

NeFSMA **Helping Protect the Good Life**

2016 Newsletter Volume 1

MESSAGE FROM THE CHAIR

Hello All!!

It's hard to believe that Memorial Day has past and we are already looking forward to Independence Day! Where does the time go...? Your board has been very busy putting together the NeFSMA Annual Conference, on July 21st. We have lined up a list of top-notch speakers, fascinating tour of the old Kearney Dam, and an evening social at the Younes Conference Center in Kearney the night before! In addition, the Silver Jackets group will be hosting a Dam Safety Workshop on July 20th. Sign-up/Registration is available now!



Tanna Wirtz and Justin Zetterman demonstrate the effects of flooding at the Omaha Children's Museum.

Over the past several months, members of NeFSMA have presented at several educational events, with several more to come. We are always looking for volunteers for these events.

Also, NeFSMA has been discussing a potential partnership with the newly forming National Municipal Stormwater Alliance (NMSA). More on this to come!

I would also like to take this opportunity to thank the other members of the Board of Directors for their continued efforts to ensure that NeFSMA continues to be a leader in floodplain and stormwater management. This organization would not be what it is without everyone's efforts!

Looking forward to seeing you all at our upcoming Kearney event!

Nate Hartman
Chair, NeFSMA



8th Annual NeFSMA Conference

Join us for our 8th Annual Conference and associated events!

Our 8th Annual Conference will be held July 21st, 2016 in Kearney, Nebraska.

You can contact the Fairfield Inn at (308) 236-4200 if you plan to stay overnight. A block of rooms is available for \$109.95 until June 20, 2016. Just tell them you are with NeFSMA!

Watch for more details including an agenda in the near future [here](#).

Registration:

Members - \$100

Non Members - \$135

Join us for our hospitality reception at the Younes Conference Center on July 20, 2016 at 7pm.

Nebraska Silver Jackets Dam Safety Workshop

On July 20th, 2016 The Nebraska Silver Jackets team, in association with NeFSMA, will be presenting a one-day (9:00 am – 4:00 pm) course on Dam Safety. The course will cover topics such as:

- The Nebraska Dam Inventory,
- Examples of projects from across Nebraska,
- Dam Safety Program activities of NeDNR, USBoR, USACE, NRCS, and NWS, and
- A presentation on the 40th anniversary of the Teton Dam failure in Idaho from Wayne Graham.

Where: Great Platte River Road Archway Monument, 3060 E. 1st Street, Kearney, Nebraska

Registration is free but space is limited.

CECs will be made available to seminar attendees.

Registration and additional information is available [here](#).

Kim Neiman of Pilger Wins ASFPM Award

Mitch Paine, CFM – State NFIP Coordinator

This summer at the national ASFPM conference, Kim Neiman, the village clerk in Pilger, will receive the Larry R Johnston Local Floodplain Manager of the Year Award. The award is given to a local floodplain manager for outstanding individual contributions to their community. Kim was a clear winner because she has shown incredible dedication to the field of floodplain management and has helped Pilger recover from being hit by a tornado in 2014.

After the tornado swept through the village on June 16th, Kim stepped up immediately to perform her duties as clerk, emergency manager, volunteer firefighter, floodplain administrator, and many others. Kim, a longtime resident of Pilger, knew what she had to do. She coordinated the local declaration, the state response, and the rising tide of interested visitors, media, and volunteers.



The Village of Pilger after the June 16, 2014 tornado.

Kim also knew that she had a responsibility as floodplain manager: almost every part of Pilger is located in the 1% annual chance floodplain. Village residents took shelter in their basements, but most would not be able to rebuild with a basement in the floodplain. Not only would she have to deal with a barrage of rebuilding permits, she would have to deal with the wrath of residents who did not understand why.

Kim requested and helped organize multiple open houses for the community to discuss building requirements in the floodplain, the rules of flood insurance, and the benefits of reducing flood risk. She wanted residents to fully understand the reasons behind the regulations and how they benefit the community. In a small town, rumors start and spread like wildfire, so the opportunity for authoritative sources of information is crucial. She organized 4 workshops in the 3 months after the tornado to be led by FEMA disaster staff, FEMA mitigation/risk analysis staff, NeDNR, and NEMA staff. She also organized 2 workshops specifically focused on safe rooms to address concerns about not being able to build a basement as a storm shelter.

Kim did all of this with no place to live of her own. Her house was in the direct path of the tornado and was completely destroyed. Through it all, Kim came to work at 6:00 am and didn't go home until well into the evening. She knew that her community's recovery hinged on her ability to be an effective emergency manager, floodplain administrator, and grants coordinator.

Most importantly, Kim wanted to show her citizens it is possible to build a house that meets floodplain regulations but also results in a livable, functional home. To do that, Kim made sure her own house was one of the first to be rebuilt. After the community adopted FEMA Technical Bulletin 11, she built her pre-fabricated house on a 4 foot, compliant crawlspace with vents. She invited anyone and everyone in town to come see it. She built a detached garage that would ultimately house her family's safe room. Within months after the tornado, residents had an actual example of how a house could be rebuilt: not on stilts, not unsightly, not out of character with the small town feel. Hundreds of people and many media outlets went to see her house to visualize how theirs could look.

As a testament to the resiliency of Nebraska communities, Kim has been a champion for keeping Pilger and its families safe. She is able to communicate to her citizens not only the regulations, but the reasons why floodplain management is important. She is a leader in her community and is most deserving of the Local Floodplain Manager of the Year Award. We're proud to call her a fellow Nebraskan!



Kim and her husband at their newly-built home.

Great Plains LID Research and Innovation Symposium

On March 7 – 9, the 2nd Biennial Great Plains LID Research and Innovation Symposium was held at the Barbara Weitz Community Engagement Center in Omaha. The event focused on low impact development (LID) in the Great Plains Region. As explained on the symposium website:

“The Great Plains Research and Innovation Symposium (GPRIS) was created to expose decision-makers, professional designers, developers, citizens and others to the full range of regional LID practices available today. Attendees can then return to their communities and encourage the adoption of LID principles through public education, necessary changes in zoning codes to improve LID utilization, and technical support for their successful implementation relative to regional soils and climatic challenges. The GPRIS strives to foster creativity in sustainable development, wider understanding and acceptance of LID within the regulatory structure that guides development, and boarder acceptance of interdisciplinary design approaches that are critical to successful LID implementation.”

GPRIS offered three tracks for attendees at the conference: Research, which included presentations on field, laboratory, and modeling of LID applications addressing current practice and new solutions; Applied, which addressed completed and proposed designs of LID; and Policy, which included discussion of existing and proposed solutions related to LID regulation, implementation, education, and roadblocks. Presentations from the event are now available for download at the GPRIS website: <http://www.greatplainslid.org/lid-resources/>

GPRIS included a design competition, with the objectives of providing a hands-on learning experience, demonstrating the many benefits of LID, encouraging greater use of LID practices, and preparing contestants for potential upcoming regulations requiring LID techniques. A cash prize of \$10,000 was awarded to the winning team, with second place receiving a cash prize of \$5,000. The winning team was represented by individuals from Felsburg, Holt, & Ullevig, Big Muddy Workshop, and Carollo Engineers. The second place team was represented by individuals from Olsson Associates with the help of Elizabeth Garrett from UNL.



Rachel Malone of Iowa State University is presented with first place in the NeFSMA Student Poster Competition.

NeFSMA sponsored the Student Poster Competition. There were many entries from multiple schools in the Midwest. Rachel Anderson of Iowa State University won first place and a \$500 cash prize. Second place was a tie between Jennifer Peters of University of Nebraska Omaha and Michelle Malone of Oklahoma State University. They each received \$250 cash prize.

2016 NeFSMA Photo Contest

We are already halfway through 2016!

Now is a great time to remind our members about the inaugural NeFSMA Photo Contest. We're looking for the best pictures you can send of your projects. No project is too small, no flood too large. We want to see Nebraska and our members at their finest!

At the end of the year, we will choose the best photos to feature in a wall calendar to be available at our Annual Membership meeting in November. Photos can be sent to nefsma@hotmail.com throughout the year. If you submit a photo, please provide a brief description of the subject, the names and professional affiliations of any persons in the photo, and the name and affiliations of the person who took the photo.

We are excited to see what our members are doing this year!



Omaha Green Infrastructure Tour participants view the Rockbrook Creek Stream Restoration Project at Prairie Lane Park in 2014

The Johnstown Flood and Its Lasting Impact

Carrie Romero, P.E., CFM

ASFPM recently noted the anniversary of the May 31, 1889 Johnstown Flood on their Facebook page. For those who may be unfamiliar, the flood was actually a dam breach – the deadliest breach in U.S. history, killing more than 2,000 people in the Johnstown, Pennsylvania vicinity.

The dam that breached was an old earthen dam, originally constructed between 1838 and 1852 in order to support a canal system. Known as the South Fork Dam, it first breached in 1862. This first breach was minor, causing little damage downstream for various reasons, including that the reservoir was less than half full at the time of the breach. The cause of the breach is not well documented, and the dam was considered abandoned at the time. There is speculation that the outlet works were being raided for metal by area residents, which may have contributed to the breach. For 17 years the dam sat unrepaired until wealthy investors from the Pittsburgh steel industry, including Andrew Carnegie and Henry Clay Frick, took an interest in turning the reservoir into an exclusive summer resort.

The investors sought to rebuild the dam, however historic documentation indicates that no engineer was consulted for the repair work. David McCullough's book "The Johnstown Flood" offers the following brief description of the repair work:

"(They) set about repairing the dam by boarding up the stone culvert and dumping in every manner of local rock, mud, brush, hemlock boughs, hay, just about everything at hand. Even horse manure was used in some quantity. The discharge pipes were not replaced, and the "engineering" techniques employed made a profound impression on the local bystanders. "

A major shortcoming of the rebuilt dam was the lack of any method to draw down the reservoir. Beyond an insufficient emergency spillway, there was no principle spillway or outlet pipes. Additionally, the poorly rebuilt dam embankment resulted in a significant sag to the middle of the dam embankment. Some reports suggested that the crest of the dam at the center was as much as 4 feet lower than the elevation at the ends of the embankment.

The dam breach occurred after several days of intense rainfall. Records indicate 6 to 10 inches of rain fell in 24 hours. The flood wave traveled down narrow, mountainous valleys, inundating half a dozen communities during its 15 mile journey to the larger community of Johnstown. By the time the flood reached Johnstown, the wall of water had picked up all manners of debris, including miles of barbed wire fence from a factory in the path of the breach. The flood wave was reported to be at least 25 feet tall when it slammed into Johnstown.

A large stone arch bridge crossing the Conemaugh River in Johnstown withstood the flood wave; however it collected all kinds of debris that the flood washed down. The debris caught fire, and at least 80 people, possibly hundreds, caught in the debris at the bridge died, trapped by the fire and the flood.



Detail of *The Great Conemaugh Valley Disaster – Flood and Fire at Johnstown, PA.*

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The Schultz house in Johnstown. 6 people were in the home at the time of the flood and all survived. Photographer not identified - not specified, Public Domain, <https://commons.wikimedia.org/w/index.php?curid=6521660>



Destruction at Johnstown after the Johnstown Flood of 1889.

By NPS Photo - <http://www.nps.gov/jofl>, Public Domain, <https://commons.wikimedia.org/w/index.php?curid=1111819>

Ultimately the death toll from the Johnstown Flood reached 2,209. The dam failure had lasting impacts not only on the survivors, but also on the American legal system. Flood survivors attempted to recover damages from the fishing and hunting club that owned the South Fork Dam; however, the wealthy club owners were

successfully defended in court by the claim that the event was an “Act of God.” Public indignation over the lack of accountability resulted in the American court system moving towards the acceptance of “strict liability” in the 20th century.

David McCullough’s book “The Johnstown Flood” is an exceptional resource for much more detail on the Johnstown Flood causes, impacts, and aftermath.

Sources:

McCullough, David (1968). The Johnstown Flood: The Incredible Story Behind One of the Most Devastating Disasters America Has Ever Known. New York, NY: Simon and Schuster, Inc.

Johnstown Flood. (n.d.). In Wikipedia. Retrieved from https://en.wikipedia.org/wiki/Johnstown_Flood

2015 Membership Meeting

For the second year in a row, NeFSMA had our membership meeting at the Strategic Air and Space Museum on November 19, 2015. It was a fun event where we were able to recognize the 10th anniversary of the founding of NeFSMA. We even had a cake! The program included a morning session broken out into two tracks - one for storm water management and one for floodplain management. The morning session was followed by the lunch business meeting and an afternoon session for all attendees.



The NeFSMA board was honored to award the second-ever lifetime membership to Dave Shelton with the University of Nebraska - Lincoln after lunch. Congratulations to Dave!

Dave Shelton becomes our second-ever lifetime member, as Katie Pekarek and Steve Rodie honor his contributions to stormwater management in Nebraska at the 2015 Membership Meeting.



2016 NeFSMA BOARD MEMBERS

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