

DAM SAFETY NEWS

Dams and Inspections

Private dam owners are required to have their dam inspected by an engineer registered in the State of Wisconsin. An owner of a large dam is required to have the inspection completed based on a schedule established by the Department. The inspection schedule is based on the hazard rating for the dam. A high hazard dam must be inspected every two years and a significant hazard dam must be inspected every 3-4 years. Low hazard dams must be inspected every 10 years.

If you are scheduled for an inspection in 2015, you will have received several letters from the Dam Safety program over the last 9 months. The most recent reminder that went out was in early February to those of you who are required to hire a consulting engineer in 2015 to perform a dam safety inspection.

The dam inspection schedule can be found on the DNR Dam safety website at <http://dnr.wi.gov/topic/Dams/damSearch.html>. The inspection schedule can be determined for either an individual dam or by year. For information on the DNR Dam Inspection Program or to find information on conducting an inspection go to <http://dnr.wi.gov/topic/Dams/inspections.html>.

If you have not yet hired a consultant, a listing of credible engineers/contractors for dam inspections, maintenance/repairs as well as hydrology/hydraulic analyses can be found at <http://dnr.wi.gov/topic/Dams/consultantInformation.html>.

The first step is to have your consultant engineer research past inspections by reviewing the DNR files. Your engineer should contact the regional Dam Safety Engineer to locate the files. We are in the process of scanning files to electronic format to facilitate review, but not all have been scanned to date and may need to be reviewed at a DNR office. Contact information for DNR Regional Dam Safety Engineers can be found at <http://dnr.wi.gov/topic/Dams/contactInformation.html>.

Once your consultant has inspected your dam, he/she has 90 days in which to produce a report listing all deficiencies and recommendations for addressing the deficiencies. The report should include photographs of the deficiencies noted, past efforts to bring the dam into compliance with safety standards, and any survey done as part of the inspection. It should also include a requirement for completing a dam failure analysis, and an Inspection Operation and Maintenance Plan as well as an Emergency Action Plan. The report must be submitted to the appropriate regional Dam Safety Engineer who will review and issue a concurrence letter to you. This will start the clock for you to make the repairs in the allotted timeframes. A PDF of typical timeframes for repairs/maintenance/reconstruction can be found at <http://dnr.wi.gov/topic/Dams/inspections.html> under Report Preparation of Inspections or at <http://dnr.wi.gov/topic/Dams/documents/TimeFramesforDamInspectionDirectives.pdf>.

Failure to do inspections during the scheduled years or failure to follow up with the needed safety repairs may necessitate enforcement action against owners. The DNR Dam Safety's goal is to ensure that all dams in the state are safe, and meet the objective to protect life, health and property. We hope you recognize your responsibility under Ch. 31 of the State Statutes to meet these safety goals and will work to avoid enforcement action on our part.



Volume 6
Number 1
Spring 2015



Inside this issue:

Spring Flooding Outlook	2
Dam Emergency Calls	2
Atlas 14 Transition	3
DNR Staff Changes	4
DNR Staff by County Map	5
Workshops	6

Spring Flooding Outlook

The 90-day outlook in Wisconsin for April - June is for above normal temperatures with an equal chance of precipitation rates being above or below normal. A warm spring with limited rainfall should allow the existing snow cover to gradually melt and result in typical small scale spring flooding. While ice build-up on lakes and rivers is much less than last winter, ice jams are always a concern. Ice jams can cause flooding in areas not normally at risk and cause damage to infrastructure such as bridges and dams.

Dam owners should inspect their dams more frequently over the next few weeks and ensure that any gates are in good operating condition. Owners should also be tracking current weather conditions and upstream ice conditions.

For a graphic display of the Three Month Outlook for temperature and precipitation go to:
http://www.cpc.ncep.noaa.gov/products/predictions/long_range/seasonal.php?lead=2

For a technical discussion of the 30-day outlook go to:
http://www.cpc.ncep.noaa.gov/products/predictions/long_range/fxus07.html

For the Long-Lead Forecast Release Schedule for 2015 go to:
<http://www.cpc.ncep.noaa.gov/products/predictions/schedule.html>.

The next 30-day outlook will be issued on February 19, 2015 for March-April-May. The Long-Lead Forecast Release Schedule for 2016 will be released in early December.

While long range forecasts are helpful, it is very important for dam owners to be aware of what is expected for the next few days. Your local National Weather Service office can give you the most current detailed information for your area. Current weather conditions and short term forecasts on a site specific, community or county basis can be found at:
http://weather.noaa.gov/weather/WI_cc_us.html.

Dam Emergency – Who Do You Call?

If despite your best efforts at maintaining your dam, an emergency arises, the first thing to do is to open your Emergency Action Plan (EAP) and follow the steps outlined. If for some reason, you do not yet have an EAP for your dam and failure is imminent, then call 911 and be prepared to provide the following information to the 911 operator:

- name and title of the person reporting the incident;
- callback number of the person reporting the incident
- name/location of the dam including county, waterbody and nearest road; and
- present condition of the dam such as perceived problem, gate status or level of pond in relation to low point in the embankment.

***Under any circumstance, if failure is imminent, call 911 first!
And then call***

**Wisconsin Emergency Hotline
1-800-943-0003 (24 hour)
Press "1"
Ask for "DNR Duty Officer"**

Hydrologic Modeling: TP-40/TP-49 to Atlas 14 Transition

The National Oceanic and Atmospheric Administration (NOAA) has published Atlas-14 Volume 8 to supersede Technical Papers 40 and 49 (TP-40/TP-49). These documents estimate various rainfall totals to be used in hydrologic modeling. Related to this update, the Natural Resources Conservation Service (NRCS) has created rainfall distribution curves for Wisconsin based on Atlas 14 to supersede the SCS Type-II distribution. After **March 1, 2015**, Wisconsin DNR Dam Safety will no longer accept hydrology that uses TP-40/TP-49 or SCS Type-II if the analysis has not already been started or received a contract bid before March 1, 2015. If you are in the early stages of your project before March 1st, we strongly encourage you to consider using Atlas-14.

The new rainfall estimates for Wisconsin are included in Atlas-14 Volume 8, which can be found at: http://www.nws.noaa.gov/oh/hdsc/PF_documents/Atlas14_Volume8.pdf. A site specific rainfall estimation from Atlas 14 can be found at: <http://hdsc.nws.noaa.gov/hdsc/pfds/>.

NRCS has released updated precipitation data for Wisconsin based on the NOAA Atlas 14, Volume 8. NRCS Wisconsin Engineering staff worked with the NRCS National Water Quality and Quantity Team on this effort. They analyzed the NOAA Atlas 14 grid data using GIS to develop updated precipitation depths (by County and storm frequency) and updated NRCS storm distributions.

The new precipitation data and background information are available on the NRCS Wisconsin Hydrology, Hydraulics webpage under NRCS Wisconsin Hydrology Resources at: http://www.nrcs.usda.gov/wps/portal/nrcs/detail/wi/technical/engineering/?cid=nrcs142p2_025417. The following is a summary of the new precipitation information that is included on this webpage:

- WI Supplement to NEH Part 650 (EFH) Chapter 2 (update information)
- Updated EFH2 Spreadsheet Including NOAA Atlas 14 Precipitation Data
- Updated TR55 Spreadsheet Including NOAA Atlas 14 Precipitation Data
- New NRCS WI MSE3 and MSE4 Storm Distribution Data (in Excel Spreadsheet)
- New WI Precipitation Depths and Storm Distributions by WI County (in Excel Spreadsheet - Copied from Appendix 1 of the WI Supplement to NEH Part 650 Ch 2)
- Information on retrieving the latest Hydrologic Soil Group Data from the Web Soil Survey
- Additional NRCS WI Spreadsheets with Updated Precipitation Data

The new precipitation depths listed by county in Appendix 1 of the Wisconsin Supplement to the NEH Chapter 2 (and in the updated Spreadsheets), supersede the precipitation depths from TP-40. Also, the two new county specific NRCS storm distributions, named MSE3 and MSE4, replace the NRCS Type II storm distribution. These new storm distributions are also listed by county in Appendix 1 of the WI Supplement. Since the NRCS Type II storm distribution was developed using the old (TP-40) data, **the Type II storm distribution is not to be used with the new NOAA Atlas 14 precipitation depths.**

As was the case prior to Atlas 14, consultants have the option of using the WDNR's or SEWRPC's (in SE Wisconsin) custom rainfall distribution in lieu of the NRCS distributions provided a critical duration storm analysis is performed. For more information on

these custom distributions, please contact a DNR Water Management Engineer. Please check the list of WMEs by county on the DNR Dam Safety website at: <http://dnr.wi.gov/topic/Dams/contactInformation.html> for the most current information.

DNR Staff Changes

Staff changes have come once again to the DNR Dam Safety/Floodplain Management staff with the recent departure of Jordan Thole, Water Management Engineer from the La Crosse office and Dustin DeFelice, Water Management Engineer from the Eau Claire office. Jordan provided dam safety, floodplain management and engineering assistance to Crawford, Grant, Richland and Vernon Counties and communities. Dustin provided dam safety, floodplain management and engineering assistance to Chippewa, Dunn, Eau Claire, Marathon, Rusk and Taylor Counties and communities.

Until Jordan and Dustin's positions are filled, please contact:

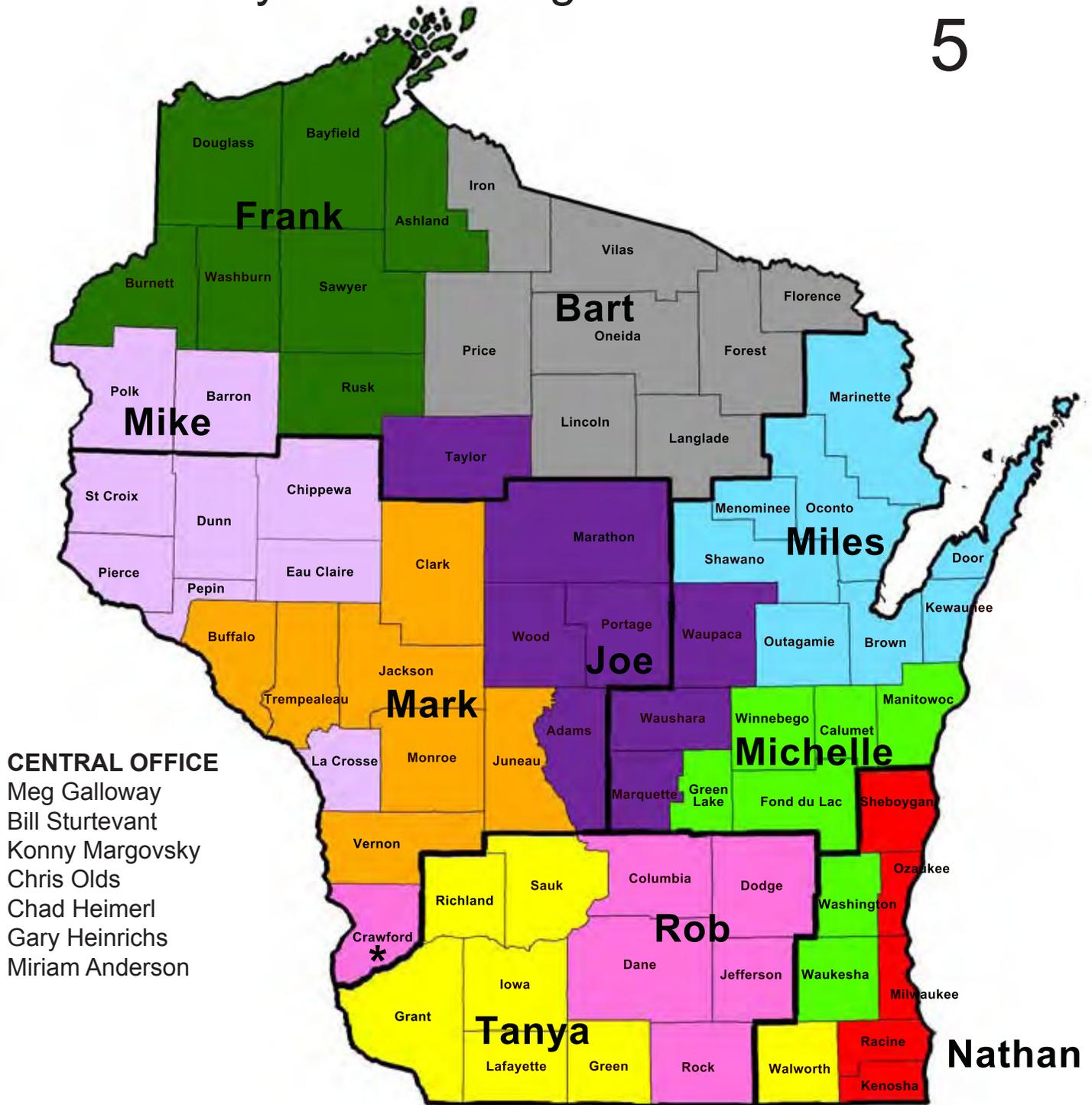
Chippewa/Dunn/Eau Claire La Crosse County	Mike Rogney - Eau Claire (Dams/Floodplain) 715-839-3735 michael.rogney@wisconsin.gov
Crawford County	Rob Davis - Fitchburg (Dams) 608-275-3316 robert.davis@wisconsin.gov
	Miriam G. Anderson - Madison (Floodplain) 608-266-5228 miriam.anderson@wisconsin.gov
Grant/Richland County	Tanya Lourigan - Fitchburg (Dams/Floodplain) 608-275-3287 tanya.lourigan@wisconsin.gov
Marathon/Taylor	Joe Behlen - Wisconsin Rapids (Dams/Floodplain) 715-421-9940 joseph.behlen@wisconsin.gov
Rusk County	Frank Dallam - Spooner (Dams/Floodplain) 715-635-4064 frank.dallam@wisconsin.gov
Vernon County	Mark Stephenson - Black River Falls (Dams/Floodplain) 715-284-1418 mark.stephenson@wisconsin.gov

The above county assignments are temporary. Please check the list of Water Management Engineers by county on the WDNR Dam Safety website at: <http://dnr.wi.gov/topic/Dams/contactInformation.html> for the most current information.

The map on the following page can be used as a quick and easy guide in determining who is your Water Management Engineer as of March 2015. WMEs are your local contact regarding questions floodplain management and dams as well as providing technical assistance regarding engineering questions.

Dam Safety/Flood Management Contacts

5



Go to <http://dnr.wi.gov/topic/Dams/contactInformation.html> for the most current contact information.

In the case of emergencies, the State Warning Center and the DNR Duty Officer can be reached at 1-800-943-0003, prompt 1; or directly at 608-576-5358.

* Floodplain related questions should be directed to Miriam Anderson at the Central Office.

2015 Dam Safety Workshops

The purpose of the workshops is to educate dam owners, operators and engineering consultants about the dam inspection requirements and process, record keeping, dam transfers, dam failure analyses as well as basic dam terminology and design. The workshops will also provide an opportunity for dam owners/operators to meet one on one with WDNR Dam Safety staff, if desired.

The workshop cost is \$25.00 and includes lunch and breaks. Registered Professional Engineers can earn 6 Professional Development Hours by attending the entire workshop. Attendees will receive a CD with course materials and other materials related to dam safety, IOMs, EAPs, permitting and inspections.

LOCATIONS and DATES

May 19, 2015 UW Extension
864 Collins Road
Room 8/9
Jefferson, WI

May 20, 2015 Northeast Wisconsin Technical College
Student Center
SC132 Lecture Hall
2740 West Mason Street
Green Bay, WI

May 21, 2015 Chippewa Valley Technical College
Business Education Center
BEC 103B
620 W. Clairemont Ave
Eau Claire, WI

AGENDA

8:00 – 8:30 Registration/Coffee
Session 1 Course Introduction/Basic Dam Terminology and Design
Session 2 Dam Dam Failure Analyses and Ordinances
11:45 – 12:30 Lunch provided
12:30 – 3:00 Session 3 Inspecting Your Dam
Session 4 Record Keeping
3:00 – 3:15 Wrap up
3:15 – 5:00 One on one discussions with WDNR staff

Registration for the workshops will be available through the Association of Dam Safety Officials at (859) 550-2788 or <http://www.damsafety.org/> starting in April. Registration materials will also be sent out via DNR's GovDelivery service.

"Dam Safety News" is published by the WDNR, Bureau of Watershed Management. Its purpose is to inform dam owners and operators as well as others concerned about dam safety issues. Comments or contributions are welcome.

This newsletter is supported by funding through FEMA National Dam Safety Grant No. EMW-2014-GR-00074 as part of the National Dam Safety Program. The contents do not necessarily reflect the views and policies of the federal government.

For further information regarding the WI Dam Safety Program, please visit our website at: <http://dnr.wi.gov/topic/dams/> or email: dnrdamsafety@wisconsin.gov.