#33 Douglas Olson Meadow Dam Culvert

State of Wisconsin
Department of Natural Resources
dnr.wi.gov

Due Date: April 15

Motorized Recreation Grant Application

For: (choose all that apply)

☒ ATV/UTV Trail Aid
☒ Snowmobile Trail Aid

Form 8700-159 (R 02/2024)

Notice: Completion of this form is required under Wisconsin Statutes 23.09(26) and 23.33. Failure to complete this form will result in denial of financial assistance. Personally identifiable information found on this form is not intended to be used for any other purpose. The Department of Natural Resources (DNR) may provide this information to requesters as required by Wisconsin's Public Records law {ss. 19.31 – 19.39, Wis. Stats.}.

Instructions: Applications may combine more than one source of funds. They may be submitted for consideration of traditional ATV, UTV, Snowmobile and Motorized Stewardship funding. Submit one copy of all forms and attachments. See Page 2 for necessary attachments. Send applications to your Community Services Specialist.

DNR Use Only	
Category	Number

Section 1: Applicant Information

Applicant / Organization Name			Check Recipient: Individual other than authorized individual to act on behalf of the applicant. ☒ Select if the same as applicant.		
Douglas County Forestry					
Individual Authorized to Act on Behalf of Applicant per Resolution			**Check Recipient Name** (Name to Appear on Check)		
Clint Meyer			Clint Meyer		
Title			Title		
Park and Recreation Supervisor			Park and Recreation Supervisor		
Address			Address		
PO Box 211			PO Box 211		
City	State	ZIP Code	City	State	ZIP Code
Solon Springs	WI	54873	Solon Springs	WI	54873
Telephone Number	Email Address				
(715) 378-2219	clint.meyer@douglascountywi.gov				

Section 2: Project Information Required for all Projects

Project Title	**Current Funded Miles**	New Miles (if applicable)
Douglas County trail 7 Culvert replacement	355	

County	Township	Range	Section	¼ ¼	¼	GPS Coordinates:
Douglas	41 N	11 ○E ◉W	6			Lat. _____ Long.

Project Description Summary

Trail 7 runs across Olson Meadow Dam utilizing it as a crossing of an unnamed tributary to lower ox creek. the structure is approximately 50 years old and has structural issues that need to be addressed. The county has decided to remove the dam in suing so the county will apply for a Dam Removal Grant that can fund $50,000.00 of the cost the remainder is requesting to be funded by the snowmobile and WATV program for the replacement of the failing culvert. total project cost is $128,000.00. It is estimated that $50,000.00 will be funded by the Dam Removal Grant leaving a total of $78,600.00 to be divided between Snowmobile(~~$39,300.00~~ $24,750) and Winter ATV(~~$39,300.00~~ $24,750).

☒ I certify that all maintenance land use agreements are on file.

Estimated Cost

Maintenance	Acquisition	Insurance	Development	Bridge Rehab.	Trail Rehab.	Total Estimated Cost
				$78,600.00		$78,600.00
Leave Blank – DNR Use Only						
				$49,500		$49,500

Applicant Certification

Printed Name of Authorized Official	Official's Title
Clint Meyer	Park and Recreation Supervisor

As the applicant's authorized official, I certify that, to the best of my knowledge, the information in this application is true and correct.

Signature of Authorized Official

4-15-2024
Date Prepared

Appendix A – Required for Bridge Rehab/Replace, New, or Reroute with New Bridge

☒ Bridge Rehab/Replace ☐ New Bridge ☐ Reroute with new bridge

County	Township	Range	Section	¼ ¼	¼	GPS Coordinates: Lat. / Long.
Douglas	41 N	○E ◉W 11	6			

Water Body Name	Bridge Name	County Inventory Number
TR LOWER OX CREEK		

Funded Trail Name or Number (SNARS if applicable)	Has this bridge site ever received development or rehabilitation funds in the past? ○ Yes ◉ No Year:____ $____
trail 7	

Bridge is located on:	Old Bridge/Culvert Size	New Bridge/Culvert Size
○ Private property ◉ Public property	48"X70'	66"X70'

Landowner Where Bridge is Located	Telephone Number	Length of Trail Use Agreement (5 year minimum)
Douglas County Forestry	(715) 378-2219	indefinate

Current maximum load ____ lbs. / Proposed maximum load ____ lbs.	Age of Bridge	Bridge Material
	50 years	CMP

Sponsoring Club Name	Club Contact	Telephone Number
Jack Pine Riders	Dave Krenz	(218) 491-3411

Do you have your trail bridges posted as to maximum load? ◉ Yes ○ No	What is the maximum load of the other bridges on the system if groomed with this bridge?
What is the weight of your puller & drag/grading equipment?	

What other recreational trail uses are planned for this bridge?
Snowmobile, WATV/UTV, pedestrian use, Hunting

If there are other Recreational uses planned, how much of the bridge cost will be paid for by non-snowmobile or non-ATV users?
$50,000.00 Dam Removal Grant

◉ Yes ○ No Have you contacted your local DNR Water Management Specialist (WMS) regarding a permit?
◉ Yes ○ No Is a permit needed? (Please provide any written correspondence from WMS.)
○ Yes ◉ No Have you contacted your County Zoning Dept. regarding a floodplain determination?
○ Yes ◉ No Will an H & H (hydrologic and hydraulic) study be required?

Bridge Project Detailed Description

Trail 7 runs across Olson Meadow Dam utilizing it as a crossing of an unnamed tributary to lower ox creek. the structure is approximately 50 years old and has structural issues that need to be addressed. The county has decided to remove the dam in suing so the county will apply for a Dam Removal Grant that can fund $50,000.00 of the cost the remainder is requesting to be funded by the snowmobile and WATV program for the replacement of the failing culvert. The selected contractor will remove the old whistle tube dam structure and culvert and replace it with a new concrete culvert.

Appendix A (continued)

Summarize Costs in Appropriate Categories:

Bridge Structure

		Quote 1	Quote 2
		◯ Steel ◯ Wooden	◯ Steel ◯ Wooden
Bridge Dimensions:		66"x70'	
Bridge Manufacturer:		concrete	
Design Weight Load		lbs.	lbs.
Cost of Structure:	1. Engineering	$ 51,700	$ 51,700
	2. Structure	$ 76,900	$ 47,800
	Subtotal	$ 128,600	$

Installation Costs:	Quote 1 ◉ Contractor or ◯ Sponsor Estimate	Quote 2 ◯ Contractor or ◯ Sponsor Estimate
1. Engineering	$	$
2. Site Preparation	$	$
3. Abutments	$	$
4. Pilings/Piers	$	$
5. Approaches	$	$
6. Riprap	$	$
7. Labor	$	$
8. Equipment Rental	$	$
9. Culverts	$	$
10. H & H Study	$	$
11. Wetland Delineation	$	$
12. Other _____	$	$
Subtotal	$	$
Total Cost	$ 128,600	$ 99,500

For the application grant, you must take the lowest of the two quotes.

Entire Deck and Railing Projects ◯ Contractor ◯ Sponsor ◯ Club

Bridge Dimensions:	
Design Weight Load	lbs.
1. Materials	$
2. Labor	$
Total	$

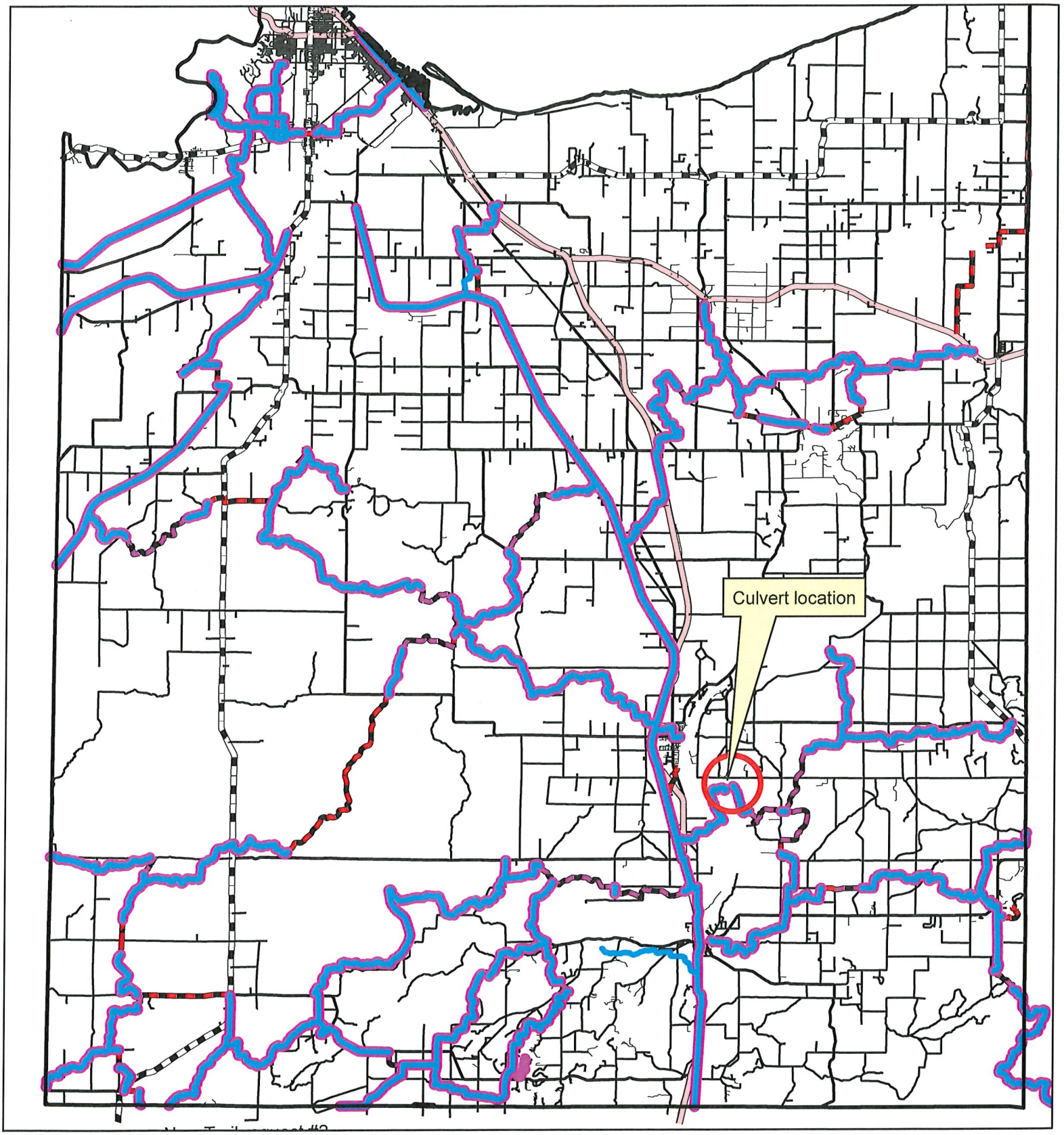
Guidelines for Applicant

Complete this form for each bridge structure you are submitting a grant application for. Provide any additional documents not requested on application checklist to substantiate your points, including actual deeded easements.

	Category	Possible Points	Actual Points
1	**Condition of the Structure** (max of 10 points)		
	Has a certified bridge inspection report that supports the project & demonstrates need (see example, must provide copy of report by August 1 for 2024 only)	10	10
2	**Permits** (maximum points 4)		
	Consultation with DNR Water Mgmt Specialist has occurred & permit is likely, if needed	1	1
	Permit in hand / Bridge already permitted	3	
3	**Funding** (maximum points 2) Are other funds already committed?		
	50% or greater from other funding source(s)?	2	2
	11% - 49% from other funding source(s)?	1	
4	**Length of Written Easements or Land Use Agreement** (max points 5)(ch. 23.09(26)(am)1 WI Stats)		
	On public land (County, State, Federal)	5	5
	10 or more year **deeded easement** on private land or other public land, for all portions of that trail to the nearest road on each side of the bridge	5	—
	3-9 year **deeded easement** on private land or other public land, for all portions of that trail to the nearest road on each side of the bridge	4	—
	10 or more year **deeded easement** on private land or other public land, for just the bridge site	3	—
	3-9 **deeded easement** on private land or other public land, for just the bridge site	2	—
	10 or more year land use agreement (LUA, not deeded) on private land or other public land	1	—
	3-9 year land use agreement (LUA, not deeded) on private land or other public land	0	—
5	**Miles Impacted** – How many miles will need to rerouted if the structure is not replaced? Measured from nearest intersection on both sides of the bridge. (max 4 points)		
	Less than 20 miles	1	1
	20 miles or more	3	
	No other snowmobile trails connect. Explain:	4	
	DEDUCTIONS		
6	**County Active Project Deduction** (maximum deduction 1 point) A snowmobile active project is one that has exceeded it's initial grant period.		
	Two or more active projects - deduct 1 point	-1	-1
	GRAND TOTAL		18

Comments/Notes:

2024-2025 Douglas County Snow and WATV/UTV Culvert Replacement 41N-11W-6



Legend

Snowmobile Funded Trails

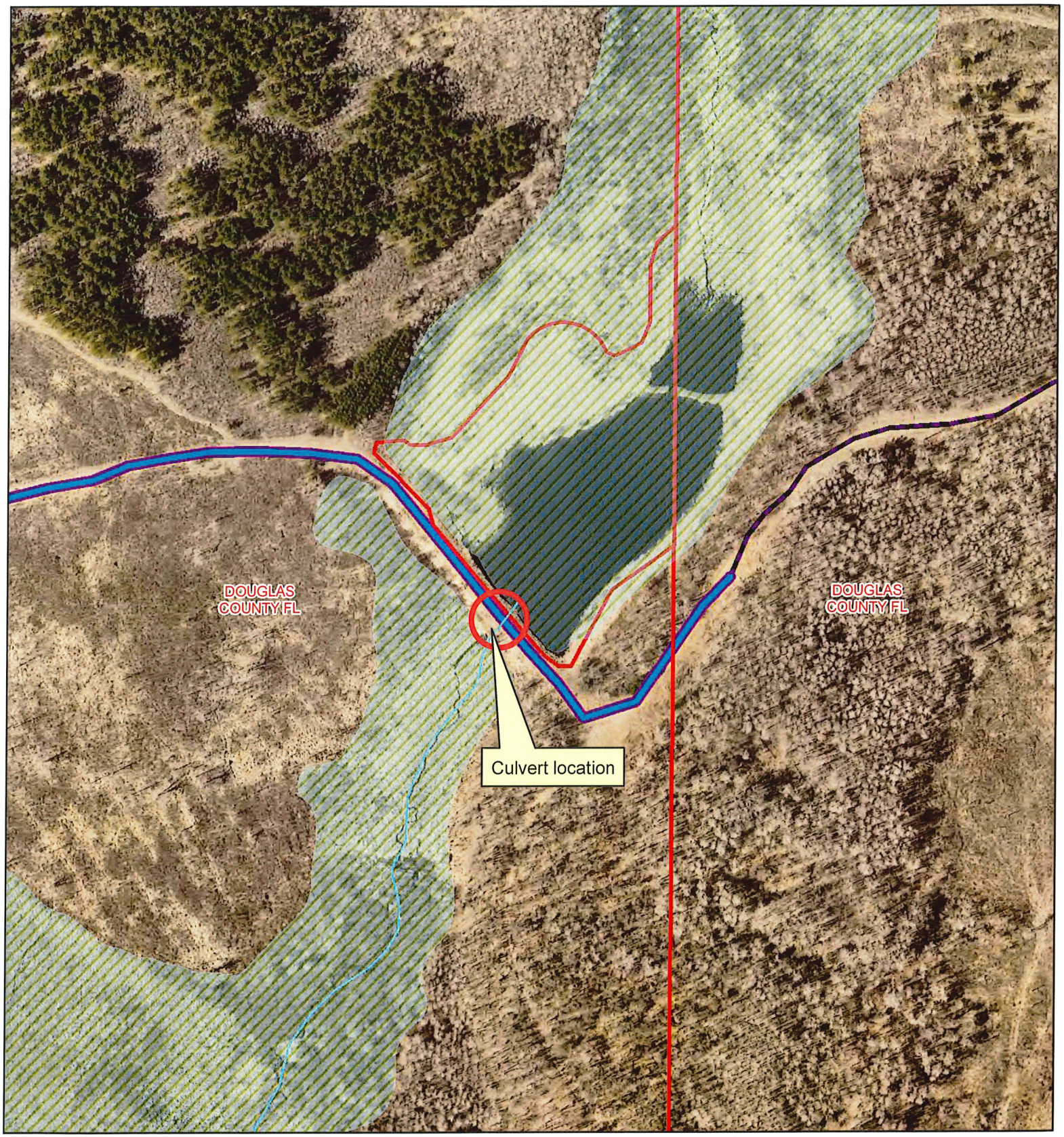
Winter ATV Funded Trails

N

0 1 2 4 6 8 Miles

Map Created by: Clint Meyer

2024-2025 Douglas County Snow and WATV/UTV Culvert Replacement 41N-11W-6



Legend

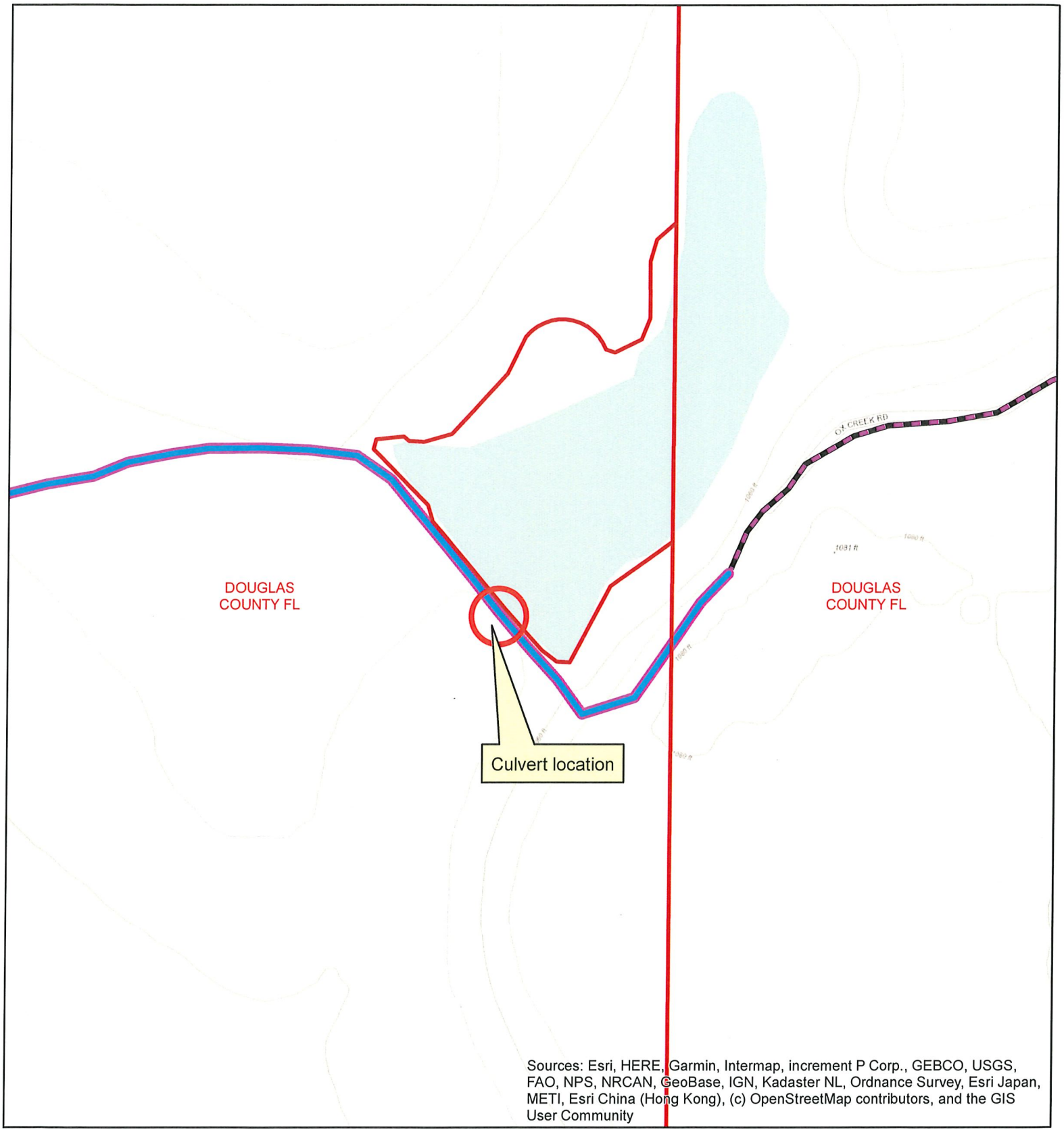
- Snowmobile Funded Trails
- Winter ATV Funded Trails

N

0 0.01 0.02 0.04 0.06 0.08 Miles

Map Created by: Clint Meyer

2024-2025 Douglas County Snow and WATV/UTV Culvert Replacement 41N-11W-6



Legend

- Snowmobile Funded Trails
- Winter ATV Funded Trails

N

0 0.01 0.02 0.04 0.06 0.08
Miles

Map Created by: Clint Meyer

Todd Gibbon
Long Island Engineering LLC
201 Maple Ridge
Ashland, WI 54806

February 23, 2024

Clint Meyer
Park & Recreation Manager
Douglas County Forestry Department
9182 East Hughes Avenue, PO Box 211
Solon Springs, WI 54873

Mr. Meyer:

Thank you for the opportunity to provide professional services for the Olson Meadow Dam Removal Project.

Project Overview
We understand that Olson Meadow Dam has structural issues with the existing corrugated metal pipe. The structure has reached its end of life and requires removal. WESLIE Engineering Group has developed the following work plan to comply with the WDNR regulations regarding dam removal, prepare construction documents, and prepare a competitive bid package for contractor bidding.

Work Plan

Task 1	**Wetland Delineation** Complete a wetland delineation of dam removal area. Create wetland delineation report and obtain concurrence from WDNR.	**$4,500**
Task 2	**Preliminary Design** Create preliminary design drawings in coordination with the Douglas County Forestry Department. This preliminary design drawings will be used in the application for approval to remove the dam.	**$4,600**
Task 3	**Floodplain Modeling** Update existing Hec-RAS modeling to reflect dam replacement or to reflect dam removal and construction of a new culvert to maintain the trail crossing. Either scenario will require floodplain modeling.	**$3,700**
Task 4	**WDNR Wetland Permitting** Submit for a wetland impact permit. The permit is expected to be a General Permit submitted as a joint WDNR and Army Corps permit. Permit will be submitted jointly with the dam removal permit.	**$3,000**

Task 5 **WDNR Dam Removal or Reconstruction Permit** **$3,900**
Develop report and analysis necessary for permitting with WDNR. Submit to WDNR a permit request to remove or to reconstruct Olson Meadow Dam.

Task 6 **WDNR Ch30 Permit for Culvert Installation** **$2,500**
Develop a Ch30 General Permit application for installation of a new culvert on a navigable stream.

Task 7 **Final Design and Plan Production** **$4,600**
Develop final construction plans and details necessary for contractors to complete bids.

Task 8 **Bid Package** **$4,500**
Complete competitive bid package. Package includes contract language (front end specifications) and technical specifications with plan sheets and details. Attend prebid meeting and bid opening and perform bid evaluation.

Task 9 **Onsite Project Representations** **$15,000**
Perform project representation for construction. **(This assumes 40hrs/wk for a PE inspector for 2 weeks of critical inspection and 25hrs/wk for 2 weeks of part time critical inspection.)**

Task 10 **As-Built Topo and Drawings** **$5,400**
Complete an As-Built topographic survey and PE stamped As-Built drawings. Submit drawings to WDNR.

Deliverables
For this project, Long Island Engineering LLC and Weyandt Engineering Services LLC (WESLIE Engineering Group) will provide the following:

- Preliminary design plans for WDNR permitting
- WDNR permit for dam removal or reconstruction
- WDNR permit for new culvert installation on navigable stream (Ch30)
- Final design plans and plan production
- Wetland Delineation and Permitting
- Competitive Bid Package
- As-built survey and stamped as-built plans

Schedule
We are available to provide these services promptly to submit permits in 2024 for a 2025 construction season.

Fee Estimate
We propose to complete **Tasks 1** through **10** in the scope of work for a time and materials estimated fee of **$51,700**.

If during the course of work, any issues that arise that are beyond the scope of this proposal, Long Island Engineering LLC will discuss the potential effects of this on the project and provide an estimated fee prior to moving forward with any additional work. The following rates apply to staff that may work on this project. These rates are good for the 2024 calendar year.

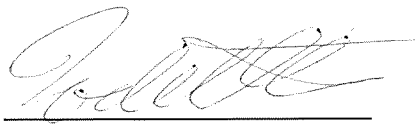
- Senior Engineer $155/hr
- Admin Support $60/hr

This letter and contract represents the entire understanding between Douglas County Forestry Department and Long Island Engineering LLC for the above described project (**Olson Meadow Dam Removal**) and may only be modified in writing signed by both parties. If this satisfactorily sets forth your understanding of our agreement, please sign in the space provided below and return to us.

I look forward to discussing this project with you further. If you have any questions, please contact me at **715-209-4747** or via email at **longislandengineeringllc@outlook.com**.

Sincerely,

Long Island Engineering, LLC



Todd Gibbon, PE CFM

Accepted by:

Clint Meyer
Park and Recreation Supervisor

Date

Office: **9346 E Wasko Road**
Solon Springs, WI 54873

Phone: (218) 464 3965

www.lakeeffectconstruction.com

Excavation ♦ Site Preparation ♦ Landscaping ♦ Demolition ♦ Material Delivery ♦ Trucking

To: Olsen Meadows
Attn: Clint Meyer

Date: June 4, 2024

Project: Olson Meadows Flowage
E Fire Lane
Solon Springs WI 54873

Pricing includes labor, material, and equipment and is subject to acceptance within 30 days.

PROPOSAL

This proposal is offered and based on the terms and conditions of the Minnesota AGC Subcontract or AIA Contract A201 with no additional terminology or riders.

Base Bid Scope of Work:

Site Work **Bid Price: $47,800.00**

Install silt fence on both sides of dam
Excavate existing pipes and stockpile materials onsite
Remove overflow structure and dispose of
Install new culvert pipe
Backfill, place and compact materials from onsite to proposed elevation
Import 60 yards gravel for reconstruction of trail

Clarifications and Exclusions

Unforseen conditions such as contaminated soils or rock excavation are excluded.
Also not included would be permits, dewatering or any winter conditions.
****Final payment is due on the date we finish.

Thank you for the opportunity to participate in this project.

Please call / email with any questions.

Respectfully submitted,

Danny Haskins
Owner/Operator
danny@lakeeffectconstruction.com
Cell: (218) 464 3965

Ritola Inc
61426 Storck Rd
Mason, WI 54856
Phone: (715)-278-0324
Email: estimating@ritolainc.com

Proposal

24-0

Date: 3/1/24

Proposal submitted to:
ATTN: Todd Gibbon

Project.
Douglas County
Olson Meadow Dam

We hereby submit Specifications and a Proposal for:

Removal and replacement of existing structure and piping

The following items to be included:

Culvert Removal

Item	Unit	Est. Quantity	Unit Price	Total
FINISH ROADWAY	EACH	2	$ 3,450.00	$ 6,900.00
MOBILIZATION	EACH	1	$ 11,500.00	$ 11,500.00
SALVAGED TOPSOIL	SY	200	$ 11.50	$ 2,300.00
SILT FENCE	LF	150	$ 8.05	$ 1,207.50
EROSION MAT URBAN CLASS I TYPE A	SY	200	$ 3.45	$ 690.00
SEEDING MIXTURE NO. 70 (@0.4LB/1,000SF)	LB	1	$ 11.50	$ 11.50
SEEDING NURSE CROP (@1LB/1,000SF)	LB	1	$ 11.50	$ 11.50
REMOVE EX. 48" CMP AND 60" RISER STRUCTURE	LS	1	$ 3,450.00	$ 3,450.00
WATER MANAGEMENT	LS	1	$ 11,500.00	$ 11,500.00
			TOTAL	$ 37,570.50

Culvert Replacement

Item	Unit	Est. Quantity	Unit Price	Total
SELECT BORROW	CY	30	$ 57.50	$ 1,725.00
APRON ENDWALLS FOR CULVERT PIPE 60-Inch	EACH	2	$ 4,025.00	$ 8,050.00
RIP RAP LIGHT	CY	30	$ 172.50	$ 5,175.00
SEEDING MIXTURE NO. 70 (@0.4LB/1,000SF)	LB	1	$ 11.50	$ 11.50
SEEDING NURSE CROP (@1LB/1,000SF)	LB	1	$ 11.50	$ 11.50
STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 60-Inch	LF	70	$ 345.00	$ 24,150.00
			Total	$ 39,330.00

Terms: LATE CHARGE on balances past due (30 days) a fixed amount of 1.5% per month on unpaid balance for annual percentage rate of 18%.

We hereby propose to furnish materials and labor in accordance with the above specifications for the sum of:

$ 76,900.50 seventy six thousand nine houndred and 50/100 Dollars

All work to be completed as specified and in a workmanlike manner according to standard practices. Any alteration or deviation from the above specifications involving extra cost will be executed only upon written orders, and will become an extra charge over and above the estimate. All agreements contingent upon strikes, accidents or delays beyond our control. Ritola Inc. has General Liability Insurance and our workers are covered by Workman's Compensation Insurance.

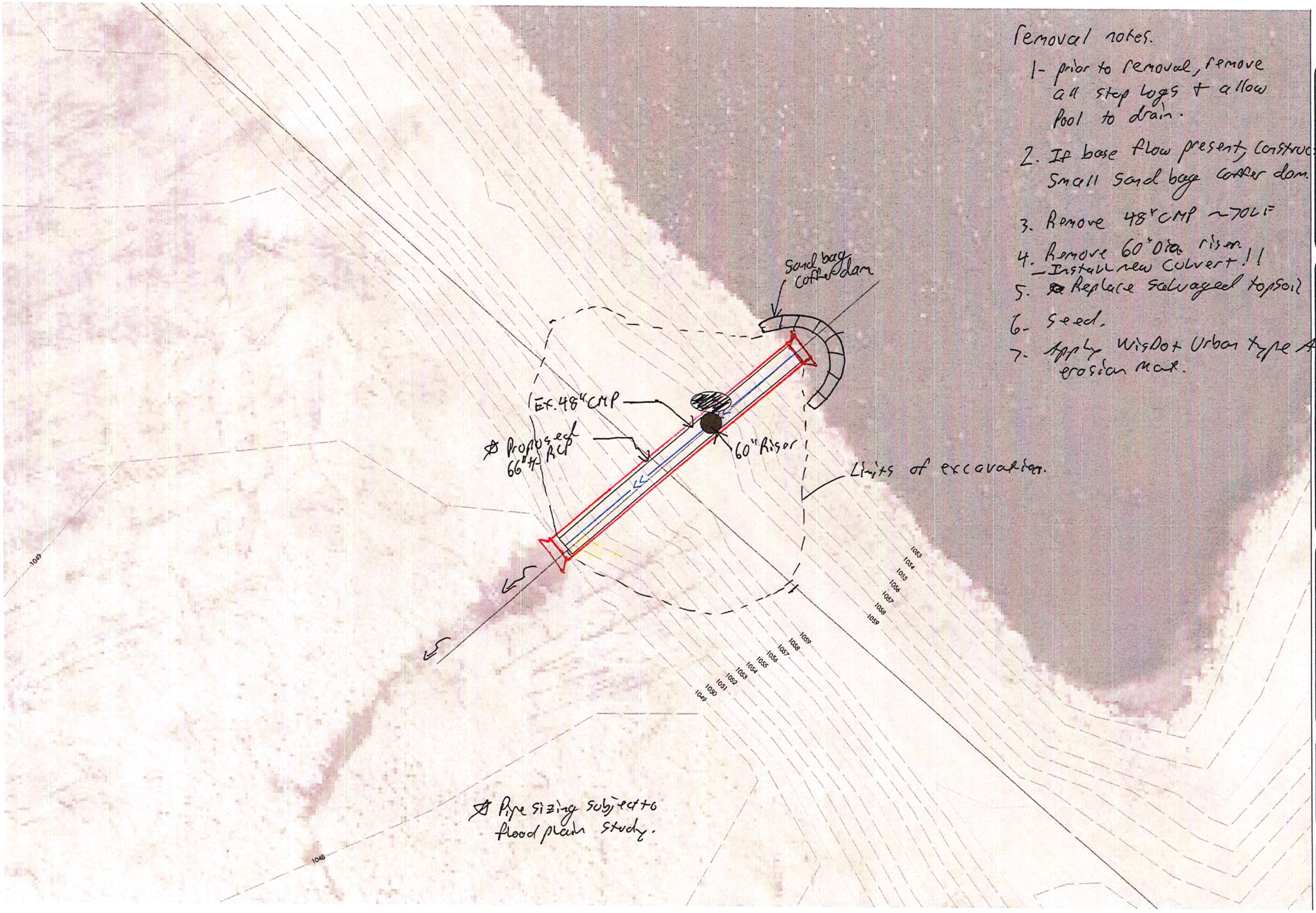
Proposal submitted by:

Authorized Signature_____

This proposal may be withdrawn by us if not accepted within 30 days

Acceptance of Proposal The above price(s), specifications and conditions are satisfactory and are hereby accepted. You are authorizing us the do the work. Warranty as stated in terms and conditions. Payment will be made as outlined above.

Signature of acceptance_____ Date: _____



LONG ISLAND ENGINEERING LLC
201 Maple Ridge - Ashland, WI 54806
715-209-4747
longislandengineeringllc@outlook.com

PLAN VIEW
OLSON MEADOW REMOVAL
Douglas County Forestry Dept.
Gordon
Douglas County, Wisconsin

REVISIONS	NO.	BY	DATE
			3-15-2016
			3-15-2016
			3-15-2016
			3-15-2016
			3-15-2016
			3-15-2016

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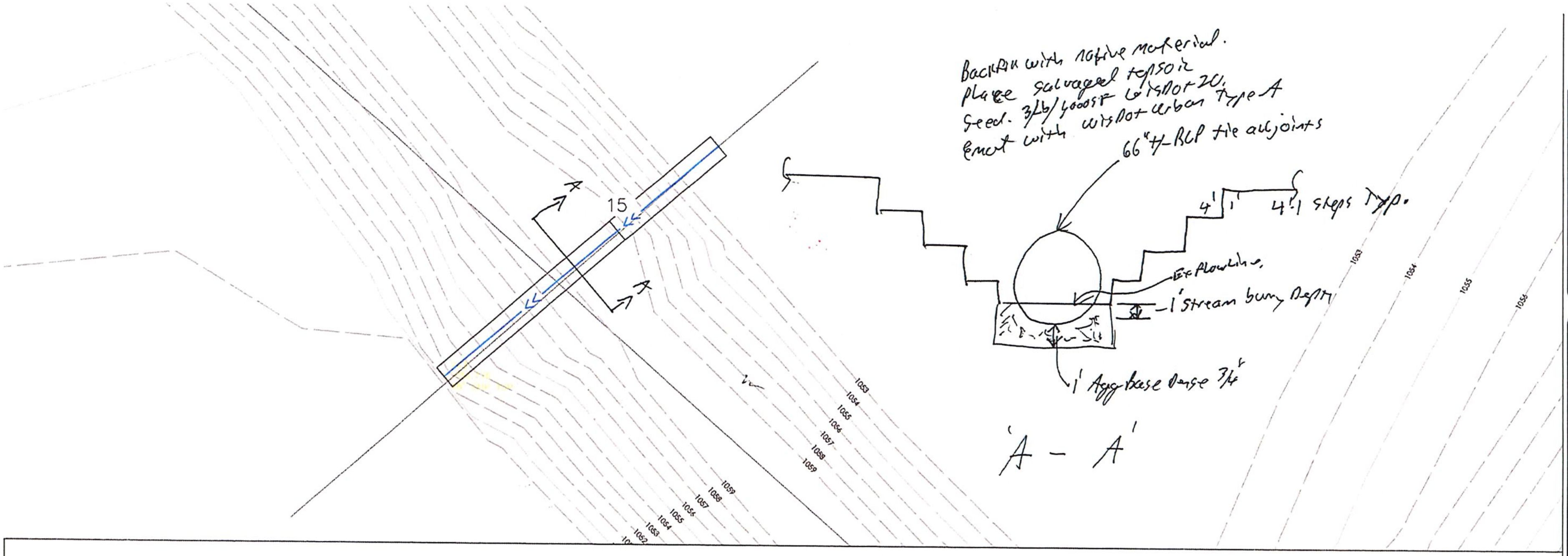
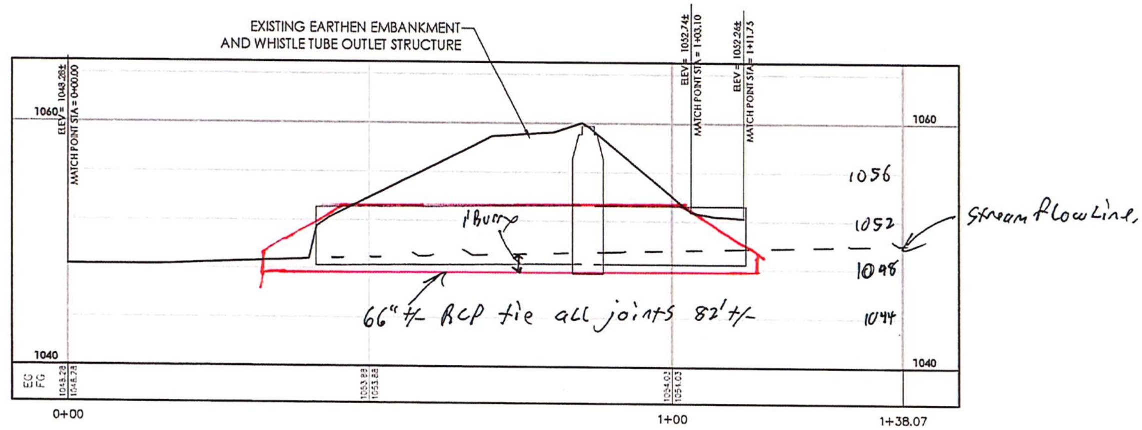
DATE:
FILE NO.: ---
SHEET NO.: 1





LONG ISLAND ENGINEERING LLC

201 Maple Ridge • Ashland, WI 54806
715-209-4747
longislandengineeringllc@outlook.com

PROFILE VIEW
OLSON MEADOW DFA
Douglas County Forestry Dept.

Gordon
Douglas County, Wisconsin

REVISIONS	NO.	BY	DATE
			3-15-2016
			3-15-2016
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			3-15-2016

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DATE
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SHEET NO. 2

OLSON MEADOWS FLOWAGE FF 16.22 2020 DAM SAFETY INSPECTION

June 19, 2020

Douglas County Forestry Department

Douglas County, Wisconsin

June 19, 2020

RE: Olson Meadows Flowage FF 16.22
2020 Dam Safety Inspection

Mr. Jacob Druffner
Wisconsin Department of Natural Resources
Northern Region
810 West Maple Street
Spooner, WI 54801

Dear Mr. Druffner:

Long Island Engineering LLC has prepared the enclosed Dam Safety Inspection for the Olson Meadows Dam in Douglas County. Please contact me with any comments you have about the enclosed information. My email is longislandengineeringllc@outlook.com and my cell number is 715-209-4747.

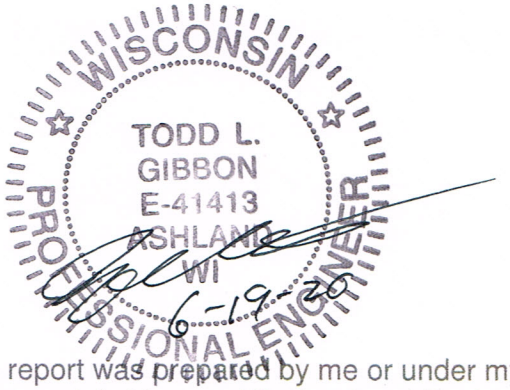
Sincerely,

Todd Gibbon
Professional Engineer

tg
c:\users\user\documents\long island eng_projects\douglas county\olson meadows dfa\olson dam inspection 2020\2020 dam inspection report narrative.docx

2020 Dam Safety Inspection

June 19, 2020



I hereby certify that this report was prepared by me or under my direct supervision, and that I am a duly Licensed Professional Engineer under the laws of the State of Wisconsin.

Todd Gibbon, PE

Date: 6/19/2020 Lic. No.: 41413

Long Island Engineering LLC
201 Maple Ridge
Ashland, WI 54806
715-209-4747

Distribution List

No. of Copies	Sent (via email) to
1	Mr. Jacob Druffner Wisconsin Department of Natural Resources Northern Region 810 West Maple Street Spooner, WI 54801
1	Mr. Clint Meyer Douglas County Forestry Department 9182 East Hughes Ave Solon Springs, WI 54873

2020 DAM SAFETY INSPECTION

PREPARED FOR:
DOUGLAS COUNTY FORESTRY DEPARTMENT

PREPARED BY:
LONG ISLAND ENGINEERING LLC
201 MAPLE RIDGE
ASHLAND, WI 54806

Table of Contents

List of Appendices

June 19, 2020

2020 Dam Safety Inspection

Olson Meadows Dam FF 16.22

Prepared for Douglas County Forestry Department

1.0 Project Description

The Olson Meadows Dam is located in Douglas County accessed via Ox Creek Trail from E Fire Lane Road. The dam is located in the NE ¼ of the SE ¼ of Section 06, T44N, R11W.

The dam outlet is a whistle tube configuration with a 60" riser and 48" inlet and outlet corrugated metal pipe (CMP).

In 2016 a dam failure analysis was approved by the WDNR and an assigned hazard rating of Low was given.

Douglas County has not adopted the DFA flood shadow mapping into their zoning ordinance.

The current Dam Safety Inspection includes a review of previous reported observations and evaluation of the current conditions of all accessible elements of this dam structure.

2.0 Previous Inspection Findings

The following items were recommendations made in the 2004 inspection by Northern Environmental and the 2011inspection by SEH. The original observation is noted numerically, followed by the Long Island Engineering LLC 2020 observations which are noted after each bullet. The sequential commenting provides a timeline of any changes in condition to defects or repairs.

NOTE: Location designations such as left and right are given as if standing on the dam and facing downstream.

2.1 Whistle Tube Control Structure

1. The CMP riser and CMP outlet pipe show no signs of perforations, but the outlet pipe joints are showing some signs of leakage and corrosion.

    - 2004 no perforations noted.
    - 2011 no perforations noted.
    - 2020 perforated joint noted approximately 20' in from outlet of pipe.

2.2 Dikes and Embankments

- 2004 inspection noted seepages on toe of dike @ 40-75' left, 100' left, and 220' right of structure.
- 2011 inspection no flow noted.
- 2020 inspection no flow noted.
- 2020 inspection noted woody growth requires removal.

The Consultant Inspection Process Form, Certification Page, and Inspection Checklist are located in **Appendix A.** Photos taken during the inspection are in **Appendix B.**

2.3 Rodents

Rodents are actively being managed. No rodent activity was noted during the inspection.

2.4 Stop Logs

No issues noted.

2.5 Benchmarks

There is a Wisconsin Department of Natural Resources benchmark located approximately 185' left of the structure and 30' east. The elevation of the WDNR benchmark was check by GPS survey conducted by Technical Design Services of Duluth on 6-9-20 and the elevation is **1065.85'** on NAVD88.

3.0 New Items for Correction and Monitoring

During the 2020 inspection dam operator Mr. Clint Meyer was on site and the following two actions were discussed.

- Woody growth requires removal on the upstream side of the embankment.
- A joint in the CMP outlet pipe is rusted through (perforated) and requires repair.

In conversation with Mr. Meyer, the mowing operation is scheduled for the following week. It is apparent that mowing operations occur on a regular basis, but simply have not occurred yet this growing season. No further action recommended.

4.0 Recommendations

It is the recommendation of Long Island Engineering LLC to repair the perforated join in the CMP outlet pipe within 5 years.

5.0 H&H

An H&H study with dam failure analysis was completed and approved for this dam in 2016. Downstream zoning has not been implemented by the county. Long Island Engineering LLC recommends that WDNR follow up with Douglas County Zoning on mapping adoption.

6.0 EAP and IOM

Emergency Action Plan and Inspection Operation and Maintenance plans were updated in 2018 and are currently being updated by the dam operator for this dam.

APPENDIX A

Consultant Inspection Process Form

Certification Page

Inspection Checklist

Consultant Inspection Process Form – for dam inspected by outside consultant

Task	✓	Date Completed	Responsible Party: Owner/ Consultant	Responsible Party: DNR
Inspection Notification *Notify dam owner of DNR inspection date/time	X	6-1-20	X	
File Research *Review last inspection report, photos, database, aerial photos, ownership information, etc.	X	6-1-20	X	
Field Inspection *Physically inspect dam, conduct survey if required	X	6-17-20	X	
Inspection Checklist *Fill out form documenting observations during inspection	X	6-17-20	X	
Photo Documentation *Print and label photos, back up digital copies	X	6-17-20	X	
Review Sufficiency Rating *Complete Sufficiency Rating questionnaire based on current condition of the dam.		6-2020		X
Review Hazard Rating *Review downstream development for changes, check if downstream zoning is adopted	X	6-2020	X	
Review EAP *Review and update EAP, submit to DNR	X	6-2020	X	
Review IOM *Review and update IOM, submit to DNR	X	6-2020	X	
Inspection Report Submitted to DNR Regional Engineer	X	6-2020	X	
Inspection Report Submitted to DNR Central Office	X			X
Response Letter *DNR letter which outlines work needed to be completed on the dam based on consultant inspection				X
Update database *Update owner contact information, follow-up dates, inspection dates, etc. on DNR database				X
Notify DNR of planned work * Determine if plans and specs are needed for the proposed dam work, issue proper permits or plan approvals			X	
Complete Required Elements *Owner completes required items listed in inspection report			X	
Enforcement *Pursue enforcement action against the dam owner if the required elements are not completed by the appropriate deadlines				X

Dam Name: Olson Meadows Flowage **Field File #:** 16.22

Engineer Completing Form: Todd Gibbon **Key Sequence #:** 446

Version 5/13/2010

Dam Inspection Checklist

Inspection of a large dam pursuant to ss. 31.19 (2) and ss.31.19 (4), Wis. Stats, should be conducted using the *Dam Inspection Checklist (Checklist).* Use of the *Checklist* will provide consistency for inspections and a more efficient and accessible review process. The *Checklist* was designed to take into consideration the wide variety of dams in use in Wisconsin and covers all aspects of a dam inspection for which DNR needs documentation.

DNR Dam Safety is working to continually improve the forms and other information available to the Dam community. Please email any recommendations for changes or additions to the *Dam Inspection Checklist* form to dnrdamsafety@wisconsin.gov.

Instructions

1. **Review the *Dam Inspection Checklist* form before beginning the inspection process.** The *Checklist* was designed to be used with a wide variety of dams. By reviewing the *Checklist* before beginning the inspection process, an inspector can determine what pages from the form are needed, what information will be required and how to structure the inspection.

2. **Print only those pages that apply to the dam being inspected.** The *Dam Inspection Checklist* was designed to be used with a wide variety of dams. Therefore, not all sections of the *Checklist* may apply to the dam being inspected. The appropriate page numbers will need to be added to the document.

3. **Fill out box at top of first page regarding the name of dam, name of inspectors, etc.** Completion of this section is required in order to tracking of the data collected during the inspection.

4. **Check the appropriate boxes to note what was reviewed on site, if photos are attached and what actions are required.** A legend for the boxes can be found at the bottom of each page. Photos must be submitted with the completed *Checklist.* Details for preparing photographs can be found on Page 2 of this instruction sheet.

5. **Questions?** Please email any questions regarding the *Dam Inspection Checklist* form or process to dnrdamsafety@wisconsin.gov.

Personally identifiable information on this form will be used to administer the inspection program under ss.31.19 (2) and (4) and will not be used for other purposes. Inspection forms may be shared with the public, consistent with Wisconsin's Open Records law [ss. 19.31-19.39, Wis. Stats.].

Certification for Dam Inspection

Local Dam Name (PRINT): Olson Meadows Flowage

DNR Field File #: 16.22

I certify that I have completed the checklist truthfully and factually:

Certifier's Name (print): Todd Gibbon

Company Name: Long Island Engineering LLC

Signature: [signature]

Date: 6-19-20

Multidisciplinary: I am experienced in the technical disciplines or I am working with other professionals experienced in the technical disciplines to properly inspect this dam and appurtenant works. Technical disciplines, in addition to general civil engineering, may include geotechnical, geological, hydrologic, structural, and mechanical:

(Yes) No

Engineer's Wisconsin Registration Number: E-41413

Expiration Date: 7-31-2020

Engineer's Seal (optional):

Name of Dam:	Olson Meadows Flowage	**Date:**	6-17-20
Inspectors:	Todd Gibbon	**F.F #:**	16.22
Owner's Name:	Douglas County	**Key Seq #:**	466
Street:	9182 E. Hughes Ave		
City, State, Zip Code:	Solon Springs, WI 54873		
County:	Douglas	**Phone:**	715-209-4747
Weather and Site conditions:	88° sunny windy	**Email:**	

GENERAL

	Item	N	P	Notes/ Observations	Action M	Action I	Action R
1	**Monuments/Benchmarks**						
	Location: Elevation: Datum:			There is a WDNR BM located 185' left of the outlet structure and 30' east. BM is good condition. BM was surveyed has and NAVD88 Elev of 1065.85'			
2	**Pool Level**						
	Normal/Operating: Maximum: Minimum:			Normal			
	Staff Gage						
3	**Access Road**						
				good			
4	**Signage/ Security**			OK			
	Portage/route:						
	Dam Warning:						
	Downstream Hazard:						
	Fencing/Railings/Catwalks:						

Additional Comments:

N= Noted; **P**= Photo; **M**= Monitor
I= Investigate; **R**= Repair
F.F.= Field File; **RT** = Right; **LT** = Left
U/S = Upstream; **D/S** = Downstream

Action Suggestion
1. Requires immediate action
2. Plan to do soon
3. Do when convenient

GENERAL (Cont.)

5 Hazard Section

A. D/S Development		none
Density:		
Distance:		
Type (Residential, Commercial, Industrial):		
B. Channel Crossing		
Type:	Bridge, Ford, Culvert, Trestle, Other (Explain) (Circle One)	
Dimensions:	earthen embankment covering whistle tube structure.	
D/S distance:		
Traffic Level (Local, CTH, Rail Road, STH, Interstate, etc):		
C. Distance to nearest D/S community/impoundment:		Stream discharges into the St Croix River without crossing any DS developments.
Name:		
D. Anticipated Hazard (based on landuse and zoning):		LOW
E. Dam Failure Analysis	X	WDNR approval 9-21-2016
Date Completed/Approved		
Is map available?	X	Douglas County Ordinance 8.3 Section 1.5(2) does not list Olson Meadows DFA and mapping.
Are map & profile adopted?		
List adoption date:		
Verify validity of failure mode:		
Verify validity of DFA conclusions:		

F. Emergency Action Plan	Y	N	Comments, Explanation, and Description	M	I	R
1. Current plan posted?	X		EAP and IOMP are currently in the update process. Clint Meyer (dam operator) was on site during inspection and has confirmed that EAP and IOMP were updated in 2018 and are currently undergoing updates.			
2. Understood by Operator?	X					
3. Warning systems?		X				
4. Certification of last test?		X				
5. Remote operation?		X				
6. Revision Date?	X					
7. Habitable structures?		X				
8. Recreation areas?		X				
9. Changed hazard potential?		X				
10. New development?		X				
11. Other comments?		X				

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Action Suggestion 1. Requires immediate action
2. Plan to do soon
3. Do when convenient

EMBANKMENTS

Description:

	Item	N	P	Location on Embankment and Deficiency	Action M	Action I	Action R
1	**Vegetation:**			No problem			
	A. Trees Quantity (<5,sparse,dense): Diameter: Location:						
	B. Brush Quantity (sparse,dense): Location:			Embankments have some woody growth that requires removal. Growth is new. Operator confirmed mowing operations are scheduled in the next couple of weeks. No follow up required.			
	C. Ground cover Type (grass, crown vetch,other): Quantity (bare, sparse,adequate, dense): Appearance (too tall, too short, good):			Dam is well vegetated. No signs of erosion.			
2	**Erosion**	X		No problem / Not applicable / Could not inspect			
	A. Wave erosion (Beaching): Scarp: Length/ Width: Location:						
	B. Runoff Erosion (Gullies) Quantity: Length/ Width/ Depth: Location:						
3	**Instabilities**			No problem / Not applicable / Could not inspect			
	A. Slides Transverse: Longitudinal: Scarp: Length/ Width: Crack Length/ Width:						
	B. Cracks: Transverse: Longitudinal: Length/ Width/ Depth: Location: Other:						
	C. Bulges/ Depressions Size: Height/ Depth:						
	D. Slope (Too Steep) U/S, D/S						

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Action Suggestion
1. Requires immediate action
2. Plan to do soon
3. Do when convenient

Additional Comments:

EMBANKMENTS (Cont.)

	Item	N	P	Notes/ Observations	Action M	Action I	Action R
4	**Slope Protection**	x		No problem ☐ Not applicable ☐ Could not inspect ☐			
	A. Type (none, riprap, wave berm, concrete slabs, loose formed concrete/asphalt):						
	B. Condition:						
5	**Other**	x		No problem ☐ Not applicable ☐ Could not inspect ☐			
	A. Rodent burrows (few, many) Location:						
	B. Ruts Length/ Width/ Depth: Location:						
	C. Other						
6	**Alignment**	x		No problem ☐ Not applicable ☐ Could not inspect ☐			
	A. Vertical Low area: Elevation Difference: Location:						
	B. Horizontal						
	C. Width Too narrow: Location:						
7	**Toe**	x		No problem ☐ Not applicable ☐ Could not inspect ☐			
	Cracks/Slumps: Embankment drains: Type/Flow: Location: Seepage/ Wetness: Hummocky:						
8	**Seepage**	x		No problem ☐ Not applicable ☐ Could not inspect ☐			
	Wet area: Boil: Sinkhole: Aquatic vegetation: Rust colored deposits: Other: Sediment in Flow: Flowrate: Location:			3 seeps were noted during the 2004 inspection. No seeps noted during 2011 inspection. NO SEEPS NOTED DURING 2020 INSPECTION. Previously noted sink holes have been filled and vegetated.			

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Action Suggestion
1. Requires immediate action
2. Plan to do soon
3. Do when convenient

Additional Comments:

SPILLWAY--PRINCIPAL - WHISTLE TUBES				Action		
Item	**N**	**P**	**Notes/ Observations**	**M**	**I**	**R**
1 Whistle Tubes	x		Full circle/Whistle tube ☐ Half circle riser ☐ Glory hole (Drop Inlet)			
A. Inlet Riser Diameter			6' CMP			
B. Outlet pipe * Dia: Type:		x	48" CMP. Protective coating is gone. Found one area rusted through approximately 20' in from downstream end of pipe.			x
C. Low level draw /Inlet Pipe What kind & Size:			NONE			
D. Debris/Trash Rack			NONE			
E. Antivortex			NONE			
F. Material						
G. Alignment						

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Action Suggestion **1**. Requires immediate action
2. Plan to do soon
3. Do when convenient

Controlled = Gated **Uncontrolled** = Overflow

Additional Comments and/or Sketch:

OUTLET CONTROL STRUCTURE IS IN OVERAL GOOD CONDITION. THE 48" CMP PIPE HAS ONE AREA THAT IS RUSTED THROUGH (SEE ATTACHED PHOTOS. THE DAMAGE IS APPROX. 20' IN FROM THE DOWNSTREAM END OF THE PIPE. THE DAMAGE DOES NOT POSE AN IMMEDIATE THREAT TO THE DAM, BUT DOES REQUIRE MAINTENANCE.

*** Type of Concrete Problems:** Spalling, cracks, exposed rebar, misalignment, joints, bug holes, efflorescence, popouts, honeycombing, scaling, craze/map cracks, isolated crack, disintegration, other

SPILLWAY--PRINCIPAL - OUTLET EROSION CONTROL & UNDERMINING

	Item	N	P	Notes/ Observations	Action M	Action I	Action R
1	**Outlet Erosion Control**	x		No problem ☐ Not applicable ☐ Could not inspect			
	A. Type (none, endwall, plunge pool, energy dissipation structure rock lined channel, apron)						
	B. Scour	☐	☐		☐	☐	☐
	C. Material **a. Riprap**: Avg Diameter: Condition (adequate, sparse, displaced, weathered): Bedding fabric- (Yes/ No): **b. Concrete *** Dimensions/Location:	☐	☐		☐	☐	☐
	D. Sidewall/Headwall Misalignment: Location: Description:	☐	☐		☐	☐	☐
	E. Separated Joint / Loss of Joint Material: Location: Description:	☐	☐		☐	☐	☐
	F. Natural	☐	☐		☐	☐	☐
2	**Undermining**	☐		No problem ☐ Not applicable ☐ Could not inspect			
	Location: Description:	☐	☐	Outlet of pipe is perched approx 1'. No issues.	☐	☐	☐

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U/S = Upstream; **D/S** = Downstream

Action Suggestion 1. Requires immediate action
2. Plan to do soon
3. Do when convenient

Controlled = Gated **Uncontrolled** = Overflow

Additional Comments:

*** Type of Concrete Problems:** Spalling, cracks, exposed rebar, misalignment, joints, bug holes, efflorescence, popouts, honeycombing, scaling, craze/map cracks, isolated crack, disintegration, other

APPENDIX B

Inspection Photos

Olson Meadows Dam Site Photos 6-17-20

Aerial Overview

Benchmark NAVD 88 Elev.1065.85’

Embankment facing NW.

Woody growth on US embankment requires removal.

Whistle tube inlet.

Riser section.

Interior of pipe.

DS side of stoplogs.

Rust damaged pipe. Approx. 20’ in from outlet.

Same rust damage.

Same rust damage. Damage is at joint of two pipes. The banding is rusted through.