

# Data Documentation

## Dataset Information

NOAA RESTORE Science Program: Linking Community and Food-web Approaches to Restoration:  
Trawl data for fishes and macroinvertebrates collected in created and natural marsh of Lake  
Hermitage, West Point a la Hache and Bay Batiste, Louisiana, 2018-05-17 to 2019-05-17

## Description:

This data set contains trawl information from collections near the West Pointe a la Hache siphon in south Louisiana. Species composition (fishes and macroinvertebrates), abundance, biomass and lengths are reported, along with salinity, temperature and dissolved oxygen data. Data are in spreadsheet format.

## Purpose:

To establish a baseline of fish and macroinvertebrate abundance at two restored (LHA, LHB) and four natural (LHC, WPH1, WPH2, PS7) marshes at various distances from a freshwater diversion in the vicinity of West Pointe a la Hache, Louisiana.

Little is known about how river diversions influence the ecological trajectory, food web structure, and function of natural versus created marshes. To address this gap, this project established sites in the West Point a la Hache (WPH) area (Barataria Bay, in Plaquemines Parish, Louisiana), near the WPH siphon which periodically shunts Mississippi River water into the local marshes. Sites were also established in nearby marshes that were restored as part of the Lake Hermitage Marsh Creation Project, representing an ideal model system to examine how seasonal and spatial shifts in salinity due to river diversions influence species composition and food web structure in both natural and different-aged created marshes. Objectives of the overall project included characterizing species compositions and abundances in multiple trophic levels (microbes to upper trophic level predators) and applying bulk (SIA) and compound-specific stable isotope analysis (CSIA) of amino acids (AA) in producer and consumer tissues to describe and compare the structure and complexity of food webs and reveal aspects of fish residency.

The data in this accession were funded by the NOAA RESTORE Science Program (ROR - <https://ror.org/0042xzm63>) under award NA17NOS4510091 to Louisiana State University.

## Methods:

Fishes and macroinvertebrates were collected using replicate 3-minute trawls (4.9-m) at 6 sites (n=8/site for a total of 48 trawls). Collected organisms were identified to the lowest possible taxonomic level, counted, weighed, and ten randomly selected individuals were measured (total length). Water quality information was also collected at each site (In 2018 temperature and salinity; in 2019 temperature, salinity and dissolved oxygen).

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Associated Datasets:

- Rabalais, Nancy N.; Morrison, Wendy; Smith, Leslie M.; Woods, Gina (2024). NOAA RESTORE Science Program: Linking Community and Food-web Approaches to Restoration: Total organic carbon and sediment grain size at natural and restored marshes along a salinity gradient generated from a freshwater diversion at West Pointe a la Hache into eastern Barataria Bay, Louisiana, 2018-05-21 to 2021-05-25 (NCEI Accession 0296021). NOAA National Centers for Environmental Information. Dataset. <https://doi.org/10.25921/fk7x-v112>
- Rabalais, Nancy N.; Morrison, Wendy; Smith, Leslie; Woods, Gina (2024). NOAA RESTORE Science Program: Linking Community and Food-web Approaches to Restoration: Taxonomic data for marsh infauna associated with natural and restored marshes along a salinity gradient generated from a freshwater diversion at West Pointe a la Hache into eastern Barataria Bay, Louisiana, 2018-05-21 to 2021-05-25 (NCEI Accession 0296020). NOAA National Centers for Environmental Information. Dataset. <https://doi.org/10.25921/zb46-m126>
- Polito, Michael J.; O'Nuanain, Aine; Bennelli, Allison; Winston, Joseph; Lamb, Katelyn J.; López-Duarte, Paola C.; Roberts, Brian J. (2025). NOAA RESTORE Science Program: Linking Community and Food-web Approaches to Restoration: Organic matter decomposition in restored vs. natural Louisiana marshes near the West Pointe A La Hache siphon, 2018-05-21 to 2021-07-28 (NCEI Accession 0302679). [indicate subset used]. NOAA National Centers for Environmental Information. Dataset. <https://doi.org/10.25921/8h8n-e570>
- Olin, Jill (2025). NOAA RESTORE Science Program: Linking Community and Food-web Approaches to Restoration: Bulk sulfur stable isotopes of on- and off-marsh fish species in restored vs. natural Louisiana marshes near the West Pointe A La Hache siphon, May 2018 (NCEI Accession 0302625). NOAA National Centers for Environmental Information. Dataset. <https://doi.org/10.25921/w8nw-nv55>
- Polito, Michael J.; Lamb, Katelyn J.; López-Duarte, Paola C.; Olin, Jill A.; Martin, Charles W.; Hooper-Bui, Linda M.; Roberts, Brian J. (2025). NOAA RESTORE Science Program: Linking Community and Food-web Approaches to Restoration: Carbon and nitrogen stable isotope values of organisms from created and natural marsh of Lake Hermitage, West Point a la Hache, and Bay Batiste, Louisiana, May 2018 (NCEI Accession 0302883). [indicate subset used]. NOAA National Centers for Environmental Information. Dataset. <https://doi.org/10.25921/43d6-6r23>
- Lopez-Duarte, Paola. (2025) NOAA RESTORE Science Program: Linking Community and Food-web Approaches to Restoration: On-marsh nekton community in restored vs. natural Louisiana marshes near the West Pointe A La Hache siphon, 2018-05-17 to 2019-05-20 (NCEI Accession 0304326). NOAA National Centers for Environmental Information. Dataset. <https://www.ncei.noaa.gov/archive/accession/0304326>. (in prep)
- Polito, Michael J.; Loesser, Katherine B.; Stahl, Angela R; Bennadji, Hayat; López-Duarte, Paola C.; Olin, Jill A.; Martin, Charles W.; Rabalais, Nancy; Roberts, Brian J. NOAA (2025). NOAA RESTORE Science Program: Linking Community and Food-web Approaches to Restoration: Carbon, nitrogen and sulfur stable isotope values of organisms from created and natural marsh of Lake Hermitage, West Point a la Hache, and Bay Batiste, Louisiana, May 2019 (NCEI Accession 0304324). NOAA National

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Centers for Environmental Information. Dataset.

<https://www.ncei.noaa.gov/archive/accession/0304324>. (in prep)

- Swenson, Erick (2025). NOAA RESTORE Science Program: Linking Community and Food-web Approaches to Restoration: Continuous hydrologic data from sondes deployed by Louisiana State University (LSU) in natural and restored marshes in the Lake Hermitage, Louisiana area from 2018-03-12 to 2021-12-31 (NCEI Accession 0304323). NOAA National Centers for Environmental Information. Dataset.  
<https://www.ncei.noaa.gov/archive/accession/0304323>. (in prep)
- Swenson, Erick (2025). NOAA RESTORE Science Program: Linking Community and Food-web Approaches to Restoration: Site elevation surveys near the West Pointe a la Hache siphon 2018-07-24 to 2021-07-28. NOAA National Centers for Environmental Information. Dataset. (in prep)

## People & Projects

### Dataset Authors:

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### Principal Investigator:

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### Additional Principal Investigators:

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- NCCOS Data Manager, [nccos.data@noaa.gov](mailto:nccos.data@noaa.gov), US DOC; NOAA; NOS; NCCOS (ROR-<https://ror.org/05ba43f71>)

### Collaborators: (Project Level)

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- Brian J. Roberts, Co-PI, Louisiana Universities Marine Consortium
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- Nancy Rabalais, Co-PI [nrabal@lsu.edu](mailto:nrabal@lsu.edu), Louisiana Universities Marine Consortium; Dept. Oceanography & Coastal Sciences, Louisiana State University

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**Funding:**

- US DOC; NOAA; NOS; NCCOS; RESTORE Science Program (ROR - <https://ror.org/0042xzm63>)
- NOAA RESTORE Science Program award NA17NOS4510091 to Louisiana State University

**Associated Online Resources:**

- National Centers for Coastal Ocean Science. 2023. RESTORE Sponsored Research Project: Linking Community and Food-web Approaches to Restoration. <https://www.fisheries.noaa.gov/inport/item/71399>
- RESTORE Project, Linking community and food-web approaches to restoration: An ecological assessment of created and natural marshes influenced by river diversions <https://restoreactscienceprogram.noaa.gov/projects/marshes>
- Project Webpage <https://restorefoodweb.lumcon.edu/>
- External source of salinity data in the same geographic region of this current study area (stations near the sampling sites in this dataset are: 0263, 3617, 0260, 0258, 3680, 0282, 0209, 4529, 0226, 0224) [https://lacoast.gov/crms\\_viewer/Map/CRMSViewer](https://lacoast.gov/crms_viewer/Map/CRMSViewer)

**Extents**

Start Date: 2018-05-17

End Date: 2019-05-17

Northern Boundary: 29.5605

Southern Boundary: 29.4759

Western Boundary: -89.8543

Eastern Boundary: -89.8099

**Keywords**

**Sea Areas, Water Bodies, Marine Protected Areas:**

- Gulf of America (formally the Gulf of Mexico)
- West Pointe a la Hache (WPH), eastern Barataria Bay, Louisiana
- Lake Hermitage (LH), Louisiana
- Port Sulphur (PS), Louisiana

**NCCOS Keywords:**

- NCCOS Research Topic > Ecological and Biogeographic Assessments
- NCCOS Research Data Type > Field Observation
- NCCOS Research Location > Region > Gulf of America (formally the Gulf of Mexico)

**File Information**

Total File Size: 128 KB

**Data File Format(s):**

- [Standard spreadsheet formats:
  - Excel (.xlsx)

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Data Files:

- LA\_Marsh\_Trawl\_2018\_2019.xlsx

Documentation Files:

- BrowseGraphic.JPG
- DataDocumentation.PDF

Table 1: Data Dictionary

Column	Variable	Label	Definition	Units	Range
<b>Abiotics and Trawl</b>					
1	Project Year	Year	Identifier indicating the first year of the project (baseline) and second year	None	1 or 2
2	Date Collected	Date Collected	Date the trawl was conducted	MM/DD/YYYY	05/17/2018 to 05/17/2019
3	Site	Site	Identifier for each sampling area	None	Restored = (LHA, LHB) Natural = (LHC, WPH1, WPH2, PS7)
4	Trawl number	Trawl #	Identifier assigned to each trawl event	None	1-8
5	Latitude Start	Latitude Start	Latitude of trawl start	Decimal degrees	29.47474 to 29.56521
6	Longitude Start	Longitude Start	Longitude of trawl start	Decimal degrees	-89.8629 to -89.7869
7	Latitude End	Latitude End	Latitude of trawl end	Decimal degrees	29.4741 to 29.5640
8	Longitude End	Longitude End	Longitude of trawl end	Decimal degrees	-89.8612 to -89.7867
9	Time of Day	Time of Day	Time the trawl began, central time	HH:MM	7:34 to 18:06
10	Total Trawl Time	Total Trawl Time	Elapsed time of the trawl	Minutes	2 to 3
11	Distance Traveled	Distance Traveled	Distance traveled in the duration of the trawl	Meters	52 to 220
12	Boat RPM	Boat RPM	Boat propeller revolutions	Revolutions per minute	1100 to 1900
13	Average Speed	Average Speed	Average boat speed	Km/hr	2.4 to 4.8

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Column	Variable	Label	Definition	Units	Range
14	Depth	Depth	Depth of the water body being trawled	Meters	0.5 to 3.7
15	Temperature	Temperature	Water temperature	Degrees Centigrade	25.5 to 31.9
16	Salinity	Salinity	Ambient salinity	Ppt	6.40 to 14.32
	Dissolved Oxygen	Dissolved Oxygen	Dissolved oxygen of the water body being trawled	Milligrams per liter	5.2 to 11.4
17	Notes	Notes	Observations related to field collections	N/A	N/A
<b>Abundance</b>					
2 18	Date Collected	Date Collected	Date the trawl was conducted	MM/DD/YYYY	05/17/2018 to 05/17/2019
19	Site	Site	Identifier for each sampling area	None	Restored = (LHA, LHB) Natural = (LHC, WPH1, WPH2, PS7)
20	Trawl number	Trawl #	Identifier assigned to each trawl event	None	1-8
21	Abundances	Abundances	Abundances of 35 organisms collected in trawls (number of individuals for each species listed by common name)	N/A	1 to 2400
<b>Biomass</b>					
22	Date Collected	Date Collected	Date the trawl was conducted	MM/DD/YYYY	05/17/2018 to 05/17/2019
23	Site	Site	Identifier for each sampling area	None	Restored = (LHA, LHB) Natural = (LHC, WPH1, WPH2, PS7)
24	Trawl number	Trawl #	Identifier assigned to each trawl event	None	1-8
25	Species	Species	Species Latin name	N/A	N/A
26	Common Name	Common Name	Species common name	N/A	N/A

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Column	Variable	Label	Definition	Units	Range
27	Biomass	Biomass	Pooled weights for individual species collected	Grams	1 to 2500
<b>Lengths</b>					
28	Date Collected	Date Collected	Date the trawl was conducted	MM/DD/YYYY	05/17/2018 to 05/17/2019
29	Site	Site	Identifier for each sampling area	None	Restored = (LHA, LHB) Natural = (LHC, WPH1, WPH2, PS7)
30	Trawl number	Trawl #	Identifier assigned to each trawl event	None	1-8
31	Species	Species	Species Latin name	N/A	N/A
32	Common Name	Common Name	Species common name	N/A	N/A
33	Total Length	Total Length-x	Total lengths for 10 randomly selected individuals, designated by -1, -2, etc.	Centimeters	Total Length-1 to Total Length-10

### Parameter Information

List of major parameters included in this accession:

#### Parameter Description:

*Parameters:* Fish and macroinvertebrate community species taxonomic composition  
*Property Type:* Measured  
*Units:* Taxonomic categories and Number of individuals  
*Observation Category:* laboratory analysis  
*Sampling Instrument:* Trawls  
*Sampling and Analyzing Method:*  
*Data Quality Method:*

#### Parameter Description:

*Parameters:* Fish and macroinvertebrate biomass measurements  
*Property Type:* Measured  
*Units:* Grams  
*Observation Category:* laboratory analysis  
*Sampling Instrument:* Pesola spring scales  
*Sampling and Analyzing Method:*  
*Data Quality Method:*

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**Parameter Description:**

*Parameters:* Fish and macroinvertebrate length measurements  
*Property Type:* Measured  
*Units:* Centimeters  
*Observation Category:* laboratory analysis  
*Sampling Instrument:* ruler  
*Sampling and Analyzing Method:* Total length was measured for ten randomly selected individuals.  
*Data Quality Method:*

**Parameter Description:**

*Parameters:* Trawl tow conditions  
*Property Type:* Measured  
*Units:* Distance traveled, average speed, water depth of trawled area  
*Observation Category:* in situ  
*Sampling Instrument:* Handheld Garmin GPSmap 76SC (distance and average speed), Garmin depth finder (depth)  
*Sampling and Analyzing Method:*  
*Data Quality Method:*

**Parameter Description:**

*Parameters:* Salinity  
*Property Type:* measured  
*Units:* ppt  
*Observation Category:* in situ  
*Sampling Instrument:* Handheld YSI ProDSS  
*Sampling and Analyzing Method:*  
*Data Quality Method:*

**Parameter Description:**

*Parameters:* Temperature  
*Property Type:* measured  
*Units:* degrees C  
*Observation Category:* in situ  
*Sampling Instrument:* Handheld YSI ProDSS  
*Sampling and Analyzing Method:*  
*Data Quality Method:*



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**Parameter Description:**

*Parameters:* Dissolved Oxygen  
*Property Type:* measured  
*Units:* milligrams per liter  
*Observation Category:* in situ  
*Sampling Instrument:*  
*Sampling and Analyzing Method:*  
*Data Quality Method:*

No dissolved oxygen data was collected in 2018.

## Document Information

**Date:** 2025-05-02  
**Resource Provider:** NCCOS Data Manager, [nccos.data@noaa.gov](mailto:nccos.data@noaa.gov), US DOC; NOAA; NOS; National Centers for Coastal Ocean Science (NCCOS)  
**Comment:** This data documentation describes data files archived as a NOAA NCEI data accession, and is intended to provide dataset-level metadata for the purposes of discovery, use, and understanding.  
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