

Scoping Document



Management Strategies for Amendment 3 to the Southern Flounder Fishery Management Plan



November 2019



The N.C. Division of Marine Fisheries seeks your input on management strategies for the Southern Flounder Fishery Management Plan.

A scoping period for public comment begins Dec. 4, 2019 and ends Dec. 18, 2019.

Comments must be received/postmarked by 5 p.m. (EST) on Dec. 18, 2019.

Can't attend but want to submit comments? Here's how!

Written comments can be submitted by online form or by U.S. mail. Comments sent by U.S. mail must be postmarked by Dec. 18, 2019 to be accepted. The division will not accept public comment through email.

To comment by online form:

The online form can be accessed through the Southern Flounder Amendment Information Page (<http://portal.ncdenr.org/web/mf/southern-flounder-topic>). Please use the link at the bottom of the information page.

To comment by U.S. mail, please submit written comments to:

N.C. Division of Marine Fisheries
Southern Flounder FMP Amendment 3
Scoping Comments
P.O. Box 769
Morehead City, NC 28557

Scoping Meetings

DMF staff will provide information about Amendment 3 to the Southern Flounder Fishery Management Plan (FMP) and will be available for questions from the public. A public comment period will follow.

Monday, Dec. 9, 2019 at 6 p.m.

Central District Office
5285 Highway 70 West
Morehead City, NC 28557

Tuesday, Dec. 17, 2019 at 6 p.m.

Dare County Commissioners Office
954 Marshall C Collins Drive
Manteo, NC 27954

Questions about the southern flounder stock, fishery, or Amendment 3 to the Southern Flounder Fishery Management Plan?



Contact the leads:

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Fisheries Biologist, Elizabeth City

Southern flounder lead

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Southern flounder co-lead

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Questions about the FMP Process?

Kathy Rawls

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Fisheries Management Plan and Rulemaking Coordinator, Morehead City

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Purpose of the Scoping Document

The purpose of this document is to inform the public the review of the Southern Flounder FMP is underway and to provide an opportunity for the public to comment on identified management strategies or identify other relevant strategies in the management of the southern flounder fishery. Input received at the start of the FMP review process may shape the final amendment and its management measures (solutions). To help focus the input received from the public, this document provides an overview of initially identified strategies, as well as background information on the fishery such as the status of the stock. A series of questions about each strategy is also provided for the public to consider when thinking about the strategies; in general: **“What should southern flounder management be? What changes are needed?”**

Additional management strategies may be considered in Amendment 3 dependent on statutory requirements, available data, research needs, and the degree of impact the management strategy would have and how effective the solution would be. If the division determines a management strategy raised during the scoping period might have significant impacts on the species, additional examination of the strategy may be undertaken in the development of the FMP.

Scoping provides an opportunity for the public to comment on strategies identified by the division as well as any additional relevant strategies for possible consideration for the development of the FMP.

What is Scoping?

Scoping is the first stage of the process to determine the appropriate contents of an FMP after a plan has been opened for review. Scoping serves many purposes including: (1) to provide notice to the public that a formal review of the FMP is underway by the N.C. Division of Marine Fisheries (DMF or division), (2) inform the public of the stock status of the species (if available), (3) solicit public input on a list of strategies identified by the DMF or identify other relevant strategies that may need to be addressed, and (4) recruit potential advisors to serve on the advisory committee (AC) for the FMP that is appointed by the N.C. Marine Fisheries Commission (MFC). You will have more opportunity to provide comments as the amendment is developed; however, scoping is the first and best opportunity to make suggestions for DMF to consider before an amendment is developed.

FISHERY MANAGEMENT PLANS- A TIERED APPROACH

Fishery Management



Management PLANS are implemented to achieve specified management goals for a fishery, such as sustainable harvest, and include background information, data analyses, fishery habitat and water quality considerations consistent with Coastal Habitat Protection Plans, research recommendations, and management strategies.

Management STRATEGIES are adopted to help reach the goal and objectives of the plan. They are the sum of all the management measures selected to achieve the biological, ecological, economic, and social objectives of the fishery.

Management MEASURES are the actions implemented to help control the fishery as stipulated in the management strategies.

FMP Timeline

Process Step	Date
Public scoping meetings	December 2019
DMF prepares draft Amendment 3	January – June 2020
FMP AC and DMF work together to further develop Amendment 3	June – September 2020
DMF selects initial management recommendations	October 2020
MFC votes to send draft FMP for public and AC review	November 2020
Public comment and AC meetings for review of draft Amendment 3	December 2020 – January 2021
MFC selects preferred management options	February 2021
NC DEQ Secretary and legislature review draft FMP	March – April 2021
MFC votes on final adoption of Amendment 3	May 2021

Developing an amendment

Annually, the DMF reviews all species for which there are FMPs for North Carolina and provides an update to the MFC. This review includes any recommended changes to the schedule for FMP review and amendment development. Per N.C. law, any changes to the schedule must be approved by the N.C. Department of Environmental Quality (NC DEQ) Secretary.

When a plan is opened for review, the first step of the formal amendment process is a scoping period. After relevant strategies have been identified by the DMF, the public (during the scoping period), and by the MFC, the division's plan development team (PDT) develops a preliminary draft amendment. The first draft will be completed before the FMP AC is appointed. Once appointed, the AC will meet with the PDT at a series of workshops. The purpose of these workshops is for the AC to assist the PDT and to work together to discuss the strategies and to further develop and refine the appropriate contents of the draft amendment and the management strategies it contains.

Upon completion of this draft, the amendment is taken to the MFC for approval to go out for public comment and review by the MFC's standing and regional ACs. Following consideration of public and AC comment, the Commission selects its preferred management options for Amendment 3. Next, draft Amendment 3 goes to the NC DEQ Secretary and the legislature for review before the MFC votes on final approval of the amendment.

Why is this happening now?

The DMF is proceeding with Amendment 3 to the FMP based on the 2019 coast-wide stock assessment update (containing data through 2017) for southern flounder that indicated the stock is overfished and overfishing is occurring. The division and the MFC are required under state law to end overfishing in two years and rebuild the spawning stock biomass to a level of sustainable harvest in 10 years. In August 2019, the MFC voted on final approval of Amendment 2 to the FMP. Amendment 2 contained short-term management measures (seasons) that meets the statutory timeframe; however, the approval of Amendment 2 specified the development of Amendment 3 to begin immediately to implement more comprehensive, long-term management measures to achieve sustainable harvest.

Amendment 3 Background

Coast-wide stock assessment and stock status

A coast-wide stock assessment was conducted on southern flounder in south Atlantic waters (North Carolina, South Carolina, Georgia, and the east coast of Florida) in 2018 and updated in 2019 with data through 2017 (Lee et al. 2018; Flowers et al. 2019). The stock assessment's current (2017) estimates of female spawning stock biomass (SSB) and fishing mortality indicate that the stock is overfished and overfishing is occurring (Figures 1 and 2).

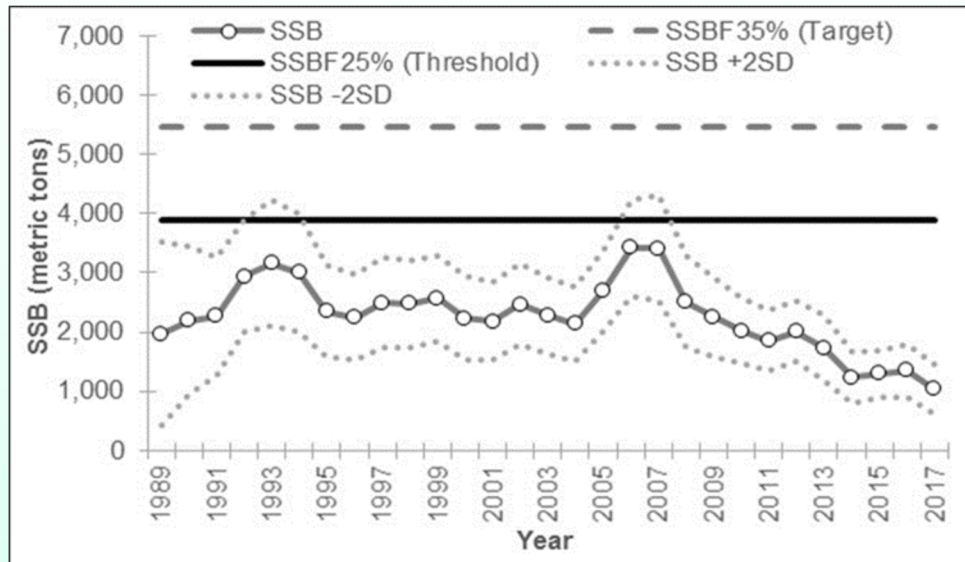
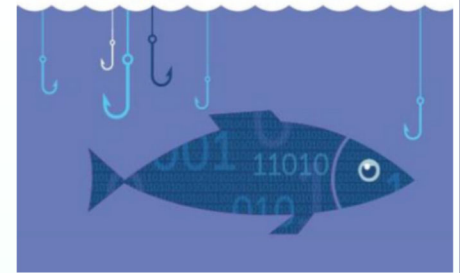


Figure 1. Estimated spawning stock biomass compared to established reference points, 1989–2017. (Source: Flowers et al. 2019).

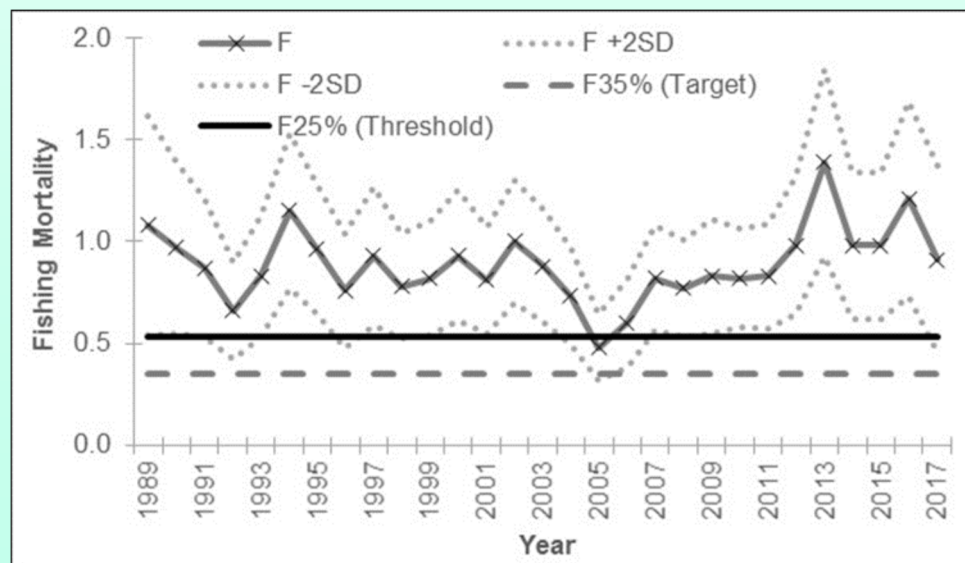


Figure 2. Estimated fishing mortality rates (numbers-weighted, ages 2–4) compared to established reference points, 1989–2017. (Source: Flowers et al. 2019).

A minimum 52% reduction in total removals is needed to rebuild the female spawning stock biomass to sustainable levels and end the overfished status within 10 years. Management in Amendment 2 called for a 62% reduction in 2019 and 72% reduction beginning in 2020 until Amendment 3 is passed. It is important to note that management measures in Amendment 3 will be based on the 2019 stock assessment, meaning a minimum of 52% reduction in total removals starting in 2021 is still needed to rebuild the spawning stock population within 10 years.



Southern flounder in North Carolina

Southern flounder supports one of the largest and most valuable commercial fisheries in North Carolina. Pound nets, gill nets, and gigs have accounted for 98% of commercial southern flounder landings in North Carolina for the last 10 years. North Carolina’s total commercial removals (landings and dead discards; in pounds) are equivalent to approximately 38.3% of the coast-wide removals of southern flounder for the last 10 years (Figure 3). In 2017, southern flounder commercial landings including dead discards, accounted for 71.8% of North Carolina’s removals (Figure 4).

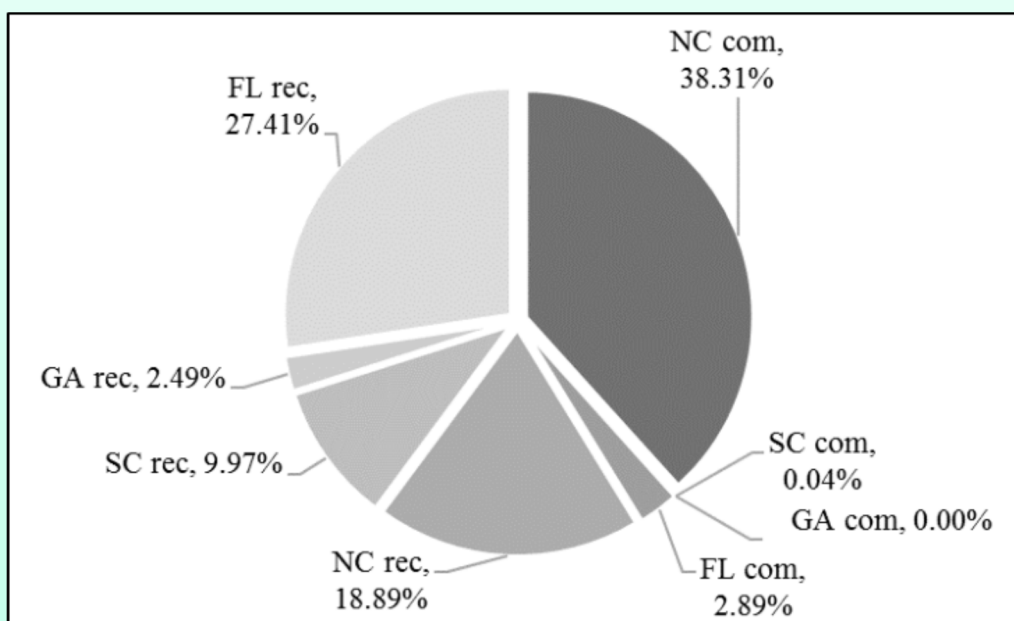


Figure 3. Average contribution to U.S. South Atlantic coast southern flounder commercial and recreational removals (observed harvest and dead discards) in pounds by state, 2008-2017. (Source: NOAA Fisheries Annual Commercial Landing Statistics, North Carolina Trip Ticket Program and the Marine Recreational Information Program).

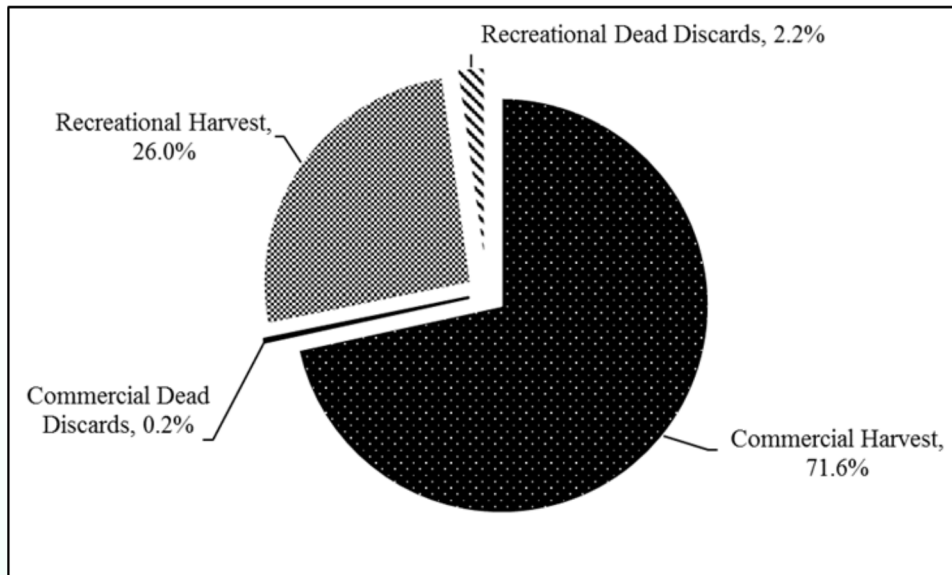


Figure 4. Breakdown of the total removals (observed harvest and dead discards) in % of pounds for the commercial and recreational (hook-and-line and gig) fisheries in North Carolina, 2017. (Source: North Carolina Trip Ticket Program and Marine Recreational Information Program).

Southern flounder, or flounder species in general, are one of the most sought-after recreational species in North Carolina. Southern flounder are taken by recreational fishers using hook-and-line, gigs, and through the recreational use of commercial gears such as gill nets. For the last 10 years (2008-2017), North Carolina's total recreational removals (in pounds) are equivalent to approximately 19% of the total coast-wide removals (Figure 3). Recreational removals, including dead discards, accounted for 28.2% of all of North Carolina's removals in 2017 (Figure 4).

The recreational harvest of southern flounder exhibits a distinct seasonality concentrated between May and October, whereas commercial harvest is concentrated between September and November. These harvest peaks helped to determine when to implement seasons in Amendment 2 for achieving the required reductions.



Amendment 3 Management Strategies

Statutorily Required Management Strategy: Sustainable Harvest

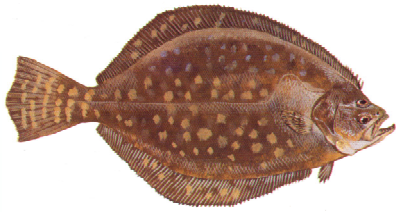
Background

The division and the MFC are required under state law to end overfishing in two years and rebuild the spawning stock biomass to a level of sustainable harvest in 10 years. Projections based on the stock assessment indicate that a minimum of a 52% reduction in coast-wide removals (harvest and dead discards) is needed to rebuild the spawning stock of southern flounder. The implementation of management measures (seasons) put into place with Amendment 2 to the FMP were deemed critical for rebuilding of the stock; these measures ensured that harvest reductions were not delayed while more comprehensive long-term management measures could be developed. Several management strategies could be introduced or redefined for achieving sustainable harvest, including:

- Management through a quota for both the commercial and recreational fisheries
- Setting accountability measures for both sectors (for example, paybacks)
- Trip limits
- Bag limit changes
- Changes in size limit, including changes to the minimum or maximum size or slot limits
- Development of fishing days (weekday vs. weekend) to allow for access to the fishery for a longer period of time
- Gear modifications as required by management actions above

Questions for the Public

- Do you support use of a quota instead of seasons? If so, how would you like to see a quota managed?
 - ◇ In the commercial fishery, how should the quota be allocated (by area, gear, both)?
 - ◇ Should the for-hire sector have their own quota outside of the general recreational quota?
- What options should be considered if there are overages for either sector?
- Should trip limits be implemented for the commercial sector?
 - ◇ Should trip limits be for all gears (gig, gill net, and pound nets)? Or just specific gears?
 - ◇ Should they be used more as an adaptive management tool (i.e., when a certain portion of the quota is caught trip limits would go into place)?
- Should DMF implement bag limit changes for the recreational fishery to help reduce harvest?
- Do you support changes to size limits? For which sector?
 - ◇ How do you support changing them? Increase the maximum size, decrease the minimum size, have a slot limit? What size would you support?
- Should allowable harvest days be consecutive? Or only selected days during the week (and which days)?



Additional Management Strategies

Increased Recreational Access by Managing Southern Flounder Separately from other Flounder Species

Background

In North Carolina, the recreational flounder fishery is managed as an aggregate fishery of the three main species of flounder (southern, summer, and Gulf). As a result, when the southern flounder recreational fishery is closed it is unlawful to harvest the other two species. In particular, the closure of the recreational ocean fishery (where summer and Gulf flounder are most likely to be caught) has been brought up as an unintended consequence of this aggregate management. Based on Marine Recreational Information Program (MRIP) data, approximately 50% of the recreational harvest from the ocean are flounder species other than southern flounder. As a result, unless some form of species-specific management is considered and recreational anglers are willing to learn how to identify the different species, recreational access to the other species of flounder will not be possible.

Questions for the Public

- Should flounder management measures apply independently for each of the three species (southern, summer and Gulf flounder)?
- Should it be simplified to ocellated (summer and Gulf flounder) and non-ocellated (southern flounder) flounders?
- What type of outreach would you recommend to educate anglers on species identification?
- Should the bag limit allow only a certain amount of southern flounder to be kept? If so, what amount do you recommend (e.g., 1 southern and 3 summer or Gulf flounders; 2 southern and 2 summer or Gulf flounders)?

Inlet Corridors

Background

Designation of inlet corridors would offer protections to mature female southern flounder during their migration through coastal inlets. A similar management strategy was adopted for the blue crab fishery in the Virginia waters of the Chesapeake Bay, was highly effective, and is being considered in Amendment 3 to the North Carolina Blue Crab Fishery Management Plan.

Questions for the Public

- Do you support creating protected areas to protect southern flounder migrating through coastal inlets?
- If you support creating corridors, what inlets would you consider?
- If you support protecting corridors, what distance from an individual inlet should be considered?
- If you support creating corridors, are there areas inside the estuaries that lead to inlets that should be considered)?





Questions for the Public about Potential Management Strategies



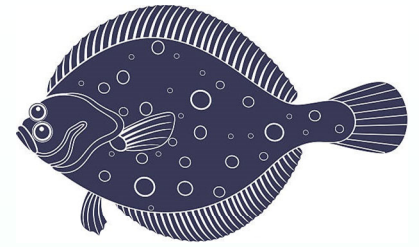
1. What management strategies already under consideration do you support for long-term management?
2. Are there other relevant strategies not included here that the Division should consider for Amendment 3?

Additional management strategies may be considered in Amendment 3 dependent on statutory requirements, available data, research needs, and the degree of impact the management strategy would have and how effective the solution would be. If the division determines a management strategy raised during the scoping period might have significant impacts on the species, additional examination of the strategy may be undertaken in the development of the FMP.



Literature Cited

Flowers, A.M., S.D. Allen, A.L. Markwith, and L.M. Lee (editors). 2019. Stock assessment of southern flounder (*Paralichthys lethostigma*) in the South Atlantic, 1989–2017. Joint report of the North Carolina Division of Marine Fisheries, South Carolina Department of Natural Resources, Georgia Coastal Resources Division, Florida Fish and Wildlife Research Institute, University of North Carolina at Wilmington, and Louisiana State University. NCDMF SAP-SAR-2019-01. 213 p.



Funderburk, S.L., S.J. Jordan, J.A. Mihursky, and D. Riley (eds.). 1991. Habitat requirements for Chesapeake Bay living resources. Second edition. Chesapeake Bay Estuary Program, U.S. Fish and Wildlife Service, Annapolis, MD.

Lee, L.M., S.D. Allen, A.M. Flowers, and Y. Li (editors). 2018. Stock assessment of southern flounder (*Paralichthys lethostigma*) in the South Atlantic, 1989–2015. Joint report of the North Carolina Division of Marine Fisheries, South Carolina Department of Natural Resources, Georgia Coastal Resources Division, Florida Fish and Wildlife Research Institute, University of North Carolina at Wilmington, and Louisiana State University. NCDMF SAP-SAR-2018-01. 425 p.

Grimes, C. B. 1998. Marine stock enhancement: sound management of techno-arrogance. *Fisheries* 23:18-23.

NCDEQ (North Carolina Department of Environmental Quality). 2016. North Carolina Coastal Habitat Protection Plan Source Document. Morehead City, NC. Division of Marine Fisheries. 475 p.

NCDMF (North Carolina Division of Marine Fisheries). 2005. North Carolina fishery management plan southern flounder (*Paralichthys lethostigma*). North Carolina Department of Environment and Natural Resources, Division of Marine Fisheries, Morehead City, North Carolina. 359 p.

NCDMF. 2013. North Carolina southern flounder (*Paralichthys lethostigma*) fishery management plan: Amendment 1. North Carolina Division of Marine Fisheries, Morehead City, North Carolina. 380 p.



NCDMF. 2018. Southern Flounder *in* 2017 Fishery Management Plan Review. North Carolina Division of Marine Fisheries, Morehead City, North Carolina. 590 p.

NCDMF. 2019a. Southern Flounder *in* 2018 Fishery Management Plan Review. North Carolina Division of Marine Fisheries, Morehead City, North Carolina. 730 p.

NCDMF. 2019b. North Carolina Southern Flounder (*Paralichthys lethostigma*) Fishery Management Plan Amendment 2. North Carolina Division of Marine Fisheries, Morehead City, North Carolina. 64 p.

Literature Cited

North Carolina Division of Water Quality (NCDWQ). 2000. A citizen's guide to water quality management in North Carolina. North Carolina Division of Environmental and Natural Resources. Division of Water Quality, Planning Branch, Raleigh, NC 156 p.

Rochman, C.M., 2015. The complex mixture, fate and toxicity of chemicals associated with plastic debris in the marine environment. In Marine anthropogenic litter 117-140pp. Springer, Cham.

Weis J.S. and P. Weis. 1989. Effects of environmental pollutants on early fish development. Aquatic Sciences. 1(1):45-55.

Wilbur, A. R. and M.W. Pentony. 1999. Human-induced nonfishing threats to essential fish habitat in the New England region. p. 299-321 in L.R. Benaka (ed.). Fish Habitat: Essential Fish Habitat and Rehabilitation. American Fishery Society, Silver Springs, MD, Symposium 22, 459 p.



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NORTH CAROLINA DIVISION OF MARINE FISHERIES

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