



Red Lake Watershed District



Scoping Report

Watershed Plan and Environmental Assessment

Pine Lake Subwatershed

Clearwater County, Minnesota

March 2017

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1 Introduction

Pine Lake is located in northwestern Minnesota within the Clearwater River subwatershed of the Red Lake Watershed District (RLWD). In 1980, the Clearwater County Board of Commissioners (Board) petitioned the RLWD for an improvement of the Pine Lake outlet that would provide the public with flood control measures, wildlife benefits, and recreation benefits. The project, which was completed in 1981, consisted of a sheet pile dam with two adjustable stop log bays located on the Lost River approximately 700 feet north (downstream) of Pine Lake (RLWD 1981). In 1989, the Board requested that the RLWD study the feasibility of raising the normal operating level of Pine Lake (RLWD 1989). The 1989 study looked at three main problems related to lake storage and lake water level fluctuations: 1) flood control by weighing the increase of the lake flood control capabilities against flooding of lakeshore development; 2) the environmental conditions that resulted in winter fish kills due to seasonal shallow lake conditions; and 3) potential land use changes due to the concentrated area of residential and seasonal development on Pine Lake's east shore, many of which did not meet 1989 standards for density, setbacks, and septic systems.

The current outlet dam has provided many years of flood control benefits to the area – predominantly downstream of Pine Lake; however, since the dam was constructed in 1981, flooding of lakeshore development has occurred several times - evidence that the dam does not provide sufficient flood control for Pine Lake. Additionally, fluctuating lake water surface elevations (WSE), primarily low water levels, has affected waterfowl, fishery and recreational benefits for Pine Lake.

In 2010, the Red River Basin Commission (RRBC) established a region-wide goal to reduce peak flows along the mainstem of the Red River of the North (Red River) by 20 percent during a flooding event similar to the severe flood that struck the Red River Basin in 1997. In order to reach this goal, each tributary of the Red River was assigned peak flow and volume reduction goals as set forth in the RRBC's Long Term Flood Solutions Basin Wide Flood Flow Reduction Strategy Report (September 2011).

A Project Work Team (see Appendix A) was created to explore alternatives available to modify the current project and reduce flood risk to local landowners, enhance environmental conditions within the subwatershed, and add recreational benefits to Pine Lake. The Project Work Team consists of local land owners, the RLWD, and several local, state, and federal agencies, including the Minnesota Pollution Control Agency (MPCA), Minnesota Department of Natural Resources (MDNR), and United States Army Corp of Engineers (USACE). The Project Work Team agreed that the primary alternatives that might be explored include modification of the existing outlet structure and adding water-detention facilities upstream of Pine Lake. A feasibility study was completed to examine the potential benefits of the two stated alternatives (Concept Feasibility Study, Pine Lake Detention and Outlet Structure Modifications, August 21, 2015).

In 2015, the RLWD entered into a cooperative agreement with the United States Department of Agriculture, Natural Resources Conservation Service (NRCS) to advance the project. The proposed improvements within the Pine Lake Subwatershed are intended to meet the goals

identified by the Project Work Team, while also supporting regional flow reduction goals of the larger Red River of the North watershed. NRCS, as the lead federal agency, has initiated NEPA analysis in the form of a Watershed Plan and Environmental Assessment (Plan-EA) to analyze impacts to the natural and human environment from this project. The EA process will comply with the Council on Environmental Quality's (CEQ) regulations in 40 CFR Parts 1500-1508, which require an evaluation of potential environmental impacts associated with federal projects and actions.

The National Watershed Program Manual (NWPM) sets forth the policy for all watershed plans developed under the Watershed Program. No project will be funded under Public Law 83-566 authority (Watershed Protection and Flood Prevention Act) unless it meets the requirements set forth in the manual. Public Law 83-566 authorizes NRCS to provide technical assistance to sponsoring local organizations (SLOs) to prepare and implement Watershed Project Plans. Three general purposes for authority include: 1) Preventing damage from erosion, floodwater, and sediment; 2) Other resources...considered as appropriate, including air, cultural and historic resources, aesthetic resources, and others; and 3) NRCS technical assistance authorization.

Authorized project purposes may include: 1) Flood Prevention (Flood Damage Reduction); 2) Watershed Protection; 3) Public Recreation; 4) Public Fish and Wildlife; 5) Agricultural Water Management; 6) Municipal and Industrial Water Supply; 7) Water Quality Management; and 8) Watershed Structure Rehabilitation. Section 1.1 lists the project purposes that pertain to this project.

The Plan-EA will be comprised of the following elements:

- Potential flood reduction alternatives for the Pine Lake subwatershed include the following:
 - **No Action:** Use the existing outlet structure without modifications.
 - **Pine Lake Outlet Modifications:** Alternate configurations considered for the outlet with differing weir crest elevations and lengths, and differing stop log bay/gate widths and openings providing varying summer pool elevations.
 - **Upstream Detention Alternatives:** Potential locations for upstream detention sites will be studied.
 - **Combination of Outlet Modifications and Upstream Detention:** This includes pairing outlet modifications with a detention site(s).
 - **Relocation of Existing Shoreline Development:** Relocating the structures prone to flooding could increase lake depth and expand the lake area, which would add to the flood control benefits.
 - **Restoration of wetlands within the watershed:** Identify areas for wetland development or restoration of historical wetlands, which would hold runoff and improve water quality.
- Detailed analysis of resources that may be affected for each of the alternatives that may satisfy the purpose and need for the project;
- Identification of potential mitigation measures to reduce or eliminate potential impacts; and
- A plan of public participation and government agency coordination throughout development of the Plan-EA.



The participation of the public is a vital component of the project so that those who are interested in or potentially affected by proposed alternatives have an opportunity to share their concerns and provide input. This Scoping Report addresses scoping efforts to date and outlines the comments received from the agencies and general public during the scoping process.

1.1 Purpose of and Need for Action

The purpose of this proposed action is **1) Flood Damage Reduction**: Reduce damages to cabins, properties, and shorelines adjacent to Pine Lake caused by minor and major floods, ranging from a minor 2-yr event above Pine Lake El. 1284.4 to a major 100-yr event above Pine Lake El. 1285.4.

The proposed action is needed to reduce damage caused by high lake levels flooding lakeshore cabins and properties during frequent runoff events. Precipitation-runoff events cause rapid increases in lake levels and has resulted in flooding of shoreline development in 13 of 39 recent years. Documented peak flood elevations resulted in minor flooding (2-yr to 10-yr: flooding of lawns, docks, and septic systems) of shoreline development during 8 of the 13 events, and major flooding (10-yr to 100-yr: flooding of lawns, docks, septic systems, outbuildings, and cabins) during 5 of the 13 events. The highest recent lake level of the 5 major events was recorded in 2009 and resulted in flood elevations exceeding the natural ground elevation of 52 cabins and exceeding first floor elevations of 22 of those cabins. High lake levels also cause erosion and ice damage to shorelines.

Secondary benefits from the project may include:

- Temporary flood detention during high runoff events;
- Contribution to a regional goal of reducing peak flows along the Red River by 20 percent during flooding events;
- Stabilization of water levels for the benefit of wildlife and fish;
- Maintenance of late Summer and Fall water levels in order to maintain recreational access for boaters.

1.2 Scoping Goals and Objectives

The public involvement process for this project help identify environmental resources and sensitivities within the watershed, developing the most thorough and effective options for meeting project goals, maintaining public buy-in for the project objectives and alternatives selection process. The process complies with NRCS requirements that are a condition for the grant supporting this work. The initial Public Participation Plan outlined the planning and decision-making process for the assessment and identified stages when the public would be invited to provide input on the project.

Objectives of the public involvement process are as follows:

- Use clear and concise messaging to communicate with the public and various stakeholders.



- Implement a communication process between the public and the project team that provides opportunity for interested parties to comment on the project.
- Successfully communicate realistic goals and schedule for the assessment.
- Promote science-based decision-making informed by public and stakeholder input.
- Provide appropriate notice of opportunities for public participation.

2 Scoping Process Summary

Scoping questions, comments, and concerns were requested from the public and government agencies during the scoping period via written submittal of comments. The following summarizes the scoping process and efforts made to engage the public and government agencies.

2.1 Scoping Schedule

The following dates outline the milestones for the scoping process:

May 27, 2016: Cooperating Agency Invitation Letter Sent (Appendix B).

June 27, 2016: Invitation Letters Sent to Public (Appendix B).

June 29, 2016 and July 6, 2016: Public Notice Published in *The Leader Record* and RLWD Project Page (Appendix B).

July 12, 2016: Public Scoping Open House.

Date: RLWD will continue to accept public and agency comments.

2.2 Scoping Notice

An invitation letter was created and distributed to all landowners in the Pine Lake subwatershed, all members of the stakeholder project team, and agencies and organizations identified as cooperating agencies. Invitation letters were mailed to the public on June 27, 2016 and to the Cooperating Agencies on May 27, 2016. The scoping notice gave a description of the Project, location and overview, purpose and need, and requested public participation. The scoping notice also identified the location of the public meeting, and contact information to submit written comments. A copy of the invitation letters are in Appendix B. The scoping notice was also posted on the RLWD Project website.

The public and interested stakeholders were notified of the Public Meeting by a public notice placed in *The Leader Record*. The RLWD placed the public notice and the notice ran on June 29 and July 6, 2016.



2.3 Scoping Meeting

The primary purpose of the scoping meeting was to gather input and feedback on the Project’s purpose and need statement, potential alternatives for consideration, environmental issues to be addressed in the EA, methodologies to be used to evaluate impacts, and the overall public participation process. To gather as broad an audience as possible, a combined government agency and general public scoping open house was held on July 12, 2016 from 6:30 PM to 8:30 PM at the City of Gonvick Community Center. No formal presentation was given at the scoping meeting. Exhibit boards and handouts were available and can be found in Appendix B.

Twenty members of the public and agency representatives attended and signed-in at the scoping meeting. Participants were invited to submit comments in writing either at the meeting or subsequently by mail, fax or e-mail during the scoping comment period. Attendance at the meeting was counted using a sign-in sheet that is located in Appendix B.

2.4 Scoping Mailing List

The mailing list was prepared by NRCS, RLWD and HDR to inform the government agencies and general public about the scoping process for the project. A total of 179 letters were mailed.

3 Scoping Results

3.1 Scoping Meeting

The combined agency/public scoping open house was conducted on July 12, 2016 from 6:30 PM to 8:30 PM. There were 20 public attendees and agency representatives at the meeting and there were 2 written comments submitted at the meeting.

Table 1 identifies Project personnel who were in attendance at the scoping meeting. These representatives were there to describe the project purpose and answer any questions.

Table 1. Scoping Meeting Project Representatives

NAME	ORGANIZATION	TITLE
Christina Rolfes	HDR	Public Involvement
Nate Dalager	HDR	PE, Project Manager
Shelley Richards	HDR	PE, Environmental Lead
Myron Jesme	RLWD	Administrator
Tammy Audette	RLWD	Office Manager
Nick Olson	RLWD	Engineering Tech II
Lee Coe	RLWD	Board Member
Terry Sorenson	RLWD	Board Member
Les Torgerson	RLWD	Board Member

The scoping meeting was held the same day as the Four Legged Lake scoping meeting.

3.2 Written Comments

As part of the scoping process, an Open Event Summary Report was produced at the July 12, 2016 scoping meeting where two written comments were received. One comment letter dated



August 2, 2016 was received from MNDNR (Appendix C) after the scoping meeting. Copies of the written comments are in Appendix B and Appendix C. A summary of the scoping and interagency concerns are as follows:

- The public was concerned that some project alternative might increase the potential for additional property flooding upstream of the lake, which could impact timber, wildlife, and homes not already affected by lake water level fluctuations.
- MNDNR concerns related to the project included lake level changes that could result in impacts to:
 - Water fowl (i.e., Trumpeter swans, species of special concern in Minnesota, use of Pine Lake for breeding)
 - Aquatic vegetation
 - Dissolved oxygen impairment in lake and Lost River
 - Flood damage prevention
 - Phosphorous sensitivity
 - Impact to calcareous fen located 4 miles northeast of Pine Lake
 - Widgeon grass, submerged aquatic plant species of special concern in Minnesota
 - Wild rice, which is an important native Minnesota plant with high cultural, ecological and economic values and provides habitat for 17 species of wildlife listed in the MNDNR's Comprehensive Wildlife Conservation Strategy as a species of greatest conservation need.

4 Resource Concerns

Table 2 is a list of resource concerns based on required scoping elements outlined in the National Watershed Program Manual Section 501.24 B.

Table 2. NRCS Required Scoping Elements

ITEM/CONCERN	Relevant to proposed action?		RATIONALE
	YES	NO	
SOILS			
Upland Erosion	X		May affect lake phosphorous sensitivity.
Stream Bank Erosion	X		May affect lake phosphorous sensitivity.
Sedimentation	X		May affect lake phosphorous sensitivity.
Prime and Unique Farmland	X		Evaluated for all NRCS projects; some may be affected by project.
WATER			
Surface Water Quality	X		Dissolved oxygen impairment in lake and Lost River; Possible fecal Coliform; Phosphorous sensitivity. Potential for improvement.
Surface Water Quantity	X		Upstream retention areas and potential effect
Groundwater Quantity		X	Groundwater should not be affected
Clean Water Act	X		Alternatives may require USACE 404 permit
Regional Water Mgt. Plans and Coastal Zone Management Areas	X		2010-2020 Clearwater County Comprehensive Local Water Management Plan. RLWD 10-year Comprehensive Plan (May 2006)
Floodplain Management	X		A few structures may be in potential floodplains
Wetlands	X		Analysis of effects required by Clean Water Act and Executive Order 11990; Potential for disturbance temporary and permanent of wetlands.
Wild and Scenic Rivers		X	Not present
AIR			
Air Quality		X	NPDES SWPPP dust suppression during construction will be enforced
Clean Air Act		X	No permits are expected to be needed; NPDES SWPPP dust suppression during construction will be enforced



PLANTS			
Endangered and Threatened Species	X		Analysis of effects required by Endangered Species Act; Not present.
Essential Fish Habitat		X	Not present.
Forest Resources	X		No or minimal impact.
Invasive Species	X		Management will be developed, including hybrid cattail.
Natural Areas		X	Not present in area of projects
Riparian Areas	X		Protection of these areas where existing.
ANIMALS			
Fish and Wildlife Habitat	X		Evaluated for all NRCS project; water fowl use and recreational fishery
Coral Reefs		X	Not present
Endangered/Threatened Species	X		Analysis of effects required by Endangered Species Act; Not present.
Invasive Species	X		Management will be developed, including hybrid cattail.
Migratory Birds / Bald and Golden Eagles	X		Purpose of action is not to take migratory birds or eagles. Actions to be implemented outside of nesting season.
HUMANS			
Flood Damages	X		Primary concern of sponsors and NRCS.
Cost, Sponsor	X		Proposals must be within the economic capacity of the sponsors (RLWD)
Cost, NED	X		Required criteria by Economic & Environmental Principles and Guidelines (P&G)
Historic Properties		X	Analysis of effects required by National Historic Preservation Act; no historic sites present in APE.
Environmental Justice		X	No impact. No EJ zones within project area.
Land Use	X		No impact. The land use of area will not change due to project.
Local and Regional Economy			Water level changes, especially high water with flooding, impedes local population and may affect recreation. Project is intended to benefit both the human and natural environments.
Potable Water Supply		X	No impact to groundwater
Public Health and Safety	X		Primary concern of sponsors and NRCS.
Recreation	X		Dependent on water levels and time of year
Scenic Beauty and Parklands		X	Rural agricultural area. Should not affect scenic vista and no parklands.

Table 3 lists resource concerns compiled for the project, including concerns identified by the public, sponsoring local organization, or agencies during the scoping meeting and scoping period. An analysis of resource concerns specific to this project will be completed during the development of the Draft Plan and EA. Relevant and Non-relevant resource concerns will be added or eliminated from further consideration during watershed plan development and upon concurrence by NRCS.

Table 3. Identified Resource Concerns


Economic, Social, Environmental, and cultural concerns	Degree of Concern	Degree of Significance to Decision Making	Remarks
Human health and safety	High	High	Primary concern of sponsors and NRCS.
Flood damages	High	High	Primary concern of sponsors and NRCS.
Surface Water Quantity	High	High	Primary concern of sponsors and NRCS.
Recreation	High	High	Primary concern of sponsors and NRCS.
Fish and Wildlife Habitat	High	High	Evaluated for all NRCS projects; MNDNR consider lake important for waterfowl.
Surface Water Quality	Moderate	Moderate	Evaluated for all NRCS projects; improvement of upstream watershed potential.
Sedimentation and Erosion	Moderate	Moderate	Evaluated for all NRCS projects; lake is phosphorous sensitive.
Wetlands and Riparian Areas	Moderate	Moderate	Analysis of effects required by Clean Water Act and Executive Order 11990; Potential for disturbance temporary and permanent of wetlands.
Prime and Unique Farmland	Moderate	Moderate	Evaluated for all NRCS projects; potential impact.
Highly Erodible Cropland	Moderate	Moderate	Evaluated for all NRCS projects; potential impact.
Cultural Resources	Moderate	Low	Analysis of effects required by the National



			Historic Preservation Act; no historic sites present in APE.
Endangered and Threatened Species	Low	Low	Analysis and effects required by Endangered Species Act; no impact.
Aesthetics	Low	Low	Minimal, temporary.
Invasive Species	Low	Low	Management will be developed, including hybrid cattail.



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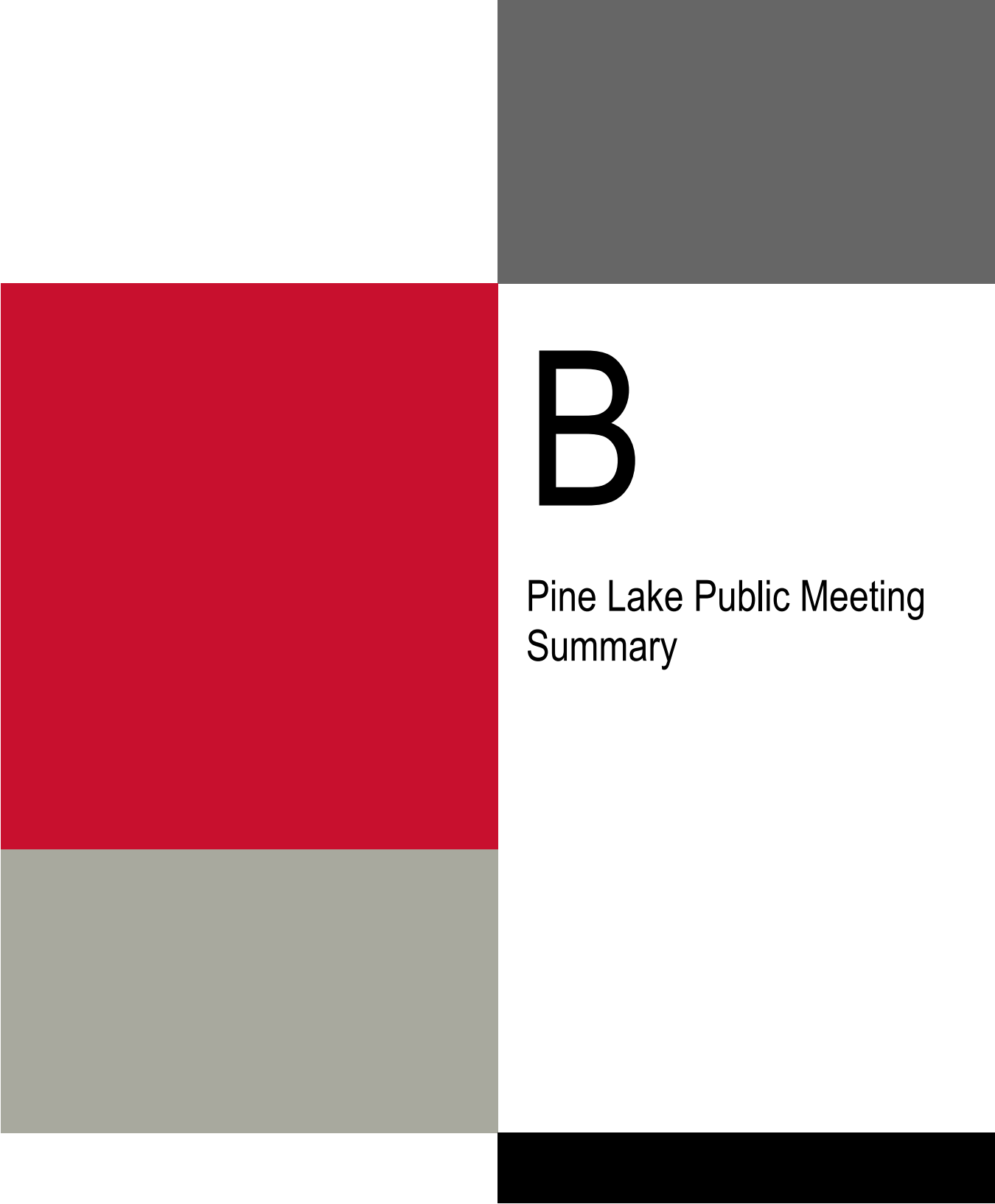
A

Project Work Team

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First Name	Last Name	Organization	Title
Bill	Bauer	U.S. Army Corps of Engineers (Corps)	
Jody	Beauchane	Polk County	Drainage & Ag Inspector
Jenny	Burrack	Natural Resource Conservation Service (NRCS) East Polk Co.	District Conservationist
Craig	Busness	Polk County	Commissioner Chair
Lee	Coe	Red Lake Watershed District (RLWD)	Treasurer
Nate	Dalager	HDR Engineering, Inc.	Senior Water Resources Engineer
Dave	Dalager	Landowner	
Brian	Dwight	Board of Water & Soil Resources (BWSR)	Clean Water Specialist - Northwest
Laurie	Fairchild	U.S. Fish & Wildlife Service (USFWS)	Private Lands Biologist
Matt	Fischer	Board of Water & Soil Resources (BWSR)	Board Conservationist
Steve	Hofstad	Board of Water & Soil Resources (BWSR)	Wetland Specialist
Neil	Illies	Clearwater County Commissioner-Chairman	
Myron	Jesme	Red Lake Watershed District (RLWD)	Administrator
Juane	Johnson	Landowner	
Carri	Jones	Leech Lake Band of Ojibwe	Tribal Chair
Mark	Larson	Landowner / Eddy Township	
Kevin	Leecy	Bois Forte Band of Chippewa - Nett Lake	Tribal Chair
Emily	McDougal	Clearwater County Auditor's Office-Auditor Clerk	
Lisa	Newton	Soil & Water Conservation District (SWCD) East Polk Co.	District Manager
Nathan	Nordlund	Soil & Water Conservation District (SWCD) Clearwater Co.	District Manager
Denise	Oakes	MN Pollution Control Agency (MPCA)	Watershed Project Management
Allen	Paulson	Clearwater County Auditor	
Larry	Peterson	Sportsman's Club/township	
Larry	Puchalski	U.S. Army Corps of Engineers (Corps)	Project Manager
Dave	Rave	MN Department of Natural Resources (DNR)-Wildlife	Bemidji Area Wildlife Supervisor
Cari	Roepke	Natural Resource Conservation Service (NRCS) Clearwater Co.	District Conservationist
Les	Roos	Landowner	
Randy	Rue	Queen Township	
Rich	Sanders	Polk County	County Engineer
Dan	Sauve	Clearwater County	County Engineer
	Seki	Red Lake Band of Chippewa Indians	Chair
Chad	Severts	Board of Water & Soil Resources (BWSR)	
Terry	Sorenson	Landowner / Red Lake Watershed District (RLWD)	
Dan	Stenseng	Clearwater County	Commissioner
Mike	Stenseng	Clearwater County	Environmental Technician
Dan	Thul	MN Department of Natural Resources (DNR)	DNR Waters Area Hydrologists
Les	Torgerson	Red Lake Watershed District (RLWD)	
Henry	Van Offelen	MN Department of Natural Resources (DNR)	Red River Basin Coordinator
Terry	Vonasek	Landowner	Operator
Chuck	Whiting	Polk County Administrator	
		U.S. Fish & Wildlife Service (USFWS)	Regional Director
		White Earth Reservation	

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B

Pine Lake Public Meeting
Summary



Pine Lake Public Meeting Summary

Red Lake Watershed District

Gonvick, MN
July 12, 2016



Summary

This document summarized the outreach, logistics, participation, and meeting content and summary for the July 12, 2016 Public Meeting held in Gonvick, MN for the Red Lake Watershed District – Pine Lake Project.

Meeting Information

Date & Time	Location	Address
July 12, 2016	Gonvick Community Center	170 Main Street Gonvick, MN 56644

Agenda

- 6:30 pm Public Meeting (PLEA) Begins – Open House; no formal presentation
- 8:30 pm PLEA Public Meeting Ends

Staffing

Project team members from Red Lake Watershed District and HDR participated and facilitated the meeting. All staff was knowledgeable of the project and was prepared to communicate with interested landowners and stakeholders. Staffing for the meeting is detailed below.

Name	Organization
Christina Rolfes	HDR
Nate Dalager	HDR
Shelley Richards	HDR
Myron Jesme	Red Lake Watershed District, Administrator
Tammy Audette	Red Lake Watershed District
Nick Olson	Red Lake Watershed District
Lee Coe	Red Lake Watershed District Board Member
Terry Sorenson	Red Lake Watershed District Board Member
Les Torgerson	Red Lake Watershed District Board Member

Outreach

Public Notice:

The public and interested stakeholders were notified of the Public Meeting by public notice placed in The Leader Record and on the District's project page. The District placed the public notice and the notice ran on June 29 and July 6, 2016. See Appendix A for the public notification advertisement.



Direct Mailing Invitations:

An invitation letter was created and distributed to all landowners in the Pine Lake subbasin, all members of the stakeholder project team, and agencies and organizations identified as cooperating agencies. See Appendix B for landowner invitation letter and Appendix C for cooperating agency invitation letter.



Attendance

Twenty (20) members of the public attended and signed-in at the public meeting. See Appendix D for copy of the Pine Lake meeting sign-in sheets.

Meeting Materials and Comments

The Public Meeting was open house format and did not include a formal presentation. The public was welcome to attend at their convenience during the meeting timeframe. Comments received from attendees are documented in Appendix E. The meeting displayed 13 exhibits and a project handout was distributed to all attendees. See Appendix F for meeting display boards and Appendix G for the handout.

Appendix A: Public Notice Advertisement

Join Us at an Open House Meeting!



Red Lake Watershed District

The Red Lake Watershed District Board of Managers will host two open house meetings for two projects that will address flood control measures and wildlife benefits as they relate to Pine and Four Legged Lakes.

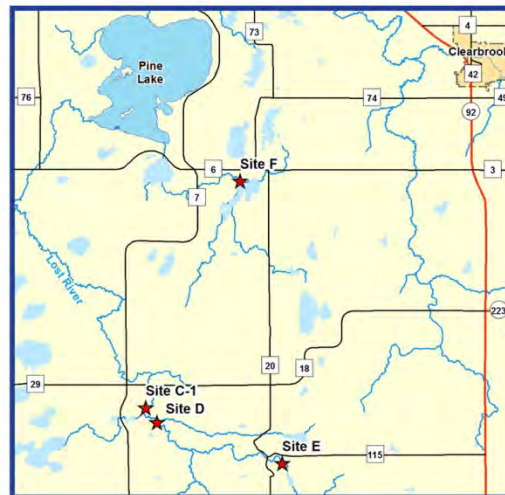
All landowners within these subwatersheds are strongly encouraged to attend at their convenience.

Attend a meeting to:

- Learn about the watershed
- Talk to our team
- Give us your input

Date	Time	Venue Name & Address
Four Legged Lake		
Tuesday, July 12	4:00 p.m. - 6:00 p.m.	Gonvick Community Center 170 Main Street, Gonvick, MN 56644
Pine Lake		
Tuesday, July 12	6:30 p.m. - 8:30 p.m.	Gonvick Community Center 170 Main Street, Gonvick, MN 56644

Both meetings are open house; no formal presentation will given.



For more information contact Myron Jesme at 218.681.5800

Appendix B: Landowner Invitation Letter

Red Lake Watershed District

President
Dale M. Nelson

Vice President
Gene Tiedemann

Treasurer
Lee Coe

1000 Pennington Avenue South
Thief River Falls, MN 56701
218-681-5800
218-681-5839 FAX
e-mail: rlwaters@wiktel.com
www.redlakewatershed.org

Secretary
LeRoy Ose

Managers
Les Torgerson
Allan Page
Terry Sorenson

June 27, 2016

[insert address]

RE: Pine Lake Watershed Public Open House

Dear [insert first name],

You are invited to attend a public information meeting being held by the Red Lake Watershed District. A project is underway to evaluate stormwater retention alternatives within the watershed and Pine Lake outlet modifications. The District managers would like to provide you an opportunity to learn more about the project, ask questions, and provide comment.

Meeting details:

Date: July 12, 2016
Time: 6:30 p.m. – 8:30 p.m.
Location: Gonvick Community Center
170 Main Street
Gonvick, MN 56644

**Open house: no formal presentation, attend at your convenience.*

A region-wide goal was established to reduce peak flows along the Red River of the North (Red River) by 20 percent during a flooding event similar to the 1997 flood. Several large-scale modeling efforts have been conducted throughout the Red River Basin to assist in determining the amount of effort required to meet the flow and volume reduction goals in each tributary basin of the Red River. The Pine Lake subwatershed has been identified as an area where retention basins could be added upstream of Pine Lake to assist in meeting downstream flow reduction goals. This project evaluates retention alternatives within the watershed while also evaluating opportunities for flood protection, wildlife, and recreational benefits at Pine Lake.

For more information about the project, please visit the project information page on the Red Lake Watershed District website at: [insert URL-Pine Lake Page].

We look forward to meeting you at the meeting.

Sincerely,

Myron Jesme
Red Lake Watershed District Administrator

Enc: Map of Pine Lake Watershed Project Area

Sound Water Management

Appendix C: Cooperating Agency Invitation Letter

Red Lake Watershed District

President
Dale M. Nelson

Vice President
Gene Tiedemann

Treasurer
Lee Coe

1000 Pennington Avenue South
Thief River Falls, MN 56701
218-681-5800
218-681-5839 FAX
e-mail: rlwaters@wiktel.com
www.redlakewatershed.org

Secretary
LeRoy Ose

Managers
Les Torgerson
Allan Page
Terry Sorenson

May 27, 2016

[insert contact]

**Subject: Pine Lake Watershed NRCS RCPP Watershed Plan-Environmental Assessment
Invitation to Participate in Watershed Planning**

The Red Lake Watershed District (RLWD) is developing a watershed plan for the Pine Lake Watershed located in Polk and Clearwater Counties. The RLWD is committed to exploring alternatives available to modify the current project and reduce flood risk to local landowners, enhance environmental conditions within the subwatershed, and add recreational benefits to Pine Lake. This work includes developing a Watershed Plan and environmental document. The plan will have a defined Purpose and Projected Outcome, evaluating various flood damage reduction strategies, and working with impacted landowners in areas with potential to store runoff, address water quality and other resources of concern. Planning also included communication with a Watershed project team consisting of concerned citizens and local governing units. Your agency/group is invited to participate in these meetings. The RLWD began working with NRCS and the Red River Retention Authority (RRRA) to develop a watershed based approach to address resource concerns in the Watershed. The Pine Lake Watershed planning effort is being done with funds through the Regional Conservation Partnership Program (RCPP). This RCPP plan must conform to Natural Resources Conservation Service (NRCS) Watershed Protection and Flood Prevention Program (Public Law 83-566). This process requires that the RLWD follow National Environmental Policy Act (NEPA) requirements, and results in a completed Environmental Assessment or Environmental Impact Statement.

The RLWD requests that your agency/entity make the RLWD aware of any resource concerns in the Pine Lake Watershed that are important to your agency/group. We would like your input and expertise by providing feedback and participating in Pine Lake Watershed Planning efforts. The RLWD would appreciate your agency/entity feedback throughout the Watershed Planning effort to ensure a preferred alternative can be developed to address the Watershed's resource concerns and achieve the local sponsors and landowners desired goals. Please provide written comments on resources of concern and any of your agency/group interests such as land, conservation easements or conservation systems in the watershed. Additionally, a public open house meeting to discuss watershed resource concerns and complete Scoping of the EA has been scheduled for July 12, 2016. Please save the date if you would like to attend.

To provide project background and understanding we have included a brief project understanding and purpose and need. If you have any questions or comments, please contact us at jesme@wiktel.com or by phone at (218) 681-5800. Thank you for your timely response and cooperation with this project.

Sincerely,

Myron Jesme
Red Lake Watershed District

Enc: Pine Lake Watershed District EA Project Understanding Brief

CC: Nate Dalager, HDR; Matthew Redington, HDR; Katie Hatfield Edstrom, HDR

Sound Water Management



Appendix D: Public Meeting Sign-in Sheets



Sign-in Sheet
 Pine Lake Watershed Public Meeting
 July 12, 2016 – 6:30 p.m. – 8:30 p.m.
 Gonvick Community Center

Contact Information		How were you notified about the meeting?
Name Larry Skala Organization (if applicable) Tree Service	Address 42742 370th St City/Zip Foston Phone 215-210-3300 Email larry@stumpgrub.com	<input type="checkbox"/> Email <input type="checkbox"/> Newspaper Ad <input type="checkbox"/> TV <input type="checkbox"/> Letter <input type="checkbox"/> Postcard <input type="checkbox"/> Website <input type="checkbox"/> Other
Name Ferry Vonasek Organization (if applicable) EGF.M	Address 39269 Cedarburg W City/Zip EGF Phone 701-740-2978 Email f.vonasek@msimax.com	<input type="checkbox"/> Email <input type="checkbox"/> Newspaper Ad <input type="checkbox"/> TV <input checked="" type="checkbox"/> Letter <input type="checkbox"/> Postcard <input type="checkbox"/> Website <input type="checkbox"/> Other
Name Janell Holter Organization (if applicable)	Address 2019 26th St SE City/Zip Rochester, MN Phone 507-280-3582 Email Janell.vence@charter.net	<input type="checkbox"/> Email <input type="checkbox"/> Newspaper Ad <input type="checkbox"/> TV <input type="checkbox"/> Letter <input type="checkbox"/> Postcard <input type="checkbox"/> Website <input type="checkbox"/> Other
Name Belinda Jensen Organization (if applicable)	Address City/Zip Phone Email	<input type="checkbox"/> Email <input type="checkbox"/> Newspaper Ad <input type="checkbox"/> TV <input type="checkbox"/> Letter <input type="checkbox"/> Postcard <input type="checkbox"/> Website <input type="checkbox"/> Other
Name Emily Ann Schmidt Organization (if applicable)	Address 14968 410th St City/Zip Bayley Mn 56621 Phone 694-6917 Email elli5509@tel.com	<input type="checkbox"/> Email <input type="checkbox"/> Newspaper Ad <input type="checkbox"/> TV <input type="checkbox"/> Letter <input type="checkbox"/> Postcard <input type="checkbox"/> Website <input type="checkbox"/> Other
Name PHIL JOHNSON CLEARBROOK Organization (if applicable)	Address PO Box 278 City/Zip CLEARBROOK MN Phone 218-776-3121 Email	<input type="checkbox"/> Email <input type="checkbox"/> Newspaper Ad <input type="checkbox"/> TV <input type="checkbox"/> Letter <input type="checkbox"/> Postcard <input type="checkbox"/> Website <input type="checkbox"/> Other
Name Organization (if applicable)	Address City/Zip Phone Email	<input type="checkbox"/> Email <input type="checkbox"/> Newspaper Ad <input type="checkbox"/> TV <input type="checkbox"/> Letter <input type="checkbox"/> Postcard <input type="checkbox"/> Website <input type="checkbox"/> Other



Sign-in Sheet
 Pine Lake Watershed Public Meeting
 July 12, 2016 – 6:30 p.m. – 8:30 p.m.
 Gonvick Community Center

Contact Information		How were you notified about the meeting?
Name Kim Novak Organization (if applicable) Pine Lake Assoc	Address 2103-9th Ave N City/Zip Grand Forks 58203 Phone 701-739-5153 Email Knovak2103@gmail.com	<input type="checkbox"/> Email <input type="checkbox"/> Newspaper Ad <input type="checkbox"/> TV <input checked="" type="checkbox"/> Letter <input type="checkbox"/> Postcard <input type="checkbox"/> Website <input type="checkbox"/> Other
Name Mark Edvold Organization (if applicable)	Address Box 41 City/Zip Gonvick Phone 218 487 5218 Email Winsore@Gvtel.com	<input type="checkbox"/> Email <input type="checkbox"/> Newspaper Ad <input type="checkbox"/> TV <input type="checkbox"/> Letter <input type="checkbox"/> Postcard <input type="checkbox"/> Website <input type="checkbox"/> Other
Name Keith Weston Organization (if applicable) USDA NRCS	Address City/Zip Phone Email	<input type="checkbox"/> Email <input type="checkbox"/> Newspaper Ad <input type="checkbox"/> TV <input type="checkbox"/> Letter <input type="checkbox"/> Postcard <input type="checkbox"/> Website <input type="checkbox"/> Other
Name Bob Nelson Organization (if applicable)	Address City/Zip Phone Email	<input type="checkbox"/> Email <input type="checkbox"/> Newspaper Ad <input type="checkbox"/> TV <input type="checkbox"/> Letter <input type="checkbox"/> Postcard <input type="checkbox"/> Website <input type="checkbox"/> Other
Name RENEE HESBY Organization (if applicable) POOPLA PRESIDENT	Address 1621 WOMAN LN City/Zip CROOKSTON Phone 218-239-2844 Email SRHESBY@CRA.MILO.NET	<input type="checkbox"/> Email <input type="checkbox"/> Newspaper Ad <input type="checkbox"/> TV <input type="checkbox"/> Letter <input type="checkbox"/> Postcard <input type="checkbox"/> Website <input type="checkbox"/> Other
Name Jan Lee Organization (if applicable) Polk Co. Commissioner	Address City/Zip Phone Email	<input type="checkbox"/> Email <input type="checkbox"/> Newspaper Ad <input type="checkbox"/> TV <input type="checkbox"/> Letter <input type="checkbox"/> Postcard <input type="checkbox"/> Website <input type="checkbox"/> Other
Name Quane D. Johnson Organization (if applicable) LAND OWNER	Address 41656 NESSET City/Zip CREGG DR Phone CLEARBROOK, MN. Email 218-776-3989	<input type="checkbox"/> Email <input type="checkbox"/> Newspaper Ad <input type="checkbox"/> TV <input type="checkbox"/> Letter <input type="checkbox"/> Postcard <input type="checkbox"/> Website <input type="checkbox"/> Other



Sign-in Sheet
 Pine Lake Watershed Public Meeting
 July 12, 2016 – 6:30 p.m. – 8:30 p.m.
 Gonvick Community Center

Contact Information		How were you notified about the meeting?
Name <i>Dave Dalager</i> Organization (if applicable) <i>Retired</i>	Address <i>42275 Co Rd #7</i> City/Zip <i>Gonvick MN 55644</i> Phone <i>218-280-0233</i> Email	<input checked="" type="checkbox"/> Email <input checked="" type="checkbox"/> Newspaper Ad <input type="checkbox"/> TV <input type="checkbox"/> Letter <input type="checkbox"/> Postcard <input type="checkbox"/> Website <input type="checkbox"/> Other
Name <i>Laurel Skala</i> Organization (if applicable)	Address <i>42742 370stSE</i> City/Zip <i>Farston MN 56542</i> Phone <i>218 280 3301</i> Email <i>lskala38@gmail.com</i>	<input type="checkbox"/> Email <input type="checkbox"/> Newspaper Ad <input type="checkbox"/> TV <input type="checkbox"/> Letter <input type="checkbox"/> Postcard <input type="checkbox"/> Website <input type="checkbox"/> Other
Name <i>Brian Beckstead</i> Organization (if applicable)	Address City/Zip <i>Clearbrook MN</i> Phone Email	<input type="checkbox"/> Email <input type="checkbox"/> Newspaper Ad <input type="checkbox"/> TV <input type="checkbox"/> Letter <input type="checkbox"/> Postcard <input type="checkbox"/> Website <input type="checkbox"/> Other
Name <i>Bradley Beck</i> Organization (if applicable)	Address <i>460 St</i> City/Zip <i>Gonvick MN 56644</i> Phone 218-280-5664 Email <i>beck@88bclearbrook.com</i>	<input type="checkbox"/> Email <input type="checkbox"/> Newspaper Ad <input type="checkbox"/> TV <input type="checkbox"/> Letter <input type="checkbox"/> Postcard <input type="checkbox"/> Website <input type="checkbox"/> Other
Name <i>Michael Davis</i> Organization (if applicable)	Address City/Zip <i>CLBRIK</i> Phone Email	<input type="checkbox"/> Email <input type="checkbox"/> Newspaper Ad <input type="checkbox"/> TV <input type="checkbox"/> Letter <input type="checkbox"/> Postcard <input type="checkbox"/> Website <input type="checkbox"/> Other
Name <i>Jerry Dehmer</i> Organization (if applicable)	Address <i>11961 36th Cr NE</i> City/Zip <i>St. Michael MN 55375</i> Phone <i>218 280 0154</i> Email	<input type="checkbox"/> Email <input type="checkbox"/> Newspaper Ad <input type="checkbox"/> TV <input type="checkbox"/> Letter <input type="checkbox"/> Postcard <input type="checkbox"/> Website <input type="checkbox"/> Other
Name <i>Mark Larson</i> Organization (if applicable)	Address City/Zip Phone Email	<input type="checkbox"/> Email <input type="checkbox"/> Newspaper Ad <input type="checkbox"/> TV <input type="checkbox"/> Letter <input type="checkbox"/> Postcard <input type="checkbox"/> Website <input type="checkbox"/> Other



Appendix E: Comment Report

OPEN EVENT SUMMARY REPORT

Pine Lake Project

Event Date	07/25/2016	Person Name	Schmidt, Emory and Linda
Event ID	28009	Owner Phone	2186946917
Event Type	Meeting Comment Form	Mailing Address	14968 410th St. Bagley, MN 56621
Event Status	Open	Owner Email	ellss@gvtel.com
Organizations			
Event Title	Emory and Linda Schmidt - Meeting Comment		
Event Summary	We went to the Pine Lake Watershed meeting on the 12th of July and learned some things about the project we didn't know and they changed our minds about the project. We were told water level for my area would be 18 feet. I bought this 80 acres for the woods and for wildlife. My 80 acres is solid wood right up to the river for most of it. Mink, muskrat, raccoons, and beavers either live or hunt along the banks. Ducks and water..... Needless to say the rise and fall of this watershed project would cause deep murder for these wild creatures and devastation to acres of woods. It appears the water would come up my back yard and reach our house. I will meet one day with Myron Jesme unless he can put things in a different perspective we stand opposed.		
Event Notes			

OPEN EVENT SUMMARY REPORT

Pine Lake Project

Event Date	07/12/2016	Person Name	Skala, Larry
Event ID	28012	Owner Phone	
Event Type	Meeting Comment Form	Mailing Address	
Event Status	Open	Owner Email	Larry@stumpgrinding.com
Organizations			
Event Title	Larry Skala - Meeting Comment		
Event Summary	Q. Are there downstream flooding problems that you would like us to be aware of? A. No. Q. How would you like lake levels to be managed? A. New dam and water about 6" higher. Q. Do you agree with the descriptions provided of purpose and need for this project?. A. Yes		
Event Notes			



Appendix F: Meeting Exhibits

Welcome!

The purpose of this meeting is to:

- Build public awareness and understanding of the project
- Meet the project team
- Ask questions
- Provide opportunity for public input



Project Understanding & Goals

Project Purpose

The purpose of this project is to allow adaptive water level management of Pine Lake throughout the year.

Today's Needs

- Runoff causes rapid increases in lake levels.
- Flooding has occurred in 13 of the last 33 years.
- Lower lake levels in late summer, fall, and winter result in recreation issues and fish kills.



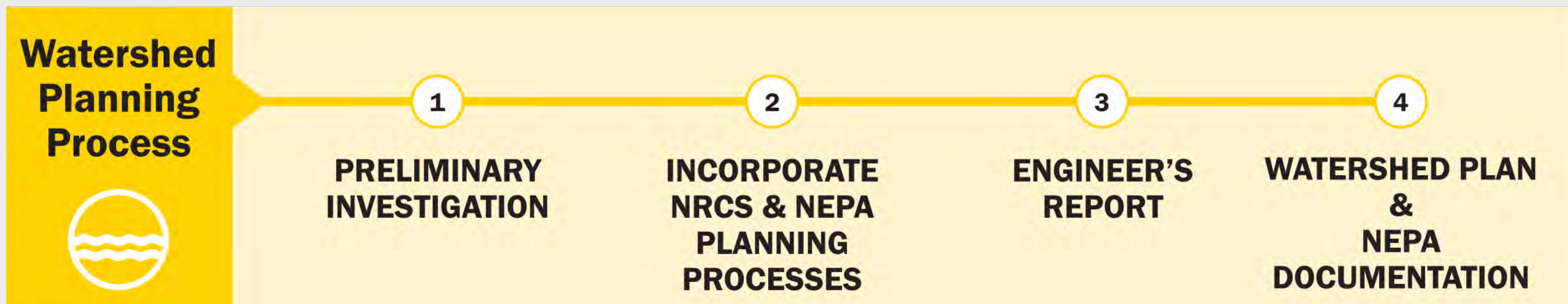
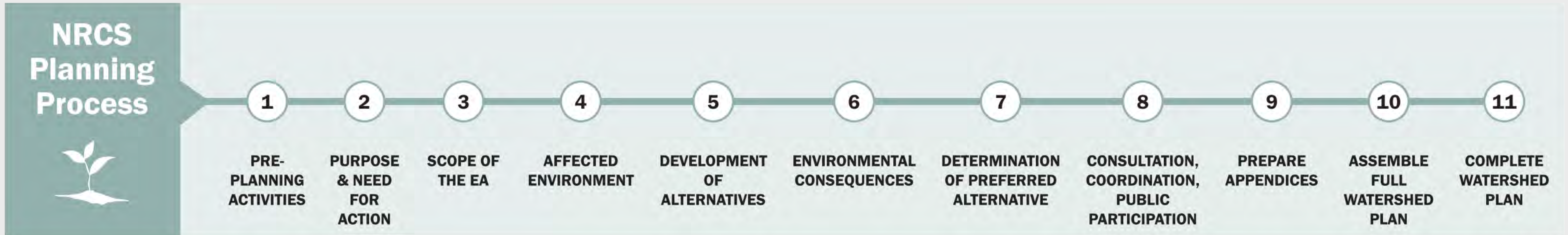
Historical Context

- A 45 square mile drainage area flows into Pine Lake.
- In 1981, a sheet pile dam with two adjustable stop bays was built to raise the lake level and provide a means to manage the level.

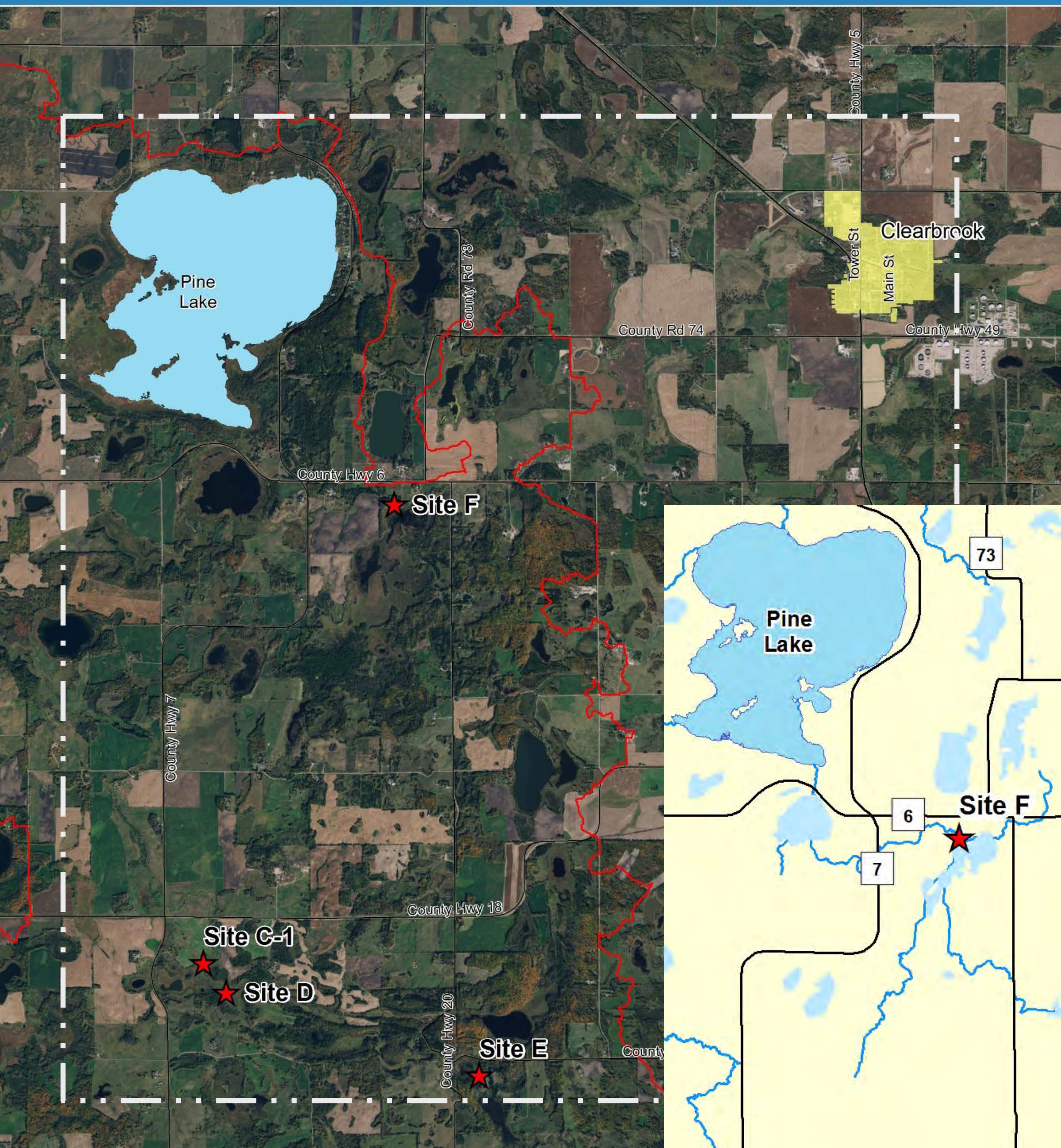
Goals for Tomorrow

- Contribute to regional goals of reducing peak flow rates along the Red River by 20% during flooding events.
- Construct a new outlet to improve operational flexibility and operator safety.
- Improve wildlife habitat and recreational activities.
- Construct upstream retention basins to reduce flood damages at Pine Lake and areas downstream from Pine Lake.

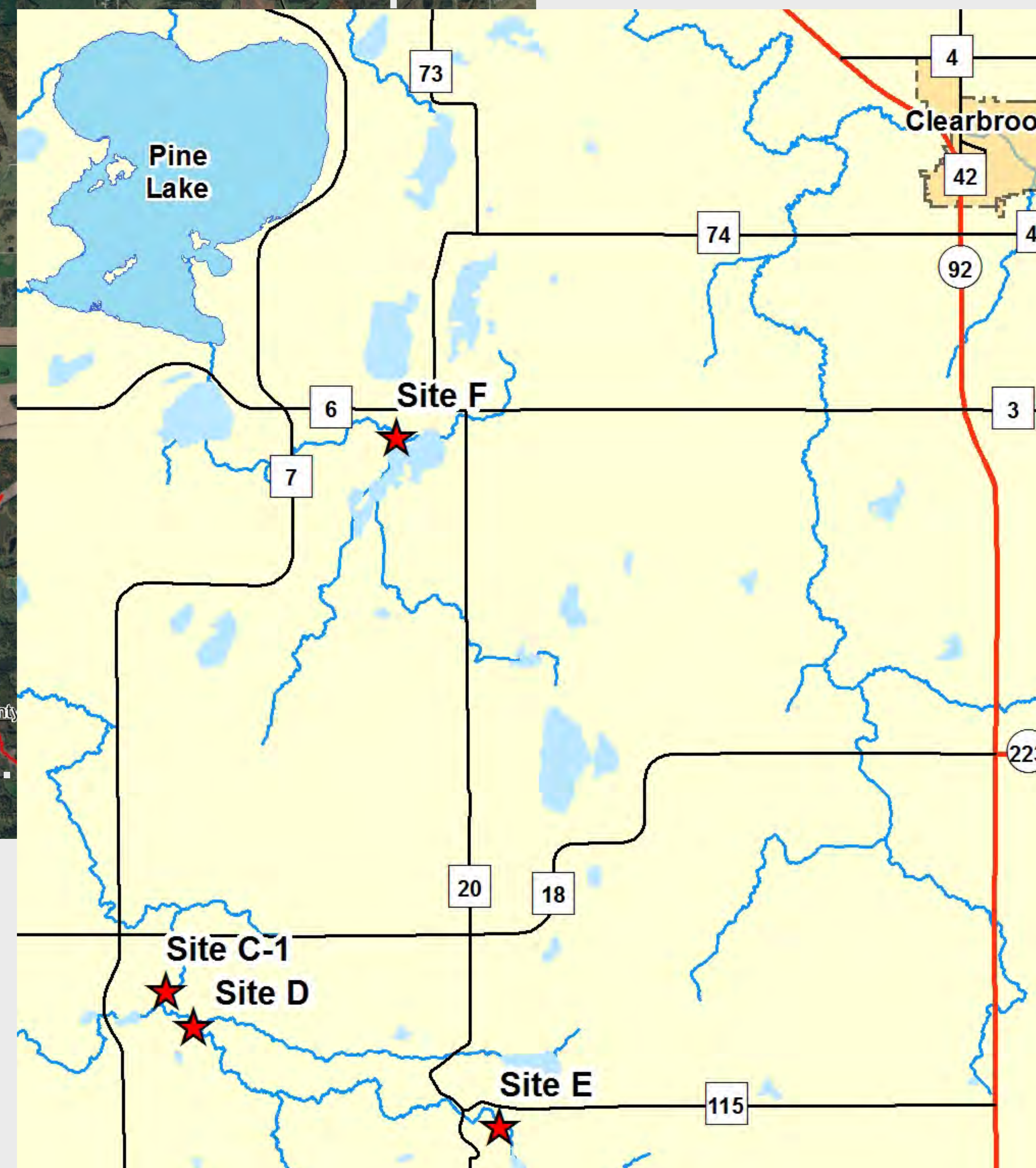
Planning/Evaluation Process



Project Location




After evaluating many potential sites, C-1, D, & E were identified as potential locations to create new retention basins.



The operations plan for an existing retention basin at Site F could be modified to increase gated storage volume.

Separate or combined, these basins may help achieve Pine Lake flood damage mitigation or regional flow reduction goals.

Human & Natural Environment Factors

-  Human Health & Safety
-  Erosion & Sedimentation
-  Archeological & Historical Resources
-  Fish & Wildlife Resources/
Threatened & Endangered Species
-  Streams, Lakes & Wetlands
-  Water Quality
-  Floodwater Property Damages
-  Socioeconomics
-  Downstream Peak Flow Rates and Flow Volumes
-  Transportation
-  Prime Farmlands
-  Land Use & Management

Resource Impacts

Resources	Anticipated Level of Impact		
	High	Medium	Low
Air Quality			None
Cultural/Historic Properties			X
Ecological Critical Areas			None
Environmental Justice			None
Fish & Wildlife Resources			X
Wildlife Community			X
Fish Community			None
Regional Water Resources Plans			None
National Parks, Monuments, and Historical Sites			None
Natural Areas			None
Parklands			None
Prime Farmland			None
Riparian Areas	X		
Scenic Areas			X
Soils (erosion, sedimentation, etc.)		X	
T & E Species			X
Waterbodies (Waters of the US)	X		
Water Quality			X
Water Quantity			X
Wetlands	X		
Land Use, Recreation, and Visual Resources			X
Public Health & Safety			X

High: Most likely will be affected and will be considered in the analysis of all alternatives.
Medium: May be affected by some alternatives.

Low: Will be considered, but not expected to be significant.
None: Need not be considered.

Feasibility Study Overview

The purpose of the Feasibility Study is to investigate Federal interest in meeting the objectives identified in the Purpose and Need.

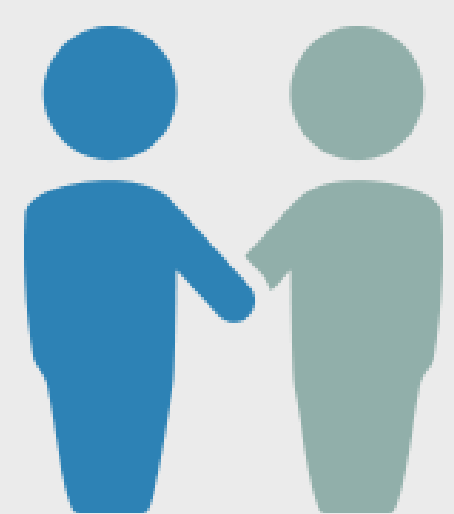
The scope of the study consists of:



Identification of problems and opportunities associated with flood damage reduction and related water resource concerns.



Formulation of alternative measures for environmental restoration, incidental reduction of future flood damages, and maximization of benefits.



Identification of the opportunity and the role for NRCS participation in water resources planning and environmental restoration.

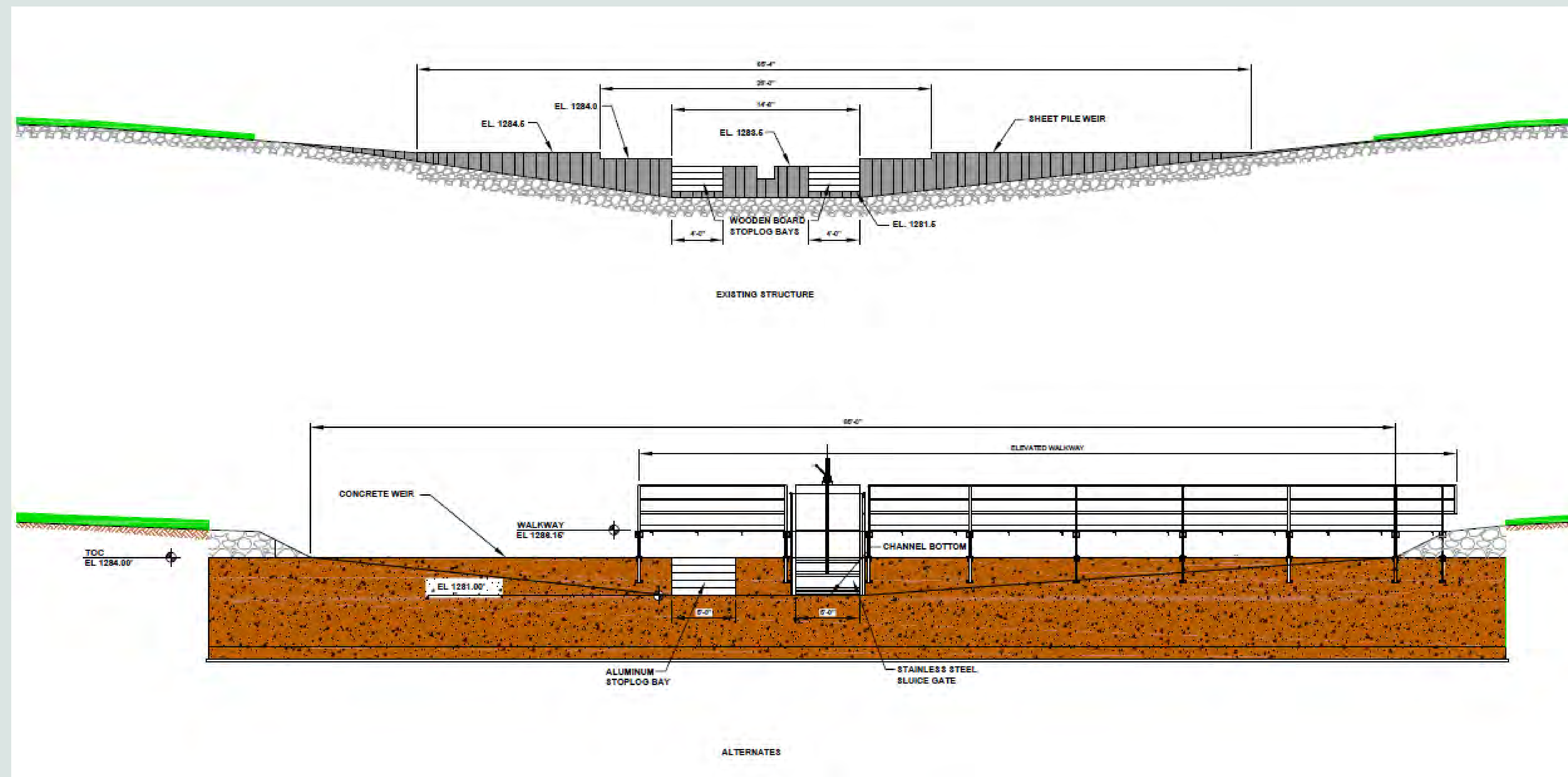
Lake Outlet Modifications

The control structure downstream from the outlet of the lake would include:

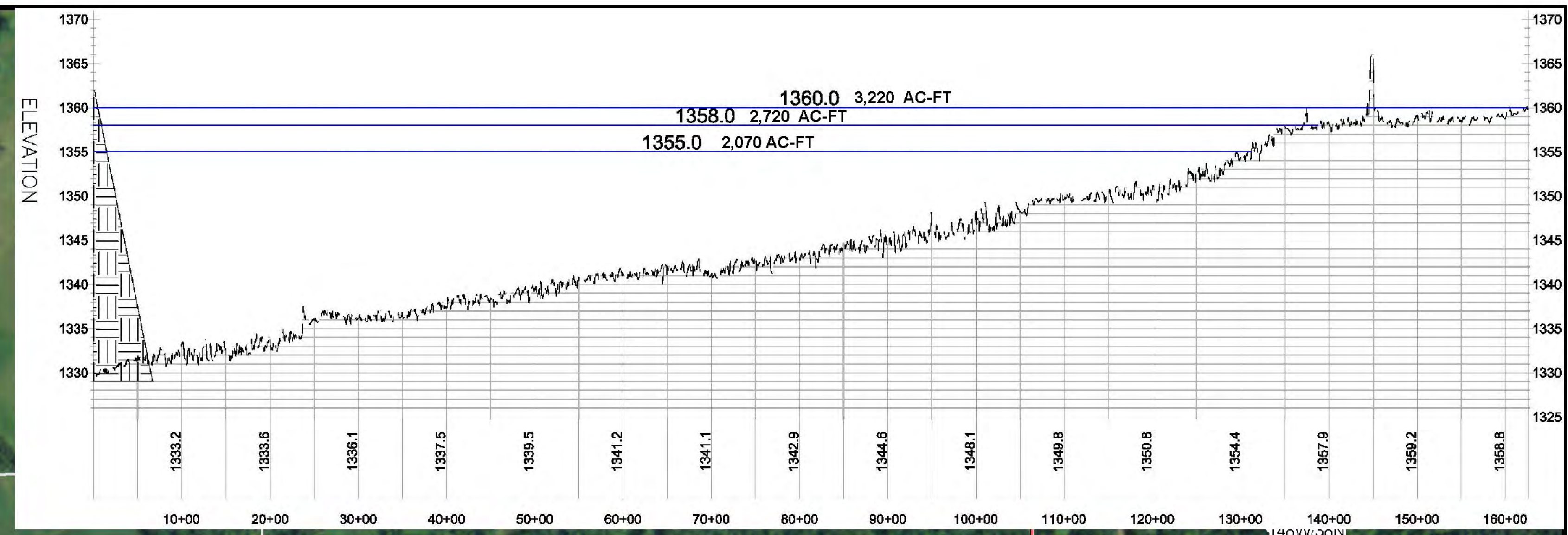
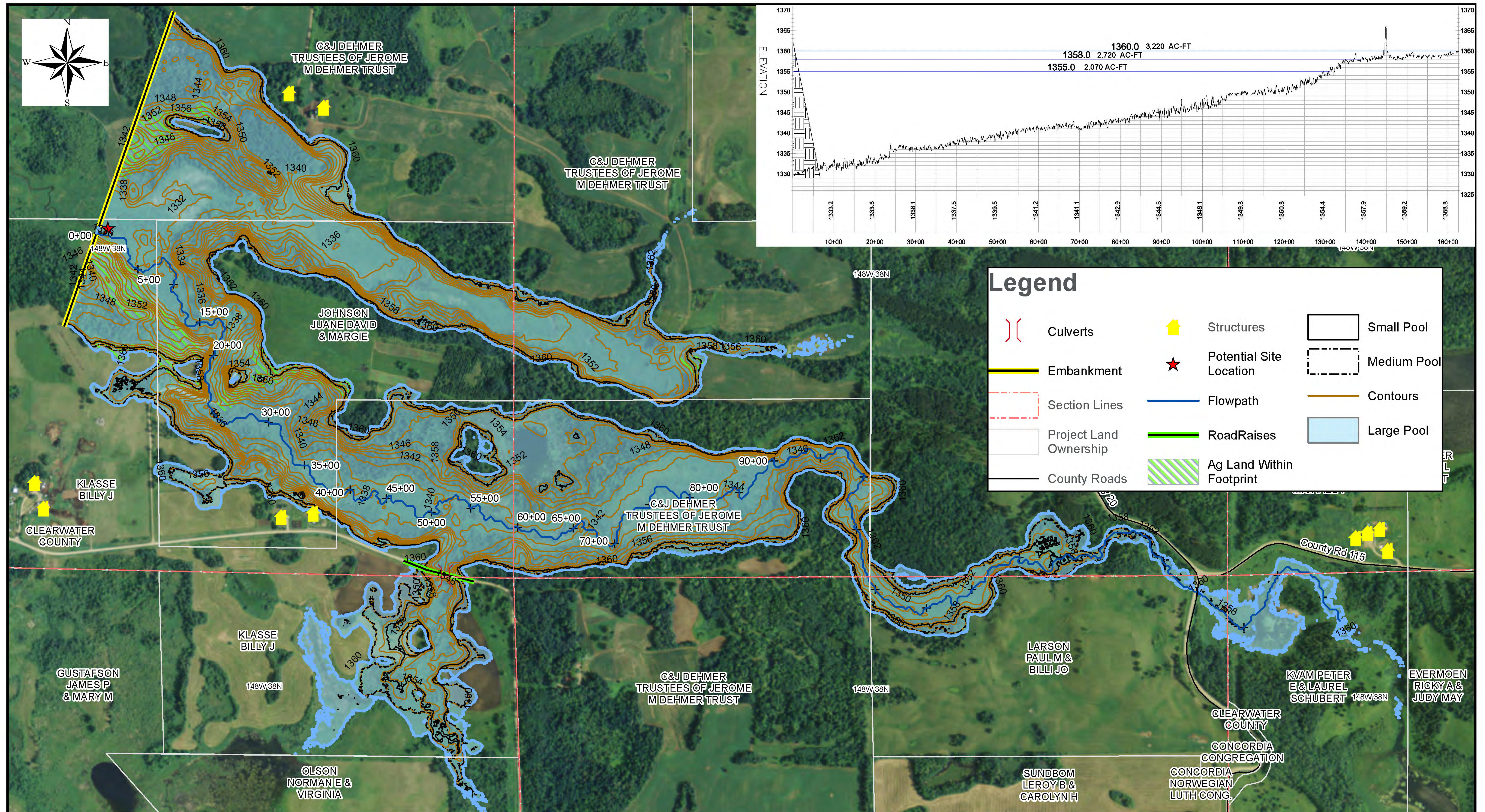
- Stop logs which can be adjusted periodically to adapt to changing seasonal or yearly conditions.
- A slide gate that can be operated with ease, allows draining of the lake to a lower level, and provides supplemental outlet capacity.

A new structure may:

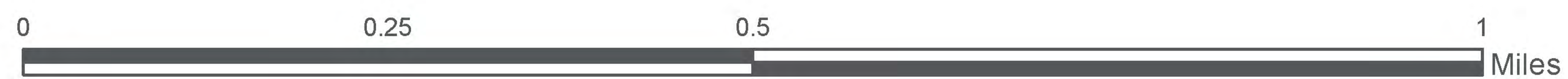
- Increase normal pool elevations
- Improve safety and convenience of making adjustments
- Allow adaptive lake management
- Improve lake habitat



Site D

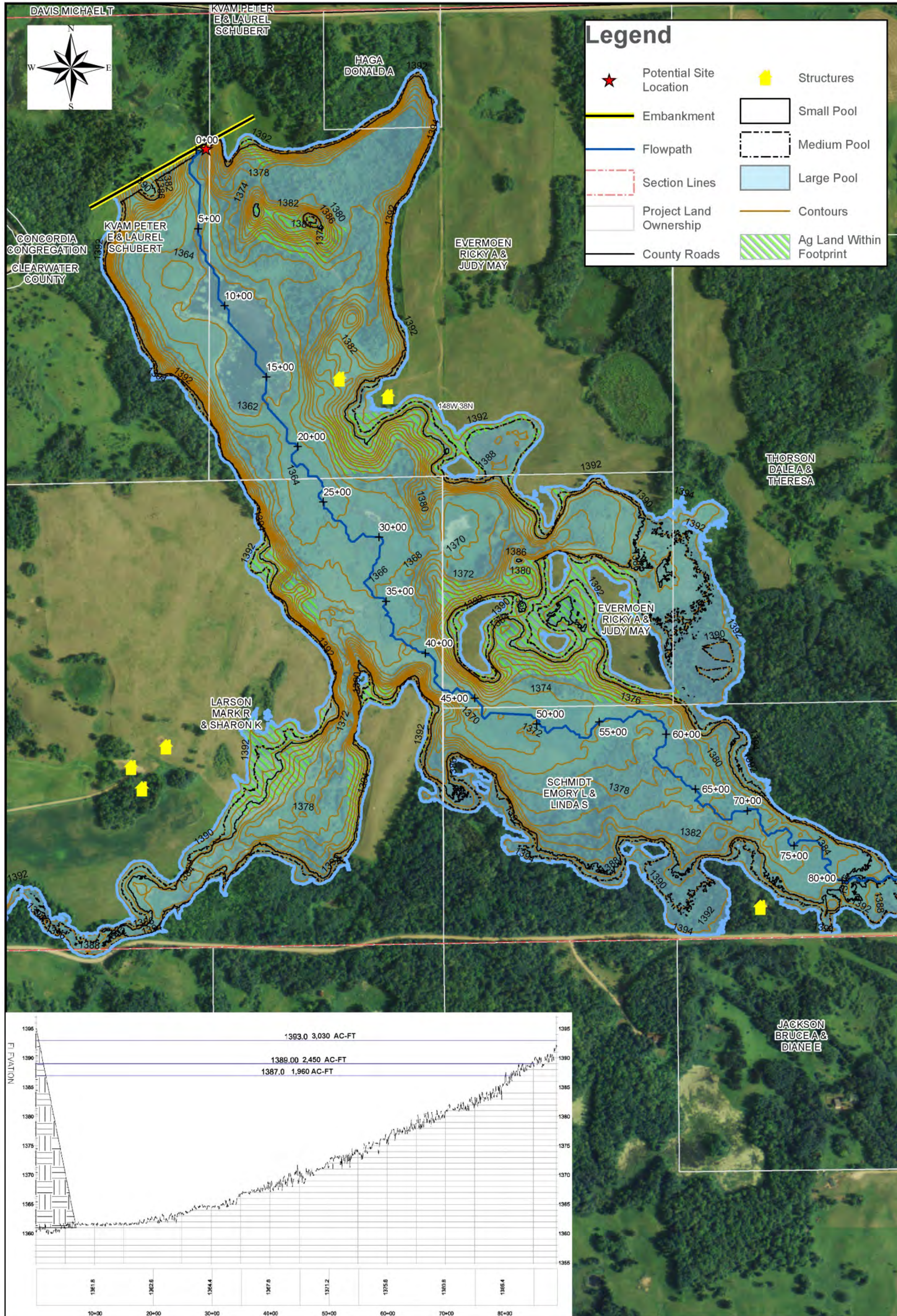


Legend					
	Culverts		Structures		Small Pool
	Embankment		Potential Site Location		Medium Pool
	Section Lines		Flowpath		Contours
	Project Land Ownership		Road Raises		Large Pool
	County Roads		Ag Land Within Footprint		

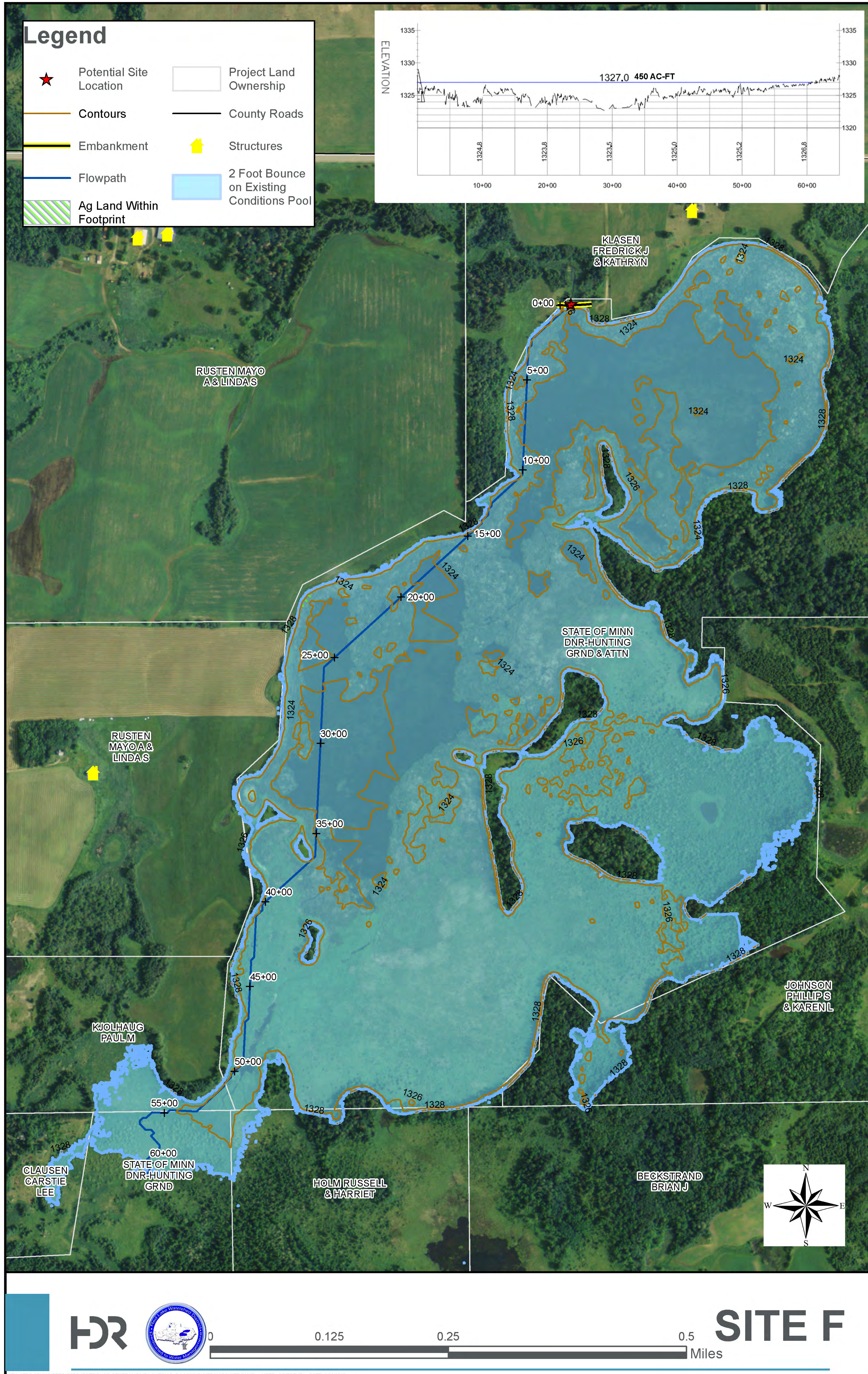


SITE D

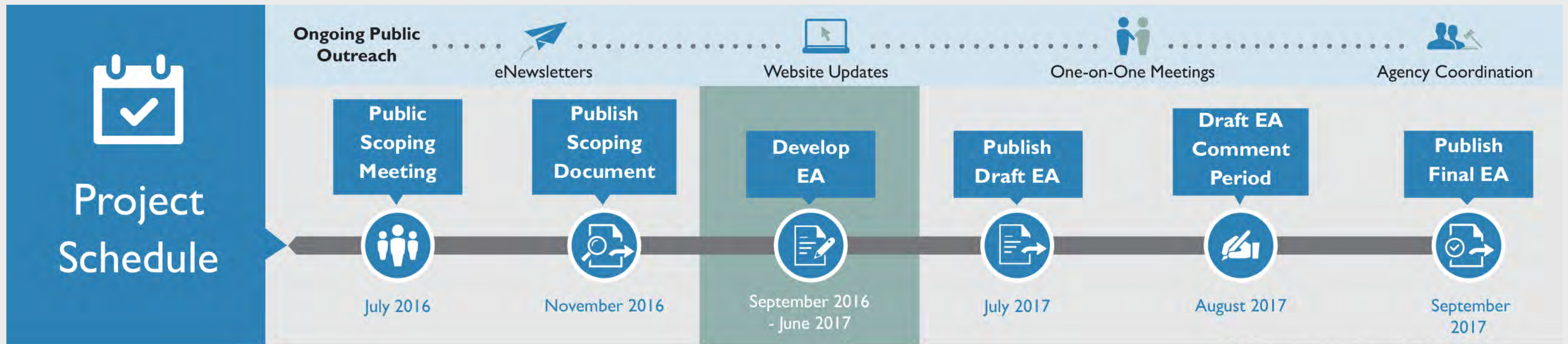
Site E



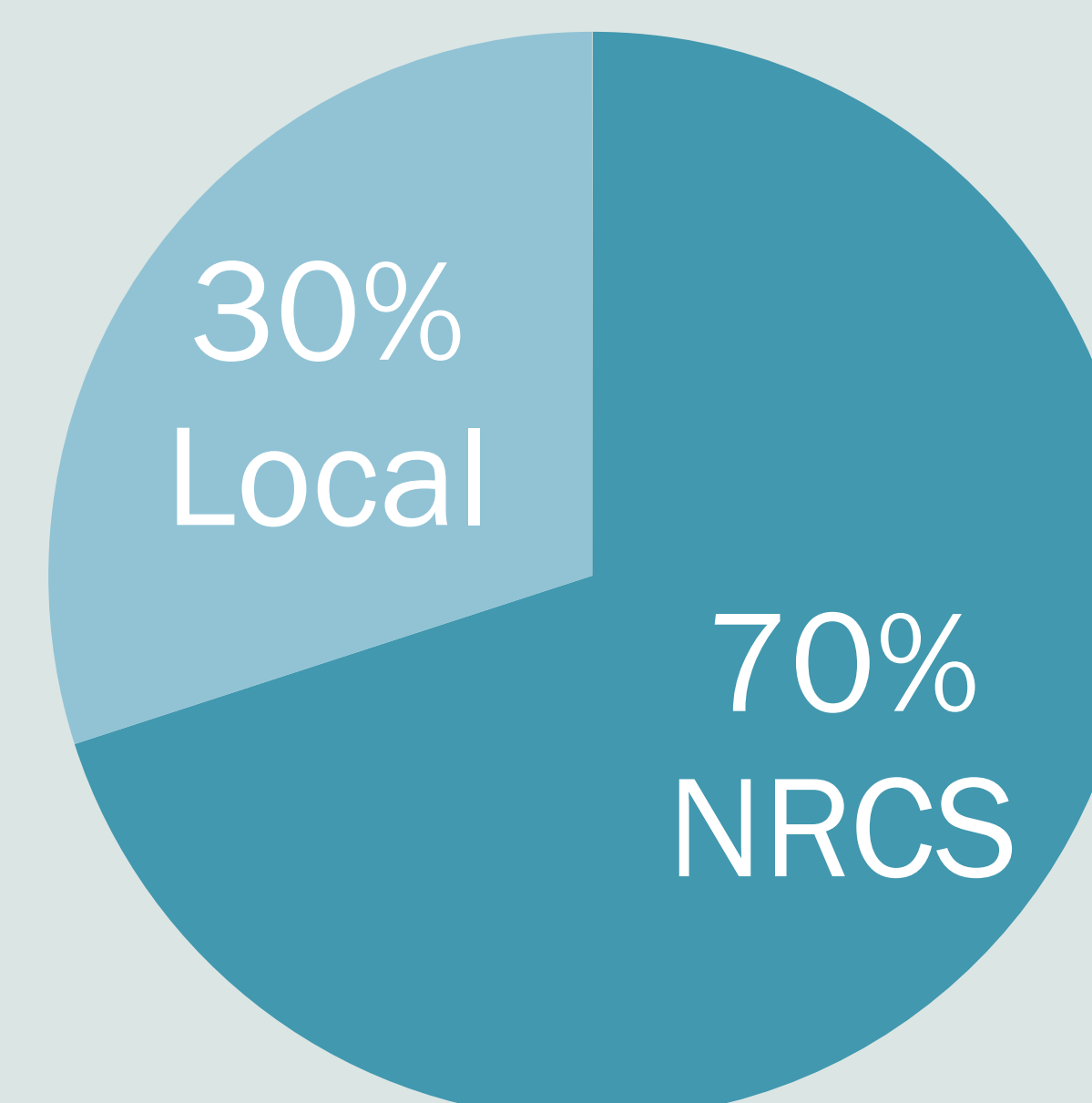
Site F



Schedule & Funding



Funding



Provide Your Input



<http://www.redlakewatershed.org/>



Fill out a Comment Form today!



Myron Jesme, District Administrator
Phone: 218.681.5800



Red Lake Watershed District
1000 Pennington Avenue South
Thief River Falls, MN 56701



Appendix G: Meeting Handout

Pine Lake Watershed Project

Red Lake Watershed District

July 12, 2016 Meeting; 6:30–8:30 p.m.

Welcome!

The purpose of this meeting is to:

- Build public awareness and understanding of the project.
- Meet the project team.
- Ask questions.
- Provide opportunity for public input.

Project Understanding & Goals

Historical Context

- A 45 square mile drainage area flows into Pine Lake.
- In 1981, a sheet pile dam with two adjustable stops bays was built to raise the lake level and provide a means to manage the level.

Project Purpose

The purpose of this project is to allow adaptive water level management of Pine Lake throughout the year.

Today's Needs

- Runoff causes rapid increases in lake levels.
- Flooding has occurred in 13 of the last 33 years.
- Lower lake levels in late summer, fall, and winter result in recreation issues and fish kills.

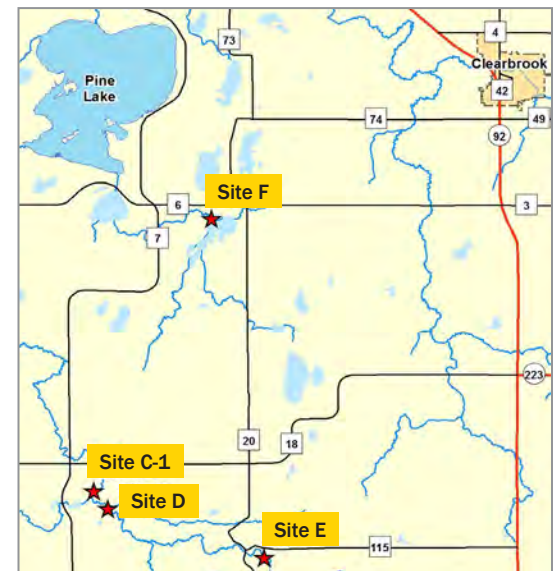
Goals for Tomorrow

- Contribute to regional goals of reducing peak flows along the Red River by 20% during flooding events.
- Construct a new outlet to improve operational flexibility and operator safety.
- Improve wildlife habitat and recreational activities.
- Construct upstream retention basins to reduce flood damages at Pine Lake and areas downstream from Pine Lake.



Project Location

There are several alternative retention basin improvements under consideration within the watershed upstream from Pine Lake. Three locations (C-1, D, and E) are being considered for construction of a new retention basin. The operating plan of one existing retention area (Site F) is being considered for modification to increase gated storage volume.



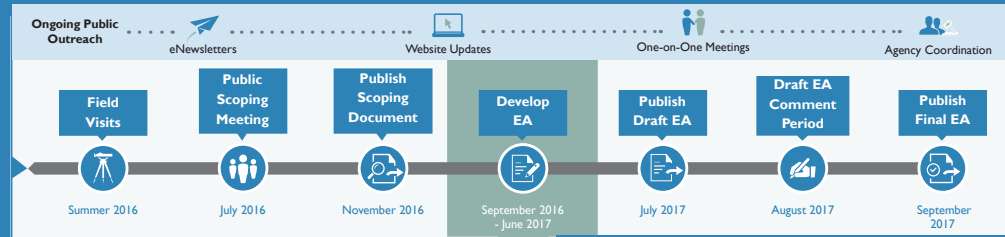
Major Considerations in the Human & Natural Environment

- Human health & safety
- Erosion & sedimentation
- Archeological & historical resources
- Fish & wildlife resources
- Stream lakes & wetlands
- Water quality
- Floodwater property damage
- Economic & social
- Threatened & endangered species
- Downstream peak flow rates and flow volumes
- Transportation
- Prime farmlands
- Land use & management

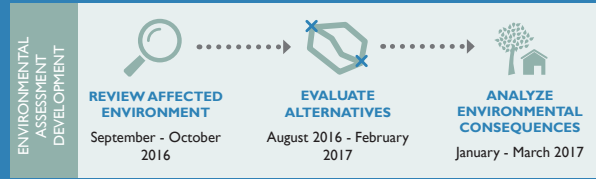




Project Schedule



**All dates are tentative and subject to change*



Lake Outlet Modifications

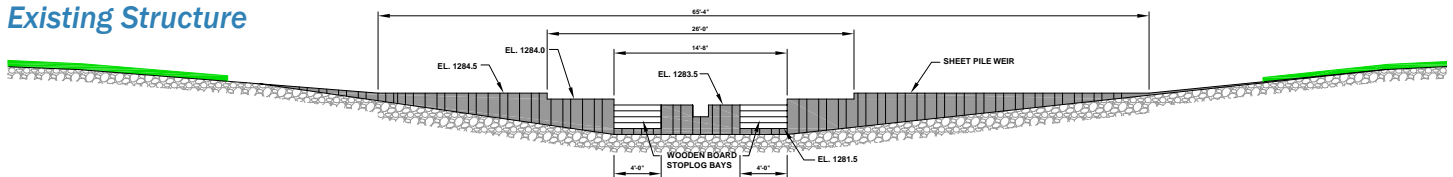
The control structure downstream from the outlet of the lake could provide the following benefits:

- A combination of stop logs and slide gate to allow for flexibility in operations.
- Stop logs could be adjusted periodically to adapt to changing seasonal or yearly conditions.
- A slide gate could allow draining of the lake to a lower level and provide supplemental outlet capacity.
- A slide gate could be operated with ease, allow draining of the lake to a lower level and provide supplemental outlet capacity.
- Additional lake level control that could help improve lake habitat.

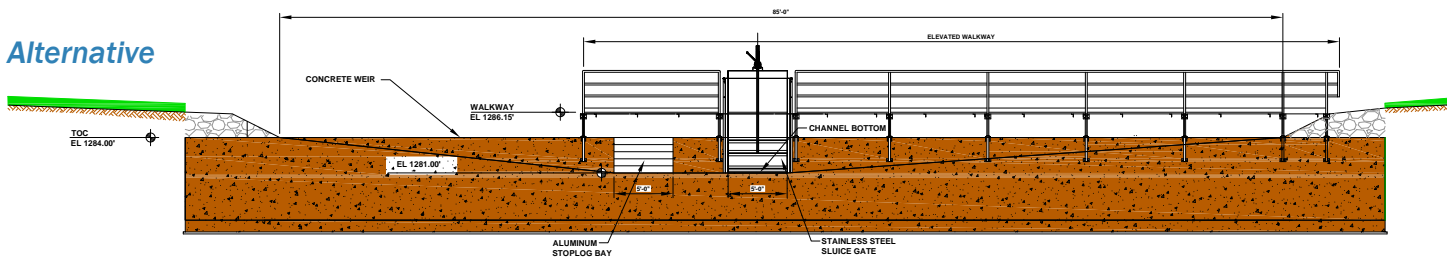
A new structure could include a walkway that would allow for:

- Access to stop logs and gate during elevated water conditions.
- Increased normal pool elevations.
- Improved safety and convenience for operators.


Existing Structure




Alternative





How to Stay Informed and Provide Input

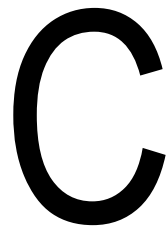
 You can stay informed about progress online by visiting the Project Page at:
<http://www.redlakewatershed.org/>

 Fill out a comment form today!

Contact Myron Jesme, District Administrator for more information.

218.681.5800


 Red Lake Watershed District
 1000 Pennington Avenue South
 Thief River Falls, MN 56701

A large, bold, black letter 'C' is positioned in the upper right quadrant of the page. It is centered horizontally relative to the text below it.

MNDNR Comment Letter



MINNESOTA DEPARTMENT OF NATURAL RESOURCES
NORTHWEST REGION

ECOLOGICAL & WATER RESOURCES
2115 BIRCHMONT BEACH RD NE
BEMIDJI, MN 56601

August 2, 2016

Mr. Myron Jesme
Red Lake Watershed District
1000 Pennington Ave. South
Thief River Falls, MN 56701

Dear Mr. Jesme:

The Minnesota Department of Natural Resources (DNR) thanks you for giving us the opportunity to participate in the watershed planning process for Pine Lake. The DNR is committed to working with local resource managers and the Red Lake Watershed District (RLWD) to improve the health of watersheds throughout Minnesota. As part of our commitment, in December 1998, the DNR was a party to the Red River Basin Flood Damage Reduction Work Group Agreement. This agreement is the framework for collaboration on flood damage reduction and natural resource protection and enhancement in the Red River Basin. This watershed planning process provides a great opportunity for us to work with the RLWD to identify issues of concern and put comprehensive plans in place to improve conditions within this watershed.

Pine Lake is intensively managed to provide a diverse fishery in an area of northwest Clearwater County where similar fishery resources are limited. Historically, this lake functioned as a periodic winterkill lake with intermittent fish populations consisting of low oxygen tolerant species such as northern pike, white sucker, yellow perch and bullhead. As a winterkill lake, the lake varied in depth and fish populations, but most importantly, had a vast quantity of aquatic vegetation that provided a significant amount of food, and was attractive to migratory waterfowl.

More recently, intensive fisheries management actions include periodic reintroduction of desirable species (i.e. crappie, sunfish, and bass) to diversify the fishery, maintenance stocking to sustain a walleye fishery, commercial bullhead removal, and winter aeration to prevent winterkill events. The DNR and the local Sportsmen's Club have worked together to manage the lake as a fishery, by incorporating many techniques such as winter aeration. Winter aeration has been successful at maintaining the fishery by stabilizing the existing fish population and providing a diverse fishery, but this management has been somewhat detrimental to migratory waterfowl use (deeper lake versus shallow lake characteristics).

Pine Lake remains vulnerable to winterkill conditions. Low dissolved oxygen concentrations have been documented multiple times since aeration was installed and some partial fish kills have occurred. Proper timing of start-up is critical to avoid depleting dissolved oxygen concentrations when they are high, but also to mix and stabilize dissolved oxygen levels before reaching lethal mean concentration in the water column.

Pine Lake is a Public Water Basin (15-0149-00), and is listed as a Type 5-Inland Open Fresh Water basin of about 1,465.00 acres. The OHWL is 1284.10 and the 100 year Flood Elevation is 1287.10 with the highest known water elevation to be at 1286.60 and an outlet elevation of 1283.50 (in NGVD 1929 datum). The Pine Lake watershed contains numerous lakes/wetlands and other wetland types such as shrub swamp and bogs. The Lost River, which flows through the lake, is also impaired for dissolved oxygen, and DNR recommends that this plan discuss potential water quality improvements to Pine Lake and the Lost River.

One of the goals listed for this planning process is for flood damage reduction for both properties along the lake and for downstream of the lake. Achieving this goal, as well as the additional goal of enhancing fish and wildlife will be challenging. Traditionally, reducing runoff volume in the watershed and increasing temporary storage in the lake basin would be options to consider for reducing flood damages downstream and increasing wildlife habitat. Increasing temporary storage could be accomplished by drawing down lake levels in the fall and using a gate controlled outlet to temporarily increase water levels in the spring. However, if a goal of this process is also to maintain fish populations and reduce the risk of flood damages to lakeshore properties, use of the lake basin for increased temporary storage would be challenging as increased storage could flood homes along the shoreline and disrupt the habitat for fish. DNR recommends that several alternatives be developed to determine the impacts of these competing goals.

Also, local interests have expressed a desire to increasing spring and summer water elevations to improve fish population. However, this would further reduce the water storage capacity of the lake and further diminish the use of the lake by migrating and breeding waterfowl. DNR recommends that the planning group clearly discuss and prioritize the goals for this project and conduct a thorough review of multiple alternatives to determine an appropriate path forward. We look forward to assisting in the development of those alternatives.

The environmental review process should also consider these issues:

- MN Rules 6115.0220 and 6115.0221 on water control structures would require a Public Waters works permit from DNR for any changes to the water level control structure.
- Review of existing data indicates that some homes surrounding the lake may be below the ordinary high water mark. This issue needs to be investigated if the project intends to change water level management that may affect ordinary high water level.
- Pine Lake is a priority shallow lake as defined by MNDNR's Shallow Lake Program Plan due to the association with the Pine Lake WMA. This WMA is managed for the protection of lakeshore and aquatic vegetation, particularly wild rice which is highly dependent on water level management.
- Pine Lake has a rank of "Moderate" under Minnesota Biological Survey Site Biodiversity Significance Ranks (http://www.dnr.state.mn.us/eco/mcbs/biodiversity_guidelines.html) (see attached map). These ranks are used to communicate the statewide native biological diversity significance of each site to natural resource professionals, state and local government officials, and the public. The biodiversity ranks help to guide conservation and management. "Moderate" sites contain occurrences of rare species, moderately disturbed native plant communities,

and/or landscapes that have strong potential for recovery of native plant communities and characteristic ecological processes. Pine Lake is classified in the highest category of phosphorus sensitivity (see attached map and reference page). Phosphorus sensitivity was calculated using lake phosphorus and hydrology data. Based on the calculated phosphorus sensitivity, the significance of that sensitivity, and the presence of any negative trends in water clarity, lakes were grouped and assigned to one of three priority classes (high, higher, or highest). Highest ranking means it has the highest priority for protection or restoration.

- A calcareous fen is located approximately 4 miles to the northeast. DNR recommends ensuring that any watershed project does not interfere with the hydrology of the fen as per the Wetland conservation Act (MN Statute 103G.223) (http://www.bwsr.state.mn.us/wetlands/Calc_fen-factsheet.pdf).
- Widgeon grass (*Ruppia cirrhosa*), a submerged aquatic plant species of special concern in Minnesota, has been documented in Pine Lake.
- Trumpeter swans have been documented using Pine Lake for breeding. Trumpeter swans are listed as species of special concern in Minnesota. Trumpeter swans were once extirpated from the state but through reintroduction efforts the current population estimate is 17,021 swans. While overhunting is blamed for the extirpation, continued threats include loss or degradation of wetland habitat, lead poisoning, power line collisions, and illegal shootings.
- Wild rice is present in Pine Lake. This important native Minnesota plant has a high level of cultural, ecological, and economic values. Wild rice is one of the most important foods for waterfowl in North America and provides habitat for 17 species of wildlife listed in the MNDNR's Comprehensive Wildlife Conservation Strategy as a species of greatest conservation need (<http://www.dnr.state.mn.us/cwcs/index.html>).

Thank-you again for the opportunity to comment. If you have any additional questions, please contact me at theresa.olson@state.mn.us or at 208-308-2672.

Sincerely,



Theresa Olson

Regional Environmental Assessment Ecologist

