2020 GOMA Tools Café Descriptions

<u>November 10, 2020 Webinar</u>

The Watershed Game Coast Model

Presenters:

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- Brenna Sweetman, NOAA Office for Coastal Management, 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.

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 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 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[1], Kat Hoenke[1], Brendan Ward[2],
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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.