

2019 GOMA Tools Café Descriptions

How's My Waterway

Presenter: Amy Newbold, USEPA, Newbold.amy@epa.gov

WEB: <https://www.epa.gov/mywaterway/>

INTENDED AUDIENCE: Intended for public use

MAIN USE

How's My Waterway can be used to learn about your water, explore data and stories and find out what's happening in your community. You can enter an address, zip code, or place in the search bar to find information on the condition of your waterways. This information is shown on four different scales: community (watershed level), county, state and national.

How's My Waterway strives to make water data collected by EPA and our partners available to the general public. This application strives to answer the questions: Is it safe to drink, fish or swim in my water? Users can expect to gain access to information about what affects water quality from how land is used, any existing violations of water discharge permits, monitoring data, and where improvement has been made through grants or other programs like the implementation of a Total Maximum Daily Load (TMDL), and much more! All of these sources help tell the water story in a comprehensive yet easy to understand way.

By visiting the site, you can:

- Learn about the waters you care about.
- Learn about the health of your waters, potential issues, and why they matter
- Discover if your waterways are being monitored and the location of local monitoring stations, and
- Learn what pollutants might be affecting your waterways, and what's being done to restore and protect them.

GEOGRAPHY & SCALE

National tool, all 50 states, territories and tribes.

ACCESSIBILITY

This tool is still under development, but once completed users will find the upgraded version at <https://www.epa.gov/mywaterway/>

The Southeast Conservation Blueprint

Presenters: Blair E. Tirpak¹, John M. Tirpak², Todd Jones-Farrand², Beth Stys³, Hilary Morris², Brent Murry², Scott Schwenk², Rua Mordecai²

¹U.S. Geological Survey, Wetland and Aquatic Research Center, btirpak@usgs.gov

²U.S. Fish and Wildlife Service

³Florida Fish and Wildlife Conservation Commission

WEB: <http://secassoutheast.org/blueprint>

Access the data: <https://seregion.databasin.org/galleries/0c3e76a996e84608890875a5aa27e4a3>

INTENDED AUDIENCE

The Southeast Conservation Blueprint identifies important areas for conservation and restoration across the Southeast and Caribbean. It helps conservation professionals bring in new resources and inform decisions that best contribute to a shared vision: a connected network of lands and waters that supports thriving fish and wildlife populations and improved quality of life for people. To date, more than 130 people from over 50 organizations have used or are using the Blueprint.

MAIN USE

The Southeast Blueprint is the primary product of the [Southeast Conservation Adaptation Strategy](#) (SECAS). Through SECAS, diverse partners are working together to achieve an ambitious goal of 10% or greater improvement in the health, function, and connectivity of Southeast ecosystems. SECAS was initiated by the states of the Southeastern Association of Fish & Wildlife Agencies and the federal Southeast Natural Resource Leaders Group.

The Blueprint stitches together smaller sub-regional plans into one consistent map, incorporating the best available information about key species, ecosystems, and future threats. It serves as the strategy for achieving the SECAS goal. More than 1,700 people from 500 different organizations have actively participated in its development so far.

By providing regional context for local decisions, the Blueprint helps organizations with different goals find common ground—opportunities to align their efforts to protect fish and wildlife habitat, improve quality of life for people, safeguard life and property, and develop strong economies. As the Blueprint guides decisions and brings in new resources to benefit communities, livelihoods, and natural and cultural heritage, it is shaping a more sustainable future for the region.

GEOGRAPHY & SCALE

The Southeast Blueprint covers the 15 states of the Southeast Association of Fish and Wildlife Agencies, as well as Puerto Rico. Along the South Atlantic coast, it also extends 200 miles into the Atlantic Ocean to the edge of U.S. territorial waters. The fall 2019 update will extend the Blueprint into the marine environment of the Gulf of Mexico. While the scales of the underlying sub regional inputs to the Blueprint vary, the Blueprint data is distributed at a 30 m resolution.

ACCESSIBILITY

To learn more about the Southeast Blueprint, visit the [Blueprint page of the SECAS website](#). To access the data and documentation, [visit the Blueprint Data Gallery on the Southeast Conservation Planning Atlas](#). [A new online user guide](#) provides real case studies and step-by-step instructions to help people use the Blueprint on their own. In addition, staff are available to support anyone in the conservation community who wants to use the Blueprint to strengthen grants, identify priority areas, and communicate how their work contributes to a shared, regional strategy.

CPRA's Master Plan Data Viewer

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

Catherine Fitzpatrick, Coastal Protection and Restoration Authority

WEB: <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 also 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 as part of 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 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.

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 data 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 and Mozilla Firefox. To promote user accessibility, the viewer also 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.

GRIIDC Data Management System

Presenters: James Gibeaut, Rosalie Rossi, Rosalie.Rossi@tamucc.edu, William Nichols, and Lalitha Asirvadam

INSTITUTION: Texas A&M University - Corpus Christi/Harte Research Institute for Gulf of Mexico Studies

WEB: <https://griidc.org>

INTENDED AUDIENCE

Researchers seeking to discover or publish datasets regarding the Gulf of Mexico; research funding organizations seeking to manage and track datasets developed through their funded research; natural resource managers; policy makers; emergency responders; non-governmental organizations; and the general public.

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, data managers, and program administrators. These tools are available to GoMRI and RESTORE Act Centers of Excellence funded investigators in Florida, Mississippi, and Texas. The GRIIDC program is 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, the National Academy of Sciences Gulf Research Program, and others, will allow more investigators to use these tools to manage and share their data using the GRIIDC system. 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 data discovery portal 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.

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. The majority of 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.

GCOOS Data Portal & Products

Presenters: Shin Kobara, GCOOS, shinichi@tamu.edu

WEB: <http://data.gcoos.org> (<http://products.gcoos.org>)

INTENDED AUDIENCE

The Gulf of Mexico Coastal Ocean Observing System (GCOOS), a Regional Coastal Ocean Observing System (RCOOS) nested in a National Backbone of coastal observations, developed and maintains a centralized data and products repository (hereafter referred to as the Portal).

The Portal was designed and deployed to aggregate and disseminate the region's near real-time oceanographic data to provide timely information about the environment of the United States portion of the Gulf of Mexico and its estuaries to assist decision-makers, including researchers, government managers, industry, military, educators, emergency responders, and the general public.

MAIN USE

The GCOOS Data Portal was designed, built and configured to conform to the protocols, standards, and best practices promulgated by U.S. IOOS Program Office with guidance from the Interagency Ocean Observation Committee (IOOC).

The Portal is supported by data products that address GCOOS primary mission to establish a sustained observing system for the Gulf of Mexico and provide observations and products needed by users in this region for:

- Detecting and predicting climate variability and consequences,
- Preserving and restoring healthy marine ecosystems,
- Ensuring human health,
- Managing resources,
- Facilitating safe and efficient marine transportation,
- Enhancing national security, and
- Predicting and mitigating against coastal hazards.

The deployed and operational version of the Portal is an automated computerized network-accessible data collection and delivery system. These data sources are maintained under a variety of data standards and archival schemas, and the Portal serves as the interface to these data, model output, and products via automated standards-based machine-to-machine (M2M) service interfaces, and through web-based human-accessible graphical user interfaces (i.e., HTML standards). The same set of services provide features that facilitate interoperability with other regional data systems, as well as with the federal backbone comprised of systems typified by, but not limited to, that of the National Data Buoy Center (NDBC).

The data in the Portal is licensed under the Creative Commons by Attribution International or CC-by-4.0 (<https://creativecommons.org/licenses/by/4.0/legalcode>) giving data users free access and unconditional use to the data in GCOOS data servers

GEOGRAPHY & SCALE

Primary focus on the Gulf of Mexico. The data currently are from voluntary local (regional) data providers, oil and gas industry, and federal observing facilities in the Gulf of Mexico.

ACCESSIBILITY

Publicly available via online

Gulf Coast Conservation Prioritization Tool

Presenters: Jennifer Roberts¹, jennifer.roberts@msstate.edu; Matt Heinemann²

Institutions: Mississippi State University¹, D.J. Case and Associates²

INTENDED AUDIENCE

The Gulf Coast Conservation Prioritization Tool (CPT) has as its primary audience the members of the RESTORE Council. However, the tools are relevant to the broad land conservation community, including land trusts, federal and state agencies, nongovernmental organizations as well as private industry.

BACKGROUND

The Strategic Conservation Assessment of Gulf Landscapes (SCA) project is led through a cooperative partnership between Mississippi State University and the U.S. Fish and Wildlife Service, in direct collaboration with a core team of RESTORE Council agency representatives, conservation planners, as well as the broad community of stakeholders representing non-governmental conservation organizations, corporate entities, and private landowners with interest in Gulf Coast Conservation. The goal of the SCA project is to develop land conservation planning tools that will enable users to identify the multitude of benefits that can be achieved through conservation of Gulf Coast lands. We will have two tools available at the 2019 Gulf of Mexico Alliance Tools Café: 1) Inventory of Gulf wide Plans and Priorities and 2) Gulf Coast Conservation Prioritization Tool.

MAIN USE

The CPT is a project evaluation tool that will enable a user to evaluate a proposed conservation project or suite of projects. The tool requires users to identify a project footprint or area of interest and offers users multiple pathways for project evaluation. Individual users can weigh the goals and priorities that reflect their values and evaluate projects accordingly or can utilize a randomly generated weighting scheme to evaluate how well the project areas meet all goals and priorities.

GEOGRAPHY & SCALE

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

ACCESSIBILITY

1) Inventory of Gulf wide Plans and Priorities: <https://scagulf.shinyapps.io/visualization3/>

2) Gulf Coast Conservation Prioritization Tool: bit.ly/scacptb1

NOAA's Marine Debris Emergency Response Guides

Presenters: Caitlin Wessel^{1,2} Caitlin.wessel@noaa.gov, Amy Gohres^{1,2}

1. NOAA Marine Debris Program 2. Genwest Systems, Inc.

WEB: <https://marinedebris.noaa.gov/emergency-response/marine-debris-emergency-response-guides>

INTENDED AUDIENCE

Responders to disaster debris, primarily government officials but also NGOs and private landowners with a specific interest in determining response authority

MAIN USE

This tool outlines existing response structures at the local, state, and federal levels to facilitate a coordinated, well-managed, and immediate response to waterway debris incidents impacting coastal areas in each Gulf state. The response guides highlight organizations' roles and responsibilities and include an overview of permitting and compliance requirements that must be met before waterway debris removal work begins. While roles and responsibilities can overlap or shift during a response, the state-specific response guide seek to capture the most likely response structure and actions with the understanding that flexibility is an inherent component of an effective response.

The purpose of the tool is to improve preparedness for response and recovery operations following an acute waterway debris incident in coastal states.

GEOGRAPHY & SCALE

All 5 Gulf States (and 5 more in the SE)

ACCESSIBILITY

It can be accessed online at <https://marinedebris.noaa.gov/emergency-response/marine-debris-emergency-response-guides> and also printed out.

Coastal Ecosystem Maps-Gulf of Mexico

Presenters: Angela Sallis, Angela.Sallis@noaa.gov NOAA's National Centers for Environmental Information/GDIT

Melissa "Missy" Partyka, Ph.D., Mississippi-Alabama Sea Grant Consortium

WEB: <https://service.ncddc.noaa.gov/website/CHP/viewer.htm>

INTENDED AUDIENCE

Natural resource managers, scientists, Gulf Coast residents, educators

MAIN USE

Coastal Ecosystem Maps-Gulf of Mexico is a mapping application which contains many of the data layers from the Gulf of Mexico Data Atlas (<https://gulfatlas.noaa.gov>) but in a format that allows more interaction with the data. Datasets can be viewed layered one on top of the other, unlike in the Gulf of Mexico Atlas where only one theme at a time is displayed in the format of a traditional map "plate."

The Coastal Ecosystem Maps also include model data such as sea surface currents, and overlays such as bathymetry and place names. Many data layers also have the ability to display attribute information when a feature in the layer is clicked on, similar to an "Identify" function in an ArcIMS application.

In addition to showing users the functionality of Coastal Ecosystem Maps-Gulf of Mexico, NOAA's National Centers for Environmental Information and Mississippi-Alabama Sea Grant Consortium are interested in gathering feedback from users regarding the pros and cons of the

interactive-map style of Coastal Ecosystem Maps as opposed to the atlas-plate style of the Gulf of Mexico Data Atlas.

GEOGRAPHY & SCALE

The Coastal Ecosystem Maps have data from all five Gulf States (Alabama, Florida, Louisiana, Mississippi, and Texas) as well as Mexico.

ACCESSIBILITY

This tool is available as an interactive mapping application at <https://service.ncddc.noaa.gov/website/CHP/viewer.htm>

MyCoast: Using Citizen Scientist to Collect Data on Storm Damage, Tides, and More

Presenter: Wes Shaw, Blue Urchin, LLC. (wes@blueurchin.com)

WEB: MyCoast.org

INTENDED AUDIENCE

Data are input by members of the general public. Data are ingested and processed by members of the general public AND specialists.

MAIN USE

MyCoast makes it easy for the general public to submit photos and information on coastal incidents and events like storm damage, high tides, weather, and abandoned boats as well as for monitoring of living shorelines and other resilience work. Submitting reports helps raise awareness among users of the event being reported (e.g., tidal flooding). Reports are used for a number of purposes by the end users including guiding storm-damage response, monitoring potential threats to current and future development, and tracking abandoned boats.

GEOGRAPHY & SCALE

MyCoast is available in various states around the country including the five Gulf of Mexico states (Texas, Louisiana, Mississippi, Alabama, and Florida).

ACCESSIBILITY

MyCoast can be accessed at MyCoast.org or through its iOS and Android apps (available for free on their respective app marketplaces).

The Deepwater Horizon Project Tracker

Presenter: Jes Skillman, jskillman@ducks.org

Institutions: Gulf of Mexico Alliance, Ducks Unlimited, The Trust for Public Land

WEB: www.dwhprojecttracker.org

INTENDED AUDIENCE

Conservation planners, Project Implementers, Funders, General Public

MAIN USE

The purpose is to map and provide key information about all projects funded by the Deepwater Horizon oil spill settlements, fines, and other payouts in the Gulf of Mexico.

GEOGRAPHY / SCALE

The geographic area spans 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. Collected information is available in a customizable map view, individual projects views, summarized by key variables, as spatial and tabular downloads, and as a REST endpoint.

Dauphin Island Data Portal

Presenter: Dinah Maygarden, dmaygard@uno.edu; University of New Orleans, Pontchartrain Institute for Environmental Sciences.

WEB: <https://dauphin.cs.uno.edu/>

INTENDED AUDIENCE

Coastal Scientists, Coastal Managers, Oil Spill Planners and Responders, Citizen Scientists, Educators.

MAIN USE

The Dauphin Island Data Portal is applicable to the GOMA Data and Monitoring and Education and Outreach Priority Issues. This Data Portal is a product of a National Academies Gulf Research Program Exploratory Grant awarded to the University of New Orleans (P.I. Mark Kulp) entitled “Building Coastal Community Subject Matter Expert Capacity Through an Innovative “Citizen Science” Program to Collect Quantitative Beach Dynamic and Tar Ball Data for Oil Spill Planning and Response in Coastal Regions with Offshore Oil and Gas Operations”. Owens Coastal Consultants were partners on the project. The objective of the project was to test a community-based, shoreline change program to collect valuable pre-spill data and for community groups and volunteers to better understand the local shoreline environments through training with experienced shoreline oil-spill response scientists and coastal geomorphologists. A key outcome and tangible product of this program was to generate a background database on beach dynamics (beach elevation profiles) and background oiling conditions (tar ball surveys) that could be used by coastal scientists and oil spill planners. The Data Portal provides access to this database, housed at the Canizaro Livingston Gulf States Center for Environmental Informatics (GulfSCEI) at the University of New Orleans. The purpose of the online database tool is to provide public access to valuable data collected by community science teams in Dauphin Island, AL. The Dauphin Island data collection began in March 2018 and surveys were completed at least monthly, providing a year-long dataset. These data have created a detailed picture of shoreline changes that took place in Dauphin Island during 2018. In addition to the Dauphin Island data collection team, newly formed teams are collecting data at Perdido Key, Pensacola Beach, and Navarre Beach, FL, and data generated by these groups can potentially be added to the data portal in the future. Both types of data stored in the database were lacking during the response operations following the Deepwater Horizon oil spill. Therefore, as more data are collected and stored, this data tool will provide baseline data essential to oil spill planners and responders in the event of an oil spill on the Gulf coast. A visitor to the site can view beach profile and background oiling data for the Dauphin Island transects. Profile data can

be downloaded in Excel format and converted to graphic form. In addition, a user may download photographs and view data geospatially using Google Maps. A person with administrative credentials may also upload new data.

GEOGRAPHY & SCALE

The data comprise 8 transects on the Gulf beaches of Dauphin Island, AL. This spans the length of the eastern portion of Dauphin Island, from the Audubon Sanctuary to Tierra Court (approximately 7 miles or 11.27 km).

ACCESSIBILITY

This tool is accessible at the web address <https://dauphin.cs.uno.edu/>

OASIS and USGS Ecological-Flows: A Decision-Support System to Assess Fish Community Response to Water-Management Scenarios

Presenters: A. Michael Sheer, amsheer@hydrologics.net; Casey Caldwell, Steven Nebiker
HydroLogics

WEB: <https://www.hydrologics.net/oasis-software>

INTENDED AUDIENCE

State and federal agencies, water utilities, environmental organizations, river basin commissions.

MAIN USE

Understanding the relationship between the ecological health of a stream and its flow is critical for resource managers to develop effective water management plans that address multiple and often conflicting uses throughout a river basin. Since the eco-flow assessment process is naturally collaborative, it is helpful to distill the underlying analysis down to (a) the most ecologically-relevant flow criteria so that the flow management models can quickly generate the results; and (b) an easily understood concept like fish diversity, i.e., number of fish species.

This decision-support system merges a flexible and transparent water allocation model – OASIS – with USGS ecological flows research. OASIS is especially well positioned to be used by stakeholders to look at tradeoffs inherent in river basin water management. In recent years, HydroLogics has partnered with USGS to link OASIS model output to USGS's ecological-limit function work in Tennessee, culminating in a decision support tool for the National Park Service in overseeing management in the Obed and Big South Fork Rivers. Work is commencing with USGS to build decision support tools for the Pearl and Pascagoula River basins in Mississippi.

GEOGRAPHY AND SCALE

OASIS models have been developed for systems as small as a single reservoir for a town all the way up to some of the largest river basins in the North America. To date, it has been successfully linked to USGS ecological-flow limit calculations in Tennessee, but once the field work has been done to develop the flow-ecology relationships in other river basins, establishing the linkage to OASIS will be easy. The next step will be to bring the tool to Gulf drainage basin via the Pearl and Pascagoula Rivers.

ACCESSIBILITY

Access to OASIS is dependent on the specific model application. For the Pearl and Pascagoula, the model will be licensed to the State of Mississippi and USGS, and training sessions will be

held for those interested in using the tool. This setup is similar to the OASIS deployments in North Carolina and Tennessee, where the states have purchased licenses to the model. NC and TN each allow the public access to their models for results analysis and alternative scenarios development.

DIVER (Data Integration, Visualization, Exploration, and Reporting) Tool

Presenter: Marti Goss (marti.goss@noaa.gov), Dan Van Nostrand

Institution: NOAA Fisheries Office of Habitat Conservation, Restoration Center

WEB: <https://www.diver.orr.noaa.gov/>

INTENDED AUDIENCE

The DIVER data warehouse and query application was designed for the Trustees responsible for assessing damage and implementing restoration in the Deepwater Horizon (DWH) Natural Resource Damage Assessment (NRDA), and for public access to environmental datasets collected and used for the NRDA and Restoration. DIVER also presents detailed information on the status of restoration projects funded by the Natural Resource Damage Assessment, and restoration monitoring data.

MAIN USE

The DIVER (Data Integration Visualization Exploration and Reporting) application is a data warehouse and query tool that manages the integration of environmental data and restoration project information and monitoring data, and makes this data available to stakeholders, scientists, and the public for querying and download for further analysis. The vast majority of environmental data that supports the Programmatic Damage Assessment and Restoration Plan (PDARP) that was collected by DWH Trustees (Federal/State/Local) is available through DIVER Explorer. The data warehouse aspect of the DIVER application supports the ability to bring in and organize field collected data including observations, samples, photographs, oceanographic data and laboratory analysis- and make the results and supporting information available for query and download. The DIVER data warehouse provides the opportunity to bring in or link restoration monitoring data from across the Gulf of Mexico and make data available through the DIVER Explorer query tool. DIVER Explorer is a querying tool which provides the user with the ability to search and filter environmental data and information by keywords (e.g. “salt marsh”) or a specific project or workplan; search by a specific area (draw a shape on the map or choose from existing state or water boundaries); and download results with metadata and additional notes and documentation.

GEOGRAPHY & SCALE

The DIVER data warehouse and query tools covers the entire Gulf of Mexico including coastal and deep-water areas. The data in DIVER scale from broad datasets that cover the entire Gulf of Mexico to very specific samples collected at a specific location. NOAA has also expanded the DIVER application to cover the entire coastal United States and Great Lakes.

ACCESSIBILITY

The DIVER data warehouse and DIVER Explorer application for querying and downloading environmental data and information is publicly accessible on the website:

<https://www.diver.orr.noaa.gov/>, which includes information on how data is organized and managed, and how to access and download data.

Hydrocoast

Presenters: John Lopez*, Ph.D. jlopez@saveourlake.org, Kristen Butcher*, M.S.

*Lake Pontchartrain Basin Foundation

WEB: <https://saveourlake.org/lpbf-programs/coastal/hydrocoast-maps/>

INTENDED AUDIENCE

The [Hydrocoast program](#) collects a number of environmentally dynamic datasets in an effort to monitor the condition of the Pontchartrain Basin's estuaries. These data are depicted through free maps that are available online and provide anyone continuous access to information about the estuary. Understanding natural and anthropogenic influences on the estuary is important for recreational and commercial fishers, as well as for restoration scientists, regulators, and agency officials who would benefit from an increased understanding of how the estuary functions, and its trajectory of change. The maps are current enough that fishers can use the maps to understand and predict the movement of commercial and recreational species.

MAIN USE

The Hydrocoast map products are an effective monitoring and visualization tool for understanding estuarine dynamics of the Pontchartrain Basin in southeast Louisiana. There are five maps that are produced every two weeks including the (1) Salinity Map, (2) Habitat Map, (3) Weather Map, (4) Water Quality Map, and (5) Biological Map. Surface salinity isohalines or 1 ppt contours are depicted across the estuary on all maps. The maps all together depict: freshwater discharge, land loss, hydrologic barriers, salinity leak points, wetland habitat type, soil salinity, precipitation, wind intensity and direction, fecal coliform counts, impaired waterbody status, shrimp/oyster fleet activity, fishery closures, hypoxia, and any other timely or episodic information that is relevant to estuary function or health. Data utilized are from agency gauges and from collected data. The map production process starts with the “survey” week followed by the “mapping” week. Since data represent week-long conditions and because the map release lags by a week, the maps are an approximate real-time snap shot of basin conditions. As large-scale restoration projects are constructed in Louisiana, changes to the estuary will be captured. The cumulative Hydrocoast maps also become the basis for historical change analysis of the basin related to natural and anthropogenic drivers on the estuary’s condition. Such analysis will provide insight into the physical and biologic function of the estuary.

GEOGRAPHY & SCALE

The Pontchartrain Basin is 10,000 square miles including 6,000 square miles of estuary and 4,000 square miles of upland. The Basin includes portions of 16 Louisiana parishes and four Mississippi counties and is one of the largest estuaries along the Gulf coast. Lake Pontchartrain is 620 square miles and is a shallow body of water, where there is a mix of freshwater from the Blind, Amite, Tickfaw, Tangipahoa and Tchefuncte Rivers and Bayous Lacombe, Bonfouca, Liberty, Cane, Castine and Chinchuba and saltwater entering the estuary through Rigolets and Chef Menteur Passes. The Pontchartrain Basin habitats range from pine upland to estuarine to

marine. The habitats can be divided into four Sub-basins including: Upland Sub-basin (north of Interstate 12), Upper Sub-basin (Lake Maurepas region), Middle Sub-basin (Lake Pontchartrain region) and Lower Sub-basin (St. Bernard and Plaquemines Parishes).

ACCESSIBILITY

This tool is available online at <http://saveourlake.org/lpbf-programs/coastal/hydrocoast-maps/>

Local Government Guide to Coastal Resilience

Presenter: Jenna Moran, Associate Program Director, National Association of Counties, jmoran@naco.org

WEB: www.naco.org/coastalcounties

INTENDED AUDIENCE

Local elected officials and coastal managers.

MAIN USE

With the increasing frequency and severity of extreme weather and climate-related hazard events, coastal decisions makers must pay close attention to how their localities plan for, prepare for, recover from and adapt to disasters. Understanding change is essential to supporting economic stability and growth, managing natural resources and planning for natural disasters and other threats and challenges. Though themes and challenges may fluctuate across regions, all coastal counties need support in managing their coastal resources. This website was created to build the capacity of coastal managers in the Gulf of Mexico Region to educate and work with their local elected officials on coastal hazards and to effectively utilize the high-level coastal management resources available to them. It is important for decision-makers to be aware of these resources, not only the types of information, tools and support available for them to use, but also how to navigate through and select the materials that best suit their needs.

Created in partnership with ASFPM, CSO and NOAA as part of a NOAA Coastal Resilience Grant. While it is focused towards coastal communities – in particular the. The guide is broken into six main sections: the basics, the process, funding, risk communication, case studies and resources. The audience is a newly elected official or an official who does not yet understand the basics of coastal resilience. The intent is for this guide to be used by coastal managers to aid in their efforts to communicate risk with local elected officials and/or be shared with local elected officials to browse. It is organized in such a way that users can dig in deep or stay as high level as they want when exploring each section.

The basics section gives an overview of coastal hazards, cultural and natural resources within the Gulf of Mexico region, mitigation strategies, and potential partnerships coastal communities might pursue. The process section gives an overview of the adaptation planning process. The funding section gives an overview of the types of funding and financing communities can use to fund coastal resilience project. It will eventually include information to aid in the identification of funding opportunities – including key searchable terms – and grant writing tips and tricks. The risk communication section digs into many of the strategies we are talking about here today but also has a section devoted to communicating with local elected officials in particular. The case study section will be built out over the next year. The resource section has compiled already existing resources which have been curated for their ability to help local elected officials

understand the different aspects of coastal resilience and the variety of federal, regional and state programs available to assist a community in building resilience. You can currently sort the resources by type and topic. We also plan to eventually add a filter for state specific resources.

GEOGRAPHY & SCALE

Gulf of Mexico region

ACCESSIBILITY

Online

Comparisons of Marsh Models Under Sea Level Rise

Presenters: Christine Buckel – NOAA/National Center for Coastal Ocean Science, Christine.Addison@noaa.gov; William Balthis – NOAA/National Centers for Coastal Ocean Science, len.balthis@noaa.gov; Trevor Meckley – NOAA/National Centers for Coastal Ocean Science, trevor.meckley@noaa.gov; Renee Collini – Northern Gulf of Mexico Sentinel Site Cooperative/Mississippi State University, r.collini@msstate.edu

WEB: Not yet publicly available

INTENDED AUDIENCE

Town planners/managers, resource managers/climate scientists, conservation and restoration specialists.

MAIN USE

Coastal marshes protect and support our coastal communities and economies, understanding and planning for the significant changes these marshes will undergo with sea level rise is critical. This data viewer compiles results of a recent project comparing how marsh model projections agree and disagree under varying levels of sea level rise. Three different regions of the Northern Gulf of Mexico were examined and two models were compared in each region: LA (Coastal Master Plan/SLAMM), Grand Bay (Hydro-MEM/SLAMM) and Apalachicola (Hydro-MEM / SLAMM). Cross-model comparisons include agreement between: 1) land-water designation, 2) marsh-not marsh designation, and 3) marsh-water-other designation. These results are intended to help users identify areas of model agreement over time as well as SLR scenario. Such results can help inform processes such as: land acquisition projects for conservation, targeting areas for conservation or restoration, improving planning/development while maintaining resilience via future marsh.

GEOGRAPHY & SCALE

Comparisons of marsh model data were conducted in three areas: coastal Louisiana, Grand Bay National Estuarine Research Reserve (MS), and Apalachicola Research Reserve (FL).

ACCESSIBILITY

Will be web-based but is still under development. This is a great opportunity to weigh in on the interface and approach.

Ocean Reports Tool

Presenters: Mark Finkbeiner, NOAA Office for Coastal Management; mark.finkbeiner@noaa.gov; Christine Taylor, BOEM Geospatial Services Division, Office of Strategic Resources; James Morris, Jr., NOAA National Centers for Coastal Ocean Science;

Dave Stein, NOAA Office for Coastal Management; Lisa Wickliffe, CSS, Inc. for NOAA National Centers for Coastal Ocean Science; Seth Theuerkauf, CSS, Inc. for NOAA National Centers for Coastal Ocean Science and The Nature Conservancy

WEB: <https://marinecadastre.gov/oceanreports/>

INTENDED AUDIENCE

Coastal and marine planners, public-sector resource managers, private sector companies, legislative staff, researchers, educators, and the general public who are not otherwise skilled in Geographic Information Systems. Specific topical areas where the tool is relevant include aquaculture siting, offshore energy development, natural resource management, and navigation planning.

MAIN USE

OceanReports allows users to select an Area-of-Interest (AOI) in the ocean space and instantly obtain over 70 unique infographics containing analyses of the location; its energy and minerals, natural resources, transportation and infrastructure, oceanographic and biophysical conditions, and its contribution to the local ocean economy. Users can select infographics of interest, explore pertinent ocean data through interactive pop-ups and visualizations, toggle map displays of each layer related to infographic content, share results by web link, and print custom reports to inform various permitting processes. Metadata, background information, and the analysis rule-sets are all available for each infographic.

GEOGRAPHY AND SCALE

OceanReports is designed for use in all waters of the U.S. Exclusive Economic Zone. This includes the contiguous U.S. as well as Alaska, Hawaii, and the Pacific and Caribbean territories. The data supporting the tool has a wide range of resolutions. In cases where a user draws a small AOI built-in processes prevent the tool from reporting potentially misleading statistics for coarse resolution data.

ACCESSIBILITY

OceanReports is a web-based tool available under the MarineCadastre Tools page. All of the data supporting the tool are available for download through OceanReports or Marine Cadastre and are routinely updated as needed to maintain the most current results possible. No specialized skills are needed to run the tool or produce reports.

MarineCadastre.gov

Presenters: Christine Taylor, Bureau of Ocean Energy Management, Christine.taylor@boem.gov; David Stein, NOAA; Mark Finkbeiner, NOAA

WEB: <https://Marinecadastre.gov>

INTENDED AUDIENCE

All government and industry decision makers who might need ocean and coastal data for decision making, educators, press, NGOs, collaborative meetings or response to government calls for information.

MAIN USE

“Serve data once, use many times” is the motto of MarineCadastre.gov, an integrated

information system that provides authoritative ocean data, offshore planning tools, and technical support to the offshore planning community. This website provides authoritative and regularly updated information on offshore boundaries, infrastructure, human uses, habitats, and energy potential, as well as many other data sets. Users can create and customize maps and can easily view and share data with ocean-planning partners, thereby speeding up their ability to address critical ocean-use details. MarineCadastre.gov is brought to you by the Bureau of Ocean Energy Management and the NOAA Coastal Services Center. It contains over 300 primary geospatial layers from authoritative sources. Users can feel confident that they are getting the best available and latest updates of a variety of coastal and ocean data layers that are most often needed by users for planning and decision-making purposes. Users may download, view, create their own maps, search for data, and use the ID tool on the map to reveal attributes beneath the user's cursor. The National Viewer portion of the tool has recently been updated to provide enhanced functionality and the ability to ingest more varieties of mapping services.

GEOGRAPHY & SCALE

National – coastal counties out to EEZ. Scale and extent vary by individual data layer.

ACCESSIBILITY

This tool is available to the public via the Web. <https://MarineCadastre.gov>

Resources for sea-level rise resilience in the northern Gulf of Mexico

Presenters: Renee Collini, r.collini@msstate.edu, Northern Gulf of Mexico Sentinel Site Cooperative, Mississippi State University/Mississippi-Alabama Sea Grant; Mikaela Heming - Northern Gulf of Mexico Sentinel Site Cooperative, Mississippi State University/Mississippi-Alabama Sea Grant, m.heming@msstate.edu

WEB: www.ngomssc.org

INTENDED AUDIENCE:

Coastal decision-makers (natural resource managers and community planners), coastal residents, tool developers, researchers

MAIN USE:

There are now many resources for sea-level rise resilience, from communication to data access and application. This can be overwhelming for those not familiar with the ongoing research and tool development. The Northern Gulf of Mexico Sentinel Site Cooperative is a partnership dedicated to facilitating the translation and transition of sea-level rise observing data and research into decision-making. We are able to provide context to the many available tools and identify which tool or tools might be best suited to particular needs and how they can be used in sequence to achieve sea-level rise resilience goals. Available resources include access to local sea-level rise projections, future storm surge maps, and communication videos about sea-level rise and low-cost options for future flood resilience.

GEOGRAPHY & SCALE:

Applicable primarily for the northern Gulf of Mexico, but some resources cover the Gulf and others cover the entire U.S. coastline.

ACCESSIBILITY:

The resources are primarily web-based and can all be accessed through www.ngomssc.org