



Workshop Report

# Gulf Coast Community Flood Resilience

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## Applications of No Adverse Impact For Coastal Communities

Biloxi, Mississippi  
September 8, 2016



FEMA



Texas Coastal Watershed Program

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## Introduction

The No Adverse Impact approach to floodplain management was developed by the Association of State Floodplain Managers (ASFPM) in 2001. This managing principal was the product of a realization; that despite the progress made nation-wide as a result of the National Flood Insurance Program's minimum standards and billions of dollars spent on structural flood control projects, flood damages have continued to increase. Since 1990 flood damage losses have increased five-fold, costing the nation \$10 billion annually on average. The No Adverse Impact (NAI) approach to floodplain management was designed to help reverse this trend by providing communities with the tools to reduce the frequency and severity of flood events, and to protect their citizens now and in the future. In general, these tools prevent the actions of one property owner or even a community from adversely impacting other property owners or neighboring communities. When applied at the watershed or regional level, this approach creates a network of resilient communities each of which is free to develop and thrive sustainably.

Since the publication of the NAI Toolkit in 2003, staff from professional organizations, non-profits, federal and state agencies, ASFPM members and interested individuals have used the toolkit to learn about and spread the message of NAI. In addition, ASFPM has been invited to host workshops on NAI and how to implement it by leaders at every level of government. Across the nation more than 50 NAI workshops have been held. The demand for these workshops has increased steadily over time as a result of super-storms Sandy and Katrina, and in the Great Lakes region, as a result of an unprecedented federal investment in the rehabilitation and protection of region called the Great Lakes Restoration Initiative.

To date, the most frequently posed questions in response to ASFPM's NAI Workshops and Toolkit have been related to the legality of zoning ordinances, land acquisition, and the implementation of new permitting requirements in flood hazard areas. As a result, ASFPM has developed a series of white papers and fact sheets in an effort to answer these questions. In addition, ASFPM has made the legality of the NAI approach the focal point of its NAI workshops. Recognizing that each state or community has different concerns, these workshops were designed to provide ample time to discuss unique regional issues, case studies, and best practices for integrating NAI into on-going efforts to reduce flood losses.

Planning for Biloxi's Coastal No Adverse Impact Workshop began in May 2015 when ASFPM staff met Rick Stickler, Biloxi's Floodplain Administrator and Tracie Sempier, Mississippi-Alabama Sea Grant at the Gulf Coast Climate Community of Practice Meeting in St. Petersburg, Florida. With funding from the Federal Emergency Management Agency (FEMA), ASFPM, the City of Biloxi and Mississippi-Alabama Sea Grant partnered with staff from the Texas Coastal Watershed Program and Mississippi Emergency Management Agency to develop a target audience, objectives and agenda for this day-long event.

Specifically this workshop was designed to provide participants with an opportunity to:

- Learn from regionally-renowned experts and local floodplain managers about legal and policy approaches to current issues in Gulf Coast coastal watersheds, including current real-life discussion on living shorelines, low-impact development, and higher standards.

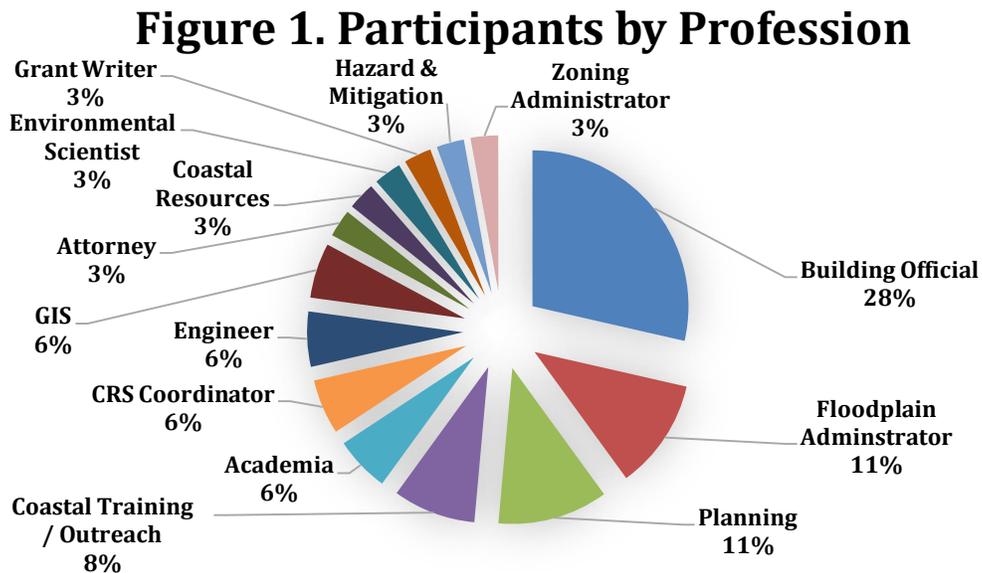
- Learn about the legal and policy frameworks that underlie and guide ASFPM’s No Adverse Impact approach to coastal resource management and its relationship with Gulf Coast coastal watersheds and climate impacts.
- Build relationships with individuals and organizations at all levels across the Gulf Coast region including but not limited to: floodplain, stormwater, and coastal resource managers, land use and hazard mitigation planners, attorneys, insurance providers, business/industry representatives, consultants, and port authorities.

This report is a summary of the Coastal No Adverse Impact Workshop held on September 8th, 2016 at the Biloxi Visitors Center, Biloxi, Mississippi.

## Participant Demographics

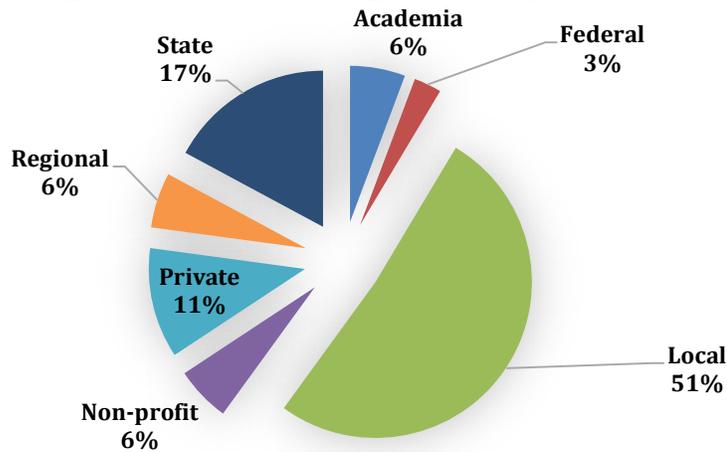
The *Coastal No Adverse Impact Workshop* planning team defined their target audience as: floodplain managers, planners, attorneys, coastal resource managers, stormwater managers, and local elected officials. In an effort to draw this target audience to the workshop and to deter individuals from registering for the event but failing to attend, the planning committee offered continuing education credits for the following organizations and certification programs: Continuing Legal Education Credits; ASFPM, Certified Floodplain Manager credits; and APA AICP Certification Maintenance credits. This technique proved to be fairly successful.

Out of the, 35 participants (including workshop planning staff and presenters) who registered (Appendix D), over 50% applied to receive some type of continuing education credit.



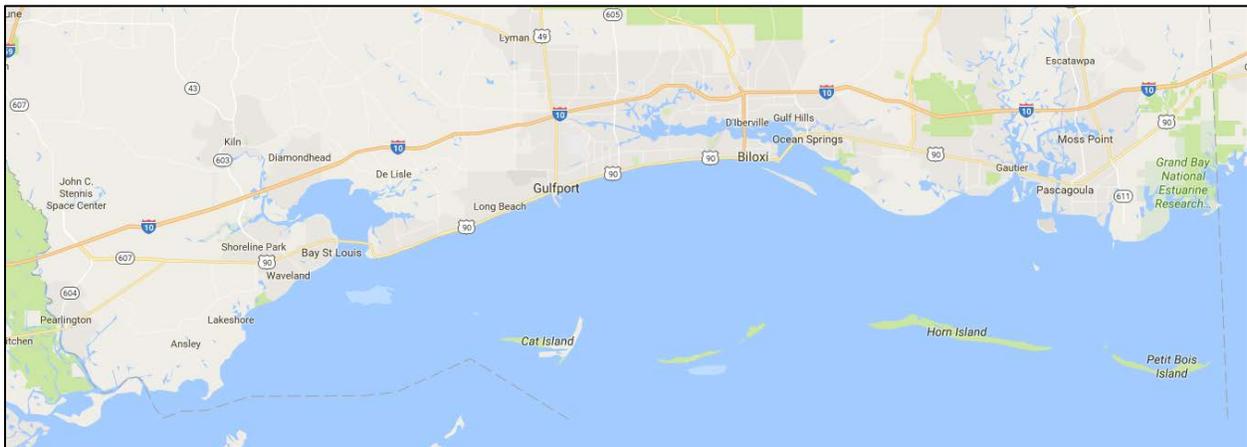
In sum, approximately 82% of total workshop registrants were identified as part of the target audience (Figure 1). Overall, local floodplain managers (individuals who identified as building officials, CRS coordinators, zoning administrators) made up the vast majority of our target audience. In addition, planners had the third highest representation at the workshop. When broken down by sector, public (local, state, regional and federal government) and non-profit sector staff represented a majority of all attendees (Figure 2). This statistic also supports the claim that the workshop target audience was reached because many of the employers who hire individuals for the occupations that this workshop catered to are government agencies and environmentally focused non-profit organizations.

**Figure 2. Participants by Sector**



For this *Coastal No Adverse Impact* workshop, the coastal communities across Mississippi were very well represented and included: City of Ocean Springs; City of Moss Point; City of Pascagoula; City of Gulfport; City of D'Iberville; City of Biloxi; City of Bay St. Louis; and Harrison County (Figure 3).

**Figure 3 - Mississippi Gulf Coast Communities**



Out of the 35 participants that attended, 28 pre-registered and 7 were walk-ins. Only 3 people that pre-registered did not show – a very low “no-show” rate. The one group that was more noticeably absent was attorneys. The workshop planning team attempted to reach local attorneys through the floodplain management user community on the coast. And while this approach was not successful in bringing attorneys to the workshop, several of the participants planned to share the workshop information with their community’s attorneys or legal staff. The workshop planning team also explored potential ways to reach the appropriate attorneys through the Mississippi Bar Association. Due to the inability to target attorneys in specialty areas related to land use or environmental law within the Bar Association, the planning team did not feel a mass email invitation to the Bar Association would draw the appropriate participants. This approach can be revisited for future workshops along with the idea of having each local floodplain manager bring their local attorney or legal staff.

## Workshop Presentations – Overview and Feedback

Over the course of the day, six 30-45 minute presentations were planned (Appendix B). The venue for this event was the Biloxi Visitors Center, located directly on the Mississippi Gulf Coast, which helped



*Biloxi Visitors Center & Light House located on Gulf of Mexico. Image by: Jeff Stone, ASFPM*

make the connection to the unique challenges managers in the region face while also providing convenient travel and access for all the communities along the coast.

The beginning of the day focused heavily on No Adverse Impact strategies, Biloxi’s local higher floodplain standards and legal

issues related to the NFIP. The second half of the day was dedicated to a hands-on planning exercise called Community, Health and Resource Management (CHARM). The workshop was organized in this way to ensure that all participants had a strong understanding of No Adverse Impact and common legal concerns associated with floodplain management, prior to exploring specific planning scenarios and topics in further detail using CHARM.

Niki Pace from Louisiana Sea Grant’s Law & Policy Program was schedule to kick-off the day with her presentation titled “Floodplain Management and No Adverse Impact: Law and Policy Concerns”. Ms. Pace was unable to participate, but her presentation is available as part of the post-workshop proceedings, which can be found on ASFPM’s website. Al Goodman, Mississippi’s former State Floodplain Manager and ASFPM Chair, presented on the core strategies and tools of *No Adverse Impact* and how it applies to many of the flooding challenges faced by the state of Mississippi. Directly

following, Rick Stickler, Biloxi's Floodplain Manager provided a detailed list of higher floodplain standards that the city has implemented and enforced, which included low density development; 100-yr standards for stormwater; a floodplain management plan that includes sea level rise; and requiring V-zone standards within Coastal A-zones. Then, Larissa Womack, a Senior Attorney from Mississippi's Emergency Management Agency (MEMA) provided the legal basis to the NFIP and issues related to legal authority and floodplain management.

Jamie Miller, Executive Director of Mississippi Department of Marine Resources accepted the invitation to speak to the workshop participants during lunch. Miller discussed his early career in floodplain management as part of FEMA's Project Impact, making connections to this early work; ways of improving policy and collaboration and finally linking overarching issues and challenges between floodplain and coastal management.



*Jamie Miller, Executive Director of MS Marine Resources.  
Image courtesy of: Jeff Stone, ASFPM.*



*CHARM Display & Exercise. Image Courtesy of: Steven Mikulencak, TCWP*

The afternoon was dedicated to the Community, Health, and Resource Management (CHARM) hands-on planning exercise. "The CHARM application helps decision makers gather input and educate the public about the what-ifs of long term growth and planning. Workshop participants collaborate over a live table-top interface and explore a library of mapping

data to plan hypothetical growth scenarios for their community. Real time feedback allows participants to see the consequences of their planning decisions. The planning support tool encourages collaborative problem solving, and no GIS experience is needed for stakeholders to participate in a CHARM workshop." (CHARM Flyer, Texas Coastal Watershed Program). For this workshop, participants were instructed to double Biloxi's population, considering different types of housing and land use and minimize flood, storm surge and sea level rise risk to existing and future development and redevelopment activities.

This exercise allowed participants to consider the information that was presented on NAI, higher standards, natural and beneficial functions, etc. and apply it to a hypothetical land use planning

scenario. Through this exercise participants were also given the opportunity to learn about one another's perspectives on conservation and development, as well as the different challenges that are faced when planning future land use.

## **Workshop Evaluation**

All participants were given evaluation forms to complete after the workshop (Appendix F). This evaluation solicited feedback on a variety of topics including the degree to which the workshop achieved its advertised learning objectives, individual presenters' performance, and topics that participants would have liked hear more about. The response rate for this brief evaluation was 57%. Overall, the feedback gathered through this evaluation was very positive. 100% of evaluation respondents felt that they could apply the information presented at this workshop to their work and that presenters had given them the tools to implement the knowledge that was shared. In addition, 100% of survey respondents noted that they would recommend this workshop to others. These statistics are reinforced by comments that were collected in response to an open ended question regarding how participants planned to use what they learned at the workshop. Respondents noted that they would use/incorporate the information presented at the workshop into various on-going projects and initiatives, and that they planned to pass it along to others who were not able to attend through technical assistance programs or interpersonal communications.

In addition, 100% of evaluation respondents noted that the workshop's advertised learning objectives, activities, opportunities for discussion, and information presented met or exceeded their expectations. Overall, respondents were satisfied with the quality of the presentations as well as the CHARM exercise, which itself elicited many positive comments and in one case a request for a full day workshop just for CHARM . 100% of participants who completed workshop evaluations noted that the workshop presentations and CHARM exercise met or exceeded their expectations. Many respondents noted that they would like to see additional workshops in the region, and that the content shared was relevant and of critical importance to the state. In the future, respondents noted that they would like more NAI examples from municipalities around the country.

## **Conclusions and Next Steps**

The Biloxi Coastal No Adverse Impact Workshop provided participants with the opportunity to learn about the core strategies of ASFPM's No Adverse Impact approach to floodplain management, common legal issues faced by floodplain managers and planners in the region, specific actions that have been taken in Biloxi to enhance flood resilience. Through this workshop, the workshop planning committee was also presented with the invaluable opportunity to learn from participants about the local challenges and concerns that they encounter regularly.

ASFPM will work to adapt content of future workshops based on the comments received during and after this event. This is done in an effort to ensure that each iteration of this workshop improves upon the last, further meeting the needs and expectations of participants. One key follow-up to this workshop will be related to the CHARM exercise. Due to the positive response by floodplain managers to the

CHARM exercise, ASFPM will follow-up with workshop participants to ask what modifications or additions to the scenarios would benefit floodplain managers – e.g. would it be helpful to see flood damage costs or avoided flood losses? ASFPM will send an email to workshop participants asking some brief questions about CHARM and also provide a final copy of this report, links to workshop presentations and legal publications and materials related to the workshop. ASFPM will take the results of the CHARM questions and collaborate with the Texas Coastal Watershed Program/Sea Grant to consider future grant proposals to implement potential changes within CHARM that would benefit the floodplain management community while also looking for ways to extend the CHARM training in other areas of the country.

## Appendix

### Appendix A. – Workshop Planning Committee

<b>First Name</b>	<b>Last Name</b>	<b>Position</b>	<b>Organization</b>	<b>Email</b>
Tracie	Sempier	Coastal Storms Outreach Coordinator	Mississippi-Alabama Sea Grant	tracie.sempier@usm.edu
Rick	Stickler	Floodplain Administrator	City of Biloxi, MS	rstickler@biloxi.ms.us
Lauren	Schultz	Floodplain Specialist	Mississippi Emergency Management Agency	lschultz@mema.ms.gov
Steven	Mikulencak	Program Manager	Texas Coastal Watershed Program / Texas Sea Grant	smikulencak@tamu.edu
Jeff	Stone	Sr. Research Manager	Association of State Floodplain Managers	jeff@floods.org

## Appendix B. – Workshop Agenda

# Gulf Coast Community Flood Resilience: Application of No Adverse Impact for Coastal Communities

### Location & Objectives

*Biloxi Visitors Center*  
1050 Beach Boulevard  
Biloxi, MS 39530

Join us as we introduce tools and approaches that reduce flood risk and implement natural and beneficial functions of the floodplain by planning and managing for future conditions in the Gulf Coast. Specifically this workshop will give participants an opportunity to:

- Learn from regionally-renowned experts and local floodplain managers about legal and policy approaches to current issues in Gulf Coast coastal watersheds, including current real-life discussion on living shorelines, low-impact development, and higher standards.
- Learn about the legal and policy frameworks that underlie and guide ASFPM's No Adverse Impact approach to coastal resource management and its relationship with Gulf Coast coastal watersheds and climate impacts.
- Build relationships with individuals and organizations at all levels across the Gulf Coast region including but not limited to: floodplain, stormwater, and coastal resource managers, land use and hazard mitigation planners, attorneys, insurance providers, business/industry representatives, consultants, and port authorities.

### Partners



**FEMA**

For more information please contact:  
Jeff Stone, [jeff@floods.org](mailto:jeff@floods.org)  
(608) 828-6340

### Agenda

**Thursday, September 8, 2016**

#### Schedule

**8:30 AM Sign-in & Registration**

**9:00 AM Welcome & Introductions**

Tracie Sempier, Ph.D., Mississippi-Alabama Sea Grant  
Jeff Stone, GISP, CFM, Association of State Floodplain Managers

**9:15 AM Floodplain Management Legal Issues**

Niki L. Pace, JD, LLM, CFM, Sustainability Coordinator  
Louisiana Sea Grant Law & Policy Program

**10:00 AM No Adverse Impact Strategies & Tools**

Al W. Goodman, CFM, Principal, AWG Consulting LLC

**10:45 AM Break**

**11:00 AM Legal Aspects of the NFIP**

Larissa Womack, JD, Senior Attorney  
Mississippi Emergency Management Agency (MEMA)

**12:00 Noon Lunch (provided)**

Jamie Miller, Executive Director  
Mississippi Department of Marine Resources

**1:00 PM Biloxi's Higher Standards**

Richard Stickler, CFM, Floodplain Administrator, City of Biloxi, MS

**1:45 PM Community Health and Resource Management (CHARM) Interactive Planning Exercise**

Steven Mikulencak, MRP, AICP, Program Coordinator  
Texas Coastal Watershed Program, Texas Sea Grant

**3:50 PM Closing Remarks & Evaluation**

**4:00 PM Adjourn**

Approved for: 5.5 CECs for CFMs  
5.0 CMs for AICPs  
5.0 CLE Credits for Attorneys

## Appendix C. – Speaker and Facilitator Biographies

### **Niki L. Pace, JD, LLM, CFM**

#### **Sustainability Coordinator – Louisiana Sea Grant Law & Policy Program, LSU**

Niki Pace is the sustainability coordinator with Louisiana Sea Grant Law & Policy Program at LSU. She received her law degree from Lewis & Clark Law School in 2002 and a Masters in Environmental Law in 2008. In addition, Ms. Pace is also a certified floodplain manager. Prior to joining Louisiana Sea Grant, she worked for seven years with the Mississippi-Alabama Sea Grant Legal Program.

### **Al W. Goodman, Jr., CFM**

#### **Principal – AWG Consulting LLC**

Mr. Goodman has 19 years of experience in mitigation and floodplain management at both the state and national level. Additionally, he worked extensively in the Mississippi State Emergency Response Team as the Planning Section Chief and in the State Emergency Operations Center as a damage assessment team leader and as the deputy state logistics officer. During his time at MEMA, he developed the floodplain management portion of the state hazard mitigation plan. As the Floodplain Management Bureau Director/NFIP State Coordinator, he was responsible for the oversight of the 300+ local NFIP member communities and the 29 CRS program community members.

### **Larissa Womack, JD**

#### **Senior Attorney – Mississippi Emergency Management Agency (MEMA)**

Larissa Womack a graduate of the Mississippi College School of Law. Larissa previously attended the University of San Diego and later graduated from Belhaven University with her degree in Political Science. Prior to completing her Bachelor's degree, Larissa served five years active duty in the Marine Corps. Currently, she enjoys her work as the Senior Attorney at the Mississippi Emergency Management Agency (MEMA) in Pearl, MS.

### **Richard Stickler, CFM, Floodplain Administrator**

#### **City of Biloxi**

Richard is the Floodplain Administrator for the City of Biloxi. He started working for the city in February 2007. He was born in Lebanon, PA, but moved to the Gulf Coast in 1986 while serving in the United States Navy Seabees. He retired from the Navy in July 2005. Richard has been a Certified Floodplain Manager since May 2007. In 2008, he was selected as the Floodplain Manager of the Year for AFMM. He is an active member of AFMM and currently serving as the Vice President. He was Chairman of Coastal Hazard Outreach Strategy Team (C-HOST) in 2010-2011. He is also a member of the National Association of State Floodplain Managers (ASFPM).

### **Jamie Miller, Executive Director**

#### **Mississippi Department of Marine Resources**

Jamie was appointed executive director of the MDMR by Governor Phil Bryant in 2013. MDMR's mission is to enhance, protect, and conserve marine interests of the state by managing the Mississippi Coastal Zone for optimal commercial, recreational, educational, and economic uses of these resources. Previously, he was chief of staff for Mississippi State Representative Stephen Palazzo in Washington,

D.C., and policy advisor to Governor Haley Barbour following Hurricane Katrina. Jamie has more than 16 years of public- and private-sector experience focusing on coastal resource management, disaster recovery, and community development.

**Steven Mikulencak, AICP**

**Program Coordinator – Texas Coastal Watershed Program, Texas Sea Grant**

Steven Mikulencak is certified planner and Extension Program Specialist for the Texas Coastal Watershed Program. He works from Houston, TX and specializes in stakeholder participation and planning tools for local decision-makers. He has worked in the private sector on comprehensive plans, zoning, design guidelines, and GIS analyses for local governments. He now develops planning and outreach programs for TX coastal communities using the weTable and GIS modeling tools. Projects under his management include [Coastal CHARM](#), [Texas Coastal Citizen Planner Program](#), [CERC Resiliency](#), the [Highland Bayou Watershed Protection Plan](#) in Galveston County, and is the lead facilitator for the [TX RESTORE Roundtables](#). Projects are supported through partnership with the National Sea Grant Office, FEMA Region 6, the US Fish and Wildlife Service, the US EPA Gulf of Mexico Program, and the Galveston Bay Estuary Program. He earned his BS in Geology from Virginia Tech and his Masters in Urban Planning from Cornell University.

**Tracie Sempier, Ph.D.**

**Coastal Storms Outreach Coordinator – Mississippi-Alabama Sea Grant**

Tracie Sempier is the Coastal Storms Outreach Coordinator for the Mississippi-Alabama Sea Grant Consortium. In this capacity she works with local communities, state and federal agencies, non-profit organizations, port authorities, emergency and floodplain managers, residents, and other audiences to try and decrease the negative impacts of coastal storms on families, communities, the environment, natural resources, and property. Tracie is also the Regional Program Manager for the Gulf of Mexico Alliance. In this capacity she works to connect partners and projects on a regional level through the implementation of the Governor's Action Plan and GOMA's six priority issue teams. Tracie has over nineteen years of professional experience in education and outreach with various audiences in formal and informal learning environments. She completed her Ph.D. at Mississippi State University in Curriculum and Instruction, has a M.S. in Science and Mathematics Education from Oregon State University, and holds a B.S. in Marine Science and Biology from the University of Alabama.

**Jeff Stone, GISP, CFM**

**Sr. Research Manager – Association of State Floodplain Managers**

Jeff Stone is a Senior Research Manager with the Association of State Floodplain Managers (ASFPM). As part ASFPM's Flood Science Program, he manages research and outreach projects that focus on informing flood policy through science. Projects include, but are not limited to developing and evaluating tools, websites and software; researching the legal, practical and technological issues related to flood management policy and practices; and communicating effective use of GIS tools and applications aimed at floodplain management through webinars and workshops. He earned his B.S. and M.S. in Geographic Information Sciences with a strong emphasis on coastal and fluvial geomorphology from the University of Wisconsin-Madison.

## Appendix D. - Workshop Attendance List

First Name	Last Name	Email	Job Title	Organization
Jeanne	Allen	allen.jeanne@epa.gov	Environmental Scientist	EPA Gulf of Mexico Program
Jackie	Antalan	ophomecare_gcr@yahoo.com	Program Director Hazard & Mitigation	Operation Homecare
Paul	Barnes	pbarnes@co.harrison.ms.us	GIS Director	Harrison County Board of Supervisors
Andrew	Beamon	andrew.beamon@cityofmosspoint.org	Building Official	City of Moss Point
Jerry	Beaugez	jbeaugez@baystlouis-ms.gov	Admin Asst - Mayor's Office / Floodplain Admin	City of Bay St. Louis, MS
Patrick	Bonck	pbonck@co.harrison.ms.us	Zoning Administrator	Harrison County
Adam	Burks	aburks@cityofpascagoula.com	Code Enforcement Supervisor	City of Pascagoula
Ernie	Carpenter	ecarpenter@gulfport-ms.gov	Chief Building Inspector	City of Gulfport
Stephen	Deal	scdeal@olemiss.edu	Extension Specialist	Mississippi-Alabama Sea Grant
Bill	Dunnam	wdunnam@cityofpascagoula.com	Building Official	City of Pascagoula
Hilliard	Fountain	hfountain@oceansprings-ms.gov	Building Official	City of Ocean Springs
Al	Goodman	Al@awgconsulting.comcastbiz.net	Principal	AWG Consulting LLC
Kristin	Greger	kgreger@biloxi.ms.us	CRS Coordinator	City of Biloxi
Kristyn	Gunter	kgunter@smpdd.com	Business Development Manager	Southern Mississippi Planning & Development District
Kelly	Henderson	kellyhenderson@co.harrison.ms.us	Inspector	Harrison County
Geoffrey	Hittner	ghittner@gulfport-ms.gov	Plan Examiner / Inspector	City of Gulfport
Theresa	Hydrick	thydrick@co.harrison.ms.us	Building Official/Floodplain Manager	Harrison County
Lydia	Jemison	jempart@bellsouth.net	President	Jemison & Partners, Inc.
Steven	Mikulencak	smikulencak@tamu.edu	CHARM Program Manager	Texas A&M Sea Grant/ AgriLife
Ashlee	Miller	amiller@oceansprings-ms.gov	Building Dept. Office Administrator	City of Ocean Springs
Ben	Posadas	ben.posadas@msstate.edu	Marine Economist	Mississippi State University
Kit	Posadas	bkapjr@email.com	Ph.D Student	Mississippi State University
Margo	Posten	margo.posten@dmr.ms.gov	Coastal Training Program Coordinator	Grand Bay NERR
Rhonda	Price	rhonda.price@dmr.ms.gov	Deputy Director	MS DMR
Lauren	Schultz	lschultz@mema.ms.gov	Floodplain specialist	MEMA
Donovan	Scruggs	dscruggs@cityofpascagoula.com	City Planner	City of Pascagoula
Dreux	Segheers	daseghers@gmail.com	Civil Engineer	D.A. Seghers Engineering
Tracie	Sempier	tracie.sempier@usm.edu	Coastal Storms Outreach Coordinator	Mississippi-Alabama Sea Grant Consortium
Robert	Smith	rsmith@biloxi.ms.us	Engineer	City of Biloxi
Richard	Stickler	rstickler@biloxi.ms.us	Floodplain Manager	City of Biloxi
Jeffrey	Stone	jeff@floods.org	Research Manager	ASFPM
VICKI	WATKINS	VWATKINS@DIBERVILLE.MS.US	CRS Coordinator	City of D'Iberville
Larissa	Womack	lwomack@mema.ms.gov	Senior Attorney	MEMA
Cathy	Wright	cathy.wright@cityofmosspoint.org	Code Enforcement Officer	City of Moss Point
Felicia	Yearwood	felicia.yearwood@cityofmosspoint.org	Grant Writer	City of Moss Point

# Appendix E. – Community, Health, and Resource Management (CHARM) Exercise

## 1 YOUR CHARM CRITICAL FACILITIES ACTIVITY

Think about critical facilities in your community; which facilities need preparation before a disaster? Which are critical for helping the community get back on its feet after a disaster? Mark down the flood and hurricane impact for the facilities:

Critical Facilities	100	500	X	H
Airport				
AM/FM Stations				
Barred Pipeline				
Electric Distribution Circuits				
Emergency Operation Center				
Fire Station				
Fuel Transfer / Loading				
Grocery Store				
Hazardous Materials Facility				

Critical Facilities	100	500	X	H
Heliport Facility				
Lift Station				
Medical Facility				
Natural Gas Facility				
Nursing Home				
Oil Facility				
Police Station				
Potable water				
Power Plants				
Prison/Jail				
School				

Critical Facilities	100	500	X	H
Seaport				
Senior Living				
Shelter				
State-owned Critical Facilities				
Substation				
Transit Terminal				
TV Station				
Vehicle and Equipment Storage				
Waste Water Treatment Plant				
Weather Stations				
Other				

## 2 YOUR CHARM GO-NO GO AREA ACTIVITY

Certain areas of your community may be more vulnerable to hazards than others. In terms of promoting resiliency, which areas might be considered a "no go" for development? Which areas would be the best candidate for development?

Write down the area that your table paint as No Go Area, and why:

## 3 YOUR CHARM DEVELOPMENT ACTIVITY

Population Today ( ) Total Future ( )

Homes Existing ( ) Total Future ( )

Homes in 100 Year Flood Zone Today ( ) Future ( )

New demand for domestic water: (per acre ft)  
Outdoor ( ) Indoor ( )

Impervious Surface Cover (per capita):  
Existing ISC: ( ) %  
New ISC: ( ) %

SAVED VIEW: PAINT-MODE  
SAVED VIEW: SCORE SHEET  
SAVED VIEW: FLOOD-ZONE - RESIDENTIAL

If you have questions or want to learn more about CHARM, please contact Texas Coastal Watershed Program: Dr. John Jacob (jjacob@tamuz.edu) Steven Zibulenscak, AICP (szibulenscak@tamuz.edu)

## CHARM LEGEND & SCORE SHEET

WORKSHEET PAINT SHOP

ATM TEXAS A&M AGRICULTURE EXTENSION Sea Grant place

<http://tcwtp.tamuz.edu/charm/>

## CHARM LAND USE PAINT SHOP

TO START PAINTING: Land "paint mode" Saved View, Start Editing, Choose a Land Use Paint, Select Area, Apply Paint to Selection, Stop Editing.

YOUR TOOLS TO NAVIGATE BETWEEN LAYERS: Zoom In, Measure, Zoom Out, Pan, Full Extent, Identify, Saved Views Browser.

LAND USE	PHOTO EXAMPLE	DESCRIPTION
TOWN CENTER MIXED USE		Urban setting, a walkable mix of residences, retail and offices. Transit friendly.
LOW-RISE RESIDENTIAL		Town setting, mid-density building, use in mostly residential, Transit friendly.
POSTAGE STAMP LAWNS TOWN GRID		Suburban character, single family homes, residential uses, possible neighborhood retail.
ACRE LOT SUBDIVISIONS		Suburban character, single family homes, residential uses.
PARKS & RECREATION FACILITIES		Publicly protected recreational open space.
CONSERVATION AREA		Publicly protected wetlands (marsh) limited facilities and a few roads.
BUSINESS THROUGHWAY		Urban setting, a walkable mix of residences, retail and offices. Transit friendly.
CANAL HOMES & CONDOS		Single family homes along canals and a few businesses that support the community lifestyle.
SUBURB SUBDIVISIONS		Suburban character, single family homes and other residential uses.
SUBURB RANCHETTES		Rural character, single family homes for rural and agricultural uses.
RANCHING & AGRICULTURE		Few facilities and homesteads for agricultural production.
HEAVY INDUSTRY		Industrial uses: rail, truck and highway, refining, manufacturing, and processing.

LAND USE	Residential (Res.)	Retail (Ret.)	Business (Bus.)	Industrial
TOWN CENTER MIXED USE	30	20	20	10.8
LOW-RISE RESIDENTIAL	8	4	1	0.2
POSTAGE STAMP LAWNS TOWN GRID	0	0	0	0
ACRE LOT SUBDIVISIONS	0	0	0	0
PARKS & RECREATION FACILITIES	0	0	0	1 Story
CONSERVATION AREA	0	0	0	100%
BUSINESS THROUGHWAY	0	0	0	0
CANAL HOMES & CONDOS	0	0	0	0
SUBURB SUBDIVISIONS	0	0	0	0
SUBURB RANCHETTES	0	0	0	0
RANCHING & AGRICULTURE	0	0	0	0
HEAVY INDUSTRY	0	0	0	0

## Appendix F. – Evaluation Results

### Workshop Evaluation Results

Total Participants: 35

Response Rate (20/35): 57%

#### 1. Attendee's Name/Agency (Optional): Data Withheld.

#### 2a. How did you hear about this workshop?

Check all that apply in the columns below:

Answer	Response	%
ASFPM	3	15%
Mississippi-Alabama Sea Grant	13	65%
AFMM	0	0%
MEMA	2	10%
Social Media	1	0.5%
Word of mouth	6	30%
Other	0	0%

#### 2b. Indicate which professional associations you are affiliated with: Check all that apply in the columns below:

Answer	Response	%
AICP Certified	2	10%
APA Member	2	10%
ASFPM Member	11	55%
Attorney	1	0.5%
CFM Certified	13	65%
Professional Engineer	0	0%
Professional Surveyor	0	0%
Other:	3	15%
None	1	0.5%

Other: Zoning Administrator, GISC/GISP

**3. How useful was this program in providing new knowledge to help you make future decisions and take action to apply the No Adverse Impact approach in your community? Mark one rating per item (row).**

Question	Not Useful	Somewhat Useful	Useful	Total Responses
1. Make decisions	0	2	17	19
2. Take action	0	3	16	19

**5. Check one response per item (row).**

Question	Yes	No	Total Responses
1. Do you feel you can apply this information to your work?	20	0	20
2. Have we given you the tools to implement this information in your work?	20	0	20
3. Would you recommend this workshop for others to attend?	20	0	20

**5. Describe how you plan to use what you learned from this program.**

Text Response
Will pass ideas associated with NO Adverse Impact principles on to CHOST members and officials To try to implement more higher standards
I plan to implement what I learned when issuing new permits and advising clients building in SFHA How to not future make floodplain issues worse
Education and public engagement
Work with Dept. head to make sure we stay consistent. Keep maintaining necessary doc's for the CRS
I would love to do the CHARM program in a comprehensive plan update
Educate our elected officials on the concept of NAI
Will apply to upgrading existing floodplain ordinance
Decision matrix
CHARM
Will request copy of CHARM tool
Take it back to other communities
Translate to a session at the 2017 Louisiana State Planning conference

**6. What are the most important legal issues you face related to floodplain management as a Coastal Resource Manager, Floodplain Manager, Planner, Attorney, etc.?**

**Text Response**

How to develop technical assistance to help communities involved in CRS  
 Convincing elected officials that they cannot do that certain development because it doesn't follow NFIP regulations  
 Accountability if permit was issues and loss was suffered  
 Giving incorrect information to the public  
 Consistency  
 Avoiding takings and justifying why the regulations exist  
 Past non-enforcement of city ordinance  
 Non-compliant structures  
 Strengthening resiliency codes

**7a. Workshop Content & Delivery: Please tell us how the workshop met or did not meet your expectations in the areas listed below. Check one rating per item (row).**

Question	Did Not Meet Expectations	Met Expectations	Exceeded Expectations	Total Responses
1. Learning Objectives Achieved	0	10	9	19
2. Course Topics Covered as Advertised	0	11	8	19
3. Presentation of Information	0	10	9	19
4. Facilitation of Activities	0	9	10	19
5. Encouragement of Discussion	0	9	10	19
6. Building Connections to Resources	0	12	7	19
7. Workshop Facilities	0	10	10	20
8. Overall Rating	0	7	13	20

**7b. Additional comments for workshop content & delivery:**

**Text Response**

Very good job on all aspects  
 Great breakfast snacks, coffee and lunch  
 Very informative  
 Great job!  
 Particularly enjoyed hands-on CHARM demonstration

**8. Workshop Materials & Information: Please tell us how the workshop met or did not meet your expectations in the areas listed below. Check one rating per item (row).**

Question	Did Not Meet Expectations	Met Expectations	Exceeded Expectations	Total Responses
Activities / Exercises	0	8	12	20
Handout Materials	0	12	6	18
Visual Aids	0	9	10	19
Amount of Information	0	11	9	20
Level of Information	0	11	9	20

**9. What would make this workshop better to help you implement practices related to the No Adverse Impact approach in your work?**

**Text Response**

I think some additional insight into national examples of NAI implementation would have been useful.  
 Same training for more people  
 Builders need to be more aware of this including surveyors and architects. As government, we are the last ones before the building permit and we often have to say you can't do this.  
 More examples from various municipalities  
 More material  
 No suggestions – great job

**10. Are there additional topics you would be interested in learning about in future workshops related to No Adverse Impact, green infrastructure, coastal or floodplain management, etc.?**

**Text Response**

Would like to learn more about the different methods and techniques that exist to floodproof structures  
 Full day CHARM workshop

**11. Additional comments:**

**Text Response**

I wish we'd had more time using the CHARM program vs. listening to people talk. Most participants are CFM's and knew a lot of the spoken information.  
 When are you going to do this one again, I have more folks that would like to attend!  
 Too many questions here!