

Kenosha



County

BOARD OF SUPERVISORS

ORDINANCE NO. _____

Subject: Proposed amendment to the Kenosha County General Zoning and Shoreland/Floodplain Zoning Ordinance in accordance with Section 87.30 of the Wisconsin State Statutes to acknowledge the Bong Recreation Area 8 Dam Failure Analysis.			
Original <input type="checkbox"/>	Corrected <input type="checkbox"/>	2nd Correction <input type="checkbox"/>	Resubmitted <input type="checkbox"/>
Date Submitted: January 4, 2022		Date Resubmitted:	
Submitted By: Planning, Development & Extension Education Committee			
Fiscal Note Attached <input type="checkbox"/>		Legal Note Attached <input type="checkbox"/>	
Prepared By: Andy M Buehler, Director Division of Planning & Development		Signature: <small>DocuSigned by:</small> <i>Andy M Buehler</i> <small>3E5F88189931407...</small>	

WHEREAS, Kenosha County proposes to amend Chapter 12 Kenosha County General Zoning and Shoreland/Floodplain Zoning Ordinance to acknowledge the Bong Recreation Area 8 Dam Failure Analysis; and,

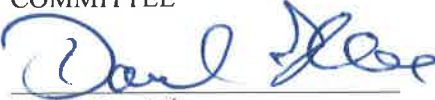
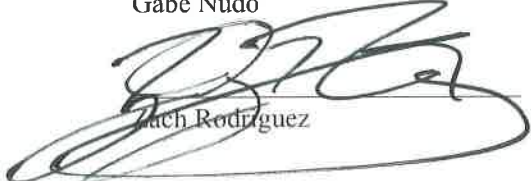
WHEREAS, the Kenosha County Planning, Development and Extension Education Committee held a public hearing on the request on December 8, 2021, and recommended approval of the request.

NOW, THEREFORE BE IT RESOLVED that pursuant to the authority granted by Sections 59.69 and 59.594(2)(a) of the Wisconsin State Statutes, the Kenosha County Board of Supervisors does hereby ordain that Chapter 12 of the Municipal Code of Kenosha County entitled "Kenosha County General Zoning and Shoreland/Floodplain Zoning Ordinance" be and hereby is changed by the following additions, deletions and amendments and is amended to read as set forth in the attached Exhibit A, pertaining to text changes to Sections 12.02-13.

Ordinance – Bong Recreation Area 8 Dam Failure Analysis Amendment
Page 2

Approved by:

PLANNING, DEVELOPMENT
& EXTENSION EDUCATION
COMMITTEE

	<u>Aye</u>	<u>No</u>	<u>Abstain</u>	<u>Excused</u>
 Daniel Gaschke, Chair	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
 Amy Maurer, Vice Chair	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
 Sandra Beth	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____ Gabe Nudo	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
 Zach Rodriguez	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

~~Red Strikethrough~~ = Text Removed

Green Underlined = New/Revised Text

EXHIBIT "A"

Proposed amendments to the Kenosha County General Zoning and Shoreland/Floodplain Zoning Ordinance in accordance with Section 87.30 of the Wisconsin State Statutes, in order to acknowledge the Bong Recreation Area 8 Dam Failure Analysis.

LIST OF AMENDED SECTIONS

12.02-13 INTERPRETATION OF DISTRICT BOUNDARIES

- (a) Boundaries of the districts set forth in section 12.20 to 12.26 are hereby established as shown on the digital zoning maps as described in Section 12.02-10. No change in a zoning boundary shall be made except after petition, review and approval pursuant to the requirements of section 12.38 of this ordinance.
- (b) Boundaries of the basic zoning districts shall be construed to follow Corporate Limits; U.S. Public Land Survey section lines; lot or property lines; centerlines of streets, highways, alleys, easements, navigable bodies of water, and railroad rights-of-way, or such lines extended. Lines which appear to be parallel to any of the aforementioned boundaries of specified distance shall be construed to be parallel as noted. Where the above rules cannot be readily applied, the location of district boundary lines shall be determined by use of the scale shown on the official zoning map.
- (c) Boundaries of the floodplain overlay districts as referenced in the following official floodplain maps and studies
 - 1 All areas covered by the regional flood or base flood as shown on the Flood Insurance Rate Map (FIRM), as approved by DNR and FEMA. Base flood elevations are derived from the flood profiles in the Flood Insurance Study (FIS) volume numbers 55059CV001B and 55059CV002B, effective March 7, 2017 and are shown as AE, A, AH, and AO Zones on the FIRM. These official floodplain maps and studies are on file in the office of the Kenosha County Department of Planning and Development. If more than one map or revision is referenced, the most restrictive information shall apply. Kenosha County (unincorporated areas) Flood Insurance Rate Map Panel Numbers include:

KENOSHA COUNTY, WISCONSIN - FIS Community Number 550523

FLOOD INSURANCE RATE MAP PANELS

55059C0017D, 55059C0036D, 55059C0061D, 55059C0063D, 55059C0139D, 55059C0251D, 55059C0252D, 55059C0016D, 55059C0018D, 55059C0019D, 55059C0038D, 55059C0041D, 55059C0042D, 55059C0043D, 55059C0044D, 55059C0062D, 55059C0064D, 55059C0110D, 55059C0116D, 55059C0117D, 55059C0118D, 55059C0119D, 55059C0126D, 55059C0127D, 55059C0128D, 55059C0129D, 55059C0131D, 55059C0132D, 55059C0133D, 55059C0134D, 55059C0136D, 55059C0137D, 55059C0138D, 55059C0151D, 55059C0154D, 55059C0156D, 55059C0157D, 55059C0158D, 55059C0159D, 55059C0176D, 55059C0177D, 55059C0178D, 55059C0179D, 55059C0231D, 55059C0232D, dated June 19, 2012; and, 55059C0184E dated March 7, 2017.

- 2 Floodplain maps derived from other studies and approved by the DNR.

a The 100-year dam failure floodplain map is determined through the use of dam failure analysis and profiles developed by Mead & Hunt Inc. as documented in their report entitled Evaluation of Hazard Potential Meyer Material Company KD Pit Embankment, January 2001. The report and study is on file in the office of the Kenosha County Department of Planning and Development.

b Bong Recreation Area 8 Dam Failure analysis approved by the Department of Natural Resources on January 7, 2020 including:
1. Map dated January, 2013, and titled "Simplified Dam Failure Analysis for Bong Recreational Area Dam No. 8".
2. Floodway data table dated, no date, and titled "Table 6.1 – Water Surface Comparison". 100-year Flood Dam Failure Peak WSEL column indicates the water surface elevations during dam failure.
3. Flood profiles dated, no date, and titled Bong Recreational Area Dam No. 8 – Simplified Dam Failure Analysis".

Formatted: Indent: Left: 2", Hanging: 0.25"

b-c Official Letters of Map Change (LOMC)

(d) Floodplain Zoning is shown on the digital zoning maps as described in Section 12.02-10 and as described as follows:

1 The FPO Floodplain Overlay District is those areas that may be covered by floodwater during the regional flood including the floodway and are contained within AE and A Zones as shown on the FIRM.

(e) Discrepancies between boundaries on the official floodplain zoning map and actual field conditions shall be resolved using the criteria in sub (1) or (2) below. If a significant difference exists, the map shall be amended according to 12.40-4 Amendments. The planning and development administrator can rely on a boundary derived from a profile elevation to grant or deny a zoning permit, whether or not a map amendment is required. The planning and development administrator shall be responsible for documenting actual pre-development field conditions and the basis upon which the district boundary was determined and for initiating any map amendments required under this section. Disputes between the planning and development administrator and an applicant over the district boundary line shall be settled according to 12.36-5(a)3 and the criteria in (1) and (2) below. Where the flood profiles are based on established base flood elevations from a FIRM, FEMA must approve any map amendment or revision pursuant to 12.40-4 Amendments.

1 If flood profiles exist, the map scale and the profile elevations shall determine the district boundary. The regional or base flood elevations shall govern if there are any discrepancies.

2 Where flood profiles do not exist for projects, the location of the boundary shall be determined by the digital zoning maps as described in Section 12.02-10.

(f) Boundaries of the C-1 Lowland Resource Conservancy District, that includes shoreland-wetlands, are shown on the maps referred to in Section 12.02-13(a) and boundary locations were determined by the criteria set forth in Sections 12.25-1(b).

State of Wisconsin
DEPARTMENT OF NATURAL RESOURCES
141 NW Barstow Street Room 180
Waukesha WI 53188

Tony Evers, Governor
Preston D. Cole, Secretary
Telephone 608-266-2621
Toll Free 1-888-936-7463
TTY Access via relay - 711



Friday, June 19, 2020

Ben Fiebelkorn
Kenosha County - Senior Land Use Planner
19600 75th Street
Suite 185-3
Bristol, WI 53104

Expedited delivery via email: Ben.Fiebelkorn@kenoshacounty.org

Subject: Bong Recreation Area 8 Dam, Field File: 30.15, Kenosha County. Floodplain Mapping, Ordinance adoption notice.

Dear Zoning Official:

On January 7, 2020, the Department of Natural Resources (Department) approved the dam failure analysis for the Bong Recreation Area 8 located on the Tributary to Brighton Creek in the NE quarter of the NE quarter of Section 22, Township 2 North, Range 20 E, Kenosha County. Based on the results of the approved study the dam was assigned a final hazard rating of High Hazard.

The areas of potential dam failure inundation (hydraulic shadow) are adequately reflected on a map with additional information such as stationing, water surface elevations, maximum velocities, and floodway widths provided in a floodway data table. This information is provided in the following enclosures:

1. Map dated *January, 2013*, and titled "*Simplified Dam Failure Analysis for Bong Recreational Area Dam No. 8*".
2. Floodway data table dated, no date, and titled "*Table 6.1 – Water Surface Comparison*". 100 – year Flood Dam Failure Peak WSEL column indicates the water surface elevations during dam failure.
3. Flood profiles dated, no date, and titled "*Bong Recreational Area Dam No. 8 - Simplified Dam Failure Analysis*"

Under the requirements of Chapter 87.30, Wisconsin Statutes and Chapter NR 116.05, Wisconsin Administrative Code, the materials submitted with this letter need to be reviewed and any comments on technical aspects of the study shall be provided to the Department within **thirty (30) days** from the date this decision was delivered. After the 30-day review and comment period, the County shall formally adopt the above referenced materials into the floodplain zoning ordinance within **six (6) months**.

To add the dam failure analysis into the ordinance amendment, the above sentences one through three need to be included in the official map section **at a minimum**. However, I suggest using the following language:

Bong Recreation Area 8 Dam Failure analysis approved by the Department of Natural Resources on *January 7, 2020*, including:

1. Map dated *January, 2013*, and titled "*Simplified Dam Failure Analysis for Bong Recreational Area Dam No. 8*".
2. Floodway data table dated, no date, and titled "*Table 6.1 – Water Surface Comparison*". 100 – year Flood Dam Failure Peak WSEL column indicates the water surface elevations during dam failure.

3. Flood profiles dated, no date, and titled "Bong Recreational Area Dam No. 8 - Simplified Dam Failure Analysis"

To assist you in the adoption process, refer to Wisconsin Administrative Code, Chapter NR 116 and the procedures outlined in "Adopting an Ordinance: Step by Step Guide." Please pay particular attention to the Class 2 notice requirements for public hearings. The second publication must be at least one week before the hearing. After the County has approved the amendment, a certified copy of the ordinance, a notarized affidavit of publication of the public hearing and a notarized affidavit of publication of the ordinance adoption must be sent to me for final administrative review and approval.

NOTICE OF APPEAL RIGHTS

If you believe that you have a right to challenge this decision, you should know that the Wisconsin statutes and administrative rules establish time periods within which requests to review Department decisions must be filed. For judicial review of a decision pursuant to sections 227.52 and 227.53, Wis. Stats., you have 30 days after the decision is mailed, or otherwise served by the Department, to file your petition with the appropriate circuit court and serve the petition on the Department. Such a petition for judicial review must name the Department of Natural Resources as the respondent.

To request a contested case hearing pursuant to section 227.42, Wis. Stats., you have 30 days after the decision is mailed, or otherwise served by the Department, to serve a petition for hearing on the Secretary of the Department of Natural Resources. All requests for contested case hearings must be made in accordance with section NR 2.05(5), Wis. Adm. Code, and served on the Secretary in accordance with section NR 2.03, Wis. Adm. Code. The filing of a request for a contested case hearing does not extend the 30 day period for filing a petition for judicial review.

This decision was mailed on 6/19/2020.

STATE OF WISCONSIN DEPARTMENT OF NATURAL RESOURCES
For the Secretary

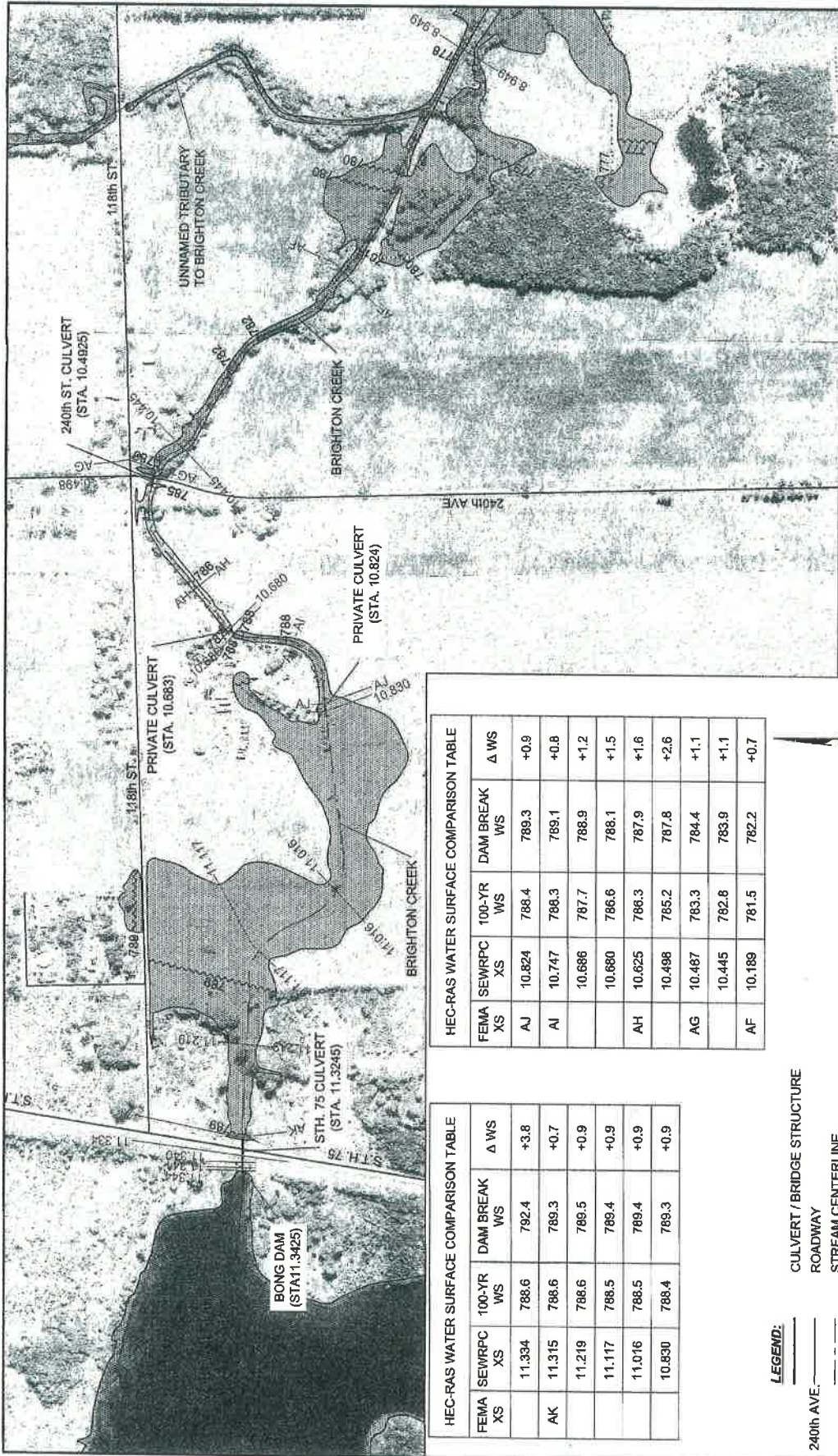


Andrea K. Stern
Water Management Engineer
Wisconsin Department of Natural Resources
Waukesha office

- Encl.:
- 1) Map dated January, 2013, and titled "Simplified Dam Failure Analysis for Bong Recreational Area Dam No. 8".
 - 2) Floodway data table dated, no date, and titled "Table 6.1 – Water Surface Comparison". 100 – year Flood Dam Failure Peak WSEL column indicates the water surface elevations during dam failure.
 - 3) Flood profiles dated, no date, and titled "Bong Recreational Area Dam No. 8 - Simplified Dam Failure Analysis"

Copy to:

- Mr. Brent A Binder, Engineer - via email
- Tanya Lourigan, State Dam Safety Engineer, via email
- Michelle Scott, Waterways and wetlands field supervisor, via email



Simplified Dam Failure Analysis for
Bong Recreational Area Dam No. 8

Wisconsin Department of
Natural Resources



HEC-RAS BASEMAP
AERIAL MAP

Project 12811-0 JANUARY 2013 **Fig. 2**

HEC-RAS WATER SURFACE COMPARISON TABLE



FEMA XS	SEWRPC XS	100-YR WS	DAM BREAK WS	Δ WS
AJ	10.824	788.4	789.3	+0.9
AI	10.747	788.3	789.1	+0.8
	10.686	787.7	788.9	+1.2
	10.660	786.6	788.1	+1.5
AH	10.625	786.3	787.9	+1.6
	10.498	785.2	787.8	+2.6
AG	10.467	783.3	784.4	+1.1
	10.445	782.8	783.9	+1.1
AF	10.189	781.5	782.2	+0.7

HEC-RAS WATER SURFACE COMPARISON TABLE

FEMA XS	SEWRPC XS	100-YR WS	DAM BREAK WS	Δ WS
	11.334	788.6	792.4	+3.8
AK	11.315	788.6	789.3	+0.7
	11.219	788.6	789.5	+0.9
	11.117	788.5	789.4	+0.9
	11.016	788.5	789.4	+0.9
	10.830	788.4	789.3	+0.9

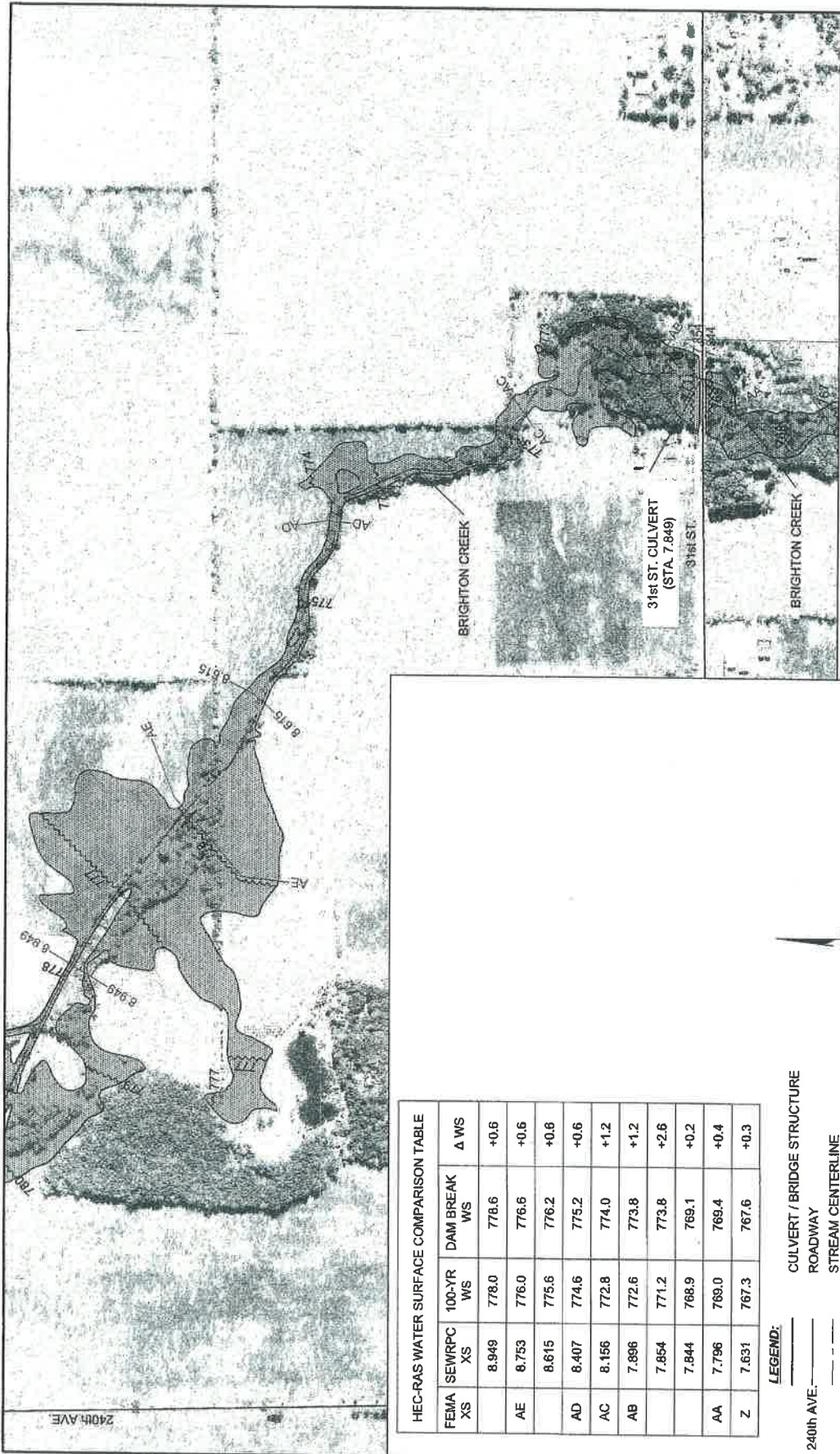
LEGEND:

- 240th AVE. _____
- CULVERT / BRIDGE STRUCTURE _____
- ROADWAY _____
- STREAM CENTERLINE _____
- FEMA-CROSS SECTION LOCATION AF _____
- 10.445-SEWRPC CROSS SECTION LOCATION _____
- 780-FEMA BASE FLOOD ELEVATION _____
- FEMA FLOODWAY AREAS IN ZONE AE _____

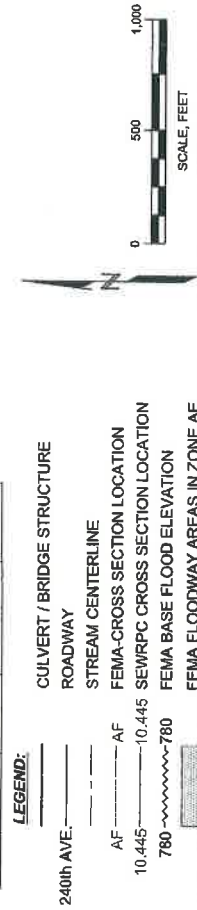
SCALE, FEET

Wisconsin Department of Natural Resources/12811-0-Bong Dam/CAD/Dong Dam, Aerial



HEC-RAS WATER SURFACE COMPARISON TABLE

FEMA XS	SEWRPC XS	100-YR WS	DAMI BREAK WS	Δ WS
		8.949	778.0	+0.6
AE		8.753	776.0	+0.6
		8.615	775.5	+0.6
AD		8.407	774.6	+0.6
AC		8.156	772.8	+1.2
AB		7.896	772.6	+1.2
		7.854	771.2	+2.6
		7.844	768.9	+0.2
AA		7.796	769.0	+0.4
Z		7.631	767.3	+0.3



Simplified Dam Failure Analysis for
Bong Recreational Area Dam No.8

Wisconsin Department of
Natural Resources

GEI
Consultants

HEC-RAS BASEMAP
AERIAL MAP

Project 12811-0 | JANUARY 2013 | Fig. 3

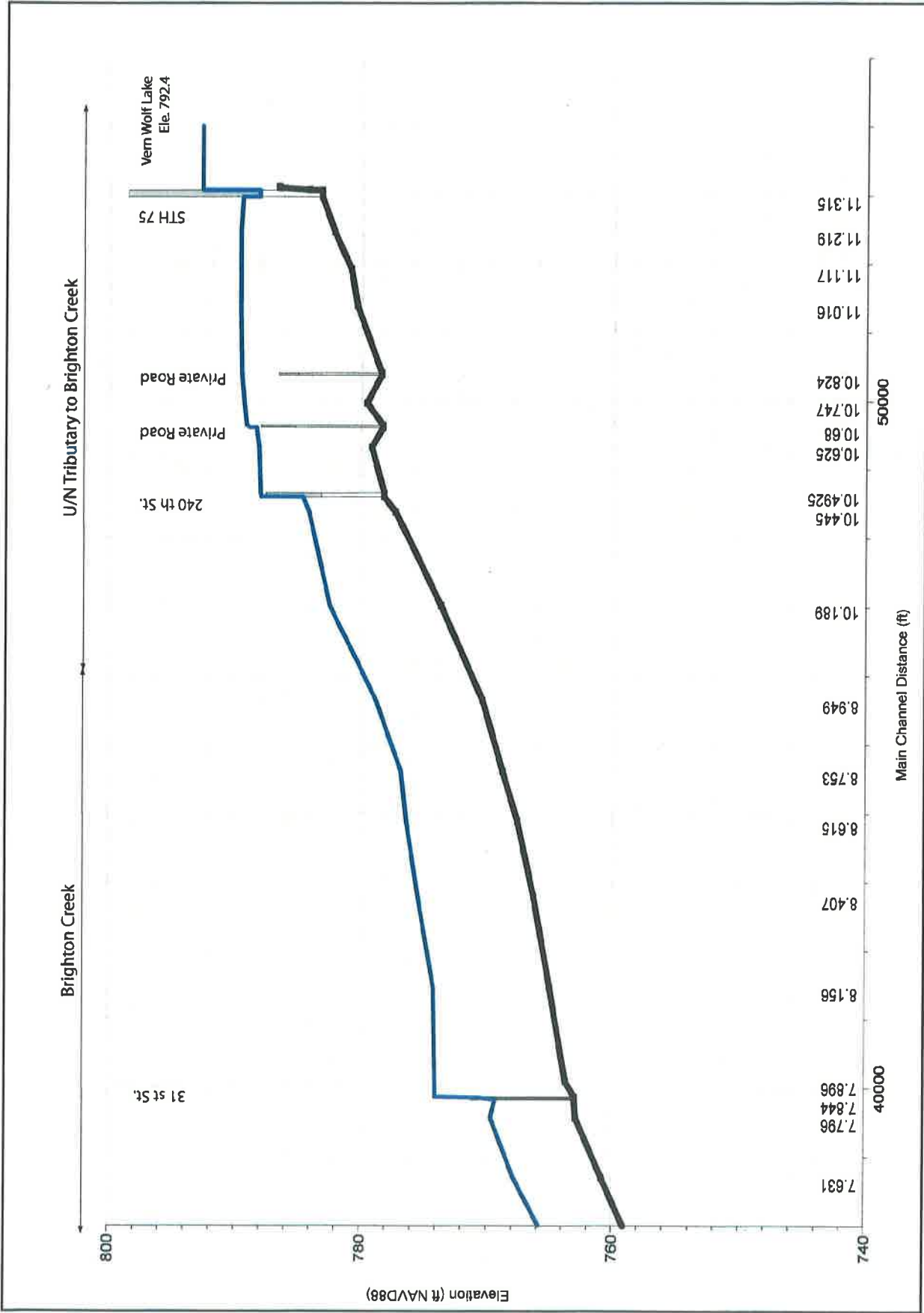
131 Wisconsin Department of Natural Resources\12811-0-Bong Dam\CAD\Bong Dam Aerial

6. Results

The hypothetical failure of Bong Dam during the 100-year flood creates an approximately 3.8-foot-high increase in water surface immediately downstream of the dam to the upstream face of the State Highway 75 embankment. This increase in flood height will increase peak water surface elevations downstream. The water surface incremental rise decreases to 0.3 feet at the downstream limit of our study. The tabulated results in the Table 4 include the increase in water surface elevation.

Table 6-1 – Water Surface Comparison

FEMA - FIS Cross Section	HEC-RAS Cross Section	100-Year Flood Dam Failure Peak WSEL. (ft, NAVD88)	100-Year Flood WSEL (ft, NAVD88)	Incremental Rise, (feet)
Z	7.631	767.6	767.3	0.3
AA	7.796	769.4	769.0	0.4
	7.844	769.1	768.9	0.2
	7.854	773.8	771.2	2.6
AB	7.896	773.8	772.6	1.2
AC	8.156	774.0	772.8	1.2
AD	8.407	775.2	774.6	0.6
	8.615	776.2	775.6	0.6
AE	8.753	776.6	776.0	0.6
	8.949	778.6	778.0	0.6
AF	10.189	782.2	781.5	0.7
	10.445	783.9	782.8	1.1
AG	10.487	784.4	783.3	1.1
	10.498	787.8	785.2	2.6
AH	10.625	787.9	786.3	1.6
	10.68	788.1	786.6	1.5
	10.686	788.9	787.7	1.2
AI	10.747	789.1	788.3	0.8
AJ	10.824	789.3	788.4	0.9
	10.83	789.3	788.4	0.9
	11.016	789.4	788.5	0.9
	11.117	789.4	788.5	0.9
	11.219	789.5	788.6	0.9
AK	11.315	789.3	788.6	0.7
	11.334	792.4	788.6	3.8



Legend
 Max WS ELE - Hydraulic Shadow
 Ground