originates.</p>	<p>Fugitive emissions from demolition of existing buildings or structures, construction operations, grading of roads, or clearing of land—applicable</p>	<p>Rules of the TDEC Chap. 1200-3-8-.01(1)</p> <p>Rules of the TDEC Chap. 1200-3-8-.01(1)(a)</p> <p>Rules of the TDEC Chap. 1200-3-8-.01(1)(b)</p> <p>Rules of the TDEC Chap. 1200-3-8-.01(2)</p>
Activities causing radionuclide emissions	<p>Shall not exceed those amounts that would cause any member of the public to receive an EDE of 10 mrem/year.</p>	<p>Radionuclide emissions from point sources, as well as diffuse or fugitive emissions, at a DOE facility—applicable</p>	<p>40 CFR 61.92;</p> <p>Rules of the TDEC Chap. 1200-3-11-.08(f)</p>
Activities causing storm water runoff (e.g., clearing, grading, and excavation)	<p>Implement good construction management techniques (including sediment and erosion controls, vegetative controls, and structural controls) in accordance with the substantive requirements of General Permit No. TNR10-000, Appendix F, to ensure that storm water discharge</p>	<p>Dewatering or storm water runoff discharges from land disturbed by construction activity—disturbance of ≥1 acre total—applicable</p>	<p>TCA 69-3-108(j)</p> <p>Rules of the TDEC Chap. 1200-4-10-.03(2)</p>

ARARs/TBC Compliance

- Remediation goals shall be measured at appropriate locations in the groundwater, surface water, soils, air, and other affected environmental media. [Ref 40 CFR § 300.435(f)(5)(iii)]
- Chemical-specific ARARs that were used to establish cleanup levels apply only at completion of the response action. [CERCLA §121(d)(2)(A)(ii)]
- ARARs must be measurable and attainable since purpose is to set a standard that an actual remedy can attain.
- Lead agency is responsible for ensuring that all ARARs identified in the ROD are met during the course of the RD/RA. [Ref 40 CFR § 300.435(b)(2)]
- Generally, EPA policy is to attain ARARs and TBCs pertaining to contaminant levels or to performance or design standards so as to ensure protection at all points of potential exposure. [53 FR 51440]

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ARARs/TBC Compliance con't

- “Points of compliance for attaining remediation levels are established on a site-specific basis...” [Ref 55 FR 8713]
- **For groundwater**, remediation levels should be attained throughout the plume or at boundary of the waste management area.
- Different areas of the plume may reach remediation levels at different times, (e.g., leading edge v. upgradient near source).
- **For air**, selected levels should be established for maximum exposed individual considering the use of the site and surrounding area.
- **For surface waters**, selected levels should be attained at the point where the release enters the water (i.e., end of the pipe).
- Most Action-specific requirements include performance standard that can be assessed immediately (e.g., store waste in non-leaking container with label that I.D. waste type).

Lessons Learned

- EPA and State have different roles but common goal to identify “correct” ARARs for the response action.
- Agencies must initiate dialogue on potential ARARs early in the scoping process to determine if difference of opinion exists. [Ref 40 CFR § 300.515(d) and (h)]
- CERCLA program may consult other regulatory Programs and Federal agency “subject matter experts” on unique federal requirements.
- Support agency rarely communicates potential ARARs in writing, so may increase EPA role and responsibility.
- **Overall:** Need early, prompt, and continuous communication on new site information and updated remedial alternatives to refine ARARs.

References on ARARs

- CERCLA Section 121(d) and NCP at 40 CFR Part 300 *et seq.*
- Preamble to Proposed NCP at 53 Fed Reg 51394 at pp. 51435 - 51450 (December 21, 1988).
- Preamble to Final NCP at 55 Fed Reg 8666 at pp. 8741 -8766 (March 8, 1990).
- *EPA Compliance With Other Laws Manual Parts I and II* (EPA 540-G-89-006, August 8, 1988 and August 1989).
- *Compendium of CERCLA ARARs and Fact Sheets and Directives* [EPA Publication 9347.3-15 October 1991].
- <http://www.epa.gov/superfund/policy/remedy/sfremedy/arars.htm>

Applicable or Relevant and Appropriate Requirements (ARARS) | Superfund | US EPA - Microsoft Internet Explorer provided by the

http://www.epa.gov/superfund/policy/remedy/remedy/arars.htm

U.S. ENVIRONMENTAL PROTECTION AGENCY

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Applicable or Relevant and Appropriate Requirements (ARARS)

Section 121(d) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) requires that on-site remedial actions attain or waive Federal environmental ARARs, or more stringent State environmental ARARs, upon completion of the remedial action. The 1990 National Oil and Hazardous Substances Pollution Contingency Plan (NCP) also requires compliance with ARARs during remedial actions and during removal actions to the extent practicable. The web pages below provide links to guidance documents designed to assist EPA and State personnel in attaining compliance with ARAR requirements. ARARs are identified on a site-by-site basis for all on-site response actions where CERCLA authority is the basis for cleanup.

An Overview of ARARs
Provides a list of standard guidance documents developed to clarify the processes and considerations associated with ARAR applicability to remedy selection at Superfund Sites.

RCRA-Specific ARARs
Contains guidance on the identification of and compliance with RCRA-based ARARs. Includes a selection of documents pertaining to Land Disposal Restrictions (LDRs).

Federal ARARs for Ground Water Cleanups
Offers pertinent guidance documents that deal with compliance issues concerning State and Federal requirements.

Current Drinking Water Standards
Provides the National Primary Drinking Water Standards developed by EPA to ensure safety of Public Water Systems. Includes MCLs and MCLGs for the following groups of contaminants: Microorganisms, Disinfectants & Disinfection Byproducts, Inorganic Chemicals, Organic Chemicals, and Radionuclides.

start | EPA R4 Legal Res... | Presentations | Microsoft PowerP... | New Message - E... | Applicable or Rel... | Local intranet | 100% | 12:37 PM

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Useful Fact Sheets on ARARs

Overview of ARARs – Focus on ARAR Waivers [EPA Publication 9234.2-03/
FS December 1989].

CERCLA Compliance with State Requirements [EPA Publication 9234.2-05/
FS December 1989].

ARARs Q's & A's: General policy, RCRA, CWA, SDWA, Post-ROD
Information and Contingent Waivers [EPA Publication 9234.2-01/FS-A June
1991].

RCRA ARARs: Focus on Closure Requirements [EPA Publication 9234.2-04/
FS October 1989].

Summary of Part II –CAA, TSCA, and Other Statutes [EPA Publication
9234.2-07/FS April 1990].

Other Guidance on ARARs

Clarification on the Role of Applicable, or Relevant and Appropriate Requirements in Establishing Preliminary Remediation Goals under CERCLA [EPA OSWER No. 9200.4-23 August 22, 1997].

Rules of Thumb For Superfund Remedy Selection [EPA 540-R-97-013/ OSWER 9355.0-69 August 1997].

ARARs Explained in Twelve Pages [EPA OSWER/OERR, June 1992]

Role of the Baseline Risk Assessment in Superfund Remedy Selections [EPA OSWER Directive 9355.0-30 April 22 1991].

Guidance on the Consideration of ARARs During Removal Actions [EPA/540/P-91/011/ Publication 9360.3-02 August 1991].

Summary of Key Existing EPA CERCLA Policies for Groundwater Restoration [EPA OSWER Directive 9283.1-33 June 26, 2009].

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Identification and Determination of ARARs – An RPM’s Perspective

- Case Study: Koppers (Newport) Superfund Site
 - 300+acre former creosote wood treater in northern Delaware. Property includes over 100 acres of tidal wetlands.
 - Site is now in Remedial Design stage
 - Site listed on NPL in 1990
 - Record of Decision (ROD) signed in 2005

Identification and Determination of ARARs – An RPM’s Perspective

- Wetlands Issues
 - 300+acre property includes over 100 acres of tidal wetlands.
 - Some remedial action will take place in wetlands
 - Wetlands damaged must be restored or replaced
 - Endangered Species Survey
 - Delaware Endangered Plant found
 - Plant is outside areas where RA will occur, so can hopefully avoid damaging it

Identification and Determination of ARARs – An RPM’s Perspective

- Wetlands Issues (cont.)
 - Jurisdictional vs. non-jurisdictional wetlands
 - Who should do JD?
 - USACE?
 - EPA?
 - Non-jurisdictional wetlands, if damaged during RA, do not require replacement. However, they still may be eligible for compensation under NRDA process.

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Identification and Determination of ARARs – An RPM’s Perspective

- Historic Preservation
 - Multi-million dollar Cultural Resources Investigation ongoing
 - State Historic Preservation Office (SHPO) consulted
 - NHPA was listed as a “Major ARAR” in Proposed Plan and mentioned in parts of the ROD, but was unintentionally omitted from the description of the selected remedy and ARARs table.
 - 2010 ESD to clarify the NHPA is an ARAR

Identification and Determination of ARARs – An RPM’s Perspective

- Historic Preservation (cont.)
 - Over 24,000 historic artifacts recovered to date
 - Site is most significant prehistoric archaeological site in State of Delaware
 - EPA contacted by tribes with historic ties to the site in 2009.
 - NHPA consultation process initiated
 - Preliminary remedial design and archaeological reports shared with tribes
 - Consultation process can cause delays

48

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Identification and Determination of ARARs – An RPM’s Perspective

- Role of Contractor in Identification and Determination of ARARs
 - Contractors often include ARARs analysis in Feasibility Study
 - EPA RPM may use contractor’s ARARs table as a starting point in developing ARARs in ROD

Identification and Determination of ARARs – An RPM’s Perspective

- Role of Regional Counsel (Site Attorney) in Identification and Determination of ARARs
 - EPA RPM will often share an early draft of the ARARs table with Site attorney at time of FS, or early in the development of the proposed plan
 - RPM may share contractor’s draft ARARs table with Site attorney
 - RPM will formally request State counterpart provide ARARs State wishes EPA to include in ARARs table

Identification and Determination of ARARs – An RPM’s Perspective

- Recap
 - ARARs case Study – Koppers (Newport) SF Site, DE
 - Discussion of selected ARARs
 - Wetland Issues
 - Historic Preservation Issues
 - Identification and Determination of ARARs
 - Role of Contractor
 - Role of Regional Counsel (Site Attorney)
 - Role of in-house tech support staff

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Identification and Determination of ARARs – An RPM’s Perspective

- Role of Regional technical support staff in Identification and Determination of ARARs
 - After initial discussions with Site attorney, EPA RPM will often share a draft of the ARARs table with regional tech support staff for input on laws within their area of expertise
 - For example, the ecological risk expert may be asked for input on wetlands, endangered species, and coastal zone ARARs.

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Break for Questions

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Review of ARARs in Feasibility Studies

A BTAG Coordinator's Perspective

54

BTAGs and ARARs

Technical support resources, specifically BTAGs, can provide timely input in the identification of ARARs throughout the RI/FS process

BTAGs often focus on chemical-specific ARARs, but are also valuable resources for information on location-specific ARARs

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Many location-specific ARARs relate
to the protection of biological
resources



56

BTAG and ARARs

- Regional BTAGs are often in a unique and advantageous position to identify location-specific ARARs early in the RI/FS process
- BTAG members typically represent Federal, and sometimes State, agencies who are directly responsible for the identified regulations
- BTAG members can typically tap a vast network of State and local experts

BTAG and ARARs

“Agencies shall notify each other, in a timely manner as described in 40CFR300.515(d), of the requirements they have determined to be “applicable” or “relevant and appropriate”.”

The individuals within a regional BTAG provide a network which can facilitate the notification process.

BTAG and ARARs

- Natural settings that are protected by location-specific ARARs are typically identified during the ecological risk assessment (site setting, habitat description)
- Individual species and living resources that are protected by location-specific ARARs that occur at the site or may be impacted by the site should be identified during the ecological risk assessment

Types of locations include federal wilderness areas, wildlife refuges, scenic rivers, wetlands, floodplains, etc.



60

BTAG and ARARs

- Location-specific ARARs may restrict remediation activities at sensitive or hazard-prone locations such as wildlife habitat and flood plains.
- Practical implications may include things like work schedule restrictions (e.g., avoidance of work during migration or breeding seasons)

Potential “Ecological” ARARs

- Clean Water Act
 - Wetlands (404)
 - Water Quality Standards
- Endangered Species Act
- Migratory Bird Treaty Act
- Bald and Golden Eagle Protection Act
- Fish and Wildlife Coordination Act
- Fish and Wildlife Conservation Act



Potential “Ecological” ARARs

- Magnuson- Stevens Act (Essential Fish Habitat)
- National Wildlife Refuge System Administration Act
- Marine Mammal Protection Act
- Coastal Zone Management Act
- Floodplain Management Act
- Wilderness Act
- National Forest Management Act



Example State “Ecological” ARARs

- Maryland Nontidal Wetlands Protection Act
- Chesapeake Bay Critical Protection Law (Maryland)
- New York Use and Protection of Waters
- New York Protected Native Plants
- Idaho Stream Channel Alteration Rules

Example State “Ecological” ARARs

- Montana Flood Plain and Floodway Management Act
- Virginia Chesapeake Bay Preservation Act
- Virginia Wetlands Mitigation Compensation Policy
- McAteer-Petris Act (San Francisco Bay Plan)
- New Jersey Pinelands Protection Act

Chemical-specific ARARs

- Typical focus is on chemical-specific ARARs, rather than location-specific
- ARARs can be based on risks to ecological receptors, such as water quality criteria/state standards established under sections 303 and 304 of the Clean Water Act.
- Federal and State AWQC, TMDLs (no?), State screening values (no)
- Site-specific standard vs. state water quality criteria
- Washington Sediment Management Standards



Search...

Established Regulatory Limits for Surface Water and Groundwater

Introduction

The regulatory limits for surface water and groundwater contained in this database comprise chemical-specific preliminary remediation goals (PRGs) based on potential Applicable or Relevant and Appropriate Requirements (ARARs). These values should be used in conjunction with PRGs based on risk assessment to ensure that the PRGs for a site meet the residual risk requirements for protection of human health and the environment in the National Oil and Hazardous Substance Pollution Contingency Plan (NCP). In some cases, the values presented in this database may be To-Be-Considered (TBC) Guidance because these values are superseded by site-specific state requirements.

Federal Water Criteria Source

The 2009 Edition of the Drinking Water Standards and Health Advisories (EPA 822-R-9-011) is available in pdf format here. Our Federal ARAR database search tool uses the pdf version rather than the html version below.

Federal Drinking Water Regulations Source

Select ARAR source

State

http://rais.ornl.gov/tools/arar_search.php

Established Regulatory Limits for Surface Water and Groundwater

Federal

Select Individual Chemicals

Available Chemicals:

- Acenaphthene
- Acenaphthylene
- Acrolein
- Acrylamide
- Acrylonitrile
- Alachlor
- Aldicarb
- Aldicarb Sulfone
- Aldicarb sulfoxide

Add >>
Remove <<

Chosen Chemicals:

Primary Drinking Water Standards

- Primary Drinking Water MCLs
- Primary Drinking Water MCLGs
- Proposed Primary Drinking Water MCLs
- Proposed Primary Drinking Water MCLGs
- Secondary Drinking Water SMCLs

Federal Water Quality Criteria

- Human Health WQC for Aquatic Organisms and Drinking Water
- Human Health WQC for Aquatic Organisms Only
- Federal Freshwater WQC - Maximum
- Federal Freshwater WQC - Continuous
- Federal Saltwater WQC - Maximum

Retrieve

*Always check the original sources of the ARARs for updates. Not every State is updated with the same frequency.

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CWA Section 404

(with some NEPA)

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National Environmental Policy Act of 1969 (NEPA)

- NEPA asks for sustainable activities, requires evaluation of a range of alternatives, disclosure of impacts on the natural and social environment, public involvement
- NEPA compliance is required for all Federal projects
- Superfund RI/FS process is considered functional equivalent

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Clean Water Act Section 404

Regulates discharge of dredge or fill material into Waters of the United States

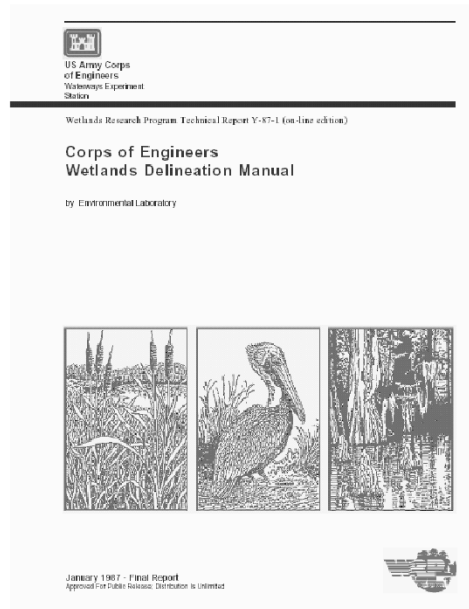
- Navigable waters
- Interstate waters
- Intrastate waters
- Tributaries of waters
- Territorial sea
- Adjacent wetlands

The Main Points

- Sec 404 requires evaluation of alternative actions that meet the purpose and need for the project
- Requires the selection of the Least Environmentally Damaging Practicable Alternative
- Avoidance of resource is first in sequence:
 - If impact is unavoidable, minimize impact and provide mitigation
- Requires coordination with other Federal and State agencies
- No net loss of wetlands
- Requires Public Notice

72

Corps of Engineers
Wetlands Delineation Manual



Three Primary Requirements for a Wetland

- Wetland Vegetation
- Hydric Soils
- Hydrology

Wetlands can sit in different locations on the landscape, originating from surface water or groundwater, in depressions or on slopes

Why protect these resources?

The functions (and values) of aquatic resources are important for:

- Sediment and nutrient control (water quality benefit)
- Retain water (flood control)
- Wildlife habitat, biological productivity

Streams, Too

- Methods available to do biological assessments of streams, from EPA or states
- Methods for evaluation of physical characteristics of streams
- Evaluation of impact, any loss of biological or physical integrity (significant degradation)

What Sec 404 says about resources

- CWA Sec 404 (b)(1) states that guidelines will be prepared
- The guidelines, which are regulation, give the explanation of how and why to protect special aquatic resources
- Five special aquatic sites under CWA:
 1. Riffle Pools Complexes
 2. Wetlands
 3. Vegetated Shallows
 4. Mudflats
 - 77 5. Coral Reefs

Mitigation

- If impact to a resource regulated by Sec 404 is unavoidable (ie if it will be filled), mitigation is required
- Mitigation should replace the functions and values of the resource, or its potential function

Mitigation, continued

- Can be “in kind” or “out-of-kind”
- Can be “on site” or “off site”
- Can be:

Restoration

Establishment of wetland

Creation

Establishment of wetland where one did not previously exist

Enhancement

Any activity conducted in an existing wetland with the goal of manipulating one or more of the physical characteristics to incorporate one or more wetland functions

Mitigation, again

- Some States have developed guidelines for wetland replacement:
- 2:1 for forested
- 1.5:1 for scrub-shrub
- 1:1 for emergent

New Mitigation Rule states preference for Wetland Banks
Previously, and in many states, preference for “in-kind”, “on
(or near)- site”

Monitoring of Mitigation Success

- Develop measurable success criteria for mitigation projects
- Monitoring plan includes: methods to collect data, responsibilities, deliverables, response to non-compliance
- Monitoring for about 5 to 10 years

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Break for Questions

Consulting with NMFS on Fish Habitat Impacts

Two Key Mandates

1. Magnuson Stevens Fishery Conservation and Management Act – essential fish habitat provisions.
2. Fish and Wildlife Coordination Act

Magnuson-Stevens Act (1996)

- The law that governs the management and conservation of federal fisheries.
- Includes provisions to protect and conserve the habitat of those fisheries

Essential Fish Habitat - Policy

- . “...to promote the protection of essential fish habitat in the review of projects conducted under Federal permits, licenses, or other authorities that affect or have the potential to affect such habitat.”

-- Magnuson-Stevens Act, 1996

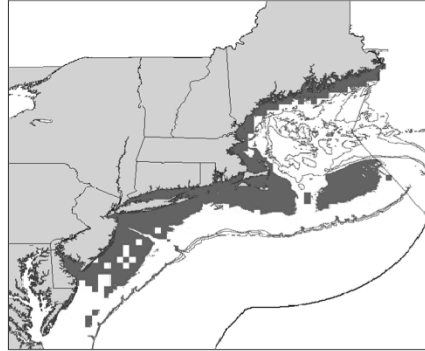
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“Essential fish habitat means those
waters and substrate necessary to
fish for **spawning, breeding, feeding,**
or growth to maturity.” - -

Magnuson-Stevens Act, 1996

Identify and Describe EFH

- Fishery Management Plans must identify and describe EFH for each federally managed species and life-stage in text and maps.
- EFH is also in state waters.
- EFH maps and text descriptions can be accessed through the EFH Mapper tool.



Winter Flounder- Adult (NEFMC Omnibus) 88

EFH MapperTool

(www.nmfs.noaa.gov/habitat/habitatprotection/efh/GIS_mapper.htm)

The screenshot shows the Essential Fish Habitat Mapper interface. The main map displays a satellite view of the Atlantic coast with a red location marker. A sidebar on the left contains navigation and search options. A pop-up window titled "EFH Report - Mozilla Firefox" displays query results for Atlantic Cod.

Query Results
 Latitude = 40.192979, Longitude = -69.499512
 The query location intersects with spatial data representing EFH and/or MAPCs for the following species/management units:

LINK	EFH Text	Data Counts	Show on Map	Species/Management Unit	LifeStages Found at Location	Management Council	FMP
		162		Sheeth Tuna			HMS
		154		White Shark			HMS

Atlantic Cod Legend
 Adult ■ Juvenile ■ Larvae ■ Eggs □ All

89

Thresholds: Adverse Effect

- Adverse effect :
 - Is defined as any “impact that reduces the quantity and/or quality of EFH”.
 - Includes direct and indirect physical, chemical and/or biological alterations.

Requirements for Federal Agencies

Federal Agencies must:

- Evaluate whether their proposed actions may adversely affect EFH.
- Prepare a written EFH assessment of any action that requires consultation.
- Consult with the Secretary of Commerce with respect to any action that may adversely affect any EFH identified under this Act.

50 CFR Part 600.915

General EFH Consultation Process

- Federal action agency provides NMFS with an EFH assessment.
- Within 30 or 60 days, NMFS provides conservation recommendations.
- Action agency must respond to NMFS in writing within 30 days regarding EFH conservation recommendations that were accepted. If not accepted, need explanation.

Use of Existing Review Procedures

- Encourage use of existing review processes to help streamline the EFH consultation process

Fish and Wildlife Coordination Act

- More general mandate that applies to all fish habitat
- Federal agencies are required to consult with NMFS on impacts.
- The process is less specific and does not require a federal agency response.

Tools and Resources

Additional Resources:

—Website

[http://www.nmfs.noaa.gov/habitat/habitatprotection/efh/
index.htm](http://www.nmfs.noaa.gov/habitat/habitatprotection/efh/index.htm)

—EFH Mapper -

[http://www.nmfs.noaa.gov/habitat/habitatprotection/efh/
GIS_mapper.htm](http://www.nmfs.noaa.gov/habitat/habitatprotection/efh/GIS_mapper.htm)

—Regulations - 50 CFR Part 600.915

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The Endangered Species Act
&
The Marine Mammal Protection Act

96

The Endangered Species Act of 1973

- Findings
 - Various species of fish, wildlife, and plants have been rendered extinct as a consequence of economic growth and development untempered by adequate concern and conservation;
 - Other species have been so depleted in numbers that they are in danger of or threatened with extinction;
 - These species are of esthetic, ecological, education, historical, recreation, and scientific value to the Nation and its people
 - » Section 2 of the ESA of 1973 as amended

The Endangered Species Act of 1973

- Purposes
 - To provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved,
 - to provide a program for the conservation of endangered and threatened species
- Policy
 - All Federal departments and agencies shall seek to conserve endangered and threatened species
 - And use their authorities in furtherance of the purpose of the Act
 - » Section 2 of the ESA of 1973 as amended

ESA Prohibited Acts

- Prohibits, for fish and wildlife:
 - Import into, or export out of U.S.
 - “Take” within U.S., U.S. territorial seas and high seas
 - Take = harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct)
 - Possess, sell, delivery; carry, transport, or ship in territorial or high seas
 - Deliver, receive, carry, transport, or ship in interstate or foreign commerce
 - Sell or offer for sale
 - Violate any regulation pertaining to endangered or threatened species

» Section 2 of the ESA of 1973 as amended

ESA Prohibited Acts

- Prohibits, for plants:
 - Import into, or export out of U.S.
 - Remove and reduce to possession from areas under Federal jurisdiction; maliciously damage or destroy on any such area; remove, cut, dig up, or damage or destroy on any other area in knowing violation of any law or regulation of any State or in the course of any violation of a State criminal trespass law;
 - Deliver; receive, carry, transport, or ship in interstate or foreign commerce, by any means whatsoever and in the course of a commercial activity
 - Sell or offer for sale
 - Violate any regulation pertaining to endangered or threatened species

» Section 2 of the ESA of 1973 as amended

ESA & Federal Agencies

- **Affirmative Conservation Mandate**
 - All Federal agencies shall, in consultation and with the assistance of the Secretary, use their authorities by carrying out programs for the conservation of endangered and threatened species
 - » Section 7(a)(1) of the ESA of 1973 as amended

- **Duty to Avoid Jeopardy & Adverse Modification of Critical Habitat**
 - Each Federal agency shall, in consultation and with the assistance of the Secretary, insure that any action authorized, funded or carried out by such agency is not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction of adverse modification of designated critical habitat
 - » Section 7(a)(2) of the ESA of 1973 as amended

101

ESA & Non-Federal Entities

- Can apply for an exception from the prohibitions of take
 - If such “taking” is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity
 - Requires the submission of a conservation plan that specifies
 - The impact of the taking
 - Steps the applicant will take to minimize and mitigate such impacts, and the funding that will be available to implement such steps;
 - What alternative actions to such taking the applicant considered and the reasons why such alternatives are not being utilized; and
 - Other measures the Secretary may require as being necessary or appropriate for purposes of the plan
 - Requires the issuing Service complete Section 7 Consultation
 - » Section 10(a)(1)(B) and Section 10(a)(2)(A) of the ESA of 1973 as amended

Other ESA Exceptions

- Exceptions from the prohibitions of take are also available for
 - Scientific purposes or to enhance the propagation or survival of the affected species, including, but not limited to acts necessary for the establishment and maintenance of experimental populations pursuant to Section 10(j)
 - Requires the issuing Service complete Section 7 Consultation
 - » Section 10(a)(1)(A) of the ESA of 1973 as amended

ESA & Superfund

Relevant ESA Section	Section 7
Action Agency	EPA
Consulting Agency	<ul style="list-style-type: none"> •FWS - terrestrial & freshwater species •NMFS - anadromous & marine species
Mechanism of Request	<ul style="list-style-type: none"> a) EPA or their representative contacts the Service(s) for a list of endangered & threatened species, & their critical habitats; b) EPA requests consultation
Requires	Preparation of Biological Assessment (major construction activities), or other similar document evaluating the effects the federal action would have on listed species
Recommended	•Engage Service(s) in technical assistance prior to submittal of request for consultation
Outcome	•“Biological Opinion” or “Concurrence Letter” that contains an assessment of the impacts of the fishery on T/E Species
Consultation Timeframes	Depends largely on time spent in technical assistance. After initiation: Informal ~ 30 days; Formal – 135 days (90 days consultation + 45 days for Biological Opinion)

104

The Marine Mammal Protection Act of 1972

- Findings and Policy
 - Certain species of marine mammals are, or may be, in danger of extinction or depletion as a result of human activity
 - Such species and populations should not be permitted to diminish beyond the point they cease to be a significant functioning element in the ecosystem, or beyond their optimum sustainable population
 - There is inadequate knowledge of the ecology and population dynamics of marine mammals
 - Marine mammals should be protected and encourage to develop to the greatest extent feasible
 - The primary objective of their management should be to maintain the health and stability of the marine ecosystem
 - » Section 2 of the MMPA of 1972 as amended

105

MMPA Prohibition on “Taking”

- Prohibits “taking” – harassment, hunting, capturing or killing, or attempting to harass, hunt, capture or kill any marine mammals
 - Permitted exceptions:
 - Scientific research
 - Public display
 - Photography for education or commercial purposes
 - Enhancing the survival or recovery of a species or stock
 - Commercial fishing
 - Subsistence harvest
 - Other specified activities within a specified geographical region
 - » Section 101 and 102 of the MMPA of 1972 as amended

MMPA & Incidental Take

- Incidental “take” allowed for small numbers of marine mammals,
 - For specified activities within a specified geographic region
 - After public notice & opportunity for public comment
- A finding that the total “taking” will have a negligible impact on the species or stock
- And will not have an unmitigable adverse impact on subsistence uses

» Section 101(a)(5)(A) of the MMPA of 1972 as amended

MMPA & Incidental Take

- The authorization shall prescribe:
 - The permissible methods of taking by harassment
 - Other means of least practicable impact on the species, its habitat
 - The measures necessary to ensure no unmitigable adverse impact on the species for subsistence
 - Monitoring and reporting requirements
 - » Section 101 of the MMPA of 1972 as amended

Types of MMPA Authorizations*

	Letter of Authorization (LOA)	Incidental Harassment Authorization (IHA)
MMPA Section	101(a)(5)(A)	101(a)(5)(D)
May Authorize	Harassment or Mortality	Harassment Only
Mechanism of Request	LOA application	IHA application
Structure	<ul style="list-style-type: none"> •Requires promulgation of regulations •Valid for 5 Years • Includes 2 comment periods (usually 30 & 60 days; 0 days for annual LOAs) 	<ul style="list-style-type: none"> •No rulemaking •Valid for up to 1 year •Includes one 30-day comment period
Processing Time	Not prescribed by statute (~18 mo)	120 days by statute

*May require the issuing Service complete Section 7 Consultation

109

For more information

- On the requirements of the ESA, including Section 7
 - For freshwater and terrestrial species, contact the U.S. Fish & Wildlife Service, or see
 - <http://www.fws.gov/endangered/>
 - For anadromous and marine species, contact the National Marine Fisheries Services, or see
 - <http://www.nmfs.noaa.gov/pr/laws/esa/>
- To apply for an MMPA Authorization to take marine mammals
 - For sea otters, walrus, polar bear, manatees and dugong Contact the U.S. Fish & Wildlife Service, or see
 - http://www.fws.gov/habitatconservation/marine_mammals
 - For seals and sea lions (other than walrus), and whales and dolphins Contact the National Marine Fisheries Service, or see
 - <http://www.nmfs.noaa.gov/pr/permits/incidental>

110

□

National Historic Preservation Act of
1966
16 U.S.C. § 470, *et seq.*

Background

- Enacted in response to increasing loss of historic properties significant to U.S. heritage
- Multifaceted statute
 - Program for identification and listing of historic properties
 - Establishment of Advisory Council on Historic Preservation (ACHP)
 - Partnerships with state and tribal historic preservation programs
 - Federal agency obligations to consider effects of federal “undertakings” on historic properties

NHPA Implementing Agencies – U.S. Department of the Interior

- Maintains National Register of Historic Places
- Review/approval of state/tribal historic preservation programs
- Guidelines for certain federal agency responsibilities (section 110)

□

NHPA Implementing Agencies – Advisory Council on Historic Preservation

- Independent federal agency w/broad membership, including federal, state, tribal and local representatives
- Advises the President and Congress on historic preservation matters
- Promulgates regulations implementing federal agency obligations under NHPA section 106

Historic Properties

- NHPA Section 301(5)
 - Prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places
- May include properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization (Section 101(d)(6)(A))

Federal Undertakings

- NHPA Section 301(7)
 - Project, activity or program funded in whole or in part under the direct or indirect jurisdiction of a federal agency, including:
 - A) Those carried out by or on behalf of a federal agency;
 - B) Those carried out with federal financial assistance;
 - C) Those requiring a federal permit, license, or approval;
 - D) Those subject to state/local regulation administered pursuant to a delegation or approval by a federal agency
- 36 CFR § 800.16(y) – Identical language, but excludes sub-section (D)

116

Relevant Federal Agency Obligations

- Section 106 – 16 U.S.C. § 470f
 - Consider effects of undertakings on historic properties
 - Provide ACHP a reasonable opportunity to comment
 - ACHP implementing regulations: 36 CFR Part 800

- Section 110 – 16 U.S.C. § 470h-2
 - Variety of provisions promoting internal federal agency programs relating to historic preservation
 - Section 110(f): Requirements where National Historic Landmark will be directly and adversely affected

Section 106/36 CFR Part 800

- Procedural requirements. Consider and consult re: impacts of undertaking on historic properties
- Relevant procedural steps:
 - Determine if action constitutes federal undertaking with potential to affect historic properties
 - If so, initiate consultation with relevant state/tribal historic preservation officer and/or tribal representative
 - Determine additional consulting parties and process to involve the public
 - Determine area of potential effect (APE)
 - Identify historic properties within the APE
 - Assess effects on historic properties
 - Resolve adverse effects (good faith effort to avoid/mitigate) – Often includes signing MOA

Tribal Roles

- Undertakings occurring on or affecting Tribal lands
 - Tribal Historic Preservation Officers
 - Designated Tribal Representatives
- Other undertakings
 - Tribes and Native Hawaiian Organizations that attach religious and cultural significance to historic properties in the APE

CERCLA Compliance with Other Laws Manual

- Chapter 4.1 – NHPA
 - Treats NHPA as an ARAR
 - Obligations for off-site activities
 - Recommended process for on-site activities
 - Lead agency involvement/EPA responsibilities
 - Substantive requirements/goals?

Emergency situations

- 36 CFR § 800.12
 - Emergencies declared by the President, Tribal/State government; other immediate threats to life/property
 - Undertakings occurring within 30 days of declared emergency; may be extended
 - Programmatic Agreement (PA)
 - If no PA, notify ACHP, SHPO/THPO, Tribes; 7 days (or other available time) for comment
 - Immediate rescue/salvage operations to preserve life/property are exempt from section 106 and its implementing regulations.

121

U.S. Department of the Interior
Fish & Wildlife Service



Consideration of Fish and Wildlife Resources during Project Planning

122

Objectives

- Identify key legislation that provides protection for fish and wildlife resources relevant to pesticide application
- Identify specific provisions of the Migratory Bird Treaty Act, Bald Eagle Protection Act, and Endangered Species Act
- Identify steps you can take to comply with the Migratory Bird Treaty Act, Bald Eagle Protection Act, and Endangered Species Act

Legislation

- Several laws and regulations include provisions for protection of various fish, wildlife, plants, and their habitats
 - Migratory Bird treaty Act
 - Bald and Golden Eagle Protection Act
 - Endangered Species Act
- For more info see <http://www.fws.gov/laws/digest/reslaws.laws.htm>

Migratory Bird Treaty Act

- Provides primary protection for migratory birds, nests, and eggs
- Taking, killing, or possessing unlawful
- Executive Order 13186 - implementation of MBTA by federal agencies and executive departments
- Implemented via international conventions established between the U.S. and Great Britain, Mexico, Japan, and the Soviet Union

Take means: pursue, hunt, shoot, capture, collect, or kill

Migratory Bird Treaty Act

- Covers over 800 species with evidence of natural occurrence in the US or its territories
- Excludes species whose occurrences in the U.S. are strictly the result of intentional human introduction
- Issue permits for scientific collection, education, falconry, depredation, etc.
- No provisions for incidental take permitting



126

Bald and Golden Eagle Protection Act

- Prohibits the taking or possession of and commerce in bald and golden eagles
- as defined, “take” includes pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb



127

Bald and Golden Eagle Protection Act

- Recent provisions allow for authorization of two types of take permits:
 - limited take of eagles where the taking is associated with, but not the purpose of the activity, and cannot practicably be avoided
 - intentional take of nests where necessary to alleviate a safety hazard to people or eagles
- Net take of golden eagles zero



128

Endangered Species Act

Purpose: to conserve endangered and threatened species and the ecosystems on which they depend

Protects habitats as well as species, including critical habitat



1374 listed species in the US

- 1302 species under authority of USFWS
- 72 species under NOAA–Fisheries

Endangered Species Act

Endangered Any species in danger of extinction throughout all or a significant portion of its range



Ocelot,
endangered

Threatened Any species likely to become endangered in the foreseeable future



Audubon's
Crested Caracara,
threatened

Critical Habitat Specific geographic areas with physical and biological features essential to the conservation of a listed species



Platte River,
critical habitat

Endangered Species Act

Section 9 of the ESA prohibits **take** of listed species:

- includes death, or injury that impacts essential behavioral patterns, including breeding, feeding, or sheltering
- includes habitat modification or degradation

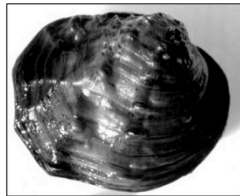


Bluemask Darter, *endangered*

Endangered Species Act

Section 7 of the ESA requires federal agencies to:

- conduct programs to conserve listed species (§7a1)
- ensure that actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of listed species or adversely modify designated critical habitat (§7a2)



Winged mapleleaf, *endangered*

Endangered Species Act

Jeopardy:

- an action reasonably expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species

Adverse modification:

- Direct or indirect alteration that appreciably diminishes the value of critical habitat for the survival or recovery of a species

Endangered Species Act

Under section 7 :

- If agency action may affect a listed species, must consult with USFWS or NOAA
- Private individuals are affected by Section 7 when their action needs a Federal permit or funding



Fresno kangaroo rat, *endangered*

Endangered Species Act

The Service conducts several types of consultations on Federal agency activities:

- informal, formal and emergency consultations for listed species or critical habitats
- informal and formal conferences for proposed species or proposed critical habitat

Endangered Species Act

Informal Consultation: optional process to assist in evaluating potential effects on species and habitat

- provides the opportunity for modifications to the proposed action which could avoid adverse effects and the need for formal consultation

Endangered Species Act

Formal consultation occurs when an action is likely to adversely affect s listed species and concludes with FWS issuing a “biological opinion” evaluating the action and which may include:

- Incidental take statement estimating amount of take that may occur incidental to the action
- Reasonable and prudent measures to minimize take
- Reasonable and prudent alternatives to avoid jeopardy

Early Coordination

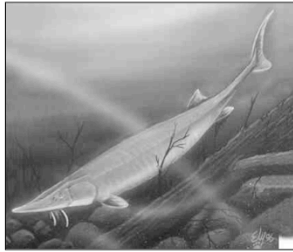
Is key regardless of whether concerns are for listed species, migratory birds, eagles, or other nontarget organisms



Desert tortoise, *threatened*

Early Coordination

Usually will result in minor project modifications that will minimize adverse impacts to nontarget organisms



Pallid sturgeon, *endangered*

Resources & Feedback

- To view a complete list of resources for this seminar, please visit the **Additional Resources**
- Please complete the **Feedback Form** to help ensure events like this are offered in the future

EPA United States Environmental Protection Agency
Technology Innovation Program

U.S. EPA Technical Support Project Engineering Forum
Green Remediation: Opening the Door to Field Use Session C (Green Remediation Tools and Examples)
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