

*South Eastern Estuarine Research Society - Spring 1999 Meeting
April 8 - 9th, Jacksonville, Florida*

Abstracts and Schedule of Meeting Events

Oral Presentations

Biological Availability of Groundwater and Precipitation as Nutrient Sources for Coastal Phytoplankton

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The focus of this research is to identify the complex biogeochemical and physical interactions within an estuarine water-column and understand the importance of freshwater N and P sources in governing phytoplankton production in a seaside coastal creek (Greens Creek). The Eastern Shore of Virginia as well as a large portion of the North Atlantic coastline is characterized by estuarine systems not dominated by large river systems. Instead, many coastal systems are influenced by small freshwater creeks yet little information has been documented on their potential ecological significance. In addition to sub-surface groundwater as a primary source of freshwater to Greens Creek, precipitation also supplies nutrient-rich freshwater to the water-column. The importance of both groundwater and atmospheric nutrients for marine primary productivity depends fundamentally on the biological availability of the nutrient species. Concentrations of nutrient fractions, species composition and nutrient loading rates for both precipitation and groundwater will be presented. In addition to measuring the quantitative nutrient composition of both sub-surface groundwater and rainfall events in the Greens Creek watershed, a rainfall related runoff model was also incorporated into this research with results to be presented.