

MINUTES

Kansas Hazard Mitigation Team Meeting

Date of Meeting – December 11, 2018

Attendees – See Sign-in Sheet (attached)

Introductions – Steve Samuelson, KDA Division of Water Resources, opened the meeting with introductions. Attendees introduced themselves around the meeting room. Brian Rast, USACE, wrote minutes.

KDA / DWR Updates –
Alma, KS

Chad Bunger (Manhattan Wildcat Creek Flooding) –

Chad presented on the first of two topics centered on flooding of Wildcat Creek. His focus was more on the future actions after the flood. Jude will present on the data from the event. The community has seen four feet of water rise within two hours of intense rain, so the city plans to see that flood mitigation work leads to resilience.

They have recognized flooding on Wildcat for some time. Past community activist groups joined with the city to form the Wildcat Creek Watershed Workgroup. For the future, these groups will continue to be included in the process of Rebounding Forward, doing Mitigation, pushing to Prepare, improving Response (flood warning and alerts), and generally working on future flood mitigation.

The past floodplain management plans were helpful in forming the community approach. This has resulted in several buyouts with KDEM using FEMA program. Two properties have been purchased, and three more are approved. And, four more wanted.

The stream gages are extremely valuable from the USACE Silver Jackets pilot project, Wildcat Creek Flood Risk Management, and the gages were really a game changer for how the flood risk was understood. Three gages came with that Silver Jackets project. USACE will no longer pay for new gages, but when communities work with USGS to install and maintain them, they help understand flood risks. The Wildcat Creek gages allow comparison of hydrographs at three locations and help explain the flood risk with timing and magnitude to the public. They also inform where to consider additional flood risk management measures, specifically features like detention basin. Activities, such as floodplain policies, have also been justified and established, based on the understandings they create. Some examples include Manhattan's policies and regulations one foot above runoff from future development, and Chad noted the Labor Day Flood mimicked that flood level.

The city is forming a Resiliency Plan, with one main step being to identify where social vulnerabilities are located. The city and county now understand the physical risk, and they need more on flood risk information on who. At the center of attention for all is the level of risk acceptance and solutions. This year is about brainstorming how to get better public understanding: Do they know where risk info is? Do they get alerts? The public is doing neither well.

Several activities will be supporting the Resiliency Plan. Outreach and information to teach the public are one area of support. Flood zone disclosure statement at real estate sale will be one item to enhance. Targeting the vulnerable population groups. One group is the transient population, like renters that are soldiers from Fort Riley or students at Kansas State University. Another group is the low to moderate income areas. The actions in the plan will be tailored to these various groups.

Chad noted the Resiliency Plan will include several items. One will be 2d Modeling. Riley County signed on 50/50 in support of the plan. All recognize the need to see the complex flood dynamics and have the ability to formulate and evaluate alternatives. These alternatives will be shared with Citizen Advisory Teams (CATs) and overseen by a Technical Committee. This will allow discussion, guidance, feedback, and help create buy in on the best alternatives. Work will conclude by December 2019 with solutions in that plan. Chad noted that grants are fine but needs budgetary impacts. Also, he noted they're considering green infrastructure, where fits, although more likely features will be built, like upstream detention basins. City wants all hazard resilience, and the work builds on the past FMP, complementing the HMP.

Chad answered several questions. On social aspects, Allen Chestnut, USACE, asked how that will be investigated. Chad mentioned several resources, including Esri and census data, education levels, transportation decisions, and heavy on personal interviews. Ken Wade, USACE, asked how long owners have been at a residence. Chad noted this is part of the problem as many are transients. Martin Koch, KDWR, asked if Manhattan has guidelines for informing tenants that renters must follow, which Chad then noted that will be looked at more. Jeanne Bunting, KDEM, wondered if Region I HMP will be integrated, and Chad affirmed that is the intent. Michelle Wolfe, FEMA, was curious about social vulnerability index ...asking if they will shift that number, and Chad answered they'd tailor responses to them, noting the Gardenway Apartments with the index. But no solution for that. Brian Rast, USACE, asked if anyone had checked the NWS Google Analytics for hits on the NWS Advanced Hydrologic Prediction Service (AHPS) Wildcat Creek flood forecast inundation map (FFIM), which NWS can do, specifically for the Labor Day hits and two weeks prior. Scott Watson, NWS, offered to look up this data to help document usage. John Woynick, Chad Omit were also present during his response. John answered many questions on the existing FFIM. Chad Bunger noted the FFIM was extremely valuable in city's emergency operations center.

The Manhattan request for qualifications on 2d modeling is next month. One aspect is to have the consulting firm that is hired train staff in use of the tool. Brian Rast, USACE, has been developing a proposal for the Silver Jackets FY 2020 Interagency Nonstructural Call for Proposals to help Chad Bunger in coordination with Steve Samuelson, KDA DWR.

Jude Kastens (Flood Modeling on Wildcat Creek) –

Jude Kastens, Kansas Biological Survey and Kansas Applied Remote Sensing, also presented about the simplified mapping libraries they have and how they can be used for flood events like the Labor Day Flood's high water marks to further calibrate map results for use in many areas across the state. The mapping libraries are available for many gage locations across Kansas.

Wildcat Creek is a 99 square mile watershed that joins the Kansas River just upstream of the Big Blue River confluence with the Kansas River. Tuttle Creek Reservoir is on Big Blue, but Wildcat does not have any detention of floodwaters. The Labor Day Flood recorded as much as 11 inches across this watershed.

The flood mapping libraries, cover most of gage network, except Wildcat Creek. The NWS AHPS web site (c. 2012) provided in interesting comparison.

He noted the library as real time not unsteady, and the flood library has a geographical map of flood wave.

For Wildcat, the three gages recorded good data. And, redundancy was important since debris hit the Scenic Drive gage. That clogging interrupted recording, about stage 24, and 28.29 was a documented high water mark. The time to peak is about 3.5 hours for Keats gage.

In general, Jude noted the NWS static map books did very well in being accurate. Drones helped collect valuable aerial imagery for mapping verification. Jude showed three areas that did well. By comparison, he realized his map books

During questioning, several items were discussed. We wish we trimmed out building footprints for areas that the AHPS FFIM does not clearly flow around buildings, although the blue color does reflect depth in the legend. Technology has improved, and this makes these FFIMs can be setup faster. The Wildcat FFIM probably should be extended to three more maps. John Woynick, NWS, noted that several water rescues were made that night. Jude noted using the E911 database and an intersect with inundation maps could be interesting to see. Allen Chestnut, USACE, offered help with the 2d model scoping.

USACE Silver Jackets –

Brian Rast presented status on the current and future interagency nonstructural projects.

- Current projects
 - High Water Signs. 14/27 delivered, 9 shipping.
 - Repetitive Loss Update. The team, lead by Ken Wade, USACE, and Tara Lanzrath, KDA DWR, has completed the review of database. Several locations were needing updating.
 - Recurring Flood ID. Internet database active on KDWR web page. TADD signs, 15 communities, 176 signs.
 - The Manhattan Levee tabletop exercise, similar to Salina's, was scheduled for October 27th, but the city has postponed that due to the recent flood disaster. The exercise will include elements related to risk communication for future enhancements to their emergency action plan regarding evacuations.
 - Florence Nonstructural Assessment. A 142-page report on risk management options for over 260 buildings.
- Silver Jackets proposals accepted for FY19
 - Nonstructural assessment for Rossville. This project will provide nonstructural assessment and public involvement assistance to the city. A meeting will be scheduled for middle of October.
 - Risk management options for communities with levees
 - Ottawa. This is a project aimed at raising awareness of the additional flood solutions available to communities with major levees. The project will include some assessments of the floodplains and offer a tabletop and workshop on emergency action plans, evacuation planning, and other helpful measures.
 - Abilene. This is another project, similar to the Ottawa one, which will start in the second half of the year.
 - Hutchinson. Again, another one similar to Ottawa.
- Next call for proposals is at the end of this month. Potential concepts:
 - **EPA flood induced contamination**, need KDHE or KDWR to overlay flood risk layers with known hazardous sites...potentially can avoid Coffeyville, Pitcher, OK, or anhydrous ammonia contaminations after a future flood. EPA contact is Pai-Yei Whung at EPA

Region VII. She is hoping to have a turn-key project develop to help states in the region with several other sites across Region VII.

- **Wildcat Creek resiliency**...build on Chad Bunger's new plan, also...add three maps for top three stages since flooding reached the maximum level...2d model...update Orion
- **Other FFIMs Short List**. This team should consider a list of priority locations for future interagency flood inundation mapping tied to NWS forecasting gages, check WFOs capability but why not submit one every year off of a list based on high population centers located below >100 square mile watersheds?
- **Nashville** ...this project is held up due to lack of their NFIP involvement

Hazard Mitigation Project Updates –

Jake Gray provided this update.

- **HMGP**

- **DR-4319**. Closing soon.
- **DR-4347**. Sirens. Looking for projects.
- **DR- 4403**. Looking for small projects.
- **FM-5170**. 2 current projects. \$3 million, Sand Hill State Park, Clark County.

- **PDM/FMA Funding Possibilities FY18**

No FMA, PDM community safe room. No flood disaster declarations.

Harper recreation Commission

FEMA Disasters Recovery Act, Michelle...funding will change from variable to 6% of total disasters cost of previous year, 6% of the previous year's disaster cost. Recently, one year was about \$300 billion.

Planning Update

FEMA approved the state hazard mitigation plan over Thanksgiving. Next efforts will be on regional HMPs. Started Region L, southeast, south central. And in February, the northeast part of the state including Region I, Region J, and Region K.

New and Unfinished Business –

None.

Presentations / Training For Next Meeting –

Next meeting will be March 5

Suggested presentations:

- Local Enhanced Management Area (LEMA) for ground water and water conservation areas, changing crops, ground water concerns, programs western Kansas and farmers agree to reduce to a certain % and are now reducing the amount they said they would save, doing away with cattle, changing crops cotton, governments water conference, water usage and aquifer

- KWO and U.S. Army Corps of Engineers Planning Branch have funding to begin the Kansas River Basin Study. This study will exemplify the integrated watershed planning elements and will address many natural hazards, like flooding and drought. The USACE project manager, Laura Totten, is available to present.