Federal Laws, Regulations and Agencies Controlling the Use of Treated Wood in The Aquatic Environment

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Federal laws have established requirements that impact the use of treated wood in streams, lakes, and marine environments. Most of the major laws that are intended to protect the environment and public health were originally passed in the 1970s, based on widespread concern over degradation of the natural environment and worker and consumer safety issues. In turn, a series of federal regulations have been promulgated to implement the laws in everyday practice. Federal agencies, such as the U.S. Environmental Protection Agency (EPA), are charged with developing and enforcing the regulations. Some of these regulations have been delegated to qualifying states to implement [e.g., the Clean Water Act's (CWA) National Pollutant Discharge Elimination System (NPDES) program].

There are numerous federal laws that affect the production, use, and disposal of treated wood. In some cases, such as the Resource Conservation and Recovery Act (RCRA), one law may have separate and distinct requirements for different stages of the life cycle of treated wood. In addition to the federal laws and regulations, many states and local governments have adopted laws that focus on the same environmental and public health concerns. In many cases, the state or local authority drives the decision-making process regarding permit approval for use of treated wood for in-water structures. A survey of the state and local laws is beyond the scope of this chapter. It is important to contact state and local governmental agencies to determine whether the laws and regulations they enforce apply to your project.

This chapter focuses on the laws, regulations, and agencies at the federal level that can impact the use of treated-wood products in the aquatic environment. Although many of the same regulations have provisions applicable to the production and disposal of treated wood, the discussion will be limited to how these federal regulations and various federal agencies can impact the use of treated wood in aquatic environments. Federal agencies can be end users of treated wood, as well as regulators. This chapter will also briefly discuss the policies and guidelines that direct agency decisions in projects that involve construction with treated wood. In addition, this chapter will present some case studies of projects, as well as a discussion of potential strategies for obtaining approval for projects utilizing treated wood in the aquatic environment.

Federal regulations are divided into two categories for purposes of discussion in this chapter. The first category is regulations that can directly impact the use of treated wood in an aquatic environment. These regulations primarily affect the installation of treated wood in or over a water body. Other federal regulations regarding treated wood primarily impact the production or disposal of treated wood. A diagram showing the array of major federal laws is shown in Figure 6.1.

6.1 Federal Regulations Impacting Treated-Wood Use in Aquatic Environments

6.1.1 Clean Water Act

The Clean Water Act (CWA) is the primary federal water pollution control law. The law was originally enacted in 1948 as the Federal Water Pollution Control Act (the name by which it is still formally known), but following major revisions in 1972, has become known as the Clean Water Act. The ultimate goal of the CWA is to eliminate the discharge of all pollutants to waters of the United States, but where this is impractical, the CWA's "interim goal" is to

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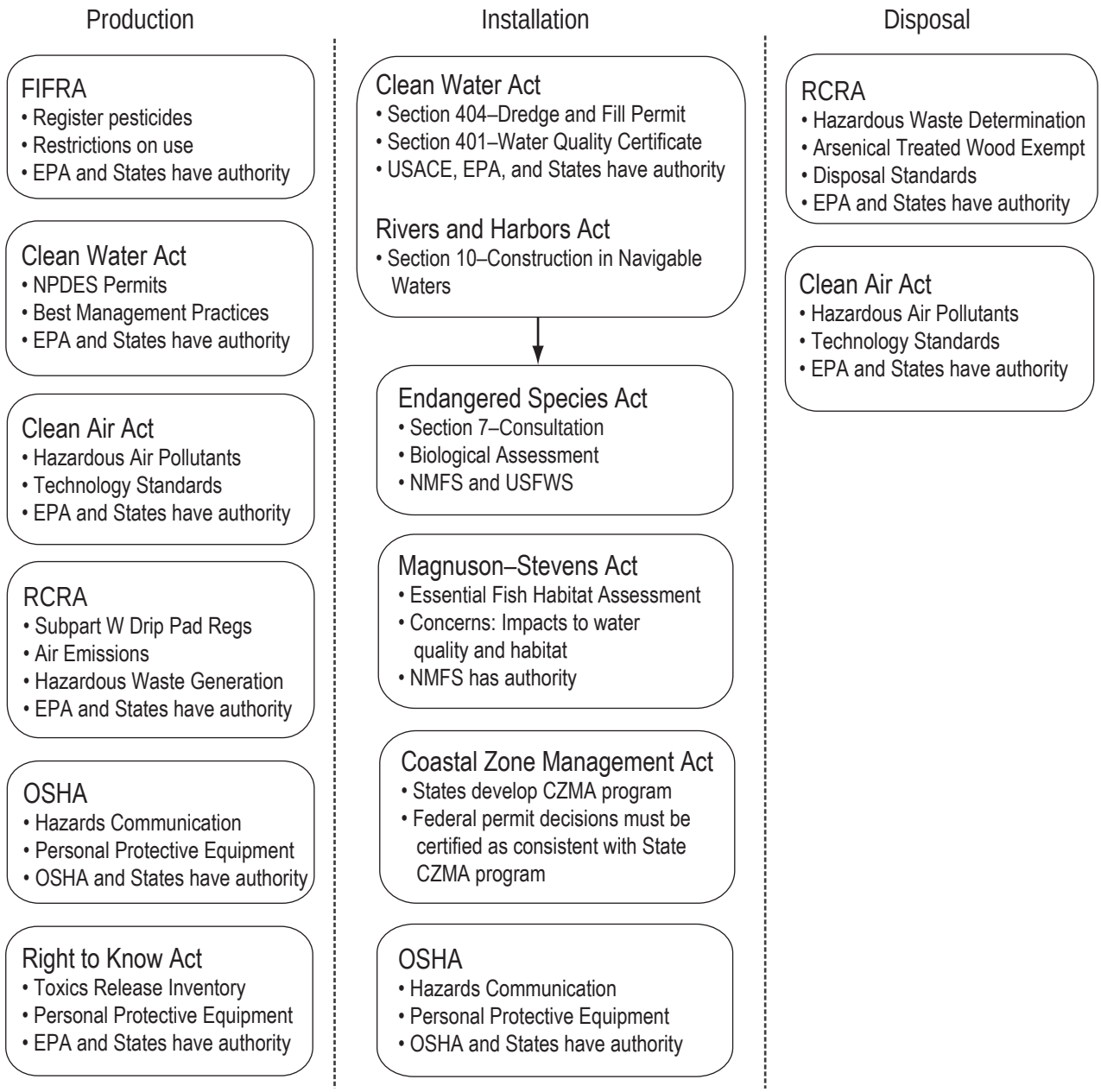

Figure 6.1 Federal regulation of treated wood.

achieve "water quality that provides for the protection and propagation of fish, shellfish, and wildlife and provides for recreation in and on the water." The mechanism for achieving these goals is a permitting system to regulate and decrease the discharge of pollutants into water bodies. The parts of this broad legislation that most directly affect the use of treated wood in aquatic applications are contained in Section 404, which states that no one can discharge dredged or fill material into waterways or a wetland without obtaining a permit; and Section 401, which prohibits the issuance of a federal permit for a project involving a discharge until and unless the state in which the discharge originates certifies that the discharge will comply with specified provisions of the CWA, including EPA-approved state water quality standards adopted pursuant to the CWA. Most pier, bulkhead, and marina projects require a Section 404 permit because of dredging operations or the placement of material such as pilings or bulkheads in the water.

The U.S. Army Corps of Engineers (USACE) is the lead agency for issuance of permits to dredge or fill waters of the United States under Section 404 of the CWA. Projects

can be approved under a Nationwide Permit (NWP) or an individual permit. NWPs are issued for categories of projects that are similar and have limited environmental impacts. NWPs establish regulations, called General Conditions, for common activities and allow expedited permit review. The current NWPs were issued in 2007 and contain 50 categories, including bank stabilization, maintenance, and modifications of existing marinas. Individual permits are required for projects not covered by an NWP. The individual permit approval process applies to larger-scale, more complex projects that are likely to have significant impacts on the environment. The process includes a public interest review of the proposal, with an assessment of the benefits and impacts of the project, analysis of steps to minimize and mitigate impacts, and generally a 30-day public notice period. The public may appeal the issuance of a 404 individual permit or challenge the use of an NWP.

USACE may consider the potential environmental impacts of using treated wood versus other materials as part of its review of a Section 404 permit application through its public interest review, its regulations requiring compliance with water quality standards, and the criteria listed in 404(b)(1) of the CWA. In addition, three related requirements that are often triggered by application for a Section 404 permit—the Section 401 water quality certification, Endangered Species Act (ESA) consultation, and Essential Fish Habitat review—may result in restrictions on the use of treated wood. Figure 6.2 demonstrates the general process for permitting a project that includes each of these reviews.

Section 401 of the CWA prohibits the issuance of a Section 404 permit unless the relevant state has issued a water quality certification for the project under Section 401 (or has waived its right to do so). The Section 401 certifications are based on a determination that a project will meet certain requirements of the CWA, including EPA-approved state water quality standards adopted pursuant to the CWA. These standards include numeric criteria for specific pollutants or characteristics, more general "narrative" criteria, and "anti-degradation policies" that limit the extent to which water quality may be degraded. The water quality certifications can contain conditions on the design, construction, and maintenance of a project. Conditions may require measures such as techniques to limit disturbance of sediment during construction or minimize threats of pollution from maintenance and operations. These conditions become part of the Section 404 permit. USACE must receive a Section 401 certification before it can issue a 404 permit. An example of a project that would require a Section 404 permit would be the proposed in-water maintenance, replacement, or new construction of a pier. Depending on the type and amount of work to be accomplished, the project may qualify for an NWP.

6.1.2 River and Harbors Act

The Rivers and Harbors Act of 1899 is one of the oldest federal environmental laws. Its primary purpose is to protect navigation. Section 10 covers construction, excavation, or deposition of materials in, over, or under such waters, or any work that would affect the course, location, condition, or capacity of those waters. The Section 10 permit application process is conducted concurrently with the Section 404 CWA permit process, often through the same application forms. USACE can authorize activities by a standard individual permit, letter-of-permission, NWP, or regional permit. USACE makes the determination on what type of permit is needed. Since the focus of the law is on maintaining the navigability of waterways, there is little consideration in permit review of treated wood versus other construction materials.

6.1.3 Endangered Species Act

The ESA was enacted in 1973 to protect plant and animal species that are approaching extinction. It establishes a two-tiered system of protection by listing species as either endangered or threatened. An endangered species is defined as being "in danger of extinction throughout all or a significant portion of its range." A threatened species is "likely to become an endangered species in the foreseeable future." The protections for endangered species are more stringent than for threatened. The National Marine Fisheries Service (NMFS) and United States Fish and Wildlife Service (FWS), collectively referred to as "the Services," determine whether a species is listed. The listing process requires extensive study to demonstrate the status of the species, and the decision to list must be made on the basis of the best scientific and commercial data available. A listing may include or be followed by the designation of critical habitat, areas that contain the physical elements "essential to the conservation of the species." The ESA also requires that a recovery plan be established to ensure the continued survival of the species.

The ESA can affect a project proposing to use treated wood if the project has the potential to "take" a listed spe-

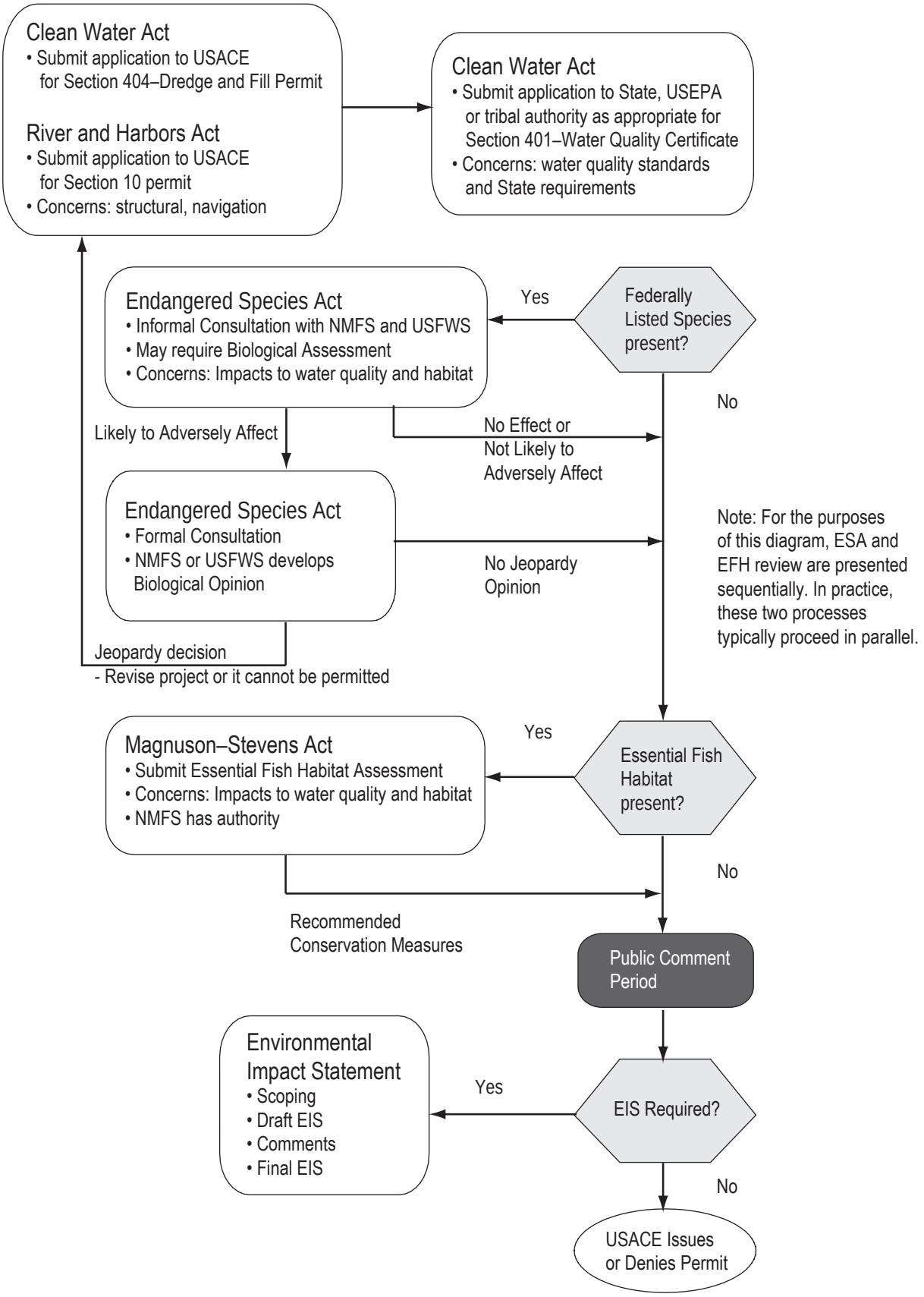

Figure 6.2 Federal permitting process for in-water use of treated wood. Note: For Section 404 Regional or Nationwide General Permits, some of the steps in this diagram may not apply.

cies or adversely affect or modify designated critical habitat. Section 9 of the ESA imposes both criminal and civil liability on those who take a species without authorization. The word "take" is broadly defined as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect" a listed species, or to attempt to do any of these things. Thus, before engaging in activities that may take a listed species, one must seek authorization for the activity to avoid Section 9 liability.

Section 7 of the ESA is one way to authorize a take. It requires federal agencies (in the ESA called an "action agency") to consult with the Services before issuance of a federal permit that may impact species on the threatened or endangered list. As mentioned previously, application for a Section 404 CWA dredge and fill permit can trigger an ESA consultation. The ESA consultation is required to ensure that the permitting action is not likely to "jeopardize the continued existence" of a listed species or result in the "destruction or adverse modification" of critical habitat.

Another way to authorize a take is to obtain an Incidental Take Permit through Section 10 of the ESA. This procedure is available for projects that do not require a federal permit and therefore do not trigger a federal agency's Section 7 consultation obligation. The Section 10 process, which requires preparation of a Habitat Conservation Plan, is widely considered to be more cumbersome, time consuming, and expensive than using Section 7, but in some cases it is the only option for authorizing a take.

The use of treated wood in aquatic environments has become a concern to the Services because of the potential impacts of copper and other chemicals to listed salmon and other aquatic species in the West. A significant body of research exists that can help evaluate the potential impact of treated wood in the aquatic environment. For more information on the scientific research related to fish impacts and treated wood, refer to the appropriate chapters of this publication.

It is important to contact the nearest NMFS and FWS offices to determine whether listed species occur near your project. If ESA-listed species occur in the vicinity of a project, then a project proponent would need to either (1) go through the consultation process if a federal permit is required, or (2) obtain a Section 10 permit to authorize the anticipated take of the protected species. For Section 7, the process begins with assessment of potential impacts to listed species from a proposed project. A project proponent submits a Biological Evaluation or Biological Assessment as part of the permit application package. A Biological Evaluation can be submitted for relatively small projects, and a more thorough Biological Assessment may be required for larger-scale projects. It is important to discuss the scope and level of impact analysis required with the Services. The Biological Evaluation or Assessment references published research and scientific studies to describe the potential impacts of a project on listed species. For large-scale, complicated projects, it may be necessary to conduct field sampling and more rigorous analysis to more precisely assess potential impacts. The action agency uses the Biological Assessment as the basis for its consultation with the Services to determine the effect of the proposal on listed species.

There are two potential outcomes from this assessment stage of consultation: (1) a determination of "no effect" or that the project is "not likely to adversely affect" listed species, after which a proposal would proceed through informal consultation; or (2) a "likely to adversely affect" determination requiring formal consultation. Informal consultation allows the permitting process to go forward but may require that certain conditions be incorporated into the permit, such as "work windows" establishing time periods for construction that minimize impacts to species during sensitive life history stages.

Formal consultation involves preparation of a Biological Opinion by NMFS or FWS to evaluate the effects of the proposed activity. The Biological Opinion will result in either a "no jeopardy" determination, which allows the project to be permitted, in many cases with "reasonable and prudent measures"; or a "jeopardy" determination that the project cannot be permitted unless the proposed project is revised to avoid the jeopardy, most often by adoption of "reasonable and prudent alternatives" to the proposed action. The Section 10 permitting process has many features similar to that of Section 7, and some that are unique to Section 10, but because it is far less widely used, it is not discussed in detail here.

The impact of the ESA on the use of treated wood in the aquatic environment can sometimes be specific to the product. Regionally, USACE and NMFS have implemented regulations that allowed the use of treated wood, but only in tightly controlled quantities or applications. An example of this is the Standard Local Operating Procedures for Endangered Species (SLOPES), which applies to the Columbia River Basin. Treated-wood products are specifically addressed in this guidance document that the Portland, Oregon, District of USACE has used to guide its

review of individual permit requests under Section 10 of the Rivers and Harbors Act and Section 404 of the CWA.

6.1.4 Magnuson-Stevens Act

The Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) authorizes federal regulation of ocean fisheries. Reauthorization of the Magnuson-Stevens Act in 1996 included amendments to protect the various habitats used by commercially important marine fish during the different stages of their life cycles. Referred to as "essential fish habitat" (EFH), these habitats are defined as "those waters and substrates necessary to fish for spawning, breeding, feeding, or growth to maturity." NMFS conducts two primary tasks related to EFH: identifying and delineating EFH for different marine fish; and consulting with federal agencies on all actions or proposed actions, permitted, funded, or undertaken by the agency, that may impact EFH. These two requirements are similar in substance to the definition of critical habitat and requirement for Section 7 consultation under the ESA.

Project proponents can contact the NMFS office in their region of the country to research whether EFH has been designated in the project area (maps and documentation of EFH can be found on regional NMFS Web sites). If EFH has been designated in the vicinity of a project that requires a USACE Section 404 or Section 10 permit, then it will be necessary to initiate consultation with NMFS. The EFH regulations include provisions to align consultation with other environmental review processes, including ESA consultation and National Environmental Policy Act (NEPA) review.

An EFH Assessment provides the basis for the consultation between the federal agency and NMFS to determine the effect of the proposal on managed species. Typically the project proponent submits an EFH Assessment as part of the permit application package. The EFH Assessment is similar to the Biological Assessment required for ESA Section 7 consultation. The level of detail and complexity of the assessment should be commensurate with the scale and potential impact of the project. Smaller projects with limited potential impacts may be assessed with a brief analysis, while larger projects may require data collection and more extensive analysis. For projects that trigger both ESA and EFH review, a single assessment report can be developed that addresses concerns of each law. NMFS reviews the EFH assessment and makes Conservation Recommendations to minimize or mitigate the potential impacts of the project. These recommendations may become conditions of permits issued by USACE or other federal agencies.

6.1.5 Coastal Zone Management Act

The federal Coastal Zone Management Act (CZMA) requires coastal and Great Lakes states to create programs that guide development along coasts. The state programs are typically focused on broad policy issues such as land use, public access, and administrative activities, and may not address the treated wood in particular. The actions of federal agencies, such as issuing a permit, must be determined to be consistent with the particular state's CZMA program. Since a CZMA consistency certification and concurrence of the State's CZMA agency may be required for issuance of a Section 404 dredge and fill permit or other federal action, it is important to determine whether a project is located within a CZMA area and understand any state requirements that this designation implies.

6.2 Other Important Federal Regulations

There are a number of federal regulations that apply to production and disposal of treated wood. These regulations are briefly described here to provide a broader picture of the regulatory context for using treated-wood products.

6.2.1 Resource Conservation and Recovery Act

The EPA regulates hazardous wastes under RCRA. The law was established in 1976 as an amendment to the 1965 Solid Waste Disposal Act. The intent of RCRA is to regulate the disposal of toxic substances to protect human health and the environment and to prevent the creation of future Superfund sites. Regulations that enact the law define exactly what is considered hazardous and establish standards for how those materials are to be handled and disposed of. The EPA has the authority to regulate hazardous materials under RCRA and the states have been delegated the responsibility of implementing many of its requirements.

Wastes are considered hazardous if they exhibit the characteristics of corrosivity, ignitability, toxicity, or reactivity, or if they are listed or specifically named based on the processes that generate them or the chemical constituents. Under RCRA, it is the responsibility of the waste

generator to determine whether the waste meets the criteria for hazardous waste.

RCRA specifically exempts discarded arsenical treated wood or wood products, even if they exhibit the characteristic of toxicity, as long as

- The material is not designated hazardous waste for any other reason, and
- The waste was generated from wood utilized for its intended purpose.

The EPA has published "Consumer Information Sheets" for different types of treated wood that include recommendations for disposal:

- Treated wood can be disposed of with regular municipal trash (not yard waste) in many areas. However, state or local laws may vary.
- Treated wood should not be burned in open fires or in stoves, fireplaces, or residential boilers.
- Treated wood from commercial or industrial use (e.g., construction sites) may be burned only in commercial or industrial incinerators or boilers in accordance with state and federal regulations.

6.2.2 Federal Insecticide, Fungicide, and Rodenticide Act

Wood preservatives are considered pesticides, and are regulated under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA). FIFRA is administered by the EPA and state environmental agencies. FIFRA was established in 1947 to regulate the efficacy of pesticides, but fundamentally shifted through amendments in 1972 to focus on protection of human health and the environment. Under FIFRA, a pesticide cannot be sold, distributed, or used unless it is registered by the EPA, or it meets a specific exemption. When EPA reviews a pesticide for registration, it can mandate restrictions on its use or cancel the registration and ban further sale of the product in the United States.

The registration review process includes an extensive public health and ecological risk assessment. The EPA risk-assessment process for treated wood includes a number of aquatic-related analyses focused on the potential leaching of pesticides, potential exposure of aquatic organisms to the pesticide, and effects of exposure on representative fish, invertebrates, and plants. Since registration of pesticides is a federal action that may impact endangered species, consultation with the Services is required as described in the Endangered Species Act section of this chapter.

Amendments to FIFRA in 1988 authorized the EPA to review the human health and environmental effects of pesticides first registered before 1984 to make decisions regarding future use of those products. The re-registration program is reviewing over 1,000 pesticide active ingredients organized into 613 groups. A number of wood preservatives have recently been reviewed in this program. Registration decisions were published in November 2008 that allow continued use of CCA, ACZA, ACC, creosote, copper, and zinc napthenate.

6.2.3 Clean Air Act

Under the Clean Air Act (CAA), the EPA regulates air pollution sources to maintain air quality in the United States. The 1970 and 1990 amendments to the CAA promulgated National Emissions Standards for Hazardous Air Pollutants (NESHAPs) for regulation of Hazardous Air Pollutants (HAPs). These emission standards require certain control technologies specific to the processes that generate HAPs. Chromium compounds, arsenic compounds, and naphthalene (a significant component of creosote) are on this list of HAPs.

6.2.4 Occupational Safety and Health Act

The Occupational Safety and Health Act was passed in 1970 to limit worker exposure to hazards including toxic substances, excessive noise levels, mechanical dangers, and unsanitary conditions. The Occupational Safety and Health Administration (OSHA) was established within the Department of Labor to implement the requirements of the Act. A separate research institute, the National Institute for Occupational Safety and Health (NIOSH), was created to establish standards for workplace safety and health, which OSHA then codifies in regulations and has the authority to enforce. Worker exposure limits have been established for substances commonly used to preserve wood, including arsenic, chromium, copper, and creosote. The following is a list of the Permissible Exposure Limits (PELS) for these substances:

- Arsenic—0.010 mg/m^3
- Chromium—0.10 mg/m^3
- Copper—1.0 mg/m^3
- Creosote—0.2 mg/m^3

Exposure limits to these and other chemical hazards can be found on the NIOSH web site (www.cdc.gov/niosh/npg/default.html).

6.3 Federal Agency Use of Treated Wood

A number of federal agencies use treated wood in the construction of facilities such as bridges, piers, and bulkheads. Agencies that use treated wood in aquatic applications include the following:

- Federal Highway Administration
- Department of Defense
- U.S. Forest Service
- National Parks Service
- Bureau of Land Management
- U.S. Fish and Wildlife Service
- Federal Emergency Management Agency
- Bureau of Indian Affairs

To ensure that quality standards are met, these agencies often apply specifications or requirements for treated-wood materials. The construction specifications may refer to standards set by American Wood Protection Association, International Code Council Evaluation Service, or other independent, reputable organizations. The specification standards may include requirements for the minimum amount of chemical (retention) and depth of injection (penetration) specific to different preservatives, lumber, and uses.

Some agencies may also include reference to the Western Wood Preservers Institute (WWPI) manual "Best management practices for the use of treated wood in aquatic and other sensitive environments" in construction specifications. The Best Management Practices (BMP) manual includes guidelines for product selection and specification, production of treated wood, and installation and maintenance. The BMP manual can be accessed at WWPInstitute.org.

In general, the federal agencies do not have formal written policies or guidelines regarding the use of treated wood in aquatic applications. Decisions on product specifications, installation methods, and maintenance procedures are typically made at the regional or local staff level. The choice of material for use in a project such as a trail bridge through a wetland is typically based on the experience of the project designers and the local regulatory environment.

6.4 Project Permitting

The permitting of new or replacement structures located in aquatic environments and using treated wood has increasingly become a challenge because of both the regulations and the perceptions of the regulators. Part of the challenge is that the agencies responsible for regulating and permitting this work have not established clear guidance for the use of treated wood. Often, agency personnel must use their best judgment regarding the use of treated wood without the benefit or knowledge of applicable scientific research. One of the purposes of this book is to assemble and make available this type of information for the public and agency personnel to use in arriving at supportable, sound decisions on the use of treated wood in the aquatic environment.

Often, the outcome of this situation is that project proponents must deal with a lack of published guidance and, sometimes, the erroneous perceptions of agency permitting staff regarding treated-wood use. Many project proponents switch to less desirable products for their projects because the barriers to approval appear too daunting. This situation applies to private as well as public projects, since agencies are often the project proponent dealing with this dilemma.

An example of this situation occurred when a port authority needed to replace a boat launch dock facility. The port hired an engineer who identified the work necessary to complete the project and prepared a design using traditional materials, including treated wood. After completing the design, the port proceeded with permit applications, using a consolidated permit application that included USACE Section 404 and Section 10 permits, 401 Water Quality Certification, and other state-required permits. The port then discovered that the project, as designed, did not qualify for a USACE nationwide permit and that, in order to proceed with the project, they would have to either redesign it or conduct a Biological Assessment of the project area. The Port decided that, because of the desired dimensions of the boat dock and the preference for a treated-wood structure, they would proceed with the Individual Permit pathway. The port submitted the Biological Assessment, successfully completed the ESA

consultation with NMFS, and received approval to use a treated-wood structure with sections of grating to allow light transmission through the dock. The project was constructed a year later than planned because of the longer approval process and the timing for in-water construction work.

6.4.1 Permitting strategies

While the specific requirements of regulations may vary from state to state, the legal frameworks are similar and a general approach to the permitting process can be applied. In order to successfully use treated wood for projects in and around an aquatic environment, the project proponent should develop a strategy that will be proactive with the permitting agencies. Federal, state, local, and tribal authorities that have jurisdiction or a reviewing role should be identified early in the project. The following sections offer additional thoughts on strategies that can be used to successfully permit a project.

6.4.1.1 Consider permits at the beginning of the design process

The restrictions of federal and local regulations may constrain the size, location, design, or materials that can be used in a project. To avoid wasting time and money on designs that cannot be built at your site, it is important to make a preliminary assessment of the laws and regulations that affect your project. Making a timeline of the permit process may also be useful. Different permits take different lengths of time and some permits can only be issued after others. For example, a Water Quality Certificate must be issued before most Section 404 dredge and fill permits can be issued, and generally the federal agencies will not issue permits before the state agencies.

6.4.1.2 Clearly define your project

It is important to clearly define the scope of your project to facilitate the regulatory review process. It is important to know the dimensions of proposed structures, the topography of a site, and the range of tides in marine projects. Helping the regulators understand your project will expedite the process by making the potential impacts and pertinent regulations clear to the regulators.

It is also important to describe the purpose of your project. The purpose can actually affect what permits are needed. For example, the repair of a failing bulkhead may go through an expedited Nationwide General Permit for Section 404 of the CWA, while replacing a sound structure may require a more in-depth review.

6.4.1.3 Meet early with the agencies

Many regulatory agencies encourage a pre-application meeting at which you can discuss the proposed project in conceptual terms, discuss issues the regulators may have with the project, and confirm exactly which regulations apply to your project. You will likely need to have separate meetings with federal, state, and local agencies, but if possible, it is very useful to set up a meeting of all of them together. If you can arrange for them to meet you at the project site, you can provide a clearer understanding of the project and often quickly address potential issues or misunderstandings.

6.4.1.4 File a complete application

This sounds obvious, but agencies will not begin to review a project until a complete application is filed. Many regulations include schedules for how much time an agency is allowed for review of applications. This clock starts ticking when an application is accepted as complete. Make sure that you know the requirements and use checklists to ensure that all of the necessary information is included in an application. An example of this coordination is working with the agencies to coordinate the timing of the 404 permit process and 401 water quality certification.

6.4.1.5 Stay in contact with the agencies

Regulatory agencies are notoriously overworked and understaffed. Your application may be put on a long waiting list for review. It is important to stay in regular communication with the project reviewers to make sure that your project is considered in a timely manner and that any questions are quickly addressed.

Online Resources

Clean Air Act
42 U.S.C. §7401 et seq. (1970)
www.epa.gov/air/caa/

Clean Water Act (CWA)
33 U.S.C. §1251 et seq. (1972)
www.epa.gov/oecaagct/lcwa.html

Coastal Zone Management Act (CZMA) of 1972
16 U.S.C. 1451-1456
coastalmanagement.noaa.gov/czm/czm_act.html

Endangered Species Act (ESA)
16 U.S.C. §1531 et seq. (1973)
www.epa.gov/regulations/laws/esa.html

EPA's Endangered Species Protection Program (ESPP)
http://www.epa.gov/espp/

Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA)
7 U.S.C. § 136 et seq.
www.epa.gov/agriculture/lfra.html

Food Quality Protection Act (FQPA) of 1996
www.epa.gov/pesticides/regulating/laws/fqpa/

Magnuson-Stevens Fishery Conservation and Management Act, Public Law 94-265, as amended through October 11, 1996
www.nmfs.noaa.gov/sfa/magact/

Marine Protection, Research, and Sanctuaries Act
16 U.S.C. § 1431 et seq. and 33 USC §1401 et seq. (1988)
www.epa.gov/owow/ocpd/marine.html

National Environmental Policy Act (NEPA)
42 U.S.C. §4321 et seq. (1969)
epa.gov/enforcement/nepa/index.html

National Pollutant Discharge Elimination System (NPDES)
cfpub.epa.gov/npdes/cwa.cfm?program_id=45

Occupational Safety and Health Act (OSHA)
29 U.S.C. §651 et seq. (1970)
www.epa.gov/lawsregs/laws/osha.html

Resource Conservation and Recovery Act (RCRA)
42 U.S.C. §6901 et seq. (1976)
www.epa.gov/lawsregs/laws/rcra.html

Rivers and Harbors Act of 1899
33 U.S.C. 401, 403, 407
el.erdc.usace.army.mil/emrrp/emris/emrishelp5/rivers_and_harbors_acts_legal_matters.htm