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Recommended Citation

Street, Thomas. "Domestic Ocean and Coastal Resource Law and Policy and Climate Change." *Sustainable Development Law & Policy*, Winter 2008, 61-65, 89.

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DOMESTIC OCEAN AND COASTAL RESOURCE LAW AND POLICY AND CLIMATE CHANGE

by Thomas Street*

INTRODUCTION

The United States Commission on Ocean Policy, a Presidentially-appointed panel of sixteen advisers, with genesis in the Ocean's Act of 2000,¹ has noted that “[although] coastal watershed counties comprise less than 25 percent of the land area in the United States, they are home to more than 52 percent of the total U.S. population.”² With such a large percentage of the American population living in or near the coastal zone, it is unsurprising that the value of the coastal and ocean economy is also high. In 2000, the contribution to United States GDP from services and manufacturing from and in the marine and coastal economy exceeded U.S. \$1.1 trillion.³ When the term coastal is taken to its broadest reading to include all coastal watershed counties, the value to the United States from the coastal and ocean economy rises to over U.S. \$5.5 trillion (2000).⁴

The coastal and ocean environment is under great stress from development and resource exploitation. On the “wet-side” of the coastal baseline,⁵ over-utilization of fishery resources, degraded water quality from anthropogenic impacts, and invasive species are the primary, but not sole, stressors.⁶ On the “dry-side,” the coastal environment has largely been impacted from coastal development associated with population growth. With the increasing development of the terrestrial and littoral coastal environment, natural hazards such as hurricanes, tsunamis, and seashore erosion have become serious and growing problems.

Of all the factors impacting the coastal and oceanic environment, perhaps one of the most grave is climate change. It is well-accepted that average global temperatures have risen over the past century. The Intergovernmental Panel on Climate Change (“IPCC”) has “[reported] that the average near-surface temperature of the Earth increased by about 1°F between 1861 and 1990, but is expected to increase by another 2.5–10.4°F by the end of the [21st Century.]”⁷

Global climate change will likely have significant impact upon the U.S. coastal zone and be felt in a number of ways. Perhaps most visible, as a result of an anticipated sea level rise of between four and forty-three inches, the coast line of the

United States may be significantly altered.⁸ As a direct result of climate change-induced sea level rise, “saltwater contamination of fresh-water sources, coastal erosion, damage to natural barriers such as coral and mangroves, and loss of agricultural sites and infrastructure” is likely to result.⁹ In addition, with climate change-induced disruption of chemical, biological, and oceanographic processes in the marine environment as a result of climate change, significant effects upon marine fish stocks are probable. Although not strictly in the coastal zone, climate change will also likely have great impact upon domestic water resource (and associated freshwater fishery) management.

ROADMAP

This Article will focus upon the major federal agencies that have jurisdiction in the United States coastal zone, as well as reviewing their underlying legal mandates. Next, this Article will examine two laws that are of general importance. It will then examine those areas of the law that will likely have particular relevance in terms of and as a result of climate change. This

Article will conclude by briefly assessing how coastal and ocean law and policy is especially relevant in the domestic response to the consequences of climate change in the United States.

FEDERAL AGENCIES WITH A RESOURCE MANAGEMENT INTEREST IN THE COASTAL ENVIRONMENT

Five federal agencies of the United States have a resource management interest in the coastal zone of the United States specifically relevant to climate change: the Army Corps of Engineers (“ACE”), the Fish and Wildlife Service (“FWS”), the Minerals Management Service (“MMS”), the Environmental Protection Agency (“EPA”), and the National Oceanic and Atmospheric Administration (“NOAA”). Of these agencies, the ACE and FWS largely regulate on the terrestrial side of the coastal baseline, with MMS regulating generally in the near-shore marine environment, and NOAA and EPA in both.

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MINERALS MANAGEMENT SERVICE

The MMS has jurisdiction over the energy resources of the Outer Continental Shelf (“OCS”) of the United States. The Outer Continental Shelf Lands Act (“OCSLA”), as amended by the Outer Continental Shelf Lands Act Amendments,¹⁰ provides the pertinent legal authority for offshore oil and gas leases to companies for marine mineral extraction.¹¹ Relatively recently, the Energy Policy Act of 2005 also gave jurisdiction over OCS alternative energy projects to MMS.¹²

Pursuant to OCSLA, the OCS is largely those areas of the marine environment that extend beyond three nautical miles (“NM”) from the coastal baseline. In the case of the Gulf Coasts of Florida and Texas, state jurisdiction extends to three marine leagues, approximately nine nautical miles. Under OCSLA, the federal government is entitled to all revenue from lease sales beyond six NM, with the states receiving twenty-seven percent of such revenues in the three to six NM zone, with a similar protocol, based upon the different jurisdictional boundaries, used for the gulf coasts of Florida and Texas. Pursuant to OCSLA, leasing decisions are required to consider environmental considerations and impacts to fisheries and endangered species.

FISH AND WILDLIFE SERVICE

The FWS manages domestic, largely freshwater, fishery resources, birds, associated habitat, and wetlands. The statutory authority underlying the operation of the FWS is largely found in the Migratory Bird Treaty Act,¹³ protecting birds subject to one of a number of international treaties, the Endangered Species Act,¹⁴ conserving threatened or endangered species and associated critical habitat, and the Fish and Wildlife Coordination Act,¹⁵ which provides a consultation role for the FWS in domestic “water-resource development projects.” The FWS also co-manages marine mammals with the National Oceanic and Atmospheric Administration, with each taking the lead on a number of different species. Other important and relevant laws protecting the coastal environment, involving the FWS, include the Coastal Wetlands Planning, Protection and Restoration Act,¹⁶ which created “national coastal wetlands conservation grants,” allowing for funds to be awarded to states for wetlands conservation projects and also provided for a specific role in wetlands restoration efforts in coastal Louisiana. The FWS also plays a lead role in the Coastal Barrier Resources Act,¹⁷ which created a system of undeveloped barrier islands along the East, Gulf, and Great Lakes coastlines of the United States. This act is especially interesting as it does not preclude development, but forbids any sort of federal assistance, especially federally subsidized hurricane insurance.

Perhaps the most important law providing underlying statutory authority to FWS is the Fish and Wildlife Coordination Act (“FWCA”).¹⁸ Under the FWCA, “whenever the waters of any stream or other body of water are proposed or authorized to be impounded, diverted, the channel deepened, or the stream or other body of water otherwise controlled or modified for any purpose whatever,” by a federal agency or by a private entity as a result of a federal license, the FWS must be consulted “with

a view to the conservation of wildlife resources by preventing loss of and damage to such resources as well as providing for the development and improvement thereof in connection with such water resource-development.”¹⁹ Significantly, the FWCA also requires that the FWS provide recommendations to federal agencies for any proposed “water resource development projects” that they are involved in. These agencies are required to give “full consideration” to FWS’s recommendations.

ENVIRONMENTAL PROTECTION AGENCY

As noted by a commentator, “[o]ne of the most basic divisions in federal water quality regulation is the distinction between point source and nonpoint source pollution. This division derives [by negative implication] from the [Clean Water Act].”²⁰ Although the Clean Water Act (“CWA”)²¹ does have impact in the marine environment, its focus is on domestic terrestrial water quality, with its centrum in point source pollution regulation and with the EPA in a lead role. NOAA, through the Coastal Zone Management Act (“CZMA”),²² has federal responsibility over non-point source regulation, with programmatic authority essentially delegated to the States.

Pursuant to the CWA, a point source of pollution is defined as “any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural storm water run-off.”²³ The characterization of whether or not a pollution source will be considered point or non-point is generally done at where it would first be introduced into United States waters.²⁴

The overarching goal of the CWA is “to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.”²⁵ Pursuant therefore to this goal, the “discharge of any pollutant [into the navigable waters of the United States] by any person [is] unlawful.”²⁶ Under the CWA, the EPA is given responsibility for permits in terms of coastal activities under two programs.²⁷ The first is for Section 404 Secretary of the Army permits, necessary for the release of dredged materials into specific coastal sites in accordance with guidelines jointly created by the ACE and EPA. The Administrator of the EPA is specifically given the authority

to prohibit the specification . . . of any defined area as a disposal site, and is authorized to deny or restrict the use of any defined area for specification . . . as a disposal site, whenever he determines, after notice and opportunity for public hearings, that the discharge . . . will have an unacceptable adverse effect on municipal water supplies, shellfish beds and fishery areas (including spawning and breeding areas), wildlife, or recreational areas.²⁸

The second program is for National Pollutant Discharge Elimination System (“NPDES”) permits, necessary for the discharge of point sources of pollution into navigable waters of the United States.

Although initially vested in the Administrator of the EPA, Section 402 of the CWA provided authority for EPA to delegate to the States the ability to manage their own NPDES programs and issue permits for discharge, under guidelines set by EPA.²⁹ As one commentator has noted, the NPDES permit system essentially provides for

an exception to [the] zero pollution approach [as provided for in the CWA]. Under the NPDES permit program, ‘the Administrator may, after opportunity for public hearing issue a permit for the discharge of any pollutant, or combination of pollutants,’ [into navigable waters] upon condition that the discharger meets all applicable effluent standards under the law.³⁰

Upon delegation to the states, similar authority exists. Under the CWA, navigable waters are defined as “the waters of the United States, including the territorial seas,”³¹ the latter as marked from the low water tidal line.

The breadth of the “waters of the United States” under the CWA has long been controversial. Ultimately known as the “Migratory Bird Rule,” the ACE in 1986 declared it had jurisdiction over intrastate waters and wetlands adjacent to navigable waters that were used, or might be used, as habitat by migrating birds. Over the years, numerous courts have examined this contentious issue. In 2006, the Supreme Court of the United States, in *Rapanos v. Army Corps of Engineers*,³² limited the definition of “waters of the United States” under the CWA to only flowing or standing waters of relative permanence. This restriction has relevance to other laws that relate to the CWA.

ARMY CORPS OF ENGINEERS

Of all federal resource agencies, the ACE has perhaps one of the largest roles in terms of coastal development and its mission is closely related to that of the EPA.³³ Organized into eight national divisions and forty-eight subordinate districts, the ACE has jurisdiction over coastal navigation, coastal dredging, and the discharge of refuse into the navigable waters of the United States pursuant to the Rivers & Harbors Act of 1899³⁴ and its successor, the Clean Water Act of 1972.³⁵ Special emphasis must be placed upon Section 404 of the Clean Water Act.³⁶ This section allows for Secretary of the Army permits providing for the release of dredged materials into specific coastal sites, with such sites chosen in light of guidelines jointly created by EPA and the ACE. The ACE is also specifically given a lead role in protecting and preserving Louisiana’s wetlands in the Coastal Wetlands Planning, Protection and Restoration Act.³⁷

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

In part, the mission of NOAA is to “conserve and manage coastal and marine resources to meet [the United States’] economic, social, and environmental needs.”³⁸ In terms of managing coastal development, chief among the tools utilized by NOAA is

the Coastal Zone Management Act of 1972.³⁹ Recognizing that “[t]he key to more effective protection and use of the land and water resources of the coastal zone is [the encouragement of] the states to exercise their full authority over the lands and waters in the coastal zone . . . [.]”⁴⁰ the Coastal Zone Management Act created a voluntary federal-state partnership for coastal management. Aside from the relatively limited federal financial support available to states who participate in the program, the crux of the partnership is the concept of “federal consistency.”

Federal consistency is a powerful tool that state partners possess to manage development in the coastal zone. There are, in effect, two types of consistency under the CZMA. The first relates to direct federal agency activity,⁴¹ with the second being connected with the issuance of a required license or permit by a federal agency.⁴² In terms of direct federal agency activity, pur-

suant to 16 U.S.C. § 1456(c) (1)(a), federal consistency requires that “[e]ach federal agency activity within or outside the coastal zone that effects any land or water use or natural resource of the coastal zone . . . be carried out in a manner . . . consistent to the maximum extent practicable with . . . enforceable policies of [federally]

approved State management programs.” A second type of consistency applies to federally permitted or licensed activity that “effects any land or water use or natural resource of the coastal zone” by virtue of 16 U.S.C. § 1456(c)(3)(a).⁴³ Under this second type of consistency, a developer must submit certification to a relevant state coastal management agency that a project is consistent with enforceable policies of a federally approved state coastal management program. If a State coastal management agency objects to a project requiring a federal license or permit (arguing that the project is inconsistent with its state enforceable policies), then no relevant federal agency may issue a permit, unless the Secretary of Commerce overrides the objection on one of two policy grounds: “. . . the activity is consistent with the objectives of this [CZMA] or is otherwise necessary in the interest of national security.”⁴⁴

Importantly, the CZMA also provides states with the authority to regulate non-point sources of pollution, noting that:

each State [with a federally approved CZM management program] shall prepare and submit to the Secretary [of Commerce] and Administrator [of EPA] a Coastal Nonpoint Pollution Control Program. . . . The purpose of the Program shall be to develop and implement management measures for nonpoint source pollution to restore and protect coastal waters, working [with State and local partners].⁴⁵

Pursuant to the CZMA each state non-point source pollution program is required to identify and provide for land uses which impact coastal waters, critical coastal areas, governance

The coastal and ocean environment is under great stress from development and resource exploitation.

measures to address problematic land uses and critical coastal regions, opportunities for public input, measures for administrative coordination between state agencies, and the possible modification of coastal boundaries to address the above concerns.

In terms of managing marine fishery resources, NOAA's chief tool is the Magnuson-Stevens Fishery Conservation and Management Act ("MSFCMA"), which created eight regional fishery management councils ("RFMCs"), each responsible for a region of United States waters (generally 3-200 NM). For most domestic marine fishery resources, the councils prepare Fishery Management Plans ("FMPs") in accordance with ten national policy standards.⁴⁶ Pursuant to the MSFCMA, FMPs are also to identify essential fish habitat in "waters of the United States," as defined by the CWA. Essential Fish Habitats ("EFH") are "those waters and substrate necessary to fish for spawning, breeding, feeding or growth to maturity."⁴⁷ Federal law requires that "[e]ach federal agency . . . consult with the Secretary [of Commerce] with respect to any action authorized, funded, or undertaken, or proposed to be authorized, funded or undertaken, by such agency that may adversely affect any ["EFH"] identified . . ."⁴⁸

Due to the amount of coastal development, other activities may also have adverse effects upon EFH. Consequently, all FMPs must identify activities other than fishing that may adversely effect EFH. Broad categories of such activities include, but are not limited to: dredging, filling, excavation, mining, impoundment, discharge, water diversions, thermal additions, actions that contribute to non-point source pollution and sedimentation, introduction of potentially hazardous species, and the conversion of aquatic habitat that may eliminate, diminish, or disrupt the functions of EFH.⁴⁹

Furthermore FMPs must also identify habitat areas of particular concern ("HAPCs"), based upon a number of specific criteria: (1) ecological significance, (2) sensitivity to anthropogenic impact, and (3) sensitivity to impacts from development.⁵⁰ RFMCs are given permissive authority to comment on any federal agency action with adverse effects upon EFH, but are required to do so in regards to anadromous fish habitat under a council's authority. Last, "[f]ederal agencies must consult with NMFS regarding any of their actions authorized, funded, or undertaken, or proposed to be authorized, funded, or undertaken that may adversely affect EFH."⁵¹ In response, NMFS will provide recommendations for conservation. This issue is especially triggered by coastal energy projects, both under traditional power sources (nuclear and fossil-fuel) and renewable sources (hydrokinetic and wind).⁵²

OTHER GENERAL LAWS

There are two other laws of particular relevance to domestic ocean and coastal law and policy and climate change. The first is the Federal Power Act ("FPA").⁵³ The FPA creates a regulatory protocol for the establishment of hydrokinetic power generating stations on domestic navigable waters, defined, for purposes of the Act, as those waters to which Congress' jurisdiction extends under the Commerce Power. Pursuant to this Act, the Federal Energy Regulatory Commission ("FERC") may issue licenses

for the construction and operation of hydrokinetic power generation facilities. In deciding whether or not to issue licenses, FERC is statutorily required to consider several factors, among them, the project's potential power-generating capacity as well as its possible impact upon fishery resources, specifically including fishery habitat. In direct reference to fishery resources, each license is required to include considerations relating to fishery conservation. FPA Section 18 is especially important as it requires that any license granted by FERC contain conditions relating to "fishways as may be prescribed by the Secretary of the Interior [through FWS] or the Secretary of Commerce [through NOAA], as appropriate."⁵⁴ The second law is the National Aquatic Invasive Species Act ("NAISA").⁵⁵ NAISA created a ballast water management program intended to combat the introduction and dispersal of invasive species into United States waters through the creation of voluntary guidelines by the Secretary of Transportation. The act also sponsors research into combating invasive species.

LAWS OF PARTICULAR RELEVANCE TO CLIMATE CHANGE

Although all of the above-examined laws are of significance in terms of climate change, it is this author's opinion that several general legal areas are of the most potential relevance. These will be examined below, with a short explanation of their possible eventual implications.

The first relates to the Energy Policy Act of 2005 and the enhanced role that it provides for the Minerals Management Service. With the advent of climate change, it is likely that coal-powered and other high carbon-emitting power plants will be supplemented and/or eventually replaced by alternative energies such as wind, wave, tidal, ocean current, and solar. As it is well known that wind resources located in the littoral and coastal United States are strong and relatively consistent, that ocean tides are well known and constant, and that broad areas of the coastal zone are subject to strong and continuous wave energy, it is likely that this is an area of strong growth.

The second relates to the Coastal Barrier Resources Act, which although it does not forbid development, prohibits federal assistance on certain barrier islands on the East and Gulf coasts. As climate change-induced sea level rise becomes evermore evident, it is conceivable that this law could become more popular to limit federal expenditures for at-risk barrier islands, and possibly even expanded to include the West Coast.

The third relates to the Clean Water Act, which regulates point sources of pollution. If climate change has substantial effect upon the physical layout of the coastal zone, as some forecast, it is likely that areas of current intense development may be impacted by rising sea levels. It is thus likely that pollution sources that currently do not have interactions with "waters of the United States" may eventually do so by encroaching water lines.

The fourth relates to the Coastal Zone Management Act and is of particular importance. Unlike many of the above-examined laws, the CZMA allows States to plan for and actively manage coastal development, while also regulating non-point sources of

pollution. Under the CZMA, states can adopt coastal management plans, addressing local geographic and physical variations, and can plan themselves for climate change, while forcing federal consistency with federally-approved programs.

The fifth relates to the group of laws that address fisheries and marine resources. Under the Fish and Wildlife Coordination Act and the Magnuson-Stevens Fishery Conservation and Management Act, the FWS and NOAA have a key role in managing freshwater and marine fish, respectively. With climate change, fishery resources are likely to be significantly impacted due to changes in chemical, biological, and oceanographic processes, with a possible large federal response so as to protect food sources as well as biodiversity. In addition, climate change is also likely to have impact upon flow rates of American coastal and continental rivers. Such an impact will also likely have concomitant implications in terms of the Federal Power Act and the conservation/utilization balance between fisheries and power generation. Finally, climate change will also likely have impact

upon the range of marine (and freshwater) species, creating problems in terms of defining the meaning of an invasive species.

CONCLUSION

The coastal and ocean environment is home to extensive development and substantial resource utilization. A number of laws have been created to attempt to manage this development and resource use, under the cognizance of a number of federal agencies. With ever increasing development in the coastal zone and ocean industry, it can be seen that coastal and ocean law and policy is particularly relevant to climate change due to the incredible diversity of resources and uses that are likely to be impacted by rising sea levels and a changing marine environment. With such a large proportion of the American population residing in or near the coastal zone and an ocean and coastal industry worth trillions of dollars, it is clear that this issue is primed to become one of the most pressing of the coming century. 

Endnotes: Domestic Ocean and Coastal Resource Law and Policy

¹ See 33 U.S.C. §§ 857-13 – 857-20 (2000).

² U.S. COMMISSION ON OCEAN POLICY, AN OCEAN BLUEPRINT FOR THE 21ST CENTURY 150 (2004), available at <http://www.oceancommission.gov/documents/welcome.html> (last visited Feb. 26, 2008) [hereinafter U.S. COMMISSION ON OCEAN POLICY].

³ See U.S. COMMISSION ON OCEAN POLICY, *id.* at 31.

⁴ See U.S. COMMISSION ON OCEAN POLICY, *id.*

⁵ Normally the high or low water lines, depending on specific and applicable law.

⁶ Invasive species are also a grave concern in bays, the Great Lakes, and other coastal and interior waterways.

⁷ U.S. COMMISSION ON OCEAN POLICY, *supra* note 2, at 43 (citing J.T. HOUGHTON ET AL. EDs., CLIMATE CHANGE 2001: THE SCIENTIFIC BASIS (2001), available at http://www.grida.no/climate/ipcc_tar/wg1/index.htm (last visited Feb. 28, 2008)).

⁸ See U.S. COMMISSION ON OCEAN POLICY, *id.* at 44. (citing J.T. HOUGHTON ET AL. EDs., CLIMATE CHANGE 2001: THE SCIENTIFIC BASIS (2001), available at http://www.grida.no/climate/ipcc_tar/wg1/index.htm (last visited Feb. 28, 2008)).

⁹ U.S. COMMISSION ON OCEAN POLICY, *id.* at 44.

¹⁰ See 43 U.S.C. §§ 1331-1356 (2000).

¹¹ Much of the OCS is currently under a moratorium on new oil and gas leasing.

¹² See 43 U.S.C. § 1337(p) (2000).

¹³ See 16 U.S.C. §§ 703-712 (2000).

¹⁴ See 16 U.S.C. §§ 1531-1544 (2000).

¹⁵ See 16 U.S.C. §§ 661-667e (2000).

¹⁶ See 16 U.S.C. §§ 3951-3956 (2000).

¹⁷ See 16 U.S.C. §§ 3501-3510 (2000).

¹⁸ See 16 U.S.C. §§ 661-667e (2000).

¹⁹ 16 U.S.C. § 1662(a) (2000).

²⁰ Robin Kundis Craig, *Urban Runoff and Ocean Water Quality in Southern California: What Tools Does the Clean Water Act Provide*, 9 CHAP. L. REV. 313, 318-19 (2006).

²¹ See 33 U.S.C. §§ 1251-1276 (2000).

²² See 16 U.S.C. §§ 1451-1464 (2000).

²³ 40 C.F.R. Part 122.2 (2007); 40 CFR Part 122.3(b)(2007)(excluding “[d]ischarges of dredged or fill material into waters of the United States which are regulated under section 404 of CWA”).

²⁴ See Brad W. Blank, *The Unitary Waters Approach: The Government's Misguided Attempt to Limit the Reach of the Clean Water Act*, 42 SAN DIEGO L. REV. 1259, 1273 (2005).

²⁵ 33 U.S.C. § 1251(a) (2007).

²⁶ 33 U.S.C. § 1311(a) (2000); see also Blank, *supra* note 24, at 1273.

²⁷ See Craig, *supra* note 20, at 333.

²⁸ 26 U.S.C. § 1344(c) (2000).

²⁹ See Craig, *supra* note 20, at 335.

³⁰ Blank, *supra* note 24, at 1268 (internal reference removed).

³¹ 33 U.S.C. § 1362(7) (2000).

³² See 547 U.S. 715 (2006).

³³ See discussion *supra* pp. 62-63 (providing more discussion of the mission of EPA).

³⁴ See 33 U.S.C. § 403 (2000).

³⁵ See 33 U.S.C. §§ 1251-1376 (2000).

³⁶ See 33 U.S.C. § 1344 (2000).

³⁷ See 16 U.S.C. §§ 3951-3956 (2000).

³⁸ About NOAA, National Oceanic and Atmospheric Administration website, <http://www.noaa.gov/about-noaa.html> (last visited Feb. 20, 2008).

³⁹ See 16 U.S.C. §§ 1451-1464 (2000).

⁴⁰ 16 U.S.C. § 1451(i) (2000).

⁴¹ See 16 U.S.C. 1456(c)(1)(A) (2000).

⁴² See 16 U.S.C. 1456(c)(3)(A) (2000).

⁴³ 40 C.F.R. § 930.11(g) (2007) (defining by regulation, in terms of both types of consistency, “effects any land or water use [as] . . . any reasonably foreseeable effect on any coastal use or resource resulting from a Federal agency activity or federal license or permit activity. . . . Effects are not just environmental effects, but include effects on coastal uses. Effects include both direct effects which result from the activity and occur at the same time and place as the activity, and indirect (cumulative and secondary) effects which result from the activity and are later in time or farther removed in distance, but are still reasonably foreseeable”).

ENDNOTES: DOMESTIC OCEAN AND COASTAL RESOURCE LAW AND POLICY *continued from page 65*

⁴⁴ 16 U.S.C. § 1456(c)(3)(A) (2000).

⁴⁵ 16 U.S.C. § 1455b(1) (2000).

⁴⁶ NOAA itself manages highly migratory species such as tunas, sharks, swordfish, and billfish in consultation and coordination with the U.S. Department of State.

⁴⁷ 16 U.S.C. § 1802(10) (2000).

⁴⁸ 16 U.S.C. § 1855(b)(2) (2000).

⁴⁹ 16 U.S.C. § 600.815(a)(4) (2000).

⁵⁰ *See* 16 U.S.C. § 600.815(a)(8) (2000).

⁵¹ 16 U.S.C. § 600.920 (2000).

⁵² *See* Heather Ludemann, *Essential Fish Habitat: What do Council Members Need to Know?* (Oct. 23, 2007), available at http://www.nmfs.noaa.gov/sfa/reg_svcs/Council%20stuff/council%20orientation/2007/2007TrainingCD/TabT-EFH/TABT_EFH_Oct07_ppt.pdf (last visited Feb. 28, 2008).

⁵³ *See* 16 U.S.C. §§ 791-828c (2000).

⁵⁴ 16 U.S.C. § 811 (2000).

⁵⁵ *See* 16 U.S.C. §§ 4701-4751 (2000).