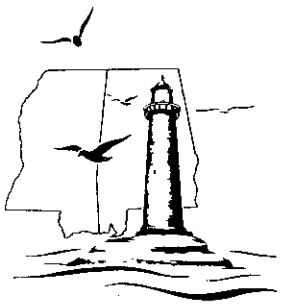
WATER LOG

A Legal Reporter of the Mississippi-Alabama Sea Grant Consortium



ARTICLES

Vol. 7, No. 3 Coastal and Marine Law Research Program July-September 1987

WATER LOG

The *Water Log* is a quarterly publication reporting on legal issues affecting the Mississippi-Alabama coastal area. Its purpose is to increase public awareness and understanding of coastal problems and issues.

If you would like to receive future issues of the WATER LOG free of charge, please send your name and address to: Coastal and Marine Law Research Program, University of Mississippi Law Center, University, Mississippi 38677. We welcome suggestions for topics you would like to see covered in the WATER LOG.

This publication was prepared with financial assistance from the U.S. Department of Commerce, National Oceanic and Atmospheric Administration, Office of Sea Grant (under Grant Number NA85AA-D-SG005), the State of Mississippi, and the University of Mississippi Law Center.

Editors:
Richard McLaughlin
Daniel Conner

Writers:
Mellie Billingsley
Colleen Coffield
Emily Shelton
Melanie Smith
Emily Shelton

University of Mississippi Law Center—University, MS 38677

MASGP-87-012-3

THE RECENT "CONFIDENTIAL" CLASSIFICATION OF NOAA SEAFLOOR MAPS AND ITS EFFECT ON U.S. MARINE SCIENTIFIC RESEARCH POLICY

Introduction

Although more than five years have passed since completion of negotiations for the 1982 United Nations Convention on the Law of the Sea (UNCLOS III), the issue of coastal state control over the conduct of international marine scientific research (MSR) continues to be a source of great concern to U.S. scientists. During UNCLOS III negotiations, the U.S. delegation vigorously opposed any type of legal regime which grants coastal nations the right to withhold consent from scientists wishing to conduct MSR. This was primarily based on a longstanding U.S. view that freedom to conduct international oceanic research benefits all nations.

Despite U.S. efforts, the final treaty contains provisions that place previously unknown constraints on foreign MSR conducted within the 200-mile Exclusive Economic Zone (EEZ). Although UNCLOS III is not in force, many of the legal duties it establishes, including the requirement that a foreign marine researcher must request consent from a coastal state prior to conducting MSR within its EEZ, have generally become an accepted part of international state practice.

On March 10, 1983, in an effort to encourage greater international MSR freedom, as well as provide American marine researchers more secure access to foreign waters, President Reagan issued a policy statement that declared that the U.S. would recognize the legal right of all coastal nations to exercise reasonable controls over American research vessels which work within their EEZs, as generally reflected in UNCLOS III. The statement went on to point out that the U.S. would decline to exercise its own jurisdiction, and would instead invite any organization or nation to conduct MSR within the U.S. EEZ totally free of legal constraints or requirements. By voluntarily refusing to exercise control over foreign MSR within the EEZ, the administration hopes to demonstrate that the U.S. has no fear of foreign research and actually encourages such activity. In theory, other coastal nations will recognize this as a show of good faith and will reciprocate by allowing greater freedom of access to U.S. research vessels.

Recent events, however, such as the decision by the National Security Council to give a "confidential" security classification to the multi-beam seafloor depth contour maps of the U.S. EEZ which are currently produced by the National Oceanic and Atmospheric Administration (NOAA), and the revelation that the Soviet Union has acquired advanced technology necessary to manufacture extremely quiet submarine propellers, may force a U.S. reexamination of this "open-door" policy.

The decision to classify NOAA-produced bathymetric maps places the U.S. in the dubious position of advocating freedom of international MSR, while at the same time restricting a civilian government agency from releasing valuable scientific information because of its military sensitivity. As a consequence, marine scientists of all nationalities who request

NOAA bathymetric data for use in legitimate research will be denied access if they lack the proper security clearance. Yet under current policy, complete freedom will be given to those who wish to conduct their own multi-beam bathymetric surveys of the U.S. EEZ.

Moreover, as the Soviet Union improves its ability to make submarines quieter and more difficult to detect, the threat posed by use of these weapons within U.S. waters will become greater. Additional precautions may therefore be necessary to protect U.S. national security interests fully.

This article argues that present U.S. policy is not accomplishing its intended goal of influencing coastal nations to liberalize access requirements for international MSR. Instead, it is creating confusion while restricting U.S. ability to control even those foreign activities within its EEZ that may have economic or military applications. After a description of the NOAA bathymetric map controversy, the article will discuss the implications of retaining present U.S. MSR policy. It will propose an alternative that should enhance U.S. ability to protect national security without damaging its ability to persuade other nations to liberalize their own controls over MSR.

The Controversy Over NOAA Multi-Beam Bathymetric Maps

Multi-beam swath technology uses multiple sonar beams to map the seafloor much more rapidly than previous sonar systems. Depth contours of seafloor relief can be produced by computer directly aboard a vessel that surveys adjoining swaths at a speed of 10 knots. Using multi-beam technology, bathymetric maps of the entire U.S. EEZ can be obtained with a depth contour resolution of 10-20 meters, and a positioning accuracy of approximately 50 meters. This degree of accuracy is a dramatic improvement over existing bathymetric maps and nautical charts of the edge of the continental shelf and beyond. Position accuracy of these older charts has been estimated to be on the order of 600-1200 meters, and as a result of the wide-beam patterns employed by less advanced sonar systems, false contour readings on steep slopes were common.

Presently, three NOAA vessels employ multi-beam systems. When all three systems become fully operational, the survey rate will be more than 2,500 square nautical miles per month. If NOAA's proposed budget wins approval, six multi-beam equipped vessels will be in operation by 1990, with completion of the survey of the U.S. EEZ scheduled for the mid 1990s. In addition to the NOAA systems, a number of U.S. university-operated vessels are equipped with multi-beam technology, as are more than seventeen foreign vessels. NOAA's original intention was to incorporate available digital data from all existing sources. It intended to make digital bathymetric data tapes accessible to the American public through the National Geophysical Data Center, and to other nations through the World Data Centers operated under the auspices of the National Academy of Sciences.

The Navy and the Defense Mapping Agency first voiced objections to public release of NOAA's multi-beam bathymetric data in early 1984, soon after NOAA began to publicize its EEZ exploration plans. Based upon a series of hearings, which pitted members of industry and academia who

argued for freedom of public access against representatives of the Defense Department who urged restrictions based on national security concerns, the National Operations Security Advisory Committee decided that the NOAA-produced data be given a classification of "confidential." Presently, the Navy and NOAA are negotiating to determine the proper method of degrading or filtering bathymetric data so that it may be released to the public some time in the future.

The Navy has stated that its foremost concern regarding NOAA's bathymetric mapping program is public availability of detailed digitized information that covers the entire EEZ. Should an adversarial nation such as the Soviet Union acquire enough digitized data, it could produce a comprehensive map of sizable sections of the U.S. EEZ which could then be programmed for use in submarine navigation systems.

Modern submarines navigate underwater by use of an on-board inertial navigation system (INS). This system is extremely accurate, with the capability of giving a submarine's captain his position to within 200-300 feet. The submarine's position is then plotted on an electronic navigation chart that contains digitized bathymetric information to determine proper course. Knowledge of exact position is essential when a submarine targets a ballistic missile. Small mis-estimates in firing location of a missile create sizable error in where it ultimately lands.

The accuracy of the INS, however, is dependent upon a series of gyroscopes that tend to drift and lose precision over time. To realign and reset the INS, a submarine must periodically obtain an independent position fix. This usually entails rising toward the surface to receive a signal from an orbiting navigation satellite. During this period, a submarine is much more susceptible to detection than when it is in a deep-dive mode.

A submarine that has access to detailed digitized bathymetric maps could use those maps both as an accurate navigational map, and as a precise method to fix position. If bathymetric data are of sufficiently high resolution, and if underwater topography is sufficiently distinctive, it is possible for a submarine to fix its position and reset its INS without nearing the surface. This would allow the submarine to hide within the EEZ and accurately launch its missiles from difficult-to-detect locations even if all navigation satellites should be destroyed at the outbreak of war. Based upon these concerns, it should not be surprising that the U.S. Navy wants to prevent enemy submarines from obtaining any kind of information that might assist them in their search for an accurate position fix.

Within the context of a conventional or limited nuclear war, the Navy has also registered its concern that detailed bathymetric maps could aid an adversary in other tactical naval operations, such as anti-submarine warfare and mine-laying. Accurate knowledge of bathymetric characteristics such as depth, bottom slope, composition and roughness, could aid an adversary in carrying out acoustic anti-submarine warfare as well as help it to place mines in areas where they would be most effective and least likely to be discovered.

Under current circumstances, it seems unlikely that the U.S.S.R. would openly conduct its own large-scale bathymetric survey of the U.S. EEZ. The time and cost of such a survey as well as the political furor that would

result would seem to preclude such an action, especially at a time when the U.S.S.R. is attempting to improve relations by courting U.S. public opinion. This is not to say that the U.S.S.R. does not already possess a sizable amount of detailed multi-beam bathymetric data or that it is not currently collecting such data in a more covert fashion such as by employing systems installed on military submerged or surface vessels or other types of vessels that travel through or work within the U.S. EEZ.

What Are The Implications of Present U.S. Policy?

It is likely that as a result of the U.S. decision to classify the NOAA data, other coastal nations will view U.S. exhortations about the benefits of unregulated MSR with even more skepticism. The MSR conditions ultimately imposed by coastal nations will undoubtedly continue to reflect a wide variety of political, economic, social, historic, environmental, security, and cultural factors. It seems unrealistic for the U.S. to believe, especially after its decision to classify the NOAA data, that its self-denial of jurisdiction over MSR within its own EEZ should rate particularly high on the list of considerations coastal nations use to determine restrictions on foreign MSR.

Instead, as a result of the U.S. decision to invite other nations to conduct research openly within its EEZ, whatever limited reciprocal leverage the U.S. may have acquired has been eliminated. For example, the Soviet Union has repeatedly denied U.S. research vessels access to its territorial waters or EEZ, yet under present U.S. policy the Soviets can conduct all varieties of MSR within the U.S. EEZ, totally free of U.S. control. For those foreign states capable of conducting research within the U.S. EEZ, no incentive exists based on reciprocity either to allow U.S. vessels into their own waters or to share the results of their research.

Moreover, by sacrificing its ability to place controls on foreign MSR within its EEZ, the U.S. openly encourages all foreign vessels to conduct any type of MSR, including multi-beam bathymetric mapping or other research activities with military or economic applications. The U.S. has no authority to inquire about the type of research being conducted, nor does it have even an advisory role regarding whether or not a foreign research vessel is performing its operations in an environmentally safe manner.

Finally, no foreign vessel that undertakes MSR within the U.S. EEZ is required to share its data or samples with the U.S. This is true regardless of whether the research vessel chooses to notify the U.S. of its plans or whether it works secretly. In the absence of a U.S. requirement to share data or a threat of reciprocal action, a foreign researcher has little incentive to go through the minor inconvenience and expense of duplicating data. One of the major goals of U.S. MSR policy is to acquire as much information as possible about the EEZ by encouraging foreign research. This goal seems ill-served, however, if the U.S. is unable to obtain and use data collected by others.

The Alternative of Notice and Data-Sharing

A preferable alternative to the present "open-door" policy would require that all foreign researchers give notice of their intention to conduct MSR

within the U.S. EEZ, and agree to share all data or samples obtained, if requested. This should satisfy the U.S. goal of encouraging freedom of research, as well as improve its ability to acquire as much information about its own EEZ as possible. At the same time, the data-sharing requirement would allow on-site research verification, which should give some degree of protection against those varieties of MSR that may pose a threat to national security.

This alternative will not damage the U.S. goal of encouraging freedom of MSR because the U.S. has already recognized the international legal right of coastal nations to control MSR as generally provided in UNCLOS III. A simple notice and data-sharing requirement would be inconsequential compared to the extensive package of legal rights the treaty grants to coastal nations, and which the U.S. has already recognized.

Nor can it be argued that a U.S. notice and data-sharing requirement would discourage foreign MSR within the U.S. EEZ. Most foreign scientists with legitimate research interests are quite experienced in functioning under the legal regime created by UNCLOS III. A U.S. requirement of simple notice and data-sharing will not deter any legitimate researcher so long as those requirements are implemented in a fair and flexible fashion.

Only foreign MSR that may be detrimental to U.S. interests will be discouraged. With a notice and data-sharing requirement, the U.S. would not be instituting a consent regime. No request by a foreign researcher would be denied so long as notice is given and data are shared. However, because the U.S. would retain the right to verify the data-sharing provision by boarding all research vessels and inspecting all compartments to make sure that all requirements are being met, the same protective function as a consent regime could be effectuated. Foreign research vessels will be much more reluctant to conduct MSR damaging to U.S. interests because they will probably not want to share that data nor allow U.S. officials access to the vessel for verification purposes. If the U.S. observes a foreign vessel within the EEZ carrying on an activity that may involve MSR, but has not given notice or refuses to share data or allow U.S. officials to board the vessel, it would have legal authority to require that vessel to cease research. If the researcher agrees to share data, the U.S. will gain a better understanding of that nation's intentions and capabilities, and therefore how best to respond.

The requirement of notice and data-sharing need only apply to foreign vessels. U.S. flag vessels such as the academic fleet of the University National Oceanographic Laboratory System, would continue to conduct research within the U.S. EEZ under the present unregulated regime. The U.S. already has the legal authority to exercise jurisdiction over domestic research should it choose to, unlike foreign research. There is therefore no reason to place additional constraints on U.S. researchers.

Conclusion

The U.S. has already formally agreed to recognize a coastal nation's right to regulate foreign MSR as reflected in UNCLOS III, so long as those regulations are applied reasonably. It is clear that the U.S. cannot turn the clock back to a time when no international MSR consent regime existed.

Instead, it must be content to influence evolving customary law by encouraging other nations to apply the UNCLOS III provisions in a moderate fashion. By voluntarily relinquishing its own ability to control foreign MSR, the U.S. is not furthering this goal, but is rather reducing its capacity to protect the nation's security. It is, moreover, in danger of eliminating any opportunity for positive change based on reciprocal action.

A notice and data-sharing requirement for foreign vessels that plan to conduct MSR within the U.S. EEZ will improve the U.S.'s ability to acquire oceanographic information while diminishing the ability of its enemies to acquire information damaging to national security. This action will in no fashion discourage legitimate foreign researchers from working in U.S. waters or diminish its ability to persuade other nations to liberalize their own controls over MSR. By implementing these minor changes, the U.S. can enhance national security with no resulting loss to other policy interests.

Richard McLaughlin

*This issue is developed more fully in a forthcoming article in *Ocean Development and International Law* published by Taylor & Francis of New York. The views expressed herein are those of the author and do not necessarily represent the opinions of the Mississippi-Alabama Sea Grant Consortium or the Mississippi Law Research Institute.

OCEAN WASTE DISPOSAL: POLICY AND ETHICAL CHOICES

Introduction

As inhabitants of the earth, we have four types of environment accessible to us: terrestrial, marine, atmospheric and celestial. When we are faced with the problem of what to do with the waste products of civilization, it becomes apparent that our choices are limited. Either we cut down on the manufacture of wastes, by restraint or recycling, or we dispose of them in one of those four environments. Outer space is accessible to us, but for the moment it is far too expensive to dispose of waste products there. That reduces our choice to land, air or water.

For the purpose of disposal, wastes can be grouped into five types: (1) ordinary solid wastes—what you find in garbage cans and landfills, such as household refuse and construction debris; (2) industrial and chemical wastes, such as pesticides, PCB's or paper mill refuse; (3) dredge spoils—solid materials removed from the bottom of water bodies, usually for the purpose of improving navigation; (4) sewage sludge—solid material left from the treatment of human or animal wastes; and (5) radioactive wastes—either "high-level" or "low-level"—such as what is left from the processing of irradiated fuel elements or nuclear reactor operations. What we call "hazardous wastes" may be found in any of these categories, although they are most often chemical or nuclear. This article will use radioactive wastes ("radwastes") to illustrate the issues involved in ocean waste disposal.

Ocean Dumping

The term "dumping" applies to three methods of disposal: (1) actual physical disposal into the water column, such as what is done with dredge spoils or sewage sludge; (2) emplacement of waste containers in or on the seabed, such as what is proposed to be done with radwastes; and (3) incineration of wastes at sea, such as what has been done with certain hazardous chemicals.

In the United States about 10 percent of all waste products find their way into the ocean. The types of materials thus disposed of range from dredge spoils, which represent about 80 percent of what we dump in the ocean, to radioactive wastes, of which there is currently no disposal in United States waters.

Between 1946 and 1970 some 90,000 drums of low-level radwastes were dumped into the ocean by U.S. vessels, not far from U.S. coasts. The entire quantity dumped in those 25 years is today exceeded every year by European nations which dump radwastes at a single site 550 miles off England. The U.S. virtually abandoned its dumping program in the early 1960s, and nothing whatever has been dumped since 1970. This cessation was due more to economic than safety reasons.

Ocean dumping was not regulated until 1972 when Congress passed the Marine Protection, Research and Sanctuaries Act, 33 U.S.C. §§1401-1444, popularly called the Ocean Dumping Act. The Act prohibits

marine disposal of "high-level" radwastes, but gives the Environmental Protection Agency power to regulate the dumping of "low level" radwastes. The Act was passed to implement the 1972 Ocean Dumping Convention, concluded in London in 1972 and to which the U.S. is a party. 2 U.S.T. 2403, T.I.A.S. No. 8165. Both the Act and Article IV(1)(a) of the Convention prohibit dumping of "dangerous" wastes *into* the ocean and provide for licenses to dump other wastes. Neither, however, prohibits emplacement of wastes *beneath* the seabed.

The historical trend has been to dispose of wastes in ever more remote areas. In New York and New Jersey of a century ago, for example, wastes were simply put into the streets or in a nearby landfill. By the 1890s wastes were discharged into the rivers. Beginning in the 1920s, sewage sludge has been dumped 12 nautical miles off the coast, and within the next 10 years or so both states will dump sewage sludge at a deep-ocean site 106 nautical miles from shore. All reasonable projections expect this trend toward remote disposal to continue.

Policy Analysis vs. Ethical Analysis

If the foregoing is so, it becomes essential to examine more closely the policy and ethical issues involved. A vast body of literature deals with scientific or policy analysis of the issues of deep-ocean dumping. Virtually none exists that deals with ethical analysis.

What is the difference? Policy analysis is different from, and ostensibly does not include, ethical analysis. Policy analysis is concerned with what is possible, expedient, politically attainable and cheap. Ethical analysis is concerned only with what is "right." It is rarely used in official determination of public policy—at least in environmental matters. Instead, it is an individualistic pursuit, usually the domain of persons and organizations that seek to express their opinions on the "morality" of government policy. Indeed, an unusual degree of concern with the "rightness" of a policy decision on the part of a policymaker is often viewed as naive. From the nature of their work, most public officials have come to believe that consensus on ethical choices is rarely possible in a pluralistic society like ours.

Many believe this is the way it should be: the government has no business meddling in people's ethical beliefs or upholding them. Ethical debate is thus discouraged in public meetings, probably because of the widespread but mistaken belief that ethical concerns are necessarily bound up with religion—a taboo in public discussion. Thus, when formal ethical analysis occurs at all in environmental issues, it is done by academics who publish articles in philosophy journals, by members of Greenpeace or similar conservation organizations at their informal meetings, or by scientists who debate ethical choices in the privacy of faculty lounges.

To put it simply, policy analysis is what goes on when decision-makers meet. Ethical analysis is what goes on when those same decision-makers lie awake at night in the privacy of their homes.

Policy Analysis of Ocean Dumping

It is now widely recognized that the ocean is not a single environment,

but rather an interrelated web of biogeographical and physical units, such as estuaries, upwelling zones and mid-ocean gyres. All are vulnerable to human abuse in widely varying degrees. Of all the earth's environments, the open ocean away from the productive continental shelves may be the least vulnerable to the influence of human activity, while coastal and estuarine areas are among the most vulnerable. The open ocean is by far the largest biome in the world, larger than all terrestrial biomes combined. For this reason, if for no other, resource managers will face intensifying pressure to direct waste products and deflect environmental stress away from the coastline to the open ocean.

This will occur for two primary reasons: (1) land-based disposal options will become less available and more expensive; and (2) ocean preservationist organizations like Greenpeace or the Oceanic Society or the Cousteau Society, while articulate and determined, are numerically weaker than advocates of any other type of environment on earth. No one lives in the open ocean, and hence it has no voting constituency.

In recent years some scientists and policy analysts have suggested that we are being overly protective of the ocean at the expense of our groundwaters and our coastal zones. Some believe that the protectionist approach of the 1970s is about to backfire on us, by degrading our coastal resources and our groundwaters as a result. Opinions are strongly divided on the use of the deep ocean as waste space, and the division occurs along several lines of bifurcation.

Dispersion vs. Concentration

Some favor concentration and isolation in the treatment of wastes and others favor its opposite, dispersion or dilution to the point of insignificance. The appropriateness of each view will vary according to the type of waste product under discussion. There is widespread agreement, for example, that in the case of sewage sludge, dispersal is better than concentration. Manure is valuable when spread equably over the countryside, but noxious when gathered in a heap, and some oceanographers believe the same argument applies to the ocean. It is also widely agreed that the opposite is true in the case of radwastes.

Close-monitoring vs. "Final" Disposal

Some advocate disposal of waste products by putting them in the remotest possible place, and others prefer to keep them nearby where we can watch them. Advocates of keeping a close watch on radwastes, for example, tend to favor land emplacement. We don't know enough about the deep marine environment to place any hazardous material there irrevocably, they say. Once we begin to dispose of radwastes thus, the process may not be easily reversible.

Advocates of remote disposal, on the other hand, want to see final and perhaps irrevocable disposal in the remotest possible place. Get it away from people and other life forms, they say. Although we may not know enough about the marine environment to say with absolute confidence that radwaste placed in the deep-seabed will not reach the biosphere, still we know enough about it to conclude that it's the best we can do, the furthest

we can economically get from human activity. As one advocate puts it, "We know more about the plumbing of the oceans than we do about the plumbing of the land."

Important assumptions and costs are buried within each of these views. Deep-sea disposal encourages an "out-of-sight, out-of-mind" mode of thinking, and reduces incentives to restraint and recycling by using what economists call a natural subsidy to internalize the costs of disposal. On the other hand, land-based monitored waste disposal also has hidden assumptions. It may overestimate the stability of governments and civilizations and their ability to sustain the kind of long-term commitment needed for effective monitoring. It externalizes on future generations costs that they may be unwilling to bear.

Ethical Analysis of Ocean Dumping

Environmental ethics is that branch of philosophy which seeks to discover the scope of human duties toward the natural environment. It is a relatively new branch of inquiry, probably invented as a formal discipline in 1949 with the publication of Aldo Leopold's *A Sand County Almanac*. It takes as its starting point the following classic statement from Leopold's book: "A thing is right when it tends to preserve the integrity, stability, and beauty of the biotic community. It is wrong when it tends otherwise." The field now has its own academic journal, in which are published contributions by philosophers, social scientists,lawyers and resource managers. (*Environmental Ethics*, Dept. of Philosophy, University of Georgia, Athens, GA 30602.)

Anthropocentrism vs. Biocentrism

Among environmentalists there is a wide variety of ethical stances. We are all familiar with the division between conservationists who advocate "wise use" of resources and preservationists who would put much of what remains off limits to development. Much debate is also going on about whether environmental values should be "anthropocentric," i.e., human-centered, or "biocentric," life-centered. The biocentric approach to environmental ethics is that advocated by Leopold. It stresses values that preserve and enhance the health of the entire biosphere, *even if necessary at the expense of human economic welfare*. The anthropocentric approach places the collective desires of the human race above everything else. An anthropocentrist can often be identified by the cry of "Jobs!"; a biocentrist by the cry of "Quality of Life!" This distinction is now the chief source of division among those who seek protection of the environment. Resource managers will run into it more and more and should become familiar with the subtleties of each position if they seek to understand public attitudes about resource conservation.

Open Ocean as "Wasteland"

From either the biocentric or anthropocentric view it is easy to argue for the protection of tropical forests, estuaries, coral reefs and other highly productive portions of the earth's surface. Their value to mankind and to the health of the planet is easily demonstrable. Less obvious are the

benefits of protecting relatively unproductive parts of the earth's surface, such as arid deserts or polar icecaps. Yet if the number and content of international treaties and domestic laws now in effect are indicative, a consensus exists that even such unproductive "wastelands" should to some extent be protected for their scientific and esthetic values.

No comparable consensus exists that those parts of the open ocean that are marine "deserts"—remote from human interests, deficient in resources and esthetic value—should similarly be protected from the waste products of civilization. This lack of consensus is well illustrated by the vigorous debate on ocean incineration of hazardous chemicals and on the emplacement of radwastes in the deep-seabed.

On the issue of use of the oceans as waste space biocentrists and anthropocentrists tend to be in agreement. From either point of view, radwastes should be put in the deep-seabed, where they will be remotest from both human activities and life processes. For those who want the deep ocean protected from radwaste disposal, the fracture between opposing points of view runs along other lines.

Who Opposes Deep-Ocean Dumping?

Recently, pressure has been building to reopen the ocean dumping option for radwastes. In 1980 the Navy devised a plan to dispose of aging nuclear submarines at sea. Opposition was fierce, and in 1984 the Navy relented, choosing instead to bury its spent subs on government land.

The question naturally arises: what is there about the deep ocean that environmental groups arise to protest its use in this way? The mid-plate and mid-gyre ocean basins are the most environmentally stable regions on earth. They are geologically quiet and biologically unproductive. They are as remote as any earth environment can get from tectonic activity, erosional currents and human activity. They are as devoid of life as any place on earth except perhaps the polar icecaps. They are covered with thick layers of inert and absorptive clays that would probably act as an effective natural barrier to isolate hazardous wastes buried in them. Deep ocean basins are insulated from climatic change, and they are the least valuable property on earth. What kind of environmentalist would rather see a spent nuclear sub on land rather than in an ocean basin?

The answer to this question, as we have seen, cannot be found in the biocentric/anthropocentric split among environmentalists. From either point of view, the deep ocean is the best possible waste space on earth. The answer also does not come from the dispersion vs. concentration views of waste disposal, for placing radwaste on land sites or within the deep-seabed both necessitate concentration and isolation rather than dispersion.

Instead, the answer seems to come from three sources. One is the policy argument discussed above; it centers on the debate whether it is better to get rid of dangerous wastes by placing them forever beyond our easy reach, or by keeping them close where we can watch them. The other two objections are ethical arguments, and they have little to do with remoteness or nearness to human activities, food chains and life processes. These arguments would oppose deep-ocean disposal of wastes even if

it could be shown that hazards could be effectively contained and no biological communities would be endangered thereby.

The ethical objections fall under two labels: (1) wilderness preservation—the argument that we have a duty to guard against further human encroachment upon natural areas that are now relatively unspoiled by human activity—and (2) "rights" for natural objects—the argument that natural features of the earth have certain "rights" that need to be protected. Those who would apply either of these objections to deep-ocean dumping are as yet a distinct minority among environmentalists.

Wilderness Argument

The first type of environmentalist who opposes deep-ocean dumping is what is ordinarily called a wilderness advocate. They would extend protection not only to productive areas like the Amazon Basin, but also to unproductive areas like the Antarctic icecap and the deep ocean basins. Wilderness advocates are well-known to resource managers and policy-makers, and require no further discussion here.

"Rights" Argument

The other type—those who would recognize moral rights in inanimate objects—are still relatively unfamiliar, and may require discussion. Environmentalists in this category presume the existence of an ethical hierarchy that is unfamiliar to most of us and incomprehensible to some. In the West, we are not used to taking seriously the idea that natural objects may have a moral claim on us. We tend to dismiss that notion as a superstition peculiar to Buddhism, Druidism or American Indian religions.

Everyone agrees that human beings have rights, both legal and moral, although the extent ot those rights is of course open to discussion. Similarly, nearly everyone agrees that higher animals have some limited rights; the law does not allow pets or useful domestic animals to be cruelly mistreated, for example. Cruelty to higher animals is now seen as an offense to the animal rather than to its owner, and most of us grant domestic animals a place in our hierarchy of moral obligations.

For most people, however, this ethical hierarchy stops when we get below Flipper or Snoopy or Smokey the Bear. The consensus disappears when we consider higher animals, like wolves or sea lions, that may directly compete with our interests, or higher animals, such as monkeys or apes, that are useful as laboratory animals. But a solid minority among us believes that certain rights should be extended to competing predators, laboratory animals, lower animals and perhaps even plants. And a smaller but growing minority believes that we should recognize certain rights even in inanimate objects such as rocks or landforms, or in the earth itself—especially in esthetically pleasing or prototypical natural features that are now relatively unspoiled by human activity. If not legal rights, then at least moral obligations toward the environment that transcend economic motives.

Who Favors Deep-Ocean Dumping?

The two positions outlined above are the ethical stances that can be counted on to oppose deep-ocean dumping of any kind. Both oppose the

subjugation of any part of the natural environment to human convenience or economic interests. In favor of deep-ocean dumping are those who think remote disposal of dangerous wastes is best both for humans and for the biosphere. Strict biocentrists would also favor the remote disposal option, except that those with a biocentric orientation tend also to be wilderness advocates, rights advocates, or both.

Conclusion

In 1972 a respected law review published a seminal article by Christopher Stone on environmental law. The article, entitled "Should Trees Have Standing?," 45 *S. Cal. Law Rev.* 450, was widely circulated and discussed. ("Standing" is a legal term referring to whether a party will be recognized in court.) In 1976 it was followed by an article by Scott Reed that carried the pun further, entitled "Should Rivers Have Running?," 12 *Idaho Law Rev.* 153. To be fully consistent, I should title this talk "Should Oceans have Sounding?" except that in this preliminary exploration I am not able to answer the question posed by such a title.

For now, I shall be content to call it to your attention that there are those who hold the ethical viewpoint that natural features of the planet, such as the deep oceans, should be accorded rights in themselves, and that policy-makers and resource managers will more and more have to deal with people who hold this view.

Daniel Keith Conner

This is a shortened version of a talk presented at Coastal Zone '87 in Seattle on May 26, 1987. The fully documented version published in the Proceedings is available upon request, and a guest editorial on the same topic will be forthcoming in CIVIL ENGINEERING in early 1988. The views expressed herein do not necessarily reflect the views of the Mississippi-Alabama Sea Grant Consortium or the Mississippi Law Research Institute.

CASE BRIEF:
NOLLAN v. CALIFORNIA COASTAL COMMISSION
107 S. Ct. 3141 (1987)

Introduction

The Supreme Court in June struck down by a 5-4 margin a California Coastal Commission requirement that permission to build a beachfront home be conditioned on the property owner's granting of a public easement to pass along the beach. While the Court found in *Nollan v. California Coastal Commission* that such a condition would be lawful land-use regulation if it substantially furthered governmental purposes, it held in this instance that the access-easement requirement served no public purpose related to the permit requirement.

Facts

The case arose when the Nollan family exercised an option to buy a leased beachfront bungalow, which had fallen into disrepair. The option was conditioned on their promise to demolish the bungalow and replace it. In order to do so, the California Public Resources Code required them to obtain a coastal development permit from the California Coastal Commission. They proposed to demolish the existing structure and replace it with a three-bedroom house in keeping with the character of the rest of the neighborhood.

The Nollans' beachfront lot lay between two public beach areas. A concrete seawall approximately eight feet high separated the beach portion of the Nollans' property from the rest of the lot. The historic mean high-tide line determines the lot's oceanside boundary. The Coastal Commission recommended that the Nollans' permit to build be granted if they recorded a deed restriction that granted a public easement. The public would then be able to pass across the portion of their property bounded by the mean high-tide line on one side, and their seawall on the other side.

Over a period of years, the Coastal Commission had required similar conditions from 43 of 60 coastal development permits issued along the same tract of land. Of the 17 not so conditioned, 14 had been approved when the Commission lacked administrative authority to require an easement, and the remaining three had not involved shorefront property.

Unwilling to dedicate a public easement across their property, the Nollans filed suit with the Superior Court. They argued that the Commission had violated the Fifth Amendment "Takings" Clause by requiring public access to private property without paying compensation to the owner. Although refusing to rule on the Constitutional issue, the Superior Court agreed with the Nollans on statutory grounds. It held that the Coastal Commission was authorized by the California Coastal Act of 1976 to impose access conditions only where the proposed development would have an adverse impact on public access to the sea. The Superior Court found no showing that the house would burden public access to the ocean, and therefore ruled in favor of the Nollans. It directed that the permit condition be struck.

In an appeal by the Coastal Commission, the California Court of Appeal reversed the Superior Court. It disagreed with the lower court's interpretation of the Coastal Act, and rejected the Nollans' constitutional claim on grounds that the condition did not deprive them of reasonable use of their property. The Nollans then appealed to the Supreme Court, raising only the constitutional question.

Analysis

The Fifth Amendment to the Constitution demands that private property shall not be taken for public use without compensation. Known as the "Takings" Clause, it has been incorporated into the Fourteenth Amendment's due process clause and applied to state governments as well.

Federal courts have held that a governmental body can legally regulate private use of property to some extent, without condemning it and formally transferring title to itself under its power of eminent domain. If regulation goes too far, however, it may be recognized as a violation of the "Takings" Clause. Generally, the government's power to forbid particular land uses in order to advance some legitimate police-power purpose includes the power to imposed conditions on use. So long as the conditions imposed further the same governmental end advanced as justification, certain property rights may be restricted.

Writing for the Court, Justice Scalia stated that one of the principal uses of eminent domain power is to assure that the government is able to require a private party to surrender a property interest, so long as payment is made. In *Loretto v. Teleprompter Manhattan CATV Corp.*, 458 U.S. 419 (1982), the Court further observed that where governmental action results in any permanent physical occupation of the property—by the government itself or by others—courts have uniformly found a "taking" to the extent of the occupation, without regard to public interest or benefit. To require an uncompensated conveyance of the easement would, therefore, violate the Fourteenth Amendment.

Does requiring conveyance of a property right as a condition for issuing a land use permit alter this outcome? The Court has long recognized, as in *Agins v. Tiburon,* 447 U.S. 255 (1980), unlike direct governmental occupation, land-use regulation will not be treated as a taking if it substantially advances legitimate state interests and does not deny an owner economically viable use of his land. A broad range of governmental purposes and regulations have been found to satisfy the requirement of legitimate state interest.

The key legal question before the Supreme Court in *Nollan* therefore became: Does the condition imposed serve public purposes related to the permit requirement? If such a connection is found, then imposition of the easement can be treated as a valid exercise of land-use regulation power. The Coastal Commission argued that these permissible purposes include protecting the public's ability to see the beach, assisting the public in overcoming the 'psychological barrier' to using the beach created by a developed shorefront, and preventing congestion of public beaches. The Court agreed that the Commission would be able to deny the Nollans'

permit outright if their new house impeded any of these enumerated purposes—unless denial would deprive the Nollans of all reasonable use.

The Commission further argued that a permit condition which serves the same legitimate police-power purpose as a refusal to issue the permit should not be found a "taking" if the refusal to issue the permit would itself not constitute a "taking." The Court agreed, stating that the Commission could have attached some condition to protect the public's ability to see the beach—a height limitation or a ban on fences, for example. It also conceded that the Commission's assumed power to forbid construction of the house in order to protect the public's view of the beach must include the power to condition construction upon some concession by the owner that serves the same end.

Upon applying these findings to the facts in *Nollan*, however, the majority failed to understand how a requirement that people already on public beaches be able to walk across the Nollans' property would reduce any obstacles to viewing the beach created by the new house. Nor could they understand how such a requirement lowers the 'psychological barrier' to using the public beaches, or helps remedy congestion caused by construction of the Nollans' new home. The Court found, therefore, that the condition could not be treated as an exercise of its land-use power for any of these purposes. The lack of a demonstrated connection between the condition and the original purpose of the building restriction converted that purpose into something else. Unless the permit condition serves the same governmental purpose as the development ban, the building restriction is not a valid regulation of land use but a "taking." The government must compensate the owner for its use.

Conclusion

It is unclear what practical effect *Nollan* will have on the ability of government agencies to regulate land use in the coastal zone. Justice Brennan pointed out in his dissent that future commissions should have little trouble avoiding a takings problem, if their findings make clear that a provision for public access directly responds to a particular type of burden on access created by new development. In response, Justice Scalia warned that the Fifth Amendment Takings Clause is to be viewed as more than a pleading requirement which can be satisfied through clever wording.

Problems associated with providing beach access to the public will not end as a result of *Nollan*. Our courts will continue to be called upon to use their discretion to decide the proper constitutional balance between the right of the public to unhindered access to beaches versus the right of private property owners to use their property as they see fit.

Emily Shelton

FISHING VESSEL SAFETY IN THE WAKE OF *LASSEIGNE & SONS v. BACON*, 1987 AMC 2251, CIV. NO. 86-490 LE (D.OR, MAY 8, 1987): IS IT TIME FOR A LEGISLATIVE SOLUTION?

Introduction

Lasseigne & Sons, Inc. v. Bacon is the latest in a long line of judicial decisions that expand seamen's rights to receive compensation for injuries sustained as a result of unsafe working conditions. *Lasseigne* held for the first time that, even in the absence of a statutory requirement, lack of a suitable life raft and survival suits for each crew member renders a vessel unseaworthy as a matter of law. Although nonbinding outside of the Oregon District, courts in other jurisdictions may rely on this decision as persuasive authority in finding a vessel owner liable for damages should a crewman die or be injured due to unavailability of a proper life raft or survival suit.

Facts

On November 15, 1985, the 73-foot trawler F/V Lasseigne capsized and sank approximately 20 miles off the Oregon coast. The entire crew of three fishermen were lost. At the time of sinking, the Lasseigne had three life jackets, two webbed life rings, and one survival suit on board. It carried no life raft. Upon discovering that they were taking on water, the crew radioed the Coast Guard and put on their life jackets. A little less than half an hour after the last radio transmission, a Coast Guard helicopter spotted two bodies floating in life jackets near the capsized vessel. Both of the crewmen were flown to a nearby hospital, but all attempts to revive them proved unsuccessful. A combination of hypothermia and drowning caused their death. The third crewman was never found, although it was assumed that he died from the same causes after being trapped inside the vessel's hull.

Lasseigne and Sons, Inc., which owned the vessel, brought suit in federal court for exoneration from or limitation of liability pursuant to 46 U.S.C. §183 (which places monetary limits on an owner's liability under certain circumstances). The representatives of the fishermen's estates filed counterclaims denying the right of Lasseigne and Sons, Inc. to exoneration or limitation, and asserting their right to recover damages for the deaths.

Analysis

Currently, federal Coast Guard regulations do not require fishing vessels to carry lifeboats or survival suits for crew members. The Coast Guard has instead opted for a voluntary safety awareness and education program. Despite the absence of mandatory federal safety regulations, courts have traditionally stepped in and fashioned judge-made maritime law to give remedies to seamen injured or killed as a result of unsafe working conditions.

General maritime law imposes an absolute duty on shipowners to provide a seaworthy vessel. This has been defined as a vessel reasonably fit for its intended purpose. Any hazard or condition that causes a vessel

to be unfit for its intended purpose may render that vessel unseaworthy. A shipowner's liability for an unseaworthy vessel does not depend either on negligence or knowledge of the unseaworthy condition (lack of knowledge may however be a factor in limiting the amount of damages under 46 U.S.C. §183). Although *Lasseigne* is the first decision to hold that absence of survival suits renders a fishing vessel unseaworthy, a number of courts have found vessels unseaworthy because of lack of suitable lifesaving equipment.

In *Walker v. Harris* , 335 F.2d 185 (5th Cir. 1964), a tug sank in the Gulf of Mexico in heavy weather. As the lifeboat was launched, it became swamped and all provisions except three oars were washed overboard because of improper stowage. Two of the four crewmen in the boat died during the four day trip. The court held that the tug was unseaworthy, and stated: "we are of the firm view that with or without statutory requirement and wholly independent of Coast Guard regulations, no vessel putting to sea in the open waters of the Gulf of Mexico on a voyage which will put the ship as much as 12 hours from shore in December is seaworthy unless it has at least one lifeboat suitably equipped." *Walker* at 196. Other courts have similarly held that it lies within a court's discretion to supplement existing safety regulations by mandating conduct prudent under individual circumstances. See, for example, *Grantham v. Quinn Menhaden Fisheries, Inc.,* 344 F.2d 590 (4th Cir. 1965).

In practical terms, judicial decisions that rely on general maritime law to supplement safety regulations should improve vessel safety. They provide notice to vessel owners that they may be held to a higher standard of care than the minimum requirements contained in existing regulations. As a result of the *Lasseigne* holding, many fishing vessel owners who currently do not provide life rafts and survival suits for their crewmen because no regulation requires it may begin that practice in order to avoid future liability.

Relying on courts of law rather than legislative action to provide guidance to the fishing industry on proper safety standards does present problems, however. Courts must necessarily render judgments based upon individual facts presented to them. As a consequence, judicial decisions such as *Lasseigne* may create a rule of law that is appropriate for the case being decided, but that may have broad and unpredictable policy implications. For example, vessel owners and marine insurance companies must make decisions based upon their best determination of existing law and how it may affect potential liability. Effective business planning can be accomplished only if an adequate legal standard by which to gauge future liability exists.

Yet the *Lasseigne* holding fails to establish a practicable standard. It neglects to explain under what circumstances survival suits must be provided to each crew member to assure a seaworthy vessel. It leaves unanswered questions such as when and where the suits may be required, and what is meant by the term "suitable" life rafts and survival suits. Moreover, it is impossible to predict whether courts in other jurisdictions will choose to apply the rule laid down in *Lasseigne* or some lesser standard.

It can therefore be argued that while judicial decisions such as *Lasseigne* improve vessel safety, they also make it more difficult for marine underwriters to predict their losses and adjust premiums on sound actuarial grounds. This in turn exacerbates the growing problems that fishing vessel owners encounter in acquiring affordable marine insurance (for a discussion of this crisis see WATER LOG Vol.6, No.2, April-June 1986).

Legislative Initiatives

Faced with reports of record losses by marine insurance companies, as well as statistics that show commercial fishermen to be seven times as likely to be killed on the job as the national industrial average, Congress has considered several responses. A variety of bills have been introduced over the last two years, all aimed at improving fishing vessel safety and alleviating the marine insurance crisis by making standards more uniform and predictable. Currently, two bills are pending. H.R. 1836, introduced by Mike Lowry (D-WA), calls for an extensive list of required safety equipment including life rafts and survival suits (in northern latitudes), improved crew training, licensing and vessel inspections. H.R. 1841, sponsored by Gerry Studds (D-MA), requires fishing vessels to carry additional safety equipment and to undergo stability tests. In return, the bill prohibits crewmen from filing lawsuits against vessel owners for temporary injuries not caused by owner negligence if medical bills and maintenance payments equal to 80 percent of the crewmen's lost wages are paid.

Two fishing vessel safety bills introduced last year were defeated primarily as a result of opposition to provisions that placed limits on vessel owner liability. Whether this year's bills will fare any better remains unclear at this time. It seems likely, however, that some form of compromise bill will emerge that will require all fishing vessels to maintain at least minimal safety equipment including life rafts and survival suits in colder waters.

Any legislative action that standardizes safety equipment required on fishing vessels should improve overall chances of crew survival in the event of accidents. It may also reduce current difficulties vessel owners face in finding affordable insurance. If safety requirements are made mandatory, fishing vessel owners with good safety records will be less likely to have to pay increased insurance premiums to make up for poor safety practices of others.

Regardless of whether a final bill deals only with vessel safety or also contains some type of limit on vessel owner liability, it should introduce an additional element of predictability into the present legal situation. Today, courts are forced to create widely varying standards of liability because of a lack of legislative guidance. If a vessel safety bill should pass, courts will be required less often to base judgments on discretionary interpretations of the general maritime law (as occured in *Lasseigne*), and more on specific guidelines contained in detailed regulations. Vessel owners and marine insurers would then be better able to predict legal consequences of a violation of the regulations, and plan accordingly.

Conclusion

Passage of vessel safety legislation will not alter the ability of courts to use general maritime law to fill gaps or go beyond minimal requirements contained in safety regulations. A new law will, however, provide additional guidance and consistency to aid courts in decision-making.

Because of the large size and diverse nature of the U.S. fishing fleet, it would be extraordinarily difficult and probably ill-advised to attempt to develop a comprehensive set of safety standards for the design, construction, and maintenance of all varieties of fishing vessels. Instead, it is likely that any vessel safety regulations that may enter into force will address only a few of the more obvious safety concerns. Courts will therefore continue to play a major role in interpreting and supplementing regulations as circumstances warrant.

Richard McLaughlin

RECENT LEGISLATION: ALABAMA

The Alabama Legislature recently passed three bills that affect the environment. All have been signed by the Governor.

Senate Bill 112 (Act No. 87226) provides for the creation and incorporation of the Alabama Water Pollution Control Authority. Effective upon the Governor's signature, June 18, 1987, its purpose is to provide aid to public bodies, including counties, incorporated cities, and state agencies, in financing wastewater treatment facilities. The Authority will establish a revolving loan fund to be operated by the Department of Environmental Management. This fund will be operated under requirements established by the Federal Clean Water Act, 33 U.S.C.A. §§1251 et seq. (West Supp. 1987) See WATER LOG Vol. 7, No. 2, pp. 25-27 (April-June 1987).

House Bill 211 (Act No. 87560) establishes procedures for sacking and tagging oysters taken from Alabama waters for commercial purposes. Effective October 1, the Act provides that all oysters harvested for commercial purposes shall be sacked in burlap or similar materials prior to landing or unloading. A tag must be attached to each sack until sold to the final customer, and must remain intact until the last oyster is removed. At that time the tag must be cut in half and removed from the sack. An empty sack with oyster tags still attached constitutes a violation. Tags may be purchased from the Department of Conservation and Natural Resources for 25 cents each. Proceeds from sale of the tags will be used only for oyster reef improvements.

House Bill 225 (Act No. 87807) amends the Alabama Hazardous Waste Management Act. Effective upon the Governor's signature, August 13, 1987, it clarifies the responsibility of the Alabama Department of Environmental Management in administering the hazardous waste management program and corrects and clarifies portions of the earlier Act. These changes have been made in an effort to make Alabama's statute consistent with federal requirements so that certain portions of the hazardous waste program may be operated in lieu of the federal program.

As amended, the Act now provides that all solid wastes that are hazardous (as defined by the Act) must be managed in accordance with its provisions unless they have been specifically excluded. It excludes from coverage those wastes that have not been specified under the federal Resource Conservation and Recovery Act (RCRA). It also provides that permits for the transportation of hazardous wastes may be issued for periods up to three years. However, the Department has the authority to review and modify a permit at any time, or even revoke it. Nothing in the amended Act limits the authority of the Alabama Department of Public Health to issue its own safety regulations.

Finally, the Act provides that land disposal facilities that qualified for federal interim status prior to November 8, 1984 but that failed to fully comply with the requirements of §3005(e)(2) of the RCRA by November 8, 1985, are not eligible for continued interim status under this subsection.

P. Colleen Coffield

BOOK REVIEW

AND TWO IF BY SEA—FIGHTING THE ATTACK ON AMERICA'S COASTS by Beth Millemann. Coast Alliance, Inc., Washington, D.C., 1986, 190 pp.

This is a citizen's guide to the Coastal Zone Management Act (CZMA) and related federal laws. Only 82 pages long, the book is divided into four sections: (1) Coastal Hazards, (2) Coastal Pollution, (3) Energy and Minerals Development, and (4) Ocean Dumping. Although the size of the book is slight, its importance is not. The author packs it with impressive documentation of what she calls the crisis facing our coasts. Millemann provides tables throughout that identify the controlling law for each issue. Insets display provisions of innovative state management plans as examples for other states to follow. Lastly, she gives a list of sample questions concerned citizens may ask when inquiring about their state's policies on environmental issues.

In her introduction, the author provides a variety of illustrations of each problem identified. In response to these problems, first brought to public attention in the 1970s, Congress passed the Coastal Zone Management Act of 1972. Of the 35 Gulf, Atlantic, Pacific, and Great Lakes states, 29 have had their coastal plans approved by the federal office of Coastal Zone Management, as the CZMA provides.

In the first section of the book, entitled "Coastal Hazards," the author shows how the CZMA and related laws can be used to control thoughtless beach development. The CZMA requires participating states to restrict development in hazardous areas as well as restricting destruction of natural protective features. Inappropriate development of hazardous areas accelerates erosion, causes routine flooding and storm damage, and results in losses of coastal wildlife and fisheries from habitat destruction. Federal flood insurance, designed to control development in exchange for protecting existing communities, ironically encourages development and keeps property values artificially high, according to Millemann.

In 1982, Congress passed the Coastal Barrier Resources Act, which repealed some of the tax incentives for building in hazardous coastal areas. It also prohibited federal spending for construction and flood insurance in certain undeveloped beaches and barrier islands. In the conclusion to this section, the author recommends an even further "retreat from coastal hazard area development" (p. 11) as a national policy.

Entitled "Coastal Pollution," the second section deals not only with pollution, but also with wetlands loss and the devastating effects that a combination of the two produce. Coastal areas are especially susceptible to the effects of pollution because they are "closer to the sources of pollution" and because "their hydrological and physical characteristics often serve as pollution traps, not readily accessible to dispersal." (p. 20) Clean water supports a variety of wildlife and commercially important fish and shellfish. Additionally, unpolluted water is essential for the tourism industry to flourish.

Physical and hydrological modifications caused by dredging and water diversion projects pose still other problems for marine life. Section 404 of

the Clean Water Act requires the Army Corps of Engineers to evaluate the impacts of proposed development projects on wetlands. The Environmental Protection Agency (EPA) can intercede if it finds that the Corps has issued a permit without giving full consideration to all issues. "However, the Corps rarely denies permits and the EPA rarely intercedes." (p. 34) The author recommends strengthening EPA's Near Coastal Waters Strategy and modernizing sewage treatment.

The third section deals with "Energy and Mineral Development." The Outer Continental Shelf (OCS) contains vast biological as well as hydrocarbon and mineral resources. The federal government's commitment "to develop the Outer Continental Shelf at all cost" (p. 50) threatens these biological resources, in the author's view. A former Secretary of the Interior offered one billion acres—virtually the entire OCS—for lease, and his successor has offered the Washington/Oregon coast and Alaska's Hope Basin for the first time.

The Outer Continental Shelf Lands Act (OCSLA) provides for few environmental protections because Congress envisioned very little offshore production when it passed the Act in 1953. The federal government, the author believes, is also attacking through the courts "a state's right, through CZMA, to restrict energy-related development in its coastal zone through protections in its federally approved Coastal Management Program." (p. 43)

In the conclusion to this section, the author states: "Security is not increased by over-producing finite resources at bargain basement process. A coherent national policy for energy production and use is desperately needed." (p. 59) Observing that a national policy of conservation would conserve more oil and gas and minerals than could be extracted from the OCS, she recommends that fuel efficiency standards for cars and appliances be increased to save oil.

The last section of the book concerns "Ocean Dumping." In response to a report by the Council on Environmental Quality, which showed that waste dumping at sea was causing serious environmental problems, Congress in 1972 passed the Marine Protection, Research and Sanctuaries Act or the "Ocean Dumping Act." However, "[w]hile the age of unregulated ocean dumpers by and large has been brought to an end, dumping wastes at sea has not." (p. 64) For example, the dumping of sewage sludge, prohibited after 1981 by the Ocean Dumping Act, continues because "[t]he legal test for determining sludge dumping's acceptability—whether it unreasonably degrades human and marine health—has been expanded to include other factors such as the availability and cost of land-based disposal alternatives." (p. 64)

Dredging generates the largest amount of ocean-disposed materials. These materials are often contaminated with heavy metals and oil, and even relatively uncontaminated dredged materials may "cause damage to marine life as they bury marine organisms and increase the level of suspended sediments." (p. 67) The Army Corps of Engineers issues permits for dumping dredged materials. But, in the author's view, such regulation is meaningless, since the Corps itself generates more than 95 percent of all dredged materials.

In addition, increasing difficulty in locating land sites for radioactive waste disposal has renewed interest in using the oceans as a receptacle. There is also greater interest in ocean incineration to reduce the quantity of wastes, although only eight percent of hazardous wastes generated in the United States can be disposed of in this manner. Waste spills, air pollution, and an end-product possibly more toxic than the unprocessed waste call for close regulation, according to the author.

Millemann notes that the Ocean Dumping Act has been substantially weakened since its passage. She concludes that "humans are turning back to the ocean as receptacles for wastes because sea dumping is less visible, regulated and politically difficult than land disposal."(p. 76) This course of action creates the need for a comprehensive national waste plan. But this need is currently ignored, and "by turning to the seas, the pursuit of better options for reducing, recycling and treating hazardous wastes is avoided." (p. 76)

In conclusion, each section of *And Two If By Sea* provides a comprehensive overview of the named topics and controlling laws, a short summary of the most effective sections from these laws to combat particular problems, and recommendations for a long-term national policy to protect the nation's coasts. *And Two If By Sea* is an excellent introduction to coastal law and policy issues, as well as a practical guide for those interested in becoming involved in decisions that affect the future of our coasts.

Mellie Billingsley

REPLY

Robert P. Jones, Executive Director of the Southeastern Fisheries Association, recently registered his objection to an article written by Robert O'Dell in the last WATER LOG Vol. 7, No. 2, (April-June 1987). The following is a reply submitted in response to an invitation by the editors:

The REDFISH MANAGEMENT UPDATE: STATE MARINE FISHERIES COMMISSION v. ORGANIZED FISHERMAN OF FLORIDA, 503 So.2d 935 (1987) written by a Mr. Robert O'Dell which appeared in the April-June issue of the WATER LOG is unprofessional at best and slanted at worst. Absolutely no balance.

It would appear that Mr. O'Dell is an active member of some militant sports fishing club or is an individual who has decided that commercial fishing for redfish is not a very nice thing to do. His anti-commercial fishing views seem to be very intense.

As one of the people involved from the very beginning in creating the Florida Marine Fisheries Commission, I think I know a little bit more about that group and about the governmental processes here in Florida than Mr. O'Dell.

Mr. O'Dell, like so many others who look at the Florida Marine Fisheries Commission's enabling legislation, misses the point that "use by all the people of the state" is a very important policy statement written into this law and that, within this wording, lie the rights of the non-boating consumers of the State to use and share this renewable marine resource so precious here in Florida. As a matter of fact, Mr. O'Dell didn't even mention these words in his article, even though they are quite prominent in the first part of the law. This is a point that the Florida Governor and Cabinet made in refusing the FMFC's redfish rule. As an aside, we called the redfish rule "Barley's Sausage." The reason we called it a sausage was that former FMFC Chairman George Barley called for making redfish a game fish long before any of the biological, economic, social or environmental considerations were plugged into the system for making a rule. In other words, Mr. Barley knew he wanted a sausage to come out of the grinder before he even put in the ingredients.

Mr. O'Dell's conclusion on page 10 is really what caught my eye, though, but his words fall short of the "deathless prose" one usually hears from the anti-commercial fishing element of our society.

Florida does not have an awkward and cumbersome administrative arrangement. Florida's system is one that should be copied by any fair-minded state. Florida does not vest godlike powers in five or seven appointed men who can make decisions affecting the very lives of commercial fishermen as they do in Texas and other states. We want our important legislative decisions made by elected representatives of the people. Why should an unelected person ever have the final authority over basic rights of humans? Food production is vital to the survival of the nation, and the commercial fishing industry must never be sacrificed so that some other segment of the society can play with the fish at their leisure. Mr. O'Dell

evidently has no comprehension of what it takes to survive in the free enterprise system. The reason I am dwelling on this point is that Mr. O'Dell gave himself away in the last sentence of his article when he talks about the fate of the redfish. Was Mr. O'Dell supposed to be writing a legal article for a respected journal or was he using his position and opportunity to get in his licks on the redfish wars?

I don't think Mr. O'Dell should have written this particular review in the WATER LOG. It might have been better fit in some sport fishing publication and it wouldn't surprise me a bit to come across it some day in that type of magazine.

Space and time will not allow me to give all the background of the redfish wars in Florida and the Gulf, but, suffice to say, we have been in the trenches long enough to smell something that is sick. Mr. O'Dell's update was sick.

LAGNIAPPE
(A LITTLE SOMETHING EXTRA)

The United States Supreme Court has agreed to review *Phillips Petroleum Co. v. Mississippi* (for a discussion of the lower court ruling, see *Cinque Bambini Partnership v. Mississippi*, WATER LOG Vol. 6, No. 3, July-September 1986, p. 12-13). This case will determine whether the state of Mississippi owns certain lands below non-navigable but tidally-influenced inland waters. Oral arguments are scheduled to begin November 9, 1987.

Turtle Excluder Devices (TEDs) will be required on most commercial shrimp vessels, according to the final rule published in the *Federal Register* on June 29, 1987. Phase-in of the TED rule began October 1st. Details of the requirements are available from your Marine Advisory Service. The next issue of WATER LOG will be devoted to a discussion of the TED controversy.

Florida, California, Oregon, Washington, and Massachusetts have filed separate suits in the U.S. Court of Appeals for the District of Columbia against the Interior Department's five-year outer continental shelf oil and gas leasing plan. The states contend that the plan does not adequately balance potentially adverse coastal impacts against benefits of new oil and gas discoveries.

The House of Representatives has approved by a vote of 311 to 93 a bill that would create a 17-member National Ocean Policy Commission. H.R. 1171, sponsored by Walter Jones (D - NC), calls on the Commission to develop a comprehensive national policy for oceans and the Great Lakes. No action has yet been taken on a similar Senate bill recently introduced by Lowell Weicker.

The Environmental Protection Agency has approved four sites in the Gulf of Mexico for dumping of dredged material under a rule proposed on August 10, 1987. Two sites lie off Gulfport, Mississippi, approximately one mile from Ship Island. Another site is located 1.5 miles from Perdido Key, offshore from Pensacola, Florida. The fourth site lies off the coast of Mobile, Alabama, about four miles from Mobile Point.

A draft billfish management plan has been jointly prepared by five Fishery Management Councils. If adopted, the plan would require that only rods and reels be used to catch marlins, sailfish, and spearfish in federal waters. Sale of billfish and billfish products would be prohibited, and the plan would establish minimum size requirements for fish caught. Written comments on the draft plan must be received before November 2nd, and may be addressed to: Gulf Fishery Management Council, Lincoln Center, Suite 881, 5401 W. Kennedy Blvd., Tampa, FL 33609-2486.