

# North Carolina Association of Floodplain Managers

Annual Conference  
Wrightsville Beach, NC May 6 - 8, 2024

## PROGRAM

Sunday, May 5 (Pre-conference Activities)	
Noon – 12:30	<b>Annual John Fullerton Memorial Golf Tournament</b> <i>Beverages Provided – Bill Tingle CFM</i>
12:30 – 6:00	<b>Annual John Fullerton Memorial Golf Tournament</b> <i>Wilmington Municipal Golf Course, Tee Time 12:30 PM – Bill Tingle, CFM</i>
4:30 – 6:30 PM	<b>Registration</b> (Event Space Foyer, Lobby Entry)
5:00 – 8:00 PM	<b>Exhibitor Set-Up</b> (Prefunction Concourse) <i>*Note: Exhibits must be removed before 6:00 PM on Tuesday.</i>
6:30 – until	<b>NCAFPM Board Meeting</b> (Solstice Private Dining Room)
8:00 - until	<b>NCAFPM Hospitality Suite</b> (Room # 652)
Monday, May 6 “Big Visions from State Partners”	
7:00 – 10:00 AM	<b>Registration CEC Check-in</b> (Event Space Foyer, Lobby Entry)
7:00 – 8:15	<b>Coffee, Juices, and Assorted Biscuits</b> (Prefunction Concourse)
All Day	<b>Silent Auction</b> (Prefunction Concourse)
8:15 AM – 12:00 Noon	<b>PLENARY SESSION 1</b> (Lumina Ballroom)
8:15 – 8:30	<b>Welcome and Updates</b> <i>Laura Arnold, PE, CFM (NCAFPM Chair)</i> <i>Mike Robinson, CFM (NCAFPM Program Chair)</i> <i>Bill Tingle, CFM (NCAFPM Executive Director)</i>
8:30 – 8:40	<b>Welcome</b> Mayor of Wrightsville Beach [10]
8:40 – 9:40	<b>NCEM Hazard Mitigation, NCFMP, NFIP, and NCGS Updates</b> [60] <i>Steve McGugan (State Hazard Mitigation Officer); Steve Garrett, CFM (State NFIP Coordinator); Chris Crew (Mitigation Plans Manager); and Gary Thompson, PLS (Deputy Hazard Mitigation Chief, NC Geodetic Survey Chief)</i>
9:40 – 10:10	<b>FEMA Region IV Updates</b> [30] <i>Valerie Anderson, CFM, Floodplain Management Specialist, Floodplain Management and Insurance Branch, FEMA Region 4</i>
10:10 – 10:30	<b>Break and Silent Auction Open</b> – (Assorted Danishes, Yogurt, Fresh Fruit, and Soft Drinks) (Prefunction Concourse) [20]
10:30 – 11:15	<b>NCDOT’s Roadway to Resilience Update</b> [45] <i>Matt Lauffer, PE, CPM State Hydraulics Design Engineer, NC Department of Transportation, Hydraulics Unit</i>

## Monday, May 6 “Big Visions from State Partners”

<b>11:15 – Noon</b>	<b>NC Flood Resiliency Blueprint Update [45]</b> <i>Marc Recktenwald, NC Division of Mitigation Services, NC Department of Environmental Quality</i>
<b>12:00 – 1:15 PM</b>	<b>Networking Luncheon – “Flavors de Mexico Buffet” Lunch Buffet (Prefunction Concourse, Lumina Ballroom)</b>
<b>1:15 to 4:45</b>	<b>PLENARY SESSION 2</b>
<b>1:15 – 1:45</b>	<b>KEYNOTE ADDRESS: Development of a Resilient Route Identification Tool for NCDOT Using 2D Rain-on-Grid Modeling and SAS Institute’s Data Analytics VIYA Platform [30]</b> <i>Barbara Doll, PhD, PE – NC Sea Grant and NC State University, Biological &amp; Agricultural Engineering Department</i>
<b>1:45 – 2:15</b>	<b>North Carolina Geospatial Data Update [30]</b> <i>Colleen Kiley, GISP, CFM, NC Center for Geographic Information and Analysis</i>
<b>2:15 – 2:45</b>	<b>Flood Resilience Updates from NCORR [30]</b> <i>Holly White, AICP, CFM and Jeffrey Royal, North Carolina Office of Recovery &amp; Resiliency</i>
<b>2:45 – 3:15</b>	<b>Break and Silent Auction Open – Assorted Snacks and Soft Drinks (Prefunction Concourse) [30]</b>
<b>3:15 – 3:45</b>	<b>NC Division of Coastal Management Updates [30]</b> <i>Kasen Wally, Coastal Resilience Specialist, NC Division of Coastal Management, NC Department of Environmental Quality</i>
<b>3:45 – 4:15</b>	<b>State Construction Office Uniform Floodplain Management Policy Updates [30]</b> <i>Michael Ali, PE State Construction Office, NC Department of Administration</i>
<b>4:15 – 4:45</b>	<b>FEMA Region IV Updates [30]</b> <i>Substantial Damage Administrative Procedures Program (SDAP): Things Every Community Needs to Know – Valerie Anderson, CFM, Floodplain Management Specialist, Floodplain Management and Insurance Branch, FEMA Region 4</i>
<b>All Day</b>	<b>Silent Auction (Prefunction Concourse)</b>
<b>5:00 – 7:00 PM</b>	<b>Exhibitors’ Social, Hoes d’oeuvres, Full Bar (2 drink tickets provided w/Cash Bar after) (Prefunction Concourse)</b>
<b>8:00 – until</b>	<b>NCAFPM Hospitality Suite (Room # 652)</b>

## Tuesday, May 7 “Step-by-Step in Local Communities”

<b>7:00 – 8:30 AM</b>	<b>Registration - CEC Check-in (Event Space Foyer, Lobby Entry)</b>		
<b>7:00 – 8:15</b>	<b>Coffee, Bagels, Fresh Fruit and Assorted Juices (Prefunction Concourse)</b>		
<b>8:30– 10:00</b>	<p><b>1-A Floodplain Management Technical Session</b> <i>(Airlie/Tidewater)</i> <b>Moderator:</b> Amit Sachan, PE, CFM</p> <p><b>One [30]</b> <i>Updates to the Elevation Certificate (EC) – Steve Garrett, CFM and Eryn Futral, AICP, CFM, CZO (NCEM)</i></p> <p><b>Two [30]</b> <i>Letters of Map Change (LOMC) in North Carolina – Scott Gentry, PE, CFM (NCFMP)</i></p> <p><b>Three [30]</b> <i>Louisiana’s Odyssey Towards Higher Standards: Statewide Freeboard Requirement – Gary O’Neal, CFM (Tetra Tech)</i></p>	<p><b>1-B Community Planning and GIS Session</b> <i>(Masonboro)</i> <b>Moderator:</b> Holly White, AICP, CFM (NCORR)</p> <p><b>One [30]</b> <i>City of New Bern: Using GIS for Resiliency – Alice Wilson, AICP, GISP (City of New Bern)</i></p> <p><b>Two [30]</b> <i>City of Fayetteville Watershed Master Plan – Ali Shallal, PhD and Alicia Lanier, PE, CFM (City of Fayetteville)</i></p> <p><b>Three [30]</b> <i>Technologies, Techniques and Tips for Conducting Post-Flood Response in Mecklenburg County, NC – James Scanlon, CFM, GISP (Mecklenburg County)</i></p>	<p><b>1-C Mapping and Modeling Session</b> <i>(Causeway)</i> <b>Moderator:</b> Scott Brookhart, PE, CFM</p> <p><b>One [30]</b> <i>Modeling a Receiving Watershed Based on FEMA New Protocol: Decoupled VS Coupled Approaches – Khaled Pordel, PE, CFM (AtkinsRealis)</i></p> <p><b>Two [30]</b> <i>Watershed Modeling: Isn’t Hydrology Supposed to be the Simple Task? – Steve Godfrey, PE, CFM (Woolpert)</i></p> <p><b>Three [30]</b> <i>Uses of Topobathymetric LIDAR and Teledyne Optech CZMIL Sensor – Ryan Ligon (Dewberry)</i></p>
<b>Note:</b> Duration of individual presentations is in brackets [ ].			
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## Tuesday, May 7 “Step-by-Step in Local Communities”

<p><b>8:30– Noon</b></p>	<p><b>1-D Field Tour A</b>  <b>Battleship North Carolina Flood Resiliency Project</b> Host: Dawn York and Jeff Crump (Moffatt &amp; Nichol) Please board the bus in front of the hotel.</p>		<p><b>1-E Hazard Mitigation Grant “Office Hours”</b>  <i>(Soundwatch)</i>            Host: NCEM</p>
<p>10:00 – 10:30</p>	<p><b>BREAK</b> – Cinnamon Buns, Assorted Fruit, Yogurt, Soft Drinks, Coffee (Prefunction Concourse)</p>		
<p><b>10:30 – Noon</b></p> <p><b>Note:</b> Duration of individual presentations is in brackets [ ].</p>	<p><b>2-A Nature-Based Solutions Session</b>  <i>(Airlie/Tidewater)</i>  <b>Moderator:</b> Jason Hetrick, PE, CFM (McCormick Taylor)</p> <p><b>One [30]</b>  <i>What Do Nature-Based Solutions Look Like in Practice, and How Are They Vital to Flood Mitigation and Resiliency – Phillip Todd (Freese &amp; Nichols)</i></p> <p><b>Two [30]</b>  <i>What Nature-Based Solutions Are (and What They Are Not!) and How They Can Work with Gray Structural Flood Mitigation Practices – Crystal Moore and Kirsten Ullman, CFM (KCI)</i></p> <p><b>Three [30]</b>  <i>Evaluating the Effectiveness of Woody Debris Removal for Mitigating Flooding – Jack Kurki-Fox, PhD, PE, NC State University, Biological &amp; Agricultural Engineering Department)</i></p>	<p><b>2-B Innovative Technologies and Solutions Session</b>  <i>(Masonboro)</i>  <b>Moderator:</b> Stephen Smith, CFM (Town of Ayden)</p> <p><b>One [30]</b>  <i>Five Tips for “No Revisions Needed” Hazard Mitigation Plan Updates – Nathan Slaughter, AICP, CFM (ESP Associates)</i></p> <p><b>Two [30]</b>  <i>Business Case and Goals Attained from Completing the Downtown Cramerton Parking &amp; Stormwater Management Project – Danny Lee Watson, PE, CFM, PMP (LaBella Associates)</i></p> <p><b>Three [30]</b>  <i>Floodplain Design, Construction &amp; Impacts on Flood Insurance – Drew Gerling (Floodproofing.com)</i></p>	<p><b>2-C Mapping and Modeling Session</b>  <i>(Causeway)</i>  <b>Moderator:</b> Kurt Golembesky, PE, CFM (NCDOT)</p> <p><b>One [30]</b>  <i>2D Diffusion Wave Transform Method for HEC-HMS – Barnard Mondal, PE and Ken Trefzger, PE (HDR)</i></p> <p><b>Two [30]</b>  <i>Data-Driven Floodplain Management and Regulation in Clearwater, FL: Using Models and Maps to Take Future Conditions Into Account – Sophia Clavel (Forerunner)</i></p> <p><b>Three [30]</b>  <i>Approach and Challenges in Calibrating Rain-on-Grid 2D BLE Hydraulic Models, Case Study – Paniz Mohammadpour, PhD (AtkinsRealis)</i></p>
<p><b>Noon – 1:30 PM</b></p>	<p><b>Networking Luncheon</b> – Create your own Deli Buffett (<i>Prefunction Concourse, Lumina Ballroom</i>)  <b>NFIP State Coordinator’s Corner</b> – Steve Garrett, CFM, NC NFIP State Coordinator  <b>Scholarship Program</b> – Ken Ashe (<i>Immediate Past Chair</i>)  <b>Student Chapter</b>  <b>NCAFPM Chapter Meeting</b> – Bill Tingle, CFM, NCAFPM Executive Director</p> <ul style="list-style-type: none"> <li>• Changes to Bylaws</li> <li>• Chapter Renewal</li> <li>• NCAFPM Board Elections</li> </ul>		
<p><b>1:30 – 4:30</b></p>	<p><b>Field Tour B</b>  <b>Clear Run Stream Restoration Project</b>            Host: Fred Royal (City of Wilmington) and Dawn York and Jeff Crump (Moffatt &amp; Nichol) Please board the bus in front of the hotel.</p>	<p><b>Certified Floodplain Manager (CFM) Exam Refresher</b>  <i>(Soundwatch)</i></p> <p><b>Moderator:</b> Steve Garrett, CFM (NCEM)</p>	

## Tuesday, May 7 “Step-by-Step in Local Communities”

<p><b>1:30 – 3:00</b></p>	<p><b>3-A Community Rating System (CRS) Session</b> (Airlie/Tidewater) <b>Moderator:</b> Ken Vafier, CFM (New Hanover County)</p> <p><b>One [30]</b> CRS Repetitive Loss (RL) Area Analysis (AA): You’re Closer Than You May Think – Gary O’Neal, CFM (Tetra Tech)</p> <p><b>Two [30]</b> Improve Multiple CRS Classes with Low-Hanging Fruit and Proper Documentation – Daryl Norris, PE, CFM (City of Greenville)</p> <p><b>Three [30]</b> CRS: Is Your Community Living Up to Its Full Potential? – Gary O’Neal, CFM (Tetra Tech)</p>	<p><b>3-B Equity Session</b> (Masonboro) <b>Moderator:</b> Holly White, AICP, CFM (NCORR)</p> <p><b>One [45]</b> Advancing Equity in North Carolina: An Engineer’s Handbook – Ummekulsoom Lalani, MPP, PMP and Lauren Sester, EI, CFM (AtkinsRealis)</p> <p><b>Two [45]</b> Integrating Equity into Planning – JaLeesa Tate, CFM (Tetra Tech)</p>	<p><b>3-C Nature-Based Solutions Session</b> (Causeway) <b>Moderator:</b> James Scanlon, CFM (Mecklenburg County)</p> <p><b>One [30]</b> Nature-based Design for Resiliency Purposes – Case Study: Using Bivalves to Decrease Scour in Place of Traditional Means – Joanna Quiah, MS, PE (Burns &amp; McDonnell)</p> <p><b>Two [30]</b> Funding Preparedness Kit: A List of Funding Essentials – Maie Armstrong (ESP Associates)</p> <p><b>Three [30]</b> Putting the “Green” in the City of Greensboro’s South Buffalo Creek Watershed Master Plan – Chris Stanley, PE, CFM; Cameron James, PE, CFM; and Hunter Freeman, PE, LEED AP (McAdams)</p>
<p><b>3:00 – 3:15</b>      <b>BREAK – Assorted Snacks and Soft Drinks (Prefunction Concourse)</b></p>			
<p><b>3:15 – 4:30</b></p>	<p><b>4-A Mapping and Modeling Session</b> (Airlie/Tidewater) <b>Moderator:</b> Laura Arnold, PE, CFM (AECOM)</p> <p><b>One [15]</b> 2025 Datum Changes: Updates and Reminders – Gary Thompson, PLS (NCGS)</p> <p><b>Two [30]</b> Finding Solutions to Flooding Using Modeling and Community Engagement in the City of Raleigh – Elizabeth Karivelil (Brown &amp; Caldwell)</p> <p><b>Three [30]</b> Beneath the Surface: Unveiling Hidden Depths of Flood Resilience with USGS 3DNTM – Tyson James PE, CFM (AECOM)</p>	<p><b>4-B Stormwater Session</b> (Masonboro/Causeway) <b>Moderator:</b> Todd Kennedy (HDR)</p> <p><b>One [15]</b> Flood Modeling for a Changing Coast – Ross Perry, PE, CFM (WithersRavenel)</p> <p><b>Two [30]</b> Win-Win! Partnerships for Flood Warning – Alicia Lanier, PE, CFM, HSDP (City of Fayetteville), Scott Brookhart, PE, CFM (Arcadis), and David Key, PE, CFM (ESP Associates)</p> <p><b>Three [30]</b> City of Aiken, SC CMAC Sand River Stormwater Project: Performance Evaluations and Observations After One-Year of Operation – Jason Hetrick, PE, CFM (McCormick Taylor)</p>	
<p><b>4:30 – 5:00</b></p>	<p>Close Out Silent Auction (Prefunction Concourse)</p>		
<p><b>6:30 – 9:00</b></p>	<p><b>Conference Social – Outdoor Palms of Lumina near pool: Low Country Boil, Games, Full Bar (2 drink tickets provided w/Cash Bar after). In the event of bad weather, the social will be held in the Lumina Ballroom.</b></p>		
<p><b>9:00 – Until</b></p>	<p>NCAFPM Hospitality Room (Room # 652)</p>		

# Wednesday, May 8 “Step-by-Step” Continued and Closing Plenary

<b>7:30 – 9:00 AM</b>	<b>Registration - CEC Check-in</b> ( <i>Event Space Foyer, Lobby Entry</i> )		
<b>7:30 – 8:30</b>	<i>Coffee and Continental Breakfast, Juices, and Fresh Fruit (Prefunction Concourse)</i>		
<b>8:30 – 10:00</b>	<p><b>5-A Dam Safety Session</b> (<i>Airlie/Tidewater</i>) <b>Moderator:</b> <i>Virginia Spillman, CFM (City of Greensboro)</i></p> <p><b>One</b> [45] <i>NCDEQ Dam Safety Program Updates – Jacob Smith (NCDEQ)</i></p> <p><b>Two</b> [45] <i>Lewis Dam Failure: Dam Safety in a Changing Climate and Lessons Learned – Holly Miller, PE, CFM, CPESC (Tetra Tech)</i></p>	<p><b>5-B Stream Restoration and Design Session</b> (<i>Masonboro/Causeway</i>) <b>Moderator:</b> <i>Alicia Lanier, PE, CFM, HSDP (City of Fayetteville)</i></p> <p><b>One</b> [30] <i>City of Wilmington Clear Run Branch Stream Restoration Project – Fred Royal, CFM (City of Wilmington) and Jeff Crump, PE (Moffatt &amp; Nichol)</i></p> <p><b>Two</b> [30] <i>Bang for your Buck! How Flood Risk was Reduced, a Stream was Restored, and Habitat for a Listed Species and Trout was Improved – Emily Brown, PhD, PE, ENVSP, CFM (Freese &amp; Nichols)</i></p> <p><b>Three</b> [30] <i>NC State Coastal Dynamics Design Lab – Travis Klondike, PLA, ASLA (NC State College of Design)</i></p>	<p><b>5-C Certified Floodplain Manager (CFM) Exam</b> (<i>Soundwatch</i>)</p> <p><b>Moderators:</b> <i>Bill Tingle, PG, CFM and Melonee Brock, CFM (NCAFPM)</i></p>
<b>10:00 – 10:30 AM</b>	<b>BREAK</b> – <i>Homemade Gourmet Cookies and Soft Drinks (Prefunction Concourse)</i>		
<b>10:30 – Noon</b>	<b>CLOSING PLENARY (Lumina Ballroom)</b>		
<b>10:30 – 11:00</b>	<b>Advancements in Floodplain Management: A Focus on Transportation Research Board’s Past and Present Research in Floodplain Management, Mapping and Resiliency</b> – <i>Kurt Golembesky, PE, CFM (NCDOT)</i> [30]		
<b>11:00 – 11:30</b>	<b>NCORR North Carolina Resilience Exchange</b> – <i>Nicole Goddard (NCORR)</i> [30]		
<b>11:30 – Noon</b>	<b>Conference Closing and Prize Giveaways</b> <i>Ken Ashe, PE, CFM (Immediate Past Chair, NCAFPM)</i> [30]		
<b>Noon</b>	<b>CONFERENCE ADJOURNS</b>		

## PRESENTERS

<p>Michael Ali, PE Valerie Anderson, CFM Maie Armstrong, PE, CFM, MPA Ken Ashe, PE, CFM Scott Brookhart, PE, CFM Emily Brown, PhD, PE, ENVSP, CFM Sophia Clavel Chris Crew, CFM Jeff Crump, PE Barbara Doll, PhD, PE Hunter Freeman, PE, LEED AP Eryn Futral, AICP, CFM, CZO Steve Garrett, CFM Scott Gentry, PE, CFM Drew Gerling Nicole Goddard Steve Godfrey, PE, CFM Kurt Golembesky, PE, CFM Jason Hetrick, PE, CFM Cameron James, PE, CFM Tyson James, PE, CFM Elizabeth Karivelil David Key, PE, CFM</p>	<p>Colleen Kiley, GISP, CFM Travis Klondike, PLA, ASLA Jack Kurki-Fox, PhD, PE Ummekulsoom Lalani, MPP, PMP Alicia Lanier, PE, CFM Matt Lauffer, PE, CPM Ryan Ligon Steve McGugan Holly Miller, PE, CFM, CPESC Paniz Mohammadpour, PhD Barnard Mondal, PE Crystal Moore Daryl Norris, PE, CFM Gary O’Neal, CFM Ross Perry, PE, CFM Khaled Pordel, PE, CFM Joanna Quiah, MS, PE Marc Recktenwald Fred Royal, CFM Jeffrey Royal James Scanlon, CFM, GISP Lauren Sester, EI, CFM Ali Shallal, PhD</p>	<p>Nathan Slaughter, AICP, CFM Jacob Smith Chris Stanley, PE, CFM JaLeesa Tate, CFM Gary Thompson, PLS Phillip Todd Ken Trefzger, PE Kirsten Ullman, CFM Kasen Wally Danny Lee Watson, PE, CFM, PMP Andrea Webster Holly White, AICP, CFM Alice Wilson, AICP, GISP</p>
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