

# 2023 Delta-X Open Data Workshop

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## HERBACEOUS VEGETATION AND SOIL DATA

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# Delta-X: Aboveground Biomass and Necromass across Wetlands, MRD, Louisiana, 2021

## Overview

DOI	<a href="https://doi.org/10.3334/ORNLDAAC/2000">https://doi.org/10.3334/ORNLDAAC/2000</a>
Version	1.2
Project	Delta-X
Published	2022-04-25
Updated	2022-06-03
Usage	267 downloads

Download Data 668.5 KB

User Guide

Resources

## Description

This dataset contains total carbon, total nitrogen, and total phosphorus content of aboveground



## Spatial Coverage

Bounding rectangle

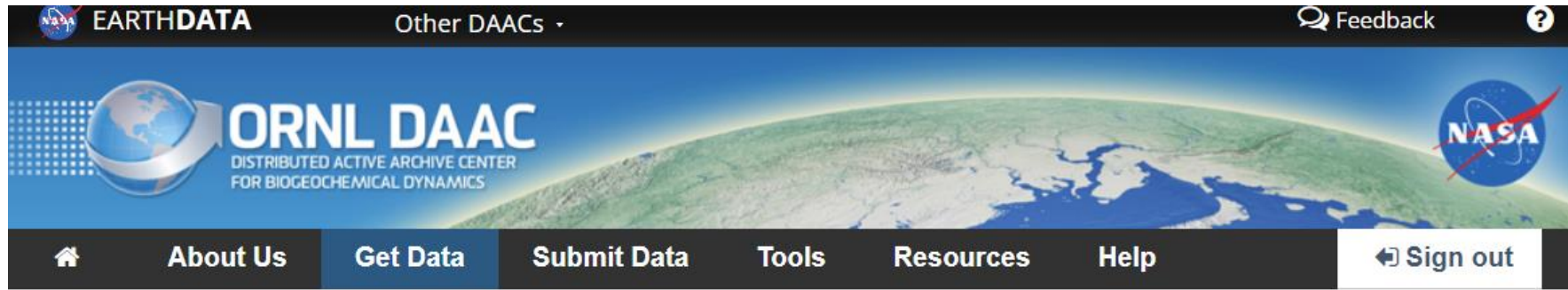
N: 29.51 S: 29.17 E: -90.82 W: -91.89

## Temporal Coverage

# Field Data Overview and Analysis

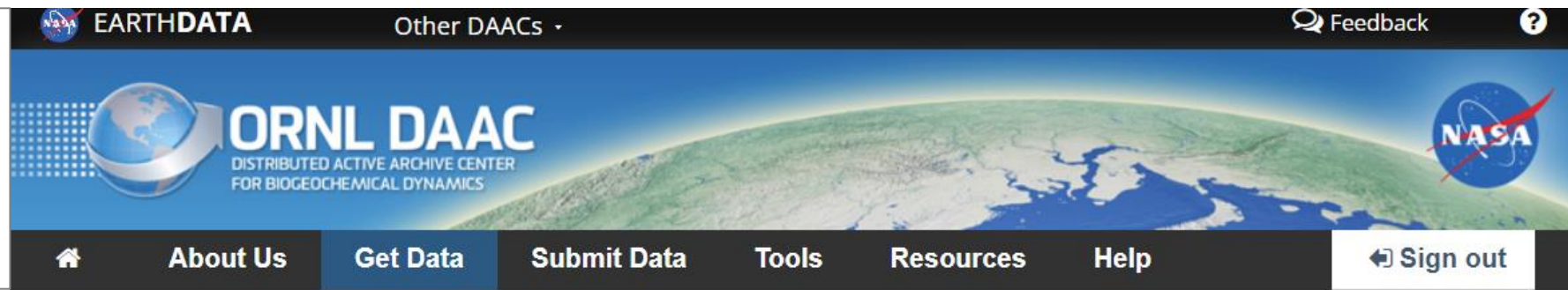
What does each Dataset (access through ORNL) include?

- Data
- Collection methods
- Processing methods
- Data file format
- Citation.



1. Delta-X: Aboveground Biomass and Necromass across Wetlands, MRD, Louisiana, 2021.
2. Delta-X: Aboveground Vegetation Structure for Herbaceous Wetlands across MRD, LA, USA.
3. Delta-X: Belowground Biomass and Necromass across Wetlands in the MRD, LA, USA, 2021.
4. Delta-X: Soil Properties for Herbaceous Wetlands, MRD, Louisiana, 2021.
5. Delta-X: AGB and BGB Stable Isotopes for Herbaceous Wetlands, MRD, Louisiana, 2021.

# Delta-X: Aboveground Biomass and Necromass across Wetlands, MRD, Louisiana, 2021



## Dataset Overview

Aboveground biomass (AGB)

Aboveground necromass (AGN)

Total Foliar Carbon

Total Foliar Nitrogen

Total Foliar Phosphorus

## Data Format

Two data files in comma-separated value (\*.csv) format (includes data for Spring and Fall Campaigns)

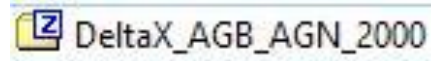
DeltaX\_Aboveground\_Biomass\_Necromass\_Spring2021.csv and  
DeltaX\_Aboveground\_Biomass\_Necromass\_Fall2021.csv.



# Delta-X: Aboveground Biomass and MRD, Louisiana, 2021

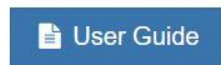
## Overview

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## In this folder:

- User guide (.pdf)
- Complete dataset (.csv)
- Link to an online version



	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	basin	campaign	date	latitude	longitude	site_id	hydrogeomorphic_zone	sampling_station	quadrat_id	species	vegetation_class	total_dry_mass	total_carbon	total_nitrogen	total_phosphorus
2	Atchafalaya	Fall_2021	8/19/2021	29.51011	-91.44493	Mike Island	High intertidal	1	A	Colocasia esculenta	AGB	558.9	422.08	38.41	3.05
3	Atchafalaya	Fall_2021	8/19/2021	29.51011	-91.44493	Mike Island	High intertidal	1	A	Colocasia esculenta	AGN	211.4	not_measured	not_measured	not_measured
4	Atchafalaya	Fall_2021	8/19/2021	29.51011	-91.44493	Mike Island	High intertidal	1	A	Polygonum punctatum	AGB	125.6	355.1	8.46	2.8
5	Atchafalaya	Fall_2021	8/19/2021	29.51016	-91.44485	Mike Island	High intertidal	1	B	Colocasia esculenta	AGB	207.7	not_measured	not_measured	not_measured
6	Atchafalaya	Fall_2021	8/19/2021	29.51016	-91.44485	Mike Island	High intertidal	1	B	Colocasia esculenta	AGN	84.6	not_measured	not_measured	not_measured
7	Atchafalaya	Fall_2021	8/19/2021	29.51016	-91.44485	Mike Island	High intertidal	1	B	Polygonum punctatum	AGB	51.8	not_measured	not_measured	not_measured
8	Atchafalaya	Fall_2021	8/19/2021	29.51016	-91.44485	Mike Island	High intertidal	1	B	Salix nigra	AGB	161.6	418.83	23.11	2.17
9	Atchafalaya	Fall_2021	8/19/2021	29.5099	-91.44506	Mike Island	High intertidal	2	A	Colocasia esculenta	AGB	794.3	403.39	39.76	3.63
10	Atchafalaya	Fall_2021	8/19/2021	29.5099	-91.44506	Mike Island	High intertidal	2	A	Colocasia esculenta	AGN	18.4	not_measured	not_measured	not_measured
11	Atchafalaya	Fall_2021	8/19/2021	29.50989	-91.44506	Mike Island	High intertidal	2	B	Colocasia esculenta	AGB	415.8	not_measured	not_measured	not_measured
12	Atchafalaya	Fall_2021	8/19/2021	29.50989	-91.44506	Mike Island	High intertidal	2	B	Colocasia esculenta	AGN	61.8	not_measured	not_measured	not_measured
13	Atchafalaya	Fall_2021	8/19/2021	29.50993	-91.44462	Mike Island	Intermediate intertidal	3	A	Polygonum punctatum	AGN	11.5	not_measured	not_measured	not_measured
14	Atchafalaya	Fall_2021	8/19/2021	29.50993	-91.44462	Mike Island	Intermediate intertidal	3	A	Salix nigra	AGB	600.7	396.56	20.11	1.53
15	Atchafalaya	Fall_2021	8/19/2021	29.50991	-91.44463	Mike Island	Intermediate intertidal	3	B	Polygonum punctatum	AGB	204.4	418.16	35.83	3.57
16	Atchafalaya	Fall_2021	8/19/2021	29.50991	-91.44463	Mike Island	Intermediate intertidal	3	B	Salix nigra	AGB	368.4	not_measured	not_measured	not_measured
17	Atchafalaya	Fall_2021	8/19/2021	29.5097	-91.4447	Mike Island	Intermediate intertidal	4	A	Alternanthera philoxeroides	AGB	172.7	not_measured	not_measured	not_measured
18	Atchafalaya	Fall_2021	8/19/2021	29.5097	-91.4447	Mike Island	Intermediate intertidal	4	A	Polygonum punctatum	AGB	497.4	413.23	17.31	2.54
19	Atchafalaya	Fall_2021	8/19/2021	29.5097	-91.4447	Mike Island	Intermediate intertidal	4	A	Salix nigra	AGB	649.4	397.44	22.26	2.85
20	Atchafalaya	Fall_2021	8/19/2021	29.50967	-91.44472	Mike Island	Intermediate intertidal	4	B	Alternanthera philoxeroides	AGB	172.4	not_measured	not_measured	not_measured
21	Atchafalaya	Fall_2021	8/19/2021	29.50967	-91.44472	Mike Island	Intermediate intertidal	4	B	Polygonum punctatum	AGB	297.6	not_measured	not_measured	not_measured
22	Atchafalaya	Fall_2021	8/19/2021	29.50967	-91.44472	Mike Island	Intermediate intertidal	4	B	Salix nigra	AGB	425.76	not_measured	not_measured	not_measured
23	Atchafalaya	Fall_2021	8/25/2021	29.29945	-91.10509	CRMS0399	Intertidal	1	A	Schoenoplectus americanus	AGB	249.8	408.14	9.28	0.86
24	Atchafalaya	Fall_2021	8/25/2021	29.29945	-91.10509	CRMS0399	Intertidal	1	A	Schoenoplectus americanus	AGN	305.2	not_measured	not_measured	not_measured

# Delta-X: Aboveground Biomass and Necromass across the Reference Monitoring System (CRMS) in the Atchafalaya and Terrebonne basins in southeastern coastal Louisiana, 2021

## Overview

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## Citation

Castañeda-Moya, E., and E. Solohin. 2022. Delta-X: Aboveground Biomass and Necromass across the Reference Monitoring System (CRMS) in the Atchafalaya and Terrebonne basins in southeastern coastal Louisiana, 2021. <https://doi.org/10.3334/ORNLDAAC/2000>

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2. Data Characteristics
3. Application and Derivation
4. Quality Assessment
5. Data Acquisition, Materials, and Methods
6. Data Access
7. References
8. Dataset Revisions

## 1. Dataset Overview

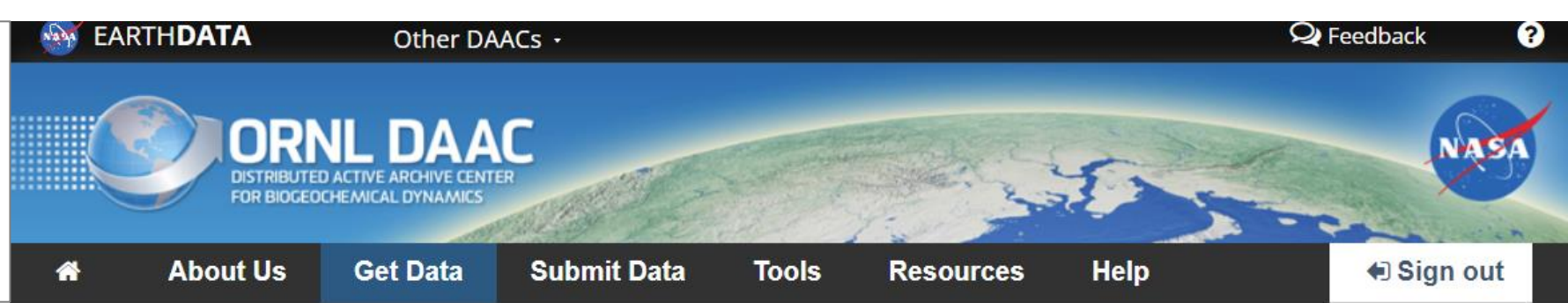
This dataset contains total carbon, total nitrogen, and total phosphorus content of aboveground biomass collected from herbaceous wetlands in the Atchafalaya and Terrebonne basins in southeastern coastal Louisiana, 2021. The data were collected at three sites in the Atchafalaya basin and three sites in the Terrebonne basin. Five of the sites are part of the Reference Monitoring System (CRMS). The other site is in the Wax Lake Delta (WLD) without appropriate plant material within each plot was clipped at soil level, stored in plastic bags, and transported to the wetland sites in both basins were chosen to represent a salinity gradient including freshwater, brackish, and saltwater. The data were for the Delta-X campaign conducted from 2021-03-19 to 2021-04-02 (spring) and 2021-08-19 to 2021-09-02 (fall).

**Project:** [Delta-X](#)

The Delta-X mission is a 5-year NASA Earth Venture Suborbital-3 mission to study the Mississippi River delta and sinking in different areas. River deltas and their wetlands are drowning as a result of sea level rise. This mission will determine which parts will survive and continue to grow, and which parts will be lost. Delta-X will acquire and carry through data analysis, model integration, and validation to predict the extent of delta loss and gain.

**Related Dataset**

# Delta-X: Aboveground Vegetation Structure for Herbaceous Wetlands across MRD, Louisiana, 2021



## Dataset Overview

Dominant species (e.g., *Spartina alterniflora*)

Stem diameter (mm)

Mean height (cm)

Stem density

## Data Format

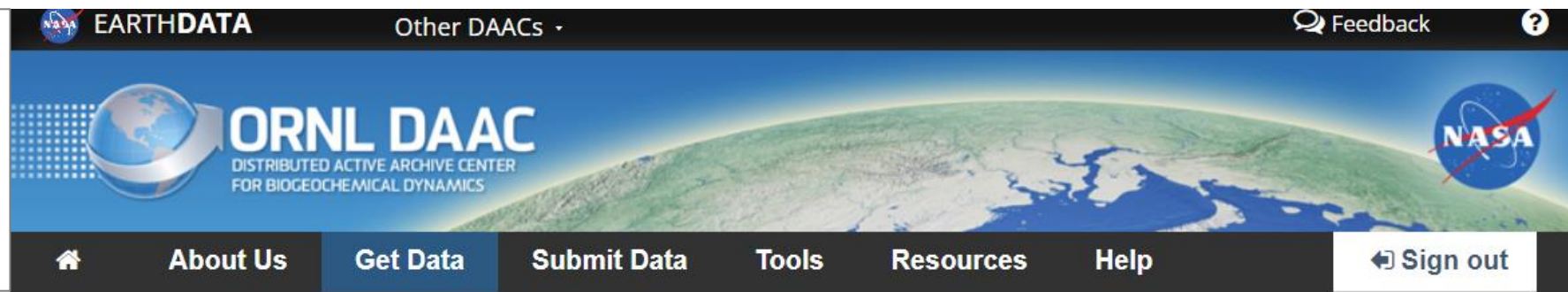
Two data files in comma-separated value (\*.csv) format (includes data for Spring and Fall Campaigns)

DeltaX\_VegetationStructure\_Spring2021.csv  
and  
DeltaX\_VegetationStructure\_Fall2021.csv



basin	campaign date	latitude	longitude	site	hydrogeomorphic_zo	sampling_static	dominant_species	quarter_id	vegetation_class	number_of_stems	mean_height	mean_diameter	stem_density		
Atchafalay	Fall_2021	#####	29.51011	-91.44493	Mike Islan	High intertidal		1	Colocasia esculenta	A	AGB	61	88.8	9	61
Atchafalay	Fall_2021	#####	29.51011	-91.44493	Mike Islan	High intertidal		1	Salix nigra	A	AGB	14	46.3	2.9	14

# Delta-X: Belowground Biomass and Necromass across Wetlands, MRD, Louisiana, 2021



## Dataset Overview

Belowground biomass (BGB)

Belowground necromass (BGN)

Total Carbon

Total Nitrogen

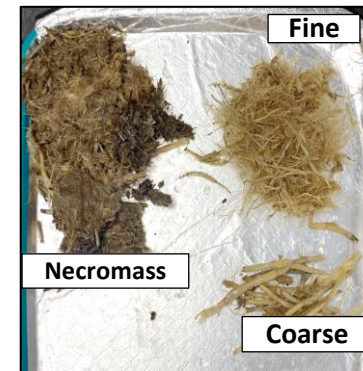
Total Phosphorus

## Data Format

Two data files in comma-separated value (\*.csv) format (includes data for Spring and Fall Campaigns)

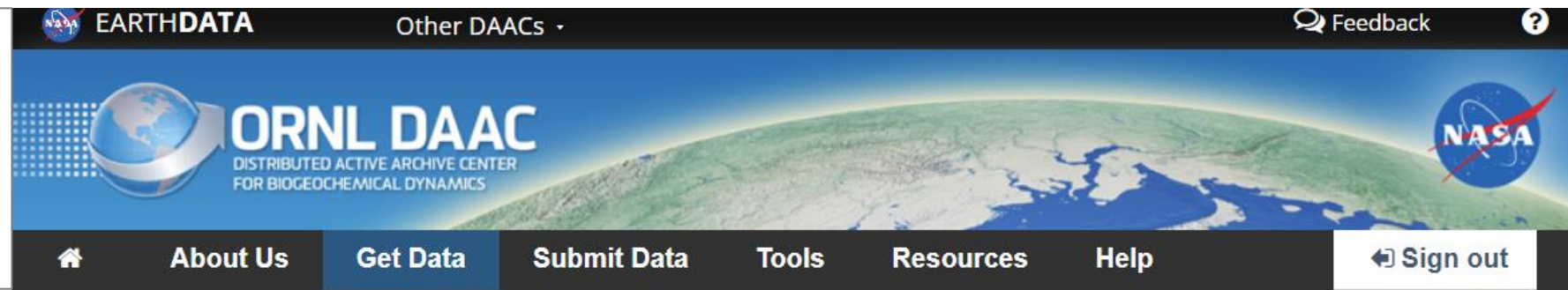
DeltaX\_Belowground\_Biomass\_Necromass\_Spring2021.csv and

DeltaX\_Belowground\_Biomass\_Necromass\_Fall2021.csv.





# Delta-X: Soil Properties for Herbaceous Wetlands across MRD, Louisiana, 2021



## Dataset Overview

Soil properties include:

bulk density, organic matter content,  
total densities of Carbon, Nitrogen, and Phosphorus.

## Data Format

This dataset consists of one file in comma-separated values (CSV) format.



## Soil Cores

50 cm soil cores  
collected at each study  
site using a Russian  
peat corer (5 cm  
diameter).

# ORNL DAAC DATASETS

1. Delta-X: Aboveground Biomass and Necromass across Wetlands, MRD, Louisiana, 2021

<https://doi.org/10.3334/ORNLDAAC/2000>

2. Delta-X: Aboveground Vegetation Structure for Herbaceous Wetlands across MRD, LA, USA. ORNL DAAC, Oak Ridge, Tennessee, USA.

<https://doi.org/10.3334/ORNLDAAC/1997>

3. Delta-X: Belowground Biomass and Necromass across Wetlands in the MRD, LA, USA, 2021. ORNL DAAC, Oak Ridge, Tennessee, USA.

<https://doi.org/10.3334/ORNLDAAC/1999>

4. Delta-X: Soil Properties for Herbaceous Wetlands, MRD, Louisiana, 2021. ORNL DAAC, Oak Ridge, Tennessee, USA. <https://doi.org/10.3334/ORNLDAAC/2078>