

DO24C-2540 - Cloud-Based Geospatial Data Applications for Streamlining Natural Resource Management

W. Benjamin Bray
MIT Sea Grant

DMF DSGA polygons

ID 699
Name SC13.1
Status Closed

Classification Conditionally Approved
Recommended Status Open

Notes
The waters, flats and all tributaries of Bourne's Pond, in the Town of Falmouth, north of a line drawn across from the "NO SHELLFISHING" sign at #64 Crowell Road to the "NO SHELLFISHING" sign at the western end of Mary Manuel Way

Rules and Conditions

Closure Rules - Temporal

Rule Result	Closure Start Date	Closure End Date
false	5/1	11/30

DMF DSGA polygons

ID 823
Name SC14.6
Status Closed

Classification Conditionally Approved
Recommended Status Open

Notes
The waters and flats of Gal Pond, in the Town of Falmouth, south of a line drawn from the eastern end of Bayside Drive to the "NO SHELLFISHING" sign on the opposite shore and west of a line drawn from the "NO SHELLFISHING" sign

Rules and Conditions

Closure Rules - Temporal

Rule Result	Closure Start Date	Closure End Date
false	5/1	11/14

DMF DSGA polygons

ID 561
Name MHB4.3
Status Closed

Classification Conditionally Approved
Recommended Status Open

Notes
The waters and flats of the Coles River, in the Town of Swansea, east of a line drawn from the northwestern point of land outside of Cedar Cove to the eastern edge of the rock wall located at #194 Staff Ave.

Rules and Conditions

Closure Rules - Comparison

Rule Result	Sensor	Rule Start Date	Rule End Date	Condition Parameter	Comparison Operator	Amount	Closure Length	Text to Re-Open?
false	view	11/1	4/30	rainfall	>=	0.3 in	5 days	No
false	view	11/1	4/30	rainfall	>=	2 in	0 days	Yes

Closure Rules - Temporal

Rule Result	Closure Start Date	Closure End Date
false	5/1	10/31

44013
NOBC

Parameter	Depth (m)
Air Pressure	null
Air Temperature	null
Average Wave Period	null
Dewpoint Temperature	null
Dominant Wave Period	null
SST	null
Wave Height	null

To query data using this panel...
1. Specify Period (below)
2. Click Parameter

r60201
CO-OPS Current Prediction
velocity (kn)

SEAGLASS IS an API-based system for creating custom geospatial data analysis and visualization tools for the web.

It allows you to streamline analysis workflows involving point, track, polygon, and raster data. You can visualize data, analyses you perform, indices you calculate from data, and output from models that utilize data from *Seaglass*.

Seaglass exists for everyone, including specialists in water quality and aquaculture, their stakeholders, funded PIs, and artists.

MOTIVATION

- Expressed need by NGOs, private companies and funded researchers for cutting-edge solutions to data management and analysis issues
- Expressed need by local communities for increased access to more datasets

GOALS

- Significantly improve workflows for data retrieval, analysis and scientific dissemination; reduce staff time required for tasks, eliminate some tasks, and create new tools for better utilization of data
- Enable users to access a greater variety of data types
- Provide virtual computing space for user-provided code
- Increase impact of data on stakeholders through increased access and effective presentation

PROCESS

- Collaborated with staff, funded researchers, outreach professionals, and artists to identify the most effective features
- Utilized popular, open-source web technology, and flexible, scalable storage
- Ensured cross-platform / cross-device compatibility and customizability

IN THE BACKGROUND

Seaglass visualization of SST and Argo profiler tracks. Eight panes of 8-day averaged sea surface temperature (SST), derived from satellite measurements throughout 2017, were blended together into a single frame using a thermal color palette. Clouds block satellite measurement of SST and are represented in each pane as transparent. Argo ocean profiler tracks spanning multiple years are shown as grey lines, and are a function of surface and deep ocean currents.

USERS

Town of Nantucket, MA
Town of Falmouth, MA
Town of Mashpee, MA
Sea Grant-Funded Researchers
MA teachers and students
MA Water Resources Authority
MA Division of Marine Fisheries
NOAA Fisheries

