CRMS Update to the CWPPRA Task Force

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CRMS Implementation Status

Milestones:

- Report to Congress complete
- 13 OM&M reports for 2012 finalized and available on the website
- 12 OM&M reports planned in 2013
- CWPPRA Project Planning - PPL22 WVA's
- Conferences
  - Restore America's Estuaries, October 2012
- Initial planning stages of a CRMS document for CWPPRA with Outreach
- Hydrologic Index Open File Report released –
  http://pubs.er.usgs.gov/publication/ofr20121122
- Submergence Vulnerability Index Open File Report in final review

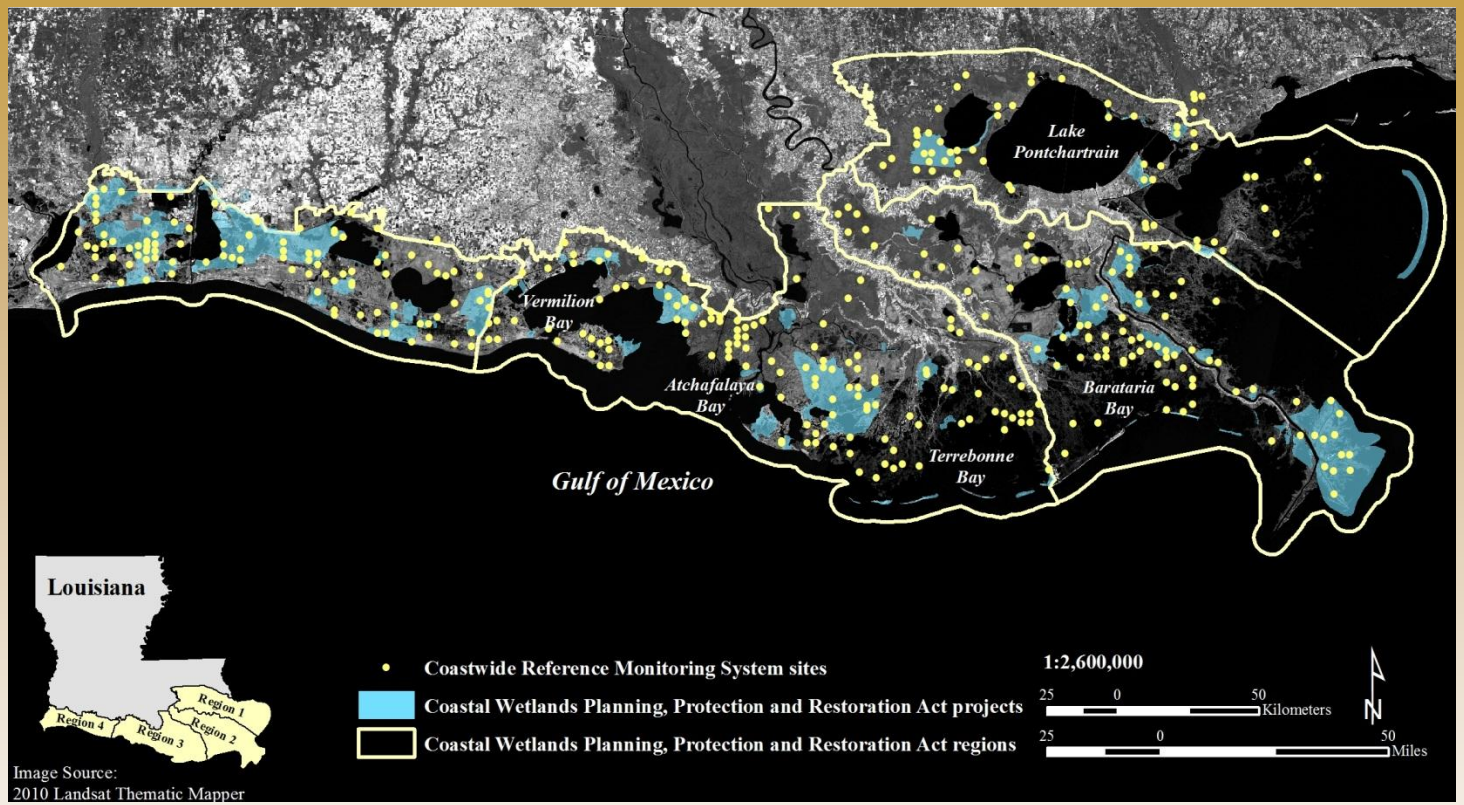
CRMS Implementation Status

- CRMS coastwide aerial photography flown in mid Oct-Nov. Data available for land/water analysis by USGS mid April.
- Coastwide Elevation Survey of all CRMS sites planned for 2013
- Vegetation Helicopter Survey scheduled for summer 2013
- GOMA/GCERTF Gulf of Mexico Monitoring Plan - CRMS could be a model for wetland monitoring
- CRMS Website training open to everyone to be scheduled in early spring
- CWPPRA “Roadshows” are being scheduled for early spring
  - USACOE: March 5 in New Orleans
  - NRCS: TBD
  - USFWS: March 7 in Lafayette
  - EPA: TBD
  - NMFS: TBD

Utility of CRMS data for CWPPRA community

- Identify potential areas in need of restoration
- Plan a new project on the priority list
- Evaluate the performance of an constructed project
- Perform water control structure operations based on data
- Adaptively manage an existing project that is not meeting the project goals
- Identify damages to projects whether constructed or in planning following a major disturbance

Coastwide Reference Monitoring System - *Wetlands*
Distribution of sites



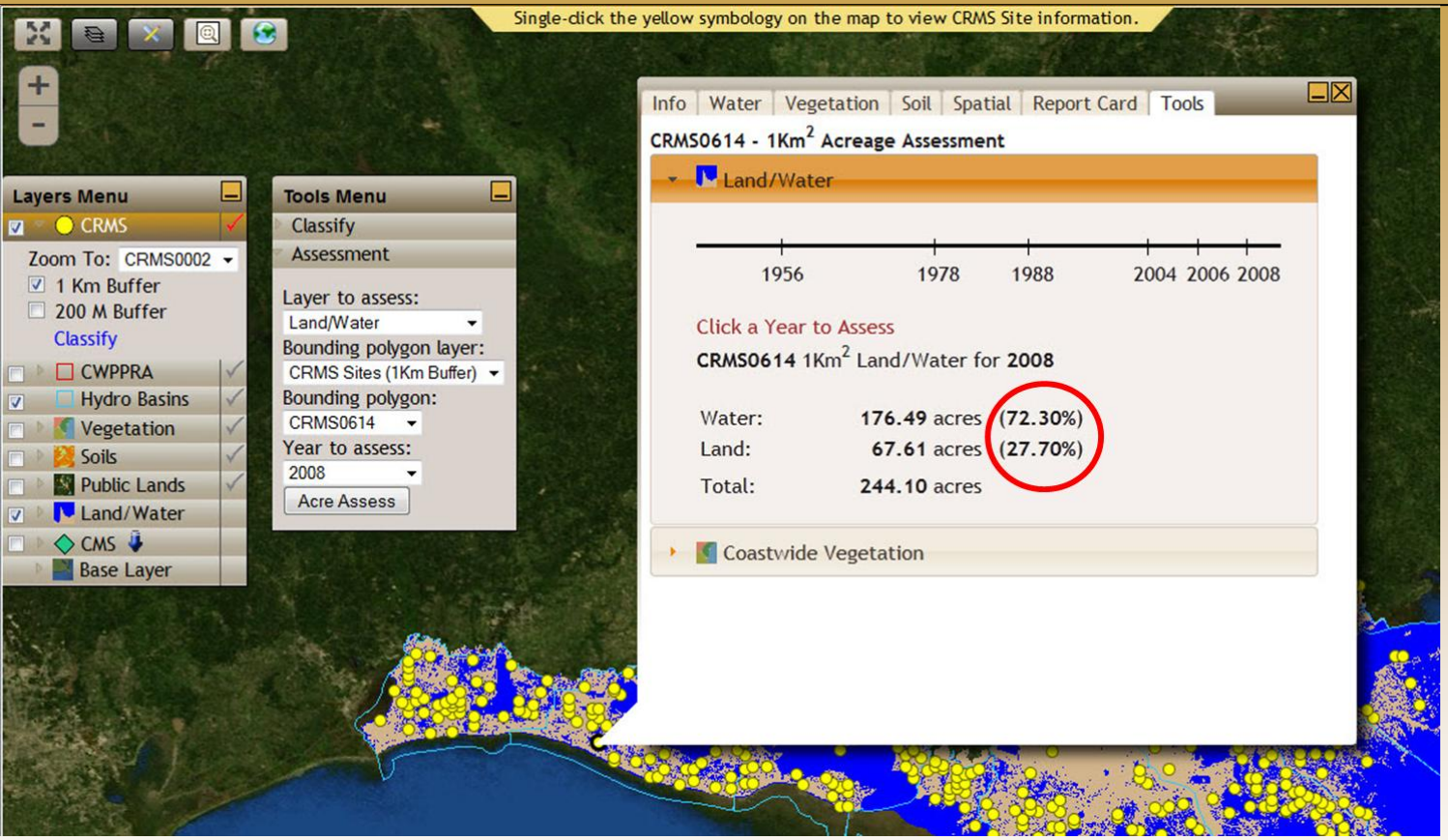
- Provide information to evaluate coastal wetlands at the ecosystem, basin, and restoration project scale.

- To improve our ability to determine the effectiveness of individual coastal restoration projects and the CWPPRA Program

Coastwide Reference Monitoring System - *Wetlands* Site Data Collection

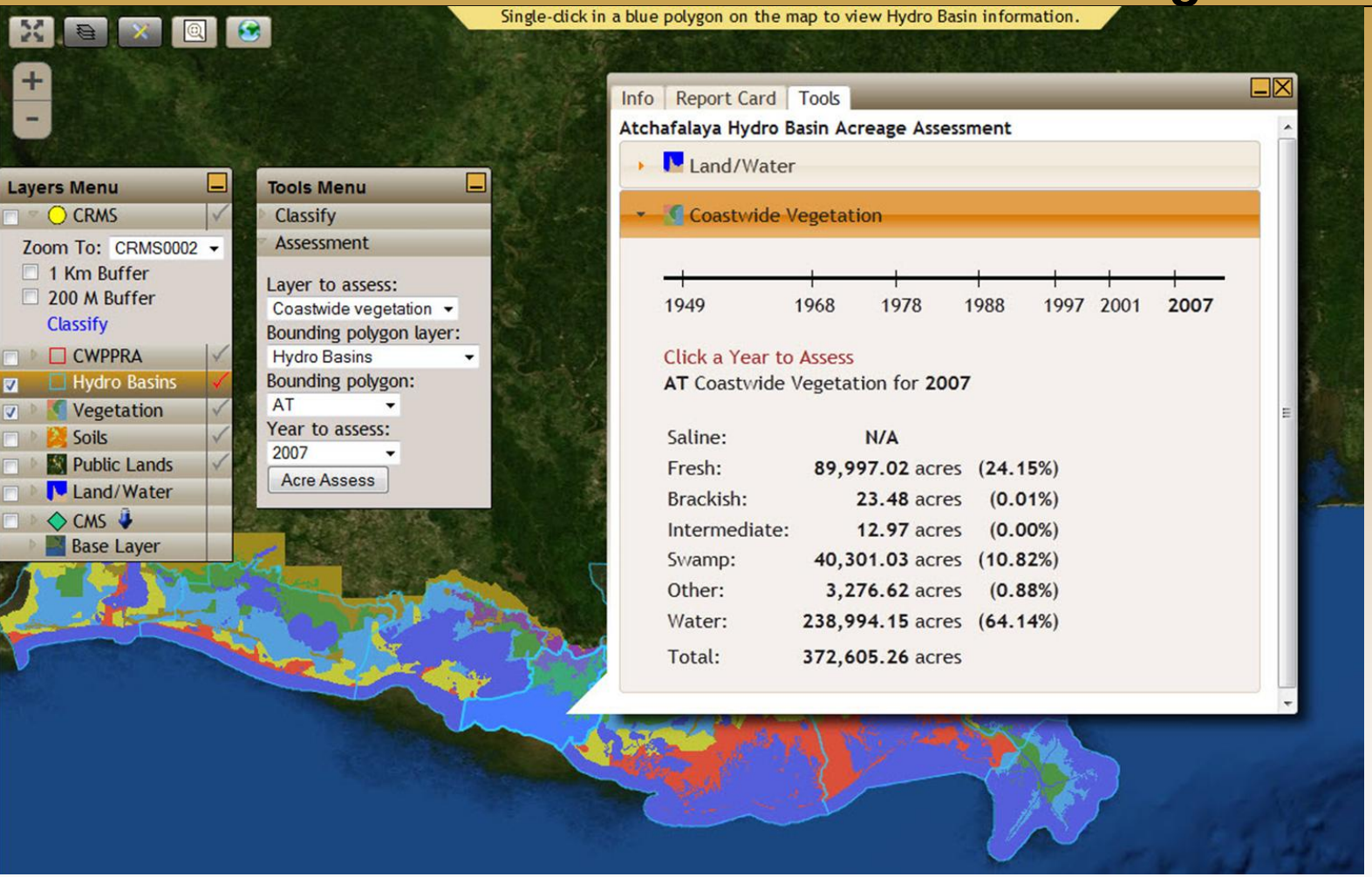
Parameter	Method	Scale	Frequency
Land/Water Ratio	Aerial photography	CRMS Site (1 Km^2)	5 years
Emergent Vegetation	Braun Blanquet: % cover, species composition, height of dominant species	(10) 2m x 2m plots/CRMS Site	Annually during peak biomass
Forested Vegetation	DBH and canopy cover	(3) 20m x 20m plots/CRMS Site	3 yrs during peak biomass
Vertical Accretion	Feldspar plots/cryogenic cores	3 plots/CRMS Site	Bi-annually
Marsh Elevation Change	Rod Surface Elevation Table (RSET)	4 directions/CRMS Site	Bi-annually
Porewater Salinity	10 and 30 cm syringe sippers	CRMS site and vegetation plots	Monthly Annually
Surface Water Salinity, Temp and Water Level	Submersible data sondes	200 m of CRMS Site or in a well	Hourly
Soil Characteristics	Core samples profiled into 4 cm increments to 24 cm. Bulk density, OM%, soil salinity, pH, and moisture.	3 cores, 18 archived samples/CRMS Site	5 years

Identify potential areas in need of restoration
Land/Water Change



How much land has the area lost over time?

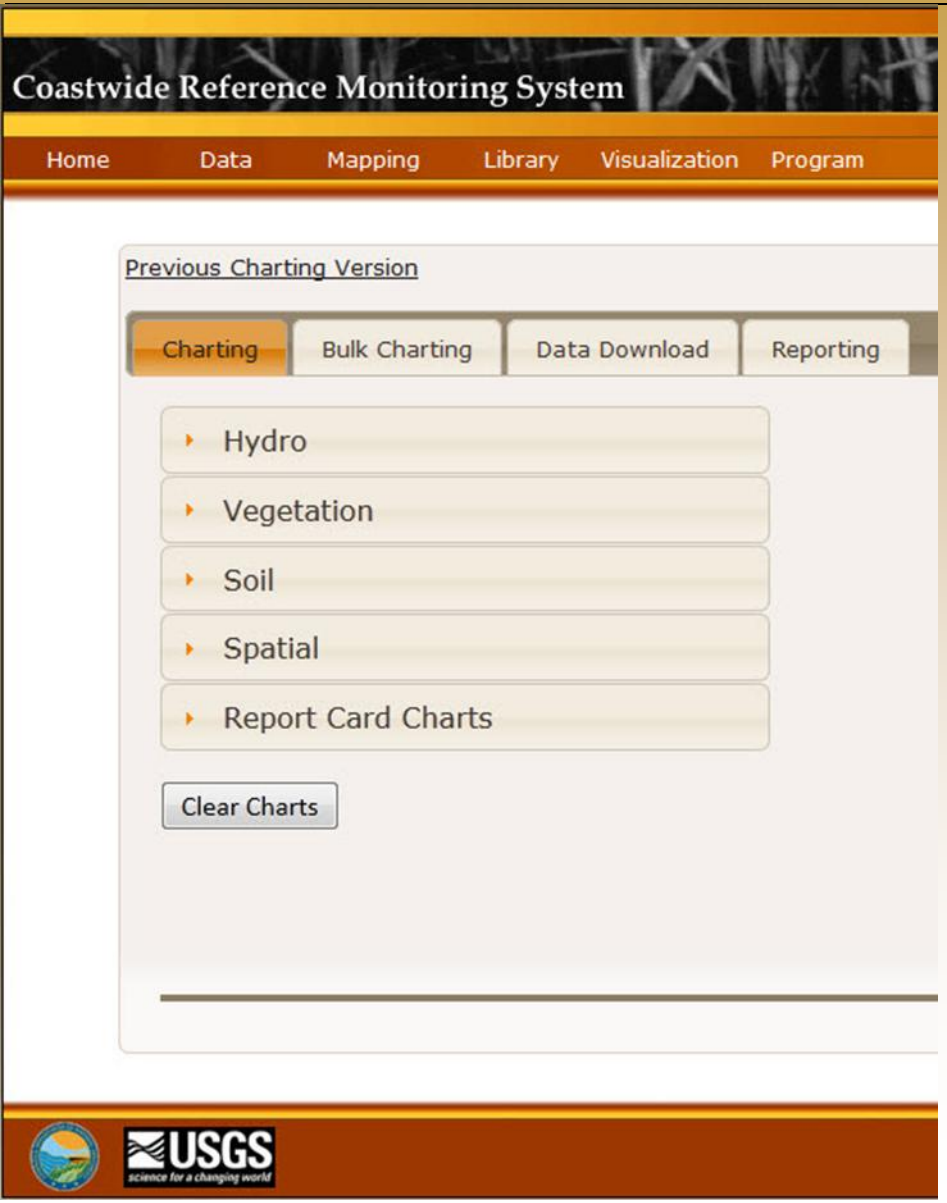
Identify potential areas in need of restoration
Vegetation Change



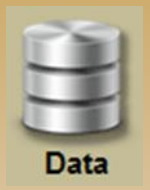
How has the marsh type changed over time?

Plan a new project on the priority list
Set Goals and Objectives

Plan a new project on the priority list
Characterize the project area



Visualization/Charting

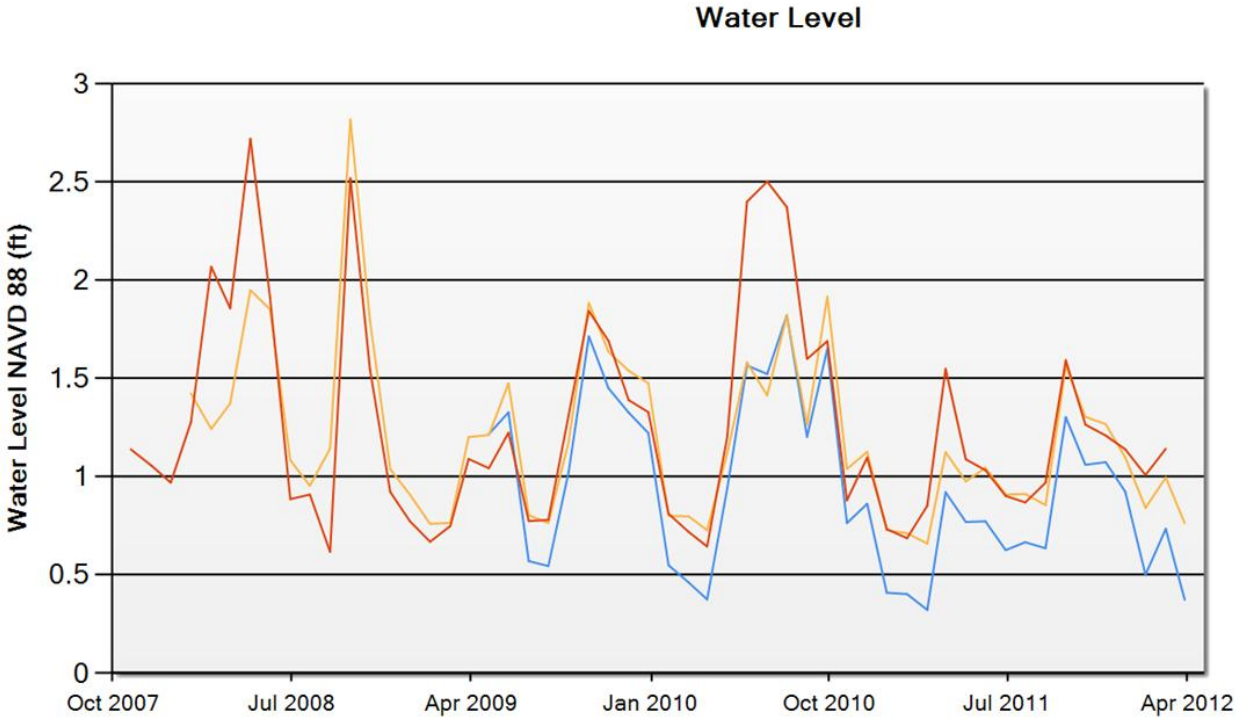


- **Charting:**
- Individual charts
- Site, multi-station, project

- **Bulk Charting:**
- Generate & download sets of charts
- Custom colors

- **Data Download:**
- Download derived values

Plan a new project on the priority list
Characterize the project area



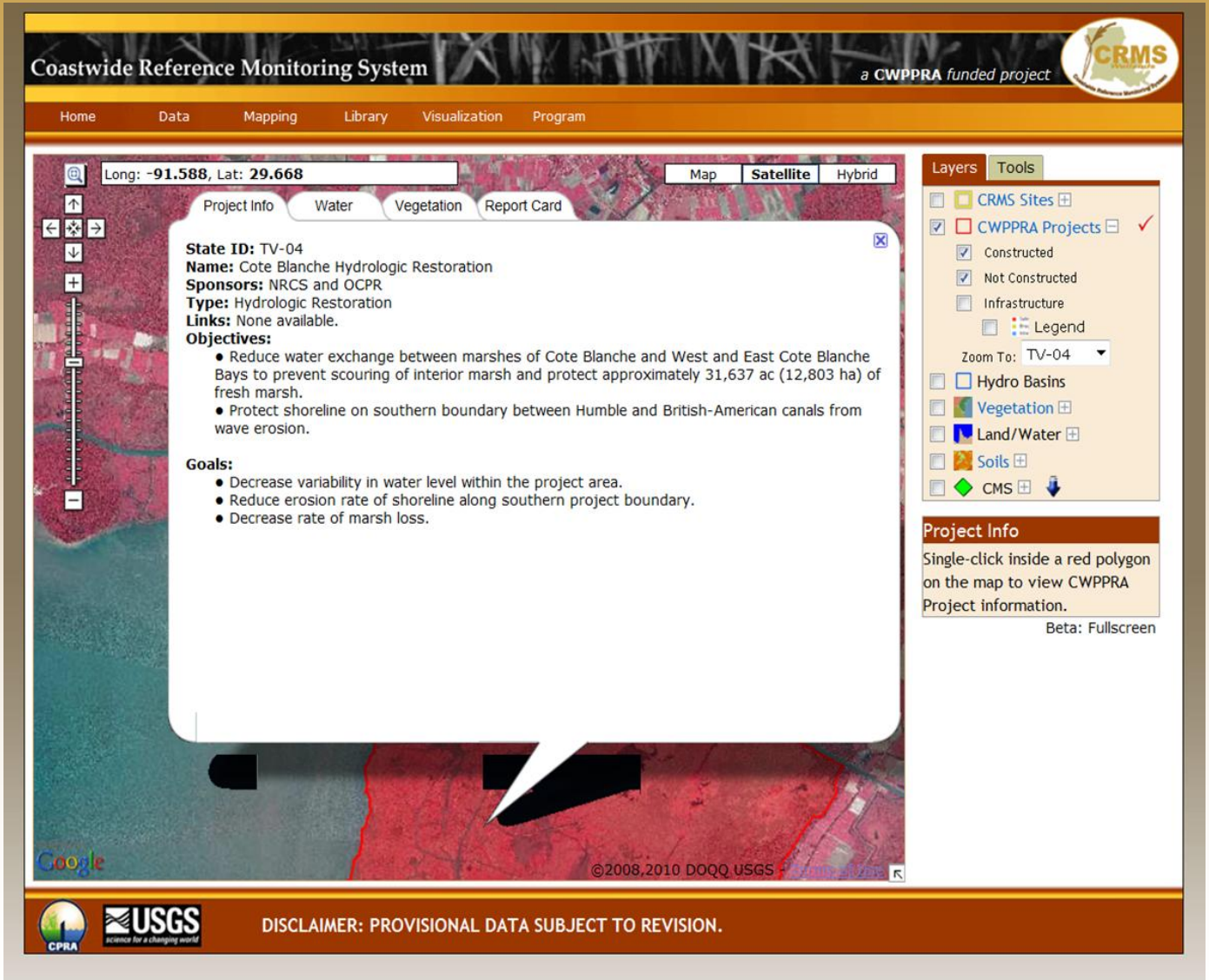
MOVE CLOSE

< 6 months : Continuous Hourly Observations
6 months - 3 years : Daily Averages
> 3 years : Monthly Averages

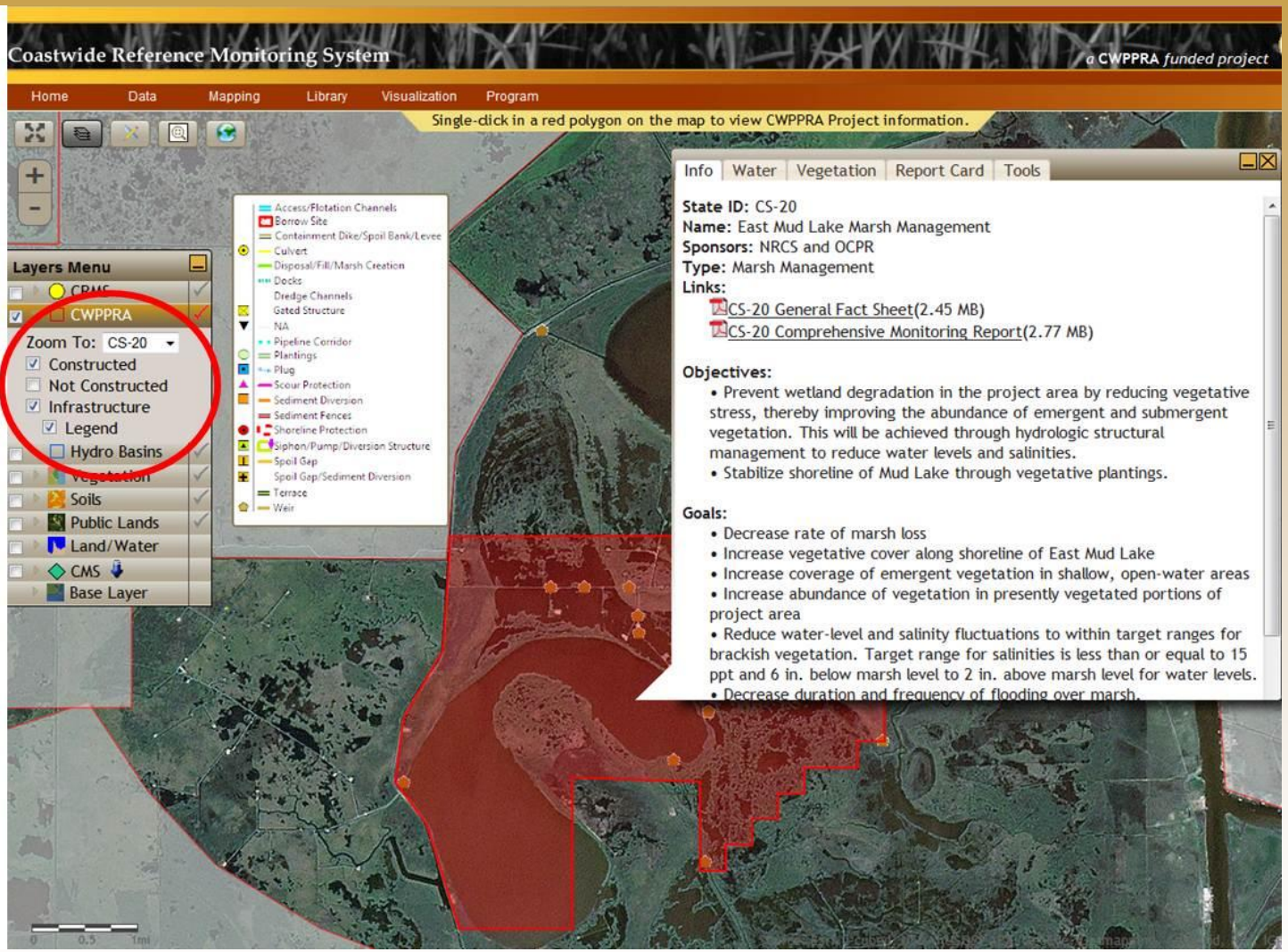
Set goals for the restoration project

Set target ranges that can be measured using the data

Plan a new project on the priority list
Set Goals and Objectives



Evaluate the performance of a constructed project



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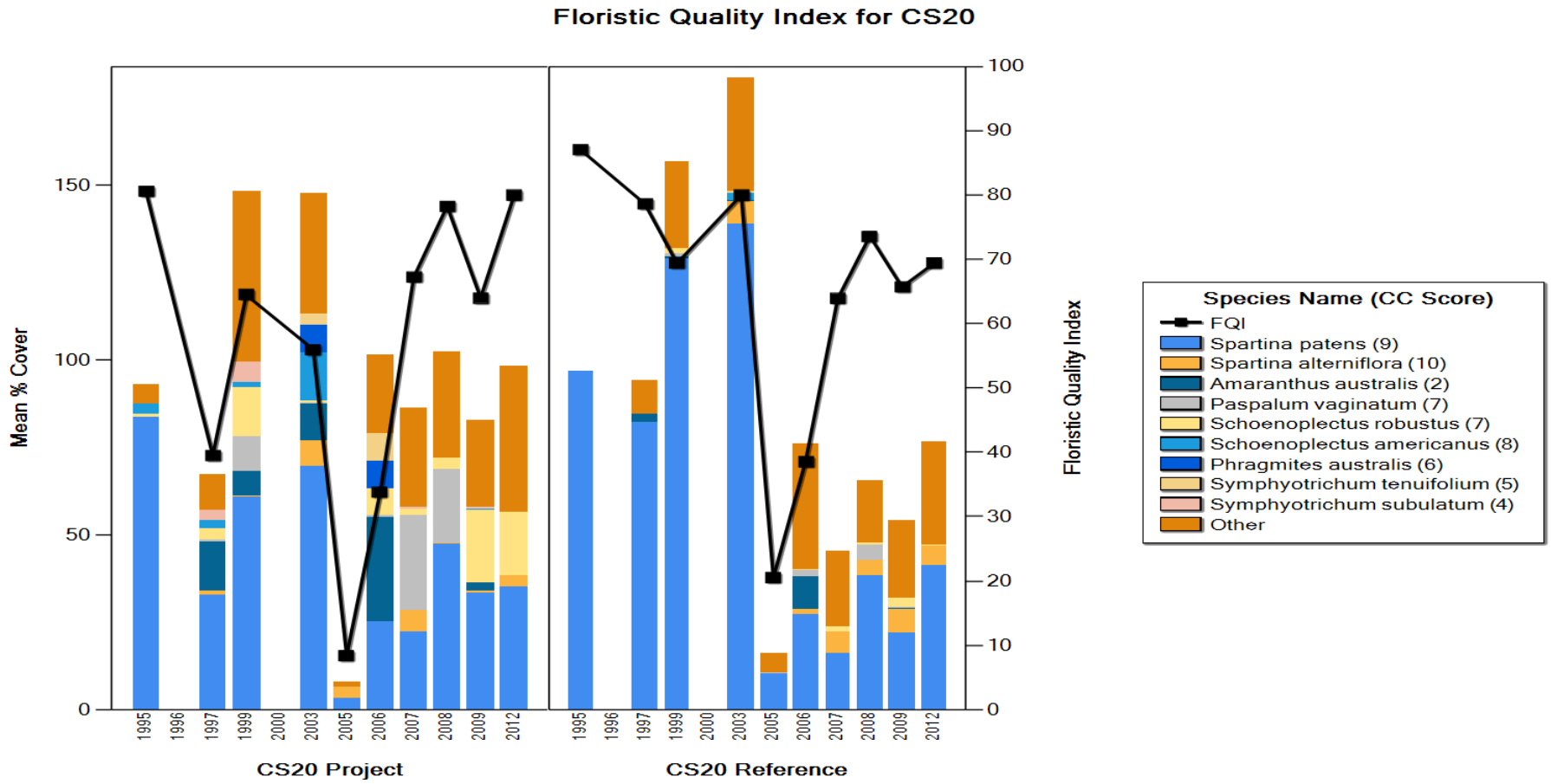
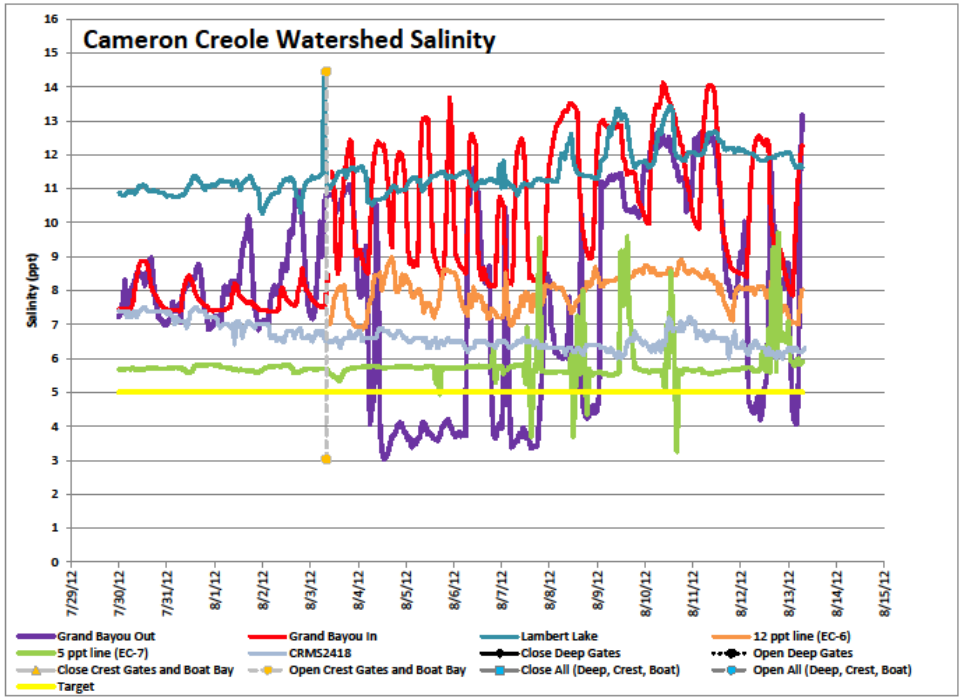
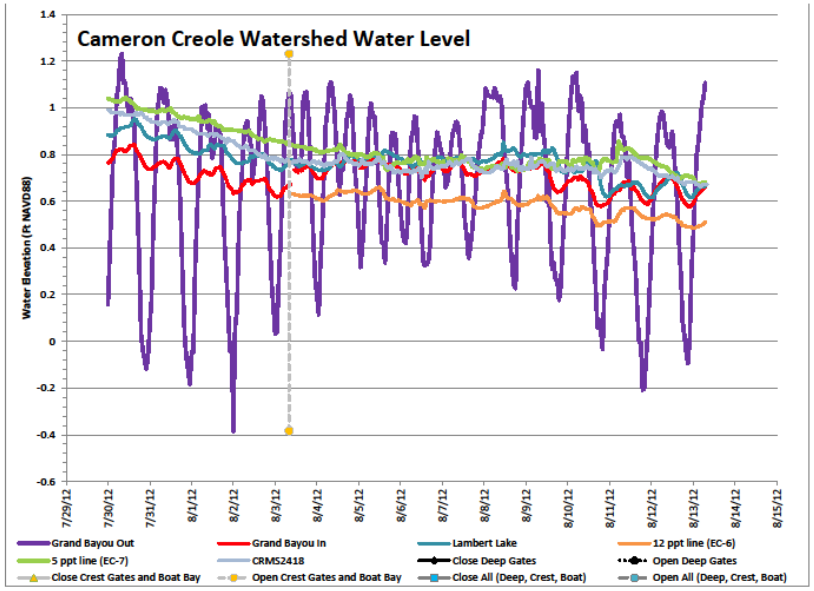
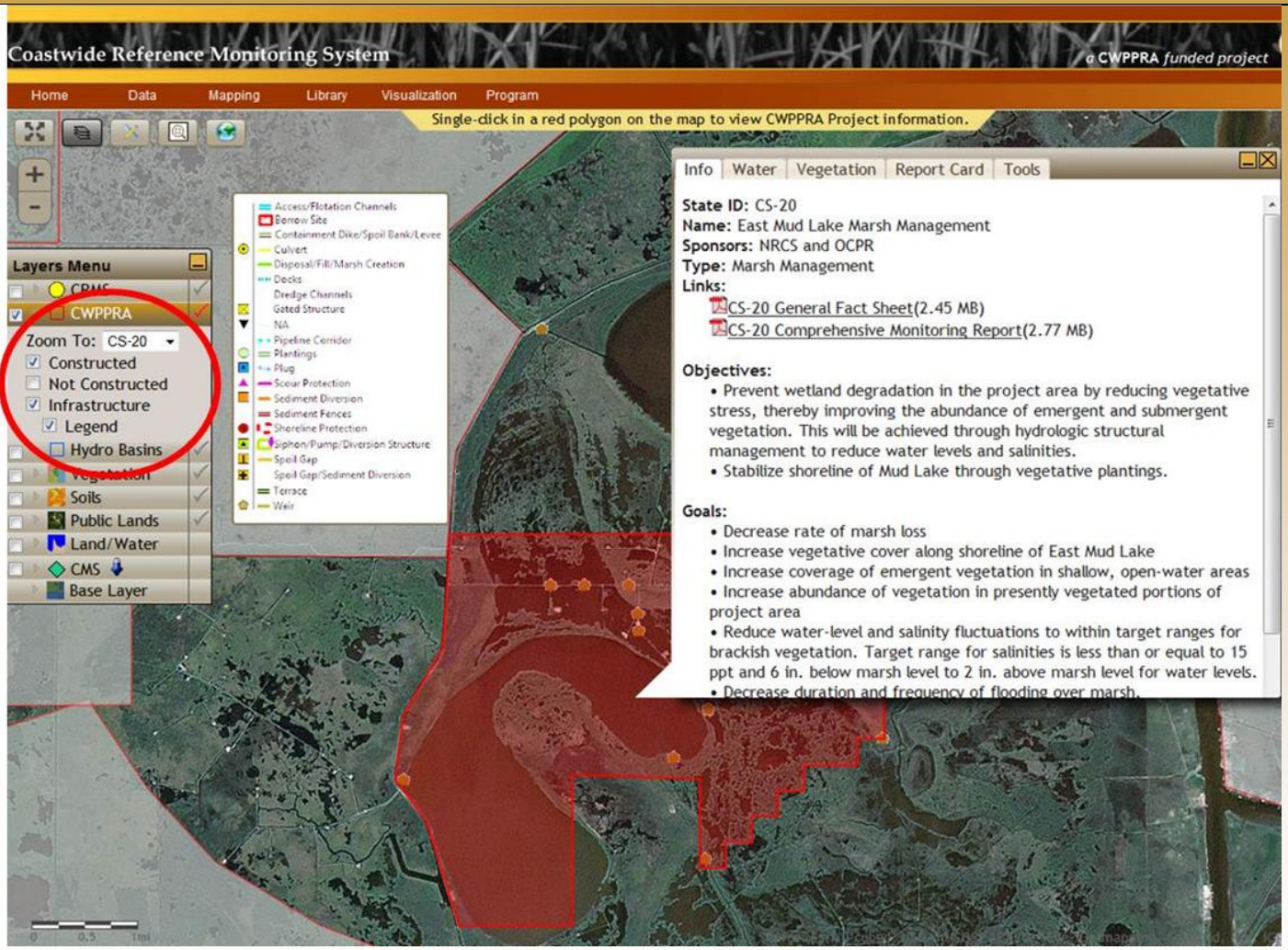


Water control structure operations
CS-04





Adaptively manage an existing project that is not meeting the project goals

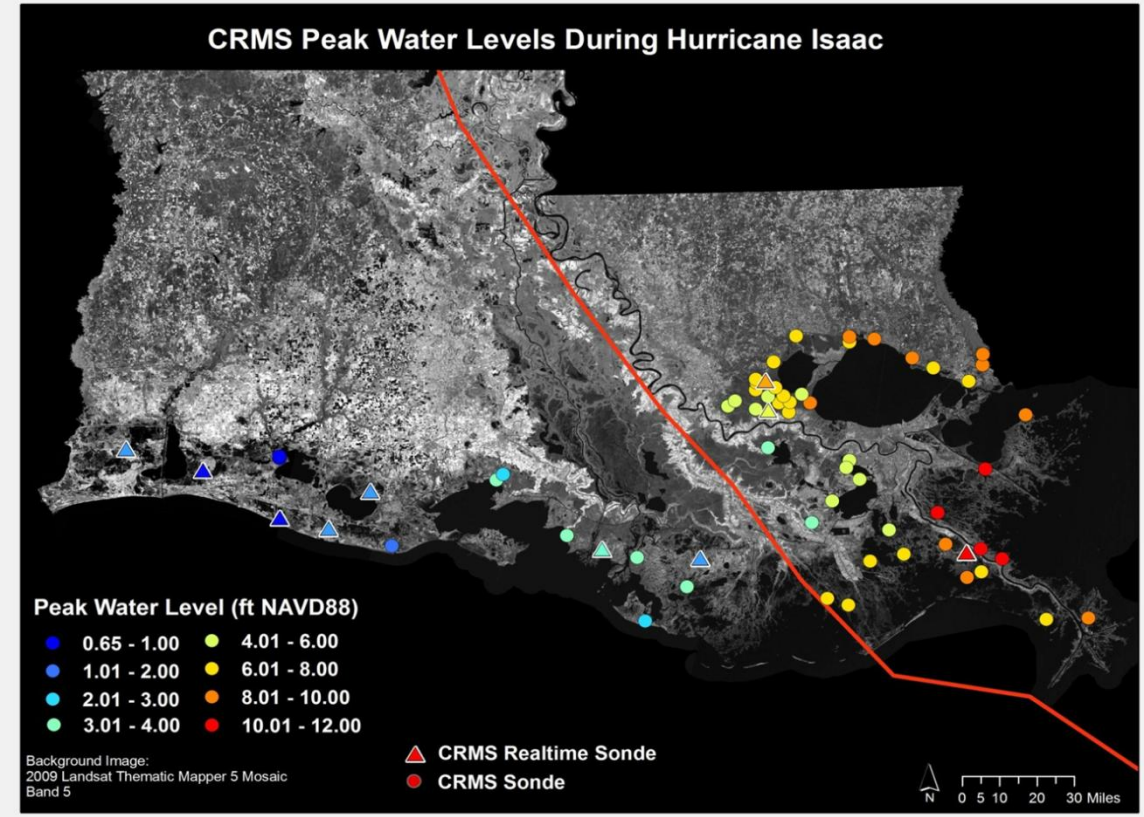


The project was constructed in a year of severe drought .

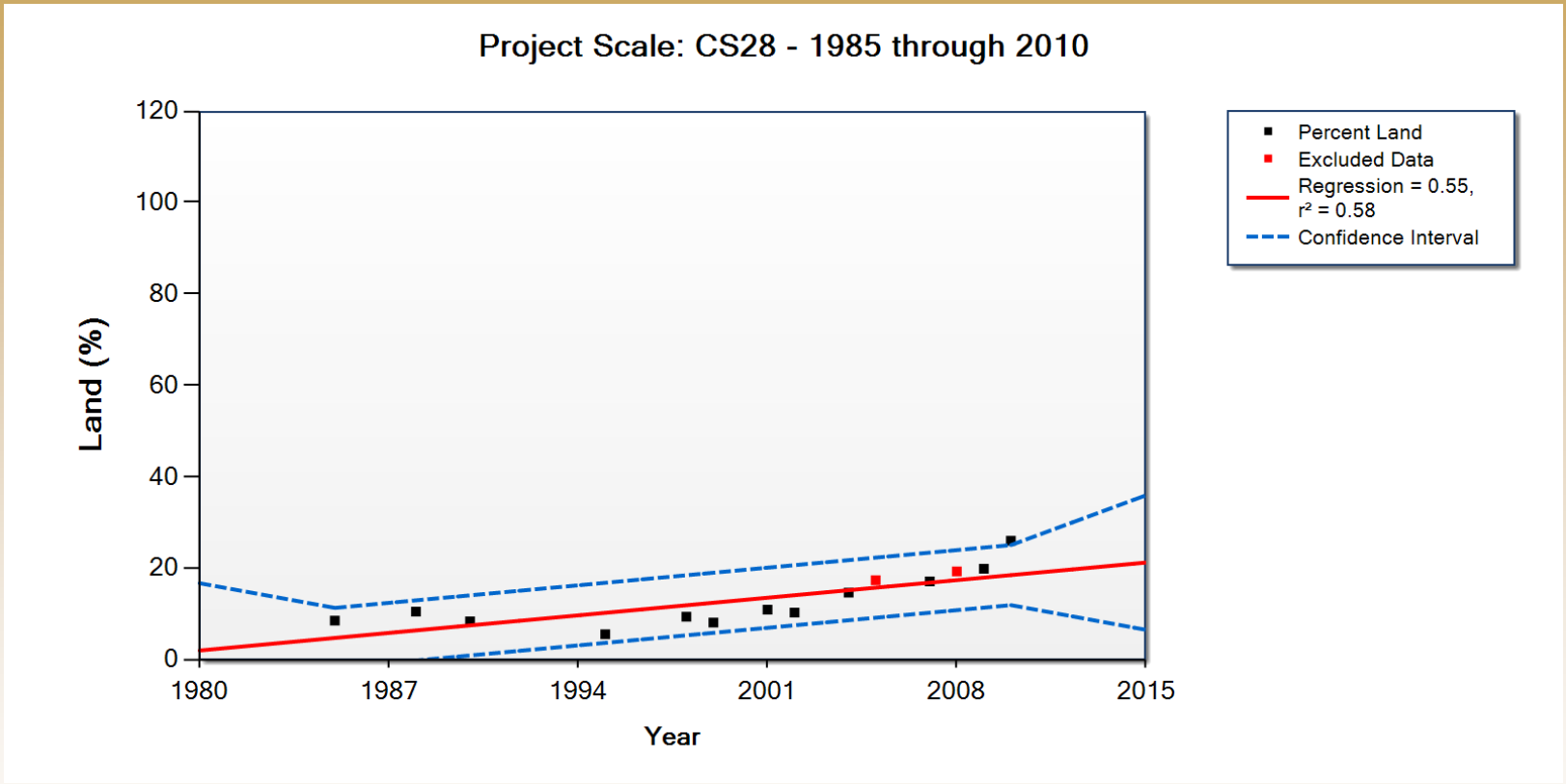
Water level data in the managed units were above the target range after construction for prolonged periods.

New elevation surveys were conducted and heights of stop logs were adjusted according to the Most recent survey.

Identify damages to projects whether constructed or in planning following a major disturbance



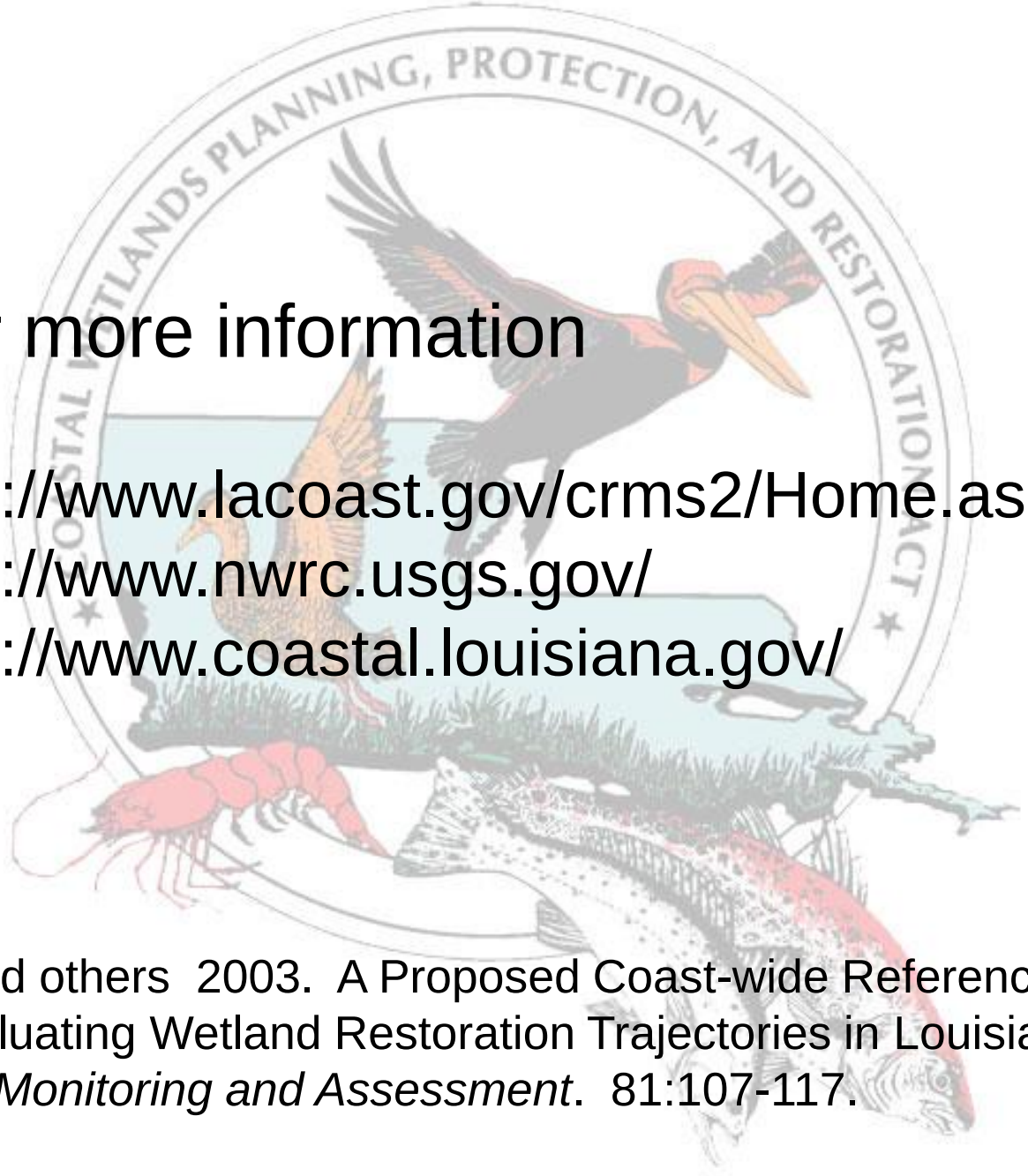
Identify damages to projects following a major disturbance: Resiliency



The CRMS dataset is robust and has many uses.

CRMS Roadshows are scheduled for the federal sponsors to provide feedback on the products provided by the website team.

CRMS website training is available to restoration professionals as well as the general public.



For more information

http://www.lacoast.gov/crms2/Home.aspx
http://www.nwrc.usgs.gov/
http://www.coastal.louisiana.gov/

Steyer, G.D. and others 2003. A Proposed Coast-wide Reference Monitoring System for Evaluating Wetland Restoration Trajectories in Louisiana. *Environmental Monitoring and Assessment*. 81:107-117.