[Ecological Flows Action Team](https://apnep.nc.gov/about-apnep/committees/action-teams/ecological-flows-team)

11:00 am - 1:00 pm

November 26, 2019

Green Square Building – Room 3001

217 W. Jones St., Raleigh, NC 27603

[Webinar Link](https://ncdenrits.webex.com/ncdenrits/j.php?MTID=m155563cd27669102447a4f607131b143)

Teleconference: 1-415-855-0003 / (Meeting Number / Access Code 310 713 638)

# DRAFT AGENDA

**Welcome and Introductions** **Stacey Feken / Dean Carpenter, APNEP**

**Meeting Objective**

* Continue discussion regarding scope and locations for detailed pilot studies to support Phase II of the team’s [action plan](https://files.nc.gov/apnep/APNEP_Flows_Team_Action_Plan_3Jun16.pdf).
* Refine Research Questions for Phase II

**PHASE II Proposal Discussion Action Team**

[**Leverage Ideas from Other Studies**](https://drive.google.com/drive/folders/1qFg9e5a7IfG9rWS-YBJlGCz8B42H3jVj?usp=sharing) **Fred Tarver**

**Review Proposed Steps/Research Questions/Discussion from Phase I Report Action Team**

* Proposed locations for pilot study (possibly 1 inner, 1 outer coastal plain ->pilot watersheds)
  + Inner Coastal Plain: Contentnea Creek (Neuse Basin)
  + Outer Coastal Plain: Chowan River Basin & tributaries / Potecasi Creek has stage & flow
  + 3rd Location further south? / saltier area of Neuse / Pamlico
  + Others? Areas where we have oysters/SAV/fish habitat / anadromous spawning areas downstream?
* Identify locations where we have ecology data / pair with stations where we have or can collect flow or stage data
  + Identify reference stations
  + Look at ambient monitoring stations / macroinvertebrate data/ NPDES permit monitoring
* Potential Research
  + Stage-slope-salinity-ecology relationships in coastal watersheds
  + Evaluate low-flow water quality relationships
  + Potential use of the USGS Coastal Salinity Index
  + Detailed water budgets in coastal watersheds experiencing decreasing low-flows

More detailed water use data needed to answer several major questions:

1. Why are low flows along Coastal Plain streams declining over the last several decades?
2. What is the relative role of meteorological controls and water withdrawals (or other anthropogenic influences) on declines in low-flows along Coastal Plain rivers?
3. How do groundwater pumping and surface water withdrawals affect low-flow characteristics?
4. How does water use during periods of high evapotranspiration influence low flows?
5. What are the ecological impacts of low-flows and how might these change with future changes in water use and climate change?

**Action Items, Next steps Action Team**

**Adjourn**

**Background / Resources:**

* [**APNEP Ecological Flows Action Team Page**](https://apnep.nc.gov/about-apnep/committees/action-teams/ecological-flows-team) **/** [**Past Meeting Materials**](https://apnep.nc.gov/about-apnep/committees/meeting-materials/ecological-flows-action-team)
* [**APNEP Ecological Flows Team Action Plan**](https://files.nc.gov/apnep/APNEP_Flows_Team_Action_Plan_3Jun16.pdf)
* [**PHASE I Report: Existing Data for Evaluating Coastal Plain Ecological Flows in the Albemarle-Pamlico Estuary Region**](https://files.nc.gov/apnep/documents/files/publications/APNEP_Ecological_Flows_Report_FINAL_DRAFT_82418.pdf)
* [**APNEP Comprehensive Conservation & Management Plan (CCMP)**](https://apnep.nc.gov/resources/publications-and-reports/ccmp) **Ecological Flows Actions:**

**Action A3.3: Develop and refine ecological flow requirements for each major river (**[**page 21**](https://files.nc.gov/apnep/documents/files/publications/CCMP2012-22CS2012-11-14.pdf)**).**

Many of the fish, aquatic plants, and other species that live within the estuarine system depend on flowing water to survive. Identifying these ecological flows will help ensure that these species and ecosystems are protected.

**Action D3.2: Facilitate the development and implementation of basinwide water management plans to ensure no less than minimum in-stream flows are maintained (**[**page 40**](https://files.nc.gov/apnep/documents/files/publications/CCMP2012-22CS2012-11-14.pdf)**).**

APNEP will work to provide scientific information and engage regional stakeholders to develop and implement water management plans that fully account for both human and ecological demands.

* [**North Carolina Ecological Flows**](https://deq.nc.gov/about/divisions/water-resources/water-planning/basin-planning/ecological-flows)
* [**North Carolina Science Advisory Board**](https://deq.nc.gov/about/divisions/water-resources/water-planning/basin-planning/science-advisory-board-related-files)