

# The Shared Coast



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## INTRODUCTION

On September 20, 2004, the U.S. Commission on Ocean Policy released its final recommendations for a new, comprehensive national ocean policy in a report entitled *An Ocean Blueprint for the 21st Century*. Representing the first comprehensive review of the nation's ocean policy in thirty-five years, the report outlines a strategy for ensuring the ongoing protection and sustainable use of the nation's oceans, coasts, and Great Lakes.

Congress established the Commission in the Oceans Act of 2000. The president appointed its sixteen members from an array of fields including government, academia, business, and industry. The Commission took testimony from scientific experts, elected officials, governmental managers and policy makers, interest groups and the general public. The Commission learned of a variety of threats to coastal areas, including pollution, declining fish populations, habitat loss, and invasive species. Then it set out to develop policy approaches to solve these problems.

The Commission's guiding vision was a "desirable future" in which the nation's coasts enjoy vibrant health while serving a myriad of human needs. The key to realizing this vision is replacing the current hodgepodge of regulation, which is largely based on political boundaries, with ecosystem-based management. Achieving this goal will require developing an ocean policy framework that is coordinated on the national level; getting high-quality scientific data to managers in a form they can use; and educating the public.

The Commission refined these extremely broad ideas into 212 recommendations to Congress, the executive branch leadership, the federal government agencies, regional bodies (such as the fishery management councils), and states. States are to play a strong role in developing and implementing national ocean policy, and state involvement in many of the recommendations may be appropriate. However, the Commission directly recommended specific state action in only seven of the recommendations. These recommendations are reproduced below in their entirety. The first number in each recommendation number represents the chapter in which that recommendation appears.

## THE COMMISSION'S RECOMMENDATIONS TO THE STATES

**Recommendation 5–1.** The National Ocean Council should work with Congress, the President's Council of Advisors on Ocean Policy, and state, territorial, tribal, and local leaders, including representatives from the private sector, nongovernmental organizations and academia, to develop a flexible and voluntary process for the creation of regional ocean councils. States, working with relevant stakeholders, should use this process to establish regional ocean councils, with support from the National Ocean Council.<sup>1</sup>

**Recommendation 5–4.** Pending the creation of a regional ocean council, the governors in each region should select a suitable entity to operate a regional ocean information program that carries out research, data collection, information product development, and outreach based on the needs and priorities of ocean and coastal decision makers.

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1. *An Ocean Blueprint for the 21st Century*, Final Report of the U.S. Commission on Ocean Policy — Pre-Publication Copy 58 (U.S. Commission on Ocean Policy 2004) (hereafter "O.C. Report").



*The entity assigned to carry out the regional ocean information program should:*

- *include representation from federal agencies, state, territorial, tribal, and local decision makers, scientists, as well as experts in information exchange and outreach.*
- *communicate regional research and information priorities to federal agencies and others with ocean and coastal responsibilities to help guide their programs.*
- *maintain strong links with the regional ocean observing systems to help them fulfill regional data collection requirements while adhering to national Integrated Ocean Observing System requirements.<sup>2</sup>*

**Recommendation 11–1.** Congress should amend the Coastal Zone Management Act to create a dedicated funding program for coastal and estuarine land conservation. In addition, a larger share of U.S. Department of Agriculture and other federal agency conservation programs should be directed to coastal and estuarine lands. To guide these programs, each state should identify priority coastal habitats and develop a plan for establishing partnerships among willing landowners for conservation purposes, with participation from federal agency, local government, nongovernmental, and private-sector partners.<sup>3</sup>

**Recommendation 14–2.** The U.S. Environmental Protection Agency (EPA), working with states, should increase technical and financial assistance to help communities improve the permitting, design, installation, operation, and maintenance of septic systems and other on-site treatment facilities. State and local governments, with assistance from EPA, should adopt and enforce more effective building codes and zoning ordinances for septic systems and should improve public education about the benefits of regular maintenance.<sup>4</sup>

**Recommendation 14–3.** The U.S. Environmental Protection Agency (EPA) and the U.S. Department of Agriculture (USDA) should support research on the removal of nutrients from animal wastes that may pollute water bodies and on the impact of pharmaceuticals and other contaminants on water quality. EPA and USDA should also develop improved best management practices that retain nutrients and pathogens from animal waste on agricultural lands. Where necessary to meet water quality standards, states should issue regulatory controls on concentrated animal feeding operations in addition to those required by EPA.<sup>5</sup>

**Recommendation 14–11.** The U.S. Environmental Protection Agency, the National Oceanic and Atmospheric Administration, and other appropriate entities should increase assistance and outreach to provide decision makers with the knowledge and tools needed to make sound land use decisions that protect coastal water quality. State and local governments should adopt or revise existing codes and ordinances to require land use planning and decision making to carefully consider the individual and cumulative impacts of development on water quality, including effects on stormwater runoff.<sup>6</sup>

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2. *Id.* at 63.

3. *Id.* at 131.

4. *Id.* at 169.

5. *Id.* at 170.

6. *Id.* at 179-80.



**Recommendation 19–22.** The National Marine Fisheries Service (NMFS), Regional Fishery Management Councils, states, and interstate fisheries commissions, should develop regional bycatch reduction plans that address the broad ecosystem impacts of bycatch for areas under their jurisdiction. Implementation of these plans will require NMFS to collect data on bycatch of all species captured by commercial and recreational fishermen, not only of commercially important species. The selective use of observers should remain an important component of these efforts.<sup>7</sup>

## ANALYSIS OF THE COMMISSION’S RECOMMENDATIONS

### Recommendation 5-1

Chapter 5 of the report is entitled “Advancing a Regional Approach.” One of the Commission’s proposed instruments of regional management is the regional ocean council. The regional councils will collaborate with the National Ocean Council, which will be a part of the executive branch consisting of cabinet-level secretaries, agency administrators, and others with ocean and coastal responsibilities. The National Ocean Council will direct national ocean policy and coordinate the various federal departments and agencies relevant to that task. The regional councils will perform similar functions on the regional scale, and will provide input to the national council.

The exact composition and duties of the regional councils will be determined by the regional participants. However, the Commission suggests that the regional councils have the following characteristics: (1) ecosystem-based boundaries that encompass, at a minimum, the area between the inland boundaries of coastal watersheds and the offshore boundary of the U.S. exclusive economic zone; (2) the capability to address a wide range of ocean and coastal issues; and (3) a broad membership, including representatives from all levels of government as well as non-government stakeholders.<sup>8</sup> The Commission also expects the regional councils to perform three “core functions”: (1) coordinating responses to regional issues; (2) developing regional goals and priorities; and (3) providing input to the national council.<sup>9</sup>

Recommendation 5-1 relates to the establishment of the regional councils, and in fact contains two distinct but related recommendations. The first is that the national council develop a process to create the regional councils. The second is that the states utilize this process. With respect to the second recommendation the states are clearly at the mercy of the national council, which must act on its recommendation first. Nonetheless, the states could prepare for the eventual establishment of regional councils by taking steps that do not depend on the specifics of the national council’s process.

*Summary of recommended action:* the states should create regional councils after the national council develops the process to do so.

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7. *Id.* at 256.

8. *Id.* at 59.

9. *Id.*



#### Recommendation 5-4

Recommendation 5-4 calls upon the state governors to select a “suitable entity” to operate a regional ocean information program, distinct from the regional council, which will perform a variety of information-related functions.<sup>10</sup> Unlike the regional councils, which cannot be formed until the national council develops the necessary process, the regional ocean information programs can be established immediately.

In its discussion of the regional ocean information programs, the Commission cites the need for improvements in the available information on how the oceans and coastal areas are affected by such forces as nonpoint-source pollution, residential and municipal development, socioeconomic issues, and global-scale processes.<sup>11</sup> Improvement will depend on stronger efforts in the following four areas: (1) research; (2) data collection, monitoring, and observations; (3) development of useful information products; and (4) outreach, education, training, and technical assistance for decision makers.<sup>12</sup> The regional ocean information programs will not be directly involved in research, data collection, and information dissemination. Rather, they will serve to coordinate the efforts of existing governmental and non-governmental institutions.

The Commission specifically cites two examples of organizations that, with minimal modification, could serve as regional ocean information programs: the Regional Associations that serve the Integrated Ocean Observing System (IOOS), and the National Sea Grant College Programs.<sup>13</sup> The Commission notes that the Regional Associations would have to expand their scope beyond observing activities, and the Sea Grant programs would “need to find a mechanism to transcend state and local interests.”<sup>14</sup> While the ultimate decision on the form that the regional ocean information programs take is left to the governors, the fact that the Commission chose to mention the Regional Associations and the National Sea Grant College Programs by name indicates that it is favorably disposed towards selection of those entities.

*Summary of recommended action:* the states should select entities to operate regional ocean information programs.

#### Recommendation 11-1

Chapter 11 of the report is entitled “Conserving and Restoring Coastal Habitat.” The chapter addresses how the degradation of coastal habitat might be ameliorated by conservation and restoration efforts. The Commission mentions a variety of coastal habitats, including mangrove forests, seagrass beds, and coral reefs, but focuses primarily on wetlands.

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10. *Id.* at 63.

11. *Id.*

12. *Id.*

13. *Id.*

14. *Id.*



One of Chapter 11's main themes is that there is insufficient coordination among the public and private entities that currently work, or have the potential to work, in the area of habitat conservation. The Commission's sole direct recommendation to the states in this chapter follows this theme. Recommendation 11-1 begins with an appeal to Congress to take certain steps toward the goal of conserving coastal and estuarine habitat.<sup>15</sup> The Commission anticipates that the states may assist the federal government in this effort by completing two tasks: (1) identifying "priority coastal habitats" for conservation, and (2) developing a "plan for establishing partnerships among willing landowners for conservation purposes" that includes participation from other stakeholders.<sup>16</sup>

*Summary of recommended actions:* the states should

- identify priority coastal habitats
- develop a plan to establish voluntary landowner partnerships

#### **Recommendation 14-2**

Chapter 14 of the report is entitled "Addressing Coastal Water Pollution." The Commission observes that coastal areas are suffering continuing degradation by being "bombarded with pollution from all directions."<sup>17</sup> Negative ecological effects include excessive sedimentation, toxic contamination, harmful algal blooms, and hypoxic (oxygen-poor) conditions such as those in the Gulf of Mexico's notorious "Dead Zone." These ecological problems cause economic losses by, for example, harming aquatic life and triggering beach closures. The Commission proposes that solving the ecological problems will benefit the coastal states' economies.

As it did with respect to coastal habitat, the Commission calls for increased coordination among the various governmental and non-governmental entities that are involved in pollution control efforts. The Commission follows the federal Clean Water Act in distinguishing between pollution from point sources and pollution from non-point sources when making its recommendations. The Commission also considers the effect of airborne pollution, which it refers to as "atmospheric deposition," on water quality. The Commission's recommendations to the states involve only point source and non-point source pollution, however.

The federal Clean Water Act defines a "point source" as "any discernable, confined and discrete conveyance...from which pollutants are or may be discharged" with the exceptions of agricultural stormwater discharges and return flows from irrigated agriculture.<sup>18</sup> "Non-point source" is not explicitly defined in the Act but is generally considered to be any pollution source that is not a point source.

The major difference between point source and non-point source pollution is legal, rather than

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15. *Id.* at 131.

16. *Id.*

17. *Id.* at 163.

18. 33 U.S.C. § 1362(14).



scientific or ecological. Point source pollution is primarily regulated by a permitting system that puts strict limits on the amount of pollutants that may be discharged. The permitting systems are administered and enforced by either the state or federal government. There is no equivalent permitting system for non-point source pollution. Non-point source pollution control efforts depend largely on voluntary programs and incentives, although states have the power to impose additional restrictions.

Recommendation 14-2 addresses pollution from septic systems, which are considered to be point sources. Despite the prevalence of centralized wastewater treatment, residential septic systems continue to serve over a quarter of U.S. households.<sup>19</sup> In coastal states, where the ground is highly permeable and the water table is close to the surface, improperly functioning septic systems can leak pathogens and nutrients into groundwater and nearby surface waters. According to the Commission the key to minimizing this hazard is “to ensure that existing and new septic systems are properly designed, located, constructed, maintained, and inspected.”<sup>20</sup> State and local governments are encouraged to pursue this goal by regulation (building codes and zoning ordinances) and education about the benefits of regular maintenance.

*Summary of recommended actions:* the states should

- adopt building codes and zoning ordinances that encourage and/or require higher-quality, better-maintained septic systems
- enforce those codes and ordinances
- educate the public about the benefits of regular septic system maintenance

### Recommendation 14-3

The Commission declares that animal feeding operations, particularly concentrated animal feeding operations or CAFOs, are “major contributors to coastal water pollution.”<sup>21</sup> The facilities, which produce enormous amounts of manure, introduce excess nutrients, ammonia, pathogens, hydrogen sulfide, methane, hormones, pesticides, and antibiotics to our water and air. As a result, the water quality standards established under the Clean Water Act may be violated.

The EPA defines an animal feeding operation as “a lot or facility (other than an aquatic animal production facility) where the following conditions are met: (i) Animals (other than aquatic animals) have been, are, or will be stabled or confined and fed or maintained for a total of 45 days or more in any 12-month period, and (ii) Crops, vegetation, forage growth, or post-harvest residues are not sustained in the normal growing season over any portion of the lot or facility.”<sup>22</sup> A CAFO is an animal feeding operation that either houses a large number of animals, as defined in the EPA regulations, or is a “significant contributor of pollutants to waters of the United

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19. O.C. Report at 169.

20. *Id.*

21. *Id.*

22. 40 C.F.R. § 122.23.





States,” or both.<sup>23</sup> By 2006 all CAFOs will be regulated as point sources under the Clean Water Act, and accordingly will be required to obtain permits.<sup>24</sup> The Commission foresees the permit requirement helping to ameliorate CAFO pollution but also suggests that states can do more. For instance, states could impose pollution limits on animal feeding operations that do not qualify as CAFOs and thus are not subject to the Clean Water Act permit requirement. States could also improve pollution monitoring and reporting efforts, and require the large animal processing corporations to be co-permittees along with the smaller concerns with whom they have contracted for the actual raising of the animals.

The Commission recommends that the states take steps to regulate CAFO pollution that go beyond what the EPA requires, when water quality standards are not being met. This recommendation implicitly requires that the states first determine the areas where water quality standards are not being met.

*Summary of recommended actions:* the states should

- determine where water quality standards are not being met because of CAFO pollution
- place stronger regulatory controls on CAFOs that are causing violations of water quality standards

#### **Recommendation 14-11**

Recommendation 14-11 concerns non-point source pollution that results from land-use decisions. Poorly planned development can lead to excessive runoff and erosion, which in turn can degrade water quality. Building codes and zoning ordinances are regulatory tools that can be used to foster low-impact development that avoids this pitfall.

The federal Clean Water Act has been the driving force in the improvement of water quality through regulatory means over the past thirty-plus years. The bulk of the Act’s success has been in limiting point source pollution. The federal government has traditionally claimed little jurisdiction over non-point source pollution because much non-point source pollution results from land use decisions, and the power to regulate land use is considered to belong almost exclusively to the states and their political subdivisions. In addition, governments at any level have little enthusiasm for land-use regulation, which is inherently politically controversial because of the perceived infringement on personal property rights.

These concerns may explain the cautious and somewhat tentative nature of the Commission’s recommendations in this area. The direct recommendation the Commission makes to the states in Recommendation 14-11 is quite mild: state and local governments should see to it that effects on water quality are considered when land-use planning decisions are made. (The Commission stops short of recommending that any particular outcome be reached.)

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<sup>23</sup> *Id.*

<sup>24</sup> *Id.*



The Commission cites two resources for state and local governments that seek to improve their land-use regulation. The first is the University of Connecticut's Project NEMO (Nonpoint Education for Municipal Officials), which educates the public about the effects of land use on water quality. The second is the National Estuarine Research Reserve System (NERRS) Coastal Training Program, which "provides scientific information and skill-building opportunities to individuals who are responsible for making decisions that affect coastal resources."<sup>25</sup> Both of these programs involve federal, state, and local governments and organizations.

*Summary of recommended action:* the states should regulate to ensure that the effects of development on water quality are considered when making land-use planning decisions.

### Recommendation 19-22

Chapter 19 of the report is entitled "Achieving Sustainable Fisheries." The Commission continues its general theme of ecosystem-based management with a call for greater consideration of ecosystem dynamics in fisheries management. One of the ways that fisheries management can help to achieve sustainable fisheries is by reducing bycatch, which is the "unintentional catch of non-targeted species by recreational and commercial fishermen."<sup>26</sup> The Commission describes bycatch as "a major economic and ecological problem."<sup>27</sup>

The Commission recognizes that the major obstacle to reducing bycatch is insufficient data. In general, there is comprehensive mortality information available for target species, but not for non-target species. Ecosystem-based management will require better information about *all* species. Data-gathering is expensive, however, and data from foreign vessels may be virtually impossible to obtain.

Unfortunately, the states will probably need additional data to comply with the Commission's recommendation to "develop regional bycatch reduction plans that address the broad ecosystem impacts of bycatch for areas under their jurisdiction."<sup>28</sup> By implication, the bycatch reduction plan cannot be developed until the ecosystem impacts of bycatch are known. The Commission anticipates that NOAA Fisheries, which is implementing the National Bycatch Strategy,<sup>29</sup> will be instrumental in data collection, but does not appear to assign the agency sole responsibility. Nor does the Commission specify the extent to which the states should gather this information. However, it appears that states should have some idea of the ecosystem effects of bycatch before writing their bycatch reduction plans.

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25. O.C. Report at 179.

26. *Id.* at 255.

27. *Id.*

28. *Id.* at 256.

29. For information on the National Bycatch Strategy, please visit <<http://www.nmfs.noaa.gov/bycatch.htm>>.



*Summary of recommended actions:* the states should

- develop a picture of the ecosystem impacts of bycatch in the ocean and coastal waters under their jurisdiction
- write bycatch reduction plans that address those impacts

## RELEVANT STATE GOVERNMENT ENTITIES

The table below connects each of the Commission’s recommendations to the state entities that would logically be responsible for carrying out the recommendation. It may also be desirable to include non-governmental organizations in efforts related to many of these recommendations. The term “local governments” refers to county and municipal governments and their agencies.

The state agency acronyms used in the table are as follows:

### **Alabama**

ACES: Alabama Cooperative Extension System  
ADEM: Alabama Department of Environmental Management  
ADPH: Alabama Department of Public Health  
DCNR: Department of Conservation and Natural Resources  
GSA: Geological Survey of Alabama  
SWCC: Soil and Water Conservation Committee

### **Mississippi**

DAC: Department of Agriculture and Commerce  
DEQ: Department of Environmental Quality  
DMR: Department of Marine Resources  
MDH: Mississippi Department of Health  
MSU: Mississippi State University  
SWCC: Soil and Water Conservation Commission





Recommended action	Relevant state entity or entities (Alabama)	Relevant state entity or entities (Mississippi)	Recommendation number
Create regional councils (after the national council develops the process to do so)	Governor, legislature, local governments, ADEM, DCNR	Governor, legislature, DEQ, DMR	5-1
Select entities to operate regional ocean information programs	Governor	Governor	5-4
Identify priority coastal habitats	ADEM, DCNR, GSA, SWCC	DMR, DEQ, SWCC, Secretary of State	11-1
Develop a plan to establish voluntary landowner partnerships	Governor, local governments	Governor, local governments	11-1
Adopt building codes and zoning ordinances that encourage and/or require higher-quality, better-maintained septic systems	Local governments, state legislature, ADPH, ADEM, SWCC	Local governments, state legislature, MDH, DEQ, SWCC	14-2
Enforce those codes and ordinances	Local governments, ADPH, ADEM	Local governments, MDH, DEQ	14-2
Educate the public about the benefits of regular septic system maintenance	ADPH, ACES, ADEM, SWCC	MDH, MSU Extension, DEQ, SWCC	14-2
Determine where water quality standards are not being met because of CAFO pollution	ADEM	DEQ	14-3
Place stronger regulatory controls on CAFOs that are causing violations of water quality standards	Legislature, local governments, ADEM	Legislature, local governments, DEQ, DAC	14-3
Regulate to ensure that the effects of development on water quality are considered when making land-use planning decisions	Local governments, state legislature	Local governments, state legislature	14-11
Develop a picture of the ecosystem impacts of bycatch in the ocean and coastal waters under their jurisdiction	DCNR	DMR	19-22
Write bycatch reduction plans that address those impacts	DCNR	DMR	19-22



## MEASURES THE STATE AND LOCAL GOVERNMENTS CAN TAKE TO FURTHER THE COMMISSION'S RECOMMENDATIONS

### A. Create regional councils.

As noted above, the actual creation of the regional councils should wait until the national council establishes the process. The states, however, can take action prior to that time so that they are ready to create the regional councils when the national council establishes the process. The states should take the following steps:

1. The state agencies, working with non-governmental organizations if desired, should determine the ecosystem-based boundaries of the regions that will be overseen by the regional councils. These boundaries should at a minimum encompass the area between the inland boundaries of coastal watersheds and the boundary of the U.S. exclusive economic zone.
2. The agencies and the governors, consulting with local governments, should determine which groups are stakeholders in ocean and coastal management. Representatives of these groups should be included on the regional council.
3. The state legislatures should prepare enabling legislation for the regional councils. The legislation should:
  - a. Authorize the participating state agencies to speak on behalf of the state;
  - b. Specify how the representatives from each state will coordinate with those from other states; and
  - c. Provide for any necessary funding.

### B. Select entities to operate regional ocean information programs.

This recommendation, which the Commission explicitly makes to the governors, is self-explanatory. Nonetheless, it is useful to consider the report's guidance as to what the Commission believes will be necessary for effective regional ocean information programs. When making their selections the governors should consider the following factors:

1. The function of the regional ocean information program is coordination, not research.
2. The selected entity should have the ability to coordinate the efforts of existing governmental and non-governmental institutions in the following areas:
  - a. Research.
  - b. Data collection, monitoring, and observations.
  - c. Development of useful information products.
  - d. Outreach, education, training, and technical assistance for decision makers.
3. The entity should have the expertise necessary to work with information about the natural and human-induced forces that affect ocean and coastal areas, including but not limited to the following:
  - a. Nonpoint-source pollution.
  - b. Residential and municipal development.



- c. Socioeconomic issues.
  - d. Global-scale processes.
4. The Commission specifically cited two programs as having the potential to serve effectively as regional ocean information programs: the Regional Associations of the Integrated Ocean Observing System (IOOS), and the National Sea Grant College Programs.

### **C. Identify priority coastal habitats.**

One of the Commission's goals is the conservation of coastal habitat. To facilitate effective conservation, it will be useful to prioritize coastal habitats based upon how badly they need conservation. It would be logical to utilize the expertise of governmental and non-governmental organizations that work in this field, because much of the necessary information may already be available. The relevant state agencies should:

1. Identify and assemble the governmental and non-governmental organizations that have expertise in coastal habitat that would be useful in prioritizing habitats based on the need for conservation.
2. Work with those organizations to identify priority coastal habitats.

### **D. Develop a plan to establish voluntary landowner partnerships.**

After priority coastal habitats are identified, the Commission envisions coastal habitat conservation being accomplished at least in part by the voluntary efforts of landowners working in concert with other stakeholders. To further this recommendation the states should:

1. Identify the owners of the priority coastal habitats.
2. Identify other stakeholders in coastal habitat conservation.
3. With participation from the landowners and other stakeholders, develop a plan to establish voluntary landowner partnerships that will further the goal of conserving coastal habitat. The plan should include:
  - a. Proposal for a legal form for the partnerships, if desired.
  - b. Identification of legal mechanisms to effectuate the will of the partnerships (for example, conservation easements).

### **E. Adopt building codes and zoning ordinances that encourage and/or require higher-quality, better-maintained septic systems.**

The Commission identifies various threats to coastal water quality, including septic systems. The Commission proposes regulation as one method of addressing the problem of pollution from septic systems.



Building codes and zoning ordinances must be written by legislative bodies or administrative agencies with rulemaking power. Other agencies, particularly environmental agencies, and non-governmental entities may be able to provide useful input. The state legislatures and local governments should:

1. Identify local governmental entities that could provide useful input. These could include, for example, local water utilities.
2. Identify non-governmental entities with the knowledge to provide useful input. These could include, for example, plumbers and septic system trade groups.
3. Gather all relevant governmental and non-governmental entities and, using their input, determine why septic systems are malfunctioning and contributing to water pollution.
4. Adopt or revise building codes and/or zoning ordinances that will promote the correction of these problems. Possible characteristics of these codes and ordinances may include:
  - a. Financial incentives for installation of high-quality systems.
  - b. Strict requirements that high-quality systems be installed.
  - c. Limitations on density of septic system placement.

#### **F. Enforce those codes and ordinances.**

New and/or revised building codes and zoning ordinances can be enforced by the same authorities that enforce them now. State agencies and local governments should:

1. Educate their enforcement authorities about the importance of proper septic system functioning.
2. Require enforcement authorities to enforce the new/revised codes and ordinances.
3. Establish penalties for violations that will give septic system owners a strong incentive to properly maintain and/or upgrade their systems.

#### **G. Educate the public about the benefits of regular septic system maintenance.**

It is reasonable to assume that a lack of awareness in the general public about the importance of regular septic system maintenance is part of the reason that septic systems are contributing to water pollution. The following steps should be taken to further the Commission's recommendation:

1. The state health departments and environmental agencies should identify the geographic areas where septic systems are most problematic, and determine how and to what extent the lack of public awareness is contributing to the problem.
2. Based on the findings of the health departments and environmental agencies, the state extension services should create educational materials tailored to correct the deficiencies in awareness.
3. The extension services should identify and utilize the most potentially effective means of distributing the educational materials. These might include:



- a. Public service announcements on radio and/or television.
- b. Print advertisements in local newspapers.
- c. Direct mail to septic system owners.
- d. Inserts in utility bills.
- e. Advertisements in public spaces; for example, billboards, bus stop benches, etc.
- f. Presentations at schools and businesses.
- g. At defined intervals, the extension services should follow up with septic system owners to determine if the educational efforts have been successful.

#### **H. Determine where water quality standards are not being met because of CAFO pollution.**

The Commission indicates that inadequate regulation of CAFO discharges is contributing to water pollution in coastal areas. Addressing this problem effectively will require the marshalling of data that may not be currently available. The state environmental agencies, ADEM and DEQ, are responsible for water quality and should be the lead agencies in this effort. These agencies should:

1. Take an inventory of the CAFOs in their states.
2. Identify the water bodies into which the CAFOs discharge.
3. If adequate data exists, determine whether CAFO-influenced water bodies are violating water quality standards.
4. If adequate data does not exist, make data collection in CAFO-influenced water bodies a higher priority. Until adequate data is collected it should be assumed that water quality standards are not being met.
5. Where adequate data exists and water quality standards are not being met, establish the causal connection between CAFO discharges and water quality violations.

#### **I. Place stronger regulatory controls on CAFOs that are causing violations of water quality standards.**

States and their political subdivisions have the authority to require stricter pollution controls than those required under the federal Clean Water Act. The Act establishes a *minimum* technology-based limit on point source pollution; states may require more, even to the point of entirely prohibiting discharges. States should:

1. Examine their regulatory structures for statutes or regulations exempting any CAFOs from pollution controls; for example, the so-called “right to farm” acts.
2. Require all CAFOs that have been shown to cause violations of water quality standards to utilize, at a minimum, the “best available technology” as defined in the Clean Water Act, 33 U.S.C. § 1311(b)(2)(A) and the corresponding EPA regulations.
3. If the best available technology is inadequate to cure a violation, further restrictions on discharges should be required.
4. If the best available technology and the further restrictions are not sufficient to cure





the violations, the CAFO or CAFOs causing the violations should be entirely prohibited from discharging.

**J. Regulate to ensure that the effects of development on water quality are considered when making land-use planning decisions.**

Land-use planning decisions typically affect water quality by increasing the potential for non-point source pollution. While the issue of non-point source pollution is a difficult one politically, it should be relatively easy to follow the Commission's recommendation because it does not anticipate any particular substantive outcome. All the Commission recommends is that state and local governments pass laws and/or regulations that will require land-use decision makers to consider water quality effects when making their decisions.

The National Environmental Policy Act (NEPA)<sup>30</sup> provides a useful model. It requires federal agencies to determine the environmental impacts of their major actions that significantly affect the quality of the environment. It would not be feasible to implement a program of NEPA's complexity for the purpose at hand, but aspects of NEPA could be emulated.

The environmental impact statement, or EIS, is the primary method by which NEPA ensures that environmental impacts are considered. The EIS includes, among other things, a detailed statement of environmental impacts and alternatives to the proposed action or actions. The alternatives typically undergo cost-benefit analysis. This information is intended to facilitate informed decision-making. NEPA does not require any particular substantive outcome; it requires only that environmental impacts be examined on equal footing with other considerations.

State and local governments can apply NEPA-type principles to the more narrow subject of the water quality impacts of land-use planning decisions. The state legislatures, with input from local governments, should:

1. Create a process for assessing the impact of land-use decisions on water quality, possibly using NEPA § 102 (42 U.S.C. § 4332) as a model. This procedure should include, at a minimum:
  - a. A requirement that adequate data be available before water quality impacts are determined. If adequate data is not available, it should be obtained.
  - b. Determination of environmental impacts of the proposed land-use planning decision, based on the data. This determination should include adverse environmental impacts that cannot be avoided if the proposed action is undertaken.
  - c. Alternatives to the proposed land-use planning decision with a consideration of the costs and benefits of each.
  - d. Mandate that local governments follow this process when making land-use planning decisions.

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30. 42 U.S.C. §§ 4321-4370f.



#### **K. Develop a picture of the ecosystem impacts of bycatch in ocean and coastal waters.**

The Commission considers reduction of bycatch to be a fundamental step towards achieving sustainable fisheries. Bycatch reduction is to be accomplished through regulatory action, in the form of bycatch reduction plans. Effective bycatch reduction plans will require accurate data on both target and non-target species. While target species mortality has been thoroughly documented, more information is needed about non-target species so that the ecosystem effects of bycatch can be better understood. However, the development of bycatch reduction plans should not wait until perfect information is obtained, but should proceed using the best available information. Because commercial and recreational fishers will be instrumental in the data-gathering process, they should be well informed about the process.

With these considerations, the recommended actions fall into two general areas: (1) data collection, and (2) plan development. With respect to data collection, the state marine resource agencies should:

1. Develop and implement an efficient method of collecting comprehensive data on bycatch. In addition to the state marine resource agencies, the following entities should be involved:
  - a. State extension services.
  - b. Commercial fishing organizations.
  - c. Recreational fishing organizations.
  - d. NOAA Fisheries.
2. Increase awareness among commercial and recreational fishers about the importance of gathering information on bycatch. At a minimum, fishers should be told:
  - a. How sustainable fisheries will benefit them.
  - b. Why ecosystem-based management is important for achieving sustainable fisheries.
  - c. Why bycatch reduction is important for achieving sustainable fisheries.
  - d. Why comprehensive bycatch information is needed to accomplish bycatch reduction.
  - e. Exactly what is expected of them in this effort.
  - f. Whom they can contact for information.

#### **L. Write bycatch reduction plans that address bycatch impacts.**

With respect to plan development, the state marine resource agencies should:

1. Utilize all reliable data from state and federal data-gathering initiatives.
2. Using the available data, specifically identify how bycatch affects the ecosystem and is detrimental to fisheries sustainability.
3. Write bycatch reduction plans that are tailored to address these specific impacts. 