

**APNEP Scientific and Technical Advisory Committee
Water Resources Meeting Agenda
March 26, 2013
Auditorium, Pitt County Office Complex, 403 Government Circle
Greenville, North Carolina 27834**

- 10:30 a.m. Call to Order.....Kenworthy**
Jud Kenworthy, STAC Co-Chair, will call the meeting to order.
- Co-Chair welcome
 - Approval of fall (November 30) meeting minutes
 - Workshop objectives
- 10:45 a.m. APNEP UpdateCarpenter**
Dean Carpenter, APNEP Program Scientist, will update members on APNEP activities since the fall (November 30) meeting.
- 11:00 a.m. Land-Sea Interactions in the Albemarle-Pamlico Estuarine System.....Walsh**
Dr. J.P. Walsh, Assistant Professor, Department of Biology, East Carolina University will discuss water and sediment dynamics in the Albemarle-Pamlico Estuarine System. Recent research highlights the importance of floodplain and wetland processes in this low gradient system and the significance of storm and human influences.
- 11:30 a.m. Implications of Discharge Frequency and Magnitude on Water, Carbon, and Nitrogen Flux Through Tidal Freshwater Rivers.....Ensign**
Dr. Scott Ensign, Aquatic Analysis and Consulting, LLC, will reveal how the flux of particulate and dissolved material from watersheds to estuaries is profoundly altered within the tidal freshwater zone of coastal rivers. The tidal freshwater zone is similar in morphology to fluvial systems, but its hydrology is more similar to estuaries. This combination of characteristics has hindered research of tidal freshwater rivers and their linkage of river networks with estuaries. Improved understanding and prediction of the transport and retention of river-borne materials requires identifying the frequency and magnitude of the dominant biogeochemical and geomorphic processes. The presentation will include examples of process frequency and magnitude that govern downstream flux of carbon and nitrogen in tidal freshwater rivers of North Carolina and Maryland.
- 12:00 p.m. Flow and Mass Transport in River Basins of the Eastern U.S.: Characteristics, Trends and Implications for Estuarine Health.....Spruill**
Tim Spruill, STAC member and retired USGS hydrologist, will present information on flow and transport of materials from uplands to the oceans and how they are important in maintaining ecosystems. Changes in flow, due either to managed or natural causes, can effect dramatic changes in ecosystems, water chemistry, and geomorphology. This talk will examine characteristics of flow, sediment, and nutrient loading along the east coast and investigate trends in flow and mass loading over the last 50 years and consider, using this information, how various flow and land-use management options may influence ecological health of lakes and estuaries.
- 12:30 p.m. Working Lunch: North Carolina Ecological Flows Science Advisory Board.....Christian**
Dr. Robert Christian, Distinguished Research Professor, Department of Biology, East Carolina University and STAC alumnus, will give an overview of the NC Division of Water Resources' Ecological Flows Science Advisory Board progress since its inaugural meeting in November 2010 and their plans to complete their report in 2013, including how the Board will address issues unique to the Coastal Plain.
- 1:30 p.m. Committee Discussion and ActionKenworthy**
STAC members will begin developing a recommended course of action for APNEP regarding the impact of water quantity (ecological flows) on freshwater and estuarine resources.
- 3:30 p.m. Adjourn**

Note: The scheduled times for issue topics are estimates and may vary during the meeting.