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Coastal Protection and
Restoration Authority of Louisiana

State of Louisiana Coastal Monitoring Workgroup Report

Dubravko Justic and Angelina Freeman

CHAMP Meeting, Stennis Space Center
January 9-10 2017



Background

- January 2017 – Initial discussions regarding LCMW (Lewitus, Freeman, Justic)
- February 2017 – LCMW established

Workgroup Members

Louisiana Coastal Monitoring Workgroup

Name	Organization
Angelina Freeman	Coastal Protection and Restoration Authority of Louisiana
Dubravko Justic	Louisiana State University
Alan Lewitus	National Oceanic and Atmospheric Administration
Rex Caffey	Louisiana State University
Ehab Meselhe	The Water Institute of the Gulf
Nancy Rabalais	Louisiana Universities Marine Consortium/Louisiana State University
Barbara Kleiss	United States Army Corps of Engineers
Brad Spicer	Louisiana Department of Agriculture and Forestry
Mark Schexnayder	Louisiana Department of Wildlife & Fisheries
Robert Twilley	Louisiana Sea Grant
Amanda Vincent	Louisiana Department of Environmental Quality
Gregory Steyer	United States Geological Survey
Kevin Craig	National Oceanic and Atmospheric Administration

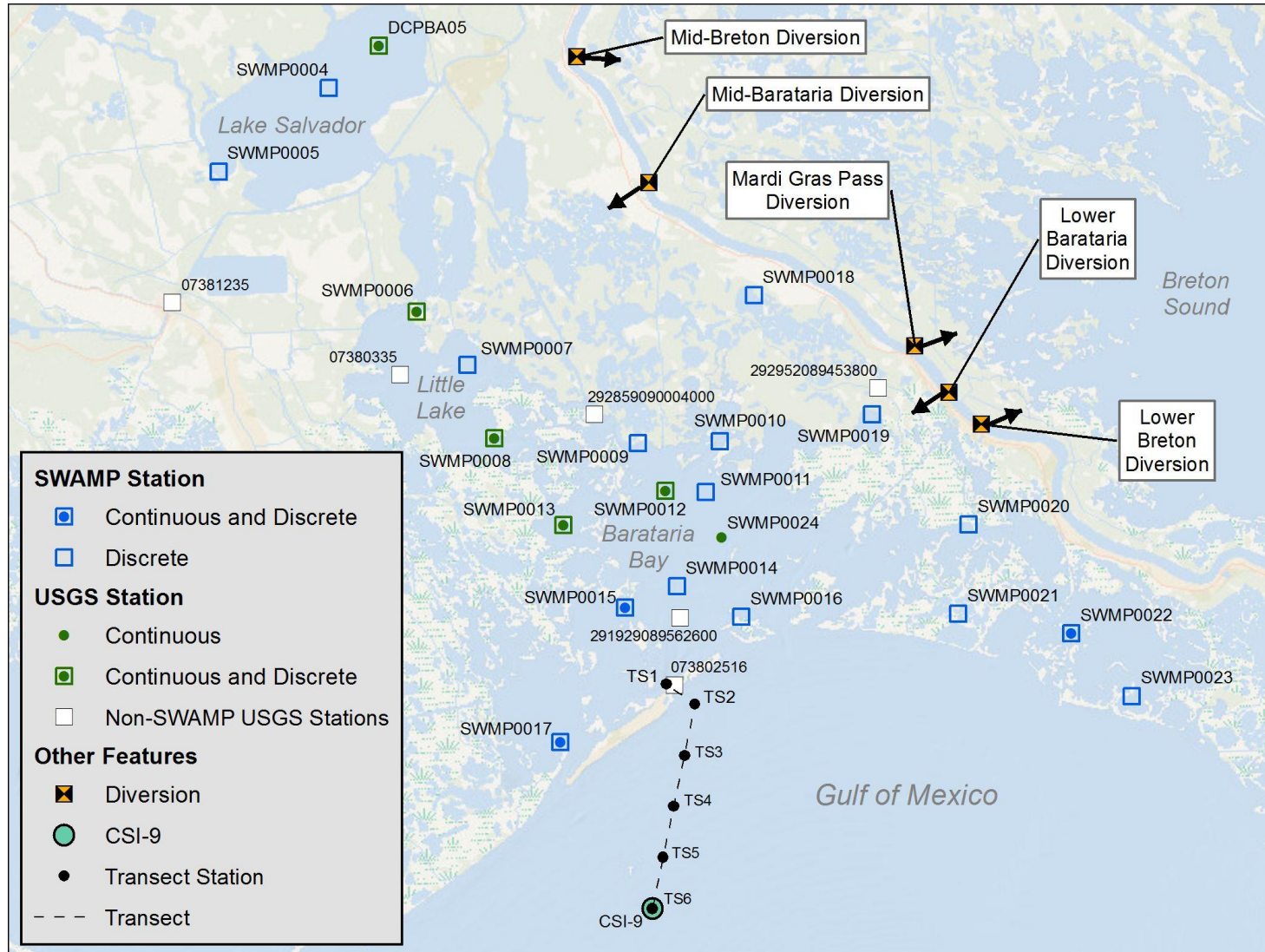
Workgroup Purpose

Develop a **cooperative and sustainable nutrient monitoring program** in Louisiana state coastal waters to complement Gulf-wide nutrient monitoring efforts.

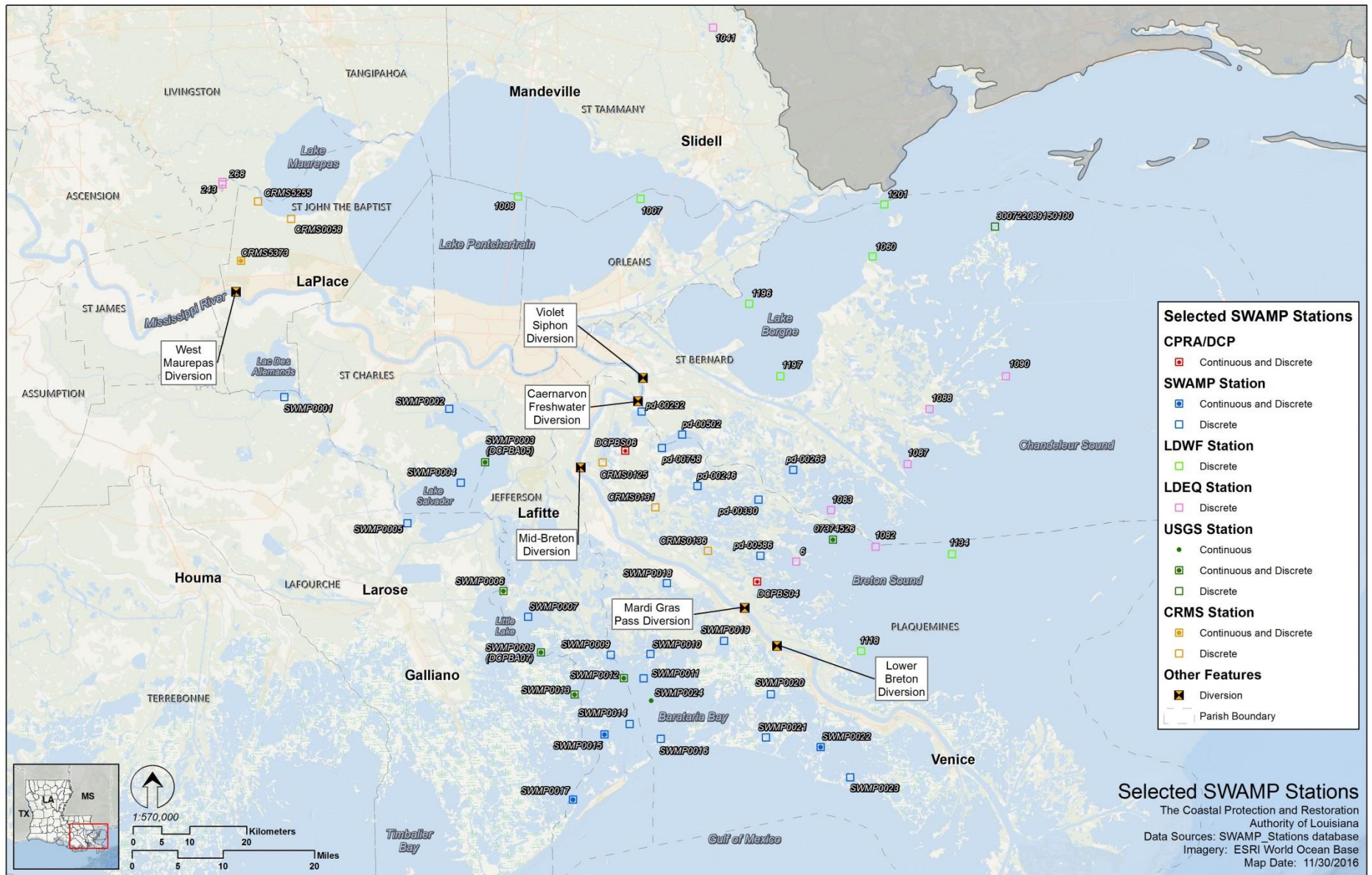
Workgroup Goals

- Determine data needs/gaps for hypoxia monitoring in Louisiana waters
- Develop proposals to address data needs/gaps that leverage existing data collection efforts and coordinate with monitoring efforts in other Gulf states
- Identify and secure funding for implementation of identified needs

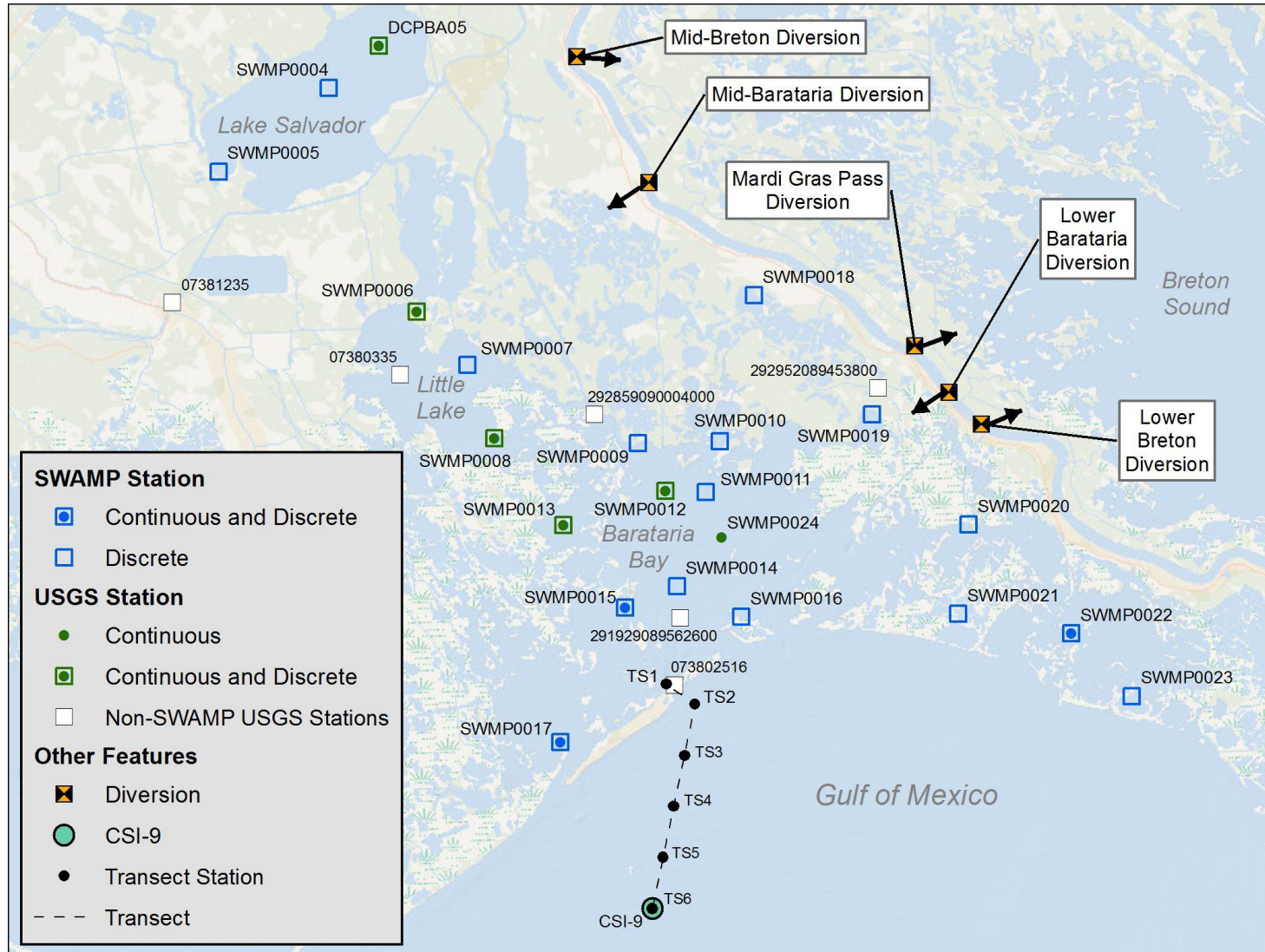
Priority 1: Monitoring Transect from Barataria Pass to Inner Shelf



Active and Proposed SWAMP Water Quality



Priority 1: Monitoring Transect from Barataria Pass to Inner Shelf



Proposed Monitoring Parameters

Monitoring Variable	Location	Sampling Frequency	Sampling Depths
Nitrogen (NO ₃ , NH ₄ , TN)	TS1, TS2, TS4, and TS6	Monthly (May-Sept) Bimonthly (Oct-Mar)	Surface*, mid, bottom**
Phosphorus (PO ₄ , TP)	TS1, TS2, TS4, and TS6	Monthly (May-Sept) Bimonthly (Oct-Mar)	Surface, mid, bottom
Silicate (SiO ₃)	TS1, TS2, TS4, and TS6	Monthly (May-Sept) Bimonthly (Oct-Mar)	Surface, mid, bottom
Dissolved Oxygen	TS1, TS2, TS4, and TS6	Monthly (May-Sept) Bimonthly (Oct-Mar)	Surface, mid, bottom
Temperature	TS1, TS2, TS4, and TS6	Monthly (May-Sept) Bimonthly (Oct-Mar)	Surface, mid, bottom
Salinity	TS1, TS2, TS4, and TS6	Monthly (May-Sept) Bimonthly (Oct-Mar)	Surface, mid, bottom
Chlorophyll a	TS1, TS2, TS4, and TS6	Monthly (May-Sept) Bimonthly (Oct-Mar)	Surface, mid, bottom
TSS	TS1, TS2, TS4, and TS6	Monthly (May-Sept) Bimonthly (Oct-Mar)	Surface, mid, bottom
pH	TS1, TS2, TS4, and TS6	Monthly (May-Sept) Bimonthly (Oct-Mar)	Surface, mid, bottom

Specific Objectives/Benefits

- Capture nutrient transformations, water quality changes, and resulting hypoxia dynamics from nearshore to the core of the hypoxic zone
- Assess the far-field effects of river diversions
- Improve understanding of estuarine-shelf exchanges in NGOM
- Address old (e.g., “outwelling”, “wetland hypothesis”) and new (e.g., “river-injected estuaries”) paradigms in estuarine-coastal coupling

Past Activities

- February – May 2017 – LCMW action plan development
- May 2017 – proposal submitted to Natural Resource Damage Assessment (NRDA) – call for Open Ocean Project Ideas (Freeman, Justic, Lewitus, Schexnayder; \$3 million/15 years)
- September 2017 – GOMA Gulf Star proposal submitted (Freeman, Justic, Meselhe, Vincent, Blich; \$100K/2 years)
- November 2017 – GOMA Gulf Star proposal Awarded (Freeman, Justic, Meselhe, Vincent, Blich; \$50K/2 years)

Current Activities

- Working to fund the full transect monitoring proposal (\$300K yr/15 years)
- Awaiting decision on our submitted project (Water Quality Offshore Monitoring Transect) in response to the Natural Resource Damage Assessment (NRDA) – call for Open Ocean Project Ideas
- Identifying potential funding sources and developing a plan to secure funding for the full transect monitoring proposal

Funding of LCMW Transect Proposal

Funding Source	Allocation	Total Amount Available	LCMW Transect Stations	Annual \$ Toward Transect	Timeframe	Status
Gulf of Mexico Alliance	Gulf Star	\$650,000	TS1, TS2, TS4, TS6	\$25,000	2 years	Secured
Natural Resources Damage Assessment (State of LA)	Monitoring and Adaptive Management	\$225,000,000	CSI-9	\$50,000	15 years	Potential
	Nutrient Reduction (nonpoint source)	\$20,000,000				
Natural Resources Damage Assessment (Open Ocean)	Monitoring and Adaptive Management	\$200,000,000		\$200,000	15 years	Proposal in review
	Fish and Column Invertebrates	\$380,000,000			15 years	Potential
NOAA			T2-T6	\$10,000		Potential
RESTORE Act	Adaptive Management		TSI-1, TS-2 (?)	\$40,000	15 years	Potential
National Fish and Wildlife Foundation	Diversions and Barrier Islands	\$1,272,000,000			15 years	Potential
	Adaptive Management (CPRA)				15 years	Potential
Baton Rouge Area Foundation				\$50,000		Potential
CPRA Project-Specific	Mid-Barataria Diversion Pre-Project Monitoring/Adaptive Management	\$1,000,000	TS1-TS6, CSI-9 (turbidity)	\$60,000	6-7 years	Potential