

# B13B - Coastal Wetland Carbon and Nitrogen Cycles: Recent Advances in Measurements, Modeling, and Syntheses II Oral



Monday, 12 December 2022



12:00 - 13:30



McCormick Place - S501a (South, Level 5)

Coastal marshes, mangroves, and seagrass sequester significant amounts of “blue carbon” in soils, sediments, and biomass. They have potential as a negative emissions technology. With the increasing policy focus on climate change mitigation, we need to understand and accurately predict wetland carbon cycling processes. Complex interactions of climate, land use, sea level, nitrogen pollution, and human management regulate the strength of the carbon sink and the greenhouse gas balance (including CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O). Our ability to measure and model vertical and lateral exchanges, as well as the soil and sediment processes, at the land-ocean interface is limited. We aim to bring together researchers from various disciplines to discuss coastal carbon and nitrogen pools and fluxes, and their roles in global biogeochemical cycling and climate change mitigation. We also aim to report advances in eddy flux, lateral flux, field experiments, remote sensing, modeling, and synthesis that support coastal wetland carbon accounting.

## Type

Oral

## Primary Convener

[Omar I. Abdul-Aziz](#)

West Virginia University

## Conveners

[Jianwu Tang](#)

MBL

[Kevin D Kroeger](#)

USGS

[Lisamarie Windham-Myers](#)

U.S. Geological Survey

## Chairs

[Omar I. Abdul-Aziz](#)

West Virginia University

[Jianwu Tang](#)

MBL

Kevin D Kroeger

USGS

Lisamarie Windham-Myers

U.S. Geological Survey

Ask a question or comment on this session (not intended for technical support questions).

*Have a question or comment? Enter it here.*

## 8 Papers

🕒 12:00

B13B-01

Controls on spatial variation in porewater methane concentration across U.S. tidal wetlands

*Erika Koontz*

(Invited)

📍 *McCormick Place - S501a (South, Level 5)*

🕒 12:12

B13B-02

Constraining CO<sub>2</sub> and CH<sub>4</sub> fluxes from Diverse Tidal Wetlands: Standardizing measurements and analysis across a network of eddy covariance sites in North America and Canada

*Patty Y Oikawa*

📍 *McCormick Place - S501a (South, Level 5)*

🕒 12:24

B13B-03

Updated Global Estimates of Mangrove Organic Carbon Burial Rates Using Sedimentary and Geomorphic Settings

*Joshua Breithaupt*


📍 *McCormick Place - S501a (South, Level 5)*

🕒 12:36

B13B-04

Spatio-temporal Variation in Biomass of Herbaceous Wetlands across Distinct Hydrogeomorphic Zones in the Atchafalaya and Terrebonne Basins, LA, USA

*Elena Solohin*

 McCormick Place - S501a (South, Level 5)


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 12:48

B13B-05

Spatial Variability of Carbon Sequestration and Stock in the Salt Marshes of the Venice Lagoon (Italy)

*Andrea D'Alpaos*

 McCormick Place - S501a (South, Level 5)

**CANCELLED**


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 13:00

B13B-06

How much Blue Carbon do Hudson Estuary Marshes Sequester? A Full-Depth Carbon Stock Estimation of Iona Marsh, Lower Hudson, NY.

*Dorothy M Peteet*

 McCormick Place - S501a (South, Level 5)


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 13:12

B13B-07

Relative to What? Assessing Recovery of Blue Carbon Storage in Gulf of Mexico Tidal Marshes Relative to Different Reference Types


*Julia A Cherry*

 McCormick Place - S501a (South, Level 5)

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 13:24

Discussion

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**Category:** Biogeochemistry (terrestrial and marine)

**Section:** Biogeosciences

**Neighborhoods:** 3. Earth Covering

**Type:** Oral

**Cross-Listed:** H - Hydrology

**Cross-Listed:** GH - GeoHealth

**Cross-Listed:** GC - Global Environmental Change

**Cross-Listed:** A - Atmospheric Sciences