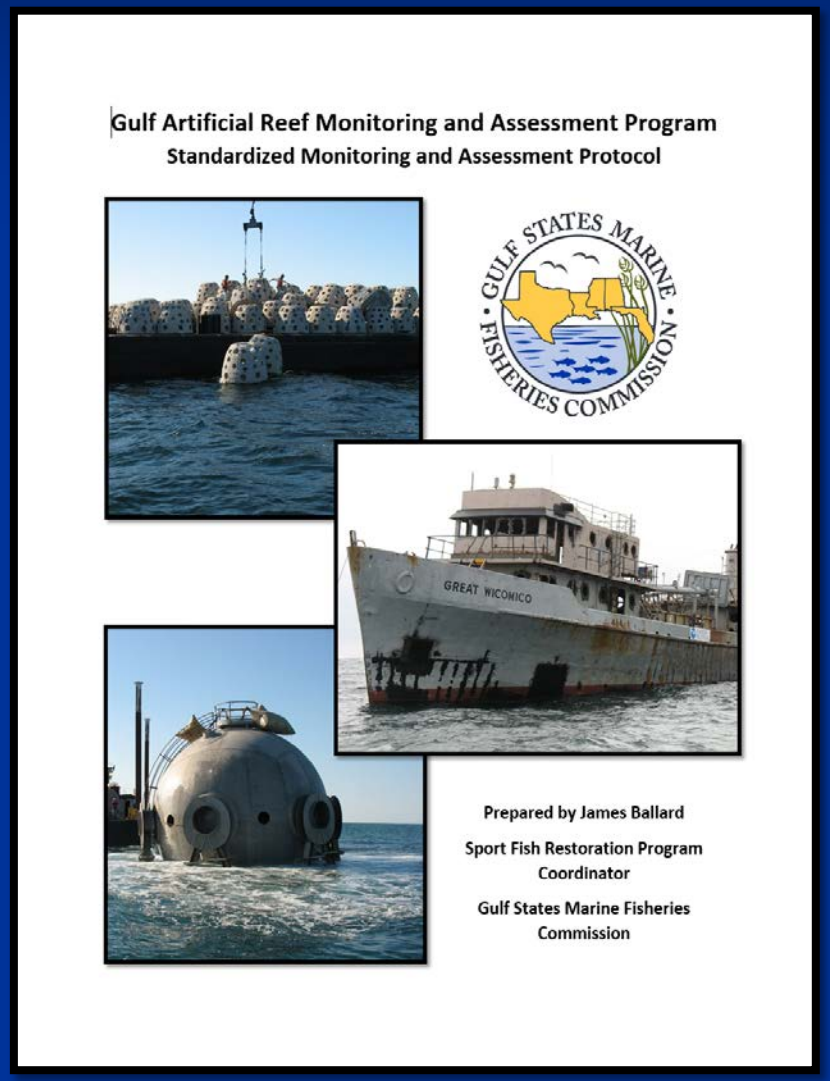
Sport Fish Restoration Program Update

March 2021

James Ballard

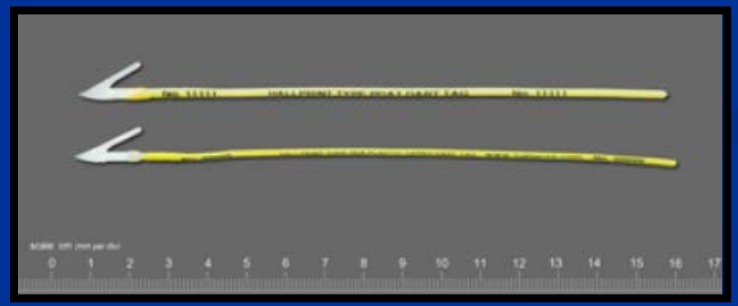
Sport Fish Restoration Program Coordinator

Gulf Artificial Reef Monitoring and Assessment Program (GARMAP)



SPORT FISH RESTORATION

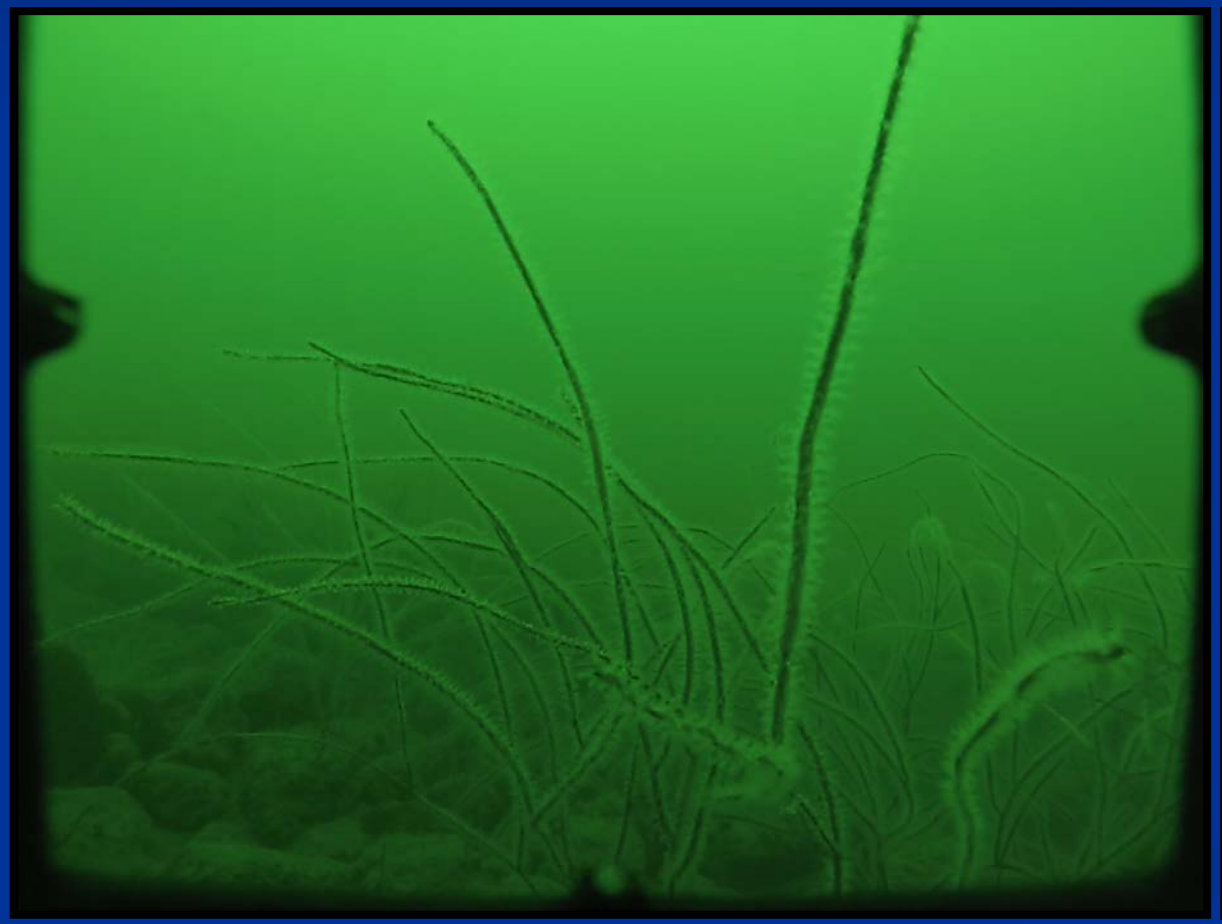
GARMAP

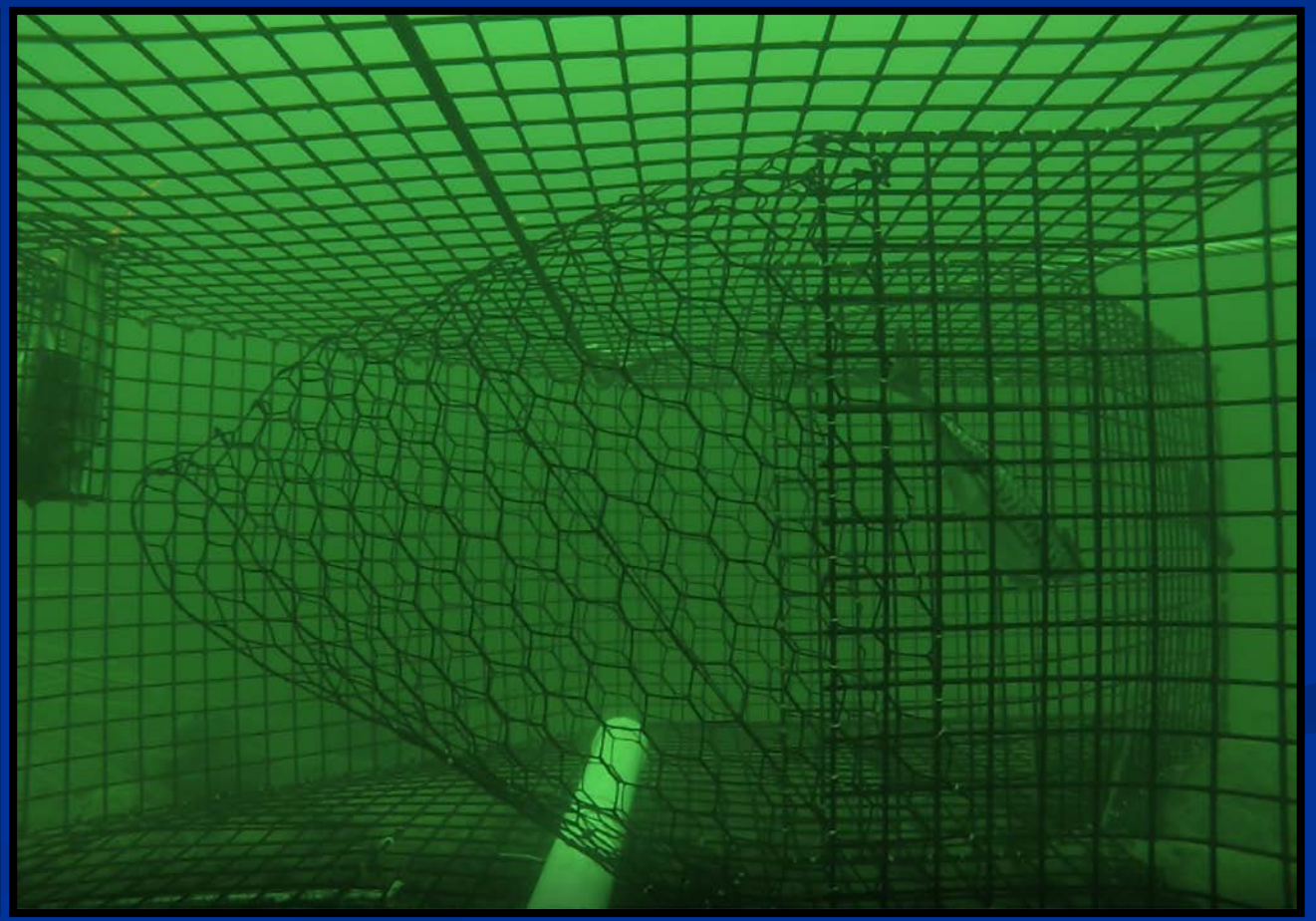


GARMAP

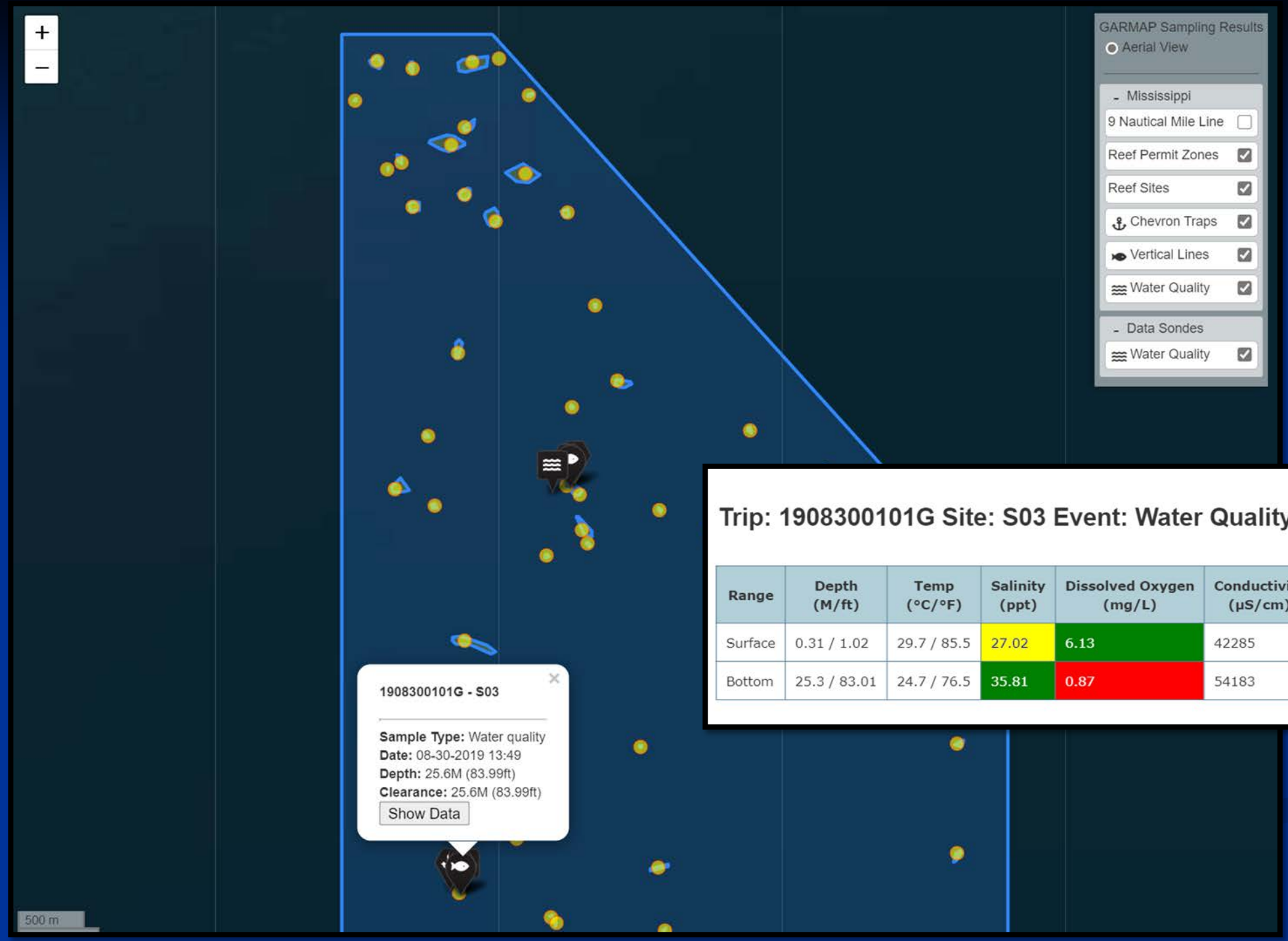
FH13-58 Rubble

Bottom DO Levels 0.87-1.59 mg/L






+
−
GARMAP Sampling Results
Aerial View
Mississippi
9 Nautical Mile Line
Reef Permit Zones
Reef Sites
Chevron Traps
Vertical Lines
Water Quality
Data Sondes
Water Quality
5 km



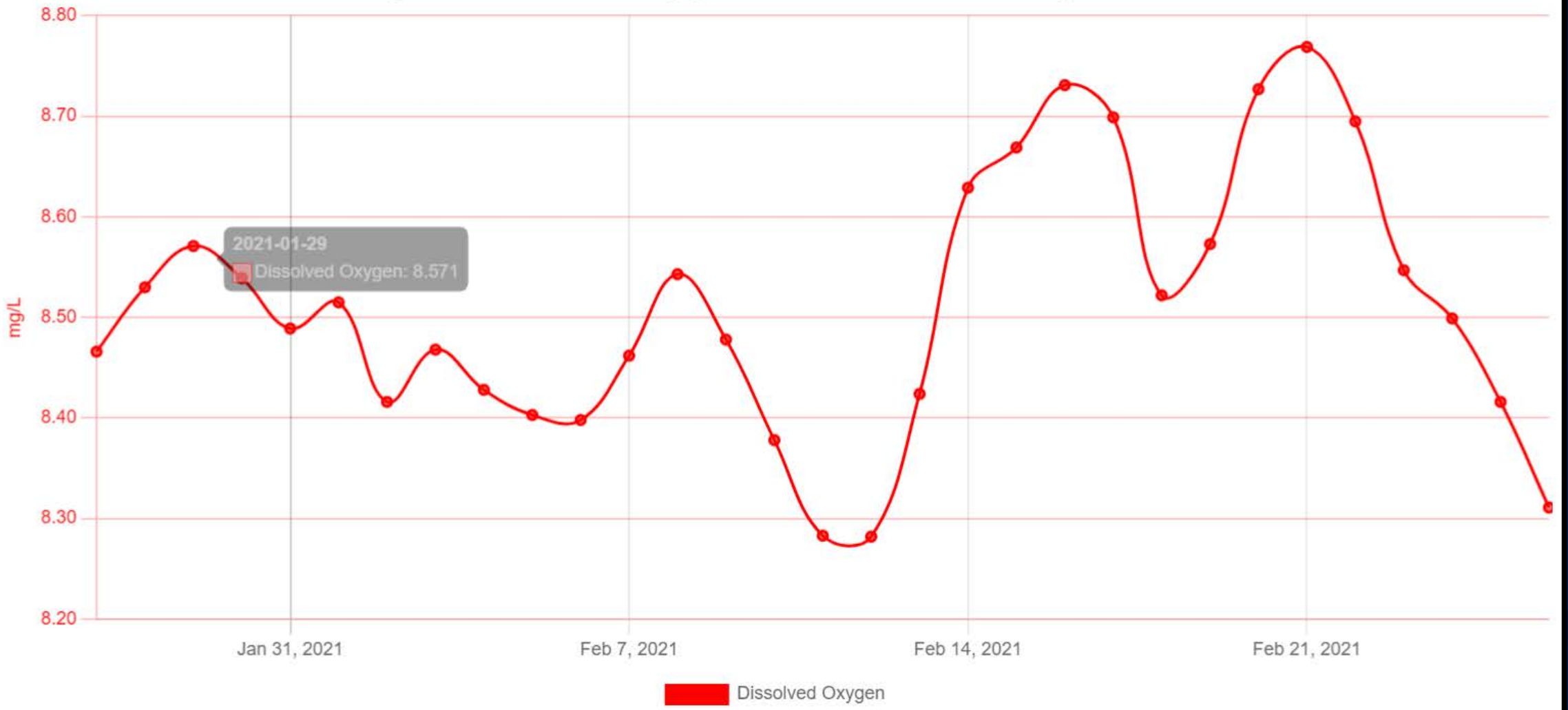
Trip: 1908300101G Site: S03 Event: Water Quality

Range	Depth (M/ft)	Temp (°C/°F)	Salinity (ppt)	Dissolved Oxygen (mg/L)	Conductivity (µS/cm)	pH	Chlorophyll (µg/L)	Turbidity (FNU)
Surface	0.31 / 1.02	29.7 / 85.5	27.02	6.13	42285			
Bottom	25.3 / 83.01	24.7 / 76.5	35.81	0.87	54183			

Continuous Water Quality Monitoring

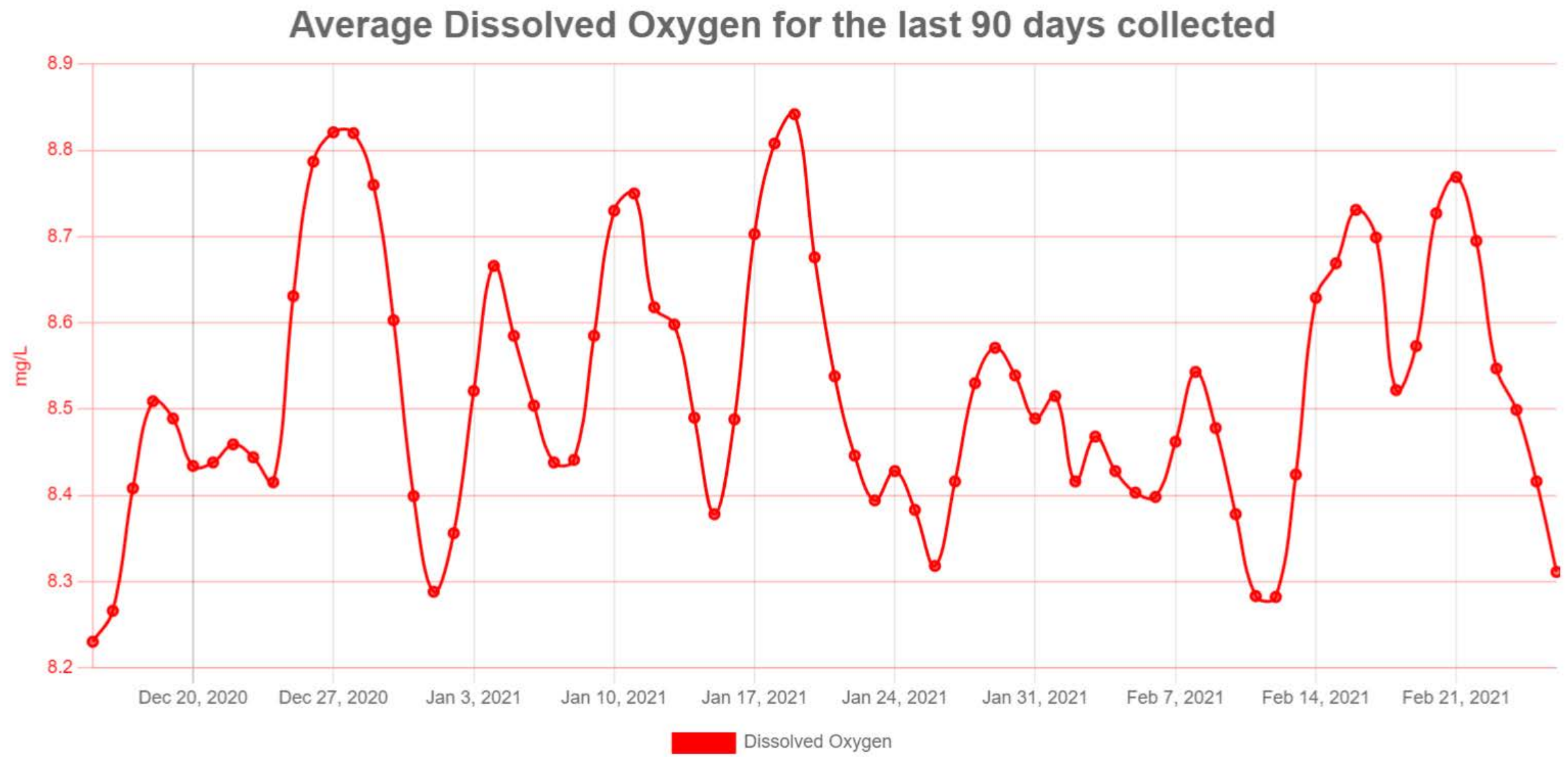
- Temperature
- Conductivity
- Salinity
- Dissolved Oxygen
- Turbidity
- pH

Average Dissolved Oxygen for the last 30 days collected



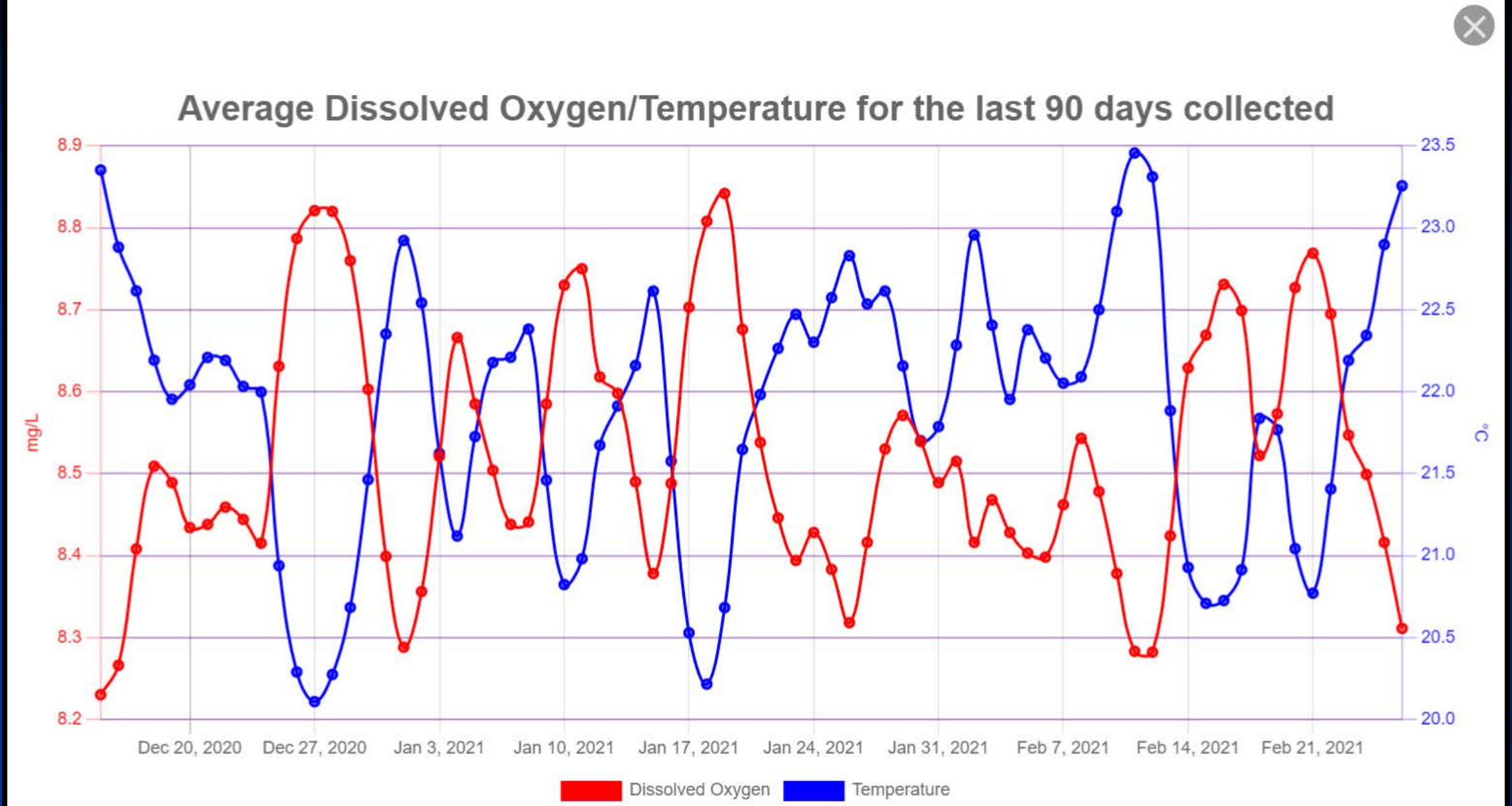
Days to show: 30 Days

Additional data to show: --None--



Days to show: 90 Days

Additional data to show: --None--

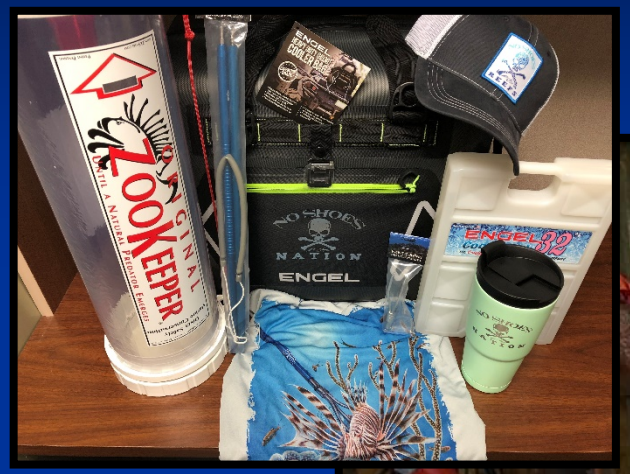


Days to show: 90 Days

Additional data to show: Temperature

EdgeTech Ropeless Fishing System

Jimmy Sanders Memorial Lionfish Challenge



- Do to current circumstances we switched to a virtual tournament utilizing Fishing Chaos.
- New format worked very well and we were able to increase 2019's number of lionfish collected by about 50%.

Sponsors: Engel Coolers, Neritic Diving, ZooKeeper, Fishing Chaos, & USFWS

Questions?

Aquatic Nuisance Species Program Update

March 2021

James Ballard

Aquatic Invasive Species Program Coordinator

U.S. Fish and Wildlife Service Region 4 AIS Program - Small Grants Program

- Over the Last Six Years - 39 Projects Funded Totaling $850K
- Giant Salvinia, Hydrilla, Phragmites, Didymo, Asian Carp, Rusty Crayfish, Speckled Crayfish, Red-rimmed Melania, Lionfish, Apple Snail, Asian Clam, American Eel Swimbladder Parasite, Whirling Disease, Snakehead, Invasive Black Bass, eDNA, Bait Regulations and Novel Cyanotoxin.
- Program has Resulted in Increased Collaboration and Communication Between FWS, GSARP, and the Academic Community.

FY2019 Projects Selected for Funding

- Development of Invasive Species Environmental DNA Data Standards and Database for the Southeast U.S. [*US Geological Survey*].
- Model Bait Regulations to Reduce Aquatic Invasive Species [*Univ. Mississippi*].
- Risk of Injurious Fish Species to the Aquatic Nuisance Species Task Force Gulf and South Atlantic Regional Panel States. [*Univ. Florida*]
- Feeding Ecology and Species Composition of the Invasive Lionfish Population, *Pterois* sp., off the Louisiana Coast. [*Louisiana Dept. Wildlife & Fisheries*]
- Determining the Risk of Consuming Fish and Waterfowl Harvested in Reservoirs Infested by Hydrilla /*Aetokthonos hydrillicola* Producing a Novel Cyanotoxin, Aetokthonotoxin. [*Univ. Georgia*]
- The Use of Genetics, Shell Shape, and Habitat Conditions to Identify Hotspots for Native and Invasive Apple Snails that Harbor Parasitic Worms in Lake Okeechobee, Florida. [*Jacksonville State Univ.*]

GSARP Invasive Species Traveling Trunk

Utilized for 1,552 Days Since Its Release in 2012

ANSTF Prevention Subcommittee
FY20 Outputs & FY21 Work Plan

- Pathway risk assessment evaluation
- Make organisms in trade data electronically available
- Determine gaps in prevention
- Ad-hoc Committee on VIDA
- Expand Non-regulatory prevention measures

James Ballard, Chair
John Darling (EPA),
Erika Jensen (GLC),
John Morris (USCG)
Karen McDowell (SFEP)
Kevin Cute (RI)
Don Maclean (USFWS)
Mark Lewandowski (MD)
Mark Minton (Smithsonian)
Marshall Meyers (Meyers PLLC)
Craig Martin (USFWS)
Meg Modley (LCBP)
Michael Ielmini (USFS)
Susan Pasko (USFWS)
Dolores Savignano (USFWS)
Paul Zajicek (NAA)
John Wullschleger (NPS)

Evaluate & Refine Risk Assessment

- Goal 2/Objective 2.1/Strategy A: Evaluate and refine the NISC/ANS Task Force's 2007 pathway risk assessment document.

- FY20:
  - ✓ Compiled lists of current published literature. Committee is challenged by lack of funds/staff time to evaluate existing documents.

- FY21:
  - Work with experts to update and finalize 2007 pathways risk assessment document based on literature and lessons learned.

Electronically Available Trade Data

- Goal 2/Objective 2/Strategy B: Work with applicable Federal agencies and responsible industry sectors to make organisms in trade importation data electronically available and searchable; ensure correct species identification.

- FY20:
  - ✓ Drafted USFWS Decision Memo to include high risk species in Declarations.
  - ✓ USGS digitized a list of aquatics in trade.
  - ✓ USGS & USFWS conducting global horizon scan on organisms in trade (in progress).

- FY21:
  - Finalize details of internal USFWS agreement that would allow entry of certain high-risk species into the LEMIS database and pilot addition of high-risk species to LEMIS declarations.
  - Address problem with hybrids.
  - Complete USGS/USFWS horizon scanning and develop watch lists.

Identify gaps in prevention Measures

- Goal 2/Objective 2.2/Strategy C: Assess new ANS introductions to determine where prevention measures may have been lacking, been ineffective, or resulted from gaps in authority

- FY20:
  - ✓ NAS database query on new human-mediated introductions complete – most from pet trade.
  - ✓ Discussions with industry on outreach campaign effectiveness and take back programs.
  - ✓ Considered using a webcrawler tool for trade on the internet. Great Lakes Commission is reviewing new off-the-shelf tools.
  - ✓ Committee is challenged by lack of funds/staff time.

- FY21:
  - Review case studies from the NAS database.
  - Evaluation of additional prevention metrics.
  - Explore use of artificial intelligence & other tools to assess internet pet trade.

Ad-hoc Committee on VIDA

- Goal 2/Objective 2.3/Strategy B: Establish an ad-hoc Committee to evaluate and implement the roles and responsibilities of the ANSTF under the Vessel Incidental Discharge Act (VIDA).

- FY20:
  - ✓ EPA held listening sessions on its proposed rule. Issues of most concern were hull fouling and ballast water.
  - ✓ USCG established a workgroup to communicate with State & territorial agencies for sharing ballast water reporting data.
  - ✓ Rhode Island will be the first East Coast state to have a ballast water inspection program.

- FY21.
  - Coordinate annual ANSTF review of draft Coast Guard Ballast Water Report to Congress.
  - Consider facilitating state or regional discussions under VIDA.
  - Establish ad-hoc subcommittee to address VIDA.
  - Establish a framework for Federal and intergovernmental response to ANS risks from discharges from vessels subject to ballast water and incidental discharge compliance requirements.

Expand Non-Regulatory Approaches

- Goal 2/Objective 2.3/Strategy C: Enter into national prevention practices agreements (natural resource agencies and responsible industry sectors) that promote effective risk management measures.

- FY20:
  - ✓ Drafted a Notice of Funding Opportunity for Seaplane Risk Analysis.
  - ✓ Western Regional Panel drafted marine mobile infrastructure guidance document.
  - ✓ USFS is working to address the risk of AIS spread by the forest fire community.
  - ✓ WRP and GLP discussed the used boat hauler pathway and see a potential role for the ANSTF in identifying and promoting risk mitigation measures.

- FY21:
  - Post NOFO and select awardee for Seaplane Risk Analysis.
  - Determine if the Western Regional Panel sees a benefit to having the ANSTF weigh in on best management practices (BMPs) for marine mobile infrastructure.
  - Make ANSTF and WRP aware of the risk of AIS spread by the forest fire community, and continue to work to address this issue.

Emerging Issues

Invasive Species Alert!

Zebra mussels have been detected within a variety of moss ball products designed for aquarium use, for example “Betta Buddy Marimo Balls” or “Marimo Balls”.

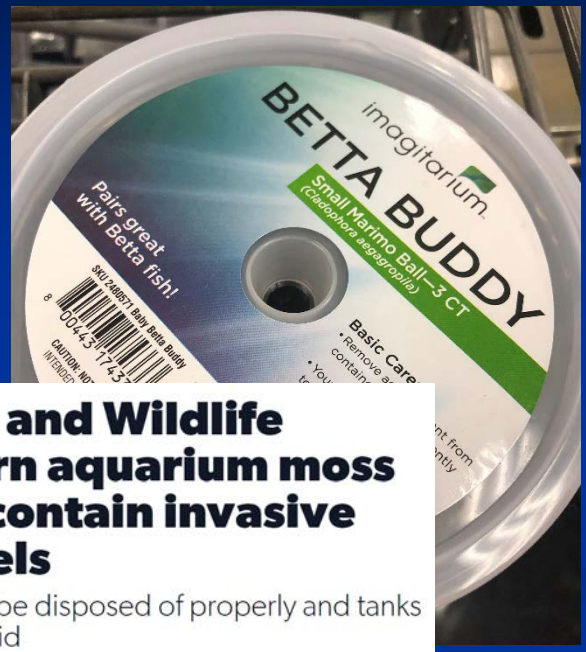
Zebra mussels (*Dreissena polymorpha*) are regarded as one of the most troublesome invasive species in North America. They are small, fingernail-sized mollusks native to the Caspian Sea region of Asia. Zebra mussels have three life stages – larval, juvenile, and adult. In the microscopic larval stage, the mussels live freely in the water column, allowing them to be easily transported. Adult zebra mussels can stay alive for several days outside of water and are common hitchhikers on boats, fishing equipment – and aquarium plants!

In spite of their small size, zebra mussels clog pipelines used for water filtration, render beaches unusable, and damage boats and infrastructure. They also negatively impact aquatic ecosystems by harming native organisms.

Moss balls or untreated water should not be disposed of in any location where they could reach local waterways.

If you have recently purchased a moss ball aquatic plant product, we recommend that you take the following steps to destroy and dispose of the moss ball and zebra mussels:

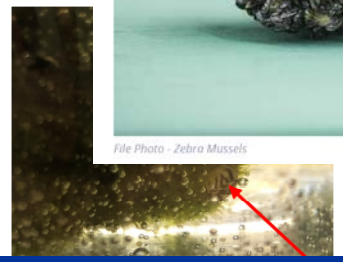
1) Destroy the moss ball using ONE of the following methods, ensuring that the disposal method you choose is in compliance with st animal welfare regulations:
    - Place the moss ball into a sealable plastic bag and freeze for at least 24 hours, OR
    - Place the moss ball in boiling water for at least 1 full minute, OR
    - Submerge the moss ball in chlorine bleach, diluted to 1 cup of bleach per gallon of water, for at least 10 minutes, OR



Texas Parks and Wildlife officials warn aquarium moss balls could contain invasive zebra mussels

The products should be disposed of properly and tanks disinfected, TPWD said

File Photo - Zebra Mussels




GULF & SOUTH ATLANTIC
REGIONAL PANEL
ON AQUATIC INVASIVE SPECIES

Questions?