
Coastal Carolina Riverwatch
700 Arendell Street, Suite 2
Morehead City, North Carolina 28557



October 21, 2021

North Carolina Department of Environmental Quality
217 West Jones Street
Raleigh, NC 27603

Dear Review Team,

Thank you for the opportunity to submit comments regarding the proposed *Coastal Habitat Protection Plan*.

We submit these comments on behalf of **Coastal Carolina Riverwatch**. We represent a coalition of hundreds of eastern North Carolina citizens, committed to protecting our local waterways.

SUMMARY OF COMMENTS AND RECOMMENDED ACTIONS

1. The development of performance criteria for measuring success of management is very important.
 - We recommend that a performance review team be assigned to monitor progress and report out to the community at least once a year.
 - We recommend that annual reports be made available online and that specific measurable goals show performance records in the annual report.
 - Currently, the last available CHPP report (online) is 2015-16.
2. Coastal Carolina Riverwatch's ***Water Quality for Fisheries Program***¹ (WQ4F) works with NC coastal fishing communities to identify top water quality concerns. We recommend that these concerns be included in the CHPP and Industry Working Group recommendations be included as an addendum to/resource for the CHPP.
 - In partnership with ECU's Center for Survey Research, these priority concerns were determined to be **agricultural pollution, stormwater runoff, industrial pollution, plastics, and municipal wastewater and septic system pollution**.
 - Through the WQ4F program an **Industry Working Group**, made up of coastal commercial and recreational fishers, was established to participate in facilitated meetings addressing each of the water quality concerns.

¹ Coastal Carolina Riverwatch. "Water Quality for Fisheries." *Water Quality for Fisheries*, 2021, <https://coastalcarolinariverwatch.org/water-quality-for-fisheries/>. Accessed 21 10 2021.

- The following are the WQ4F Program **Industry Working Group's** prioritized actions. These actions come directly from the coastal fishing community (made up of both commercial and recreational fishers). We request that these action items be considered when finalizing the update to the Coastal Habitat Protection Plan:

I. Industrial Agriculture and Factory Farm Pollution

- Update waste management systems.
- Requirement for pre-storm preparation.
- Evaluation of best management practices.
- Evaluation of hormonal, pharmaceutical, and microbiological contaminants.
- Enhancement of water quality monitoring technologies.
- Conservation practices for coastal, flat topography.
- Bridge gaps between scientists and policymakers for advocacy purposes.

II. Stormwater Pollution

- Green infrastructure policy development through standardizing the use of permeable pavement, green streets, filtration systems, and nature-based infrastructure.
- Reclaiming or enhancing areas with poor stormwater controls.
- Enhance monitoring of stormwater runoff.
- Publicize successful stormwater control efforts.

III. Industrial Pollution

- Reducing industrial activities that utilize industrial chemicals in their processes (ex. PFAS).
- Development of new filtration technologies.
- Enforceable maximum contaminant levels for wastewater treatment facilities.
- Analysis of the effects of all heavy metals on aquatic ecosystems.
- Researching safe alternatives to industrial pollutants.
- Educating consumers on PFAS-containing products.

IV. Plastic Pollution

- Restructuring the manufacturing process of plastics by changing chemical composition and product design.
- Plastic bag, styrofoam, single-use plastic, and straw bans.
- Extended Producer Responsibility policies.
- Studies focused on the interactions of molecules in the environment and the physiological effects on fish.
- Public outreach regarding human contribution to aquatic plastic pollution from land sources.

V. Municipal Wastewater and Septic System Pollution

*we note that this is the primary topic of *CHPP Chapter 7*

- Preventative repairs and updates on current infrastructure.
 - Increase use of ecologically engineered wastewater treatment technologies.
 - Legislation increasing federal funding for updating infrastructure.
 - Establish water quality standards for additional pollutants found in wastewater such as plastics and industrial pollutants.
 - Research effective wastewater treatment infrastructure for coastal regions with high water tables and flooding.
 - Increase community outreach and support for improving wastewater treatment infrastructure.
3. While agriculture is mentioned in the amendment it could be expanded. We request to specifically indicate Concentrated Animal Feeding Operations (CAFOs) as a source of agricultural nutrient pollution.
- Studies in Coastal NC suggest that CAFOs can be a more significant source of nitrogen than fertilizers from row crop agriculture. Under certain hydrological conditions, this nitrogen can be detected in estuaries many miles downstream.²
 - Recommend more comprehensive water quality monitoring related to CAFOs, assessments of cumulative impacts of CAFOs including nutrients and other pollution from both swine operations and the rapidly growing poultry industry, more enforcement following waste management violations, improved transparency in public records and information requests, and assistance for buyout programs.
4. Emerging contaminants are absent from CHPP. These are a threat to coastal habitats because they persist in the environment for undeterminable periods of time resulting in bioaccumulation, endocrine disruption, and reproductive and development issues in fish and aquatic species.³ PFAS and other emerging contaminants are subject to little regulation and monitoring. Research is ongoing and long term data is still developing. Despite proven and suspected impacts on the environment, these contaminants are entering our waters.
- We recommend that PFAS be included in the future of CHPP. Potential actions may include increasing research, imposing restrictions on the release of PFAS and other chemicals, and prioritizing cleanups and mitigation of existing chemical contaminants in our waterways.

² Brown, Colleen & Mallin, Michael & Loh, Ai Ning. (2020). Tracing nutrient pollution from industrialized animal production in a large coastal watershed. *Environmental Monitoring and Assessment*. 192. 10.1007/s10661-020-08433-9.

³Gonsioroski A, Mourikes VE, Flaws JA. Endocrine Disruptors in Water and Their Effects on the Reproductive System. *International Journal of Molecular Sciences*. 2020; 21(6):1929. <https://doi.org/10.3390/ijms21061929>

5. While funding, technical assistance, and incentives for voluntary actions should all be expanded, the need for accountability and enforcement through regulation should be assessed.
 - More regulatory measures should be implemented by the agencies listed in CHPP who are responsible for water quality protection.
 - Voluntary compliance to CHPP and completion of recommended actions may not be met with the same urgency or result in adequate reduction of nutrients, sediments, pathogens, and other forms of coastal pollution.
 - There is a need to address staffing and funding issues resulting in underregulation.
 - Additionally, research must be utilized to identify indicators and thresholds for policy development and enforcement moving forward.

6. As NC moves towards a more sustainable future for our coastal habitats, we emphasize the importance of a just transition.
 - DEQ should reference Environmental Justice tools and consult with communities, experts, and advisors in the event that implantation and actions associated with CHPP are proposed in environmental justice communities.

7. Coastal Carolina Riverwatch requests to be a partner on the following workgroups:
 - **4.4** *By 2022, DEQ will form a workgroup with DWR, Soil and Water Conservation, local governments, and other partners to develop a plan to increase the use of BMPs related to water quality within the SAV waterbody regions by 50 percent (Table 4.5; Figures 4.1-4.9).*
 - **8.1** *By 2022, convene interagency workgroups of DEQ agency staff, academics, and subject matter experts by coastal habitat type (i.e., water column, shell bottom, SAV, wetlands, hard bottom, and soft bottom) to define indicator metrics and identify data gaps and monitoring needs for the ability to determine long-term status and trends of coastal habitats and the estuarine ecosystem.*

8. Coastal Carolina Riverwatch requests to be a partner in the effort to develop, partner-on, and review public education and stewardship programs.
 - **4.13** *By 2022, DEQ Office of Education and Public Affairs will work with local governments and NGOs to start the development of public education and stewardship programs with social media campaigns and citizen science monitoring to increase public awareness of SAV's importance for fish habitat and other co-benefits, as well as instill public commitment to SAV conservation.*

9. We believe the following actions (below with questions) are very important:
- **4.9** *By 2024, EMC will adopt scientifically defensible nitrogen and/or phosphorus criteria if recommended through the NCDP process, to help protect and restore ~12,900 acres of low salinity SAV habitat in the Albemarle Sound SAV waterbody region and continuing with other water bodies that support SAV.*
 - **4.14** *By 2022, DEQ through funding of NCSU by APNEP will provide an economic evaluation of the co benefits SAV provides to the coastal economy in terms of habitat for fish, waterfowl, wildlife, recreation, shoreline stabilization, water purification, and carbon sequestration.*
 - **5.5** *By 2022, DEQ will provide information to NC legislators regarding the need for increased appropriated funds for the three state conservation trust funds to increase conservation of critical wetland properties and critical corridors that will allow for future marsh migration.*
 - **5.9** *By 2025, DEQ will determine if living shoreline projects can be built in a manner that qualifies for salt marsh or nutrient mitigation credits.*
 - **7.1** *By 2024, DEQ will request that funding programs under the purview of the SWIA give additional priority for projects with a direct benefit to sensitive estuarine waters, including SA waters, fish nursery areas, and impaired waters, particularly those adversely impacting estuarine fish and their habitat.*
 - **7.3** *By 2025, DCM and DWR will work with NC Office of Recovery and Resiliency (N CORR) and local governments in the coastal counties to develop strategies regarding flood-proofing wastewater infrastructure; siting new and relocating existing infrastructure away from sensitive estuarine waters and floodplains; upgrading sewer infrastructure; and develop strategic priorities for public and natural infrastructure improvements.*

QUESTIONS

1. How will this be measured? Can this be included in the plan?
 - **5.10** *By 2025, DEMLR and other divisions should increase education, outreach, and training to consultants, local government, and landowners for nature-based stormwater and watershed management strategies.*
 - **7.6** *Prioritize research on alternative wastewater collection system designs that may be better suited for coastal conditions (i.e., alternative sewer systems, composting toilets).*
2. Who is responsible for this?
 - **7.7** *Evaluate the feasibility of re-designing and re-engineering existing systems that are inadequately protecting ground and surface water quality.*

On behalf of the Coastal Carolina Riverwatch team, we thank you for the opportunity to comment on the 2021 amendment to CHPP. As water quality impairment becomes more prevalent across North Carolina, we commend this dedication to improving coastal habitats. We encourage partnership and accountability in the progress of CHPP and respectfully request review of the above comments.

Respectfully,



Lisa Rider, Executive Director
Coastal Carolina Riverwatch
LisaR@coastalcarolinariverwatch.org



Rebecca Drohan, White Oak Waterkeeper
Coastal Carolina Riverwatch
RebeccaD@coastalcarolinariverwatch.org