

The background of the slide is an underwater photograph. It shows a deep blue ocean with sunlight filtering through the water from the top, creating a shimmering effect. In the foreground, there is a dense field of coral and small fish. The overall tone is serene and scientific.

DEEPWATER JOINT ANALYSIS GROUP

NODC Data and Analysis Efforts

Presented to:
**Identification and Discussion
of Collaborative Research Projects**

**Russ Beard, NCDDC
Nov. 1, 2010**

DWH Data Management

Heterogeneous, Complex, and Voluminous

Thomas Jefferson



NOAA P-3



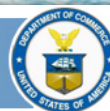
Slocum Glider



Weekly DWH Quad Chart



Gulf Region Functional Team: Meeting NOAA Mission Expectations



DWH Strategic Goals Supported by Regional Performance Measures

- **Protect Wildlife and Habitat from the Impact of the DWH Incident and conduct activities that support ecosystem recovery ; Restore Ecosystem Services to the Region**
 - Action 4 – Effective completion of project related work that supports ecosystem recovery (e.g., EFH/ESA consultations; GOMA related project work) (PM5)
 - Action 6 – Collaborate/exchange data information on key issue inside and outside of NOAA (PM7)
- **Conduct Science and Provide Environmental Information to ensure the Best Response Decisions are made in the DWH Incident**
 - Action 5 - Effectively process and manage data (PM6)

Key Activities/Issues/Risks

- Conductivity-Temperature-Depth (CTD) casts processed, including QA/QC and associated metadata (PM6)



NOAA Office of General Counsel



Objectives

1. **Natural Resource Damage Assessment and Restoration:** Support components of NOAA involved in assessment of injury to natural resources and restoration planning.
2. **Enforcement and Seafood Safety:** Provide legal support to ensure public safety and consumer confidence in Gulf seafood, including development of enforcement cases.
3. **Fisheries:** Provide legal support related to fisheries re-openings and potential changes to Fishery Management Plans related to spill effects.
4. **Legislation, Regulations, and Interagency Affairs:** Provide analysis regarding proposed legislation and other approaches to prevent and address future oil spills and restoration after the DWH spill.
5. **Response/Operations:** Provide legal support in aid of response activities, including budget issues and other authorities.
6. **Miscellaneous:** Provide prompt response to a wide range of questions related to the DWH spill, including FOIA requests.

Schedule

Objectives	Sept	Oct	Nov
Effective, thoughtful, and prompt completion of requests for legal advice – Ongoing.		▲	▲
Provide effective legal support for early-action and long-term natural resource damage assessment and restoration - Ongoing.		▲	▲
Process enforcement cases and issue Notices of Violation immediately upon receipt from the NOAA Office of Law Enforcement.		▲	▲
Provide effective legal support to ensure timely response to FOIA requests – Ongoing.		▲	▲
Provide legal support for fisheries re-openings.		▲	▲
▲ Milestone Completed ▲ Milestone at Risk ▲ Milestone Missed ▲ Milestone on Track			

Report Date: October 20, 2010

Key Issues for Discussion

1. Natural Resource Damage Assessment and Restoration:

Short-term

- Continue to assist with planning for regional outreach meetings to explain the damage assessment and restoration process and to solicit the public's views on restoration approaches.
- Obtain BP funding commitment for trustees' proposed emergency restoration projects.
- Continue to assist technical work groups (TWGs) developing plans for additional data collection and assessment for various resource categories.
- Work with co-trustees to review candidate early restoration projects for consistency with Natural Resource Damage Assessment regulatory criteria.

Long-term

- Continue providing advice in support of trustee efforts to document resource injuries and losses attributable to the spill and to develop restoration alternatives to make the environment and public whole.
2. **Enforcement:** GC for Enforcement will continue immediately processing cases forwarded from the Office of Law Enforcement.
 3. **FOIA:** Continuing to work with the DWH war room to develop a searchable repository for war room emails and related documents.

Activities – October 15 to October 19

1. Natural Resource Damage Assessment and Restoration:

- Continued providing legal advice in support of ongoing joint trustee/BP activities to collect and analyze data concerning the spill; completed review of work plan for acquiring aerial imagery of shorelines and submerged aquatic vegetation – forwarded for signature by trustees and BP.
- Participated jointly with the State of Texas and the Department of the Interior in public meeting in Galveston to inform the public about the NRDA process and provide an update on ongoing NRDA activities.
- Attended the Submerged Aquatic Vegetation (SAV) Technical Work Group meeting with BP representatives to discuss preliminary sampling results and plans for continuing damage assessment activities.
- Transmitted to the responsible parties a request for funds to implement three potential emergency restoration projects that would avoid or reduce natural resource losses.

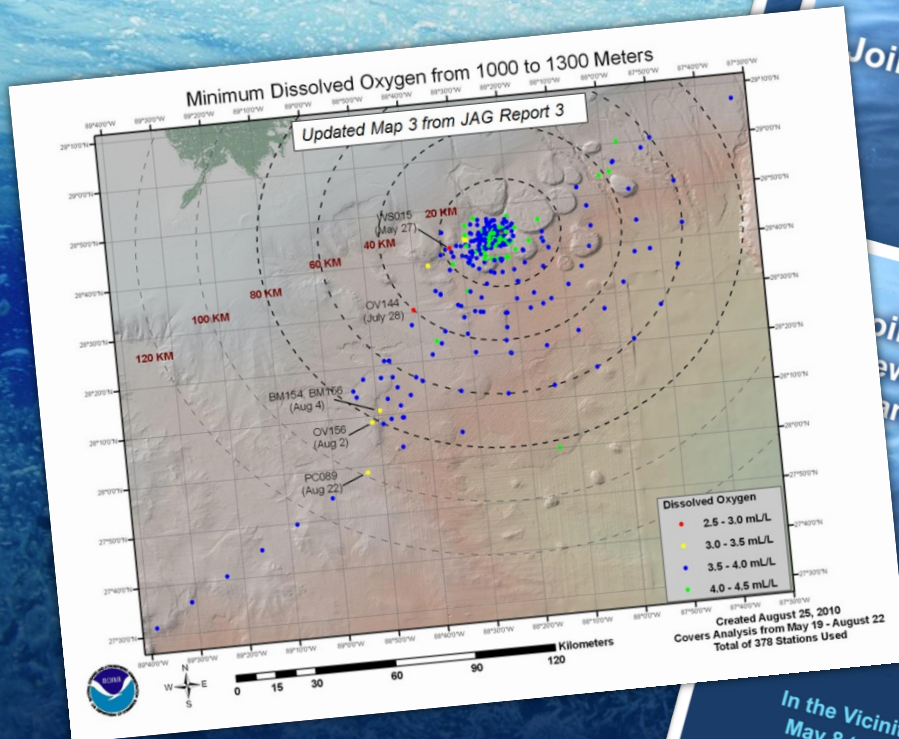
2. **Enforcement:** No new case packages were forwarded from the Office of Law Enforcement since last week. All previously received cases have been processed.
3. **FOIA:** No new updates since last week.

Performance Measures

Measure	To Date	This Report Period	Target
PM5 - Number and percent timely response to program related actions that support long-term recovery	21 100%	0 100%	90%
PM6 - Weekly processing of CTD casts, including QA/QC and associated metadata	1589 95.3%	27 100%	90%
PM7 – Workshops to identify, catalogue, and track key regional issues to inform NOAA Leadership	7	0	5 + summary whitepaper 9/30/10

Report Date: October 16 – 19, 2010

Interagency Charge to JAG



Joint Analysis Group
Report 1
Review of R/V Brooks McCall
Data to Examine Subsurface Oil

Joint Analysis Group
Report 2

Joint Analysis Group
Review of Preliminary Data
to Examine Oxygen Levels

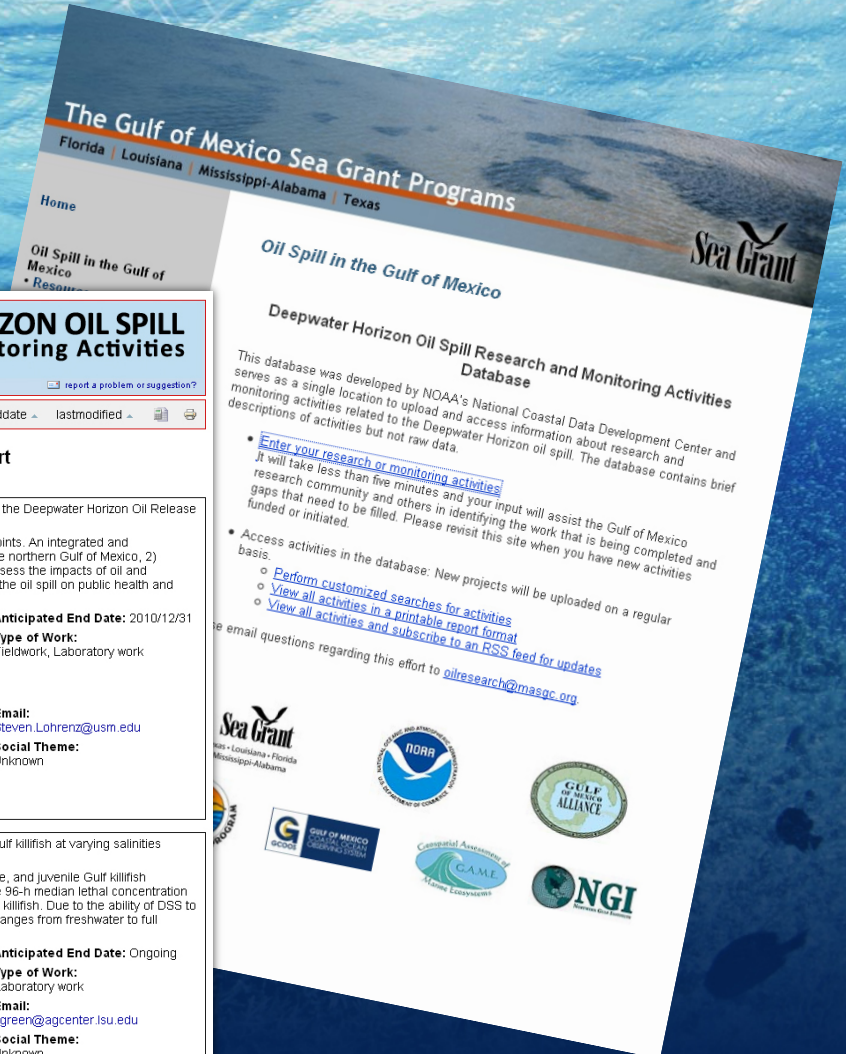
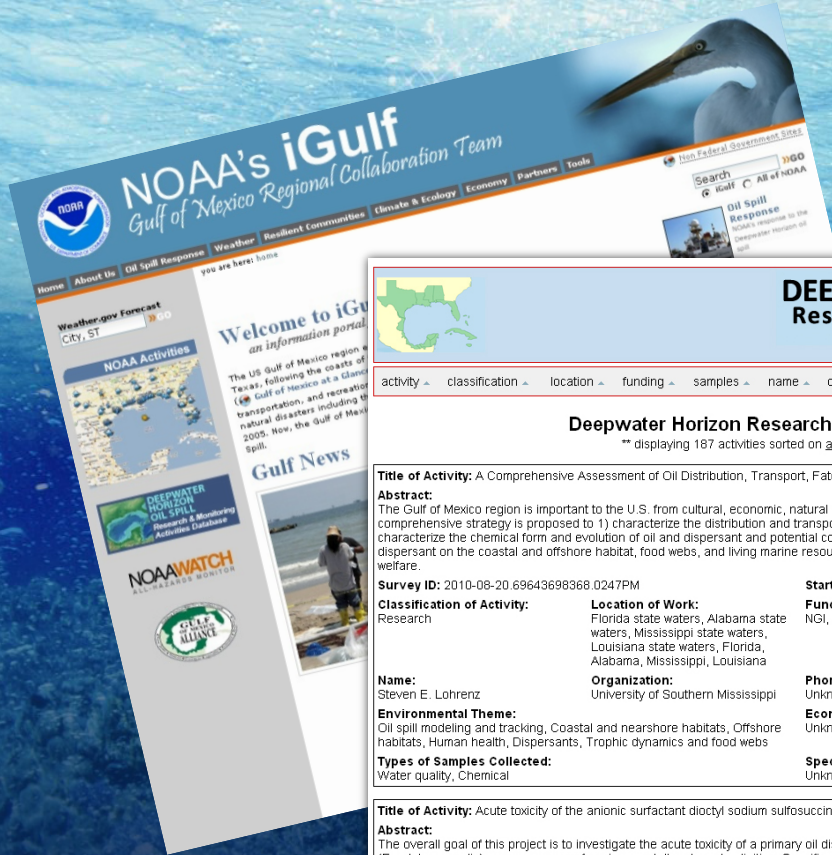
In the Vicinity of MC252#1
May 8 to August 9, 2010

- Document the subsurface plume

- Look for presence of hydrocarbons

- Analyze oxygen levels

GOMRT, OAR Sea Grant Research Activities



DEEPWATER HORIZON OIL SPILL Research and Monitoring Activities

report a problem or suggestion?

activity classification location funding samples name organization startdate enddate lastmodified

Deepwater Horizon Research and Monitoring Report

** displaying 187 activities sorted on activity in ascending order **

Title of Activity: A Comprehensive Assessment of Oil Distribution, Transport, Fate, and Impacts on Ecosystems and the Deepwater Horizon Oil Release

Abstract:

The Gulf of Mexico region is important to the U.S. from cultural, economic, natural resource, and recreational standpoints. An integrated and comprehensive strategy is proposed to 1) characterize the distribution and transport of the oil in coastal waters on the northern Gulf of Mexico, 2) characterize the chemical form and evolution of oil and dispersant and potential contribution to coastal hypoxia, 3) assess the impacts of oil and dispersant on the coastal and offshore habitat, food webs, and living marine resources and 4) assess the impacts of the oil spill on public health and welfare.

Survey ID: 2010-08-20.69643698368.0247PM

Classification of Activity: Research

Location of Work: Florida state waters, Alabama state waters, Mississippi state waters, Louisiana state waters, Florida, Alabama, Mississippi, Louisiana

Start Date: 2010/06/16

Funding Agency: NGI, BP-GRI

Anticipated End Date: 2010/12/31

Type of Work: Fieldwork, Laboratory work

Name: Steven E. Lohrenz

Organization: University of Southern Mississippi

Phone Number: Unknown

Email: Steven.Lohrenz@usm.edu

Environmental Theme: Oil spill modeling and tracking, Coastal and nearshore habitats, Offshore habitats, Human health, Dispersants, Trophic dynamics and food webs

Economic Theme: Unknown

Social Theme: Unknown

Types of Samples Collected: Water quality, Chemical

Species of Interest: Unknown

Title of Activity: Acute toxicity of the anionic surfactant dioctyl sodium sulfosuccinate to eggs, larvae, and juvenile Gulf killifish at varying salinities

Abstract:

The overall goal of this project is to investigate the acute toxicity of a primary oil dispersant component to eggs, larvae, and juvenile Gulf killifish (*Fundulus grandis*) across a range of environmentally relevant salinities. Specifically this work seeks to determine the 96-h median lethal concentration (LC50) values for dioctyl sodium sulfosuccinate (DSS) to eggs, 15-d posthatch (dph) larvae, and juvenile (0.5 g) Gulf killifish. Due to the ability of DSS to alter absorption rates and membrane permeability we believe that it might demonstrate increasing toxicity as salinity ranges from freshwater to full strength seawater.

Survey ID: 2010-08-11.932432773512

Classification of Activity: Research

Location of Work: Louisiana state waters

Start Date: 2010/06/01

Funding Agency: NOAA, Louisiana Sea Grant

Anticipated End Date: Ongoing

Type of Work: Laboratory work

Name: Christopher C. Green

Organization: Louisiana State University AgCenter

Phone Number: 225-765-2848

Email: cgreen@agcenter.lsu.edu

Environmental Theme: Dispersants, Toxicology, Impact on life stages of aquatic animals

Economic Theme: Ecosystem valuation

Social Theme: Unknown

Types of Samples Collected: Biological

Species of Interest: *Fundulus grandis*

An underwater photograph showing a vibrant coral reef. The water is clear and blue, with sunlight filtering through the surface, creating a shimmering effect. Several small, colorful fish are swimming around the coral. The coral itself is diverse, with various shapes and colors, including shades of green, yellow, and brown. The overall scene is peaceful and beautiful, representing the rich biodiversity of the ocean.

ACCESS TO OCEAN OBSERVATIONS THROUGH NODC

Gliders

NOAA Satellite and Information Service

NOAA NATIONAL OCEANOGRAPHIC DATA CENTER (NODC)
UNITED STATES DEPARTMENT OF COMMERCE

You are here: [NODC Home](#) > [Access Data](#) > [Gulf of Mexico Data and Information](#) > Deepwater Horizon Incident Support

NODC Support for the Deepwater Horizon Incident

Directory view and [OpenDAP](#) or [THREDDS \(TDS\)](#) views of data submitted to NODC in support of the Deepwater Horizon Incident

[Archived Deepwater Horizon Data](#)

[Ocean Archive System](#)

[Satellite Data](#)

[Resources on Oil Spills, Response, and Restoration](#)

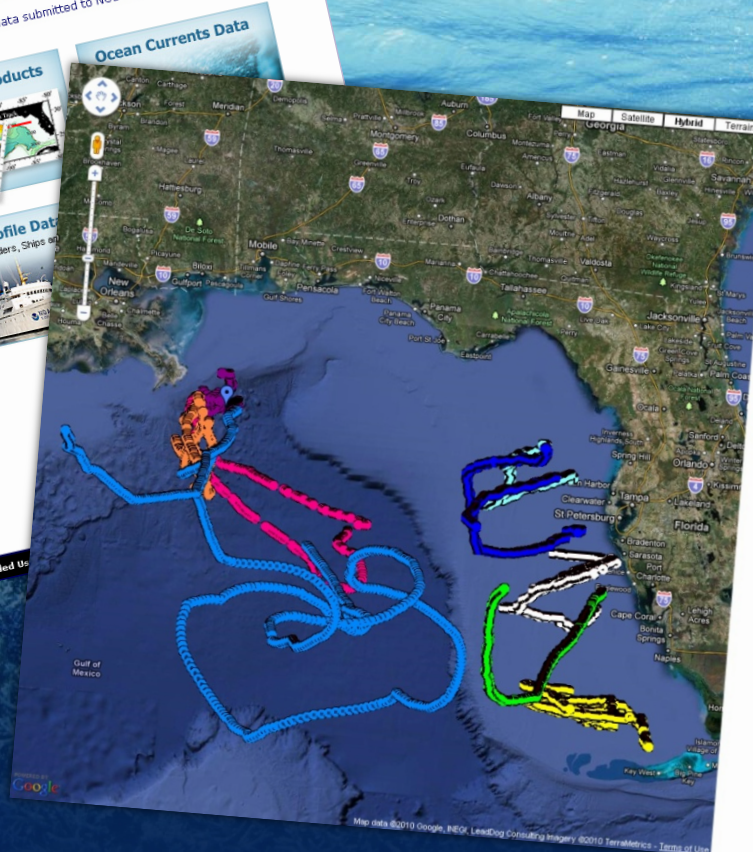
[A Selected Bibliography](#)

[Ocean Currents Data](#)

[Climatology Products](#)

[Ocean Profile Data](#)

[Access Data](#) - [Submit Data](#) - [Site Map](#) - [Intended Use](#)



NOAA
NATIONAL OCEANOGRAPHIC DATA CENTER (NODC)

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Glider Data

Long load times are possible.
If all gliders do not appear please refresh the page.

An underwater glider is a type of autonomous underwater vehicle (AUV) that uses small changes in its buoyancy in conjunction with wings to convert vertical motion to horizontal, and thereby propel itself forward with very low power consumption. This is a Google Maps presentation of oceanographic data stored in the [Global Temperature and Salinity Profile Programme \(GTSP\)](#) database in the vicinity of the BP Deepwater oil spill.

Click any data point to get detailed information about that point.

<input checked="" type="checkbox"/> Glider 48900	<input checked="" type="checkbox"/> Glider 48901	<input checked="" type="checkbox"/> Glider 48902
<input checked="" type="checkbox"/> Glider 48903	<input checked="" type="checkbox"/> Glider 48904	<input checked="" type="checkbox"/> Glider 48905
<input checked="" type="checkbox"/> Glider 48906	<input checked="" type="checkbox"/> Glider 48908	<input checked="" type="checkbox"/> Glider 48909

Climatology

NOAA Satellite and Information Service

NOAA NATIONAL OCEANOGRAPHIC DATA CENTER (NODC)
UNITED STATES DEPARTMENT OF COMMERCE

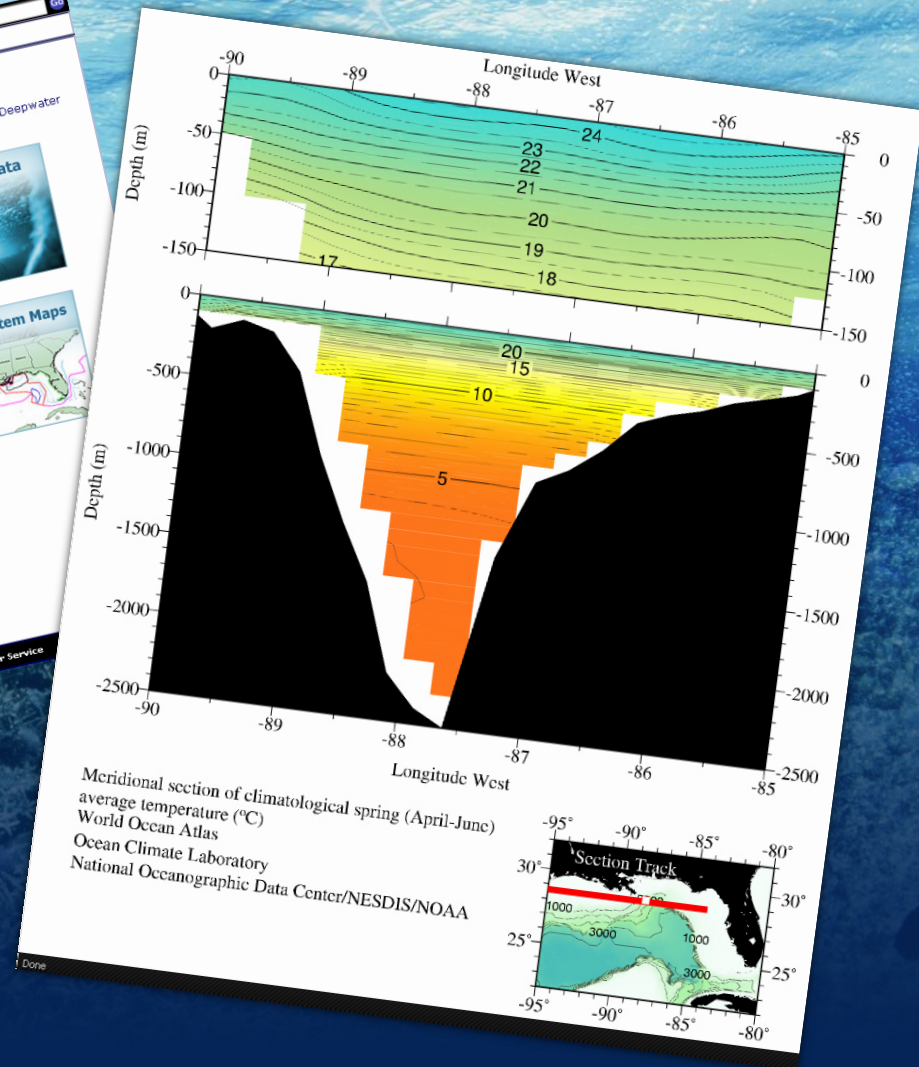
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NODC Support for the Deepwater Horizon Incident

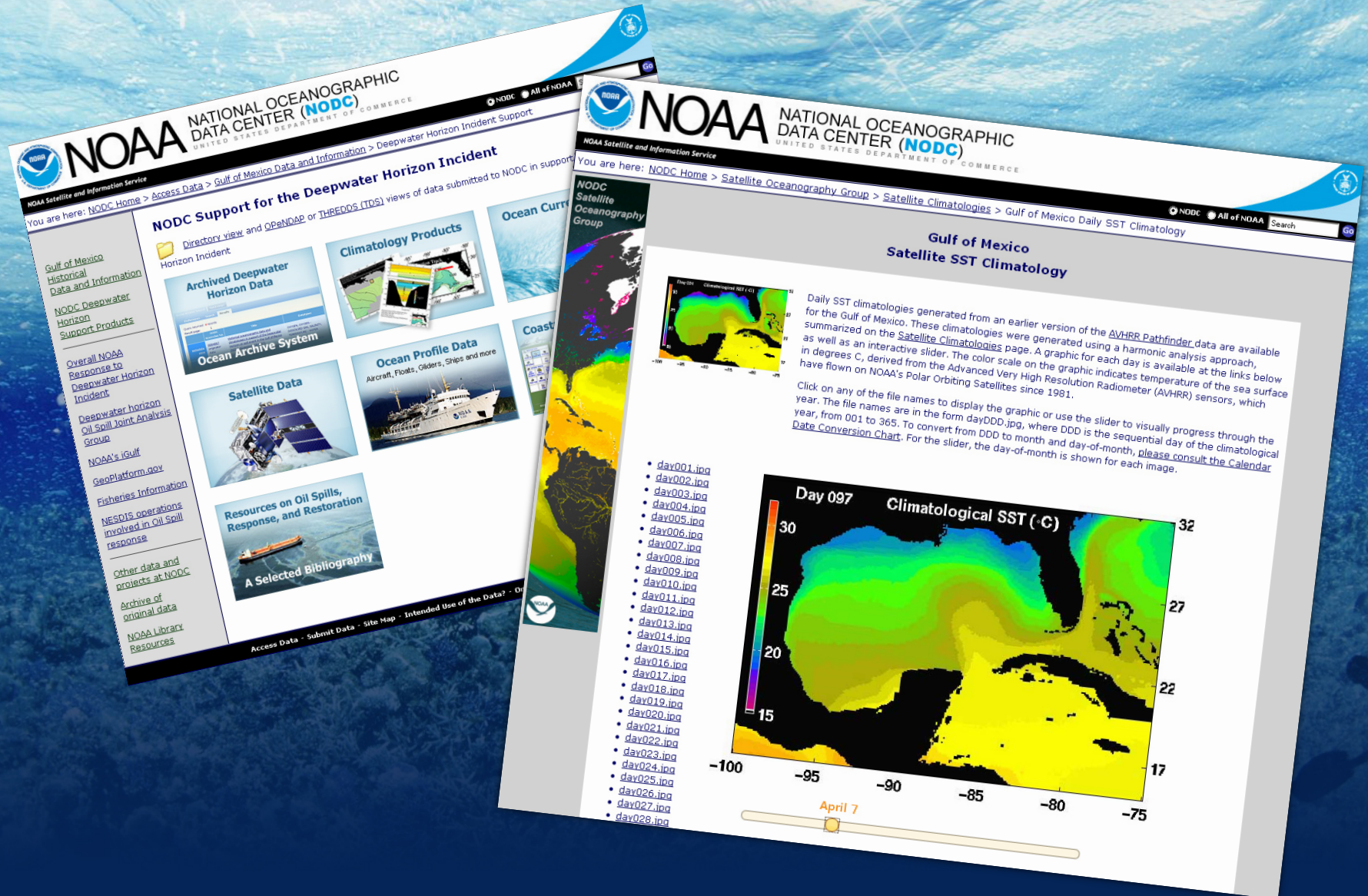
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- [Climatology Products](#)
- [Ocean Currents Data](#)
- [Ocean Profile Data](#)
Aircraft, Floats, Buoys, Ships and more
- [Coastal Ecosystem Maps](#)

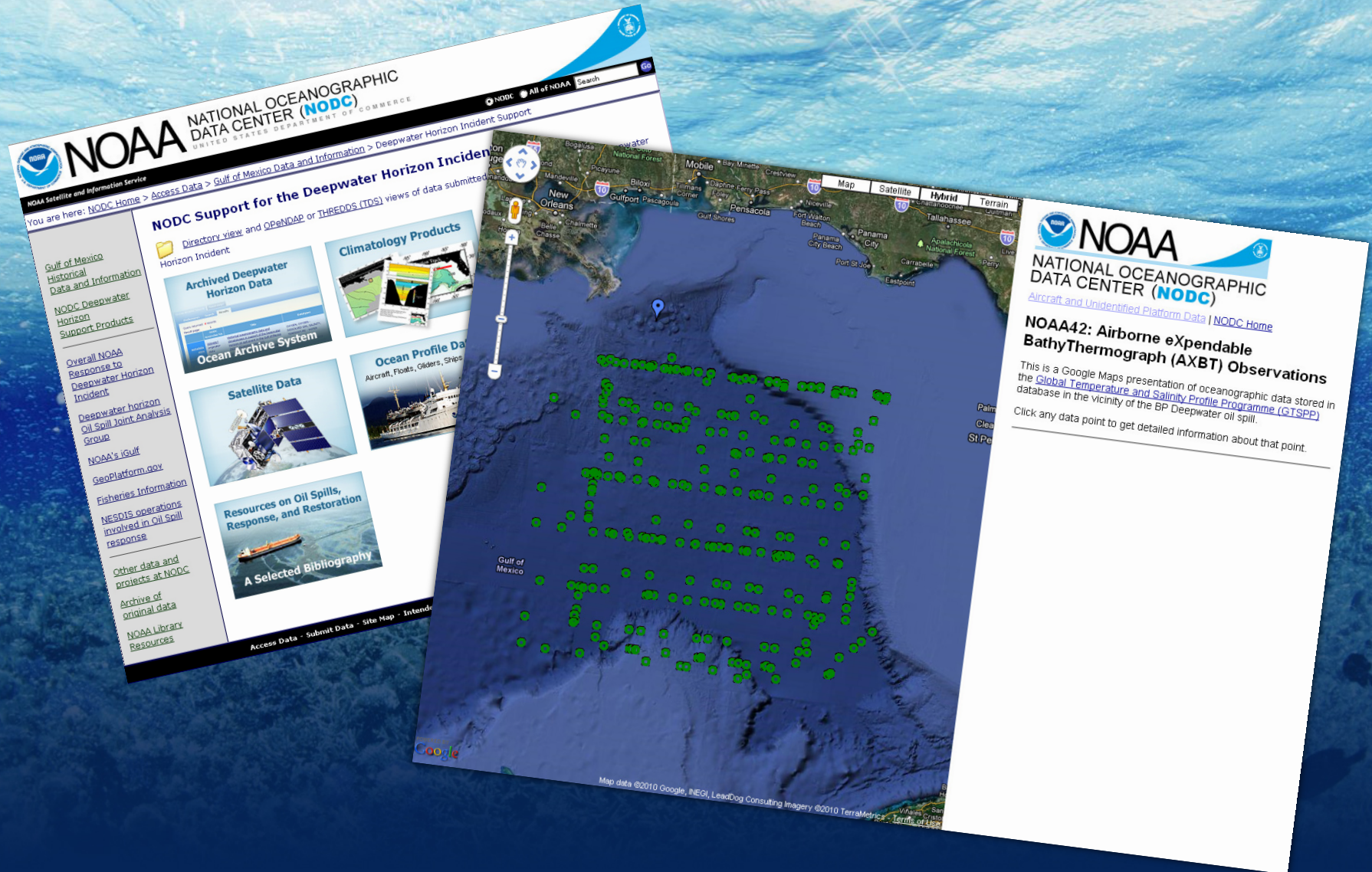
[Access Data](#) - [Submit Data](#) - [Site Map](#) - [Intended Use of the Data?](#) - [Online Store](#) - [Customer Service](#)



Satellite Data



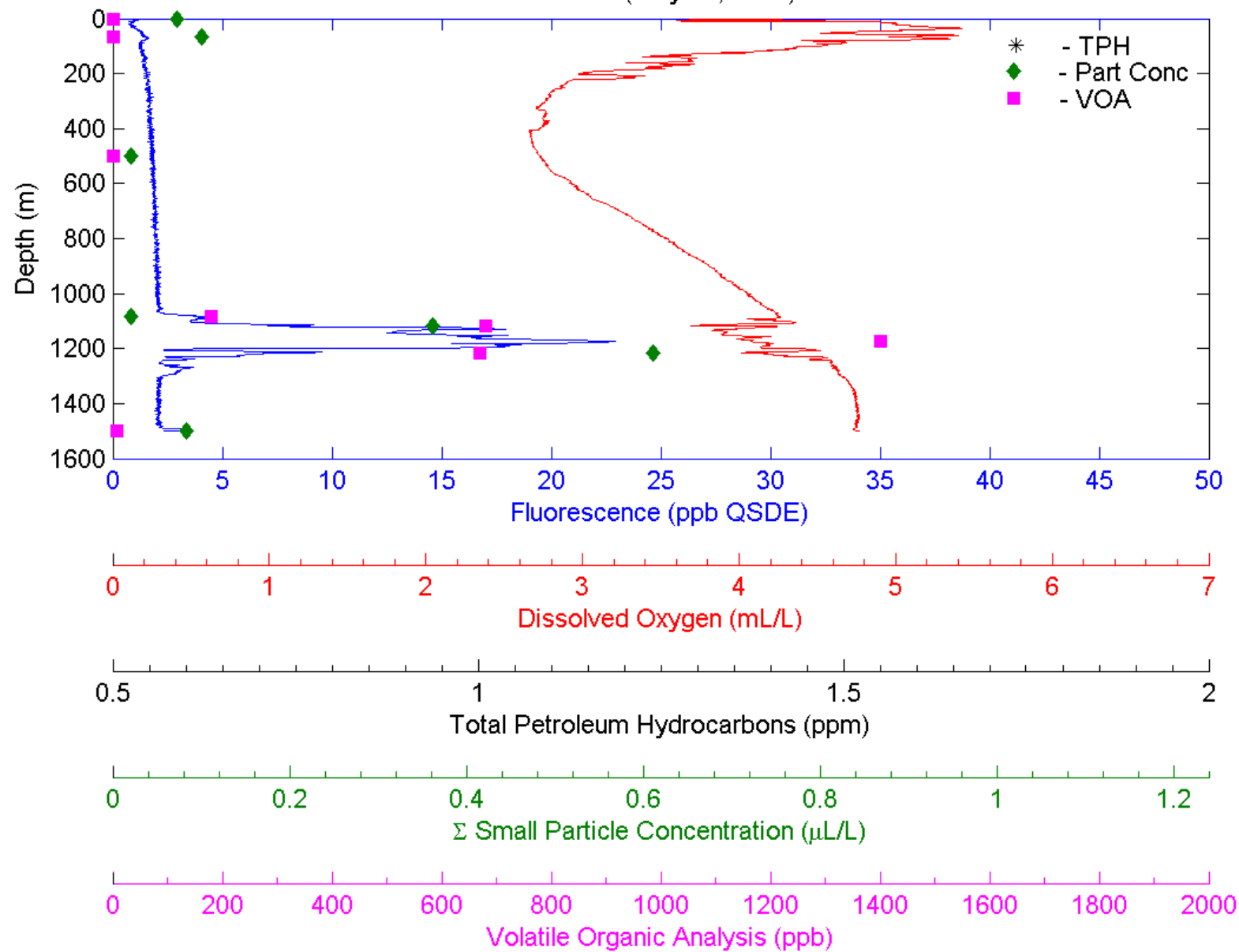
Aircraft Data



An underwater photograph showing a vibrant coral reef. The water is clear and blue, with sunlight filtering through from the surface, creating a shimmering effect. Several small, colorful fish are swimming around the coral. The coral itself is diverse in shape and color, with some appearing as green and yellow patches and others as darker, more complex structures.

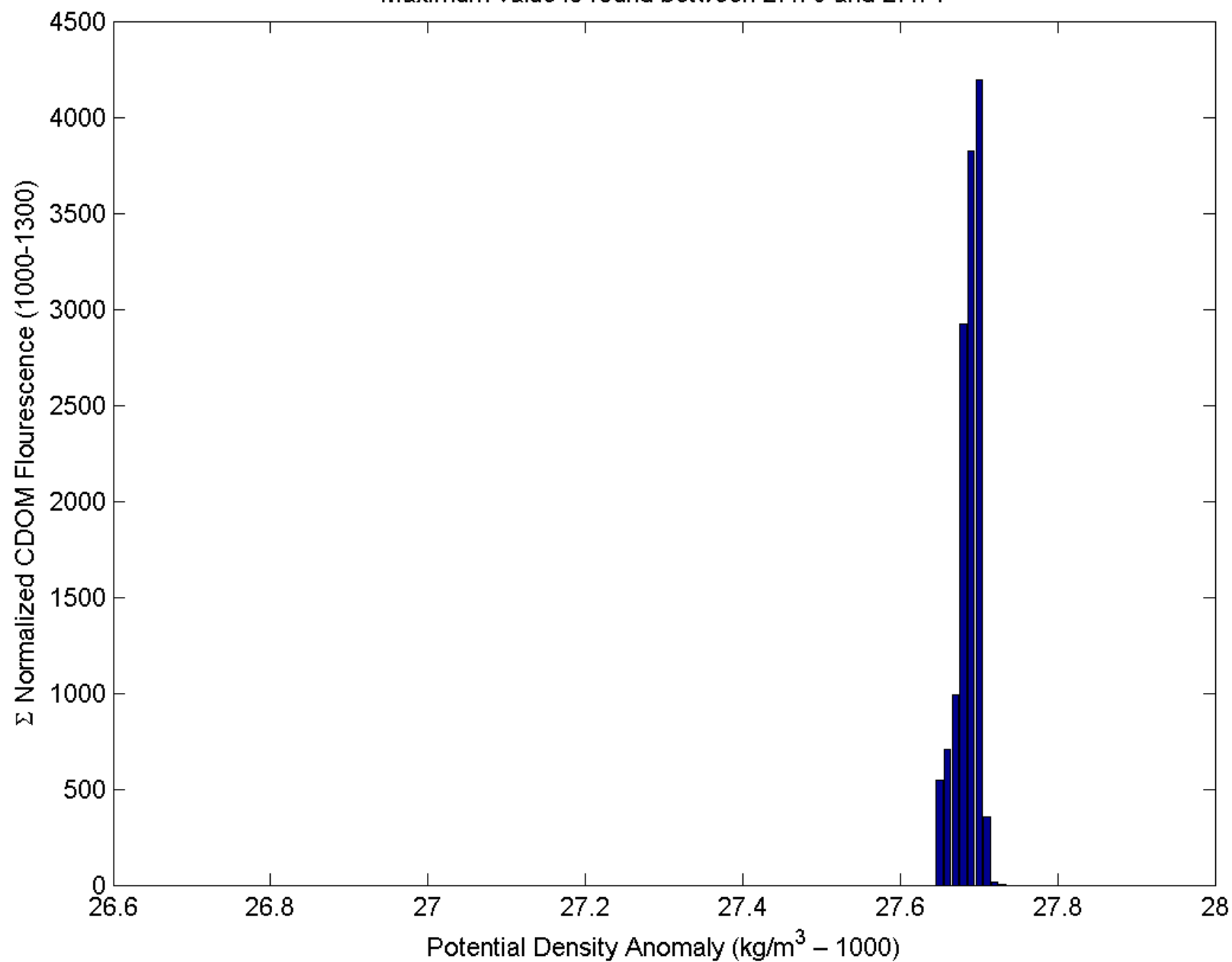
HIGHLIGHTS FROM SUBSURFACE ANALYSIS

RV Brooks McCall Cruise 5 (May 30, 2010) - CTD Station B57

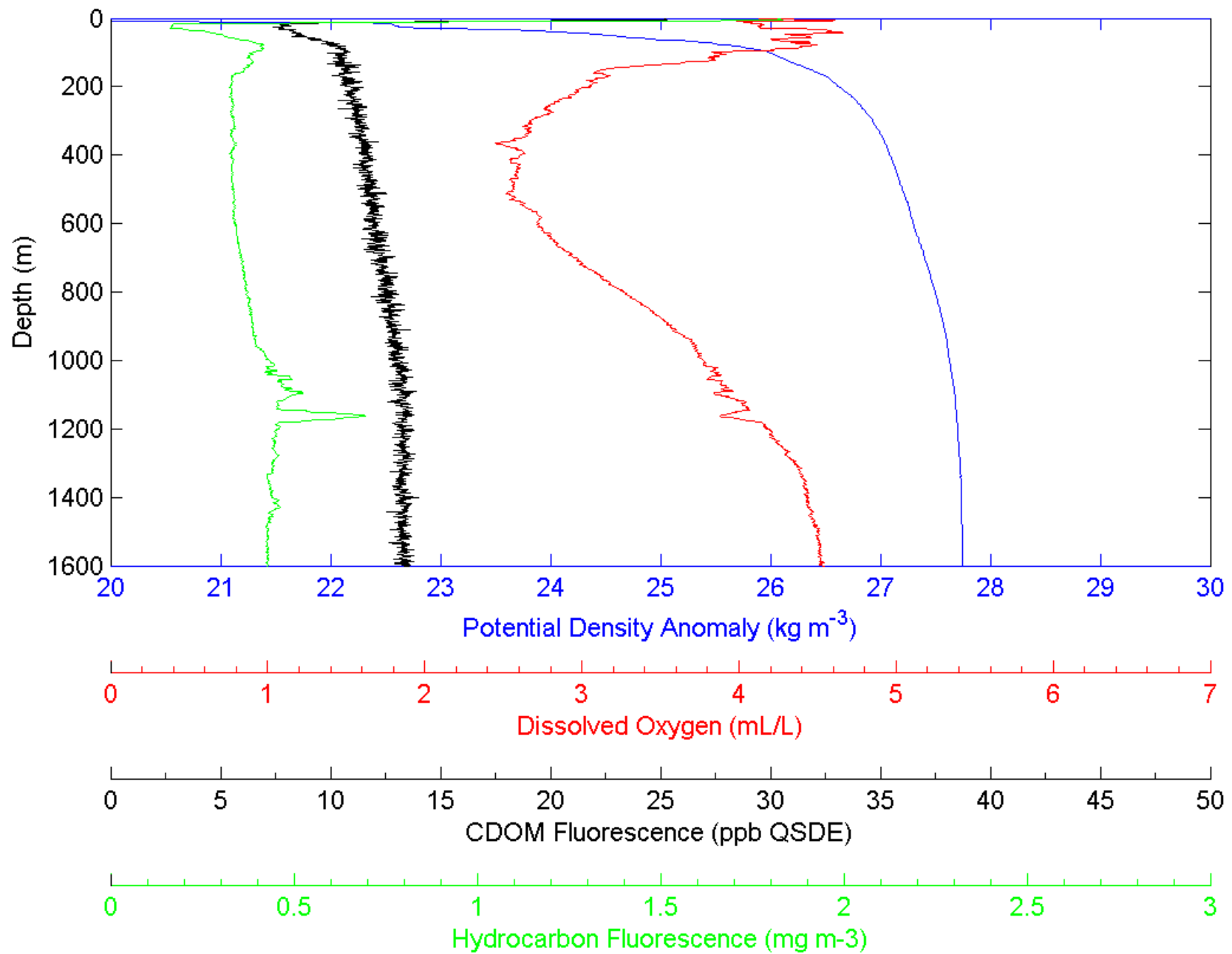


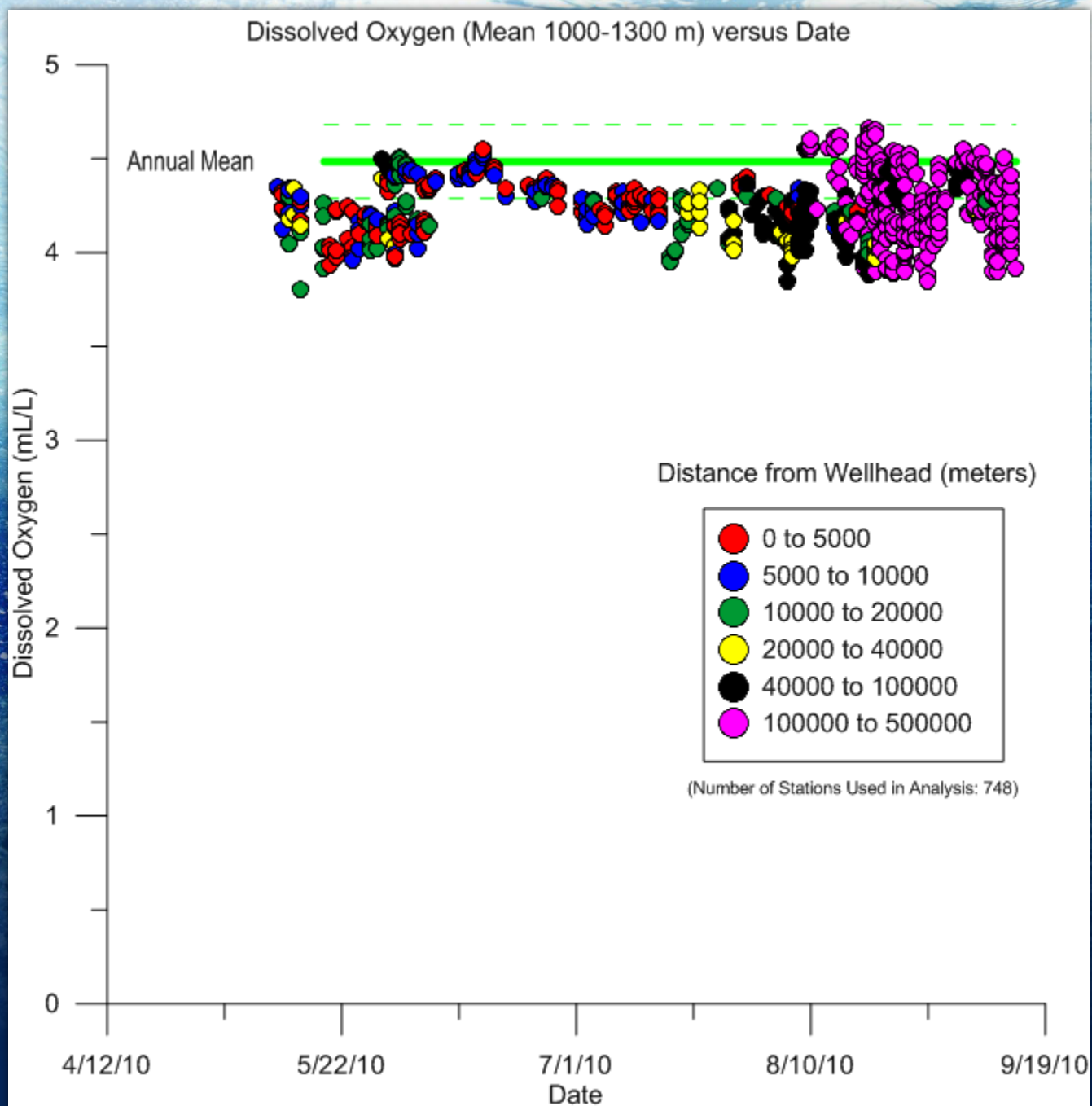
Normalized CDOM Fluorescence (1000-1300 m) Summed over Potential Density Anomaly σ_θ

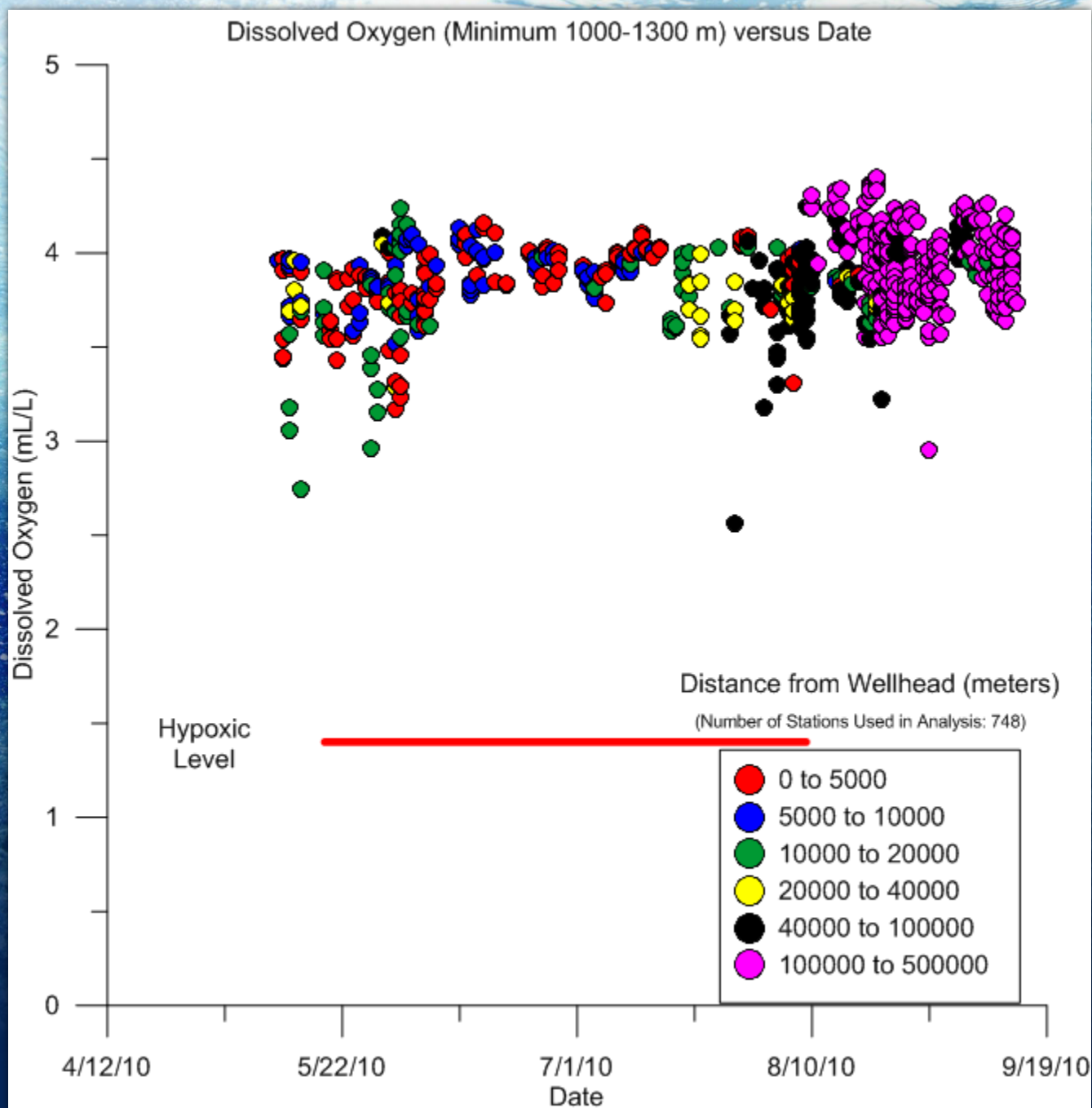
Maximum value is found between 27.70 and 27.71



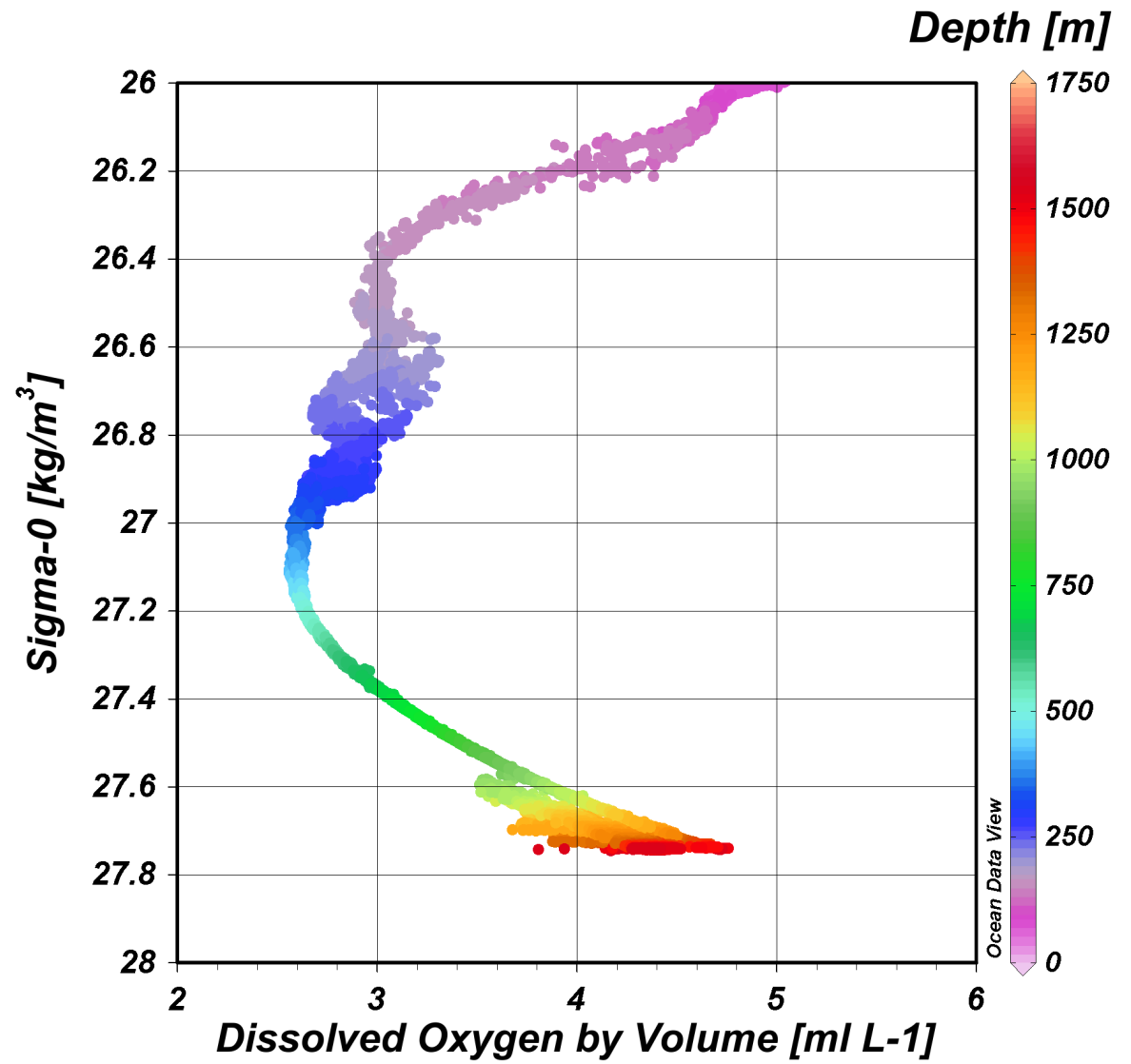
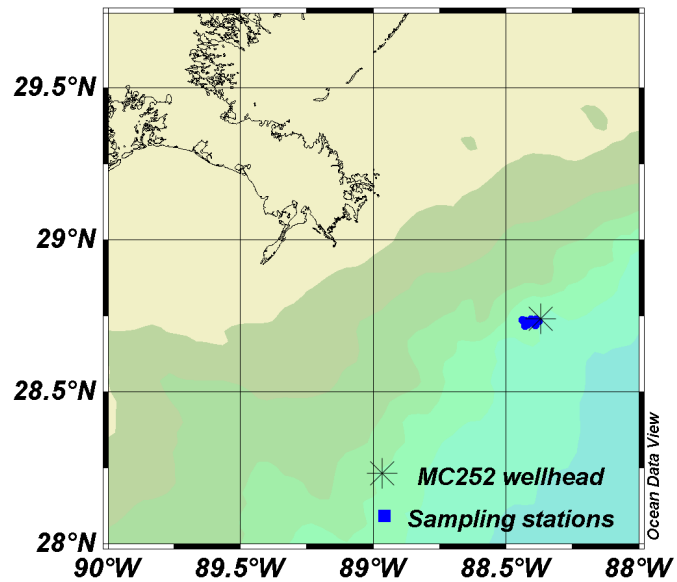
Pisces Cruise 4 - CTD Station PC087



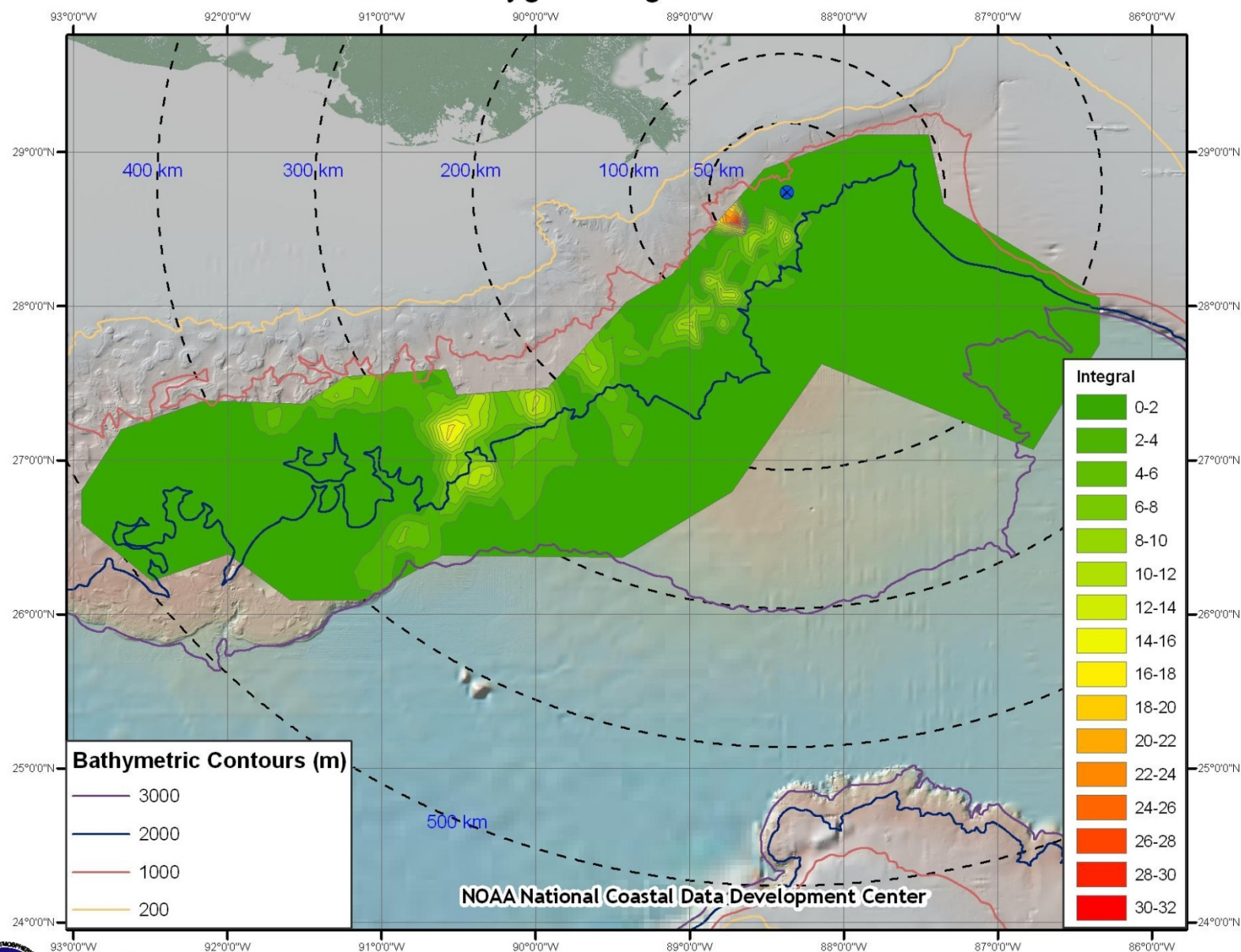




Brooks McCall Cruise 4



Detrended Dissolved Oxygen Integral from 1000 to 1300 Meters



0 50 100 200 300 400 Kilometers

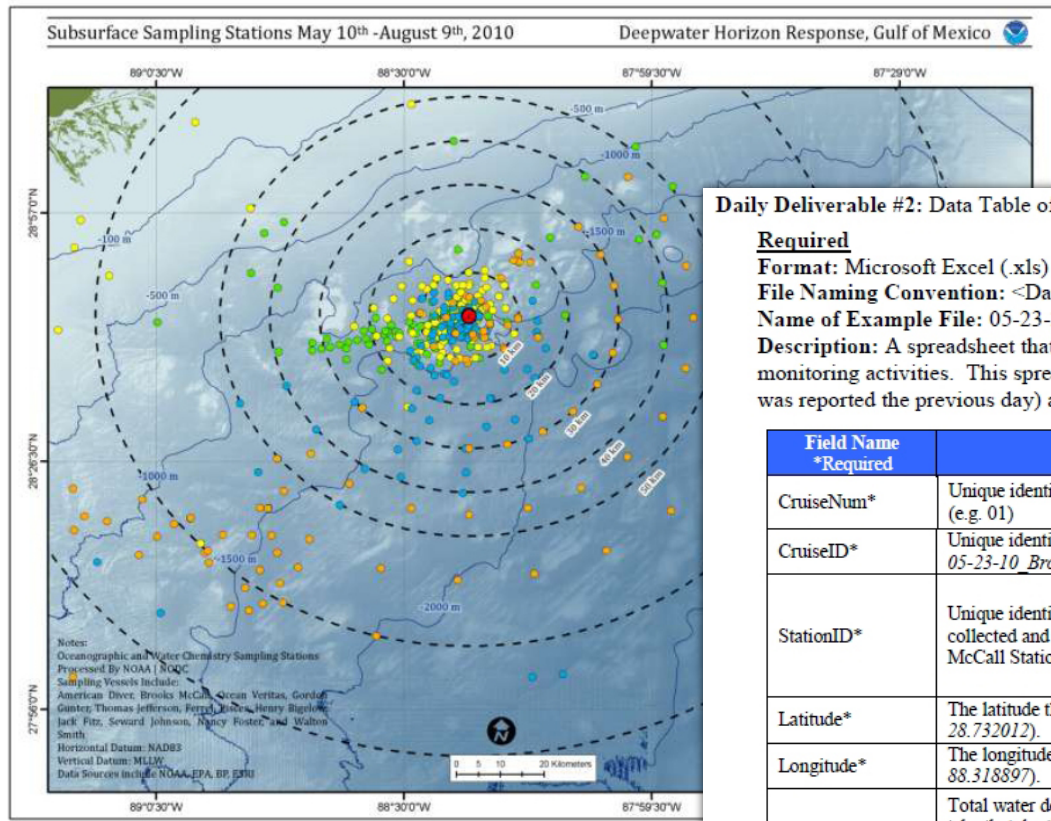
Created Oct. 6, 2010
Covers Analysis from July 22 - Oct. 2
Total of 570 Stations Used

An underwater photograph showing a vibrant coral reef. The water is clear and blue, with sunlight filtering through from the surface, creating a shimmering effect. Several small, colorful fish are swimming around the coral. The coral itself is diverse, with various shapes and colors, including some that look like brain coral and others that are more branching. The overall scene is peaceful and beautiful, representing a healthy marine ecosystem.

LESSONS LEARNED

Data should be collected uniformly and good data starts on the ships.

Map 2. Detail of survey area and month of station occupation for monitoring for subsurface dispersed oil.



Daily Deliverable #2: Data Table of Sampling/Monitoring Locations

Required

Format: Microsoft Excel (.xls) Spreadsheet

File Naming Convention: <Date (in the format MM-DD-YYYY)>_<Vessel Name>_Locations

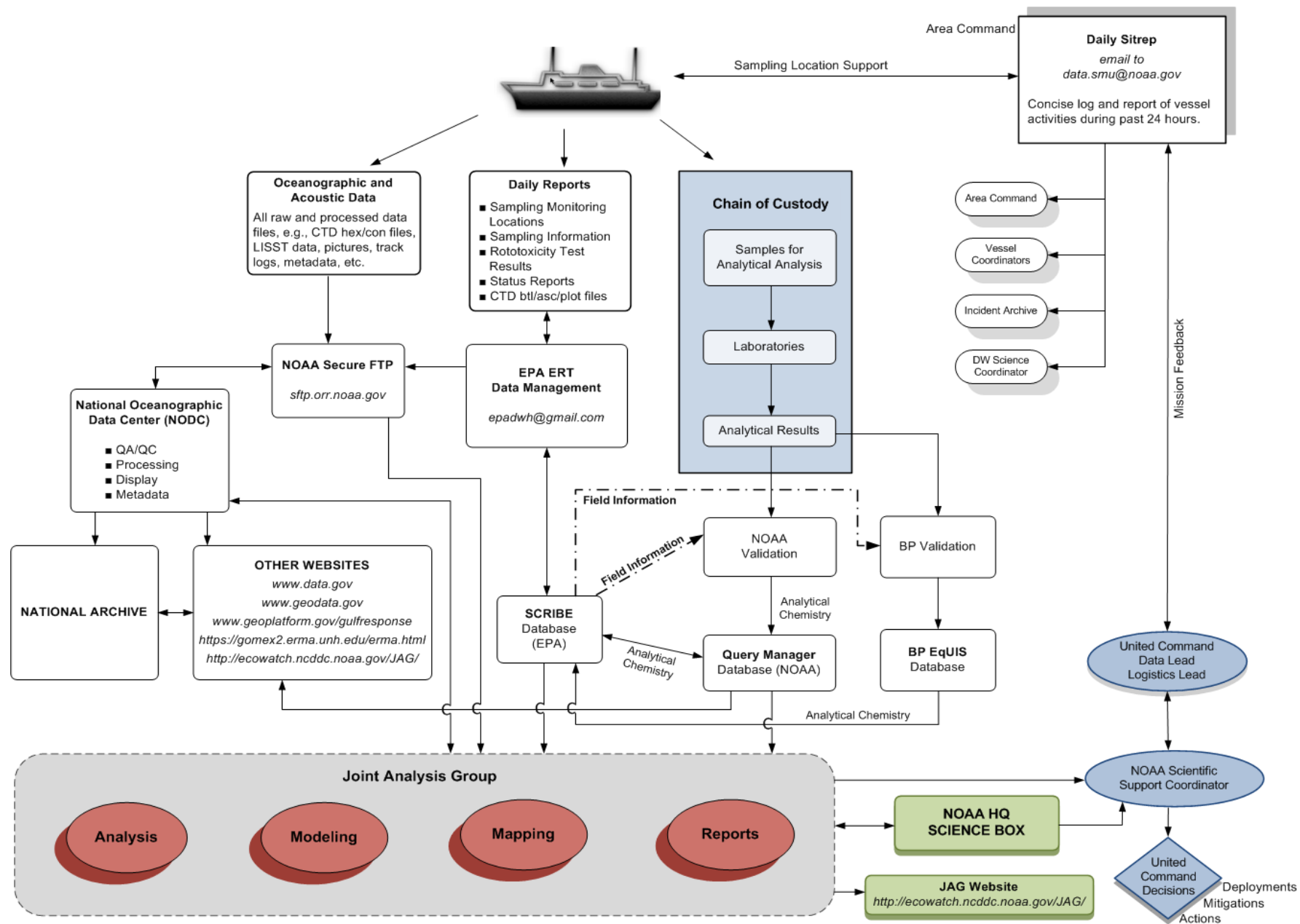
Name of Example File: 05-23-2010_Brooks McCall_Locations

Description: A spreadsheet that documents the locations where the vessel conducted sampling and monitoring activities. This spreadsheet must be a cumulative log for the entire cruise (do not delete what was reported the previous day) and must include the following columns or data fields:

Field Name *Required	Description	Formatting Requirements
CruiseNum*	Unique identifier for the incremented Cruise number (e.g. 01)	Numeric
CruiseID*	Unique identifier for the at-sea operating period (e.g., 05-23-10_Brooks McCall).	<Cruise Start Date>_<Vessel Name>
StationID*	Unique identifier of the location at which samples are collected and measurements are made (e.g. Brooks McCall Station 16 = BM016).	<Vessels Initials><3-digit sequential number representing the sampling station>
Latitude*	The latitude that is generated by the CDT (e.g. 28.732012).	Decimal Degrees (six decimal places)
Longitude*	The longitude that is generated by the CDT (e.g. -88.318897).	Decimal Degrees (six decimal places)
Depth*	Total water depth in meters at this location. If possible, take that depth from rough-scale (75 m resolution) bathymetric chart. Otherwise, use the sum of the CDT maximum depth and the instrument's altimeter value at that depth.	Numeric
Date*	The date that the station is occupied.	MM/DD/YYYY
Datum*	The datum used to collect the latitude and longitude measurements.	Must be "NAD83" or "WGS84"

MC252 Subsurface Monitoring Unit Data Flow

July 19, 2010



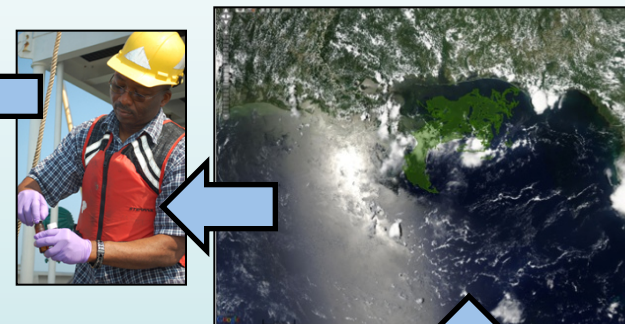
NOAA Observing Systems



Collection & Process



All Source Observing Systems



Data Assembly Center (e.g. OR&R, NDBC, NODC)

Calibration
Validation
QA/QC
Metadata

Verified
Data
Streams

Joint Analysis Group

Assimilation, Integration & Visualization



Protecting
Living
Marine
Resources



Decision
Support
Tools

Interagency
Management

Research
Community

Archive &
Stewardship

Data Centers &
Centers of Data

DWH Data & Information Management – Federal/Research “Lessons Learned”

- **The inability of the SMU and the JAG to provide guidance on vessel sampling locations (enforcement issues)**
- **Established clear chain of command to drive collection requirements and RELEASABILITY issues, i.e., approval and clearance structure poorly defined**
- **Pre-determination of data-sharing protocols and public access agreements, non-existent. Not shared, or poorly understood by industry, academics, and government**
- **Early failure to establish a consistent and coherent policy throughout the data management process**

DWH Data & Information Management – Recommendations

- **Convene a DWH Data Collections Data and Information Management Services Workshop as soon as reasonable**
- **NOAA and the academic research community establish/publish the common goals beneficial to both in response activities as well as those areas where goals legitimately differ**
- **NOAA work with NSF and leading publications to protect publication rights while meeting the constituents “right to know” what data is available**
- **Better understanding both federal and academics on NRDA requirements re data**
- **Utilize the academic community as SMEs as subgroups within the process and build a working partnership**

An underwater photograph showing a vibrant coral reef. The water is clear and blue, with sunlight filtering through from the surface, creating a shimmering effect. Several small fish are visible swimming around the coral. The word "QUESTIONS?" is overlaid in the center in a bold, white, sans-serif font.

QUESTIONS?