ASMFC Releases Report on Sciaenid Fish Habitat

Arlington, VA – The Atlantic States Marine Fisheries Commission has released the 14th report in its Habitat Management Series entitled, Atlantic Sciaenid Habitats: A Review of Utilization, Threats and Recommendations for Conservation, Management and Research. Prepared by ASMFC staff, sciaenid experts, and a subset of the Commission’s Habitat Committee, the report is the most comprehensive compilation of habitat information to date on Commission-managed and other common sciaenid species found throughout the Western Atlantic. These species include Atlantic croaker, black drum, red drum, spot, spotted seatrout, weakfish, northern kingfish, southern kingfish and Gulf kingfish. The report provides a habitat description for all stages of each species’ life cycle, their associated Essential Fish Habitats and Habitat Areas of Particular Concern (when applicable), threats and uncertainties to their habitats, and recommendations for habitat management and research. It was developed to serve as a resource for fisheries managers to use when amending existing fishery management plan (FMPs).

Sciaenids are found throughout the Western Atlantic Ocean from Maine to Mexico, in shallow coastal waters and larger bays and estuaries, including their tributaries. They utilize a variety of habitats throughout their life stages, including estuaries, salt marshes, freshwater marshes, oyster reefs, sea grasses and mud banks/shores. Because of the way different species of sciaenids use various types of habitats throughout their life, several different habitats are key for maintaining healthy populations.

The Atlantic States Marine Fisheries Commission was formed by the 15 Atlantic coastal states in 1942 for the promotion and protection of coastal fishery resources. The Commission serves as a deliberative body of the Atlantic coastal states, coordinating the conservation and management of nearshore fishery resources, including marine, shell and anadromous species.
Estuarine habitats are particularly important to many sciaenids at every life stage. In the Mid-Atlantic Bight, as many as 14 species can be present in estuaries as larvae, juveniles, or adults over the course of a year. Weakfish, for example, use estuaries as primary spawning habitat, while Atlantic croaker and spot use them as nurseries and seasonal adult foraging grounds. Young sciaenids play important roles as both predators and prey in these habitats.

Temperature, salinity, and dissolved oxygen vary considerably in estuarine environments and these factors are known to affect sciaenid growth rates, spawning, and spatial and temporal distribution. As a group, sciaenids are habitat generalists rather than specialists and may therefore be relatively resilient to changes in environmental factors. However, Atlantic coast estuaries have been profoundly altered. Despite their ability to take advantage of a range of habitats, sciaenids are not immune to habitat degradation or suboptimal conditions, especially in the face of climate change.

Increasingly dense human populations along our coastlines threaten the health of estuaries and coastal waters, including sciaenid habitats. Widespread development, beach renourishment, dredging, overfishing, coastal armoring, pollution, and other human impacts have significantly altered the physical and chemical environments of estuarine and marine waters. Changes in hydrologic processes and runoff characteristics can increase turbidity and sedimentation and decrease light transmittance, which may lead to the loss of submerged aquatic vegetation. Human-caused alterations to the estuarine environment have been linked to changes in hydrography and salinity regimes, as well as food web modification, which can eventually reduce the quality of habitat for sciaenids and other estuarine-dependent fish.

The Commission would like to thank the following individuals for their contributions to the report: Jay Odell, Brian Boutin and Kate M. Wilke with The Nature Conservancy; Douglas H. Adams and Kent Smith with Florida Fish and Wildlife Conservation Commission; William Collier II, South Atlantic Fishery Management Council; Alison Deary, University of Southern Mississippi; James A. Johnson, Jr., North Carolina Department of Environmental Quality; Stephen R. Midway, Louisiana State University; January Murray, Georgia Department of Natural Resources; and Lisa N. Havel and Melissa W. Yuen, Atlantic States Marine Fisheries Commission.

The report is available online at http://www.asmfc.org/files/Habitat/HMS14_AtlanticSciaenidHabitats_Winter2017.pdf. Species-specific chapters are also available on the Commission’s website, www.asmfc.org, on the respective species pages (on the left navigation bar under Quick Links). For more information, please contact Lisa Havel, Habitat Coordinator, at LHavel@asmfc.org.

###