
HABITAT HOTLINE ATLANTIC

Atlantic States Marine Fisheries Commission

Summer 2008, Volume XV, Number 2



Please Pass the Fish

ASMFC Hosts Workshop on Fish Passage Issues Impacting Atlantic Coast States

Why is the Commission Concerned About Fish Passage?

Millions of artificial barriers have been constructed along the Atlantic coast to impound and redirect water for irrigation, flood control, electricity, drinking water, and transportation—all altering natural features of rivers and streams. Recently, many Americans have become increasingly concerned about effects of impoundments on fish and other aquatic species. Many dams are obsolete and no longer serve their original purpose. In many cases, these impoundments serve as a barrier to fish

migration, which is fundamental to the life history of many species. As a result, some populations of native fish are gone and others are on the brink of disappearing.

The Commission is particularly concerned about the migrations to spawning habitat for Atlantic sturgeon, American shad, hickory shad, alewife, blueback herring, and striped bass, and migrations to long-term growth areas for American eel. Without access to these habitats, it will be very difficult to restore populations of these very important diadromous species.

Workshop Overview

On April 3 & 4, 2008, the Atlantic States Marine Fisheries Commission (ASMFC) held a workshop for Commissioners and Technical Committee members on fish passage issues impacting Atlantic coast states. The workshop was held in Jacksonville, Florida. The goals of the workshop were:



Source: A. Haro

(continued on page 2)



(continued from page 1)

1. To initiate development of an ASMFC fish passage protocol that can be applied by the states when addressing future passage issues.
2. To provide a summary of current fish passage technologies and techniques to Commissioners and Technical Committee members.
3. To provide a forum to discuss recent experiences with dam re-licensing and potential future ASMFC/state involvement.
4. To discuss species-specific fish passage concerns and solutions.

This workshop began with George Lapointe, Commission Chair, introducing these concerns, and noting that for some species, fish passage improvement might be the only option to help advance their recovery. Following the opening remarks, a series of presentations were given on a variety of topics (see below).

Throughout the workshop, opportunities were given for discussion of the issues presented, and development of recommendations (32 total; see page 5 for a few examples) to be brought before the Commission's Interstate Fisheries Management Program (ISFMP) Policy Board. The workshop was very successful, with participants gaining and sharing knowledge on how to improve the fish passage situation along the Atlantic coast.

Listing of Presentations

Session 1. Background on fish passage, focusing on ASMFC managed species

1. **State of the Art of Fish Passage** by Steve Gephard: Brief talk on the common designs for fish passage available today (e.g., dam removal, pool-and-weir, roughened chutes, elevators, nature-like, trap & truck, eel passes) and downstream passage structures.
2. **Fish Passage Concerns for Striped Bass** by Wilson Laney: Overview of the fish passage designs that work for striped bass, and those that do not. Also covered specific challenges in passage of striped bass. Examples were given of successful and unsuccessful passage projects.
3. **Fish Passage Concerns for Shad and River Herring, Atlantic (and Shortnose) Sturgeon, and American Eel** by Alex Haro: Overview of the fish passage designs that work for shad and river herring, Atlantic sturgeon, and American eel, and those that do not. Also covered specific passage challenges. Examples were given of successful and unsuccessful passage projects.
4. **General FERC Process** by Mark Pawlowski: Overview of how hydroelectric projects are licensed and re-licensed, what the prescriptive powers are of USFWS and NMFS, how state agencies are consulted and interact with the federal agencies, and what are options for involvement.



Source: A. Haro

Session 2. Summary and Experiences with the FERC Re-licensing Process

4. **General FERC Process** by Mark Pawlowski: Overview of how hydroelectric projects are licensed and re-licensed, what the prescriptive powers are of USFWS and NMFS, how state agencies are consulted and interact with the federal agencies, and what are options for involvement.

5. **Federal FERC Experiences from the Northeast** by Melissa Grader: Built upon the previous descriptive talk to discuss experiences with FERC in the northeast over the years, including what works and what does not. Speaker also discussed the advantages of watershed management plans prior to FERC licensing, the advantages of having multiple interveners, how multiple state agencies get involved, how NGOs get involved, where 401 Clean Water Certifications come into play, pre-licensing agreements among parties, evaluation studies, etc.

6. **Federal FERC Experiences from the Southeast** by Prescott Brownell (Wilson Laney coauthor): Built upon the previous talk to discuss NMFS and USFWS experiences with FERC in the southeast over the years, including what works and what does not.

7. **Federal FERC Experiences from the West Coast** by Steve Edmondson: Built upon the previous talk to discuss NMFS experiences with FERC in the west over the years, including what works and what does not.

8. **FERC Case Studies: Kennebec River** by Gail Wippelhauser

9. **FERC Case Studies: Connecticut River** by Melissa Grader

10. **FERC Case Studies: Susquehanna River** by Mike Hendricks

11. **FERC Case Studies: Santee-Cooper River** by Prescott Brownell

12. **Federal Perspective on Non-Hydro power Dams** by John Catena: Overview of program, process, and examples of passage on non-hydropower dams along the East Coast from a federal perspective through voluntary projects.

13. **State Perspective on Non-Hydropower Dams** by Steve Gephard: Overview of program, process, and examples of passage on non-hydropower dams along the East Coast from a state perspective-both through the Connecticut regulatory process and through strictly voluntary projects.

14. **NGO Perspective on Non-Hydropower Dams** by Brian Graber: Overview of program, process, and examples of passage on non-hydropower dams along the East Coast from a NGO perspective-both through the regulatory process and through strictly voluntary projects.

Session 3. ASMFC/State Involvement in Improving Fish Passage

15. **Projects on the Horizon** by Alex Hoar: Map of upcoming FERC relicensings and discussion of projects in progress, including an overview of fish passage work at the Conowingo Dam on the Susquehanna River, Maryland.



Source: A. Haro

(continued on page 4)

Session 4. Technical Issues Surrounding Passage of American Eel

16. Presentation on Barrier Effects on American Eel Populations by Leonard Machut: An examination of the ability of American eel to pass barriers in tributaries of the Hudson River that lack eel passage structures, as well as the effects of passage efficiency on demographic characteristics of the eel populations along the length of each river.

17. American Eel Passage Issues Follow-up by Alex Haro: More in-depth discussion of the passage issues presented for American eel in Session 1 of this workshop.

18. Case Study: Upper Potomac River by Alex Hoar: Success story of cooperation between federal agencies, state agencies, the energy industry, and non-governmental organizations to implement goals of the American Eel Fishery Management Plan and restore population abundance in the Potomac River.



Source: A. Haro

Example Recommendations

1. Develop a policy for passage efficiency for diadromous fishes in cooperation with USFWS and NOAA.
2. Help design and implement monitoring protocols to measure fish passage success.
3. Support fish passage projects as they come up for public comment.
4. Provide training (in partnership with USFWS, NMFS, etc.) on FERC re-licensing issues and process, dam removal, instream flow assessments, conflict resolution, project negotiation techniques, etc.
5. Develop a tool to evaluate positive and negative consequences of providing fish passage so that managers can make appropriate decisions and lobby effectively for a project.
6. Develop an East Coast Fish Passage Plan, whereby each state partner should work with federal agencies to develop a roadmap of fish passage priorities in each state, and develop criteria to rank which sites are highest priority for involvement.

Next Steps for Commission Involvement

On May 8, 2008, the full list of workshop recommendations were brought to the ISFMP Policy Board for their consideration. Subsequently, the ISFMP Policy Board requested that staff prioritize the list of recommendations from the workshop, and present them at the Commission meeting in August 2008.

For workshop proceedings, including abstracts, full presentations, and a complete list of recommendations, please visit the Commission's website at: <http://www.asmf.org/researchStatistics.htm>. If you have questions, please contact Jessie Thomas, ASMFC Habitat Coordinator, at JThomas@asmfc.org, or call (202) 289-6400.

SPOTLIGHT: MORE ON FISHERIES AND CLIMATE CHANGE

Temperature and other variations resulting from climate change will have a strong impact on fisheries and aquaculture, with significant food security consequences for certain populations, FAO said. The UN food agency's note of caution came at the start of a four day scientific symposium on climate change and marine fisheries being held at its Rome headquarters (8-11 July 2008). The event, which involves over 200 experts and policymakers from around the globe, aims to paint a fuller picture of the challenges that climate change poses to marine fisheries and the millions of people who depend on them for food and income.



Although large regional differences exist, the world is likely to see significant changes in fisheries production in the seas and oceans, FAO says. For communities who heavily rely on fisheries, any decreases in the local availability or quality of fish for food or increases in their livelihoods' instability will pose even more serious problems. Fishing communities located in the high latitudes and those that rely on climate change-susceptible systems, such as upwelling or coral reef systems, will have the greatest exposure to climate-related impacts. In addition, fisheries communities located in deltas, coral atolls, and ice-dominated coasts will be particularly vulnerable to sea level rise and associated risks of flooding, saline intrusion and coastal erosion. But countries with limited ability to adapt to the changes, even if located in low risk areas, are also vulnerable. FAO also noted however that the impacts of climate-related physical and biological changes in fisheries on the communities that depend on them will be as varied as the changes themselves. Both negative and positive impacts are likely, depending on local circumstances and the vulnerability and adaptive capacity of the affected communities.

At both the local and global levels, fisheries and aquaculture play important roles in providing food and generating income. Some 42 million people work directly in the sector, the great majority in developing countries. Adding those who work in associated processing, marketing, distribution, and supply industries, the sector supports several hundred million livelihoods. Aquatic foods have high nutritional quality, contributing 20% or more of average per capita animal protein intake for more than 2.8 billion people, again mostly in developing countries. Fish is also the world's most widely traded foodstuff and a key source of export earnings for many poorer countries. The sector has particular significance for small island states. Accordingly, FAO is increasingly focusing its attention on how climate change will affect fisheries and aquaculture.

In April, the agency convened a workshop of experts to look at climate change implications for fisheries and aquaculture in advance of the June 2008 summit on food security, climate change, and bioenergy. That group generated an overview document which looks at the issues and risks involved, and also outlined possible responses governments and policymakers could make to begin to adapt, as well as highlighting the responsibility of the sector vis-à-vis its role in minimizing its carbon footprint. The July symposium was intended to deepen and broaden scientific knowledge on how climate change is affecting marine ecosystems and the communities that depend on them.

Source: FAO Media Office; Email: FAONewsroom@fao.org; Phone: (+39) 06 570 53625

Atlantic States Marine Fisheries Commission
1444 Eye Street, N.W., 6th Floor
Washington D.C. 20005

Return Service Requested

HABITAT HOTLINE ATLANTIC

Jessie Thomas
Editor

Funded by



Any portion of this newsletter may be reproduced locally with credit given to the Atlantic States Marine Fisheries Commission Habitat Program.

Printed on 100% Recycled Paper Using Vegetable-Based Ink

AROUND THE COAST: A BAG REVOLUTION

Facts

Worldwide: 500 billion to 1 trillion plastic bags consumed per year (or over 1 million/minute); billions become litter

U.S.: Over 380 billion plastic bags/sacks/wraps consumed per year; use 100 billion plastic shopping bags annually (cost to retailers = \$4 billion)

Plastic bags photodegrade—breaking down into smaller and smaller toxic bits contaminating soil and waterways and becoming ingested by animals.

In Ireland, an extremely successful plastic bag consumption tax, or *PlasTax* (2002), reduced consumption by 90%. Approximately 18 million liters of oil have been saved due to this reduced production. Governments around the world are considering implementing similar measures. Additionally, some municipalities in the U.S. are considering similar taxes, or banning the use of plastic bags altogether.

Remember: Each high quality reusable shopping bag you use has the potential to eliminate hundreds, if not thousands, of plastic bags over its lifetime.

IN THE NEWS

Annotated Bibliography of ASMFC Habitat Program Documents Available

An annotated bibliography of all Commission habitat-related documents has been compiled. The bibliography contains a listing of the document title, author(s), editor(s), publication date, and a brief summary. Electronic copies of this document, and all documents referenced therein, can be obtained at: <http://www.asmfc.org/educationOutreach.htm>. If you have any questions, please contact Jessie Thomas, Habitat Coordinator, at JThomas@asmfc.org, or (202) 289-6400.

Stream Barrier Removal Monitoring Guide Published

A lack of standardized monitoring data has prompted resource managers in the Gulf of Maine to develop a regional guide to monitoring parameters for stream barrier removal projects. In December 2007, the Gulf of Maine Council on the Marine Environment published this guide to provide the scientific context of stream barrier removal and information on eight critical monitoring parameters. This guide can be found at: <http://www.gulfofmaine.org/streambarrierremoval/>.