

# 2020 GOMA Tools Café Descriptions

## August 4, 2020 Webinar

### **Resources for Assessing Ecological and Socioeconomic Impacts of Sea-Level Rise**

**Presenters:** Renee Collini & Marian Hanisko, Mikaela Heming, Sara Martin, Sonia Vedral

**Institutions & Email:** Northern Gulf of Mexico Sentinel Site Cooperative, Mississippi State University, Mississippi-Alabama Sea Grant; r.collini@msstate.edu

**Web Address:** [www.ngomssc.org](http://www.ngomssc.org)

#### **INTENDED AUDIENCE**

These resources are intended for built and natural environment coastal stewards to understand future conditions and potential impacts as a result of rising seas. This includes professionals such as natural resource managers, restoration specialists, floodplain managers, city planners, elected officials, transportation and utility professionals, coastal engineers, and consultants.

#### **MAIN USE**

These resources and tools assess changes in high tide inundation, changes in storm surge extent and depth, changes in coastal habitat extent and health, and populations at risk due to sea-level rise. Specific resources include the NOAA Sea Level Rise Viewer, the Gulf of Mexico Storm Surge Story Map, SLAMM View, Hydro-MEM, Surging Seas Risk Finder, and a soon to be released dataset on the economic impacts of changing storm surge.

#### **GEOGRAPHY & SCALE**

The majority of these resources are national in scale, though some of the more advanced models cover smaller geographies focused on the northern Gulf of Mexico (Mississippi, Alabama, and northwest Florida).

#### **ACCESSIBILITY**

All resources are available online at their respective websites, except the storm surge economic impact data which is still in development.

Future high tide: NOAA Sea Level Rise Viewer (<https://coast.noaa.gov/slr/>)

Future storm surge: Gulf of Mexico Storm Surge Story Map ([www.gom surge.org](http://www.gom surge.org))

Changes in Coastal Habitat:

- Hydro-MEM ([www.gommarsh.org](http://www.gommarsh.org))
- SLAMM (<http://www.slamview.org/>)

At-Risk Communities

- Risk Finder (<https://riskfinder.climatecentral.org/>)
- CDC Social Vulnerability Index (<https://svi.cdc.gov/>)

## **Tools for Talking to ANYONE about Sea-Level Rise**

**Presenter(s):** Mikaela Heming, Renee Collini, Sara Martin, Sonia Vedral

**Institution(s) and Email:** Northern Gulf of Mexico Sentinel Site Cooperative, Mississippi State University; Mississippi-Alabama Sea Grant Consortium; [m.heming@msstate.edu](mailto:m.heming@msstate.edu)

### **Web Address:**

- Resilience to Future Flooding Short Films:  
<http://masgc.org/northern-gulf-of-mexico-sentinel-site-co/resilience-to-future-flooding#ShortFilms>
- Local Sea-Level Rise Two-Pager:  
<http://masgc.org/northern-gulf-of-mexico-sentinel-site-co/two-pager>
- Climate Myths & Communication Two-Pager:  
[http://masgc.org/assets/uploads/publications/1137/climate\\_communication\\_and\\_myths\\_v2.pdf](http://masgc.org/assets/uploads/publications/1137/climate_communication_and_myths_v2.pdf)
- Living Shorelines Resources: [www.GulfLivingShorelines.com](http://www.GulfLivingShorelines.com)

### **INTENDED AUDIENCE**

These sea-level rise (SLR) communication tools are intended for use by practitioners of various backgrounds who are engaging in dialogue around sea-level rise science and potential risks to different audiences. Included are short films, two-page documents, and resource catalogs, all of which cover different topics related to SLR communication. As such, these resources can be used by and for many different audiences, including community residents, local and county staff and officials, coastal decision-makers, Extension and outreach professionals, and others along the spectrum of researcher to decision-maker to coastal resident who is interested in better-communicating climate hazards.

### **MAIN USE**

Communicating about risk is difficult due to challenges from uncertainty, differing levels of risk, and risk tolerance. Risk is even more difficult when disseminating a comparatively slow-growing risk like sea-level rise (SLR); yet, informing coastal communities about SLR risks and potential actions for increasing resilience is vital. This information should be conveyed in different ways for different audiences, seasons (hurricane season, etc.), places, and purposes. For this reason, it is important to have a variety of tools and resources at-the-ready to meet differing SLR communication needs.

This tool demo includes four tools designed to support SLR engagement. The Resilience to Future Flooding short films are two series of short films covering SLR basics and case studies of how Gulf Coast communities have responded to increasing hazards. The Local SLR Two-Pager goes beyond the global SLR projections to locally-specific rates of sea-level rise, projected days of high-tide flooding, and contextualizes the information to planning. The Gulf Living Shorelines resource webpage includes catalogs of relevant resources for each Gulf state,

audience-specific two-pagers that answer frequently asked questions from the intended audience, and short videos with interviews about living shorelines from different stakeholders. And finally, the *Climate Myths & Communication* two-pager provides best practices for discussing climate change and its associated hazards as well as tactics for responding to common challenging-to-dispel myths.

### **GEOGRAPHY & SCALE**

All of these tools are able to be used at a local level. Further, the Resilience to Future Flooding videos were made specific to the northern Gulf of Mexico (Mississippi, Alabama, and northwest Florida) and includes a case study from each Gulf state.

### **ACCESSIBILITY**

Each of the tools in this tool demo are available online for use and can be printed or downloaded ahead of time for off-line use in a community or meeting.

## **Adapting Stormwater Management for Coastal Floods**

**Presenter:** Brenna Sweetman, NOAA Office for Coastal Management,  
[Brenna.sweetman@noaa.gov](mailto:Brenna.sweetman@noaa.gov)

**Tool web address:** <https://coast.noaa.gov/stormwater-floods/>

### **INTENDED AUDIENCE**

The tool was designed for use with stormwater managers, planners, floodplain managers, engineers or others interested in exploring and navigating stormwater management and combined flooding in coastal communities.

### **MAIN USE**

In coastal areas, combined flooding from storms and coastal flooding including sea level rise translates to more widespread and prolonged inundation, often impairing even the best stormwater systems. To effectively tackle this complex issue, communities need to know if and when they should expect to see coastal flooding, how long it will last, and how this may impact their ability to effectively manage stormwater. “Adapting Stormwater Management for Coastal Floods” is a web-based, interactive resource, available through NOAA’s Digital Coast platform that provides timely and relevant information to address these concerns. The website includes tools and methods to derive critical coastal water level thresholds and assess the potential impacts of threshold exceedance on stormwater infrastructure. In addition, linkages are provided to various planning, policy, on-the-ground, and funding actions that can be taken to address the issue and increase coastal resilience.

Product Goal:

- Describe impacts and implications of coastal inundation on stormwater management
- Estimate current and future local coastal flooding taking into account changing future conditions

- Prepare to meaningfully communicate coastal flooding to stakeholders, including community leaders.
- Identify methodology for estimating impacts of coastal inundation on stormwater systems
- Identify options for addressing impacts of coastal flooding on stormwater management including planning, legislation, and projects and potential funding sources

## **GEOGRAPHY AND SCALE**

The tool is a web-based resource with a national scope but applicable for use with local communities. The interactive, self-guided format allows a user to walk through the steps to take in their local community to address the issue of stormwater management and coastal flooding.

## **ACCESSIBILITY**

The tool is an online resource available on NOAA's Digital Coast:

<https://coast.noaa.gov/stormwater-floods/>.

## August 18, 2020 Webinar

### **Coastal Change Analysis Program (C-CAP) High Resolution Land Cover**

**Presenters:** Nate Herold, NOAA OCM, [nate.herold@noaa.gov](mailto:nate.herold@noaa.gov); Tarice Taylor, CSS/Lynker Team on contract to NOAA OCM, [tarice.taylor@noaa.gov](mailto:tarice.taylor@noaa.gov)

**C-CAP Website:** <https://coast.noaa.gov/digitalcoast/data/ccaphighres.html>

## **INTENDED AUDIENCE**

Current, accurate land cover and change information is a common foundational data set that can be used to address a wide range of management issues, from flooding risk and natural infrastructure to policy evaluation and land use planning. Detailed information related to impervious areas, wetland features, and other cover types can inform endless applications.

## **MAIN USE**

For almost two decades, NOAA's Office for Coastal Management has been producing standardized, 30-meter, land cover and change information for the coastal United States through its Coastal Change Analysis Program (C-CAP). More recently, NOAA has been working to establish an operational high resolution (1-meter) land cover product line, bringing the national C-CAP framework to the local level and allowing for more site-specific, local applications. This presentation will discuss the status of current pilot projects within the Gulf of Mexico, the advanced AI Machine and Deep Learning methods used in their creation, highlight the advantages of this more detailed data compared to previous/existing land cover data, and discuss future vision for creating these products in additional geographies.

## **GEOGRAPHY & SCALE**

NOAA's vision is to produce 1-meter land cover products for all the Coastal areas of the U.S., and update these products every 4 to 6 years. Currently several pilot projects are taking place, including an area surrounding New Orleans, LA and the 6 coastal counties in MS. In addition, 10-meter products have been recently released for all the coastal areas within the Gulf of Mexico (and much of the rest of the country).

### **ACCESSIBILITY**

The C-CAP Land Cover data is available within NOAA's Digital Coast website, which is managed by the Office for Coastal Management (OCM) and can be accessed via <https://coast.noaa.gov/digitalcoast/data/ccaphighres.html>. A brief overview video can be found at this web address along with background information and technical assistance resources.

## **Strategic Conservation Assessment of Gulf Coast Landscapes – a Web-based Geospatial Tool Suite**

**Presenter(s):** Amanda Sesser<sup>1</sup>, Jiandong Liu<sup>2</sup>, Andrew Shamaskin<sup>2</sup>, Sathish Samiappan<sup>2</sup>, Kristine Evans<sup>2</sup>

**Institution(s):** <sup>1</sup>21sustainability LLC, [amanda@21sustainability.com](mailto:amanda@21sustainability.com); <sup>2</sup>Mississippi State University

**Web address:** <http://www.landscape.org/gulfcoast/>

### **INTENDED AUDIENCE**

The Strategic Conservation Assessment of Gulf Coast Landscapes (SCA) project serves land and resource agencies working in the five Gulf states: Alabama, Florida, Louisiana, Mississippi, Texas. The SCA tool suite is relevant and useful to the broader Gulf conservation community, including member agencies of the RESTORE Council, land trusts, nongovernmental organizations, and private industry.

### **DESCRIPTION/MAIN USE**

Land and resource decision makers currently have an unprecedented opportunity for land conservation in the Gulf Coast Region (GCR) yet identifying optimal projects to meet conservation goals is a persistent challenge. The SCA project provides a suite of planning-support tools to assist Gulf conservation stakeholders in integrating shared priorities for land conservation and evaluating co-benefits of potential projects in a geospatial environment given individual stakeholder values.

### **BACKGROUND**

The SCA Toolkit is a suite of three web-based geospatial planning-support tools that will help land and resource managers evaluate co-benefits of potential land conservation projects. Following on the heels of our third round of stakeholder charrettes in April-May 2020, we will present the three SCA project tools together, which allow for seamless project prioritization, assessment of benefit, and visualization. This will include an unveiling of the third tool, the Conservation Visualization Tool, as well as demonstrate how the tools integrate and collectively support strategic conservation in the Gulf Coast Region. The Visualization Tool is in its alpha

phase and we are soliciting user feedback to improve tool design and functionality. We are also seeking input on realistic workflows of tool use by resource managers to inform improved integration of the SCA Toolkit. As with all three tools, the Visualization Tool is being designed and customized for the needs of users through an iterative process involving stakeholders at each stage of development.

The next steps include undertaking use case studies that will apply the SCA Toolkit to help inform tangible conservation decisions in the region.

### **GEOGRAPHY AND SCALE**

The Gulf Coast Region, which includes all the coastal zones within the five Gulf states (AL, FL, LA, MS, TX), plus 25 miles inland.

### **ACCESSIBILITY**

The SCA decision support tools suite, along with a description of the stakeholder prioritization process is located at <https://sca-natureserve.hub.arcgis.com/>.

## **Coastal Change Analysis Program (C-CAP) Land Cover Atlas Tool**

**Presenters:** Nate Herold, NOAA OCM, [nate.herold@noaa.gov](mailto:nate.herold@noaa.gov); Tarice Taylor, CSS/Lynker Team on contract to NOAA OCM, [tarice.taylor@noaa.gov](mailto:tarice.taylor@noaa.gov)

**C-CAP Website:** <https://coast.noaa.gov/digitalcoast/tools/lca.html>

### **INTENDED AUDIENCE**

The Coastal Change Analysis Program (C-CAP) Land Cover Atlas was designed to eliminate the need for a desktop GIS or advanced technical expertise by processing data for the user and providing easy access to the distilled information.

### **MAIN USE**

This online data viewer provides user-friendly access to coastal land cover and land cover change information developed through NOAA's Coastal Change Analysis Program. The tool summarizes general change trends (such as forest losses or new development) and provides tables, maps, and reports to enhance communication and decision-making. Features of the C-CAP tool include exploring land cover changes by county or watershed, visualizing different types and specific locations of change, and sharing summary reports of areas of interest.

### **GEOGRAPHY & SCALE**

Includes 30-meter land cover data within the coastal areas of the Contiguous U.S. (CONUS) and 2.4-meter land cover in the Pacific and U.S. Virgin Islands.

### **ACCESSIBILITY**

The C-CAP Land Cover Atlas is housed within NOAA's Digital Coast website, which is managed by the Office for Coastal Management (OCM) and can be accessed via

<https://coast.noaa.gov/digitalcoast/tools/lca.html>. A brief tutorial can be found at this web address along with background information and related data, tools, stories, and training. The user will be able to launch the tool from this site, as well as download data.

## September 1, 2020 Webinar

### **HAB Economic Impact Data Dashboard**

**Presenters:** Cortney Cortez and Amy Bainbridge

**Institution:** The Balmoral Group  
[ccortez@balmoralgroup.us](mailto:ccortez@balmoralgroup.us)

**Web Address:** <https://datavisual.balmoralgroup.us/GOMA-HABecon>

#### **INTENDED AUDIENCE**

Elected officials; coastal natural resource managers; the general public, HAB researchers

#### **MAIN USE**

A GulfStar Partnership Project, the Dashboard summarizes at the county level a variety of economic activity and modeled economic impacts of the 2017-2019 Red Tide event in Florida. Impacts reported include marine business, commercial fishing, tourism, marine-based recreation, property values, boat sales, and the loss of marine animals (dolphin, manatee and sea turtles). The data reflect validated economic, scientific (cell counts and remotely sensed ocean color), and digital media (Twitter and Google Analytics) sources. Data are viewable in multiple formats – maps, pie and bar charts – to be user-friendly and include direct, indirect, and induced effects as well as employment and taxes.

#### **GEOGRAPHY & SCALE**

As a pilot study, the Dashboard currently addresses the Gulf Coast of the State of Florida, 23 counties, and reports at the county level (digital media are addressed at market/metro areas). The Dashboard presents data in monthly time steps as well as for the entire duration of the HAB event. The spatial extent of the Dashboard could be modified for other Gulf Coast states, or the Gulf region as a whole.

#### **ACCESSIBILITY**

The Dashboard is highly interactive and accessible on-line (only). It is fully customizable with regard to the data desired to be displayed and the scale or area of interest within the State of Florida Gulf Coast study area. Individual counties are selectable, as are the metro areas, for the various categories of economic impact, which are also individually selectable. Beyond the maps or various pie and bar charts, the Dashboard offers Sankey diagrams that provide impactful

visuals regarding the relative scales of HAB impacts across the metro areas. An additional series of charts included is the percent difference, which presents the magnitude of the revenue losses directly related to HAB events against what revenues would have been had the HAB event not occurred.

## **Strategic Bird Monitoring Guidelines for the Northern Gulf of Mexico**

**Presenters:** Jeff Gleason<sup>1\*</sup>, Melody Chimahusky<sup>2</sup>, Mark Woodrey<sup>3</sup>, Randy Wilson<sup>4</sup>

**Institution:** <sup>1,4</sup> U.S. Fish and Wildlife Service

<sup>2</sup> Mississippi Department of Environmental Quality

<sup>3</sup> Mississippi State University – Coastal Research Extension Center

\* Lead Presenter Email: [jeffrey\\_gleason@fws.gov](mailto:jeffrey_gleason@fws.gov)

**Web Address:** <https://gomamn.org/strategic-bird-monitoring-guidelines>

### **INTENDED AUDIENCE**

These Strategic Guidelines were designed for program managers and monitoring practitioners operating across the northern Gulf of Mexico. Program managers include Gulf Restoration Programs (e.g., RESTORE Act Science Program, Trustee Implementation Groups) and state, federal, NGO wildlife program managers (e.g., Chiefs of Wildlife Programs, state non-game ornithologists, etc.), whereas, monitoring practitioners may include the vast array of individuals implementing monitoring programs (e.g., Universities, USGS Science Centers/Cooperative Fish & Wildlife Research Units, NGOs, etc.).

### **PRIMARY USE**

The Strategic Bird Monitoring Guidelines identify many data gaps and uncertainties in our current state of knowledge of bird-habitat conservation across the northern Gulf of Mexico. It is critical that we fill these gaps and increase our understanding of the role that different intrinsic (e.g., fitness, productivity, health, lifespan) and extrinsic (e.g., habitat, food resources) factors play in the conservation of >500 species of birds that utilize the region for all or part of their annual life cycle. Further, due to the multitude of restoration projects and management activities, and the complex inter-relationships of ecological and climatic factors presumed to drive bird populations, an agreement on large-scale data gaps and *a priori* hypotheses is a crucial first step. Recognition and acceptance of the data gaps and uncertainties presented within these Guidelines not only provides a strong foundation to further communication and collaboration across agencies and organizations implementing bird monitoring projects, but also provides a basis to enable collaboration and integration across resource types (e.g., fisheries, water quality, etc.).

### **GEOGRAPHY & SCALE**

This tool identifies monitoring needs and uncertainties for seven taxonomic groups of birds, and also includes information related to avian health across the entirety of the northern Gulf of Mexico; closely approximating the geographic boundary outlined by the RESTORE Act.

#### **ACCESSIBILITY**

The Strategic Bird Monitoring Guidelines and an Executive Summary are available in both digital media and hard copy. Users have open access to the Guidelines in its entirety or individual chapters therein via the Gulf of Mexico Avian Monitoring Network's web page (<https://gomamn.org>). Hard copies are available and can be obtained by contacting members of the GoMAMN Coordination Committee.

## **Open Source Toolset for Data Dashboards and Monitoring Alerts**

**Presenters:** Tylar Murray, Dan Otis

**Institution:** IMaRS, University of South Florida College of Marine Science  
[tylarmurray@usf.edu](mailto:tylarmurray@usf.edu)

**Web Address:** <http://grafana.marine.usf.edu:3000>

#### **INTENDED AUDIENCE**

The presented tool provides ecosystem monitoring for coastal resource managers and planners at federal, state, tribal, or local jurisdictions. The tool is of interest to these stakeholders who need to quickly visualize, share, or monitor time series data. Current users monitor coastal water quality conditions in the context of historical observations, and receive alerts when conditions depart from normal or a specified threshold. The dashboards are useful as a research tool to researchers and students. A dashboard enables interactive analysis of existing time series data spanning multiple time scales. Users with real-time data and existing backends in \*SQL, influxdb, ERDDAP, and others can leverage the frontend with little effort by connecting directly to their data sources.

#### **MAIN USE**

The dashboards provide a quick overview of recent data in the context of historical conditions. Dashboards provide email alerts based on thresholds or other criteria. Climatological time-series can be displayed using these tools to identify anomalies.

#### **GEOGRAPHY & SCALE**

The dashboards focus on satellite- and buoy-derived coastal and oceanographic conditions in the northern Gulf of Mexico, including the Florida Keys and Flower Garden Banks National Marine Sanctuaries. Any region or data streams can be scaled and implemented with the proposed approach.

#### **ACCESSIBILITY**

Existing dashboards are publicly available for view and exploration. New dashboards can be set up and customized for new regions or data streams. The full software stack is free and open source, meaning that the presented pipeline can be recreated by anyone with no charge. For help reproducing our work or to request collaboration please email [tylarmurray@usf.edu](mailto:tylarmurray@usf.edu).

## September 15, 2020 Webinar

### **U.S. Fish and Wildlife Service Socioeconomic Profile Tool**

**Presenters:** Wylie Carr, Brad Milley

**Institutions and email:** U.S. Fish and Wildlife Service, [wylie\\_carr@fws.gov](mailto:wylie_carr@fws.gov)

**Web address:** <https://headwaterseconomics.org/tools/usfws-indicators/>

#### **INTENDED AUDIENCE**

U.S. Fish and Wildlife Service Socioeconomic Profile Tool is designed for use by public land managers but is publicly available and can be used by anyone to generate socioeconomic profiles for any state, county, city/town, American Indian area, and/or census tract.

#### **MAIN USE**

Do you want to understand the communities you serve and who may affect and be affected by your decisions? If so, then the new U.S. Fish and Wildlife Service Socioeconomic Profile Tool will be of interest to you.

The Socioeconomic Profile Tool is a web-based application developed by Headwaters Economics that provides users with customized reports on the socioeconomic conditions around the areas they work. The tool is free, publicly available and includes socioeconomic indicators from state to census tract level that are relevant and reliable. It is continually updated with the latest data as it becomes available, is capable of producing on-the-fly reports in Excel and PDF, is user-friendly and is available nationwide.

Natural resource practitioners, planners, visitor services specialists, researchers and others can use the tool to explore state to community-level data on economics, demographics and land use.

Knowing more about the communities you work in is often a first step in planning, stakeholder engagement efforts and designing programs and policies that meet the needs of communities. As you dig into the socioeconomic data in the reports you generate you may find you have questions about the data and why it's important. To help you make the most of your inquiry you will get an easy to understand, short, and to the point guide to interpret the results. Want to go even further? The guide also provides some key resources to learn more and make the most out of the data as well as a comprehensive list of citations. If you like what you find and want to use the data in your own work simply copy and paste tables, charts, and paragraphs into your document.

## **GEOGRAPHY & SCALE**

Socioeconomic profiles can be generated for any county, city/town, American Indian area, census tract, and/or state within all 50 states and Washington, D.C.

## **ACCESSIBILITY**

Publicly available online.

## **Bluevalue**

**Presenters:** David Yoskowitz, Kara Coffey, Chris Hale, Yasmine Carcamo, and Michael Young

**Institution and email:** Texas A&M University - Corpus Christi / Harte Research Institute for Gulf of Mexico Studies, [Kara.Coffey@tamucc.edu](mailto:Kara.Coffey@tamucc.edu)

**Web address:** [www.BlueValue.org](http://www.BlueValue.org)

## **INTENDED AUDIENCE**

Academic scientists, agency scientists, resource managers, decision-makers, NGOs, and highly interested citizens

## **MAIN USE**

The natural world supports, sustains, and enriches human life in numerous ways. Scientists and resource managers refer to these benefits as “ecosystem services”. The newly updated Bluevalue, previously known as GecoServ, is a searchable online database of ecosystem service valuation studies relevant to coastal habitats in the Gulf of Mexico region. Although ecosystem services are critical to human well-being, cases in which they have been successfully applied to real policies and decisions are rare. For society to make informed decisions about sustainable use of the environment, directly linking the valuation — or quantification — of ecosystem services to society’s needs, is necessary. Bluevalue is that link. Many scientists, economists, practitioners, and others around the world have conducted ecosystem valuation studies. However, it can be difficult and time-consuming for decision-makers to find and access the results of those studies.

Bluevalue offers quick and easy access to actual ecosystem values in numbers. It houses literature from around the world that users can download, cite, bring to meetings, and share with others. Data stored in Bluevalue can be used to inform management decisions when the option to conduct a primary valuation study is not possible due to monetary or time constraints. The main goals of Bluevalue are to allow for the distribution and sharing of information on ecosystem service valuation, facilitate the application of the value transfer methodology, help managers include ecosystem services in the decision-making process, and identify current gaps in ecosystem service literature. The Bluevalue database is an international powerhouse of information concerning the economic value of coastal habitat ecosystem services. The previous version was GecoServ (Gulf of Mexico Ecosystem Services Valuation Database), which was originally launched in 2011 and was supported by the United States Environmental Protection Agency's Gulf of Mexico Program, National Oceanic and Atmospheric Administration (NOAA), and the Harte Research Institute for Gulf of Mexico Studies.

### **GEOGRAPHY & SCALE**

The tool's geographic area is focused on worldwide data. The tool was initially intended for use by audiences in the Gulf of Mexico, but now has international use. Since the GecoServ launch in 2011, this tool has 10,501-page views in 1,460 cities in 124 countries. More than half of these visits are from cities in the U.S. Over the years, an increasing number of visits have occurred outside the U.S. These foreign visits to the site have increased 12-19% per year since 2013. In 2016, foreign visits represented 62% of total visits to the site.

### **ACCESSIBILITY**

This tool is available online only.

## **Logic models and socio-economic metrics for restoration project and program monitoring and assessment in the Gulf of Mexico**

**Presenters:** Lydia Olander, Katie Warnell, Sara Mason, Rachel Karasik

**Institutions and email:** Nicholas Institute for Environmental Policy Solutions, Duke University (same affiliation for all presenters); [lydia.olander@duke.edu](mailto:lydia.olander@duke.edu)

**Web Address:** <https://nicholasinstitute.duke.edu/project/gems/models-and-metrics>

### **INTENDED AUDIENCE**

The primary audiences for this tool are Gulf restoration practitioners and funders.

**MAIN USE:** This online resource represents a repository of expert-reviewed ecosystem service logic models and associated socio-economic metrics for various restoration project types taking

place in the Gulf of Mexico (including habitat restoration, recreational enhancement, and water quality enhancement). The resource was built in a multi-year effort to establish standard, commonly used metrics for socio-economic and human well-being outcomes of restoration, which are not currently monitored consistently. Logic models provide practitioners developing projects or programs the ability to identify specific social and economic outcomes of their project or program that link to a set of metrics which can be used for monitoring. Practitioners can use the general logic models provided or adapt the models to reflect expected effects of specific projects using editable versions of the models included in the repository. Additionally, there will be example protocols available for how to collect data on the suggested metrics for practitioners who wish to or are required to implement them. Funders can use the resource to help prioritize and identify projects that match their goals relating to social and economic components of restoration and as a suggested resource for how socio-economic monitoring of their funded projects might be performed.

### **GEOGRAPHY & SCALE**

This tool was designed and built for the Gulf of Mexico using input from practitioners and experts in the Gulf States. Both the models and metrics can be used to assess socio-economic outcomes at project (site) and program (regional) scales.

### **ACCESSIBILITY**

This set of resources is available online through the Gulf of Mexico Ecosystem Service Logic Models and Socio-economic Indicators project website (<https://nicholasinstitute.duke.edu/project/gems/models-and-metrics>). In addition, there will be printed practitioners' and funders' guides that describe the resource and guide these user groups on how to apply the tools.

### **October 6, 2020 Webinar**

#### **“After the Flush” Septic System Program Website: An interactive tool for education and action**

**Presenters:** Whitney Elmore, County Extension Director/Urban Horticulture Agent ([welmore@ufl.edu](mailto:welmore@ufl.edu)); Andrea Albertin, Water Resources Regional Specialized Agent; and Mary Lusk, Assistant Professor Urban Soil and Water Quality, University of Florida Institute of Food and Agricultural Sciences

### **Abstract**

About 30% of Florida's population relies on septic systems to treat and dispose of household wastewater. This translates to 2.6 million systems discharging approximately 426 million gallons of wastewater per day to underlying soil and groundwater. On average, septic systems remove

30% of nitrogen flowing into them and are identified as important sources of N to groundwater particularly when improperly sited or failing. If septic systems contribute at least 20% of the N load in areas with a Basin Management Action Plan (BMAP), a septic system remediation plan goes into place. This includes connecting homes to sewer systems and replacing conventional systems with advanced N-removal technology, both of which are costly for local governments and residents.

In response, UF/IFAS Extension agents and research faculty developed a septic system educational program called “After the Flush” which included the production of an interactive website. The website is a ‘Septics 101’ for residents, aimed to increase knowledge about septic system function and best practices, advanced onsite N-removal technology, and connections between septic systems and water quality. It addresses septic system regulations established by the 2016 Florida Water Bill. The program and online tool respond to needs identified by UF/IFAS Extension agents in a 2017 survey concerning septic system education. Of 87 respondents, 55 agents (63%) were interested in printed and online information to share with clients, 34 (39%) were interested in teaching residents about connections between septic systems and potential water quality impacts, and 26 (30%) were interested in hosting or co-teaching workshops on systems and how to properly maintain them.

## **INTENDED AUDIENCE**

Homeowners and Extension Agents

## **MAIN USE**

The interactive website includes educational videos, fact sheets, and content written by UF/IFAS Extension Agents as well as information from the Florida Department of Health and Florida Department of Environmental Protection. It is designed to house the relevant information concerning environmental impacts of septic systems, advanced treatment systems, the Florida Water Bill requirements for Basin Management Action Plans and Priority Focus Areas and the new septic system permitting requirements mandated by the legislation. Homeowners would use the material to understand their responsibilities in septic system maintenance and replacement/repair of conventional systems. The website also houses program materials, surveys, and technical information for Extension Agents to download (privately) for use in septic system programming.

## **GEOGRAPHY & SCALE**

The website tool is designed for use state-wide as septic systems are ubiquitous. It is available to anyone on the world-wide web, and the tool is applicable across all demographics and rural, suburban and urban communities along the coast to the central inland portion of the state.

## **ACCESSIBILITY**

The website is available for free at <https://www.aftertheflushfl.com/>. Extension Agents can request access, via email request, to programmatic materials. Printed versions are also available on request for fact sheets and legislative materials. Materials are also available in Spanish.

## **ExtractX™ Imagery Analysis Tool**

**Presenters:** Carl Ferraro, Senior Environmental Scientist, Stantec, [carl.ferraro@stantec.com](mailto:carl.ferraro@stantec.com)  
Grant Wiseman, Remote Sensing Scientist, Stantec  
Steve Mathies, Vice President/Global Practice Leader, Coastal Restoration, Stantec

### **INTENDED AUDIENCE:**

- Habitat Restoration Programs
- State and Federal Water Quality and Natural Resource Agencies
- Industry
- Academia

### **MAIN USE:**

ExtractX is an imagery and data analysis tool. This innovative approach combines high-resolution image datasets with object-based image analysis (OBIA) for more accurate and efficient monitoring. Utilizing ExtractX™, clients can increase the spatial scale and extent of assessments while reducing cost and health and safety risk to field staff.

ExtractX analyzes imagery and data collected by satellites, planes or unmanned aerial vehicles (UAVs) using OBIA. OBIA is a form of artificial intelligence, automatically breaking down images into objects using color, texture, shape, size and proximity characteristics. It essentially does what the human brain does instantaneously by clustering image pixels with similar properties to form a series of objects. Properly configured OBIA segmentation does in mere seconds what would take a photo interpreter hundreds of hours to complete. Unlike traditional remote sensing classification, OBIA allows for highly sophisticated decision-tree classification processes, resulting in finite and detailed class generation.

Potential uses include:

- Vegetation rehabilitation monitoring and assessment.
- Vegetation impact assessment.
- Vegetation cover and type identification.
- Invasive species detection.
- Disturbance feature delineation.
- Habitat-related feature identification.
- Contamination and Construction impacts.
- Construction progress monitoring.
- Disaster mitigation tracking.
- Water quality (TSS, Temperature and Dissolved Organic Matter (DOM))

- Wetland hydrology monitoring
- Shoreline erosion, mitigation, management tracking

This tool is relevant to the activities and interests of most of the GOMA PITs, including Coastal Resilience, Data & Monitoring, Habitat Resources, Water Resources and Wildlife and Fisheries.

### **GEOGRAPHY & SCALE:**

ExtractX can analyze environmental issues for any location on earth using a wide variety of imagery sources ranging in resolution from inches to miles. LiDAR elevation and SONAR bathymetry datasets can be incorporated into any project assessment. Using historical geo-spatial databases ExtractX can quantitatively perform change detection analyzes dating back years or decades.

### **ACCESSIBILITY:**

ExtractX is a service provided by Stantec's Remote Sensing Center of Excellence. We work interactively with our clients to ensure we provide them with the highest degree of accuracy and precision for their projects. ExtractX allows us to work digitally on projects from around the world while reducing field work and inherent health & safety risk.

## **Marine Minerals Information System**

**Presenter:** Brian Cameron, BOEM, [brian.cameronjr@boem.gov](mailto:brian.cameronjr@boem.gov)

**WEB:** <https://mmis.doi.gov/BOEMMMIS/>

### **INTENDED AUDIENCE**

The Marine Minerals Information System was designed for Federal, State, and Local governments, Organizations such as Regional Planning Bodies, Industry and Business Community, Academia, Non-Governmental Organizations, Tribes, and the General Public.

### **MAIN USE**

The MMIS is a tool to support a National Offshore Sand/Sediment Inventory and foster access to the Nation's offshore mineral resources. It serves current and historical marine minerals data and information for the Atlantic, Gulf of Mexico, and Pacific. It is equipped with geodatabase and query tools which lets users select sites and parameters to further analyze. The goal is for coastal managers to access the MMIS and identify sediment sources on the Outer Continental Shelf that could be used for managing coastal recovery and planning coastal resilience projects.

In addition, it helps users of the outer continental shelf identify potential multiple use conflicts through the location of oil and gas infrastructure, underwater cables, and dredge pipelines. This

would be useful to site future artificial reef deployment sites as well as locations for aquaculture activities.

## **GEOGRAPHY & SCALE**

The main focus of the MMIS tool is within the Federal waters of the United States but there has been data shared by state partners for resources within state waters.

## **ACCESSIBILITY**

The tool can be accessed via online at <https://mmis.doi.gov/BOEMMMIS/>.

October 20, 2020 Webinar

## **Gulf TREE, your ultimate climate resilience guide**

**Presenter(s):** Mikaela Heming, Renee Collini, Sara Martin, Sonia Vedral

**Institution(s) and Email:** Northern Gulf of Mexico Sentinel Site Cooperative, Mississippi State University; Mississippi-Alabama Sea Grant Consortium; [m.heming@msstate.edu](mailto:m.heming@msstate.edu)

**Web Address:** [www.gulfTREE.org](http://www.gulfTREE.org)

## **INTENDED AUDIENCE**

This resource is relevant for users of all experience levels across the climate resilience spectrum including, but not limited to, natural resource professionals, planners, local and regional government agencies, Extension and outreach professionals, researchers, and restoration and conservation specialists.

## **MAIN USE**

Gulf TREE (Tools for Resilience Exploration Engine) is a filter-based search engine designed to match users with relevant climate resilience tools quickly, easily, and confidently. With over 100 tools relevant to the Gulf of Mexico (and more being added all the time), Gulf TREE sorts through the plethora of options to match users with a climate resilience tool that meets their specific criteria. The web resource was created by the Northern Gulf of Mexico Sentinel Site Cooperative, Gulf of Mexico Alliance, and Gulf of Mexico Climate and Resilience Community of Practice. Developed through an end-user driven process, Gulf TREE is user-friendly despite the complex nature of its content and was created to be a solution to common obstacles faced by Gulf of Mexico stakeholders interested in climate resilience.

## **GEOGRAPHY & SCALE**

Many tools on Gulf TREE are national in scale, but there are also many that are specific to regional, state, or local (county-level or occasionally smaller) geographies. Gulf TREE includes all climate resilience tools relevant to Gulf of Mexico shoreline and watershed counties.

## **ACCESSIBILITY**

Gulf TREE is available online at [www.gulfTREE.org](http://www.gulfTREE.org) and is accessible by most web browsers. For full functionality, be sure to view the web resource on a computer. Due to the complex nature of Gulf TREE, we can only provide limited functionality on the mobile version and some tablet computers do not auto-display properly.

## **Gulf of Mexico Research Initiative Information & Data Cooperative (GRIIDC) Data Management System**

**Presenter:** Rosalie Rossi

**Institution:** Gulf of Mexico Research Initiative Information & Data Cooperative, Harte Research Institute for Gulf of Mexico Studies, Texas A&M University-Corpus Christi, [Rosalie.Rossi@tamucc.edu](mailto:Rosalie.Rossi@tamucc.edu)

**WEB ADDRESS:** <https://data.gulfresearchinitiative.org/>

## **INTENDED AUDIENCE**

Gulf of Mexico Research Initiative (GoMRI) funded investigators and administration; RESTORE Act Centers of Excellence funded investigators and administration; academic researchers; natural resource managers; policy makers; emergency responders; non-governmental organizations; and the general public.

## **DESCRIPTION/MAIN USE**

The tool was initially designed to manage and distribute data generated by Gulf of Mexico Research Initiative (GoMRI) funded projects. The data management applications that assist with planning, documenting, and submitting data to GRIIDC are designed for investigators and data managers. GRIIDC also issues a DOI for discrete data packages that provides researchers with a citable reference for their efforts. The system allows data submissions to be tracked through the data package workflow by both investigators and program administration via the dataset monitoring application. The GRIIDC search and dataset landing pages are designed for anyone who is interested in obtaining data about the Gulf of Mexico, including academic researchers, natural resource managers, policy makers, emergency responders, non-governmental organizations, and the general public. These tools are available to GoMRI, Florida RESTORE Act Centers of Excellence Program (FLRACEP), Mississippi Based RESTORE Act Center of Excellence (MBRACE), the National Academy of Science Gulf Research Program, and the Harte Research Institute for Gulf of Mexico Studies. The GRIIDC program is also developing new partnerships to continue our mission of ensuring a data and information legacy that promotes continual scientific discovery and public awareness of the Gulf of Mexico ecosystem. Potential partnerships with Louisiana and Alabama RESTORE Act Centers of Excellence, oil and gas industry, and others will allow more investigators to use these tools to manage and share their data using the GRIIDC system.

## **GEOGRAPHY & SCALE**

The tool is focused on Gulf of Mexico data; however, limited datasets are available related to other locations including the North Sea and the Pacific Coast of North America. Most data available through the tool have been generated after the 2010 Deepwater Horizon incident. Datasets available through the tool have been produced through lab, field, and modeling activities describing phenomenon ranging from microscopic fluid dynamics to large scale ocean currents, bacteria to marine mammals, and detailed observations to synoptic mapping.

**ACCESSIBILITY**

This tool is available online only.

**The Deepwater Horizon Project Tracker**

**Presenter:** Jes Skillman

**Institutions:** Gulf of Mexico Alliance, Ducks Unlimited, The Trust for Public Land  
[jskillman@ducks.org](mailto:jskillman@ducks.org)

**Web address:** [www.dwhprojecttracker.org](http://www.dwhprojecttracker.org)

**INTENDED AUDIENCE:**

Conservation planners, Project Implementers, Funders, General Public

**MAIN USE:**

To map and provide key information about research, restoration, and recovery projects funded by the Deepwater Horizon oil spill settlements, fines, and other payouts in the Gulf of Mexico.

**GEOGRAPHY / SCALE:**

North America, focusing on the Gulf of Mexico region, migratory flyways of birds impacted by the oil spill, and cities in which relevant research and policy work are occurring. The scale varies depending on the project / projects of interest to the user.

**ACCESSIBILITY:**

Online website, tabular and GIS downloads, online maps, tables, and summaries, map service.

November 10, 2020 Webinar

# The Watershed Game Coast Model

## Presenters:

- Karen Bareford, National Water Extension Liaison, Mississippi-Alabama Sea Grant, [karen.bareford@noaa.gov](mailto:karen.bareford@noaa.gov)
- Brenna Sweetman, NOAA Office for Coastal Management, [Brenna.sweetman@noaa.gov](mailto:Brenna.sweetman@noaa.gov)
- Tina Miller-Way, Assistant Director for Education, Mississippi-Alabama Sea Grant
- John Bilotta, Minnesota Sea Grant & Minnesota Water Resources Center
- Cynthia Hagley, Minnesota Sea Grant
- Madison Rodman, Minnesota Sea Grant

## INTENDED AUDIENCE

The Watershed Game is a proven tool utilized by traditional and nontraditional educators and community engagement professionals for use with local stakeholders and school-aged youth.

## MAIN USE

The high social, economic and ecological value of coastal environments often results in coastal managers struggling to balance the competing and divisive interests of different stakeholder groups. Small-group simulations like the Watershed Game help break down barriers related to engaging local community members on watershed planning and management while encouraging civility, dialogue and mutual respect. The Watershed Game is a proven nonpoint water pollution educational program and interactive tool for local leaders and educators that increases participants' understanding of the impacts that excess pollutants have on communities and natural resources. The game, available in a local leader and youth classroom version, enhances understanding of management challenges and solutions including practices, plans and policies to protect water resources while building collaboration skills across stakeholder groups. Based on requests from local leaders, educators, and water professionals, the Watershed Game has expanded to include models with a focus on priority issues of coastal and estuarine environments including water quality and resilience. **This demonstration will provide an introduction to the recently developed local leader version of the Coast Watershed Game featuring highlights of game play and a discussion of how the game addresses water quality issues (including excess nitrogen, phosphorus, and sediment) and community resilience to flooding.**

## Game Goal

The goal of the game is to decrease nonpoint source pollution to meet a Clean Water Goal and to increase the community's resilience to flooding with limited financial resources.

## Learning Objectives

- Understand that all land uses within a watershed contribute pollutants and impact water quality.
- Identify specific sources of excess nutrients and sediment from each land use.
- Understand that all land uses are susceptible to flooding,
- Identify specific sites most vulnerable to damage from flooding.
- Apply “Tools” (plans, practices, and policies) to prevent or reduce nutrient and sediment pollution while increasing a community's preparedness for, and ability to respond to, flooding.
- Choose solutions based on available funds, benefits, and feasibility.

## **GEOGRAPHY AND SCALE**

The tool is designed for application with all coastal and Great Lake communities across the U.S. Representatives in the Gulf of Mexico provided significant input that led to the creation of the coast models, and to pilot testing of the draft version.

## **ACCESSIBILITY**

The tool is a large-format board game and the Coast Model will be available in printed form. For more information on the existing versions of the Watershed Game, visit [watershedgame.umn.edu](http://watershedgame.umn.edu).

## **CPRA’s Master Plan Data Viewer**

**Presenters:** Ashley Cobb, Coastal Protection and Restoration Authority (CPRA), [ashley.cobb@la.gov](mailto:ashley.cobb@la.gov)

Catherine Fitzpatrick, Coastal Protection and Restoration Authority

**WEB ADDRESS:** <http://cims.coastal.louisiana.gov/masterplan/>

## **OVERVIEW**

The Master Plan Data Viewer is an online tool that lets residents learn more about their current and future coastal flood risk. The viewer was created in response to the public’s number one question about the coast: “How bad is flooding going to get?” The viewer is an interactive tool that allows people to enter a location and learn how likely that place is to flood from hurricanes and coastal storm surge. People can view estimated damages from storm surge flooding, as well as estimates of how flood risk could change as master plan projects are constructed. The viewer addresses the GOMA Priority Issues of Coastal Resilience; Education and Engagement; and Conservation, Restoration, and Resilience Planning.

## **INTENDED AUDIENCE**

The viewer is primarily designed for coastal Louisiana residents, as well as local planners, parish/municipal officials, floodplain managers, emergency managers, and community groups.

## **MAIN USE**

The viewer serves as a one-stop shop for data produced for the 2017 Coastal Master Plan. The viewer provides insight into current and future land change, flood depths, economic damage, coastal vegetation, social vulnerability, 2017 Master Plan Projects, and resources to reduce risk. Users can explore how the coast may change under different environmental scenarios and at different points in time over the next 50 years. For example, land change and coastal vegetation information is available at 10-year time-steps. Flood depths are available for 10, 25, and 50 years into the future for various storm events. The tool is intended to enable coastal residents to better understand their current and future coastal flood risk in order to inform family, neighborhood, community, municipal, and state decision-making processes and plans for increased coastal resilience. Once available, the viewer will be updated with 2023 Coastal Master Plan data.

### **GEOGRAPHY & SCALE**

The viewer provides information for coastal Louisiana, including 24 parishes (all or portions of the parish): Acadia, Ascension, Assumption, Calcasieu, Cameron, Iberia, Iberville, Jefferson, Jefferson Davis, Lafayette, Lafourche, Livingston, Orleans, Plaquemines, St. Bernard, St. Charles, St. James, St. John the Baptist, St. Martin, St. Mary, St. Tammany, Tangipahoa, Terrebonne, and Vermilion.

The scale of the data varies according to type. For instance, land/water and land change data is available at 30m resolution; coastal vegetation is available at 500m resolution; and flood depth and economic damage data is calculated for 1km grid points (or smaller 2010 U.S. Census blocks).

### **ACCESSIBILITY**

The viewer is available online and operates best in Google Chrome/Mozilla Firefox. To promote user accessibility, the viewer contains FAQs to help first-time users navigate the website. CPRA has promoted the viewer through a series of public meetings across the coast, as well as an interdisciplinary professional lunch-n-learn training for members of the APA, ASLA, and AIA. Additionally, local media outlets including the *Times-Picayune*, *The Lens*, *Donaldsonville Chief*, and the *Mississippi River Delta Coalition* have all helped to promote public awareness of the tool.

## **The Southeast Aquatic Barrier Prioritization Tool**

**Presenters:** Dr. Jessica Graham<sup>1</sup>, Kat Hoenke<sup>1</sup>, Brendan Ward<sup>2</sup>,

**Institutions:** Southeast Aquatic Resources Partnership (SARP), Astute Spruce, LLC

**Presenting Author Email:** [kat@southeastaquatics.net](mailto:kat@southeastaquatics.net)

**Web Address:** <http://connectivity.sarpdata.com>

### **INTENDED AUDIENCE:**

This tool was designed to assist aquatic resource managers in all sectors that work to restore riverine systems through the removal or bypass of fish barriers, such as dams and road related barriers.

## **MAIN USE**

The Southeast Aquatic Barrier Prioritization Tool was created to provide best available data on barriers in the Southeast and what the ecological benefits would be if the barrier would be removed. The tool allows users to prioritize dams and road-stream crossing barriers for removal or bypass in an area of interest using a host of pre-calculated ecological metrics and then refined using a number of possible filters. These results can then be exported for the user to

The tool functions by hosting over 130,000 dams and 25,000 assessed road crossings, allowing the user to prioritize these barriers within different geographic subsets (such as HUC, State, or county) based on pre-calculated ecological metrics generated for each barrier. For example, a manager looking for the top priority dams to bypass based on connectivity alone within the Strawberry River Basin, AR is able to geographically limit the barriers to this basin and re-run the prioritization to identify which barriers open the most mileage if removed or bypassed. Whereas a manager interested in removing a dam to reconnect high quality watersheds with the state of Georgia is able to select only those dams in the State and re-run the prioritization using metrics that pertain to watershed condition, such as contributing land use and sinuosity of the upstream river network. In addition, filters exist within the tool to allow users to only select those dams within watersheds containing threatened and endangered species, among others. The results are then displayed on a web map where they can be further explored and downloaded.

The purpose of this tool is to allow resource managers to more efficiently target fish passage projects by screening through thousands of dams and road crossings, identifying top priority projects within their own priority areas. Identifying projects in this manner allows the user to target more ecologically beneficial projects in less time and devote resources to high priority projects. In addition, if a barrier has already been identified but funding is needed, a user may include prioritization scenario rankings in grant applications to validate the project and assist in obtaining project funds.

This tool does not create a “hit list” of projects but is rather a screening tool. It does not include information on landowner willingness or project specific considerations.

The Southeast Aquatic Barrier Prioritization Tool was created by the Southeast Aquatic Resources Partnership (SARP) in collaboration with The Conservation Biology Institute and Astute Spruce and through generous funding provided by the Gulf Coastal Plains and Ozarks LCC, USFWS and the Florida Fish and Wildlife Commission.

## **GEOGRAPHY & SCALE:**

This tool covers fourteen southeastern states (VA, NC, SC, GA, FL, KY, TN, MS, AL, MO, AR, TX, OK, and LA) as well as Puerto Rico. Dams and road stream crossing barriers are limited to the high resolution NHD plus beta hydrography (With the exception of Puerto Rico, which uses the medium resolution NHD plus hydrography). With further resources, SARP hopes to improve this tool to include live updates and editing on the fly.

## **ACCESSIBILITY**

This tool is available online and data can be exported.

November 17, 2020 Webinar

## **The COASTAL Act Wind and Water Event Database (CWWED) developed on Amazon's Web Services (AWS) Cloud Platform**

**Presenters:** Stephen Del Greco<sup>1</sup>, Danny Flack<sup>2</sup>

**Institutions and Email:** <sup>1</sup> Cooperative Institute for Research in Environmental Sciences Boulder, Colorado; [Stephen.Delgreco@Colorado.edu](mailto:Stephen.Delgreco@Colorado.edu)

<sup>2</sup> Riverside Technology Inc. Fort Collins, Colorado

### **INTENDED AUDIENCE**

Primary stakeholder is FEMA. However, the CWWED geographical web services tool, data and any derived products will be in the public domain and available to both the public and private sectors.

### **MIAN USE**

The Consumer Option for an Alternative System to Allocate Losses (COASTAL) Act was signed into law on July 6, 2012, to help the Federal Emergency Management Agency (FEMA) determine the extent to which wind vs. water was the cause of damage in cases where little tangible evidence exists beyond a building's foundation following a tropical cyclone. This determination is needed for the proper and timely adjustment of insurance claims, as water damage is covered by FEMA's National Flood Insurance Program, while wind damage is covered by private insurers. The COASTAL Act requires the National Oceanic and Atmospheric Administration (NOAA) to produce detailed "Post Storm Assessments (PSA)" in the aftermath of a damaging tropical cyclone that strikes the U.S. or its territories. NOAA's National Center for Environmental Information (NCEI) in partnership with the Cooperative Institute for Research in Environmental Sciences (CIRES) and NOAA's National Weather Service (NWS) is developing the COASTAL Wind and Water Event Database (CWWED) and Geographical Web-based mapping Services (GWS) that support the COASTAL Act.

### **GEOGRAPHY & SCALE**

Currently the prototype includes all CONUS coastal areas with plans to also support Alaska, Hawaii and U.S. territories coastal areas. CWWED serves as an interactive database that provides access to all data used by the Named Storm Event Model (NSEM) to derive PSAs and serves as an accessible repository for the PSA output so it can be referenced by all relevant stakeholders. CWWED receives the NSEM input from NOAA, the United States Geological Survey (USGS), and academic members of the Digital Hurricane Consortium (DHC) as well as the derived PSA data products that are generated from the NSEM. To meet this need, CWWED was developed on the Amazon Web Services (AWS) cloud platform. The CWWED Architecture includes an Amazon Relational Database Service (RDS + PostgreSQL) and THREDDS Data

Server (TDS) and leverages AWS Elastic Cloud Computing and Open Source Geographical Information Services tools. This presentation details the functionality of the CWED and GWS, on AWS and highlights the partnerships involved in ensuring the CWED is successfully implemented on a cloud platform as part of the COASTAL Act process.

### **ACCESSIBILITY**

This tool is available on-line. However currently not advertised. A live demo of the capabilities will be demonstrated.

**"For Official Use Only – Pre-decisional information"**

## **Resilience Dialogues Tool Kit**

**Presenter:** Dr. Chris Feurt

Director Coastal Training Program, Wells National Estuarine Research Reserve [cfeurt@une.edu](mailto:cfeurt@une.edu)

(Web address under development available June 30<sup>th</sup>. Temporary project page:

<https://www.wellsreserve.org/project/the-resilience-dialogues> )

### **INTENDED AUDIENCE**

*Resilience Dialogues* are conversations that occur among people with diverse perspectives who have agreed to collaborate to improve a situation that contributes to building social and ecological resilience.

The Resilience Dialogues toolkit is for people who organize, design, facilitate and evaluate resilience dialogues for diverse groups of stakeholders. Developed from 10 years of experience in the National Estuarine Research Reserve system, the toolkit synthesizes lessons learned about dealing with conflict during collaborative projects. Government agencies, coastal managers, planners, researchers, community leaders and facilitators are the target audience.

### **MAIN USE**

The toolkit includes the Resilience Dialogues Resources Guide, Case Studies and Activity Templates for implementing Stakeholder Assessments, Collaborative Learning processes, Mental and Cultural Models Situation Mapping, and Creating Shared Language for Stakeholders. The toolkit focuses on the science-based processes underlying successful conflict management and collaboration and is designed to help practitioners at all levels of expertise by providing step by step guidance that can be adapted for a variety of coastal management situations.

The toolkit is designed to be used with an in-person training and is being adapted for on-line training.

A pilot of the in-person training was hosted by Weeks Bay and Grand Bay NERRs in October 2019 and was very well received by the target audience. Experienced facilitators can use the resources “off the shelf” like a cookbook. Dr. Feurt can work with anyone interested in remote support to use the toolkit. In-person trainings will resume after the pandemic.

## **GEOGRAPHY & SCALE**

The toolkit was designed with input from 14 National Estuarine Research Reserves across the US. It is usable across scales for community-based projects as well as collaborative projects across regional and national scales.

## **ACCESSIBILITY**

The final products for the Resilience Dialogues toolkit are undergoing final edits and graphic design and will be available on-line by June 30<sup>th</sup>. Preliminary materials used to develop and pilot the toolkit are available from: <https://www.wellsreserve.org/project/the-resilience-dialogues>

Final products will include a PowerPoint presentation used in the training; Resources workbook; case studies and Activity Templates for the 4 skills described above.

**For more information contact Dr. Chris Feurt 207-604-6760 (cell at home) or [cfeurt@une.edu](mailto:cfeurt@une.edu)**

## **ShoalMATE (Shoal Map Assessment Tool for EFH)**

### **Presenter(s):**

Deena Hansen, Bureau of Ocean Energy Management, [deena.hansen@boem.gov](mailto:deena.hansen@boem.gov)  
J. Christopher Taylor, NOAA, National Centers for Coastal Ocean Science  
Bradley Pickens, CSS-Inc. and NOAA, National Centers for Coastal Ocean Science

### **Web address:**

The tool itself is internal to the Bureau of Ocean Energy Management. Information on the project:

<https://coastalscience.noaa.gov/project/geospatial-assessment-u-s-atlantic-gulf-mexico-essential-fish-habitat-relation-offshore-sand-features/>

### **INTENDED AUDIENCE:**

Coastal managers, National Marine Fisheries Service, Bureau of Ocean Energy Management, US Army Corps of Engineers

### **MAIN USE**

The purpose of the tool is to guide wise use and dredging of offshore sand shoals. ShoalMATE (Shoal Map Assessment Tool for EFH) was developed as an interactive mapping and reporting tool to aid in the Essential Fish Habitat (EFH) assessments to minimize impacts to habitats. The tool combines geospatial data on sand shoals, oceanography, seafloor characteristics, Essential Fish Habitat designations, and modeled marine fish distributions in federal waters.

## **GEOGRAPHY & SCALE**

The tool covers the northern Gulf of Mexico and US Atlantic coasts in federal waters. The scale is focused on individual sand shoals and sand resources.

## **ACCESSIBILITY**

The tool itself is available as an internal tool to BOEM, but output reports will be given to NOAA National Marine Fisheries and other organizations involved with sand dredging projects. Shoal data underlying tool is available through BOEM's [MMIS](#). Fish and shoal data will soon be available through [Marine Cadastre](#).