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Department of Marine Sciences Presents a Seminar By

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Carbon cycling in a New England salt marsh

Salt marshes are important carbon sinks, but large uncertainties about current rates of carbon exchange with the atmosphere and the ocean remain. These need to be constrained for a better assessment of changes in long-term drivers such as sea level and climate. At the Plum Island Ecosystems LTER, we are expecting a transition from the currently dominant *Spartina patens* dominated high marsh to a more frequently flooded *Spartina alterniflora* dominated low marsh with increasing sea level. We have set up two eddy covariance sites, one in a high marsh (starting in 2013) and one in a low marsh (starting in 2015) to study net ecosystem CO2 exchange. Tidal effects on the carbon exchange are visible especially during monthly spring tides, when both daytime carbon uptake and night time respiration were reduced during flooding. We use a broad-band NDVI to monitor phenology at both sites, which is tightly coupled to the CO2 fluxes. While the temporal dynamics do not vary much between the years, the magnitude in NDVI and CO2 fluxes seem to vary with precipitation during the growing season. To constrain the lateral carbon export, these measurements are compared to long-term burial rates and supplemented by measurements of discharge and dissolved carbon (DIC, DOC) during selected tidal cycles.

Host: Craig Tobias
Time & Date: 11:00 am, Friday, October 7, 2016
Place: Marine Sciences Building, Seminar Room 103

Please see this page for cancelations and additional seminar information,
email marinesciencesseminars@uconn.edu, or call 860-405-9152 or 860-405-9151