

# NOAA Restore Marsh Food Web Project Advisory Meeting

*Linking Community and Food-Web Approaches to Restoration: An Ecological Assessment of Created and Natural Marshes Influenced by a River Diversion*



Tues. Nov. 14<sup>th</sup>, 2017 - 10:00 – 11:30 CDT

*Join from your computer, tablet or smartphone.*

<https://global.gotomeeting.com/join/387154373>

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*United States: +1 (872) 240-3311*

*Access Code: 387-154-373*

# Agenda:

- *10:00 - 10:05 am: Welcome and meeting overview*
- *10:05 – 10:10 am: Introduction of project PIs, roles, and responsibilities*
- *10:10 – 10:15 am: Advisory Board and NOAA Restore team introductions*
- *10:15 – 10:25 am: Brief overview of project goals and study design.*
- *10:25 – 11:05 am: Input from Advisory Board members*
  - *Stuart Brown - CPRA (will also share insights from Pat Williams – NOAA)*
  - *Kevin Roy – USFWS*
  - *Sharon Osowski - EPA*
  - *Robert Spears - Plaquemines Parish*
- *11:05 – 11:10 am: Input from NOAA Restore Team*
- *11:10 – 11:25 am: Open discussion*
- *11:25 – 11:30 am: Wrap up and next steps*



# Meeting Goals:

1. Introduce the project participants
2. Briefly summarize the project's objectives and study design
3. Provide ample time for our Advisory Board members to provide their insights on the project



# Michael Polito

*Assistant Professor*

*Department of Oceanography & Coastal Sciences*

*Louisiana State University*

[mpolito@lsu.edu](mailto:mpolito@lsu.edu)



**Project Role:** Overall project administration and direction. Coordinate field work, supervise bulk and compound-specific tissue analyses, and contribute to food web analyses.

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# Annette Summers Engel

*Donald H. Jones Professor of Aqueous Geochemistry*

*Department of Earth and Planetary Sciences*

*University of Tennessee at Knoxville*

[aengel1@utk.edu](mailto:aengel1@utk.edu)



**Project Role:** Coordinate and supervise microbial and molecular research, conduct field work and research, and contribute to community and food web analyses and interpretations.

## Linda Hooper-Bùi

*Associate Professor & Executive Director of Office of Strategic Initiatives  
Department of Environmental Sciences  
Louisiana State University  
Lindabui@lsu.edu*



Project Role: Role of insects and other terrestrial arthropods in food webs, participate in field sampling, sort and identify samples, contribute to analyses.

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## Olaf Jensen

*Associate Professor  
Department of Marine & Coastal Sciences  
Rutgers University  
olaf.p.jensen@gmail.com*



Project Role: Coordinate and supervise the development of the food web models, and contribute to community and food web analyses.

## Paola López-Duarte

*Assistant Research Professor*  
*Department of Marine and Coastal Sciences*  
*Rutgers University*  
[lopez-duarte@rutgers.edu](mailto:lopez-duarte@rutgers.edu)



**Project Role:** Coordinate and supervise otolith microchemistry analyses, and contribute to isotope and food web analyses.

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## Charlie Martin

*Assistant Professor*  
*UF/IFAS Nature Coast Biological Station*  
*University of Florida*  
[charles.martin@ufl.edu](mailto:charles.martin@ufl.edu)



**Project Role:** Coordinating field sampling of nekton including capture, identification, handling, and quantification of specimens. Play a lead role in community analyses as well as contribute to additional food web analyses.

## Jill A. Olin

*Research Scientist*

*Great Lakes Research Center*

*Michigan Technological University*

[jaolin@mtu.edu](mailto:jaolin@mtu.edu)



**Project Role:** Contribute to field sampling, supervise bulk tissue sulfur isotope analysis, and prepare and contribute to manuscripts directed toward the objectives of the proposal related to community and food web analyses and specifically toward understanding residency of fishes across the salinity gradient and using restored vs natural marshes.

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## Nancy N. Rabalais

*Professor, Shell Oil Endowed Chair*

*Department of Oceanography & Coastal Sciences*

*Louisiana State University*

[nrabal@lsu.edu](mailto:nrabal@lsu.edu)



**Project Role:** Responsibility for benthic infaunal and epibenthic macroinvertebrate characterization. Participation in field trips, contribute to food web analysis, data analysis, synthesis, and publications.

## Brian Roberts

*Associate Director of Science, Associate Professor*

*Louisiana Universities Marine Consortium*

[broberts@lumcon.edu](mailto:broberts@lumcon.edu)



**Project Role:** Coordinate and supervise terrestrial and aquatic primary production research and contribute to community and food web analyses.

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## Erick Swenson

*Research Associate 5*

*Department of Oceanography & Coastal Sciences*

*Louisiana State University*

[eswenson@lsu.edu](mailto:eswenson@lsu.edu)



**Project Role:** Coordinate the advisory panel and interactions between the panel members and the researchers. Participate with model development and assessment, and contribute to manuscript preparation.



## ***Project Advisory Board Members:***

**Stuart Brown**, Coastal Protection and Restoration Authority, 150 Terrace Ave., Baton Rouge, LA 70802, (225) 342-4736, [stuart.brown@la.gov](mailto:stuart.brown@la.gov)

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**Sharon Osowski**, Marine, Coastal and Analysis Section (6WQ-EC), US EPA Region 6 , 1445 Ross Ave , Dallas, TX 75202, 214-665-7506, [Osowski.Sharon@epa.gov](mailto:Osowski.Sharon@epa.gov)

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**Kevin Roy**, U.S. Fish and Wildlife Service, Louisiana Ecological Services Office, 646 Cajundome Blvd., Suite 400, Lafayette, LA 70506, (337) 291-3120, [kevin\\_roy@fws.gov](mailto:kevin_roy@fws.gov)

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**Robert Spears**, Plaquemines Parish Coastal Zone Management Office, 8056 Hwy 23, Suite 200, Belle Chasse, LA 70037, 504-297-5631 / 504-934-6155, [rspears@ppgov.net](mailto:rspears@ppgov.net)

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**Pat Williams**, NOAA's National Marine Fisheries Service, Habitat Conservation Division, c/o Louisiana State University, Military Science Building, Room 266, South Stadium Drive, Baton Rouge, LA 70803, (225)389-0508 ext 208, [patrick.williams@noaa.gov](mailto:patrick.williams@noaa.gov)

## ***NOAA Restore Program Officers:***

**Frank Parker III**, Associate Director, NOAA RESTORE Science Program,  
NOAA/NOS/NCCOS, (301) 602-5577, [frank.parker@noaa.gov](mailto:frank.parker@noaa.gov)

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**Melissa Carle**, Monitoring and Planning Coordinator, Deepwater Horizon Restoration,  
NOAA Restoration Center, 301-427-8679, [melissa.carle@noaa.gov](mailto:melissa.carle@noaa.gov)

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# Brief overview of project goals and study design

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**Project Goal:** The primary goal of this research is guide future restoration effort by integrating community and food-webs approaches into management and restoration planning.

**Study Area:** West Point a la Hache area and Lake Hermitage Marsh Creation Project within Barataria Bay, in Plaquemines Parish, Louisiana.



# Brief overview of project goals and study design

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## Three Specific Objectives:

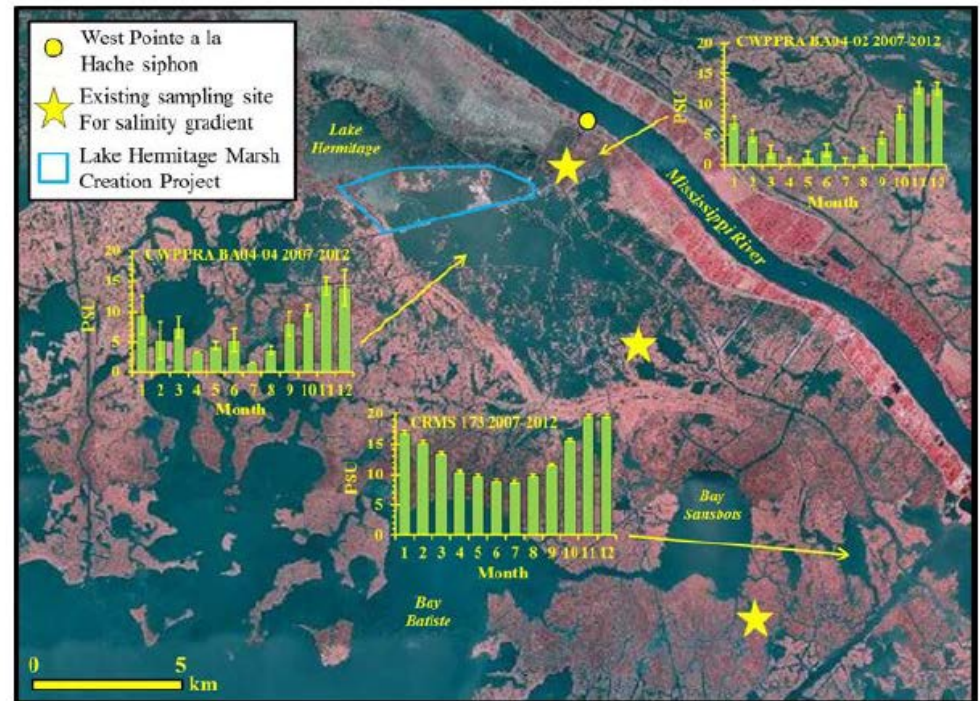
1. To examine species composition, relative abundances, and food web structure over time at different-aged created and natural marshes.
2. To examine species composition, relative abundances, and food web structure in natural marshes along a salinity gradient.
3. To use the above field data to develop and test an ecosystem model that will be used to predict the outcome of habitat restoration efforts on marsh food web structure, function and resilience.



# Brief overview of project goals and study design

**Study Design:** Sample two created marsh sites at the Lake Hermitage Marsh Creation Project and three natural marsh sites at varying distances from the WPH siphon over a three year period:

- Spring 2018 (Siphon off)
- Spring 2019 (Siphon recently on)
- Spring 2020 (Siphon on)



**\*\* Additional Data:** Spring 2016 (siphon on) - Stable isotope data for three natural marsh sites at varying distances from the siphon.

# Integration with Management Priorities

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*A Project Advisory Board* will help us to insure that the specific questions of interest to each participating management agency will be explicitly addressed in the project design, implementation, and analyses.

## **Broadly:**

- Compare with community and species level models commonly used by CWPPRA to evaluate marsh restoration projects.
- Identify the insights managers can gain from metrics of food web structure that can help interpret and refine current models.



# Input from Advisory Board members

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1. What are the specific management questions or information needs that your agency is hoping to have addressed as part of this project?
2. Do you have suggestions on how we can better incorporate your questions and priorities into our current research plans to serve the management needs of your agency?
3. Are there other ongoing research or management project/programs at your agency that are complementary to this project?



# Input from NOAA Restore

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1. What are the specific management questions or information needs that your agency is hoping to have addressed as part of this project?
2. Do you have suggestions on how we can better incorporate your questions and priorities into our current research plans to serve the management needs of your agency?
3. Are there other ongoing research or management project/programs at your agency that are complementary to this project?





# Open Discussion

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# Wrap-Up & Next Steps

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- Submit a **2-3 page summary framework** explaining the updated study design new plan to NOAA Restore (Nov/Dec 2017)
  - What question(s) does the new study intend to address?
  - What is the rough experimental design?
  - What existing management need(s) will be addressed?
  - What will be the outputs?
  - Who are the anticipated users of the outputs and how are they integrated with your team?
  - How do you anticipate the outputs being used and how will they be transferred to the users (such as CWPPRA)?
  - What is a reasonable timeline for the entire project?



# Wrap-Up & Next Steps

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- Submit a 2-3 page summary framework to NOAA Restore (Nov/Dec 2017)
- Scout field sites and recover/deploy data loggers (December 2017/January 2018)
- Prepare for field sampling (January –April 2018)
- Year 1 site visit Meeting in Baton Rouge (April 2018 – Date TBD)
- Year 1 field sampling (April / May 2018 – Dates TBD)



# Thank you!

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