

The BFE*

* BASE FLOOD ELEVATION

2023 Spring Technical Update

Brandon Claborn PE, CFM - OFMA Conference Co-Chair

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OFMA has historically produced great conferences for an organization of its size, and this year's Spring Technical Workshop continued to raise the bar. The theme this year was "The Digital Age of Flood and Stormwater Management," and the workshop was held at the Hard Rock Casino Hotel & Resort in Catoosa on April 11, 2023. After the welcome, invocation, and National Anthem, Jon Phillips, State NFIP Coordinator, started us off with an update on the Oklahoma State Flood Plan, upcoming training opportunities, and current issues facing the state. Kim Jenson, Interim State Hazard Mitigation Officer with ODEMHS, provided an update from Emergency Management, and OFMA's Chair, Lincoln Irvine, shared OFMA's current issues and goals.

The morning plenary session jumped right into the conference theme. Chris Hill and I presented the Evolution of Technology in Floodplain Management, recapping the technology changes in the last 50 years of the NFIP program and took some guesses at future technological impacts, including machine learning and artificial intelligence. For our more experienced members, it brought back fond memories of light

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Words from the Chair

Lincoln Irvine PE, CFM | OFMA Chair



Volunteering for the Midwest City's Earth Day was a great opportunity for me to meet new people and discuss concerns and problems with the floodplain. It was also good for me to think through how to communicate with local community members about significant flooding topics. One of my favorite parts of the flood model was the detention scenario. It was interesting to me to describe to others at the event how detention works in a straightforward way. After slowly pouring the pitcher of water into the miniature detention pond with its small orifice, the flow was significantly reduced. The observers were amazed by the fact that the detention pond had reduced almost all the flooding impacts. I thought after my fifth or so flood trial that a regional detention basin would be very effective whenever it comes to controlling flooding impacts.

I was very impressed with all the experiences people had with flooding. I was amazed when one spectator told me that her trailer was flooded and that her home was permanently relocated downstream. One homeowner told me of his story of living through a 60-inch rain event in the city of Houston. I thought to myself, "Wow! These people should be a part of OFMA." People with firsthand flooding experience are highly motivated and, in my mind, considered to be experts at dealing with flooding problems. After all the related flood experiences, I resorted to my standard answers when asked the difficult questions about what to do about future flood problems. The best answer I could come up with was, Have you considered buying flood insurance? Or have you ever considered moving out of the floodplain? Overall, the event was a success.

Carrie Evenson wrote the following about the event: Public events, like our First Annual Earth Day Festival here in

Midwest City, are great opportunities to meet with local residents in a fun, light-hearted atmosphere while educating them on the importance of water in their daily lives. We don't get many opportunities to meet with people in a completely nonregulatory way to discuss flooding and water quality like we did on Saturday. I think these events are invaluable for that reason alone. With these events, you know people are really interested and paying attention when they stay and ask questions. Every time I looked in on your table, you were surrounded by people asking questions.

The other thing events like this do is allow us to highlight the work being done across the city by our Public Works. Often, the extraordinary work done by these individuals goes unseen because the systems they keep functioning are underground. Public events give our employees a chance to interact with the public and highlight the things they do on a daily basis to keep our municipality functioning.

I think any event with the public, whether it's a festival, Touch-a-Truck event, or community meeting, are good events for OFMA members to attend and provide information. The membership may just need a reminder that OFMA has a couple of flood models that are available for them to borrow and use.

We really appreciate OFMA's participation in Midwest City's event and you spending a freezing morning outside talking to our residents about flooding! We are planning the next one for April 20, 2024, if OFMA is interested in participating again.

I encourage all of you to take opportunities to share your expertise and experience. By sharing the experiences, we become stronger experts in our field.

Continued from page 1

tables and planimeters and concerns about keeping up with the pace of change in technology. Our younger members laughed at the technologies they never heard of and were excited at the potential future applications of technology. Will Lehman, an economist with USACE's Hydrologic Engineering Center, shared insights from FEMA's Future of Flood Risk Data Initiative (FFRD). One of the big takeaways was the goal of shifting from a binary analysis (high flood risk if you are in the SFHA, little to no flood risk if you are out) to a probabilistic mindset to better represent risk and a graduated manner. Will also shared some examples of how "Big Data" and Machine Learning are already being used to improve analysis and communication of flood risk.

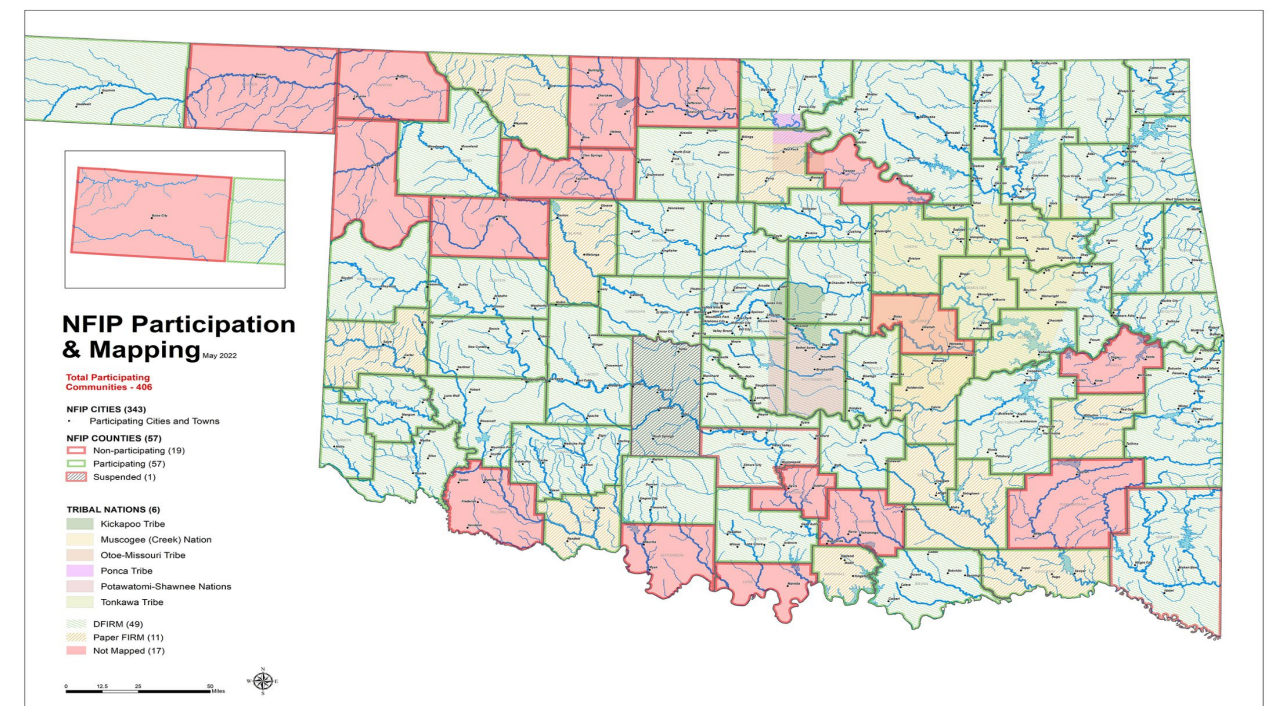
Attendees enjoyed a buffet lunch with a great view from the 18th floor with ample time for networking or just taking in the view.

The afternoon started with breakout sessions in three track tropics: Technical Topics, Mitigation and Resilience, and Rural FPA Toolbox.

William "Bill" Smiley with USACE Tulsa District started the closing plenary session with a presentation titled, Are You Data Ready? Identifying Key Data Sources to Technically Evaluate Flood Risk Impacts. This presentation did a great job of challenging our members on the application side of floodplain management with examples of things an FPA (and others) can do to better prepare for a flood event, including resources USACE can provide. Nicole McGavock, Service Hydrologist and Meteorologist for the National Weather Service in Tulsa Forecast Office, was our final speaker. Nicole shared current and future products the National Weather Service produces that can be used by the floodplain community.

If you missed a reference on a slide, presentations can be viewed/downloaded from our website at <https://okflood.org/2023-spring-technical-workshop-presentations/>.

A special thank you to Vice Chair, Annie Vest and those who helped make this year's workshop successful. Thanks also are due to Carolyn Schultz and Michelle Gourd for the many things they did to prepare for the conference and for running registration at the event.



NFIP Participation map from John Phillips', NFIP State Coordinator, presentation on the NFIP Program Update

FEMA Releases Additional Risk Rating 2.0 Data

If you haven't yet seen this, FEMA released Risk Rating 2.0 data publicly yesterday afternoon. See the data, at this link <https://www.fema.gov/flood-insurance/work-with-nfip/risk-rating/single-family-home> and the table summary below.

Exhibit 1: Risk-based Cost of Insurance									
Single Family Home, Levee and Non-Levee, In-force on September 30, 2022 and rated under RR2.0									
OKLAHOMA STATE WIDE									
Range of Cost of Insurance	Policies in Force (PIF)	PIF Distribution	Average RCV	Average Risk-based Cost of Insurance	Percentage of Policies with Exposure To:				
					Inland Flood	Storm Surge	Tsunami	Great Lakes	Coastal Erosion
0 - 1,000	2,556	44%	371,203	682	100.0%	0.0%	0.0%	0.0%	0.0%
1,000 - 2,000	1,753	30%	387,237	1,409	100.0%	0.0%	0.0%	0.0%	0.0%
2,000 - 3,000	692	12%	417,523	2,436	100.0%	0.0%	0.0%	0.0%	0.0%
3,000 - 4,000	337	6%	444,841	3,458	100.0%	0.0%	0.0%	0.0%	0.0%
4,000 - 5,000	244	4%	508,688	4,465	100.0%	0.0%	0.0%	0.0%	0.0%
5,000 - 6,000	126	2%	545,687	5,499	100.0%	0.0%	0.0%	0.0%	0.0%
6,000 - 7,000	88	2%	671,065	6,431	100.0%	0.0%	0.0%	0.0%	0.0%
7,000 - 8,000	26	0%	860,155	7,381	100.0%	0.0%	0.0%	0.0%	0.0%
8,000 - 9,000	13	0%	732,237	8,469	100.0%	0.0%	0.0%	0.0%	0.0%
9,000 - 10,000	9	0%	926,818	9,543	100.0%	0.0%	0.0%	0.0%	0.0%
10,000 - 11,000	3	0%	955,568	10,386	100.0%	0.0%	0.0%	0.0%	0.0%
11,000 - 12,000	1	0%	1,051,760	11,242	100.0%	0.0%	0.0%	0.0%	0.0%
12,000 - 13,000	-	0%							
13,000 +	-	0%							
Total	5,848		403,990	1,683	100.0%	0.0%	0.0%	0.0%	0.0%

Exhibit 2: Risk-based cost of insurance versus current cost of insurance: State Summary									
Single Family Homes, Levee and Non-Levee, In-force on September 30, 2022 & Rated Under RR2.0									
ID	State/Territory	Policies in Force (PIF)	Average Risk-based Cost of Insurance	Average Current Cost of Insurance	Percentage of Policies with Exposure To:				
					Inland Flood	Storm Surge	Tsunami	Great Lakes	Coastal Erosion
ALL	ALL STATES AND TERRITORIES	2,192,730	1,808	888	100.0%	60.7%	1.0%	0.2%	7.4%
AK	ALASKA	1,230	543	454	100.0%	2.5%	23.0%	0.0%	0.0%
AL	ALABAMA	19,745	2,051	927	100.0%	47.1%	0.0%	0.0%	16.1%
AR	ARKANSAS	6,335	1,583	849	100.0%	0.0%	0.0%	0.0%	0.0%
AS	AMERICAN SAMOA	3	584	479	100.0%	33.3%	66.7%	0.0%	33.3%
AZ	ARIZONA	13,059	1,443	825	100.0%	0.0%	0.0%	0.0%	0.0%
CA	CALIFORNIA	89,572	1,689	901	100.0%	0.0%	14.8%	0.0%	2.9%
CO	COLORADO	7,910	1,644	860	100.0%	0.0%	0.0%	0.0%	0.0%
CT	CONNECTICUT	13,291	3,000	1,590	100.0%	62.3%	0.0%	0.0%	26.9%
DC	DISTRICT OF COLUMBIA	906	407	404	100.0%	0.0%	0.0%	0.0%	0.0%
DE	DELAWARE	10,903	1,497	874	100.0%	82.9%	0.0%	0.0%	23.6%
FL	FLORIDA	597,967	2,213	958	100.0%	90.8%	0.0%	0.0%	9.1%
GA	GEORGIA	43,324	1,332	791	100.0%	64.7%	0.0%	0.0%	4.0%
GU	GUAM	60	2,438	1,449	100.0%	16.7%	53.3%	0.0%	13.3%
HI	HAWAII	6,489	3,653	1,437	100.0%	46.9%	75.1%	0.0%	18.7%
IA	IOWA	4,804	1,679	867	100.0%	0.0%	0.0%	0.0%	0.0%
ID	IDAHO	2,673	1,633	862	100.0%	0.0%	0.0%	0.0%	0.0%
IL	ILLINOIS	15,698	1,697	1,039	100.0%	0.0%	0.0%	1.0%	0.0%
IN	INDIANA	9,793	1,361	917	100.0%	0.0%	0.0%	0.8%	0.0%
KS	KANSAS	4,084	1,569	870	100.0%	0.0%	0.0%	0.0%	0.0%
KY	KENTUCKY	9,231	2,201	1,060	100.0%	0.0%	0.0%	0.0%	0.0%
LA	LOUISIANA	284,095	1,904	813	100.0%	84.3%	0.0%	0.0%	1.2%

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MA	MASSACHUSETTS	20,348	2,097	1,269	100.0%	66.1%	0.0%	0.0%	26.8%
MD	MARYLAND	21,928	742	608	100.0%	64.1%	0.0%	0.0%	39.4%
ME	MAINE	3,565	2,700	953	100.0%	49.2%	0.0%	0.0%	40.8%
MI	MICHIGAN	11,037	1,068	811	100.0%	0.0%	0.0%	18.2%	0.0%
MN	MINNESOTA	3,914	1,832	943	100.0%	0.0%	0.0%	0.8%	0.0%
MO	MISSOURI	7,743	2,038	978	100.0%	0.0%	0.0%	0.0%	0.0%
MP	NORTHERN MARIANA ISLANDS	3	1,152	573	100.0%	33.3%	66.7%	0.0%	0.0%

Notes: Cost of insurance is defined as all premiums, fees, assessments and surcharges for a policy. Risk based cost of insurance is what policyholders would pay if they were paying their full actuarial rate (a rate based on the expected costs of losses and associated programmatic expenses) as evaluated under the rates implemented October 1, 2021 (Risk Rating 2.0). Note that rates will be updated periodically to reflect changes in risk. RCV (Replacement Cost Value) represents the estimated cost of replacing the building and any insured contents after a disaster, based on square footage and location-based data. This exhibit only includes Single-Family Home (SFH) policies that had transitioned to Risk Rating 2.0 by September 30, 2022. Any policies still rated under the legacy rating system at that point are not included in this exhibit. For this exhibit, all polices are shown with a \$25 Homeowner Flood Insurance Affordability Act (HFIAA) surcharge.

Source Data: NFIP PIVOT Analytics and Reporting Tool (PART); data was retrieved on December 15, 2022.

Region 6 Holds Data Today for Resilience Tomorrow Workshop for CTPs

In February, the Data Today for Resilience Tomorrow workshop was held for CTPs in Region 6. It was a meeting for FEMA and CTPs to come together and give CTPs the tools and information needed to coordinate and carry out the Risk MAP process throughout the region. The workshop taught local CTPs about FEMA's program requirements and discussed ways to align with the Risk MAP vision of reducing the risk of life and property and increasing the number of resilient communities.

At the workshop, attendees received updates on FEMA grant processes, notable CTP projects underway, FEMA's Risk MAP priorities, and resources and tools to help improve and streamline their work. There were also interactive activities and breakout sessions that allowed attendees to work together and learn from each other. The workshop had to be held online because of the weather, but it was still a great chance for everyone to share their ideas and experiences.

Attending these workshops is a great way to get involved in regional CTP work and learn more about how you can better serve your community.



New Staff Member at OWRB

OWRB Floodplain Management welcomes Mr. Jason Tutkowski, CFM, to our floodplain management staff. Originally from Wisconsin, Jason began his career at OWRB more than five years ago in our Water Rights Administration Division and moved to Floodplain Management on May 1. He will be involved in all areas of floodplain management, with special emphasis on our Cooperative Technical Partners program and the State Flood Plan.

Congratulations to the winners of our Turn Around Don't Drown Flood Safety Poster Contest

OFMA appreciates all the hard work of teachers, parents, and many others who supported this year's poster contest.

The students who entered also deserve our thanks.

We hope that by working together to spread the Turn Around Don't Drown® message. Floodwaters will harm fewer people in Oklahoma.

This year, more than 464 participants submitted their beautiful artwork.



CONTEST WINNERS

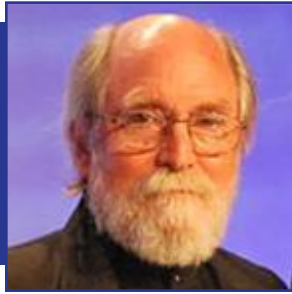
- 1ST PLACE** Reagan Stamile, School of St Mary
- 2ND PLACE** Levi McReynolds, Pond Creek-Hunter
- 3RD PLACE** Hannah Armbrister, Roosa Elementary
- HONORABLE MENTION** Anny Jiron, ASTEC Elementary

First, second and third place winners receive cash awards in the amount of \$150, \$100, and \$50, respectively. The top 13 posters in the state are published in the OFMA Turn Around Don't Drown® calendar. Each student participant is awarded a certificate of participation. Teachers receive a letter of appreciation.

Thank you to the following schools for supporting student participation in this year's program:

- ASTEC Charter School, OKC
- Blackwell Elementary, Blackwell
- Bridge Creek Intermediate School, Blanchard
- Creek Elementary, Muskogee
- First Luthern School, Ponca City
- Hilldale Elementary, Muskogee
- Liberty Elementary, Broken Arrow
- Marble City Elementary, Marble City
- Maryetta Schools, Stilwell
- Pond Creek-Hunter, Pond Creek
- Putnam City Schools, Warr Acres
- Roosa Elementary, Claremore
- School of St Mary, Tulsa
- Skiatook Elementary, Skiatook
- Stone Canyon, Owasso
- Taloga Public Schools, Taloga
- Timberlake Elementary, Jet
- Tulsa Legacy Charter School, Tulsa
- Washington Elementary, Clinton





OFMA DRT Corner

Rev. W. B. "Bill" Smith, PE, CFM | OFMA DRT Coordinator

The OFMA Disaster Response Team (DRT) and the Drone Support Team (DST) are always looking for volunteers. I just did an introductory training for 23 people from a church in Edmond – mostly retired – but with the expertise from their pre-retirement work to assist. They are excited to participate. I will return to Edmond and do a detailed training exercise for them once I receive their OFMA memberships and DRT signups.

Over the years, we have had up to 87 volunteers, but over time people have moved, decided not to continue to participate, retired from their jobs, etc. We always need assistance.

So that leads me to Spring 2023. To date, there have been more than 100 tornados greater in the US than normal. As I write this (5/8/23), I am looking at the weather map for Missouri, and they are in for a day of very severe weather. There are some who believe that "tornado alley" has moved to the south and east of Oklahoma, but the conditions for tornados in Oklahoma have not changed. The fronts coming off the Rockies, the Gulf moisture, and the dry lines from New Mexico still combine over Oklahoma. They say the Jet Stream is pushing some of the severe weather to the southeast.

Our southeast part of Oklahoma has had more than its share of rain and runoff this year so far, so we are not out of the woods.

As before, I ask if You (Mr. Floodplain Administrator) and your communities are prepared for an event – severe flooding, tornado, earthquake, hail, or strong winds, that may affect your Special Flood Hazard Area and the structures within it. Are you prepared to do the necessary assessments required by your participation in the National Flood Insurance Program?

Remember, if your community has not pre-signed for disaster response, please contact Bill Smith, DRT Coordinator, or Tom Leatherbee, DRT Assistant Coordinator, for a community signup sheet. It will require a council or county commissioner board action to prepare and return the required letter of authorization to request the OFMA DRT/DST to come to your community, so – be prepared.

Be safe out there - Spring Storm Season has just begun.

Bill Smith, DRT Coordinator

918-625-2449 or wbsmith@hisinc.us



STORMWATER QUALITY TECHNICAL WORKSHOP JULY 19, 2023

OFMA is hosting the Annual Stormwater Quality Technical Workshop on Wednesday, July 19th, 2023.

Embassy Suites Oklahoma City Will Rogers World Airport
1815 South Meridian, Oklahoma City, OK, 73108
8:30 am to 4:30 pm

The workshop will include presentations on municipal stormwater management, low impact development, inspections and enforcement, and total maximum daily loads (TMDLs).

Representatives from COSWA, the Oklahoma Department of Environmental Quality, the Oklahoma Conservation Commission, the Indian Nations Council of Government, and the Oklahoma Water Survey will be in attendance.

If you are looking for stormwater training for your inspectors or other city officials, this is a perfect opportunity to get them to a local workshop focused on stormwater quality.

Registration is \$100 per person and will be open soon.

Lunch and snacks will be provided.

If you have an interesting topic to present or want to recommend a speaker, please contact

Morgan Lozoya at mlozoya@meshekengr.com



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