



GREEN LAKE COUNTY

571 County Road A, Green Lake, WI 54941

The following documents are included in the packet for the Land Use Planning & Zoning Committee meeting on Thursday, February 4, 2021.

Packet Pages:

- 2 Agenda
- 3-4 Draft meeting minutes from January 7, 2021
- 5-7 Financial reports for December 2020
- 8-9 Permit Reports
- 10-11 Violation reports
- 12-13 Public Hearing Notice
- 14-49 Public Hearing Items

Item I: Applicant: Green Lake County Land Use Planning & Zoning Committee
Explanation: Amend Code of Green Lake County, Chapter 315, Land Division & Subdivision Ordinance; more specifically, to include the County Coordinate System for certified survey maps and plats, clarify exceptions from certified survey maps, update considerations in plat and certified survey map review, and update the violations and penalties section.

Item II: Applicant: Green Lake County Land Use Planning & Zoning Committee
Explanation: Amend Code of Green Lake, Chapter 300, Floodplain Zoning Ordinance; more specifically, to adopt “The Dam Failure Analysis (DFA) for the Green Lake Dam” prepared by Donohue & Associates, Inc., dated June 18, 1990.

If you have questions or need additional information,
please contact the Land Use Planning & Zoning Department at (920) 294-4156.

*Land Use Planning & Zoning Committee
Meeting Notice*

*Date: February 4, 2021 Time: 4:30 PM
Location: Government Center, County Board Room, 571 County Road A, Green Lake WI*

AGENDA 02/04/2021

**Committee
Members**

*Curt Talma,
Chairman*

Bill Boutwell

Chuck Buss

Don Lenz

Harley Reabe

*Keith Hess,
Alternate*

Vacant, Secretary

1. Call to Order
2. Pledge of Allegiance
3. Certification of Open Meeting Law
4. Approval of Minutes: 1/7/2021
5. Department activity reports
 - a. Financial reports
 - b. Land use & septic permits
 - c. Violation reports
6. Staff update – Administrative Assistant
7. Public Hearing: (Not to begin before 5:00 PM)

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8. Future committee activities
 - a. Future agenda items
 - b. Meeting date: March 4, 2021
9. Adjourn

Due to the COVID-19 pandemic, this meeting will be conducted and available through in person attendance (6 ft. social distancing and face masks required) or audio/visual communication.

Remote access can be obtained through the following link:

To Join this Zoom Meeting

Click link for audio & video

<https://zoom.us/j/94617493590?pwd=YTAwMXpldmRIQ3lPR091MGNFV2daZz09>

Or by phone for audio

Dial by your location (1-312-626-6799) US

Meeting ID: 946 1749 3590

Password: 397201

Kindly arrange to be present, if unable to do so, please notify our office. Sincerely, Matt Kirkman, Director

**GREEN LAKE COUNTY
LAND USE PLANNING AND ZONING
COMMITTEE MEETING MINUTES
Thursday, January 7, 2021**

CALL TO ORDER

Planning & Zoning Chair Curt Talma called the meeting of the Land Use Planning and Zoning Committee to order at 4:30 p.m. in the Green Lake County Government Center, County Board Room #0902, Green Lake, WI. The requirements of the open meeting law were certified as being met. Public access was available via remote programming as well as in person.

Present: **Bill Boutwell, Chuck Buss, Don Lenz, Harley Reabe, Curt Talma**

Absent: **None**

Also Present: **Matt Kirkman**, Land Use Planning and Zoning Director

Liz Otto, County Clerk

Aaron Ogle, Code Enforcement Officer

Gene Thom, Supervisor #19 (Zoom)

Cathy Schmit, County Administrator (Zoom)

Nicole Geschke, HR Coordinator (Zoom)

PLEDGE OF ALLEGIANCE

The Pledge of Allegiance was recited.

APPROVAL OF MINUTES

Motion/second (Boutwell/Lenz) to approve the minutes of the December 3, 2020 meeting with no additions or corrections. Motion carried with no negative vote.

DEPARTMENT ACTIVITY REPORTS

a. Financial reports

Matt Kirkman gave an overview of department finances through November 2020.

b. Permits

Matt Kirkman updated the committee on land use and sanitary permits through November 2020.

c. Violations

Matt Kirkman provided the committee with information and updates on land use and septic violations through November 2020.

REQUEST FOR BUDGET ADJUSTMENT – BILL FOR OUTSIDE LEGAL COUNSEL

Motion/second (Buss/Boutwell) to approve the budget adjustment in the amount of \$3,949 due to outside legal counsel expenses. Motion carried with no negative vote.

LAND DIVISION – SUBDIVISION ORDINANCE AMENDMENT

Matt Kirkman explained the updated language in the Exceptions section pertaining to Warranty Deeds (lines 61-84). Discussion held. *Motion/second (Boutwell/Reabe)* to approve the changes as presented. Motion carried with no negative vote.

STAFF UPDATE – ADMINISTRATIVE ASSISTANT

Matt Kirkman stated that the Administrative Assistant has resigned and transferred to another department. Kirkman explained the need to refill the position.

FLOODPLAIN ZONING AMENDMENT – 1990 DFA GREEN LAKE DAM

Matt Kirkman explained the zoning amendment. *Motion/second (Lenz/Buss)* to approve the zoning amendment. Motion carried with no negative vote.

PUBLIC HEARING – 5:00 PM

Chair Talma read the rules for the Public Hearing

- Applicant: Jon Loberg
Site Locations: W1726 North St. and W1702 North St.
General Legal Description: Parcel #004-00410-052, 004-00410-0523, 004-00410-0524. Lands located within Lot 1 CSM 904 and Units 3 and 4 of Yukon Partners Condominium Building 400 located within Lot 1 of CSM 3523, all in the SE1/4 of Section 17, Town 16 North, Range 13 East, Town of Brooklyn
Request: A Conditional Use Permit to manufacture, assemble, sell, and store prefabricated buildings as well as to store associated construction materials.

Chair Talma called for public input.

- Paul Schwandt, Markesan, stated that Loberg has requested to use one of his storage buildings. No objection.
- Kyle Wiggs, Green Lake, requested clarification on the location of manufacturing.
- Luke Amend, Green Lake, requested a change in the hours presented and clarification on building rental.

Chair Talma closed the Public Hearing.

Matt Kirkman presented Staff Comments.

Motion/second (Boutwell/Lenz) to suspend the rules and allow for more public comment. Motion carried with no negative vote.

- Kyle Wiggs asked if the hours of operation would include 7 days per week
- Jon Loberg gave an update of the hours he would prefer.

Chair Talma closed public comment.

Motion/second (Boutwell/Buss) to approve the Conditional Use Permit as presented but eliminate Condition #2 and modify Condition #3 for hours of use to 7:00 AM – 5:00 PM Monday – Saturday. Motion carried with no negative vote.

FUTURE COMMITTEE ACTIVITIES

- a. Future agenda items –
- b. Next meeting date – February 4, 2021

ADJOURN

Chair Talma adjourned the meeting at 5:42 PM.

Respectfully submitted,

**Liz Otto
County Clerk**

FEES RECEIVED	DECEMBER				YEAR-TO-DATE				BUDGET	
	2019		2020		2019		2020		2020	
	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT		
LAND USE PERMITS										
Total Monthly Issued Permits	6	4,200	11	2,400	163	46,400	200	\$ 44,965	\$ 34,800	129%
SANITARY PERMITS (POWTS)										
Total Monthly Issued Permits	9	2,355	6	1,680	99	26,540	105	\$ 28,225	\$ 22,695	124%
NON-METALLIC MINING PERMITS										
Annual Permit Fees	-	-	4	\$ 4,200	20	16,900	9	\$ 13,800	\$ 15,300	90%
BOARD OF ADJUSTMENT										
Special Exception	-	-	-	-	-	-	-	-	-	-
Variances	-	-	-	-	5	1,875	5	1,875	-	-
Appeals	-	-	-	-	-	-	-	-	-	-
Total	-	\$ -	-	\$ -	5	\$ 1,875	5	\$ 1,875	\$ 1,500	125%
PLANNING & ZONING COMMITTEE										
Zoning Change	-	-	2	750	13	4,875	7	2,625	-	-
Conditional Use Permits	2	750	-	-	7	2,625	5	1,875	-	-
Variance	-	-	-	-	1	375	-	-	-	-
Total	2	\$ 750	2	\$ 750	21	\$ 7,875	12	\$ 4,500	\$ 8,625	52%
MISC.										
Wisconsin Fund	-	-	-	-	1	100	1	100	-	-
Fines & Forfeitures	-	-	1	50	1	860	16	7,350	-	-
Total	-	\$ -	1	\$ 50	2	\$ 960	17	\$ 7,450	-	-
SURVEYOR										
Certified Survey Maps	3	495	3	570	50	8,400	41	7,215	6,000	
Preliminary and Final Plats	-	-	-	-	-	-	-	-	-	-
Applied Funds: County Surveyor	1	20	-	-	1	2,739	1	9,500	9,500	
Total	4	\$ 515	3	\$ 570	51	\$ 11,139	42	\$ 16,715	\$ 15,500	108%
GIS (Geographic Information System)										
Map Sales	-	200	-	-	-	285	-	-	180	
Land Records Transfer	-	24,500	-	25,000	-	24,500	-	25,000	25,000	
Land Information Grant	-	9,080	-	10,000	-	18,580	-	10,000	10,000	
Total	-	\$ 33,780	-	\$ 35,000	-	\$ 43,365	-	\$ 35,000	\$ 35,180	99%
GRAND TOTAL	21	41,600	27	44,650	361	155,054	390	152,530	\$ 133,600	
									Total	114%

GREEN LAKE COUNTY

For 12/01/20 - 12/31/20

Revenue Summary Report

FJRES01A

Periods 12 - 12

Land Use & Zoning Month End Revenue

MER100-10-P&Z

<u>Account No/Description</u>	<u>Budget Amount</u>	<u>Period Amount</u>	<u>Y-T-D Amount</u>	<u>Balance</u>	<u>Percent Received</u>
10 Land Use Planning and Zoning					
20-100-10-44400-000-000 Land Use Permits	34,800.00	2,400.00	44,965.00	-10,165.00	129.21
20-100-10-44400-001-000 BOA Public Hearing	1,500.00	.00	1,875.00	-375.00	125.00
20-100-10-44400-002-000 PZ Public Hearing	8,625.00	750.00	4,500.00	4,125.00	52.17
20-100-10-44400-003-000 Misc	.00	.00	.05	-.05	.00
20-100-10-44409-000-000 Non-Metallic Mining	30,300.00	4,200.00	13,800.00	16,500.00	45.54
20-100-10-44410-000-000 Sanitary Permits	22,695.00	1,680.00	28,225.00	-5,530.00	124.37
20-100-10-44411-000-000 Wisconsin Fund Applications	.00	.00	100.00	-100.00	.00
20-100-10-45110-000-000 Fines & Forfeitures	.00	50.00	7,350.00	-7,350.00	.00
20-100-10-46131-001-000 GIS Map Sales	180.00	.00	.00	180.00	.00
20-100-10-46131-002-000 Strategic Fund	10,000.00	10,000.00	10,000.00	.00	100.00
20-100-10-46762-000-000 Certified Survey Maps	6,000.00	570.00	7,215.00	-1,215.00	120.25
20-100-10-47411-000-000 Interdepartment transfer/Land Records	25,000.00	25,000.00	25,000.00	.00	100.00
20-100-10-49320-000-000 Applied Funds	19,000.00	.00	.00	19,000.00	.00
10 Land Use Planning and Zoning	158,100.00	44,650.00	143,030.05	15,069.95	90.47

For 12/01/20 - 12/31/20

Expenditure Summary Report

FJEXS01A

Periods 12 - 12

Land Use & Zoning Month End Expenses

MEE100-10-P&Z

<u>Account No/Description</u>	<u>Adjusted Budget</u>	<u>Y-T-D Encumb</u>	<u>Period Expended</u>	<u>Y-T-D Expended</u>	<u>Available Balance</u>	<u>Percent Used</u>
10 Land Use Planning and Zoning						
53610 Code Enforcement						
20-100-10-53610-110-000 Salaries	306,001.00	.00	35,073.60	278,436.72	27,564.28	90.99
20-100-10-53610-125-000 Overtime	.00	.00	76.11	95.52	-95.52	.00
20-100-10-53610-140-000 Meeting Payments	1,225.00	.00	450.00	728.14	496.86	59.44
20-100-10-53610-151-000 Social Security	23,432.00	.00	2,591.76	21,718.07	1,713.93	92.69
20-100-10-53610-153-000 Ret. Employer Share	20,677.00	.00	2,372.62	19,562.08	1,114.92	94.61
20-100-10-53610-154-000 Health Insurance	56,744.00	.00	5,816.88	52,702.68	4,041.32	92.88
20-100-10-53610-155-000 Life Insurance	610.00	.00	33.57	322.33	287.67	52.84
20-100-10-53610-210-002 Professional Services-SRV	9,500.00	.00	750.00	8,000.00	1,500.00	84.21
20-100-10-53610-210-003 Miscellaneous Fees	300.00	.00	3,873.63	4,248.63	-3,948.63	**
20-100-10-53610-225-000 Phone Service	576.00	.00	113.05	892.91	-316.91	155.02
20-100-10-53610-242-000 Print Management	1,180.00	13.60	17.62	312.24	854.16	27.61
20-100-10-53610-307-000 Training	540.00	.00	.00	336.43	203.57	62.30
20-100-10-53610-310-000 Office Supplies	2,602.00	.00	236.22	900.37	1,701.63	34.60
20-100-10-53610-312-000 Field Supplies	200.00	.00	.00	79.57	120.43	39.79
20-100-10-53610-320-000 Publications-BOA Public Hearing	750.00	.00	.00	1,266.13	-516.13	168.82
20-100-10-53610-320-001 Publications-PZ Public Hearing	3,000.00	.00	326.00	2,095.75	904.25	69.86
20-100-10-53610-321-000 Seminars	655.00	.00	.00	647.88	7.12	98.91
20-100-10-53610-324-000 Member Dues	100.00	.00	.00	100.00	.00	100.00
20-100-10-53610-330-000 Travel	492.00	.00	83.45	83.45	408.55	16.96
20-100-10-53610-352-000 Vehicle Maintenance	638.00	.00	34.74	573.50	64.50	89.89
53610 Code Enforcement	429,222.00	13.60	51,849.25	393,102.40	36,106.00	91.59
10 Land Use Planning and Zoning	429,222.00	13.60	51,849.25	393,102.40	36,106.00	91.59

Land Use Permits: 12/1/2020 - 12/31/2020

Permit Number	Parcel Number	Township	Site Address	Application Date	Issued Date	Owner Name	Estimated Cost	Permit Sub Type	Project_1 Type/SubType	Project_1 Description	Project_2 Type/SubType	Project_2 Description
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None

Town of Brooklyn

Permit Number	Parcel Number	Township	Site Address	Application Date	Issued Date	Owner Name	Estimated Cost	Permit Sub Type	Project_1 Type/SubType	Project_1 Description	Project_2 Type/SubType	Project_2 Description
12763	004009660100	Brooklyn	W1205 ILLINOIS AVE	12/07/2020	12/07/2020	HUFFMAN FAMILY WISCONSIN QUALIFIED PERSONAL RESIDENCE TRUST	95000	Land Use	Accessory Structure - Boathouse	Boathouse will go in exact same location as footprint of current boathouse. Height is 10'8" but will have deck on top (same as current deck)		
12767	004003120000	Brooklyn	W1238 N LAWSON DR	12/28/2020	12/28/2020	KDR WOODWORKING LLC	850	Land Use	Accessory Structure - Accessory Structure	Storage		

Town of Green Lake

Permit Number	Parcel Number	Township	Site Address	Application Date	Issued Date	Owner Name	Estimated Cost	Permit Sub Type	Project_1 Type/SubType	Project_1 Description	Project_2 Type/SubType	Project_2 Description
12761	006014080000	Green Lake	W2078 MELMAR DR	12/03/2020	12/03/2020	PETERJ MENTELE, SHARONL MENTELE	15000	Land Use	Accessory Structure - Detached Deck/Patio	replace current patio with new patio (retaining walls holding	Land Disturbing Activity - Slope Stabilization	Straighten the Seawall
12762	006013270100	Green Lake	N2984 N KEARLEY RD	12/07/2020	12/07/2020	GERISEM LASPISA, JAMESN YOUNGBLOOD	32500	Land Use	Accessory Structure - Attached Deck/Patio	Back Porch (Lakeside)	Accessory Structure - Attached Deck/Patio	Front Porch
12765	006015370000	Green Lake	W2782 CIRCLE DR	12/11/2020	12/11/2020	JOHN R & BARBARA J ZAHNOW	230000	Land Use	Accessory Structure - Attached Deck/Patio	Covered Screen Porch	Principal Structure - Single Family	Home Portion not including attached garage or porch. Single

Town of Kingston

Permit Number	Parcel Number	Township	Site Address	Application Date	Issued Date	Owner Name	Estimated Cost	Permit Sub Type	Project_1 Type/SubType	Project_1 Description	Project_2 Type/SubType	Project_2 Description
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None

Town of Mackford

Permit Number	Parcel Number	Township	Site Address	Application Date	Issued Date	Owner Name	Estimated Cost	Permit Sub Type	Project_1 Type/SubType	Project_1 Description	Project_2 Type/SubType	Project_2 Description
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None

Town of Manchester

Permit Number	Parcel Number	Township	Site Address	Application Date	Issued Date	Owner Name	Estimated Cost	Permit Sub Type	Project_1 Type/SubType	Project_1 Description	Project_2 Type/SubType	Project_2 Description
12764	012006270100	Manchester	N316 COUNTY ROAD M	12/11/2020	12/11/2020	ERINJ HOFFMAN, RUSSELLJ HOFFMAN	60000	Land Use	Accessory Structure - Agricultural Building	Farm Equipment Storage		
12769	012001930100	Manchester	N1785 COUNTY ROAD I	12/29/2020	12/29/2020	PAULA ROWLEY, VALENTINAG ZELENKO	90000	Land Use	Accessory Structure - Attached Deck/Patio	Attached Deck	Accessory Structure - Detached Garage	Garage

Town of Marquette

Permit Number	Parcel Number	Township	Site Address	Application Date	Issued Date	Owner Name	Estimated Cost	Permit Sub Type	Project_1 Type/SubType	Project_1 Description	Project_2 Type/SubType	Project_2 Description
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None

Town of Princeton

Permit Number	Parcel Number	Township	Site Address	Application Date	Issued Date	Owner Name	Estimated Cost	Permit Sub Type	Project_1 Type/SubType	Project_1 Description	Project_2 Type/SubType	Project_2 Description
12759	016019230000	Princeton	No Address Available	12/01/2020	12/04/2020	GL LAKESHORE DRIVE LLC	92000	Land Use	Accessory Structure - Boathouse		Accessory Structure - Stairs/Walkway	appx 41' long
12760	016003921103	Princeton	N4602 WILDWOOD LN	12/03/2020	12/03/2020	ALLYSOND CAYCE 2012 REVOCABLE TRUST	15000	Land Use	Accessory Structure - Attached Deck/Patio	Deck	Accessory Structure - Attached Deck/Patio	Porch
12766	016015920000	Princeton	W3724 ORCHARD AVE	12/22/2020	12/22/2020	KEVINP LUTSCH, PAULA LUTSCH	25000	Land Use	Additions / Alterations - Additions / Alterations	Sunroom		

Town of Saint Marie

Permit Number	Parcel Number	Township	Site Address	Application Date	Issued Date	Owner Name	Estimated Cost	Permit Sub Type	Project_1 Type/SubType	Project_1 Description	Project_2 Type/SubType	Project_2 Description
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None

Town of Seneca

Permit Number	Parcel Number	Township	Site Address	Application Date	Issued Date	Owner Name	Estimated Cost	Permit Sub Type	Project_1 Type/SubType	Project_1 Description	Project_2 Type/SubType	Project_2 Description
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None

Totals: \$787,350.00

Sanitary Permits: 12/1/2020 - 12/31/2020

Sanitary Permit	Parcel Number	Site Address	Owners	Date Issued	Permit Type	System Type	Plumber Name	Additional Explanation	Permit Fee \$ (County)	Permit Fee \$ (DPS)
202024106	004007811100	N5111 SKUNK RIDGE LN	DIANE L MOCKRIDGE, MARK A LINDQUIST	12/01/2020	Replacement System	Conventional (Non-Pressurized In-Ground)	Daniel Egbert	3 Bedroom	280	100
202024107	002008270000	No Address Available	MARTIND NEHLS	12/01/2020	New System	Conventional (Non-Pressurized In-Ground)	Daniel Pollesch	3 Bedroom House	280	100
202024108	016003810000	N4740 RADTKE RD	SALLYM KOLIAN TRUST FUND	12/14/2020	Replacement System	Conventional (Non-Pressurized In-Ground)	Daniel Pollesch	4 Bedroom House	280	100
202024109	016017130000	W4860 KRISTINE CT	DENNISF JINGST, KATHYS JINGST	12/15/2020	New System	Conventional (Non-Pressurized In-Ground)	Jeffrey Novak	4 Bedroom House	280	100
202024110	014009070000	W6208 LAKEVIEW DR N	DACE JOHNSON, WILLIAMS JOHNSON	12/16/2020	New System	Conventional (Non-Pressurized In-Ground)	Jeremiah Storer	3 Bedroom House	280	100
202024111	012001930100	N1785 County Road I	PAUL ROWLEY, VALENTINA ZELENKO	12/29/2020	Reconnect	Conventional (Non-Pressurized In-Ground)	Joel Jahnke	3 Bedroom House	280	0
Total:									1680	500

* There are additional properties associated with the permit

First Notice

Parcel Number	Site Address	Owner Name	Permit #	Violation Type	Violation Description	Violation Date
002007690000	N9666 WILDFLOWER LN	VAN BUREN KEITH A & VIKKI	12551	Junk	Update 12-15-20: Has until end of January to resolve both truck and vehicle issue.	11/20/2020
006005420200	N3047 E LITTLE GREEN RD	SARGENT REVOCABLE LIVING TRUST SANDRA LYNN	12525	Zoning	350-65 no LUP for new structure; Update 12/2020: Is scheduled to be removed by May 1 2021.	10/24/2019
014000010000	N2797 COUNTY ROAD B	SWANKE GARY L & LINDA A	12534	Junk	Update 12-15-20: Site visit showed...Add Caleb's comment here. Tires Pallets Unregistered truck Junk/ inoperable machinery (non-farm) containers plastic tarps	10/10/2019

Second Notice

Parcel Number	Site Address	Owner Name	Permit #	Violation Type	Violation Description	Violation Date
004003560000	No Address Available	EGBERT EXCAVATING INC	12225	Zoning	Update 12/15/20: Egbert working with surveyor to document filled areas as not significant and create the new CSM.	4/5/2018
010001430000	N1914 COUNTY ROAD AS	SLR PROPERTIES LLC	12522	Junk	Update 12-15-20: Monitoring violation status. Property has been cleaned up to an extent.	10/23/2019
012002620300	N1638 MADISON ST	SCHWANDT CHILDREN REAL ESTATE LLC	4127	Conversion	Update 12-15-20: Only a few vehicles left on site.	1/20/2020
014003500000	W6592 PUCKAWAY RD	SMITH WESLEY E	12443	Shoreland	Update 12-15-20: Waiting for owner to provide an elevation verification of the shed. Site inspection required for NOC letter. Original violation: Owners added a pea gravel patio at shore; violation of 338-37 vegetated buffer activities 338-40 land disturbing activities and 338-32 as patios are not exempt from 75ft setback;	8/22/2019

Corp Council

Parcel Number	Site Address	Owner Name	Permit #	Violation Type	Violation Description	Violation Date
016011960000	N4250 S LAKESHORE DR	SPICER ANDREW G & DORIS E	12744	Shoreland	Matt and Aaron used the Town of Princeton lake access to the west of the parcel 016-01196-0000 to get a view of the backyard. A patio was very visible and entirely within the 75' shoreland setback. Unable to get access to the property for measurements and size as the property owner was not present. Final notice was sent out 12/07/2020.	10/29/2020

Parcel Number	Site Address	Owner Name	Permit #	Violation Type	Violation Description	Additional Information
002002110000	N8725 WHITE RIDGE RD	BEDNAREK DAVID ; BLOCK KELIE J		131 POWTS Failure	Tank unsound	
004002320000	N6698 COUNTY ROAD PP	BENNETT GLEN J & CAROLYN M		281 POWTS Failure	Possible cesspool.	Have New Permit
014001720000	W5156 PINE RD N	HEINECKE RANDAL R ET AL		26724 POWTS Failure	Tank Failure	Working with Contractor
014002350000	W5621 PINE RD S	SCHULTZ NATHAN E		1969 POWTS Failure	Tank Failure	Working with Contractor
014008340000	W4052 COUNTY ROAD H	NOWATZSKI KATHY A		1424052 POWTS Failure	Tank Failure	Working with Contractor
016008010300	N5591 LOCK RD	CALAMITA TAMI LYNN		37516 POWTS Failure	Surface Discharge of Effluent	Have New Permit
016009230000	N4898 RAY SHORTER RD	PROG ROD-GUN CLUB		10024252 POWTS Failure	Surface discharge of sewage/effluent	Have 3 out of 12 Permits
016010950000	N4659 OAK RD	CARCHESI ANTHONY M; CARCHESI CAROL L		369 POWTS Failure	Tank unsound	Have New Permit
018000570000	W3602 PINE RD	BREWER DOUGLAS & SALLY		258 POWTS Failure	Tank unsound	
018000850000	W4224 HUCKLEBERRY RD	DEIBERT BRUCE ; DEIBERT DEBORAH L		56 POWTS Failure	Tank Failure	Have New Permit
018005690300	N6999 STATE ROAD 73	FERTIG WALTER		21127 POWTS Failure	Tank Failure	Have New Permit
004005930000	N5691 BROOKLYN G RD	HARVEY RICHARD A & JOYCE M		424036 POWTS Failure	Tank Failure	Have New Permit
014005330000	N3946 STATE ROAD 73	WHITE KELLY L & DIANE		264853 POWTS Failure	Surface Discharge of Effluent	Working with Contractor
016007700000	W5897 STATE ROAD 23	HAZELWOOD WANETTA ET AL		26752 POWTS Failure	Tank Failure	Working with Contractor
016007980500	N5588 LOCK RD	KUJAC THOMAS		1624077 POWTS Failure	Tank Failure	Have New Permit
154000890000	150 W 2ND ST	KOERNER KENNETH A & JEAN A		593 POWTS Failure	Probable surface discharge	Have New Permit

NOTICE OF PUBLIC HEARING

The Green Lake County Land Use Planning and Zoning Committee will hold a public hearing in County Board Room #0902 of the Green Lake County Government Center, 571 County Road A, Green Lake, WI, on **Thursday, February 4, 2021, at 5:00 p.m.** to consider the following requests:

Item I: Applicant: Green Lake County Land Use Planning & Zoning Committee **Explanation:** Amend Code of Green Lake County, Chapter 315, Land Division & Subdivision Ordinance; more specifically, to include the County Coordinate System for certified survey maps and plats, clarify exceptions from certified survey maps, update considerations in plat and certified survey map review, and update the violations and penalties section. The proposed ordinance amendments are available for review at the County Government Center, Land Use Planning & Zoning Department, 571 County Road A, Green Lake, WI. Also, the proposed ordinance amendment is posted on the County's website:

- Go to www.co.green-lake.wi.us
- Click on Departments
- Click on Land Use Planning & Zoning
- Go to Downloads and click on Land Division & Subdivision Ordinance Amendment

Item II: Applicant: Green Lake County Land Use Planning & Zoning Committee **Explanation:** Amend Code of Green Lake, Chapter 300, Floodplain Zoning Ordinance; more specifically, to adopt "The Dam Failure Analysis (DFA) for the Green Lake Dam" prepared by Donohue & Associates, Inc., dated June 18, 1990. The proposed ordinance amendment and study are available for review at the County Government Center, Land Use Planning & Zoning Department, 571 County Road A, Green Lake, WI. Also the proposed ordinance amendment is posted on the County's website:

- Go to www.co.green-lake.wi.us
- Click on Departments
- Click on Land Use Planning & Zoning
- Go to Downloads and click on Floodplain Zoning Ordinance Amendment

All interested persons wishing to be heard at the public hearing are invited to attend. For further detailed information concerning this notice and for information related to the outcome of public hearing items, contact the Green Lake County **Land Use Planning and Zoning Department** at (920) 294-4156.

Publish: January 21, 2021

SUMMARY NOTICE OF PUBLIC HEARING

The Land Use Planning and Zoning Committee of *Green Lake County* will hold a public hearing in #0902 of the Government Center, 571 County Road A, Green Lake, WI, on *Thursday, January 7, 2021, at 5:00 p.m.* to consider the following items:

Item I: Applicant: Green Lake County Land Use Planning & Zoning Committee **Explanation:** Amend the Land Division & Subdivision Ordinance; to include the County Coordinate System for certified survey maps and plats, clarify exceptions from certified survey maps, update considerations in plat and certified survey map review, and update the violations and penalties section.

Item II: Applicant: Green Lake County Land Use Planning and Zoning Committee **Explanation:** Amend the Floodplain Zoning Ordinance to include “The Dam Failure Analysis (DFA) for the Green Lake Dam” prepared by Donohue & Associates, Inc., dated June 18, 1990.

On January 21, 2021 the full text of the Notice of Public Hearing was published in Berlin Journal Newspapers and is available for viewing at the Berlin Journal, at www.co.green-lake.wi.us, at www.wisconsinpublicnotice.org and the public meeting notices board at the Green Lake County Court Government Center.

Publish: January 28, 2021

LAND USE PLANNING AND ZONING COMMITTEE STAFF REPORT

PUBLIC HEARING

February 4, 2021

ITEM I: LAND DIVISION & SUBDIVISION ORDINANCE AMENDMENT

REQUEST: The Green Lake County Land Use Planning and Zoning Committee is requesting an amendment to the Code of Green Lake County, Chapter 315 of the Land Division & Subdivision Ordinance; more specifically to include the County Coordinate System for certified survey maps and plats, clarify exceptions from a certified survey map, update considerations in certified survey map and plat review, and update the violations and penalties section to match other land use ordinances.

ADDITIONAL INFORMATION / ANALYSIS: The Land Division & Subdivision Ordinance was first adopted in 2004 and then amended in 2013. The proposed amendment is mostly a maintenance action, but there are several upgrades being proposed that will make administration and enforcement of the ordinance more efficient.

Article I. After reviewing the “Purpose and intent” section, several new phrases were added that more succinctly describe the original purpose and intent.

Article II. After reviewing the “Applicability” section it seemed appropriate to direct the reader to exceptions to needing a certified survey map contained in Section 315-15. Also, due to confusion generated by Section 315-15.C., “Exceptions”, related to the “exchange of lands between adjoining property owners” provision, language approved by WDOA Plat review, was added to clarify how to use this exception.

Article III. The County has a “Coordinate System” that is based on the NAD 83(91) adjustment. All of the PLSS sections corners that have been monumented and re-monumented are based on this “County Coordinate System and datum. It is appropriate to include the County Coordinate System as the foundation for all new certified survey maps and subdivision plats. This inclusion standardizes filing requirements for surveyors working in Green Lake County and it creates efficiencies in GIS parcel mapping.

Article IV has to do with land divisions by Subdivision Plat. Past practice had been to describe a licensed surveyor as a “registered land surveyor”, however recently surveyors have updated their terminology to “professional land surveyor.” As a result, the word “professional” will replace “registered” when referring to a land surveyor.

Also under Section 315-27 the preliminary subdivision plat ties are to be tied to the County Coordinate System. A requirement was added that for preliminary plats, the current tax parcel number(s) are included in the plat. Stormwater drainage and infiltration structures and stormwater flow directions are to be included in the preliminary plat. It is clarified that certain lands abutting a stream, river or lake, which may be questionable for inclusion into the plat (by the surveyor) are to be included in the plat.

Under Section 315-28, drainage easements in subdivision plats are discussed in terms of location, size, design as well as their need for Committee approval.

Under Section 315-34, relating to subdivision plat lots, reasoning for added width for corner lots was inserted.

Section 315-35, Stormwater Management & Erosion Control was added to require, by local ordinance, that Chapter 284, Construction Site Erosion Control and Stormwater Management Ordinance standards apply to subdivision plats.

Article V has to do with land divisions by certified survey map (CSM). Here a reference to the County Coordinate system was inserted, more property features were listed to be shown on the CSM map, gross and net area are to be shown, adjacent lands (platted or unplatted) are to be identified, and floodplain and/or wetlands (if applicable) are to be located and identified. Also a provision was added to require property taxes to be current prior to plat or CSM approval.

Article VIII, which deals with enforcement of violations of the ordinance, was updated with the same enforcement language as the other land use ordinances.

Article X contains of the definition Section 315-56. The definitions of certificate of survey and certified survey map were updated.

SUMMARY: This ordinance amendment includes references to the County Coordinate System as well as provides updates to the ordinance that will increase the clarity and efficiency of administering and enforcing this ordinance.

STAFF COMMENTS: The Land Use Planning and Zoning Committee has several options in this regard and they are as follows:

- ❑ Forward onto the County Board with recommendation to adopt as proposed.
- ❑ Hold another public hearing to take additional public comment.
- ❑ *Reject as proposed.

* In the event that these amendments are not adopted, surveyors will continue to have little clarity on how to perform surveying in Green Lake County which in many cases leads to additional GIS mapping inefficiencies. These inefficiencies are eliminated if CSMs and Plats are tied to the County Coordinate System. Further, if these amendments are not adopted there will be insufficient references, in a local ordinance, to the requirements for subdivision platting and certified survey mapping. Finally, without the amendments to the enforcement section of the ordinance Corporation Counsel will have to continue to account for poorly worded standards that make enforcement more difficult and inefficient.

ORDINANCE NO. -2021

Amending Chapter 315, Land Division and Subdivision

The County Board of Supervisors of Green Lake County, Green Lake Wisconsin, duly assembled at its regular meeting begun on the 16th day of February 2021, does ordain as follows:

Section 1. Green Lake County Ordinance, No. 1056-2013, adopted May 21, 2013, and as amended from time to time (Chapter 315 Land Division and Subdivision), is hereby amended as follows (additions in underline, deletions in strikeout):

Roll Call on Ordinance No. -2021

Submitted by Land Use Planning & Zoning Committee:

Ayes , Nays , Absent , Abstain

Passed and Enacted/Rejected this 16th day of December, 2021.

Curt Talma, Chair

William Boutwell, Vice-chair

County Board Chairman

Harley Reabe

ATTEST: County Clerk
Approve as to Form:

Charles Buss

Corporation Counsel

Don Lenz

1 § 315-1 **Statutory authority.**

2 This chapter is adopted pursuant to the authorization in § 236.45, Wis. Stats., and
3 amendments thereto.

4
5 § 315-3 **Purpose and intent.**

6 A. The purpose and intent of this chapter is to establish standards that promote the
7 public health, safety, and general welfare of Green Lake County through the regulation of
8 land division:

9 (1) To lessen congestion in the streets and highways, including proper ingress and egress;

10
11 (2) To ~~facilitate~~ further the orderly layout and use of land through the establishment of
12 reasonable standards of design and procedures for land division and subdivisions so
13 they will fit within the County Coordinate System;

14
15 (3) To secure safety from fire, flood, panic and other dangers; and to prevent overcrowding
16 of the land and the undue congestion of the population.

17
18 (4) To provide for adequate light and air, including access to sunlight for solar collectors
19 and to wind for wind energy systems;

20
21 (5) To ~~prevent overcrowding of land~~ guide the future growth and development of Green
22 Lake County in accordance with the adopted comprehensive plan;

23
24 (6) To facilitate the orderly and beneficial development of the county through well-planned
25 land divisions consistent with workable design standards ~~avoid undue concentration of~~
26 ~~population;~~

27
28 (7) To facilitate adequate provisions for transportation, water, sewerage, schools, parks,
29 playgrounds, and other public requirements;

30
31 (8) To facilitate the land division of larger tracts into smaller lots or parcels of land; and to
32 promote the proper monumenting of land divisions and conveyancing by an accurate
33 legal description.

34 § 315-14 **Applicability.**

35 The provisions of this chapter shall apply to all subdivisions, land divisions and land
36 combinations.

37
38 A. Subdivision. A subdivision as defined in this chapter shall be created by subdivision
39 plat in accordance with Ch. 236, Wis. Stats., and the provisions of this chapter.

40
41 B. Land division. A land division as defined in this chapter shall be created in
42 accordance with § 236.34, Wis. Stats., where applicable, and the provisions of this
43 chapter.

44 (1) All land divisions, except subdivision plats and any exceptions described in Section

45 315-15, 15 acres or less in size shall be created by certified survey map in compliance
46 with § 236.34, Wis. Stats., and the provisions of this chapter.

47
48 **§ 315-15 Exceptions.**

49 Pursuant to § 236.45, Wis. Stats., the provisions of this chapter that apply to divisions of
50 land being less than five lots or parcels shall not apply to the following:

- 51
52 A. Transfers of interests in land by will or pursuant to court order;
53
54 B. Leases for a term not to exceed 10 years, mortgages or easements;
55
56 C. The sale or exchange of lots or parcels of land between owners of adjoining
57 property if additional lots or parcels are not thereby created and the lots or parcels
58 resulting are not reduced below the minimum sizes required by this chapter or other
59 applicable laws or ordinances;

60
61 (1) In order to qualify as an exception as described in C. above the following process shall
62 be completed:

63
64 (a) A meets and bounds description shall be prepared by a Wisconsin Professional Land
65 Surveyor describing the lands being sold or exchanged.

66
67 (b) A deed, shall be recorded in the Green Lake County Register of Deeds Office
68 transferring ownership of the lands being sold or exchanged.

69
70 (c) Immediately following the deed described in (b) above, a deed, shall be recorded
71 combining into one land area the owner's principal lot or parcel with the lands being
72 sold or exchanged. The required combination language shall state that "All lands
73 described in this document shall be considered one land area for the purposes of real
74 property listing, assessment, taxation and land use regulations. Separation or division
75 of this land area shall only occur in compliance with the applicable Green Lake County
76 ordinances and regulations affecting the combined land area."

77
78 (2) Strictly for the purpose of applying building setbacks, the process described in (1)(a)
79 thru (c) above shall have the effect of eliminating any internal lot lines associated with
80 the resultant combined land area from being used in the application of structure or
81 building setbacks.

82
83 **§ 315-20 Land suitability.**

84 No land shall be divided or subdivided by means of a subdivision plat for a use that is held
85 unsuitable by the Land Use Planning and Zoning Committee for reason of flooding or
86 potential flooding, soil limitations, inadequate drainage, incompatible surrounding land use,
87 or any other condition likely to be harmful to the health, safety or welfare of the future
88 residents or users of the area, or to the residents of Green Lake County.

- 89
90 E. Unless specifically exempt from this requirement elsewhere in this chapter, all

91 subdivision plat proposals where private water and/or sewage disposal systems are to be
92 used shall be accompanied by certifications and reports:

93
94 (1) Describing the probable depth, cost and yield of private wells. This report shall be
95 based on competent scientific investigation and shall include the sources of all data
96 used in the preparation of the report.

97
98 (2) Describing soil conditions existing on the site as applicable to on-site waste water
99 disposal. A soil report shall accompany all subdivision plat proposals.

100
101 **§315-22 Ties to County Coordinate System**

102
103 A. Any Plat or Certified Survey Map recorded in the Register of Deeds office shall be tied
104 by lengths and bearings to the boundary line of the quarter section, Private Claim or
105 Federal Reservation in which the subdivision lies, and description of the monuments at
106 ends of the line; and bearing and distance between those monuments. Boundary bearing
107 references shall be the bearing and distance established by the County in its county
108 coordinate system, along with the NAD 83(91) adjustment, unless waived by the County
109 Surveyor. If no bearing has been established on any of the boundaries of the section
110 being worked in, a reference to a magnetic, true or other identifiable direction may be used
111 for reference to the boundary. When re-dividing an existing certified survey map or
112 subdivision plat which is already connected to county bearings the re-division shall be
113 shown on the face of the map.

114
115 1. A retracement or combination certified survey map is not required to be tied to the
116 County coordinate system.

117
118 **§ 315-23~~2~~ Improvements.**

119
120 **§ 315-24~~3~~ Construction.**

121
122 § 315-24 is renumbered to 315-25.

123
124 **§ 315-27 Preliminary subdivision plat.**

125 A. General. A preliminary subdivision plat shall be prepared by a registered professional
126 land surveyor for all subdivision plats. The preliminary subdivision plat shall comply
127 with the provisions of Ch. 236, Wis. Stats., and the provisions of this chapter.

128
129 D. Preliminary subdivision plat requirements.

130 (1) A preliminary subdivision plat shall be prepared on reproducible material and shall
131 show correctly on its face the following information:

132
133 (a) Title under which the preliminary subdivision plat is to be known and a general legal
134 description by 1/4 section or government lot, section, town, range, county and state
135 where the preliminary subdivision plat is located.

- 137 (b) Vicinity map with the general legal description, showing the location of the preliminary
138 subdivision plat in relation to the road system in the immediate area along with any
139 lake and stream accesses in relation to the preliminary subdivision plat.
140
- 141 (c) Date, graphic and written scale of not more than 100 feet to the inch and a north arrow
142 with a basis for bearings.
143
- 144 (d) Names and addresses of the subdivider and land surveyor preparing the preliminary
145 subdivision plat.
146
- 147 (e) Entire area contiguous to the preliminary subdivision plat, owned or controlled by the
148 subdivider shall be included on the preliminary subdivision plat even though only a
149 portion of such area is proposed for immediate development.
150
- 151 (f) Ties to all government corners required to be used for the survey, according to State
152 and Federal surveying requirements, also see Section 315-22, Ties to County
153 Coordinate System. Bearings and distances of the exterior boundaries of the
154 preliminary subdivision plat, being referenced to a boundary line of the Public Land
155 Survey System of the section in which the preliminary subdivision plat is located, and
156 identify the corners at each end of that boundary line and the bearing and distance
157 between them.
158
- 159 (g) Total number of lots and outlots with total acreage and current tax parcel numbers of
160 all tax parcels that are included in the plat.
161
- 162 (h) Contours at vertical intervals of not more than two feet where the slope of the ground
163 surface is 5% or less and of not more than four feet where the slope of the surface of
164 the ground is greater than 5%.
165
- 166 (i) Water elevations of adjoining lakes and streams on the date of survey, for the ordinary
167 high-water elevation, designated regional flood elevation, or floodway.
168
- 169 (j) Location, right-of-way width and names of all existing and proposed streets, alleys or
170 public ways, easements, railroads and utility rights-of-way and all section and quarter
171 section lines within the proposed subdivision plat or immediately adjacent thereto.
172
- 173 (k) Location and names of any adjacent subdivisions, parks, schools, cemeteries and
174 owners of record of abutting unplatted lands.
175
- 176 (l) Type, width, and elevation of any existing street pavements within the exterior
177 boundaries of the preliminary subdivision plat or immediately adjacent thereto.
178
- 179 (m) Locations of all existing property boundary lines, structures, drives, streams and
180 watercourses, wetlands, rock outcrops, wooded area, and other similar significant
181 features within the preliminary subdivision plat or immediately adjacent thereto.
182

- 183 (n) Dimensions of all lots, together with proposed lot and block numbers.
184
185 (o) Location and dimensions of any sites to be reserved or dedicated for parks,
186 playgrounds, drainageways or other public use.
187
188 (p) Approximate centerline radius of all curves.
189
190 (q) Delineation of floodplain and zoning boundaries within or immediately adjacent to the
191 preliminary subdivision plat.
192
193 (r) Corporate limit lines.
194
195 (s) Source and availability of potable water supplies.
196
197 (t) Lots served by private on-site wastewater treatment systems (POWTS) shall have
198 information submitted demonstrating sufficient on-site sewage disposal area and
199 suitability, including soil suitability, depth to ground water and bedrock, and slope.
200
201 (u) All stormwater drainage and infiltration structures required by the Green Lake County
202 Construction Site Erosion Control and Stormwater Management ordinance shall be
203 indicated on the preliminary plat as well as the direction of stormwater flow on each lot
204 with arrows.
205
206 (v) Lands lying between the meander line and the water's edge and any other unplattable
207 lands which lie between a proposed subdivision and the water's edge shall be included
208 as parts of lots, outlots, or public dedications in any plat abutting a lake, river, or
209 stream.
210
211 **§ 315-28 Final subdivision plat.**
212 A. General requirements. A final subdivision plat shall be prepared by a registered
213 professional land surveyor and shall comply with the provisions of Ch. 236, Wis. Stats.,
214 and the provisions of this chapter.
215
216 B. Fees. At the time of submittal of the final subdivision plat, a fee shall be paid as
217 provided in Article IX, of this chapter.
218
219 C. Final subdivision plat submittal. The subdivider shall file an application for review and
220 provide 10 copies of the final subdivision plat to the Land Use Planning and Zoning
221 Department for review and distribution.
222
223 **§ 315-32 Subdivision utility easement.**
224 A. Utility easements across lots or along lot lines shall be provided for utilities above and
225 below grade, of a width and at a location deemed necessary by the appropriate utility
226 company. Utility easements shall be identified on the subdivision plat as to type and
227 width.
228

229 B. Drainage easements. Where a subdivision is traversed by a watercourse, drainage
230 way, channel or stream, an adequate drainage way or easement shall be provided as
231 may be required by the Committee. The location, width, alignment and improvements
232 of such drainage way or easement shall be subject to the approval of the Committee;
233 and parallel street or parkways may be required in connections therewith. Where
234 necessary, stormwater drainage shall be maintained by landscaped open swales of
235 adequate size and grade to hydraulically accommodate maximum potential volumes of
236 flow. These design details are subject to review and approval by the Committee.

237
238 **§ 315-34 Lots.**
239 The size, shape and orientation of lots shall be appropriate for the location of the
240 subdivision plat and for the type of development and use contemplated.

241
242 F. Corner lots, in an effort to provide for adequate buildable area, shall be designed with
243 extra width to account for street yard setbacks from both streets permit adequate
244 building setback from both streets.

245
246 **§ 315-35 Stormwater Management and Erosion Control**

247
248 A. The subdivider shall provide stormwater management facilities and erosion control that
249 are in compliance with Chapter 284, Construction Site Erosion Control and Stormwater
250 Management Ordinance.

251
252 **§ 315-36 through § 315-37. (Reserved)**

253
254 **§ 315-38 Certified survey map.**

255
256 C. Submittal. Certified survey maps, as defined in this chapter, shall be submitted for
257 review to the County Land Use Planning and Zoning Department. The certified survey
258 map shall be prepared in accordance with the provisions of § 236.34, Wis. Stats.,
259 Section 315-22 and any other applicable ~~the~~ provisions of this chapter and show the
260 following information clearly on the face of the certified survey map:

261
262 (1) All existing buildings, building setback dimensions to lot or parcel boundary lines,
263 watercourses, access locations, easements, floodplain elevation stated, well
264 location(s), approximate location of any septic tank(s), septic system drain field(s),
265 septic vent(s) or other major private wastewater treatment system location-component.

266
267 (8) Gross and net lot sizes in square feet with net lot size excluding any land use by public
268 as a road per a prescriptive easement.

269
270 (9) Identify adjacent lands, platted or unplatted by owner or others.

271
272 (10) If applicable, floodplain boundary(ies), FEMA map panel number and effective date
273 from which the boundary(ies) were drawn.

274

275 (11) If applicable, wetlands on the current Wisconsin Wetlands Inventory Map. A copy of
276 the wetland delineation report shall be included with the certified survey map
277 application for any wetlands identified on the map.
278

279 **D. Review and approval.**
280

281 (1) The Committee representative shall, within 90 days, approve, approve conditionally or
282 reject the certified survey map. The review and above stated decision shall be based
283 on the conformity to the provisions of this chapter or any others referenced herein. In
284 the event of rejection or conditional approval, the aggrieved party will be notified and
285 may appeal the decision of said representative to the Land Use Planning and Zoning
286 Committee.
287

288 (2) If the County Treasurer notifies the Land Use Planning and Zoning Department in
289 writing that there are delinquent real estate taxes or installments due on real estate
290 taxes, including all interest and fees, for the property subject to the certified survey map
291 application, said application shall not be approved until the County Treasurer confirms
292 in writing that the real estate taxes have been paid or the installments due are current.
293

294 **§ 315-51 Violations and penalties; citation.**

295 A. Any violation of the provisions of this chapter by or under the direction of the subdivider
296 shall be brought into compliance upon notification by the Land Use Planning and
297 Zoning Department or the Land Use Planning and Zoning Committee or the County
298 Corporation Counsel.
299

300 B. The County Corporation Counsel shall have the authority to use all legal remedies
301 necessary to ~~pursue compliance with~~ enforce the provisions of this chapter. After
302 consultation with the Land Use Planning and Zoning Department and/or Land Use
303 Planning and Zoning Committee, the Corporation Counsel shall determine which legal
304 remedy or legal remedies are in order to ~~pursue compliance with~~ enforce the
305 provisions of this chapter.
306

307 C. Any subdivider who violates or refuses to comply with any of the provisions of this
308 chapter shall be subject to a forfeiture of not less than \$50 nor more than ~~\$5,000~~ \$500
309 per offense, together with the taxable costs of action. Each day that the violation exists,
310 after receiving notice of the violation from the Land Use Planning and Zoning
311 Department by certified or registered mail, or personal service per § 801.11 Wis. Stats.,
312 shall constitute a separate offense.
313

314 D. In addition to the County Corporation Counsel having the authority to ~~pursue~~
315 ~~compliance~~ enforce the provisions of this chapter per Subsection B above, the
316 designated staff of the Land Use Planning and Zoning Department shall have the
317 authority to and may prepare, sign and issue citations in order to commence action to
318 ~~achieve~~ enforce compliance with the provisions of this chapter.
319

320 **§ 315-56 Word usage and definitions.**

321 For the purpose of administering and enforcing this chapter, the terms or words used
322 herein shall be interpreted as follows: Words used in the present tense include the future
323 tense, words in the singular number include the plural number, and in the plural number
324 include the singular number. The word "may" is permissive, and the word "shall" is
325 mandatory, not discretionary. All distances unless otherwise specified shall be measured
326 horizontally.

327

328 CERTIFICATE OF SURVEY

329 Also known as a "map of survey" or "plat of survey" prepared by a registered professional
330 land surveyor. A certificate of survey may be a survey of an existing lot or parcel, or may
331 be a new land division if greater than 15 acres.

332

333 CERTIFIED SURVEY MAP

334 A map of a land division, land combination, or an existing lot or parcel of record. This map
335 shall be of not more than 4 lots or parcels and prepared by a professional land surveyor in
336 accordance with the provisions of this chapter and § 236.34, Wis. Stats.

337

338 REPLAT

339 The process of changing, or the map or plat that changes, the boundaries of a recorded
340 subdivision plat or part thereof. The legal dividing of a large block, lot or outlot within a
341 recorded subdivision plat without changing the exterior boundaries of said block, lot or
342 outlot is not a replat. A replat shall not alter areas dedicated to the public unless proper
343 court action is secured.

344

345 Section 2. This ordinance shall become effective upon passage by the County Board and
346 publication.

347 Section 3. The repeal and recreation of any section herein shall not have any effect on
348 existing litigation and shall not operate as an abatement of any action or proceeding then
349 pending or by virtue of the repealed sections.

350 Section 4. All ordinances and parts of ordinances in conflict herewith are hereby
351 repealed.

LAND USE PLANNING AND ZONING COMMITTEE STAFF REPORT

PUBLIC HEARING

February 4, 2021

ITEM II: Floodplain Zoning Ordinance Amendment

REQUEST: The Green Lake County Land Use Planning and Zoning Department is requesting an amendment to the Code of Green Lake County, Chapter 300: Floodplain Zoning, more specifically, to adopt “The Dam Failure Analysis (DFA) for the Green Lake Dam” prepared by Donohue & Associates, Inc., dated June 18, 1990.

ADDITIONAL INFORMATION / ANALYSIS: The last update to the Floodplain Zoning Ordinance took place in 2018. This was a much needed update that kept the County in compliance with the National Flood Insurance Program. The proposed amendment before the Committee would adopt a 1990 Dam Failure Analysis Study of the upper and lower Green Lake dams.

The study, although 30 years old, is more accurate than the 1978 study that the FEMA maps, that the Department currently uses, are based on. Further, the County’s adoption of this study, would facilitate the City of Green Lake in lowering the “High” hazard rating of the upper dam to “Significant” hazard. The State of Wisconsin’s Dam Safety program requires a “High” hazard dam to be inspected every 2 years. A dam with a “Significant” hazard rating is required to be inspected every 3 to 4 years. The city is required, for each inspection, to hire a professional engineer to perform this inspection. Therefore the reduction in hazard rating could reduce the City’s inspection costs by half.

The Green Lake County Land Use Planning and Zoning Department strongly suggests the Land Use Planning and Zoning Committee recommend adoption of the proposed amendment to the County Board. This amendment will provide the Department with more accurate floodplain data that it currently has and could help the City of Green Lake reduce maintenance costs related to their dam. Attached is a copy of the proposed ordinance amendment.

STAFF COMMENTS: The Land Use Planning and Zoning Committee has several options in this regard and they are as follows:

- ❑ Forward onto the County Board with recommendation to adopt as proposed.
- ❑ Hold another public hearing to take additional public comment.
- ❑ *Reject as proposed.

* In the event that this amendment is not adopted, the Land Use Planning & Zoning Department would have to continue to utilize less accurate data and mapping when administering and enforcing the floodplain along this stretch of the Puchyan River. Additionally, the City of Green Lake will have to continue to support the elevated maintenance costs for a high hazard dam, when these costs could be reduced if the dam hazard rating was lowered by the WDNR.

ORDINANCE NO. -2021

Amending the Floodplain Ordinance for Green Lake County, Wisconsin, §300-10 Official maps and revisions.

The County Board of Supervisors of Green Lake County, Green Lake Wisconsin, duly assembled at its regular meeting begun on the 16th day of February 2021,

1 **NOW, THEREFORE, THE COUNTY BOARD OF SUPERVISORS OF THE COUNTY**
2 **OF GREEN LAKE DOES ORDAIN AS FOLLOWS:**

3 Section 1. Green Lake County Ordinance, No. 24-2008 adopted on June 19, 2018, is
4 hereby amended as follows (additions are in underline, deletions are in ~~strikeout~~):

5 Section 300-10 Official Maps and Revisions is amended to add the following section:

Roll Call on Ordinance No. -2021

Submitted by Land Use Planning &
Zoning Committee:

Ayes , Nays , Absent , Abstain

Curt Talma, Chair

Passed and Enacted/Rejected this 16th
day of February, 2021.

William Boutwell, Vice-chair

County Board Chairman

Harley Reabe

ATTEST: County Clerk
Approve as to Form:

Charles Buss

Corporation Counsel

Don Lenz

7 B. Official maps, based on other studies:

8 (6) “The Dam Failure Analysis (DFA) for the Green Lake Dam” prepared by Donohue &
9 Associates, Inc., dated June 18, 1990 and revised August 30, 1990, and approved by the
10 Department of Natural Resources on September 11, 1990. Elements of this approved
11 analysis, adopted by reference into this Ordinance, include the flood profile labeled “Dam
12 Failure, 100-year Event, Green Lake” in DFA Attachment 5R, the elevations in the column
13 labeled “Maximum Stage Elevation (ft MSL)” associated with locations in the column
14 labeled “Cross Section Location (mi)” in DFA Attachment 5R, and the two map panels
15 titled “100-year Flood Event with Failure of Green Lake Dam” which include cross section
16 locations and a floodway / flood-fringe delineation in DFA attachment 6. In the case of any
17 apparent discrepancy between the map, profile, and/or elevations, the information in the
18 “Maximum Stage Elevation (ft MSL)” column in Attachment 5R shall govern.

19

20 Section 2. This ordinance shall become effective upon passage and publication.

21 Section 3. The repeal and recreation of any section herein shall not have any effect on
22 existing litigation and shall not operate as an abatement of any action or proceeding then
23 pending or by virtue of the repealed sections.

24 Section 4. All ordinances and parts of ordinances in conflict herewith are hereby
25 repealed.

or structure outside of the floodplain.

§ 300-4 Title.

This chapter shall be known as, referred to as or cited as the "Floodplain Zoning Ordinance for Green Lake County, Wisconsin."

§ 300-5 Abrogation and greater restrictions.

- A. This chapter supersedes all the provisions of any municipal zoning ordinance enacted under §§ 59.69, 59.692 or 59.694 or 87.30, Wis. Stats., which relate to floodplains. If another ordinance is more restrictive than this chapter, that ordinance shall continue in full force and effect to the extent of the greater restrictions, but not otherwise.
- B. This chapter is not intended to repeal, abrogate or impair any existing deed restrictions, covenants or easements. If this chapter imposes greater restrictions, the provisions of this chapter shall prevail.

§ 300-6 Interpretation.

In their interpretation and application, the provisions of this chapter are the minimum requirements liberally construed in favor of the governing body and are not a limitation on or repeal of any other powers granted by the Wisconsin Statutes. If a provision of this chapter, required by Ch. NR 116, Wis. Adm. Code, is unclear, the provision shall be interpreted in light of the standards in effect on the date of the adoption of this chapter or in effect on the date of the most recent text amendment to this chapter.

§ 300-7 Severability.

Should any portion of this chapter be declared unconstitutional or invalid by a court of competent jurisdiction, the remainder of this chapter shall not be affected.

§ 300-8 When effective.

This chapter shall be effective upon adoption by the Green Lake County Board and publication as provided for in the Wisconsin Statutes.

Article II General Provisions

§ 300-9 Areas to be regulated.

This chapter regulates all areas that would be covered by the regional flood or base flood within Green Lake County, Wisconsin, as shown on the Flood Insurance Rate Map (FIRM) or other maps approved by the WDNR. Base flood elevations are derived from the flood profiles in the Flood Insurance Study (FIS) and are shown as AE, A1-30, and AH Zones on the FIRM. Other regulatory zones are displayed as A and AO Zones. Regional flood elevations (RFE) may be derived from other studies. If more than one map or revision is referenced, the most restrictive information shall apply.

§ 300-10 Official maps and revisions.

The boundaries of all floodplain districts are designated as A, AE, AH, AO or A1-30 on the maps listed below and the revisions in the Green Lake County Floodplain Appendix A. Any change to the base flood elevations (BFE) or any changes to the boundaries of the floodplain or floodway in the Flood Insurance Study or on the Flood Insurance Rate Map must be reviewed and approved by the Wisconsin Department of Natural Resources and the Federal Emergency Management Agency through the Letter of Map Change process (see Article IX, Amendments) before it is effective. No changes to regional flood elevations on non-Federal Emergency Management Agency maps shall be effective until approved by the Wisconsin Department of Natural Resources. These maps and revisions are on file in the Land Use Planning and Zoning

Department, Green Lake County. If more than one map or revision is referenced, the most restrictive information shall apply.

- A. Official maps, based on the Flood Insurance Study for unincorporated areas of Green Lake County, Community Number 550165. Applicable map panels: 55047C0010C, 55047C0020C, 55047C0030C, 55047C0034C, 55047C0035C, 55047C0038C, 55047C0039C, 55047C0040C, 55047C0045C, 55047C0051C, 55047C0053C, 55047C0054C, 55047C0058C, 55047C0065C, 55047C0079C, 55047C0082C, 55047C0083C, 55047C0084C, 55047C0087C, 55047C0090C, 55047C0091C, 55047C0092C, 55047C0093C, 55047C0094C, 55047C0101C, 55047C0105C, 55047C0110C, 55047C0111C, 55047C0113C, 55047C0115C, 55047C0120C, 55047C0126C, 55047C0127C, 55047C0130C, 55047C0131C, 55047C0132C, 55047C0133C, 55047C0134C, 55047C0140C, 55047C0155C, 55047C0160C, 55047C0165C, 55047C0170C, 55047C0178C, 55047C0179C, 55047C0180C, 55047C0183C, 55047C0184C, 55047C0186C, 55047C0187C, 55047C0191C, 55047C0192C, 55047C0195C, 55047C0203C, 55047C0204C, 55047C0205C, 55047C0225C; dated February 3, 2010, with corresponding profiles that are based on the Flood Insurance Study 55047CV000A effective February 3, 2010; approved by the Wisconsin Department of Natural Resources and the Federal Emergency Management Agency.
- B. Official maps, based on other studies:
- (1) The Inundation Map (with boundaries shown in yellow and red on the original map) for Kingston Dam on the Grand River, the floodway data table and the higher of the dam breach during regional flood (DAMBRK) profile and regional flood no breach (HEC2) profile. These are found in the Hydraulic Evaluation Report for the Kingston Dam prepared by Barrientos & Associates, Inc., and dated February 1991 and approved by the Wisconsin Department of Natural Resources.
 - (2) The Dam Breach Analysis for the Lower Water Quality Improvement Dam for an unnamed tributary to Little Green Lake, prepared by Jonathan D. Lefers, PE, of Montgomery Associates Resource Solutions, LLC, dated November 2008, and approved by the Wisconsin Department of Natural Resources.
 - (3) Letter of Map Revision (LOMR) "Del Monte Foods" FEMA Case No. 13-05-7472P, revising the Flood Insurance Study (FIS) Report and Flood Insurance Rate Map (FIRM) for Community 550165 prepared by Max Franzen and Jeff Quast of Excel Engineering, June 2014.
 - (4) Flood study, "Little Green Lake Discharge," prepared for Green Lake County by MSA Professional Services, April 1997, and Dam Break Exhibit Maps prepared by MSA Professional Services, November 2013, both approved by Wisconsin Department of Natural Resources.
 - (5) "Hydrologic and Hydraulic Report - Swamp Road - Township of Princeton, Princeton, WI" prepared by Badger Engineering & Construction, LLC, and Alieus Engineering, LLC, January 2017. Approved by Wisconsin Department of Natural Resources on February 21, 2017.
 - (6) "The Dam Failure Analysis (DFA) for the Green Lake Dam" prepared by Donohue & Associates, Inc., dated June 18, 1990 and revised August 30, 1990, and approved by the Department of Natural Resources on September 11, 1990. Elements of this approved analysis, adopted by reference into this Ordinance, include the flood profile labeled "Dam Failure, 100-year Event, Green Lake" in DFA Attachment 5R, the elevations in the column labeled "Maximum Stage Elevation (ft MSL)" associated

with locations in the column labeled “Cross Section Location (mi)” in DFA Attachment 5R, and the two map panels titled “100-year Flood Event with Failure of Green Lake Dam” which include cross section locations and a floodway / flood-fringe delineation in DFA attachment 6. In the case of any apparent discrepancy between the map, profile, and/or elevations, the information in the “Maximum Stage Elevation (ft MSL)” column in Attachment 5R shall govern.

§ 300-11 Establishment of floodplain zoning districts.

The regional floodplain areas are divided into three districts as follows:

- A. The Floodway District (FW) is the channel of a river or stream and those portions of the floodplain adjoining the channel required to carry the regional floodwaters and are contained within AE Zones as shown on the FIRM.
- B. The Flood-Fringe District (FF) is that portion of the floodplain between the regional flood limits and the floodway and displayed as AE Zones on the FIRM.
- C. The General Floodplain District (GFP) is those areas that have been or may be covered by floodwater during the regional flood and does not have a BFE or floodway boundary determined, including A, AE (rarely), AH, and AO Zones on the FIRM.

§ 300-12 Locating floodplain boundaries.

Discrepancies between boundaries on the Official Floodplain Zoning Map and actual field conditions shall be resolved using the criteria in Subsection A or B below. If a significant difference exists, the map shall be amended according to Article IX, Amendments. The County Land Use Planning and Zoning Department can rely on a boundary derived from a profile elevation to grant or deny a land use permit, whether or not a map amendment is required. The County Land Use Planning and Zoning Department shall be responsible for documenting actual predevelopment 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 County Land Use Planning and Zoning Department and an applicant over the district boundary line shall be settled according to § 300-40C and the criteria in Subsections A and B 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 Article IX, Amendments.

- A. 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.
- B. Where flood profiles do not exist for projects, the location of the boundary shall be determined by the map scale.

§ 300-13 Removal of lands from the floodplain.

Compliance with the provisions of this chapter shall not be grounds for removing land from the floodplain unless it is filled at least two feet above the regional or base flood elevation, the fill is contiguous to land outside the floodplain, and the map is amended pursuant to Article IX, Amendments.

§ 300-14 Compliance required.

Any development or use within the areas regulated by this chapter shall be in compliance with the terms of this chapter and other applicable local, state, and federal regulations.

§ 300-15 Municipalities and state agencies regulated.

Unless specifically exempted by law, all cities, villages, towns, and counties are required to comply with this

RECEIVED

June 18, 1990

JUN 18 1990

Wisconsin Department of Natural Resources
101 South Webster Street
Madison, WI 53703

Bureau of Water
Regulation & Zoning

Attn: Mr. William Sturtavent, P.E.
Assistant Dam Safety Engineer

Re: Green Lake Dam
Dam Failure Analysis
Donohue Project No. 17782



Dear Bill:

Donohue & Associates has completed the dam failure analysis for the Green Lake Dam as required in the Wisconsin Administrative Code, Chapter NR333, and specified in our agreement dated March 6, 1990. We have conducted a limited hydrologic analysis and applied the results to a model of the Green Lake, Puchyan River system, from the head of the lake to downstream of the Berlin Road bridge. Our analyses show that the Green Lake Dam should have an apparent preliminary hazard rating of Class II, Significant (Table 2, NR333.06).

The Green Lake Dam is owned and operated by the City of Green Lake. The dam is located in the City, at the northeast corner of Green Lake. The Puchyan River feeds Green Lake and receives lake discharge below the dam. The dam was originally constructed about the year 1860 to provide hydropower to a mill. The dam has been rehabilitated numerous times and is currently used to regulate the level of Green Lake for recreation. The dam consists of a 14-foot wide concrete south spillway, a 46-foot wide, 3-bay concrete and stone main spillway, and the mill race to the north. All three structures are manually controlled with stoplogs.

Pertinent information used in this study was obtained from the following sources:

1. National Dam Safety Program Report, Green Lake Dam, September, 1980, U.S. Army Corps of Engineers.
2. Flood Insurance Study, Green Lake County, Wisconsin, Unincorporated Areas, June, 1976, U.S. Department of Housing and Urban Development, Federal Insurance Administration.
3. Original field survey notes for Green Lake County Flood Insurance Study on Puchyan River, Owen Ayers Associates, Eau Claire, Wisconsin.

4. Wisconsin Department of Natural Resources, Bureau of Water Regulation and Zoning, Dam Inspection Files.

HYDROLOGIC ANALYSIS

Several hydrologic analyses have been conducted on the watershed tributary to Green Lake and the dam. No gauging stations are located above or below the dam on the Puchyan River.



ENGINEERS
ARCHITECTS
SCIENTISTS

Flows from the Flood Insurance Study (FIS) for the unincorporated area below Green Lake were compared with flows developed in the Dam Safety Program Report. The Corps' report developed flows using Conger's regression equations and the Soil Conservation Service TR20 Runoff Model. The FIS flows were close to those from TR20. The flows from the FIS were selected for the dam failure analysis to maintain continuity between the two analyses.

The hydrograph for the 100-year recurrence interval regional flood event was obtained by combining the FIS peak flow with basin parameters previously developed. The Corps' report developed a hydrograph for the Probable Maximum Flood (PMF) event for the Green Lake watershed using TR20. The shape of this hydrograph was preserved, however, the hydrographs for the regional flood event and lesser events were proportionally reduced. The peak flows for the 5-, 10-, 25-, 50-, 100-, 500-, and 1000-year recurrence interval events are presented in Attachment 1, along with the hydrographs developed for those events. The inflow hydrograph for the 100-year regional flood event is presented on Attachment 2.

HYDRAULIC ANALYSIS

The river reach for this study is the Puchyan River from the Green Lake Dam to the marsh area downstream of the Berlin Road bridge. This 2.6-mile reach passes through four bridges and over the lower Green Lake Dam, just downstream of Depot Road.

The hydraulic analysis consisted of four parts:

1. Determine the hydraulic shadow of the Green Lake Dam, including floodplain and floodway, assuming the dam fails during the regional flood.
2. Same analysis as Part 1, except the lower dam, approximately one mile downstream of Green Lake, fails at the crest of the Green Lake Dam failure floodwave.
3. Determine the floodplain, including floodway, of the regional flood if the Green Lake Dam did not exist.

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4. Route the hydrograph for the design event, determined based on the preliminary hazard rating, through the Green Lake Dam to determine if spillway capacity is adequate.

The hydraulic analyses were conducted using the BOSS DAMBRK, Release 2, computer model which is based on the 1988 National Weather Service DAMBRK computer model, developed by Professor D.L. Fread. The following data is input into the model: lake inflow hydrograph, stage/storage relationship for the lake, cross sections geometry for reach downstream of the lake including bridges, characteristics of the dam and spillway, and the timing and mechanics of the simulated dam failure. Dynamic routing of the inflow hydrograph through lake cross sections can be used in place of the stage/storage relationship for the lake.



A rating curve was developed for the spillways for each of the dams. The rating curve for the Green Lake Dam assumed stoplogs were in place to maintain a normal pool elevation. The rating curve for the lower dam assumed no regulation. The rating curves are presented as Attachment 3.

After the channel geometry, determined from the survey notes and topo mapping, was input to the model, some adjustments were required. A small vee notch was added to the bottom of each channel section to help stabilize initial conditions. Some smoothing of channel slopes was also required.

The Green Lake Dam is a combination earth fill embankment with concrete spillways. After a threatened failure of the earth embankments in the fall of 1986, a sheet pile wall was driven in on the upstream face of the embankments. This reinforcement gives the dam's embankment a safety factor of over 3. The lower dam is a concrete structure across the entire width of the channel, with three 10-foot spillways and a 5-foot sluiceway along the right bank. The dam is in very bad condition, with deteriorated concrete, exposed rebar, and weepholes.

A dam can potentially fail by overtopping the dam, a partial or complete failure of a spillway section, or a breach in an earthen embankment. All three failures were considered for the dams in this study. It must be noted that the assumptions made in this study are not based on the actual probability for a potential failure at the dam. The results of the analyses only reflect the conditions that could occur in the event of a dam failure.



Part 1

The hydraulic analysis was performed assuming the Green Lake Dam fails during the regional flood with the lake starting at normal pool elevation. There is a 2-foot difference between normal pool elevation of 786.5 and the dam overtopping elevation of 798.5. Given the large storage capacity of Green Lake and the relatively small inflow hydrograph, an overtopping failure is unlikely. The sheet pile reinforcement of the embankment makes a breach of that structure unlikely. Therefore, a total failure of the main concrete spillway was selected as the mode of failure for this study. This was set to occur when the peak flow from the design event reaches the dam and the lake is at its maximum pool elevation of 796.64. The failure time was set to 0.25 hour and the spillway was reduced to 0.5 foot of the channel bottom.

Dynamic routing of the design event through Green Lake and the Darthford Bay Bridge down to the dam provide the most stable dam failure results. The input to the model is shown as Attachment 4. The output is present in Attachment 5. The maximum discharge from the dam was 1468 cubic feet per second (cfs). This attenuated to 705 cfs at the downstream end of the study area. The failure started approximately 30 hours after the start of the regional flood. Maps showing the hydraulic shadow of the failure are Attachment 6.

Part 2

The Part 1 analysis was modified to fail the lower dam when the peak of the Green Lake Dam failure floodway reached the dam. A total failure of the concrete structure was selected as the mode of failure. The output from this analysis is presented in Attachment 7. The maximum discharge from the dam failure was 1122 cfs and occurred about 31 hours into the flood event. Maps showing the hydraulic shadow of the combined failures are Attachment 8.

Part 3

The regional flood was dynamically routed through Green Lake and down the Puchyan River assuming the Green Lake Dam was not in place. The output for the analysis is included as Attachment 9. The maximum flow at the upstream cross section was 1300 cfs. The flow attenuated to 119 cfs at the downstream end of the study area. Green Lake is several hundred feet deep and would exist without the dam. The large lake area attenuates most of the flood before it reaches the dam site. Maps showing the floodplain and floodway for this analysis are Attachment 10.

Part 4

The 500 design flood was dynamically routed through Green Lake and the dam starting at normal pool elevation. The lake elevation at the dam raised 0.27 foot to 796.77. Peak outflow at the dam was 109 cfs compared to the peak inflow of 2400 cfs at the head of the lake. The dam spillway cannot pass the design flow, however, the lake attenuates this flow by using available storage capacity. The output for the analysis is presented as Attachment 11.

Donohue

ENGINEERS

ARCHITECTS

SCIENTISTS

SUMMARY


Our analyses show that the Green Lake Dam should have an apparent preliminary hazard rating of Class II, Significant, based on Table 2 of NR333.06.

The analyses contained within this report were conducted in accordance with the Wisconsin Administrative Code, Chapter NR333. The results are presented as preliminary findings at this time. After your review, your comments will be incorporated with those from the Donohue quality control review. This report will then be reissued as a final document.

A floppy disk is enclosed with the input and selected graph files for the BOSS DAMBRK runs document in this report. Donohue was pleased to conduct these analyses for WDNR. If you have any questions regarding these analyses or findings, please contact us at (608)271-1004.

Very truly yours,

DONOHUE & ASSOCIATES, INC.


Meg M. Galloway, P.E.
Water Resources Engineer

MMG/dce

Enc:As noted

cc: Mr. Robert Carr, P.E., Donohue Quality Control Reviewer

T/L/RK0

Wisconsin DNR
June 18, 1990
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Donohue

MEMORANDUM

Date: 8-3-90

To: Bill S.
WDNR

From: MEG

Client: WDNR

Job. No.

Subject: GREEN LAKE DAM FAILURE

HERE ARE THE MATERIALS I AGREED TO SEND YOU I HAVE INCLUDED

- 5 COPIES - REPORT & ~~FIGURE 1~~ ATTACHMENTS 1-3, 6, 8, 10

- THE ORIGINALS FOR ATTACHMENTS 4, 5, 7, 9, 11

~~FITS WAS A~~

- REVISED ATTACHMENTS 4, 5, 7, 9, 11

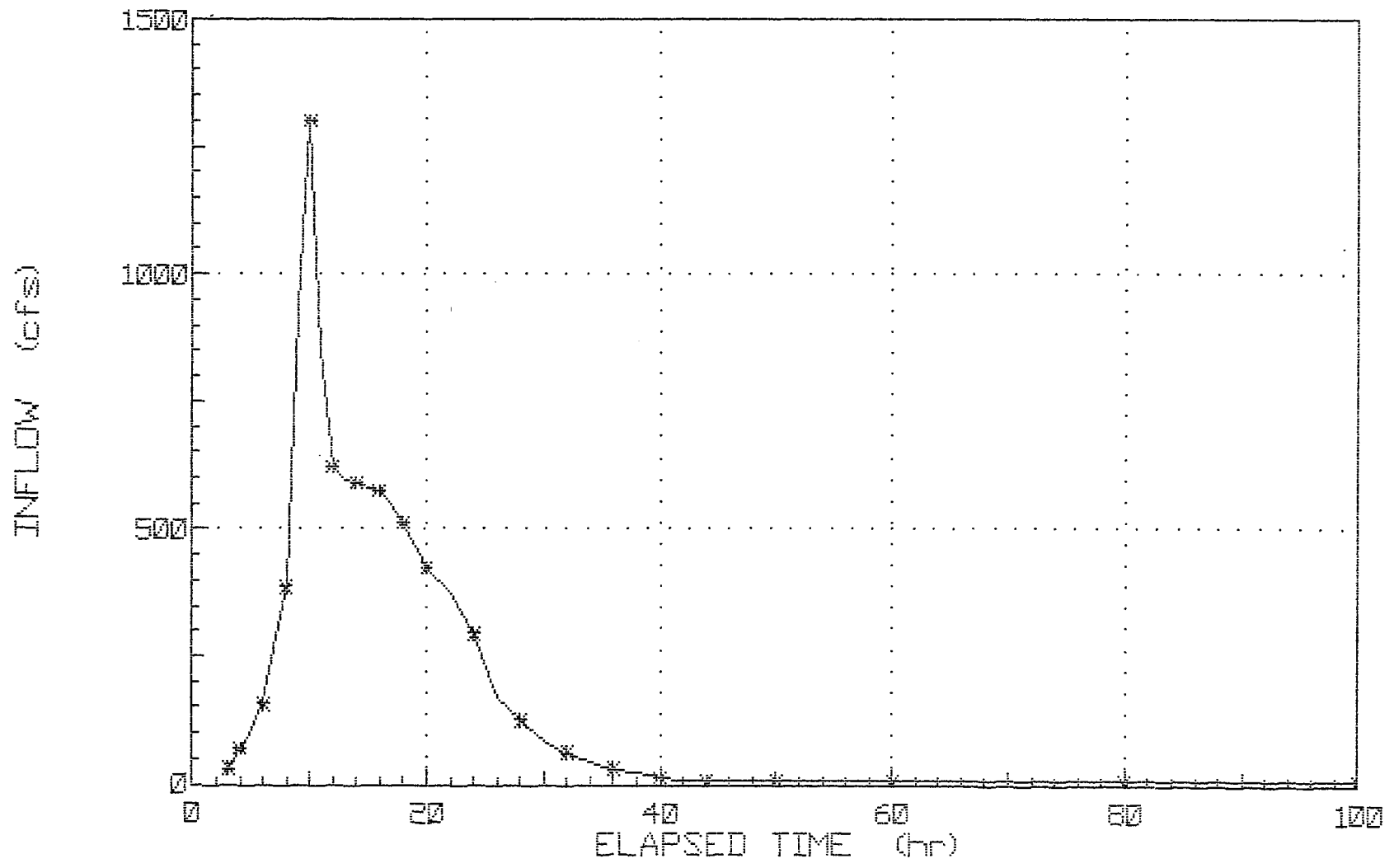
THIS WAS DONE SO YOU CAN REVIEW THE ORIGINAL SUBMITTAL VS THE REVISED (2 EXTRA X-SECTION). YOU CAN MAKE THE DECISION WHICH TO USE.

IF YOU HAVE ANY QUESTION I'LL BE BACK ON THE 13TH. I'LL STOP BY THAT WEEK TO GET THE ORIGINALS.

GREEN LAKE
INFLOW HYDROGRAPHS

TIME HOURS	PMF	1000-YEAR	500-YEAR	100-YEAR	50-YEAR	25-YEAR	10-YEAR	5-YEAR
PEAK (CFS)	168,000	3,100	2,400	1,300	995	700	425	260
0	0	0	0	0	0	0	0	0
1	1,000	18	14	8	6	4	3	2
2	2,000	37	29	15	12	8	5	3
3	4,000	74	57	31	24	17	10	6
4	9,000	166	129	70	53	38	23	14
5	14,000	258	200	108	83	58	35	22
6	20,000	369	286	155	118	83	51	31
7	34,000	627	486	263	201	142	86	53
8	50,000	923	714	387	296	208	126	77
9	120,000	2,214	1,714	929	711	500	304	186
10	168,000	3,100	2,400	1,300	995	700	425	260
11	110,000	2,030	1,571	851	651	458	278	170
12	80,000	1,476	1,143	619	474	333	202	124
13	77,000	1,421	1,100	596	456	321	195	119
14	76,000	1,402	1,086	588	450	317	192	118
15	75,000	1,384	1,071	580	444	313	190	116
16	74,000	1,365	1,057	573	438	308	187	115
17	71,000	1,310	1,014	549	421	296	180	110
18	66,000	1,218	943	511	391	275	167	102
19	60,000	1,107	857	464	355	250	152	93
20	55,000	1,015	786	426	326	229	139	85
22	48,000	886	686	371	284	200	121	74
24	38,000	701	543	294	225	158	96	59
26	22,000	406	314	170	130	92	56	34
28	16,000	295	229	124	95	67	40	25
30	11,000	203	157	85	65	46	28	17
32	8,000	148	114	62	47	33	20	12
34	6,000	111	86	46	36	25	15	9
36	4,000	74	57	31	24	17	10	6
38	3,000	55	43	23	18	13	8	5
40	2,000	37	29	15	12	8	5	3
42	1,000	18	14	8	6	4	3	2
44	0	0	0	0	0	0	0	0
46	0	0	0	0	0	0	0	0
48	0	0	0	0	0	0	0	0
50	0	0	0	0	0	0	0	0

UPSTREAM INFLOW HYDROGRAPH PLOT



GREEN LAKE DAM OUTFALL RATING TABLE

FORMULA: $Q = C L H^{1.5}$

WHERE: $Q =$ FLOW IN CFS $L =$ WEIR LENGTH
 $C =$ WEIR COEFFICIENT (1) $H =$ DEPTH OF FLOW ABOVE WEIR (HEAD)

RIGHT				MIDDLE				LEFT				TOTAL
H	C	L	Q	H	C	L	Q	H	C	L	Q	Q
												(CFS)
0.0	2.69	14.0	0	0.0	2.69	40.5	0	0.0	2.69	5.3	0	0
0.1	2.69	14.0	1	0.1	2.69	40.5	3	0.1	2.69	5.3	0	5
0.2	2.69	14.0	3	0.2	2.69	40.5	10	0.2	2.69	5.3	1	14
0.3	2.70	14.0	6	0.3	2.70	40.5	18	0.3	2.70	5.3	2	27
0.4	2.72	14.0	10	0.4	2.72	40.5	28	0.4	2.72	5.3	4	41
0.5	2.73	14.0	14	0.5	2.73	40.5	39	0.5	2.73	5.3	5	58
0.6	2.75	14.0	18	0.6	2.75	40.5	52	0.6	2.75	5.3	7	76
0.7	2.80	14.0	23	0.7	2.80	40.5	66	0.7	2.80	5.3	9	98
0.8	2.85	14.0	29	0.8	2.85	40.5	83	0.8	2.85	5.3	11	122
0.9	2.91	14.0	35	0.9	2.91	40.5	101	0.9	2.91	5.3	13	149
1.0	2.98	14.0	42	1.0	2.98	40.5	121	1.0	2.98	5.3	16	178
1.1	3.03	14.0	49	1.1	3.03	40.5	142	1.1	3.03	5.3	19	209
1.2	3.08	14.0	57	1.2	3.08	40.5	164	1.2	3.08	5.3	21	242
1.3	3.14	14.0	65	1.3	3.14	40.5	188	1.3	3.14	5.3	25	278
1.4	3.20	14.0	74	1.4	3.20	40.5	215	1.4	3.20	5.3	28	317
1.5	3.24	14.0	83	1.5	3.24	40.5	241	1.5	3.24	5.3	32	356
1.6	3.28	14.0	93	1.6	3.28	40.5	269	1.6	3.28	5.3	35	397
1.7	3.30	14.0	102	1.7	3.30	40.5	296	1.7	3.30	5.3	39	437
1.8	3.31	14.0	112	1.8	3.31	40.5	324	1.8	3.31	5.3	42	478
1.9	3.31	14.0	121	1.9	3.31	40.5	351	1.9	3.31	5.3	46	518
2.0	3.30	14.0	131	2.0	3.30	40.5	378	2.0	3.30	5.3	49	558
2.1	3.30	14.0	141	2.1	3.30	40.5	407	2.1	3.30	5.3	53	601
2.2	3.30	14.0	151	2.2	3.30	40.5	436	2.2	3.30	5.3	57	644
2.3	3.31	14.0	162	2.3	3.31	40.5	468	2.3	3.31	5.3	61	690
2.4	3.31	14.0	172	2.4	3.31	40.5	498	2.4	3.31	5.3	65	736
2.5	3.31	14.0	183	2.5	3.31	40.5	530	2.5	3.31	5.3	69	782
2.6	3.31	14.0	194	2.6	3.31	40.5	562	2.6	3.31	5.3	74	830
2.7	3.31	14.0	206	2.7	3.31	40.5	595	2.7	3.31	5.3	78	878
2.8	3.31	14.0	217	2.8	3.32	40.5	630	2.8	3.32	5.3	82	930
2.9	3.31	14.0	229	2.9	3.32	40.5	664	2.9	3.32	5.3	87	980
3.0	3.31	14.0	241	3.0	3.32	40.5	699	3.0	3.32	5.3	91	1031
3.1	3.31	14.0	253	3.1	3.32	40.5	734	3.1	3.32	5.3	96	1083
3.2	3.31	14.0	265	3.2	3.32	40.5	770	3.2	3.32	5.3	101	1136
3.3	3.31	14.0	278	3.3	3.32	40.5	806	3.3	3.32	5.3	105	1189
3.4	3.31	14.0	291	3.4	3.32	40.5	843	3.4	3.32	5.3	110	1244

(1) FROM TABLE 5-3 IN THE HANDBOOK OF HYDRAULICS
 ASSUME ALL WEIRS AT 1.0 FOOT WIDE

LOWER DAM
OUTFALL RATING TABLE

FORMULA: $Q = C L H^{1.5}$

WHERE: Q = FLOW IN CFS

L = WEIR LENGTH

C = WEIR COEFFICIENT (1)

H = DEPTH OF FLOW AB

ELEVATION	LEFT/RIGHT				MIDDLE				TOTAL
	H	C	L	Q	H	C	L	Q	Q (CFS)
788.4	0.0	2.69	15.0	0	0.0	2.69	20.0	0	0
788.5	0.1	2.69	15.0	1	0.0	2.69	20.0	0	1
788.6	0.2	2.69	15.0	4	0.0	2.69	20.0	0	4
788.7	0.3	2.70	15.0	7	0.0	2.69	20.0	0	7
788.8	0.4	2.72	15.0	10	0.0	2.69	20.0	0	10
788.9	0.5	2.73	15.0	14	0.1	2.69	20.0	2	16
789.0	0.6	2.75	15.0	19	0.2	2.69	20.0	5	24
789.1	0.7	2.80	15.0	25	0.3	2.70	20.0	9	33
789.2	0.8	2.85	15.0	31	0.4	2.72	20.0	14	44
789.3	0.9	2.91	15.0	37	0.5	2.73	20.0	19	57
789.4	1.0	2.98	15.0	45	0.6	2.75	20.0	26	70
789.5	1.1	3.03	15.0	52	0.7	2.80	20.0	33	85
789.6	1.2	3.08	15.0	61	0.8	2.85	20.0	41	102
789.7	1.3	3.14	15.0	70	0.9	2.91	20.0	50	120
789.8	1.4	3.20	15.0	80	1.0	2.98	20.0	60	139
789.9	1.5	3.24	15.0	89	1.1	3.03	20.0	70	159
790.0	1.6	3.28	15.0	100	1.2	3.08	20.0	81	181
790.1	1.7	3.30	15.0	110	1.3	3.14	20.0	93	203
790.2	1.8	3.31	15.0	120	1.4	3.20	20.0	106	226
790.3	1.9	3.31	15.0	130	1.5	3.24	20.0	119	249
790.4	2.0	3.30	15.0	140	1.6	3.28	20.0	133	273
790.5	2.1	3.30	15.0	151	1.7	3.30	20.0	146	297
790.6	2.2	3.30	15.0	162	1.8	3.31	20.0	160	321
790.7	2.3	3.31	15.0	173	1.9	3.31	20.0	173	347
790.8	2.4	3.31	15.0	185	2.0	3.30	20.0	187	371
790.9	2.5	3.31	15.0	196	2.1	3.30	20.0	201	397
791.0	2.6	3.31	15.0	208	2.2	3.30	20.0	215	424
791.1	2.7	3.31	15.0	220	2.3	3.31	20.0	231	451
791.2	2.8	3.32	15.0	233	2.4	3.31	20.0	246	479
791.3	2.9	3.32	15.0	246	2.5	3.31	20.0	262	508
791.4	3.0	3.32	15.0	259	2.6	3.31	20.0	278	536
791.5	3.1	3.32	15.0	272	2.7	3.31	20.0	294	566
791.6	3.2	3.32	15.0	285	2.8	3.32	20.0	311	596
791.7	3.3	3.32	15.0	299	2.9	3.32	20.0	328	626
791.8	3.4	3.32	15.0	312	3.0	3.32	20.0	345	657
791.9	3.5	3.32	15.0	326	3.1	3.32	20.0	362	689
792.0	3.6	3.32	15.0	340	3.2	3.32	20.0	380	720

(1) FROM TABLE 5-3 IN THE HANDBOOK OF HYDRAULICS
ASSUME ALL WEIRS AT 1.0 FOOT WIDE

=====
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=====

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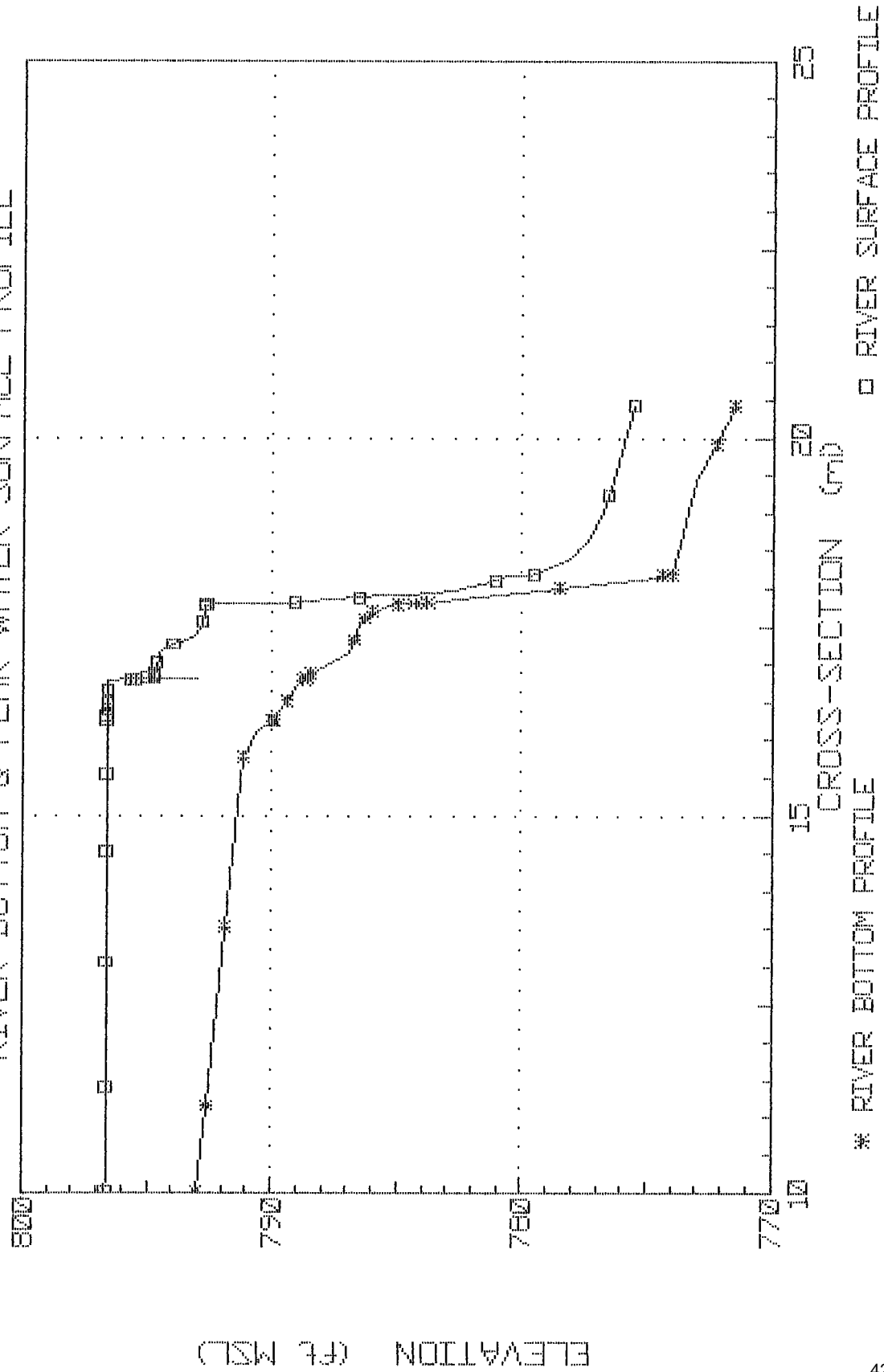
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PROJECT DESCRIPTION :

PROJECT TITLE : GREEN LAKE DAM FAILURE ANALYSIS (R)
PROJECT NUMBER : DONOHUE PROJECT NUMBER 17782.000
DESCRIPTION : 100-YEAR FAILURE OF GREEN LAKE DAM
ENGINEER : MRS. M. GALLOWAY
DATE OF RUN : 7/31/1990
TIME OF RUN : 11:05 am

DAM FAILURE
100-YEAR EVENT GREEN LAKE

FLOOD CREST SUMMARY
RIVER BOTTOM & PEAK WATER SURFACE PROFILE



PROJECT TITLE : GREEN LAKE DAM FAILURE ANALYSIS (R)

PROJECT NUMBER : DONOHUE PROJECT NUMBER 17782.000

7/31/1990

FLOOD CREST SUMMARY :

Cross Section Location (mi)	Maximum Stage Elevation (ft NSL)	Maximum Flow (cfs)	Time To Maximum Stage (hr)	Maximum Flow Velocity (ft/sec)	Flood Elevation (ft NSL)	Time To Flood Elevation (hr)
10.000	796.66	1300	26.288	.67	.00	.00
10.231	796.66	1194	26.213	.37	.00	.00
10.462	796.66	1140	26.163	.25	.00	.00
10.693	796.66	1109	26.100	.19	.00	.00
10.924	796.66	1068	26.050	.14	.00	.00
11.155	796.66	1022	26.000	.11	.00	.00
11.403	796.65	970	25.938	.09	.00	.00
11.652	796.65	919	25.900	.08	.00	.00
11.900	796.65	872	25.863	.06	.00	.00
12.149	796.65	826	25.800	.05	.00	.00
12.376	796.65	785	25.775	.05	.00	.00
12.604	796.65	743	25.725	.04	.00	.00
12.831	796.65	700	25.700	.04	.00	.00
13.058	796.65	655	25.650	.04	.00	.00
13.286	796.65	610	25.638	.03	.00	.00
13.513	796.65	563	25.600	.03	.00	.00
13.714	796.65	523	25.550	.03	.00	.00
13.915	796.65	488	25.538	.02	.00	.00
14.117	796.65	491	25.513	.02	.00	.00
14.318	796.65	492	25.488	.02	.00	.00
14.519	796.65	498	25.463	.03	.00	.00
14.720	796.65	503	25.438	.03	.00	.00
14.922	796.65	506	25.375	.03	.00	.00
15.123	796.65	508	25.375	.03	.00	.00
15.230	796.65	508	25.363	.03	.00	.00
15.338	796.65	510	25.338	.03	.00	.00
15.445	796.65	512	25.325	.04	.00	.00
15.552	796.65	515	25.300	.04	.00	.00
15.660	796.65	521	25.288	.05	.00	.00
15.767	796.65	533	25.225	.06	.00	.00
15.877	796.65	538	25.213	.07	.00	.00
15.988	796.65	538	25.163	.10	.00	.00
16.098	796.65	537	25.175	.17	.00	.00
16.250	796.65	535	25.100	1.80	.00	.00
16.260	796.65	693	25.113	4.79	.00	.00
16.265	796.64	693	25.113	8.75	.00	.00
16.270	796.64	693	25.113	5.99	.00	.00
16.274	796.64	693	25.113	4.58	.00	.00
16.279	796.64	694	25.113	3.72	.00	.00
16.284	796.64	694	25.125	3.14	.00	.00
16.296	796.64	695	25.113	2.22	.00	.00
16.308	796.64	698	25.100	1.72	.00	.00
16.320	796.64	700	25.100	1.39	.00	.00
16.332	796.64	703	25.113	1.17	.00	.00
16.344	796.64	706	25.100	1.00	.00	.00
16.356	796.64	710	25.100	.87	.00	.00
16.368	796.64	714	25.100	.77	.00	.00
16.380	796.64	719	25.113	.69	.00	.00

PROJECT TITLE : GREEN LAKE DAM FAILURE ANALYSIS (R)

PROJECT NUMBER : DONOHUE PROJECT NUMBER 17782.000

7/31/1990

FLOOD CREST SUMMARY :

Cross Section Location (mi)	Maximum Stage Elevation (ft MSL)	Maximum Flow (cfs)	Time To Maximum Stage (hr)	Maximum Flow Velocity (ft/sec)	Flood Elevation (ft MSL)	Time To Flood Elevation (hr)
16.392	796.64	725	25.100	.63	.00	.00
16.403	796.64	732	25.100	.57	.00	.00
16.415	796.64	747	25.100	.52	.00	.00
16.427	796.64	782	25.100	.48	.00	.00
16.439	796.64	816	25.100	.45	.00	.00
16.451	796.64	850	25.088	.41	.00	.00
16.463	796.64	883	25.088	.39	.00	.00
16.475	796.64	915	25.088	.36	.00	.00
16.487	796.64	946	25.088	.34	.00	.00
16.499	796.64	977	25.088	.32	.00	.00
16.511	796.64	1012	25.075	.30	.00	.00
16.544	796.64	1109	25.075	.34	.00	.00
16.577	796.64	1196	25.063	.40	.00	.00
16.611	796.64	1267	25.063	.50	.00	.00
16.644	796.64	1337	25.063	.63	.00	.00
16.677	796.64	1397	25.063	.84	.00	.00
16.710	796.64	1432	25.050	1.17	.00	.00
16.748	796.64	1460	25.038	1.50	.00	.00
16.786	796.64	1468	25.038	2.05	.00	.00
16.793	795.70	1468	25.288	6.82	.00	.00
16.794	795.68	1458	25.288	6.62	.00	.00
16.795	795.67	1448	25.288	6.42	.00	.00
16.796	795.65	1439	25.288	6.26	.00	.00
16.797	795.63	1433	25.288	6.06	.00	.00
16.798	795.60	1432	25.288	5.87	.00	.00
16.799	795.58	1430	25.288	5.69	.00	.00
16.800	795.55	1429	25.288	5.54	.00	.00
16.801	795.52	1428	25.288	5.42	.00	.00
16.801	795.49	1427	25.288	5.37	.00	.00
16.802	795.45	1426	25.288	5.40	.00	.00
16.803	795.41	1425	25.288	5.46	.00	.00
16.804	795.36	1424	25.288	5.56	.00	.00
16.805	795.31	1423	25.288	5.72	.00	.00
16.806	795.24	1422	25.288	5.93	.00	.00
16.807	795.16	1421	25.288	6.20	.00	.00
16.808	795.07	1420	25.288	6.52	.00	.00
16.815	793.14	1420	25.275	10.29	.00	.00
16.816	793.12	1420	25.275	9.89	.00	.00
16.817	793.09	1420	25.275	9.53	.00	.00
16.818	793.06	1421	25.275	9.21	.00	.00
16.819	794.78	1421	29.675	8.86	.00	.00
16.821	794.78	1419	29.750	8.59	.00	.00
16.822	794.78	1417	29.725	8.35	.00	.00
16.823	794.78	1415	29.713	8.11	.00	.00
16.824	794.78	1414	29.700	7.89	.00	.00
16.825	794.78	1412	29.750	7.69	.00	.00
16.826	794.78	1410	29.738	7.50	.00	.00
16.827	794.77	1408	29.750	7.31	.00	.00

PROJECT TITLE : GREEN LAKE DAM FAILURE ANALYSIS (R)

PROJECT NUMBER : DONOHUE PROJECT NUMBER 17782.000

7/31/1990

FLOOD CREST SUMMARY :

Cross Section Location (mi)	Maximum Stage Elevation (ft MSL)	Maximum Flow (cfs)	Time To Maximum Stage (hr)	Maximum Flow Velocity (ft/sec)	Flood Elevation (ft MSL)	Time To Flood Elevation (hr)
16.828	794.77	1405	29.775	7.14	.00	.00
16.829	794.77	1403	29.788	6.98	.00	.00
16.830	794.77	1401	29.725	6.83	.00	.00
16.831	794.77	1398	29.725	6.68	.00	.00
16.833	794.77	1395	29.775	6.54	.00	.00
16.834	794.77	1392	29.750	6.41	.00	.00
16.835	794.77	1390	29.750	6.28	.00	.00
16.836	794.77	1387	29.763	6.15	.00	.00
16.837	794.77	1383	29.750	6.03	.00	.00
16.838	794.77	1380	29.775	5.92	.00	.00
16.839	794.77	1377	29.788	5.80	.00	.00
16.840	794.76	1373	29.788	5.69	.00	.00
16.841	794.76	1370	29.763	5.58	.00	.00
16.842	794.76	1366	29.775	5.47	.00	.00
16.844	794.76	1362	29.788	5.37	.00	.00
16.845	794.76	1358	29.775	5.27	.00	.00
16.846	794.76	1354	29.838	5.16	.00	.00
16.847	794.76	1350	29.775	5.07	.00	.00
16.848	794.76	1346	29.775	4.97	.00	.00
16.849	794.76	1342	29.838	4.87	.00	.00
16.850	794.76	1338	29.788	4.77	.00	.00
16.851	794.76	1333	29.825	4.68	.00	.00
16.852	794.76	1329	29.838	4.59	.00	.00
16.853	794.76	1325	29.825	4.50	.00	.00
16.854	794.76	1320	29.813	4.40	.00	.00
16.856	794.76	1316	29.838	4.32	.00	.00
16.857	794.76	1312	29.788	4.23	.00	.00
16.858	794.76	1308	29.788	4.15	.00	.00
16.859	794.75	1304	29.788	4.07	.00	.00
16.860	794.75	1299	29.838	3.99	.00	.00
16.861	794.75	1295	29.825	3.91	.00	.00
16.862	794.75	1291	29.838	3.83	.00	.00
16.863	794.75	1287	29.788	3.75	.00	.00
16.864	794.75	1283	29.813	3.67	.00	.00
16.865	794.75	1278	29.813	3.60	.00	.00
16.867	794.75	1274	29.788	3.52	.00	.00
16.868	794.75	1270	29.825	3.45	.00	.00
16.869	794.75	1266	29.813	3.38	.00	.00
16.870	794.75	1262	29.825	3.31	.00	.00
16.871	794.75	1257	29.838	3.24	.00	.00
16.872	794.75	1253	29.813	3.17	.00	.00
16.918	794.71	1087	29.913	3.12	.00	.00
16.964	794.67	977	30.113	3.07	.00	.00
17.010	794.63	913	30.138	2.99	.00	.00
17.055	794.59	849	30.250	2.92	.00	.00
17.101	794.54	783	30.313	2.87	.00	.00
17.147	794.50	750	30.363	2.90	.00	.00
17.175	794.42	739	30.513	2.56	.00	.00

PROJECT TITLE : GREEN LAKE DAM FAILURE ANALYSIS (R)

PROJECT NUMBER : DONOHUE PROJECT NUMBER 17782.000

7/31/1990

FLOOD CREST SUMMARY :

Cross Section Location (mi)	Maximum Stage Elevation (ft MSL)	Maximum Flow (cfs)	Time To Maximum Stage (hr)	Maximum Flow Velocity (ft/sec)	Flood Elevation (ft MSL)	Time To Flood Elevation (hr)
17.204	794.32	731	30.588	2.29	.00	.00
17.232	794.18	725	30.713	2.10	.00	.00
17.260	793.99	721	30.800	2.05	.00	.00
17.289	793.74	719	30.900	2.14	.00	.00
17.317	793.47	718	31.038	2.36	.00	.00
17.383	793.14	717	31.175	2.02	.00	.00
17.450	792.93	715	31.288	1.84	.00	.00
17.516	792.79	714	31.350	1.90	.00	.00
17.533	792.77	714	31.350	1.47	.00	.00
17.550	792.76	714	31.363	1.24	.00	.00
17.567	792.76	714	31.338	1.09	.00	.00
17.584	792.75	714	31.338	.97	.00	.00
17.601	792.75	713	31.338	.89	.00	.00
17.612	792.74	713	31.338	.99	.00	.00
17.697	792.72	713	31.325	.71	.00	.00
17.735	792.71	713	31.325	.60	.00	.00
17.773	792.70	713	31.338	.63	.00	.00
17.775	792.70	713	31.325	.69	.00	.00
17.776	792.70	713	31.338	.76	.00	.00
17.778	792.69	713	31.338	.85	.00	.00
17.779	792.69	713	31.350	.97	.00	.00
17.781	792.68	713	31.338	1.13	.00	.00
17.782	792.67	713	31.350	1.35	.00	.00
17.784	792.65	713	31.325	1.69	.00	.00
17.786	792.60	713	31.338	2.26	.00	.00
17.787	792.46	713	31.338	3.47	.00	.00
17.792	792.40	713	31.350	3.42	.00	.00
17.797	792.43	713	31.363	2.99	.00	.00
17.801	792.44	713	31.338	2.65	.00	.00
17.803	789.14	713	31.388	7.72	.00	.00
17.805	789.13	713	31.388	6.28	.00	.00
17.808	789.13	713	31.363	4.90	.00	.00
17.810	789.14	713	31.350	3.68	.00	.00
17.812	789.14	713	31.388	2.79	.00	.00
17.825	788.96	713	31.375	3.41	.00	.00
17.837	788.63	713	31.363	4.56	.00	.00
17.850	787.59	713	31.350	7.72	.00	.00
17.875	786.54	712	31.313	5.38	.00	.00
17.901	785.50	712	31.325	4.39	.00	.00
17.926	784.52	712	31.363	3.79	.00	.00
17.951	783.58	712	31.375	3.36	.00	.00
17.977	782.76	712	32.038	2.83	.00	.00
18.002	782.43	712	32.375	1.62	.00	.00
18.053	781.63	710	33.000	1.92	.00	.00
18.103	781.10	709	33.263	2.29	.00	.00
18.154	780.75	708	33.301	1.34	.00	.00
18.159	780.70	708	33.301	1.62	.00	.00
18.164	780.62	708	33.301	2.06	.00	.00

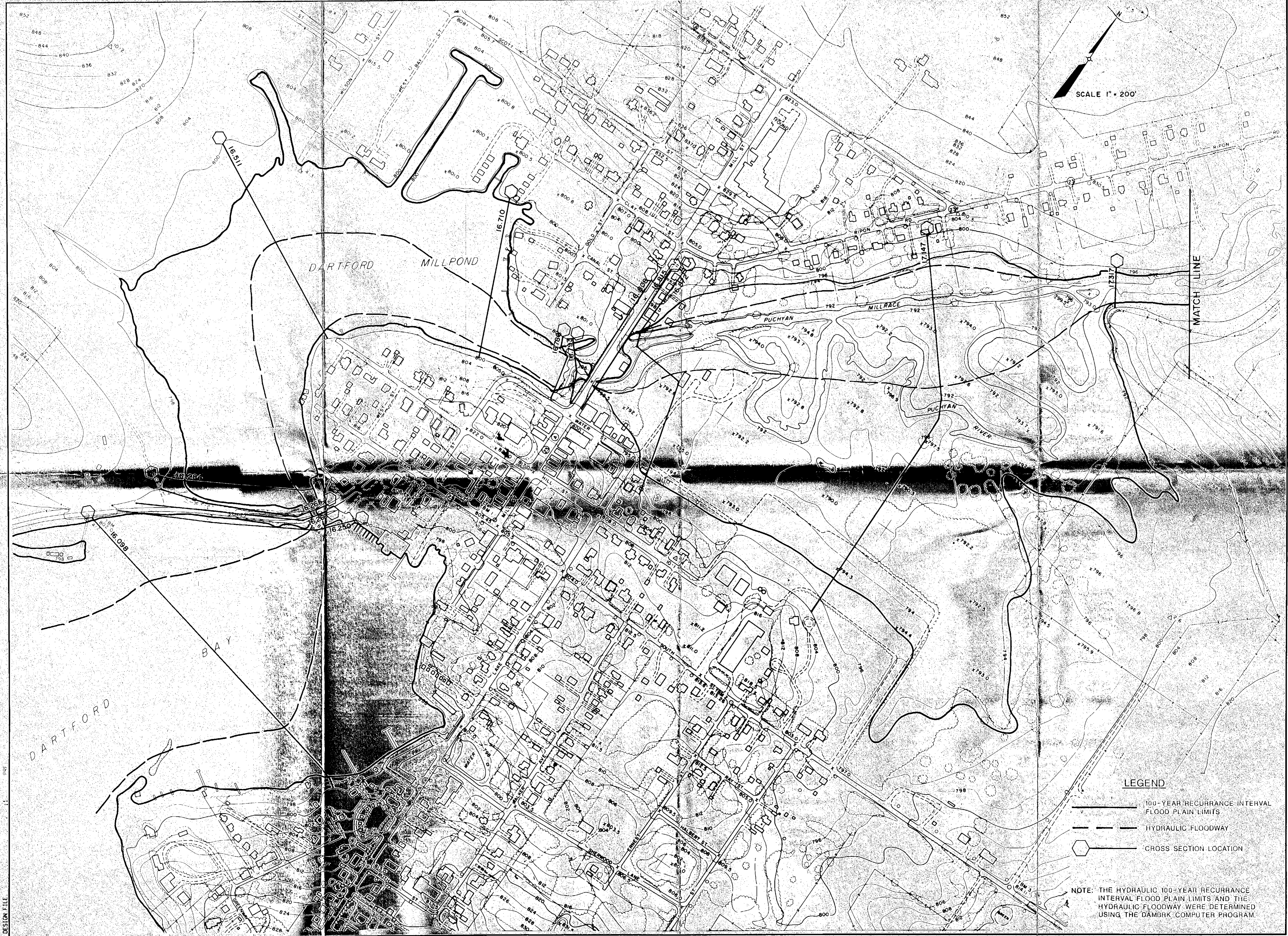
PROJECT TITLE : GREEN LAKE DAM FAILURE ANALYSIS (R)

PROJECT NUMBER : DONOHUE PROJECT NUMBER 17782.000

7/31/1990

FLOOD CREST SUMMARY :

Cross Section Location (mi)	Maximum Stage Elevation (ft MSL)	Maximum Flow (cfs)	Time To Maximum Stage (hr)	Maximum Flow Velocity (ft/sec)	Flood Elevation (ft MSL)	Time To Flood Elevation (hr)
18.168	780.42	708	33.313	2.86	.00	.00
18.173	779.89	708	33.401	4.83	.00	.00
18.178	779.63	708	33.476	5.19	.00	.00
18.184	779.53	708	33.476	4.21	.00	.00
18.190	779.45	708	33.488	3.54	.00	.00
18.196	779.39	708	33.463	3.05	.00	.00
18.401	778.10	707	34.076	1.50	.00	.00
18.606	777.49	707	34.888	1.15	.00	.00
18.812	777.08	705	36.201	.97	.00	.00
19.017	776.76	703	38.113	.86	.00	.00
19.222	776.52	700	39.351	.78	.00	.00
19.427	776.35	695	39.363	.69	.00	.00
19.927	775.95	685	39.376	.79	.00	.00
20.427	775.54	679	39.376	.81	.00	.00



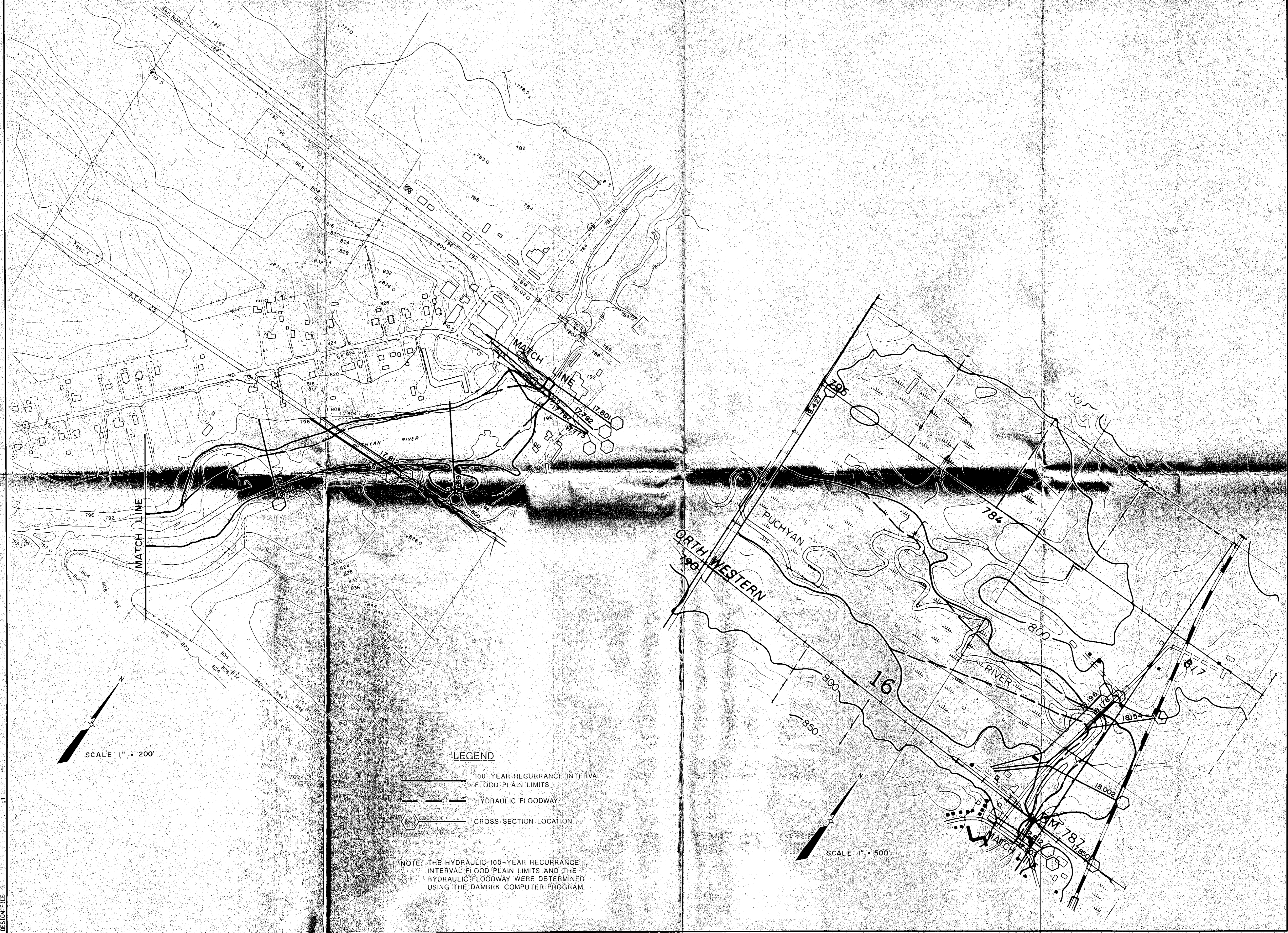
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Date	6-18-90
Designer	MMG
Drafter	JLH
Checker	
Approver	
No.	
Revisions	

Donohue
 ENGINEERS
 ARCHITECTS
 SCIENTISTS

**GREEN LAKE DAM FAILURE ANALYSIS
 GREEN LAKE, WISCONSIN
 100 - YEAR FLOOD EVENT
 WITH FAILURE OF GREEN LAKE DAM**

Sheet No.	1
MADISON Off. Loc.	M-10718 File No.
Project No. 17782.000	
ATTACHMENT 6	
Drawing No.	

DESIGN FILE



SCALE 1" = 200'

LEGEND

- 100-YEAR RECURRENCE INTERVAL FLOOD PLAIN LIMITS
- - - HYDRAULIC FLOODWAY
- CROSS SECTION LOCATION

NOTE: THE HYDRAULIC 100-YEAR RECURRENCE INTERVAL FLOOD PLAIN LIMITS AND THE HYDRAULIC FLOODWAY WERE DETERMINED USING THE DAMBRK COMPUTER PROGRAM.

SCALE 1" = 500'

AS SHOWN	6-18-90
DATE	MMG
DESIGNED BY	JLH
CHECKED BY	
APPROVED BY	
SCALE	AS SHOWN
DATE	6-18-90
DESIGNED BY	MMG
CHECKED BY	JLH
APPROVED BY	
SCALE	AS SHOWN

Donohue
ENGINEERS
ARCHITECTS
SCIENTISTS

GREEN LAKE DAM FAILURE ANALYSIS
GREEN LAKE, WISCONSIN
100 - YEAR FLOOD EVENT
WITH FAILURE OF GREEN LAKE DAM

Sheet No.	2
MADISON Off. Loc.	M-10717 File No.
Project No.	177 82 000
ATTACHMENT 6	
Drawing No.	

DESIGN FILE