

WI River/ Lake Wausau Floodplain Questions

1. Can't Wisconsin Valley Improvement Company just lower the water levels by the Dams?

Article 402 of the License to Operate the Rothschild Dam Project No 2212 (issued by United States Federal Energy Regulatory Commission) states:

“The Licensee shall operate the project in a run-of-river mode for the protection of fish spawning in the project impoundment, riparian vegetation below the project, and recreational opportunities in the project impoundment on the Wisconsin River.”

“To ensure run-of-river operation, the Licensee shall maintain a reservoir water surface elevation between a minimum of 1,160.6 feet and a maximum of 1,160.8 feet National Geodetic Vertical Datum (NGVD) when operating in automatic mode and between a minimum of 1,160.4 feet and a maximum of 1,161.0 feet NGVD when operating in manual mode as measured immediately upstream from the project dam.”

2. What is the appeals process for someone on the Firm Maps?

Two options for a person who would wish to appeal the Firm map changes would be...

- a. The person would have the right to appeal the decision made by the Land Conservation and Zoning Committee to the Marathon County Board of Adjustment.
- b. FEMA has a specific outline of the appeal process of when an appeal is eligible and what has to be provided to them for an appeal to be heard.

3. What is the Number of Property owners required to have flood insurance?

Per Count of National Flood Insurance Program Policy holders by state and County as of 12/31/2012 Marathon County has 436 total policies. The Unincorporated areas listed on FEMA's site are 164 policies for \$27,532,800 in coverage, average of \$168,000 a policy.

4. What assistance did FEMA provide to Merrill after the Tornado?

“What I can see for the records the only funding we received was from the Wisconsin Disaster Fund and that was for municipalities only. It appears that covered about 70% of the municipality's costs during the disaster. From what I can see the private costs that were not covered by insurance did not amount to enough to qualify for FEMA funds. I'm not sure if there was any FEMA resources that were received. From my understanding of the process, the county needs to exhaust their resources first, then the state steps in and helps with resources. Federal resources come into play when the state's resources are strained/exhausted.” –Jeff Kraft, Lincoln County Emergency Management

NOTE **Wisconsin Disaster Fund:** This funding is made available when the state or counties are denied federal disaster assistance or do not meet the federal eligibility criteria. Communities that meet an established per capita threshold in damages can request assistance through the County Emergency Management Director who applies to the Administrator of Wisconsin Emergency Management. Tribes can apply directly to WEM.

Funding is intended to help local and tribal governmental units recover from disasters. Grants are available on a 70/30 cost share basis for debris clearance, emergency protective measures and damage to road systems.

5. How much money was from FEMA during the last Flood event in Marathon County?

AT THIS TIME DO NOT HAVE AN ANSWER, WAITING FOR RESOPONCE FROM EMERGENCY MANANGEMENT.

6. **What happens if a community does not participate in the NFIP?**

Flood insurance under the NFIP is not available within that community. Furthermore, Section 202(a) of Public Law 93-234, as amended, prohibits Federal officers or agencies from approving any form of financial assistance for acquisition or construction purposes in a Special Flood Hazard Area (SFHA). For example, this would prohibit loans guaranteed by the Department of Veterans Affairs, insured by the Federal Housing Administration, or secured by the Rural Housing Services. Under Section 202(b) of Public Law 93-234, if a presidentially declared disaster occurs as a result of flooding in a non-participating community, no Federal financial assistance can be provided for the permanent repair or reconstruction of insurable buildings in SFHAs. Eligible applicants may receive those forms of disaster assistance that are not related to permanent repair and reconstruction of buildings. If the community applies and is accepted into the NFIP within 6 months of a Presidential disaster declaration, these limitations on Federal disaster assistance are lifted.

7. **What happens when a community does not enforce its floodplain management ordinances?**

Communities are required to adopt and enforce a floodplain management ordinance that meets minimum NFIP requirements. Communities that do not enforce these ordinances can be placed on probation or suspended from the program. This is done only after FEMA has provided assistance to the community to help it become compliant.

8. **What is probation?**

Probation is the formal notification by FEMA to a community that its floodplain management program does not meet NFIP criteria. It is an action authorized under Federal regulations.

9. **When can a community be placed on probation?**

A community can be placed on probation 90 days after FEMA provides written notice to community officials of specific deficiencies. Probation generally is imposed only after FEMA has consulted with the community and has not been able to resolve deficiencies. The FEMA Regional Director has the authority to place communities on probation.

10. **How long will probation last?**

Probation may be continued for up to 1 year after the community corrects all Program deficiencies and remedies all violations to the maximum extent possible.

11. **What penalties are imposed when a community is placed on probation?**

An **additional \$50 charge is added to the premium for each policy sold or renewed in the community.** The additional charge is effective for at least 1 year after the community's probation period begins. The surcharge is intended to focus the attention of policyholders on the community's non-compliance to help avoid suspension of the community, which has serious adverse impacts on those policyholders. Probation does not affect the availability of flood insurance.

12. **What is suspension?**

Suspension of a participating community (usually after a period of probation) occurs when the community fails to solve its compliance problems or fails to adopt an adequate ordinance. The community is provided written notice of the impending suspension and granted 30 days in which to show cause why it should not be suspended. Suspension is imposed by the Associate Director, Mitigation Directorate, FEMA. If suspended, the community becomes non-participating and flood insurance policies cannot be written or renewed. Policies in force at the time of suspension continue in force for the policy term. Three-year policies remain in force until the next annual anniversary date of the policy.

13. How was the Light Detection and Ranging, LiDAR, Data obtained?

Standard Specifications for LiDAR

Specifications	Description
Returns per pulse	LiDAR sensor shall be capable of recording up to 3 (or more) returns per pulse, including 1st and last returns
Scan angle	$\leq \pm 20$ degrees
Swath overlap	Nominal side lap of 30% on adjoining swaths, i.e., survey shall be designed for 100% coverage at planned aircraft height above ground
Design pulse density (nominal)	Average point spacing 1.4 m
GPS procedures	At least 2 GPS reference stations in operation during all missions, sampling positions at 1 Hz or higher frequently. Differential GPS baseline lengths shall not exceed 30 km. Differential GPS unit in aircraft shall sample position at 2 Hz or higher. LiDAR data shall
Coverage	No voids between swaths or due to cloud cover or instrument failure

Calibration Procedures

Sanborn performs two types of calibrations on its LiDAR system. The first is a building calibration, and it is done any time the LiDAR system has been moved from one plane to another. New calibration parameters are computed and compared with previous calibration runs. If there is any change, the new values are updated internally or during the LiDAR post-processing. These values are applied to all data collected with the plane and the ALS-50 system configurations.

Once final processing calibration parameters are established from the building data, a precisely-surveyed surface is observed with the LiDAR system to check for stability in the system. This is done several times during each mission. An average of the systematic biases are applied on a per mission basis.

LiDAR Acquisition Parameters

Average Altitude	2800 Meters AGL
Airspeed	~150 Knots
Scan Frequency	34 Hertz
Scan Width Half Angle	20 Degrees
Pulse Rate	89200 Hertz

Processing Accuracies and Requirements

Accuracy of LiDAR Data (H)	0.5 m RMSE (1.64 ft)
Accuracy of LiDAR data in bare areas (V)	12.5 cm RMSE(4.92 inches)

A complete LiDAR Project report from SANBORN is available for reference.

- 14. Response to Nicholas Bancuk, MTS comment of “I have a couple of comments. I reviewed the DNR cross-sections of 279.53 and 278.96. These sections are located north and south of your property, respectively. Cross-section 278.96 is located just south of your property. The flood widths in the model at these cross sections do not seem to match the scaled flood widths as shown on the proposed flood maps. Also, the surface profile in the flood model at cross-section 278.96 shows an approximately 11-foot dip near North Lakeshore Drive. The largest difference in elevation near North Lakeshore Drive on the County 2-foot contour map is 6-feet.”**

The original floodplain maps were produced by the US Geological Survey in 1971 on contract with (then) the US Department of Housing and Urban Development, (HUD). The mapping standards and data available at the time has been vastly improved over the years. For instance, in 1971, the standard for vertical ground data was only good to within 10ft., the standard now is to within 2ft. That difference transfers to a map to make a horizontal difference from 100 to 200 ft. With that difference in mind, it is obvious that many residences located along the Wisconsin River could either be “included” or “excluded” erroneously on the current 2010 FEMA map, which still reflects the 1971 data.

Also, because of this horizontal difference compared to new data, the engineering model used to predict both areas of moving water during flooding and the level of flooding did not match this new data. This 1971 model was ‘adjusted’ to match the horizontal width of the revised floodplain produced with the Marathon County vertical data. In some areas the mapped “floodway” was widened and in some areas it was decreased, depending on the comparison to the more accurate ground data provided by the County.

The answer to Nick’s question is that we did extend the 1971 cross sections to match the 2010 County LIDAR, where the LIDAR indicates that the ground elevation is LOWER than the flood elevation. That is true for North Lakeshore Drive. I do not understand what he means by ‘topo’. We do not use the ‘contour’ information made from the LIDAR points. The contours can only be ‘interpreted’ to within 2ft. We use the County’s LIDAR points which are more precise and offer a more 3-dimensional picture of the area. – Robert Watson DNR