



Louisiana's Coastwide Reference Monitoring System-*Wetlands* (CRMS)

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State of the Coast
March 20, 2014

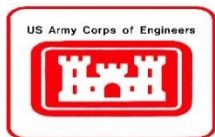


committed to **our coast**

Coastal Wetland Planning, Protection and Restoration Act

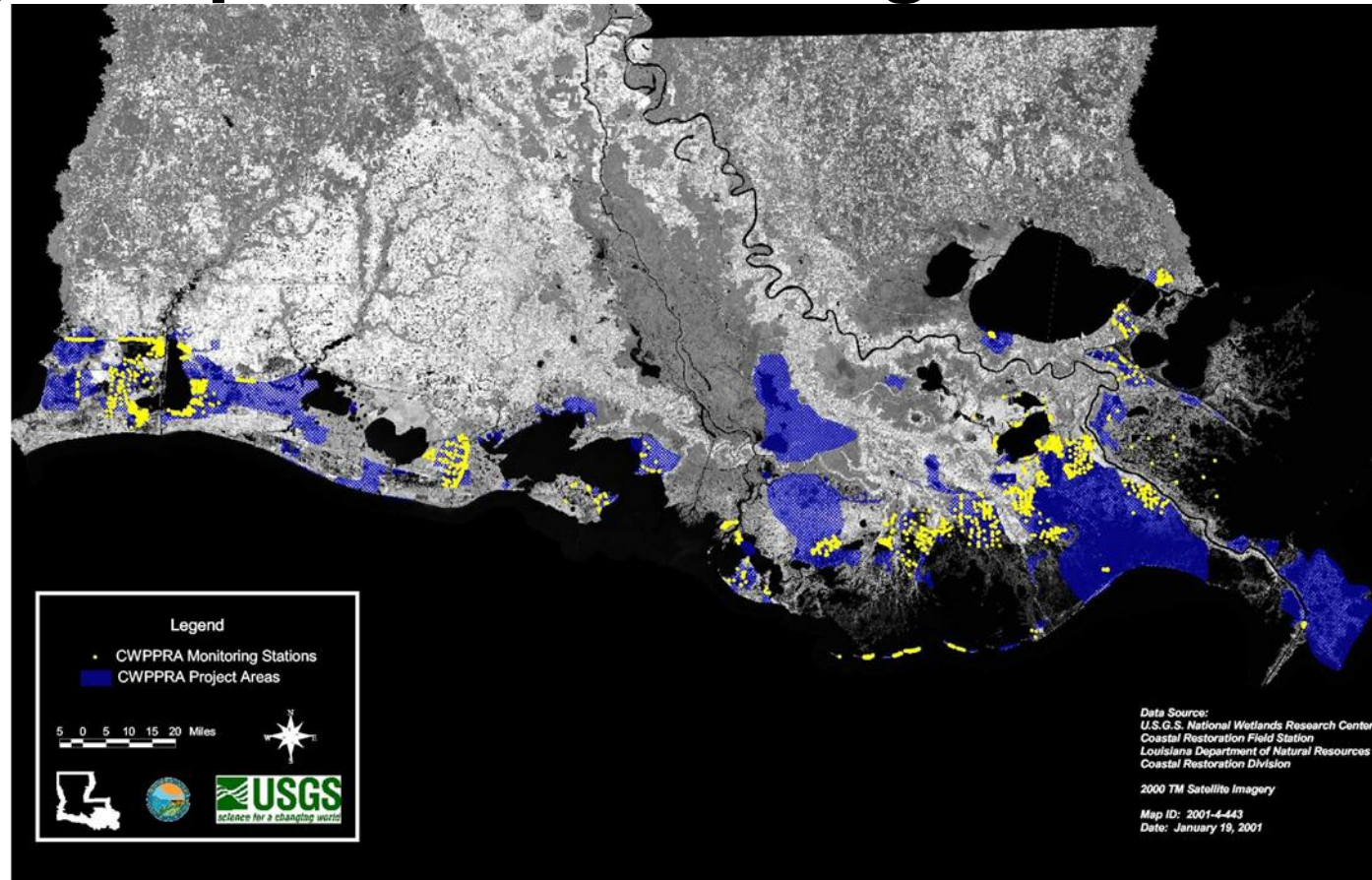


- CWPPRA
 - Congressionally funded in 1990 to identify, prepare, and fund construction of coastal wetlands restoration projects
 - Partnership involving 5 federal agencies and the State of Louisiana
 - Diverse array of restoration project types
- Two monitoring mandates in the Act
 - Evaluate effectiveness of individual projects
 - Evaluate effectiveness of the restoration program



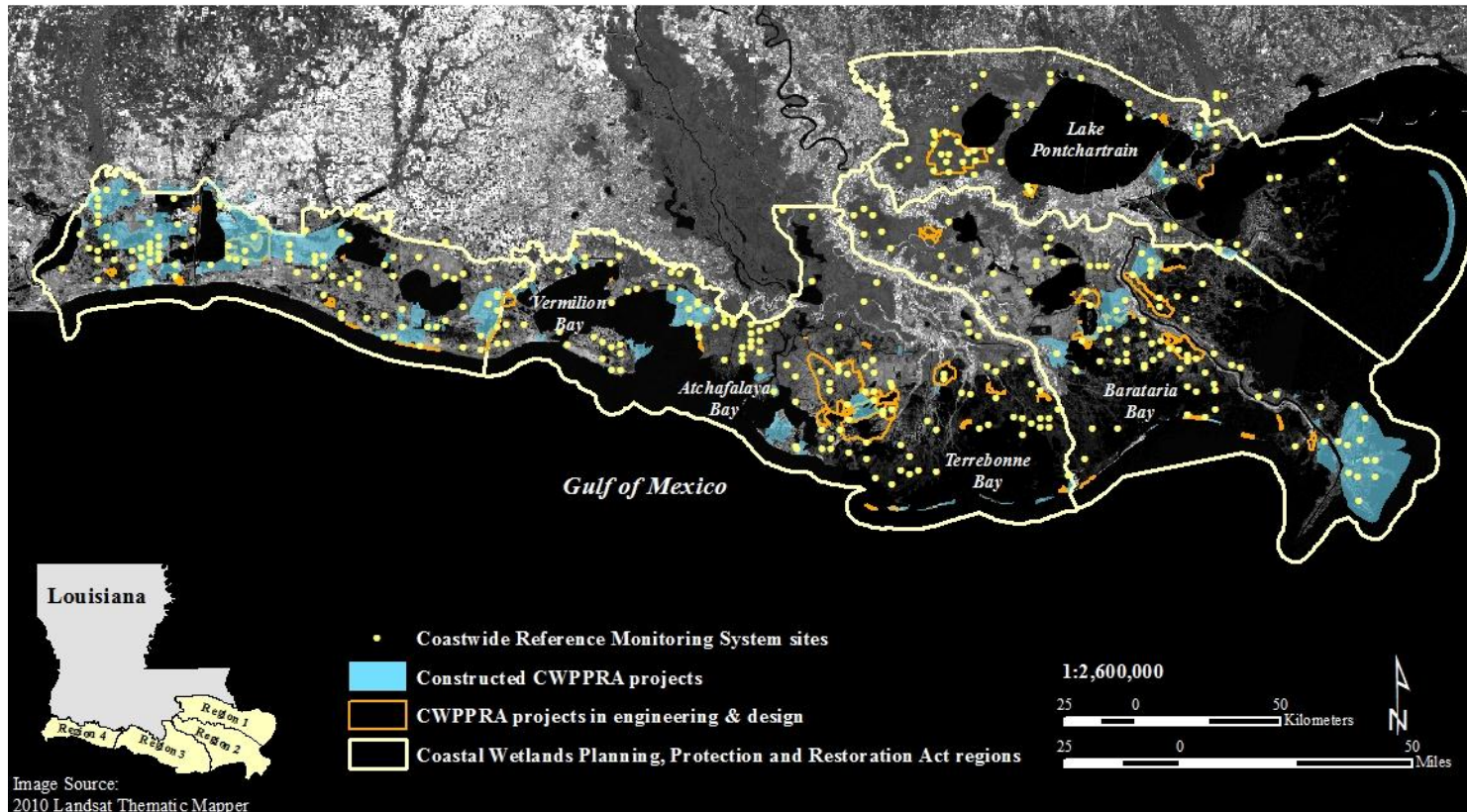
CWPPRA Restoration Projects

Project Specific Monitoring



Inconsistent monitoring variables, short term data records, inadequate coverage, unsuitable or no reference areas

CRMS Site Distribution

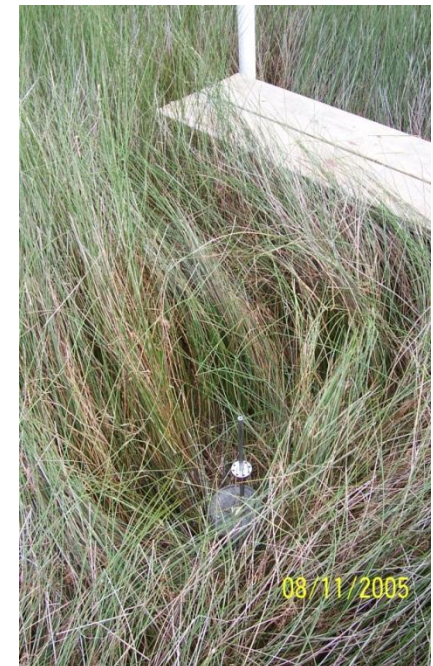
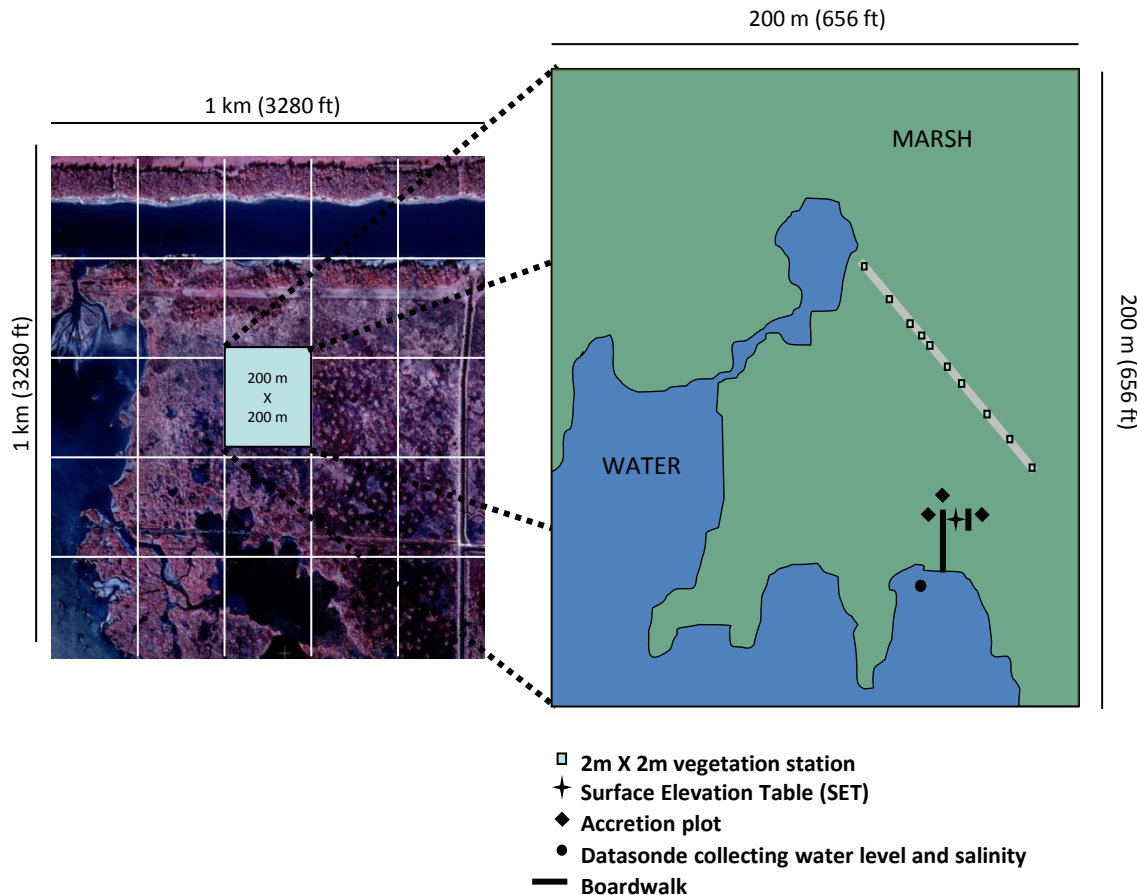


390 sites for coastwide coverage in all marsh types
Monitoring sites inside and outside of project boundaries
Provides baseline for unconstructed projects
Evaluate wetlands at multiple scales

CRMS Site Design

*CRMS-Wetlands Sampling Area:
1 km² aerial photography area*

*CRMS-Wetlands Sampling Area:
200m X 200m area for non-spatial
data collection*



CRMS Milestones

- 2001-2003 – Design development
- 2003 - CWPPRA approved funding
- 2003-2005 - pre-construction planning, contracting, **landrights**
- 2005-2007 - site installation begins, interrupted by Hurricanes Katrina and Rita, 390 sites completed in 2007
- 2006-present – Data collection, site maintenance, USGS and CPRA develop website to house data



CRMS Public Website

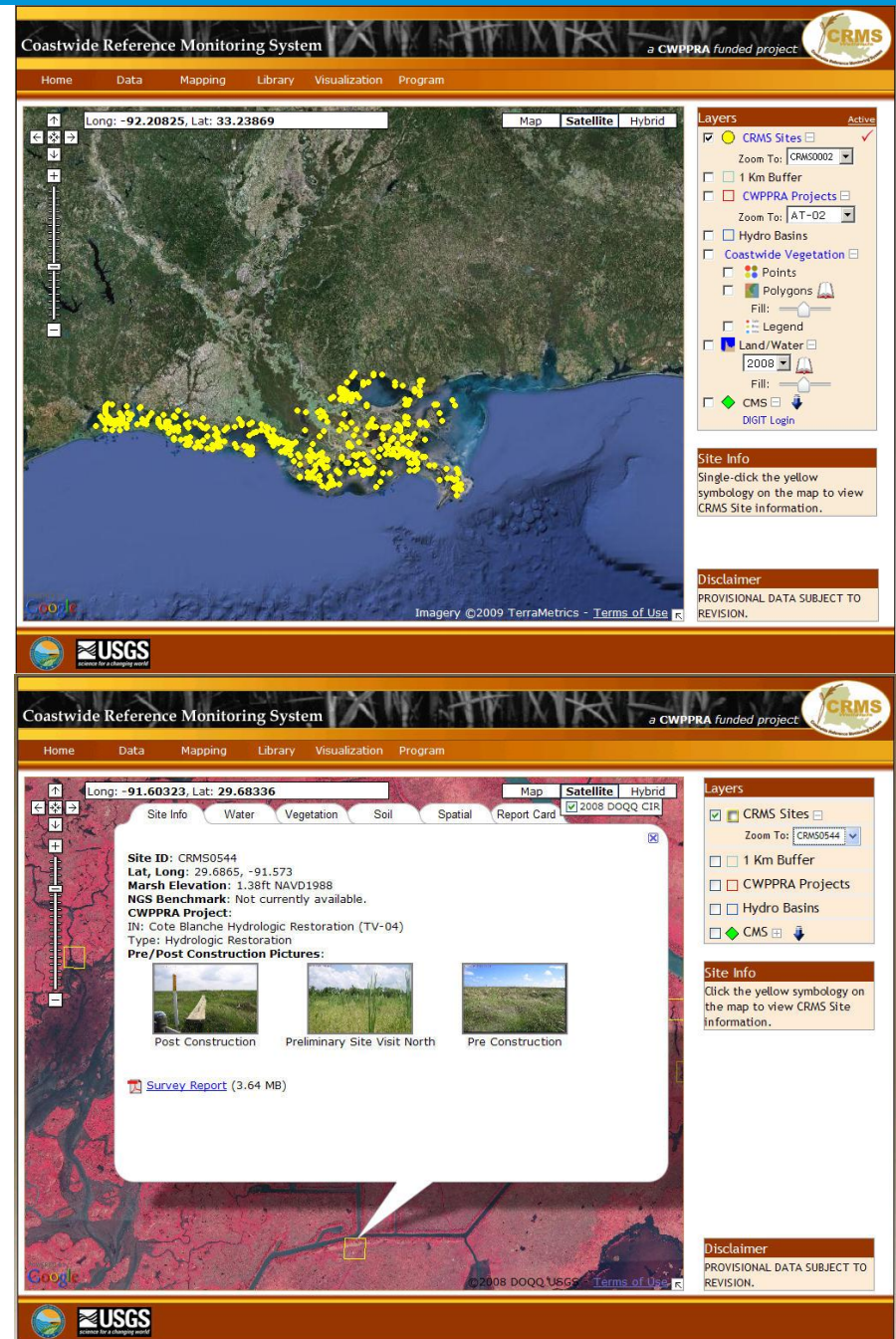
- CRMS Analytical teams are made up of scientists and information technology specialists
- Feedback solicited from CWPPRA partners annually at “roadshows”
- Comments are then incorporated into the website
- Training available to public twice annually



CRMS Website

www.lacoast.gov/crms2

- Mapping Menu bar - select the Basic Map viewer
- Select a site and a bubble pops up with site information and select graphics



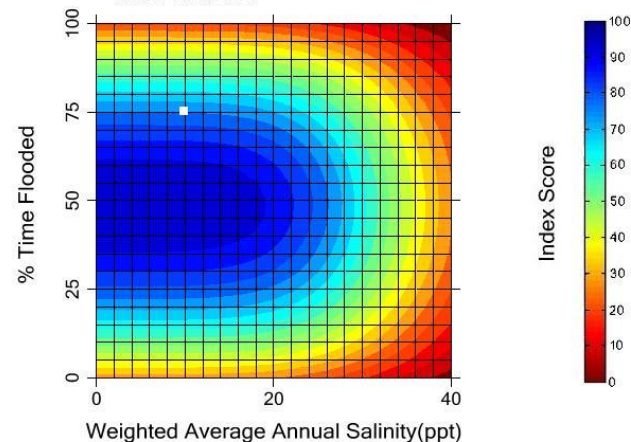
CRMS Indices

Comparison across multiple spatial scales

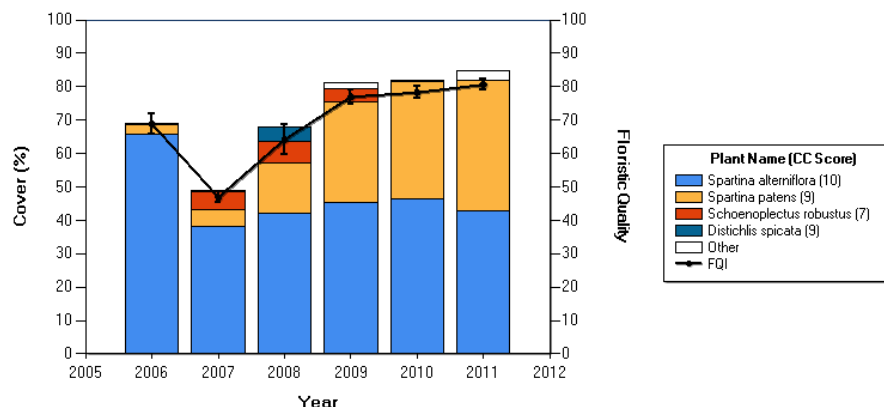
- Hydrologic – HI suitability of average salinity and % time flooded in maximizing vegetative primary productivity
- Floristic Quality - FQI
Species assigned scores based on fidelity to a marsh type and whether they indicate wetland stability or disturbance

Hydrologic Index for 2010 Saline Marsh, CRMS6301

% Time Flooded: 75.21
Weighted Average Annual Salinity: 9.48 (ppt)
Index Value: 81



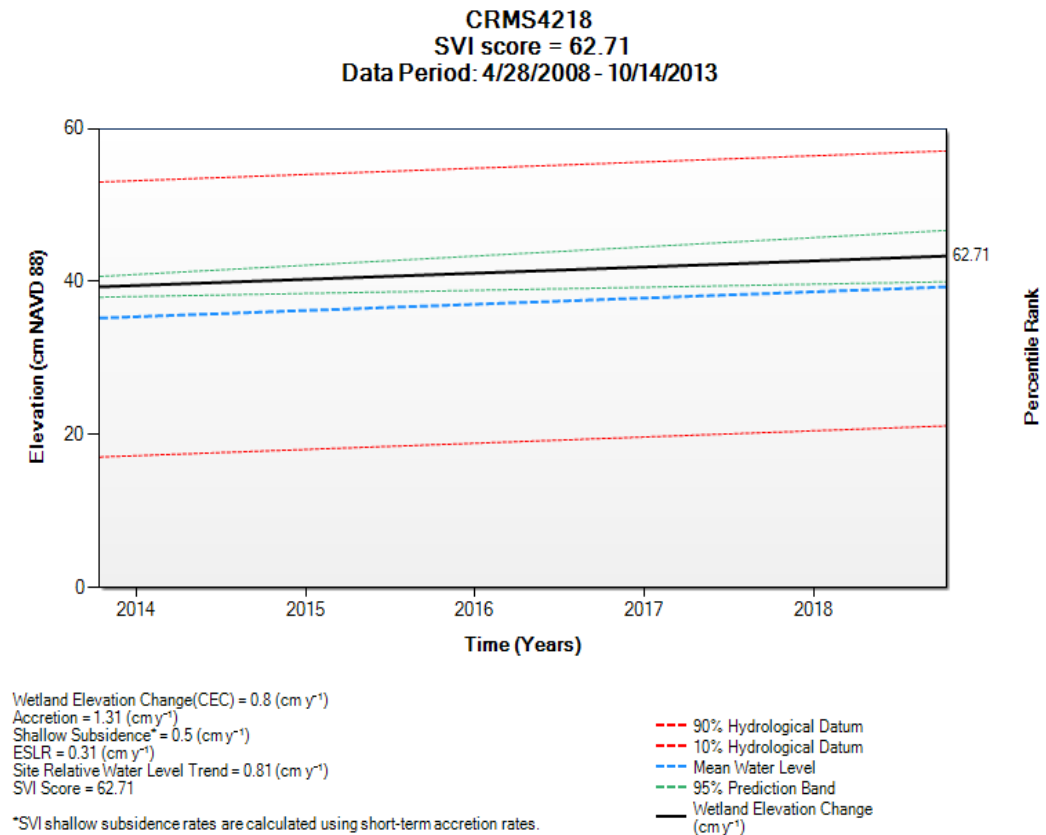
Floristic Quality Index for Saline Marsh, Site CRMS0685



CRMS Indices

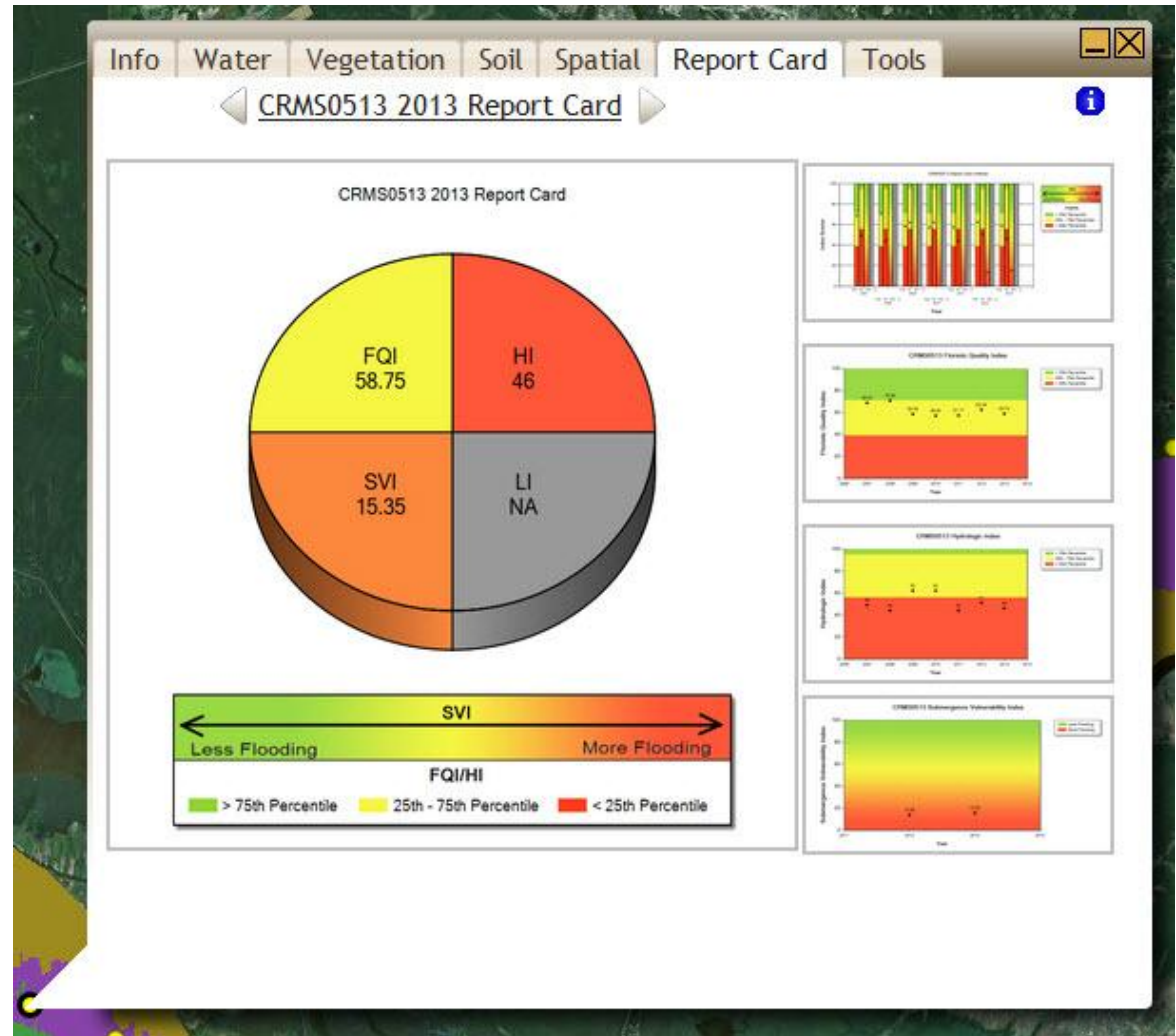
Comparison across multiple spatial scales

- Submergence Vulnerability Index - combines elevation change and shallow subsidence data with known starting elevations and predicted sea level rise rates to predict future marsh elevation relative to water elevation (submergence or emergence)



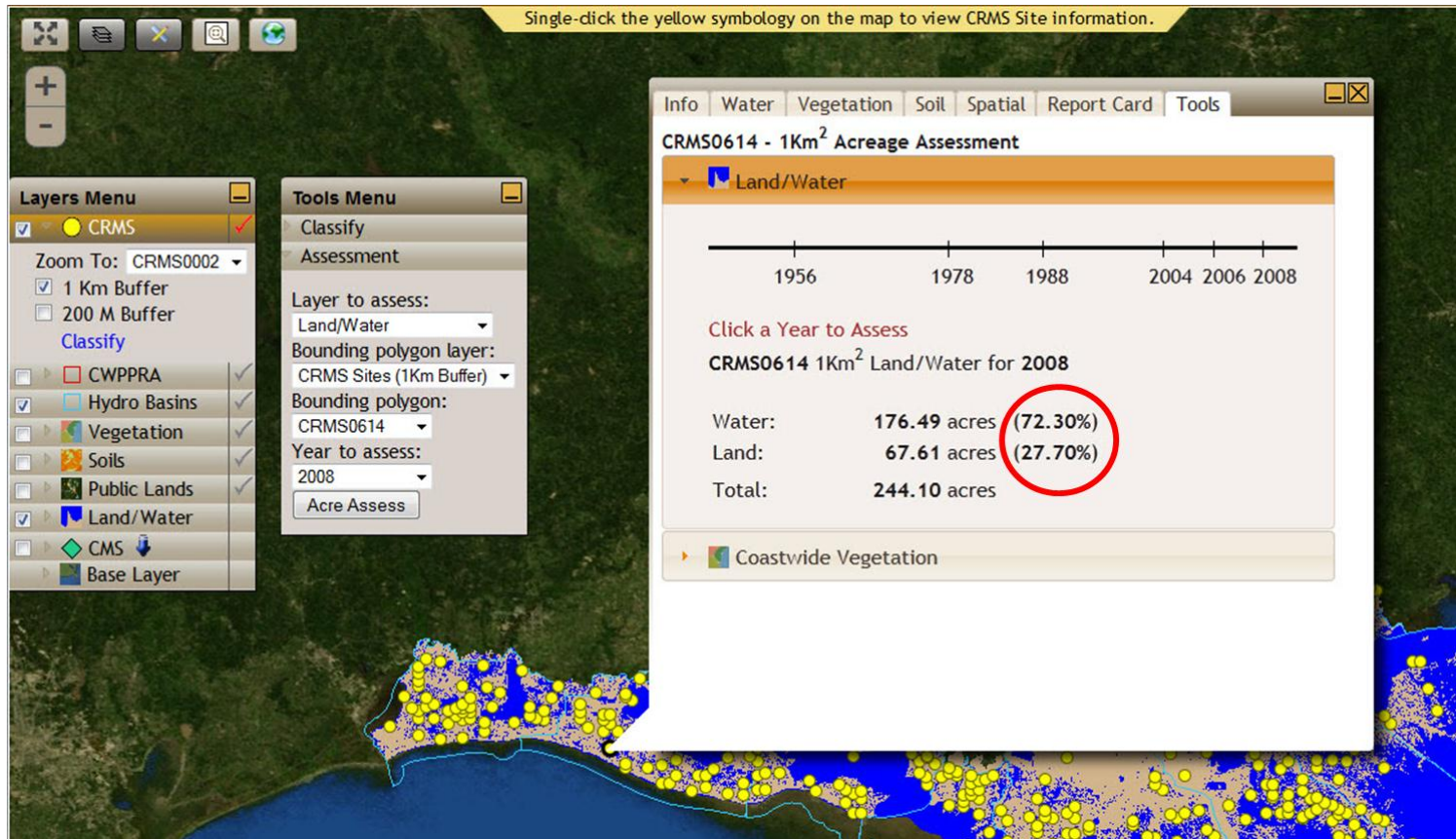
CRMS Report Cards

- Baseline period from 2006-2009 was established to assess existing distribution of index scores of all CRMS sites



Data Utilization

Identify problem areas



How much land has the area lost over time?

Data Utilization

Develop a new project on the priority list

[Previous Charting Version](#)

Charting Bulk Charting Data Download Reporting

Hydro

- Water Level Range
- Hydro Completeness
- Salinity
- Water Level**
- Temperature
- Continuous
- Site Hydro Index
- Soil Porewater
- Precipitation

Interactive Hydro

Vegetation

Soil

Spatial

Report Card Charts

Clear Charts

Water Year is October 1 - September 30

Scale: Multi Station

Date Range:
2/25/1987 - 12/19/2012

Min Date: 2/25/1987

Max Date: 12/19/2012

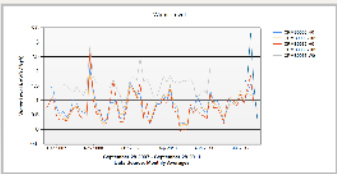
Apply Date Filter

Basin: All Basins Project: All Projects

Selection limited to 10 items.

AT04-01	CRMS0002-H01
AT04-02	CRMS0003-H01
AT04-03	CRMS0035-H01
AT04-04	CRMS0065-H01
AT04-06	CRMS0065-W01
BA01-01	
BA01-02	
BA01-03	

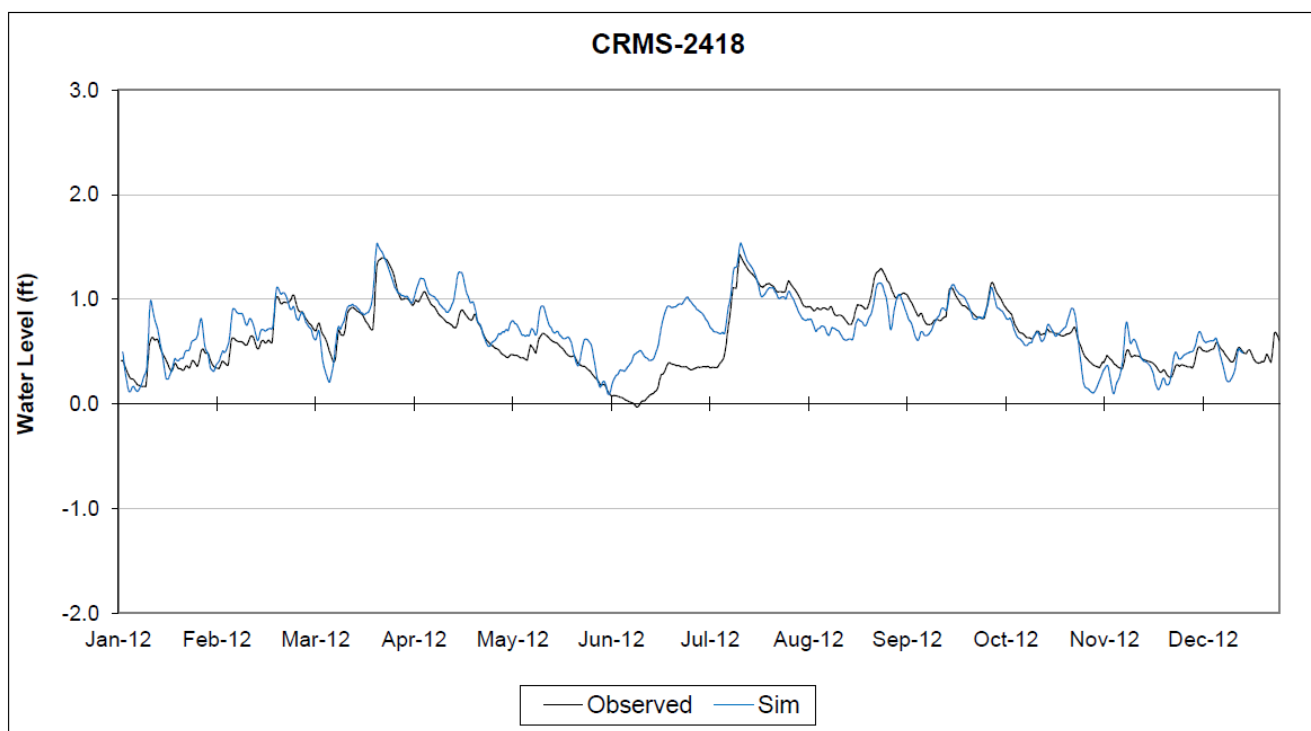
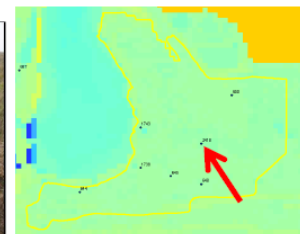
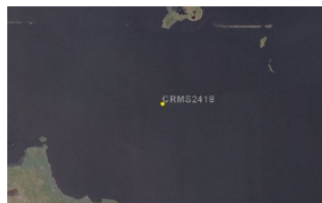
Submit Request



Data Utilization

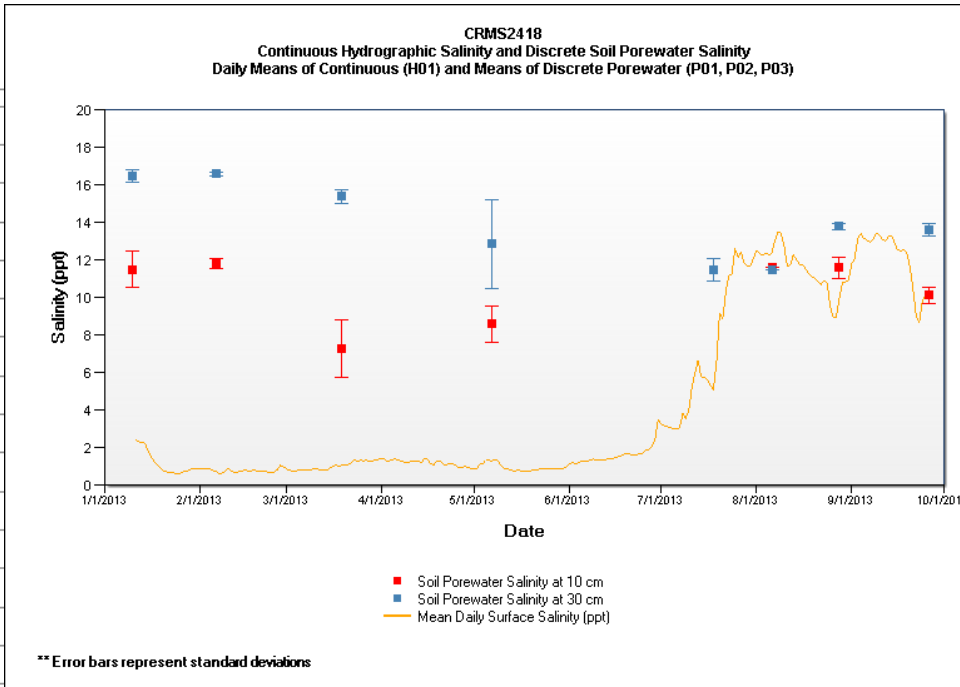
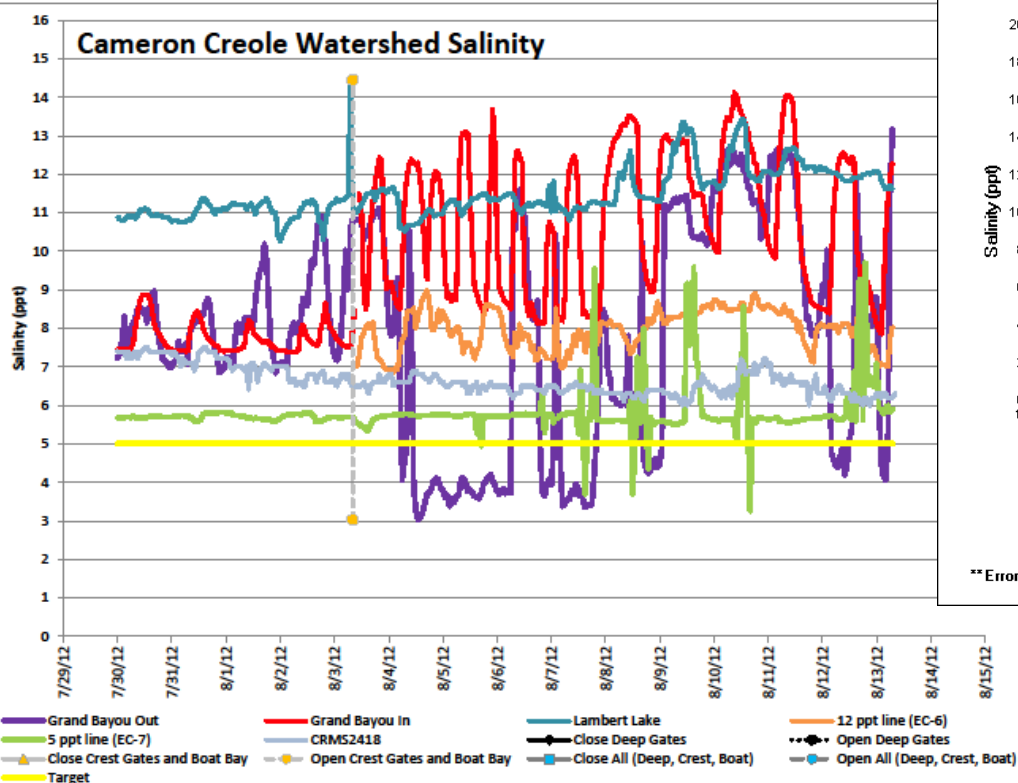
Model hydrologic data for project planning

CRMS-2418



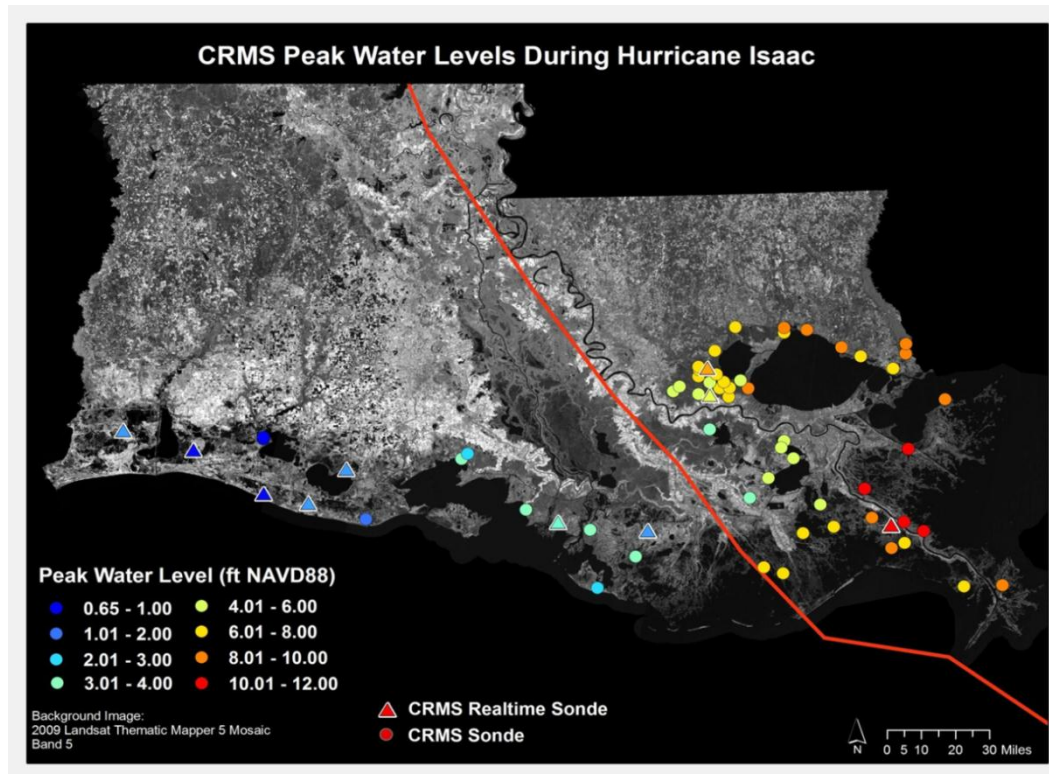
Data Utilization

Evaluate the performance of and adaptively manage constructed projects



Data Utilization

Identify damages to projects following a major disturbance



Damage assessments underway when sites are accessible

Data Utilization

Recommendation for Project at end of 20 yrs

[Previous Charting Version](#)

Charting Bulk Charting Data Download **Reporting**

Generate Report Card

State Number:

▶ Generate Report Card

▼ OM&M

OM&M report

Clear Reports

[Report Card MR-09 2004 Operations, Maintenance, and Monitoring Report](#)

[Report Card MR-09 2009 Operations, Maintenance & Monitoring Report](#)



Coastal Protection and Restoration
Authority of Louisiana
Office of Coastal Protection and
Restoration

**2009 Operations, Maintenance and
Monitoring Report**

For

DELTA WIDE CREVASSES

State Project Number MR-09
Priority Project List 6

August 1, 2009
Plaquemines Parish

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2014 Activities

- 2013 Vegetation survey performed by Visser/Sasser results available
- Land/Water analysis of 2012 photography available on website this summer
- CRMS annual Roadshows with federal partners scheduled in April
- Public Website Training April 30 in Baton Rouge
- CRMS Website Beginner's Guide
- Elevation Survey of all CRMS sites in 2014



<http://www.lacoast.gov/crms2>