
Habitat Hotline Atlantic

Issues of Concern for Atlantic Marine Fish Habitat

June 1996, Issue No. 14



Habitat Managers Workshop Integrates Research, Management, and Communication

Management of Atlantic Coastal Fish Habitat: A Workshop for Habitat Managers was held June 3-6, 1996 in Philadelphia, Pennsylvania. The workshop, which was sponsored by the ASMFC, US Fish and Wildlife Service, NOAA Coastal Services Center, National Marine Fisheries Service Office of Habitat Protection, and Chesapeake Bay Foundation, gave state and federal fish and habitat managers an opportunity to expand their chest of tools for the protection of fish habitat. Formal presentations covered topics from identifying the links between habitat and fisheries impacts to a review of existing/creative tools for habitat management; and, as with any workshop or conference, significant utility surfaced in the form of informal interaction between managers, research scientists and others concerned about protecting fish habitat.

The three primary arenas covered by the workshop included: 1) a review of innovative management tools used for fish habitat conservation, 2) the scientific research necessary for management decision making and research application; and 3) communication and coordination. Innovative management tools discussed, which inspired considerable enthusiasm among managers, included the use of water quality standards to protect the biotic integrity of fish habitat, and fisheries habitat restoration or enhancement projects, including the development of regional restoration plans. A process for the consideration of fisheries impacts in the development of dredging windows for Long Island Sound was discussed, with coastwide implications. Finally, the concept of essential fish habitat as included in Magnuson Act reauthorization language was reviewed. An open ended

evening discussion session provided lively debate and insights from managers as well as the fishermen and environmentalists in attendance.

A number of papers outlining the results of applicable recent scientific research were presented, and included the effects of pollution on fish behavior and reproduction, the effects of the application of agricultural best management practices on estuarine fated polluted runoff, and the effects of pier shading on fish populations, among others. These research results were identified as examples of the kind of information habitat managers require to assist in the decision making process for the permitting of habitat affecting activities; although managers commented that even with clear linkages, habitat protection is not necessarily guaranteed. In addition, a plan reviewing habitat related research for the National Marine Fisheries Service was presented.

Of the take home messages, the one most emphasized was the need for frequent communication between and among those with habitat related concerns. In order to be at all effective, the fragmented nature of habitat management requires communication between the factions of managers including coastal zone, water quality, wetlands, local land-use, fisheries, and researchers and the general public. In order to facilitate communication, a proceedings of the workshop is being prepared, and will be available by the end of the year. Workshop recommendations are also being developed. For further information, contact Dianne Stephan at 202/289-6400.



Legislative Update

President Signs Coastal Zone Management Act

On June 3, 1996 President Clinton signed H.R. 1965, a bill reauthorizing the Coastal Zone Management Act (CZMA). This action comes after Democratic and Republican lawmakers laid down their swords and found environmental legislation they all agreed upon. On April 22 and May 21, respectively, the House of Representatives and Senate unanimously passed H.R. 1965. The bill was introduced by Representative James Saxton (R-NJ) and extends the program through 1999.

The CZMA, administered by the National Oceanic and Atmospheric Administration, is a state-federal partnership aimed at coordinating federal, state and local coastal protection laws. The program encourages states to exercise their authority over their coastal areas by developing coastal zone management programs, which must meet minimal federal standards. To date, 29 of 35 coastal states and territories have developed coastal zone management (CZM) programs. On the Atlantic Coast, all states except Georgia have implemented coastal zone management programs, while Georgia's program is under development.

An important part of the CZMA is the Nonpoint Pollution Control Program, authorized by the Coastal Zone Act Reauthorization Amendments of 1990 (Section 6217). Through implementation

of Section 6217, sources of nonpoint pollution are to be controlled for measurable results. Rather than prescribing specific methods that must be followed to achieve objectives, various best management practices (ways of operating efficiently and prudently to control pollution) are suggested.

Nonpoint source pollution, such as runoff of silt and chemicals from urban streets, agricultural and timber lands, is a significant contributor to some fish and shellfish habitat problems. The Environmental Protection Agency says that pollution from nonpoint sources may exceed that from point discharges. In 1988, the EPA reported that nonpoint sources contributed 65 percent of all contamination in water quality impaired rivers, and 45 percent of the pollution in water quality impaired estuaries.

Changes to the CZMA by H.R. 1965 include increasing, from two to four, the number of annual grants that states can receive to develop coastal zone management programs. The grant program would be terminated after FY 1999 (October 1, 1999). Approximately \$50 million per year are allocated for state grants through FY 1999. H.R. 1965 authorizes the appropriations for grants under the National Estuarine Research Reserve System, as well

as resource management improvement and coastal zone enhancement grants.

H.R. 1965 also allows states to evaluate and facilitate the siting of public and private aquaculture facilities in the coastal zone, which will enable states to formulate, administer, and implement strategic plans for marine aquaculture.

The Coast Alliance, a non-profit group which raises public awareness about coastal resources, said the continuance of the CZMA is important because: "The CZMA is the nation's Granddaddy coastal protection law, the only federal law that is a land-use program. It is through the CZMA that 34 coastal states and territories have drafted or finalized plans to manage coastal resources. These plans include North Carolina's prohibition on construction in erosion zones, and Maine's sea level rise zone in which construction must be small and moveable. These provisions are strong components of state plans, but we know that every state could and should be doing more to aggressively protect and conserve its coastal resources. However, we also know that without the CZMA and the state plans, the framework for improving coastal protection would be gone, with drastic implications for the coasts." *For Further Information Contact: Coast Alliance at (202)546-9554.*

Federal Private Property/Takings Legislation

With the resignation of Senator Bob Dole (R-Kan.) from the Senate, it is unclear whether his bill *The Omnibus Property Rights Act* or "takings" bill, S.605, will go to the Senate floor for a vote. This bill would compensate private interests when their property, or a portion of it, is devalued 33 percent or more as a result of any government regulation. Environmental groups charge that the bill will make it impossible for federal agencies to protect wetlands and habitat for wildlife and endangered species.

The Association of Forest Service Employees for Environmental Ethics recently said this about S.605: "We maintain that environmental laws protect against costly externalities, including the hidden costs of pollution and land development by private landowners. S.605 makes the questionable assumption that environmental regulations restrain landowners from the most lucrative use of their land, thereby constituting a taking. For this reason, S.605 would undermine environmental laws designed to protect the public interest. By ignoring costly externalities, it would leave the burden to pay not on

the polluter but on the public. This is both economically absurd and ecologically disastrous."

On the other side of the property rights issue are groups such as the National Association of Homebuilders, which claim that environmental regulations are overly restrictive.

Clean Water Act Reauthorization

Prospects for a full reauthorization of the Clean Water Act (CWA) in the current Congress appear remote. Even if the Senate Environment and Public Works Committee is able to report out a bill, there is limited time left in the session to strike a compromise package with the House, which passed its Clean Water Reauthorization bill, H.R.961, in 1995.

Reports are that Representative Walter Jones (R-NC) will likely introduce legislation dealing only with the mitigation banking aspects of the CWA's Section 404 (wetlands) program. Environmental groups have expressed concern about numerous provisions contained in a draft of the bill.

FISHERIES AND POLLUTION 1996

The Second Annual Conference on Population-Level Effects of Marine Contamination

November 8-9, 1996

Bodega Marine Lab, Bodega, California

The following environmental quality issues will be covered in the context of population-level effects and fisheries management:

Habitat quality. The processes influencing fish populations are complex and poorly understood. Environmental managers have begun to appreciate the role habitat plays in fish populations, and the relevance of habitat quality to fisheries management this session will focus on the link between habitat quality and fishery resource health.

Biomarkers. There is growing interest in evaluating the usefulness of biomarkers in monitoring population health, and in ecological risk assessment. Studies have begun to suggest that biomarkers can be related to toxicity endpoints. Improvements in the understanding of biomarker responses are needed to assess the linkages between biomarkers and adverse effects in individuals, populations and ecosystems.

Policy, management and communication. The need for better communication between scientists and policy-makers was a major concern voiced at the 1995 Fisheries and Pollution conference. This session will be devoted to exploring the transfer of scientific information to environmental managers and other interested parties. Scientists will be able to speak in some depth with — not just about — those who make resource management decisions and rely on scientific information.

PROGRAM

Keynote

Jonathan Cannon, General Counsel, EPA

OVERVIEWS

The Science. Volkert Dethlefsen, Federal Research Board Fisheries, Cuxhaven, Germany

The Management. Paul Sandifer, Division of Marine Resources, South Carolina Department of Natural Resources

HABITAT QUALITY

Habitat Quality, Environmental Perturbations, and Fishery Populations: Are Linkages Measurable and Quantifiable? David Engel, National Marine Fisheries Service Beaufort Laboratory

Combined Urban Impacts to Small Estuaries in South Carolina. Thomas Siewicki, Charleston National Marine Fisheries Service Laboratory

Habitat, Fisheries Management and Fishermen. Nat Bingham, Pacific Coast Federation of Fishermen's Associations

Ecological Risk Assessment: An Emerging Approach to Managing Fisheries? Robert Lackey, EPA Environmental Research Laboratory, Corvallis

BIOMARKERS

Genotoxic Biomarkers and their Relation to Ecology and Resource Management. Susan Anderson, Lawrence Berkeley Laboratory

Contaminants and Fishes: Effects on Neurotransmitters, Behavior and Ecology. Implications for Management. Judith Weis, Rutgers University

Biomarkers as Predictors and Indicators in Shellfish Populations. Erik Rifkin, Rifkin and Associates; James Clegg, Bodega Marine Laboratory; Daniel Grosse, Rifkin and Associates

Utility of a Biomarker Approach in Ecological Risk Assessment. Tracy Collier, Northwest Fisheries Science Center, National Marine Fisheries Service

POLICY, MANAGEMENT AND COMMUNICATION

What Information Do Environmental Decision-Makers Need?

Margaret Davidson, NOAA Coastal Services Center

Habitat, Public Policy and Scientific Communication. Bill Dietrich, The Seattle Times

Pollution Effects in Florida Bay: Scientists, Fishermen, the Media and Decision-Makers. Heather Dewar, Knight Ridder News (invited)

Environmental Information, Ecological Risk and Public Policy. Dail Brown, Office of Habitat Conservation, National Marine Fisheries Service

A Sociological Perspective. Marc Miller, School of Marine Affairs, University of Washington

Workshop Sponsors: Rifkin and Associates, NOAA Coastal Services Center, National Marine Fisheries Service, California Sea Grant, University of California, Bodega Marine Laboratory, and the Atlantic States Marine Fisheries Commission

For further information, contact Daniel Grosse, Rifkin and Associates, Suite 2332, World Trade Center Baltimore, 401 East Pratt Street, Baltimore, Md. 410-962-1401. Internet: dgrosse@access.digex.net

Federal Government Proposes Sand Mining off New Jersey Coast

Comments due July 20

The federal government is seeking comments on a proposal to allow gravel and sand mining on the ocean floor off the New Jersey coast. There are already a number of companies interested in offshore mining of these minerals; however, New Jersey commercial fishermen are concerned about impacts to local surf clam and ocean quahog fisheries.

The area under consideration includes a tract from Surf City north to Sandy Hook, beginning three miles offshore and extending seaward for up to 45 miles. This area has been identified in the past by federal fishery scientists as susceptible to quahog and clam stock depletion.

According to a spokesperson for the Department of the Interior's Minerals Management Service, the proposed sand sale is the first ever for federal waters of the Atlantic. The

Service is seeking comments on the proposal in part to learn more about the ecological importance of the area. Since this is a new venture, it is anticipated that an environmental impact statement (EIS) will be prepared, rather than the less detailed environmental assessment. Officials from MMS stated that it often takes a year or more to put together an oil or gas lease sale, and the timeline is expected to be the same for sand mining projects. Proceeds of the sale go to the U.S. Treasury, and may be used to offset the federal budget deficit.

Fisheries impacts from sand mining are discussed in a feature article in Issue No. 12 of *Habitat Hotline Atlantic*. A list of references is also included.

Written comments on the federal proposal should be submitted to: *Minerals Management Service, 381 Elden Street, Herndon, VA 22070-4817*. Faxed responses may be sent to: *703/787-1284*. **The comment period closes on July 20, 1996. For further information, call the Minerals Management Service at 703/787-1300.**

American Fisheries Society Sponsors Symposium on Estuaries

The annual meeting of the American Fisheries Society will be held August 26-29, 1996 in Dearborn, Michigan. One of the symposia featured at this meeting will focus on estuarine related management and research. The symposium, entitled *Economics, Ecology and Ethics: Estuaries as Nexus*, will be held on Thursday, August 29. Many of the scheduled papers, which are listed below; have direct implications for the management of fish habitat.

Reversal of Fortune? Lessons for Estuarine Management from the Decline of Salmon in New England, California and the Pacific Northwest, by Michael Black, San Francisco, CA.

Interaction of Science, Engineering and Policy in California's Sacramento-San Joaquin Estuary, by Bruce Herbold, USEPA, San Francisco, CA.

The Copper River Delta Project: Putting the Theory of Sustainable Development to Work, by Riki Ott, Alaska Clean Water

Alliance.

Salmonid Ecology within the Klamath Economic Zone, by R.L. Garret, Klamath Falls, OR and Allen Cooperider, Ukiah, CA.

Contaminant Effects on Estuarine Macrobenthos, by Donna D. Turgeon, Bioeffects Assessment Branch, Ocean Resources Conservation and Assessment, NOS/NOAA.

A Habitat at Risk: Productivity of Coastal Marshes for Fishery Species and Potential Impacts of Oil Spills, by Thomas J. Minello and Lawrence P. Rozas, NMFS.

Habitat Preference of Fish in Mid-Atlantic Estuarine/Coastal Systems, by Mark E. Monaco, NOAA, Stephen B. Weisberg, VERSAR, and Tony A. Lowery, NOAA.

Trophic Impacts of Introduced Invertebrates on Estuarine-Dependent Fishes, by Gonzalo C. Castillo, John W. Chapman

Hiram W. Li, Oregon Cooperative Fishery Unit, Oregon State University, and Todd W. Miller, Humboldt St. University.

Changes in Elevation and Vegetation Over Time in a Restored Wetland as Measured with a Total Station Geographical Positioning System (GPS), by Blake Feist and Charles A. Simenstad, University of Washington.

Identifying Organic Matter Sources that Support Fishes of Southern California Estuaries Using Stable Isotopes and Implications for Restoration, by Thomas J. Kwak, Arkansas Cooperative Fish and Wildlife Research Unit, Univ. of Ark., Joy B. Zedler, Pacific Estuarine Research Laboratory.

Ethics and Estuaries: Tough Choices for Professional Biologists, Bruce M. Kahn, SBI/ESA, Deborah A. New, BLM, and Stephen M. Waste, NMFS, NOAA.

International Conference on Shellfish Restoration: *Improving the Health of Coastal Ecosystems through Shellfish Restoration*

The International Conference on Shellfish Restoration (ICSR '96) will focus on the restoration of molluscan shellfish and their habitat. Often referred to as "the canary in the mine shaft" or "the tip of the iceberg," shellfish and the waters they populate serve as excellent indicators of environmental health.

Molluscan shellfish are sedentary filter feeders and consumed raw in many cultures. Harvest may be regulated when concentrations of bacterial or viral pathogens in waters or shellfish meats exceed safe levels, when blooms of toxic dinoflagellates occur within water bodies, or when harmful levels of toxic chemicals, heavy metals and hydrocarbons are measured in sediments and meats. Harvest restrictions are an indication that the quality of these environments are compromised and the waters may be unsuitable for other marine life or human activities. Loss of shellfish beds can also directly impact finfish populations, as certain types of shellfish (i.e. oyster reefs) provide vital habitat.

This international conference will provide an ideal opportunity for government officials, resource managers, local residents and industry representatives from the United States, Canada, Europe, New Zealand, Japan and many other countries to discuss approaches to improve the health of coastal ecosystems through shellfish restoration.

Sessions will be organized around the three general themes for the conference:

- Shellfish Habitat Assessment and Restoration
- Shellfish Stock Enhancement, Management and Restoration
- Shellfish/Habitat Remediation through Watershed Management and Pollution Abatement

Examples of topics which may be covered in each session include:

- A. Shellfish Habitat Assessment and Restoration**
1. Shellfish reef development-technical and

- analytical approaches
2. Constructed wetlands for shellfish habitat restoration
3. Linkages between shellfish habitats and estuarine ecosystems
4. Shellfish/habitat restoration through water quality management

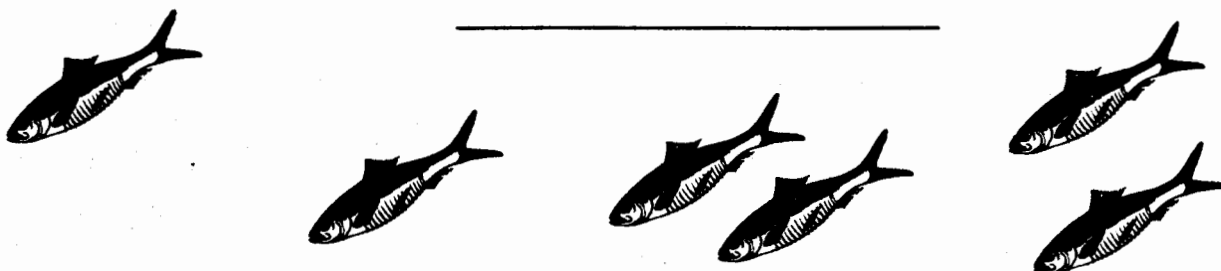
B. Shellfish Stock Enhancement, Management and Restoration

1. Relationship of fisheries management to shellfish stocks
2. Use of relaying in shellfish management
3. Role of hatcheries and remote sensing in stock restoration
4. Public enhancement of shellfisheries
5. Role of aquaculture in shellfish stock enhancement
6. New technologies, equipment and techniques

C. Shellfish/Habitat Remediation through Pollution Abatement and Watershed Management

1. Land use planning to protect water quality, improve habitat and enhance fisheries
2. Innovative coastal zone management techniques, e.g. (non-point cleanup, best management practices, stormwater controls and wildlife management)
3. Innovative technologies to treat point and non-point sources of pollution
4. Improved indicators of water quality to protect human health and assess habitat degradation
5. Socio-economic factors affecting shellfish/habitat remediation

If you are interested in convening and organizing special panels or case study analyses in any of these theme areas, or would like information about submitting an abstract, contact Rick DeVoe, SC Sea Grant Consortium, 287 Meeting Street, Charleston, SC 29401, Phone: 803/727-2078 FAX: 803/727-2080 EMAIL: devoemr@mus.edu



Atlantic States Marine Fisheries Commission
1444 Eye Street, NW, Sixth Floor
Washington, DC 20005

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Dianne Stephan
Editor

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