



MONROE COUNTY ADMINISTRATION DEPARTMENT

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Climate Change Task Force

December, December 11, 9:00 a.m.

(Notes)

**Monroe County Board Assembly Room
(South Side/Oak Street Entrance)
112 S. Court Street
Sparta, WI 54656**

1. Call to Order/Introductions
2. Monroe County Task Force Update:
 - Bob went over the 10 objectives of the CCTF.
 - Recommended an additional bullet to the 8th objective: Implement climate change mitigation and adaptation planning into municipal comprehensive plans and promote planning integration throughout other municipal plans. (Roxie) CCTF agreed
 - Alison explained the State & Federal (FEMA) grants and the application the county submitted to remove structures in flood prone areas. These properties would become public property after the structures are removed. Hopeful Spring of 2020 will have answers on this grant.
 - Discuss permitting process/review/evaluation that happens for stream crossings (bridges, culverts, etc.) Build options/alternative “crossings” and or study cumulative effects. Potential discussion with DNR at next meeting.
3. Iowa Flood Center – Presentation (Nate Young, Associate Director)
www.iowafloodcenter.org (319) 384-1729
www.iowawatershedapproach.org

The Iowa Flood Center is located at the University of Iowa – C. Maxwell Stanley Hydraulics Lab home of IIHR – Hydrosience and Engineering. In 2008 devastating Iowa flooding was the main push for the establishment of the Iowa Flood Center (IFC). The IIHR-Hydrosience and Engineering were approached directly by the legislators of the state, who gave them 1.5 million in base funding, which has been leveraged into hundreds of millions of grant funding. A summary of the IFC’s and Iowa Watershed Approach (IWA) accomplishments and program efforts was provided:

- Iowa Flood Information System (IFIS) – The IFC established a network of stream sensors and hydrologic stations (developed in-house by IFC) throughout selected watersheds. Using data collected from the network of sensors developed by IFC and from other sources such as National Weather Service and U.S. Geological Survey streamgauge station network, the IFC developed their own computer models to predict rainfall and provide forecasts throughout the state. The IFIS is an interactive Google Maps – based online application that provides real-time and forecast information for approximately 1000 locations throughout the state. The website is accessible to the public and user can sign up to receive text alerts.
- IFC Stream Sensors - The IFC developed in-house stream sensors that use ultrasonic

pulses to measure water level. The IFC stream sensors transmit data real time (every 15mins) online and can send alerts for high water levels. The stream sensors are low maintenance and are powered by a solar panel and backup battery, which doesn't need to be replaced for up to 5 years. The in-house development cost of the stream sensor is estimated at \$3500. The IFC has over 200 stream sensors placed throughout the state, with the goal to deploy up to 150 more sensors.

- IFC Hydrologic Stations – The IFC also developed in-house hydrologic stations that collect rainfall and wind speed and direction (to help measure intensity of rainfall), as well as soil moisture and temperature which is measured at 2, 4, 8, and 20 inches. The hydrologic stations are co-located with a shallow groundwater well. The stations are solar powered and cost approximately \$15,000 each. There are currently 20 hydrologic stations placed in priority watersheds with the goal to establish more stations.
- Flood Inundation Maps – IFC worked with Dept. of Natural Resources to model flooding scenarios and show estimated flood levels and how communities will be affected. The maps were developed to meet the standards of FEMA but are not yet adopted as FEMA regulatory maps.
 - The maps can be used to provide flood risk probabilities for anyone inquiring to build or purchase land etc. The Flood Hazard Calculator from website also helps to predict the flooding as well.
 - U.S. Department of Housing and Urban Development (HUD) project offered \$15 million funding for these maps.
 - LIDAR data from 2006 has been used for this mapping project, using information and help from other state entities. They are working on new LIDAR data right now. Larger municipalities in Iowa will fly their own LIDAR so they get updated more often than statewide.
 - Google maps interfaces/servers are used to run their program, they have 3.5 million page views and over 150,000 visitors during the 2018 fall flooding. They got shut down with google because of how many people were on the server!
- Silver Jackets: ran by the core of engineers. Developing synthetic rating curves with the sensors, they have funding right now to do this and are working with the Iowa Silver Jackets to accomplish this goal.
- Presidential Disaster Proclamations:
 - 14 billion in property loss in 30 years (1988-2005)
 - 4.5 billion in crop loss
- Iowa Watershed Approach Project Funding:
 - U.S. Housing and Urban Development (HUD) funded program
 - \$312M for Disaster Recovery Enhancement Fund (DREF) released to 13 states in response to 2008 flooding disasters. Iowa received \$84.1 million.
 - HUD released \$1B in funding through the Community Development Block Grant program for a National Disaster Resilience Competition in 2014. Iowa received 4th largest amount (\$97 million) awarded in the country.
- Watershed Management Authorities:
 - IFC committed \$10M to establish watershed demonstration projects and education to reduce flooding impacts.
 - In 2010 legislation was passed to authorize the creation of Watershed Management Authorities (WMAs) – which consists of stakeholders (governmental and private) throughout a watershed to cooperatively engage in watershed planning and management. The WMAs were created during the first phase of the National Disaster Resilience Competition.
 - Develop a hydrologic assessment and watershed plan.
 - Work with project coordinators and volunteer landowners to implement projects that reduce the magnitude of downstream flooding and improve water quality.
 - Covers 26 different watersheds statewide

- GHOST: Generic Hydrologic Overland-Subsurface Toolkit
 - Used to estimate watershed levels in response to rainfall events and can simulate hydrologic response over decades. IWA modelers used GHOST to evaluate the flood reduction benefits expected from both nature-based and structural mitigation strategies for Iowa watersheds.
 - Flood Resilience Program:
 - Public awareness and education to share flood resilience resources and information with communities within nine IWA watersheds.
 - Establish partnerships and collaborate with local planning organizations to develop flood resilience action plans.
 - Recent outreach efforts include IFC hosting government representatives from North Carolina and in early January IFC will be hosting representatives from Texas.
4. Q & A with Nate Young & demonstration of website:
- www.iowafloodcenter.org > Live IFIS Info > Launch IFIS, or choose which map you'd like to see:
 - These maps are based on google maps servers so they are very user friendly and customizable.
 - Shows real-time data and 2 weeks of historical data and also presents 5 days of forecasted data.
 - The Presentation will be posted on Monroe County's website at <http://www.co.monroe.wi.us/departments/land-conservation/>
5. Question for the Wisconsin Department of Natural Resources (DNR) and Department of Administration (DOA):
- The DNR is talking about this issue on a state level to address flooding/climate change precautions. The DNR has created interactive flood inundation maps that are real-time and also present forecasted river levels. Currently, this project only covers several rivers in the southeastern portion of the state.
 - Mike Thompson, Waterway Management Program Director for the DNR, reported that they are looking internally how to increase proactivity on dam inspections, and ways to incentivize flood mitigation and upkeep of these bridges and dams. Worked with 300 property owners on emergency coastal (Lake Michigan) erosion projects.
 - Working on some projects in Monroe County, to get funding for different mapping along with topographic data updates. He would like to work with Monroe County CCTF on some of these issues, and lend us some contacts and resources. These projects are prioritized by FEMA.
6. Set next meeting date:
- **Wednesday, January 8th, 2020 at 9am in the County Board Assembly Room.**
7. Adjourn/Technical Review/Lunch with Nate at Jake's Northwoods

PLEASE NOTE: A quorum of the Monroe County Board or other committees may be present at this meeting. No business of the County Board or other committees will be conducted at this meeting, only the business noted above.

Monroe County Climate Change Task Force Members

| Name | Title | Agency | Email |
|-----------------|--------------------------------|-------------------------------|--|
| Tina Osterberg | County Administrator | Monroe County | Tina.Osterberg@co.monroe.wi.us |
| Bob Micheel | County Conservationist | Monroe County | bob.micheel@co.monroe.wi.us |
| Alison Elliott | Zoning Administrator | Monroe County | alison.elliott@co.monroe.wi.us |
| Roxie Anderson | Land Use Planner | Monroe County | roxie.anderson@co.monroe.wi.us |
| David Ohnstad | Highway Commissioner | Monroe County | david.ohnstad@co.monroe.wi.us |
| Wally Habhegger | County Supervisor, District 5 | Monroe County | district.05@co.monroe.wi.us |
| Al McCoy | County Supervisor, District 1 | Monroe County | district.01@co.monroe.wi.us |
| Dave Pierce | County Supervisor, District 2 | Monroe County | district.02@co.monroe.wi.us |
| Jim Schroeder | County Supervisor, District 15 | Monroe County | district.15@co.monroe.wi.us |
| Ron Luethe | Town Supervisor | Town of Ridgeville | luethes@gmail.com |
| Jack Herricks | Town Chair | Town of Jefferson | hdfinc@centurytel.net |
| Bill Halfman | Agricultural Agent | UW-Extension | bill.halfman@co.monroe.wi.us |
| John Noble | Fisheries Biologist | Fort McCoy | john.d.noble10.civ@mail.mil |
| Tonya Townsell | Public Affairs Officer | Fort McCoy | tonya.k.townsell.civ@mail.mil |
| Cindy Koperski | Program and Policy Analyst | WI Dept. of Natural Resources | cindy.koperski@wisconsin.gov |

Dec. 11 Meeting - Additional Attendees

| Name | Title | Agency | Email |
|-------------------|-----------------------------------|--|--|
| John Wetenkamp | Hydrologist | National Weather Service | john.wetenkamp@noaa.gov |
| Charlie Handy | Land Use Planner | La Crosse County | chandy@lacrossecounty.org |
| Matt Komiskey | Physical Scientist | U.S. Geological Survey | mjkomisk@usgs.gov |
| Dave Owens | Supervisory Hydrologist | U.S. Geological Survey | dwowens@usgs.gov |
| Michelle Komiskey | District Conservationist | Natural Resources Conservation Service | Michelle.komiskey@usda.gov |
| Pam Porter | Environmental Policy Advisor | WI Dept. of Natural Resources | pamela.porter@wisconsin.gov |
| Rob Davis | Environmental Engineer Supervisor | WI Dept. of Natural Resources | robert.davis@wisconsin.gov |
| Mike Thompson | Bureau Director | WI Dept. of Natural Resources | Michaelc.Thompson@wisconsin.gov |
| Martin Wells | Water Reg/Zoning Engineer | WI Dept. of Natural Resources | martin.wells@wisconsin.gov |
| Sarah Semrad | Representative | WI State Senator Jennifer Shilling | sarah.semrad@legis.wi.gov |
| Joey Esterline | Resident | Monroe County | joeyesterline@gmail.com |
| Ned Gatzke | Resident | Monroe County | cngatzke@centurytel.net |
| Tim Welch | Village President | Village of Wilton | welchtim66@yahoo.com |
| Gillian Pomplun | Reporter | Crawford City Independent | indreporter@mwt.net |
| Marcy West | Executive Director | Kickapoo Valley Reserve | marcy.west@wisconsin.gov |
| Loren Oldenburg | State Representative | Wisconsin | rep.oldenburg@legis.wi.gov |
| Gregg Wavrunek | Regional Representative | U.S. Senator Tammy Baldwin | gregg_wavrunek@baldwin.senate.gov |
| Tim Hundt | Representative | U.S. Representative Ron Kind | not on file |