US Army Corps of Engineers ®
Rock Island District

PUBLIC NOTICE

Applicant: Iowa Department of Natural Resources

Date: October 31, 2022

Expires: November 29, 2022

CEMVR-RD-2021-1512

Section 404

Joint Public Notice
US Army Corps of Engineers
Iowa Department of Natural Resources

1. **Applicant**: Iowa Department of Natural Resources, c/o Mr. Chad Paup, 2991 State Highway 2, Kellerton, Iowa 50133.

2. **Project Location:**

- Three Mile Lake, Afton, Iowa
- Section 5/Township 72 North/Range 29 West, Sections 18, 19, 29, 30, 31, 32/Township 73 North/Range 29 West, and Sections 13, 24, 25/Township 73 North/Range 30 West.
- Union County, Iowa
- UTM NAD-83 Zone 15
- Lat 41.1100, Long -94.2534.

3. **Project Description and Purpose**.

a. The applicant proposes the Three Mile Lake Restoration Project to include in-lake sediment retention forebays, Best Management Practices (BMP's) 1, 2, and 12, and bank stabilization along Three Mile Lake at 12 locations, including jetties, riprap, and wind breaks. Cumulatively these projects will impact 6.540 acres of open water, 7.328 acres of wetland (1.740 acres of emergent and 5.588 acres of forested), inundate 2,254 linear feet (LF) of steam (858 LF of perennial, 1,232 LF of intermittent, and 164 LF of ephemeral), and 13,025 linear feet of bank stabilization. The applicants stated purpose and need for BMP's 1, 2, and 12 are to reduce sediment within Three Mile Lake to improve the quality of the Lake for recreational areas and to provide drinking water to 30,000 residents. Three Mile Lake has experienced decreased water quality, increased algae blooms, and impairments to fish populations in recent years. The existing silt dike has silted in, settled, and is experiencing more frequent overtopping's. The applicants stated purpose and need for the bank stabilization is for shoreline stabilization and improved angler access due to the existing eroding shorelines. The bank stabilization efforts will provide for protection measures and angler access to existing shoreline erosion and areas in need of wind protection, angler access, and along shorelines near known sensitive cultural resources threatened from impending shoreline degradation.

b. BMP's 1 and 2 will provide for 23 acre-feet of sediment reduction at Three Mile Lake by construction of two earthen dams at two locations. BMP 1 includes construction of an in-lake forebay on a northwestern arm of Three Mile Lake with an earthen embankment with 3H:1V upstream slopes, a 6H:1V downstream slope, and a 10-foot-wide bench with 2-foot-thick rock riprap at the principal spillway inlet. The forebay includes a 12" diameter SMP principal spillway pipe and rock riprap at the pipe outlet. The structure is approximately 9 feet tall and is designed to capture 7 acre-feet of sediment within its permanent pool. BMP 2 includes construction of an in-lake forebay on a northwestern arm of Three Mile Lake. The forebay consists of an earthen embankment with 4H:1V upstream and downstream slopes and a ten-foot-wide top width. The structure includes a 12" diameter SMP principal spillway that discharges directly into Three Mile Lake. The structure is approximately 10-feet tall and is designed to capture approximately 16 acre-feet of sediment within its permanent pool. Cumulatively BMP 1 and 2 will impact 1,232 linear feet of stream and 0.346 acre of wetland by inundation and for the earthen berm and 0.515 acres of fill in open water for the earthen berm.

c. BMP 12 will provide for 130 acre-feet of sediment reduction at Three Mile Lake by raising the top of the existing silt dike elevation by 3-feet and increasing the silt dike's pool by 2-feet. This would provide an additional 35 years of sediment storage for Three Mile Lake. BMP 12 will maintain 4H:1V side slopes and have a 10-foot-wide top width. A 100-foot-wide weir consisting of concrete-tied blocks located at the permanent pool elevation. Fill for the berm will come from adjacent uplands. BMP 12 will impact 1,022 linear feet of stream and 5.588 acres of wetland by inundation and for the earthen berm and 1.055 acres of fill in open water for the earthen berm.

d. Shoreline stabilization measures include 13,025 feet of shoreline protection with 1,193 feet of deep erosion protection measures, 9,858 feet of medium, 1,030 feet of special, and 944 feet from jetty enhancements and the windbreak. Deep and medium armoring involves restoring the shoreline by grading to an appropriate slope, deepening the near shore area to a depth of three or five and a half feet, and protecting the shoreline above and below the Lake's permanent pool by armoring with rock riprap. Special shoreline stabilization is being implemented near known sensitive cultural resources to protect the resources from impending shoreline degradation in cooperation with Iowa State Historic Preservation Office. The special shoreline stabilization consists of rock riprap placed 2 feet above and below the Lake's permanent pool elevation at a 2H:1V slope. Hard armoring protection would be placed around proposed shoreline protection lengths. Deep erosion protection measures will be used in areas to allow deep water angler access, and medium erosion protection measures will be used to stabilize shorelines without deep water access. Jetty enhancements would additionally be implemented at existing jetties along the Lake's shoreline to improve angler access by adding benches below the Lake's permanent pool and to provide shoreline protection by extending jetties. A windbreak structure would also be implemented to protect the shoreline from wind and wave action.

e. Mitigation. The applicant has proposed to purchase emergent wetland credits at a Corps approved mitigation bank. There are currently no banks within the service area of this project that have forested wetland or stream credits available; therefore, the applicant is proposing permittee responsible mitigation for forested wetlands and stream impacts within the Three Mile Lake state owned property. A permittee responsible mitigation plan, including implementation of the Iowa Stream Mitigation Method, is being reviewed by the Corps and will meet mitigation requirements prior to permit issuance.

f. The applicant has provided avoidance and minimization and an alternative analysis for each component of the project, BMP 1 and 2, BMP 12, and bank stabilization. These are available for review upon request.

4. **Agency Review**.

a. Department of the Army, Corps of Engineers. The Department of the Army application is being processed under the provisions of Section 404 of the Clean Water Act (33 U.S.C. 1344).

b. State of Iowa. The project plans have been submitted to the Iowa Department of Natural Resources (IDNR) for state certification of the proposed work in accordance with Section 401 of the Clean Water Act. The certification, if issued, will express the Department's opinion that the proposed activity will comply with Iowa's water quality standards (Chapter 61 IAC). The applicant has also applied for authorization of work in the floodplain pursuant to Chapter 455B of the Iowa Code and other applicable state permits. Written comments concerning possible impacts to waters of Iowa should be addressed to: Iowa Department of Natural Resources, 502 East 9th Street, Des Moines, Iowa 50319. A copy of the comments should be provided to the Corps of Engineers office (see paragraph 11. of this public notice for address).

5. **Historical/Archaeological**.

a. The District Archaeologist consulted with the Iowa I-Sites geographic information systems archeological site and survey databases online.

b. The permit areas have been covered by multiple previous cultural resource assessments. Several historic properties have been located in the immediate area of the projects. Given the age of the previous surveys on the project some additional survey for historic properties may need to be completed for the project.

c. Consultation will be initiated with the Iowa SHPO and any Tribes that request to be a part of the project. If, through consultation, additional archaeological survey and geomorphological evaluation survey is deemed necessary the geomorphological investigation must extend at least 50 centimeters below the proposed depths of soil disturbance or to a depth below which no possibility of historic properties exists.

d. The applicant, in addition to this Phase I survey, may be required to conduct additional Phase II test excavations to evaluate sites for eligibility for inclusion in the NRHP as well as other studies, site avoidance, or data recovery as may be the case.

6. **Endangered Species**.

a. District staff has performed a preliminary review of this application for the potential impact on threatened or endangered species pursuant to Section 7 of the Endangered Species Act as amended. The following all have potential habitat in Union County, Iowa.

- Indiana bat (*Myotis sodalist*)
- Northern Long-eared Bat (*Myotis septentrionalis*),
- Monarch Butterfly (*Danaus plexippuss*),

b. There are no records in the Iowa Department of Natural Resources records of known occurrences of rare species within the project area. There is potential habitat for bats within culverts and trees located within the project area.

7. **Dredge/Fill Material Guidelines**. The evaluation of the impact of the proposed activity on the public interest will also include application of the guidelines promulgated by the Administrator of the United States Environmental Protection Agency under authority of Section 404(b) of the Clean Water Act (40 CFR Part 230).

8. **Public Interest Review**. The decision whether to issue the Corps permit will be based on an evaluation of the probable impact including cumulative impacts of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered including the cumulative effects thereof; among those are conservation, economics, aesthetics, general environmental concerns, wetlands, cultural values, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food production and, in general, the needs and welfare of the people.

9. **Who Should Reply**. The Corps of Engineers is soliciting comments from the public; Federal, state, and local agencies and officials; Indian Tribes; and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps of Engineers to determine whether to issue, modify, condition, or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity. These statements should be submitted on or before the expiration date specified at the top of page 1. These statements should bear upon the adequacy of plans and suitability of locations and should, if appropriate, suggest any changes considered desirable.

10. **Public Hearing Requests**. Any person may request, in writing, within the comment period specified in this notice, that a public hearing be held to consider this application. Requests for public hearings shall state, with particularity, the reasons for holding a public hearing. A request may be denied if substantive reasons for holding a hearing are not provided.

11. **Reply to the Corps**. Comments concerning the Corps permit should be addressed to the US Army Corps of Engineers, Rock Island District, Attn: RD (K. Brown), Clock Tower Building - Post Office Box 2004, Rock Island, Illinois 61204-2004. **Mrs. Kirsten Brown** may be contacted for additional information at (309) 794-5369 or email at Kirsten.L.Brown@usace.army.mil.

matthew a zehr

Attach
Plans

Mr. Matthew A. Zehr
Chief, Western Branch
Regulatory Division

REQUEST TO POSTMASTERS: Please post this notice conspicuously and continuously until the expiration date specified at the top of page 1.

NOTICE TO EDITORS: This notice is provided as background information for your use in formatting news stories. This notice is not a contract for classified display advertising.

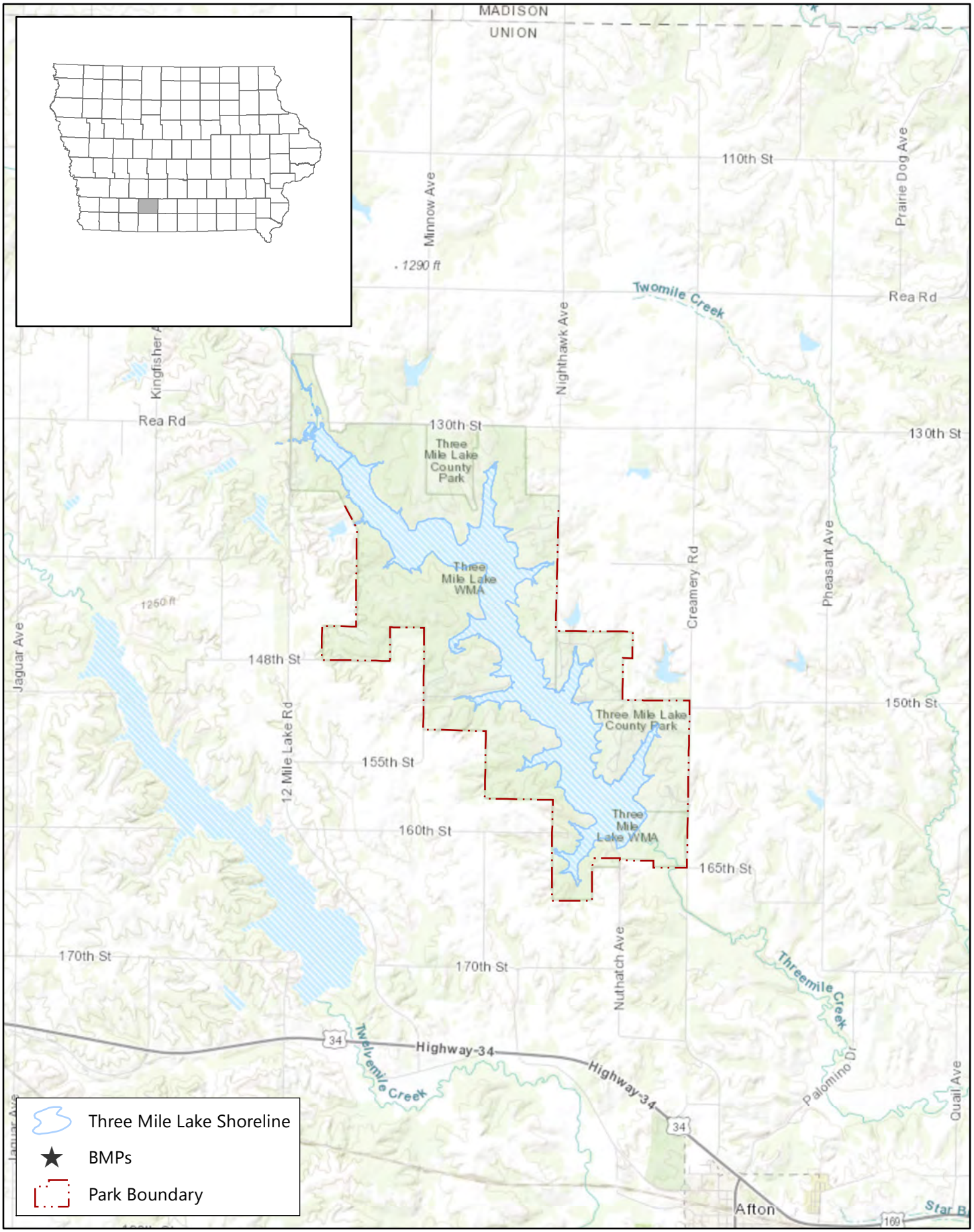
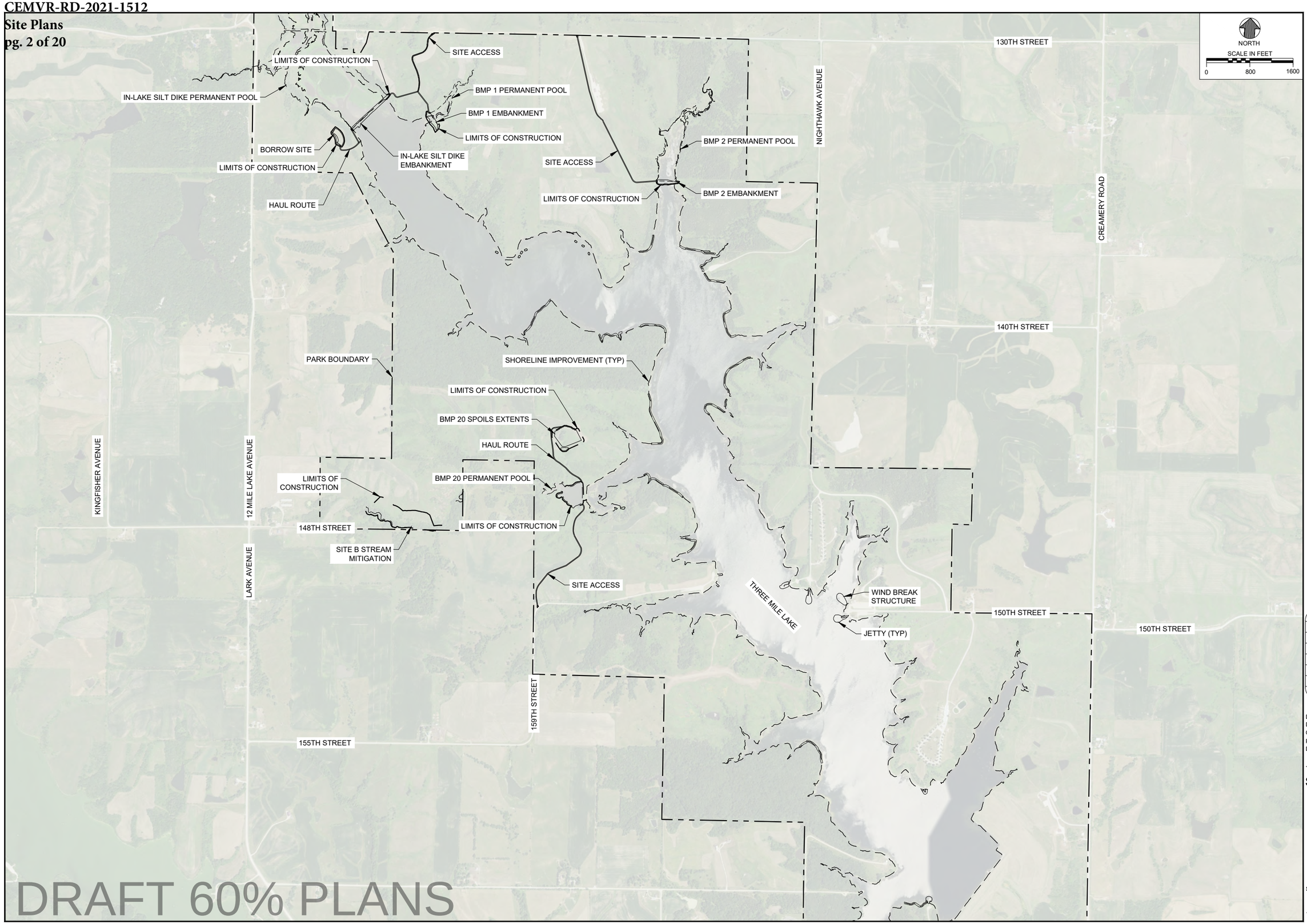


Figure 1. Location Map
Request for Individual Permit
Three Mile Lake Restoration Project
Iowa Department of Natural Resources

0 5,000 Feet



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100 Court Avenue, Suite 202
Des Moines, Iowa 50309
515.444.5393
www.fyraengineering.com

THREE MILE LAKE RESTORATION PHASE 2
IOWA DEPARTMENT OF NATURAL RESOURCES
UNION COUNTY, IOWA
2022

ENGINEER'S SEAL

REVISIONS

NO.	DATE

DESIGNED BY:	SEM
DRAWN BY:	CKW
QA / QC BY:	MKS
PROJECT NO.:	007-20-01
DATE:	JUNE 2022

TITLE
SITE MAP

SHEET
A.3

DRAFT 60% PLANS

Figure 2A. Plan View
Request for Individual Permit
Three Mile Lake Restoration Project
Iowa Department of Natural Resources

0 600 Feet

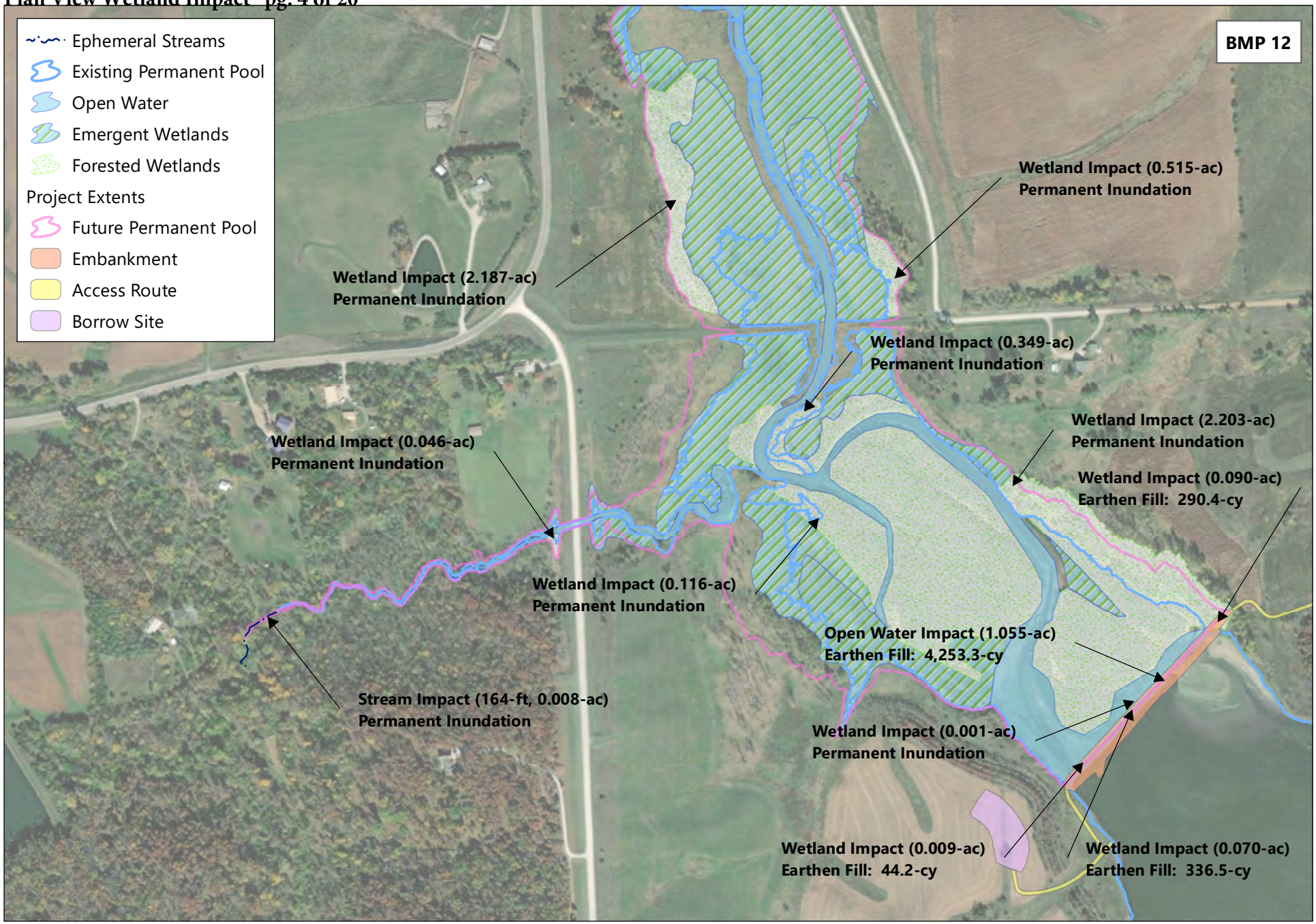
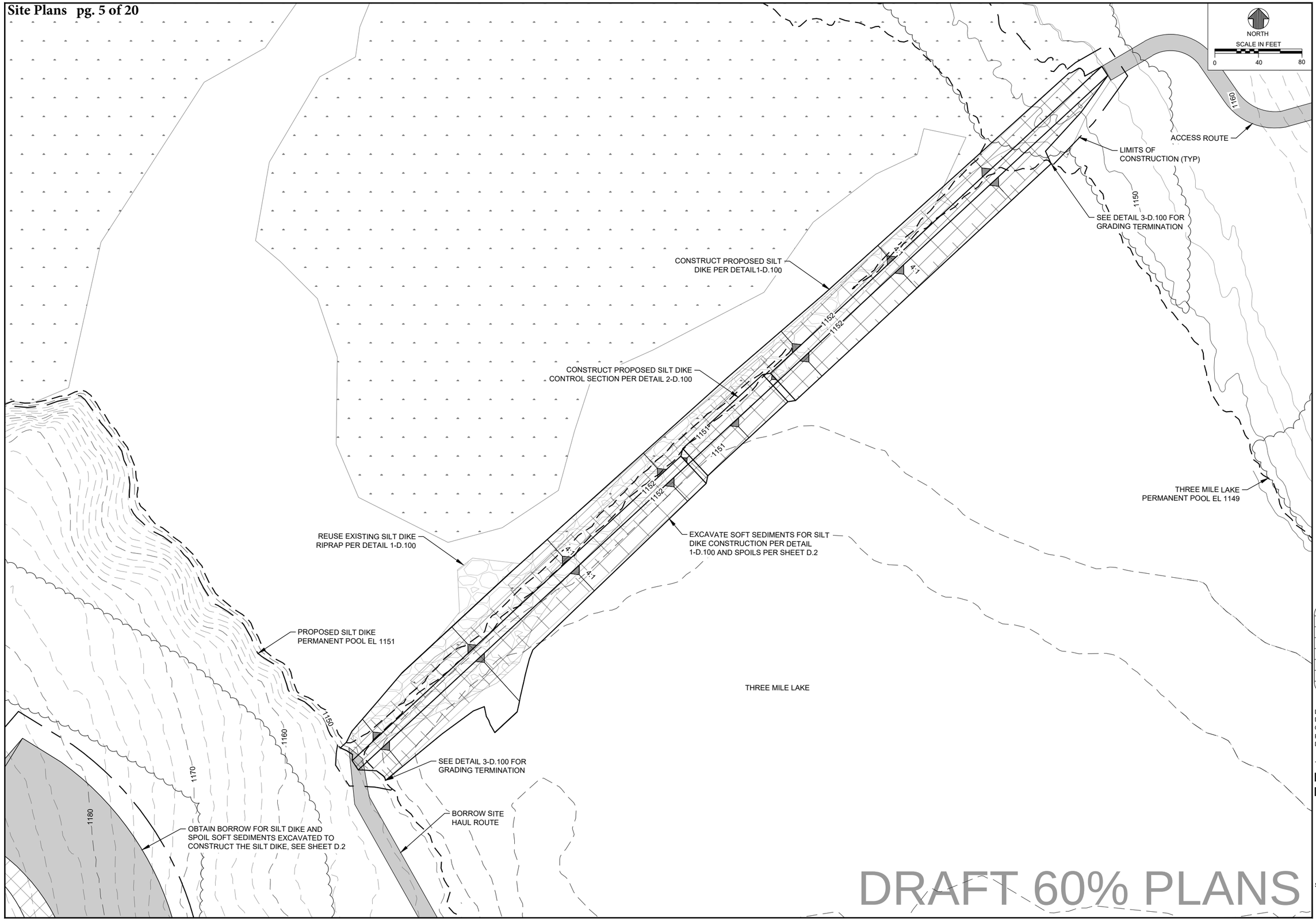


Figure 2B. Plan View
Request for Individual Permit
Three Mile Lake Restoration Project
Iowa Department of Natural Resources



DRAFT 60% PLANS

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UNION COUNTY, IOWA
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NO.	DATE

DESIGNED BY: SEM
DRAWN BY: CKW
QA / QC BY: MKS
PROJECT NO.: 007-20-01
DATE: JUNE 2022

TITLE
IN-LAKE SILT DIKE PLAN

SHEET
D.1

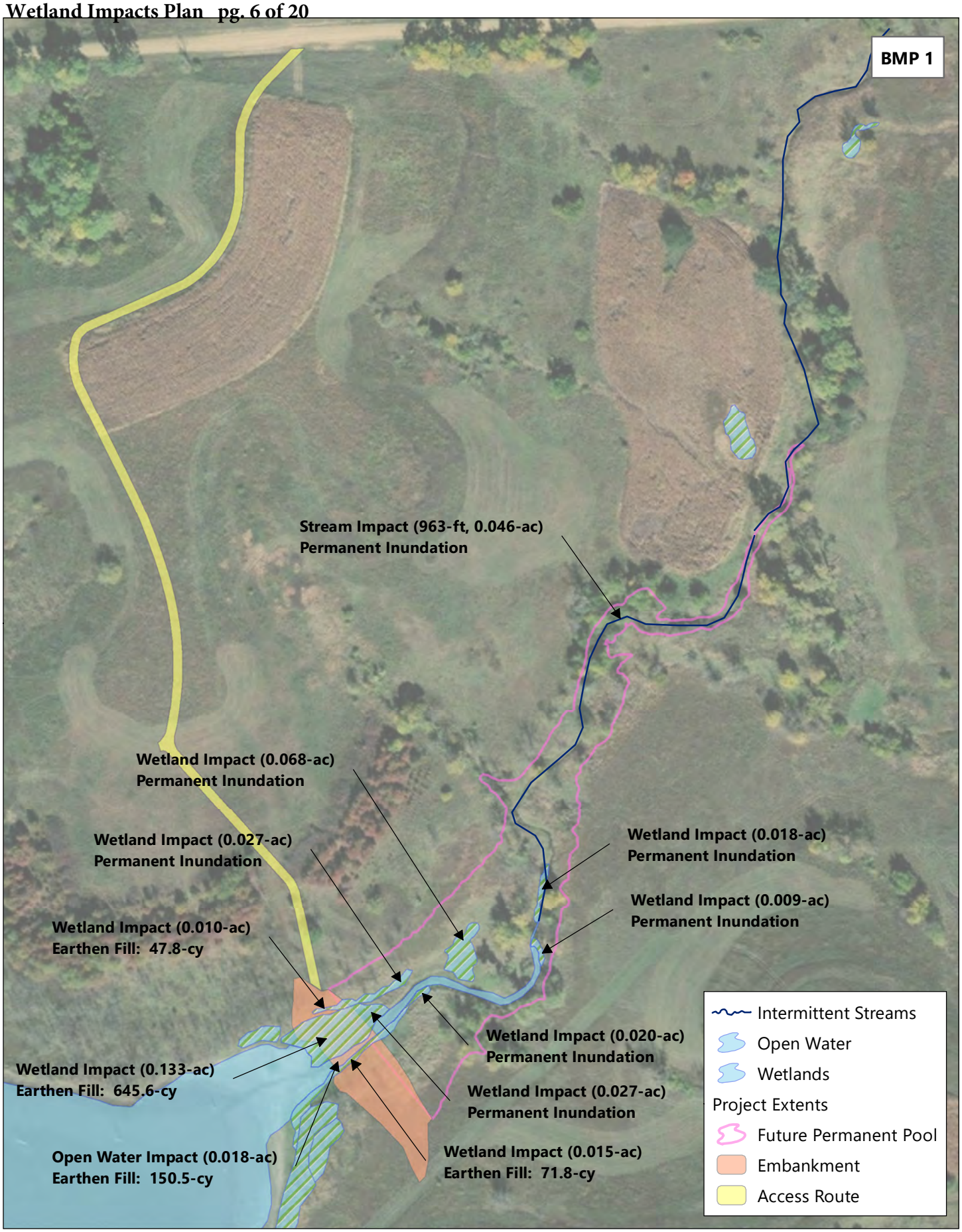


Figure 2C. Plan View
Request for Individual Permit
Three Mile Lake Restoration Project
Iowa Department of Natural Resources

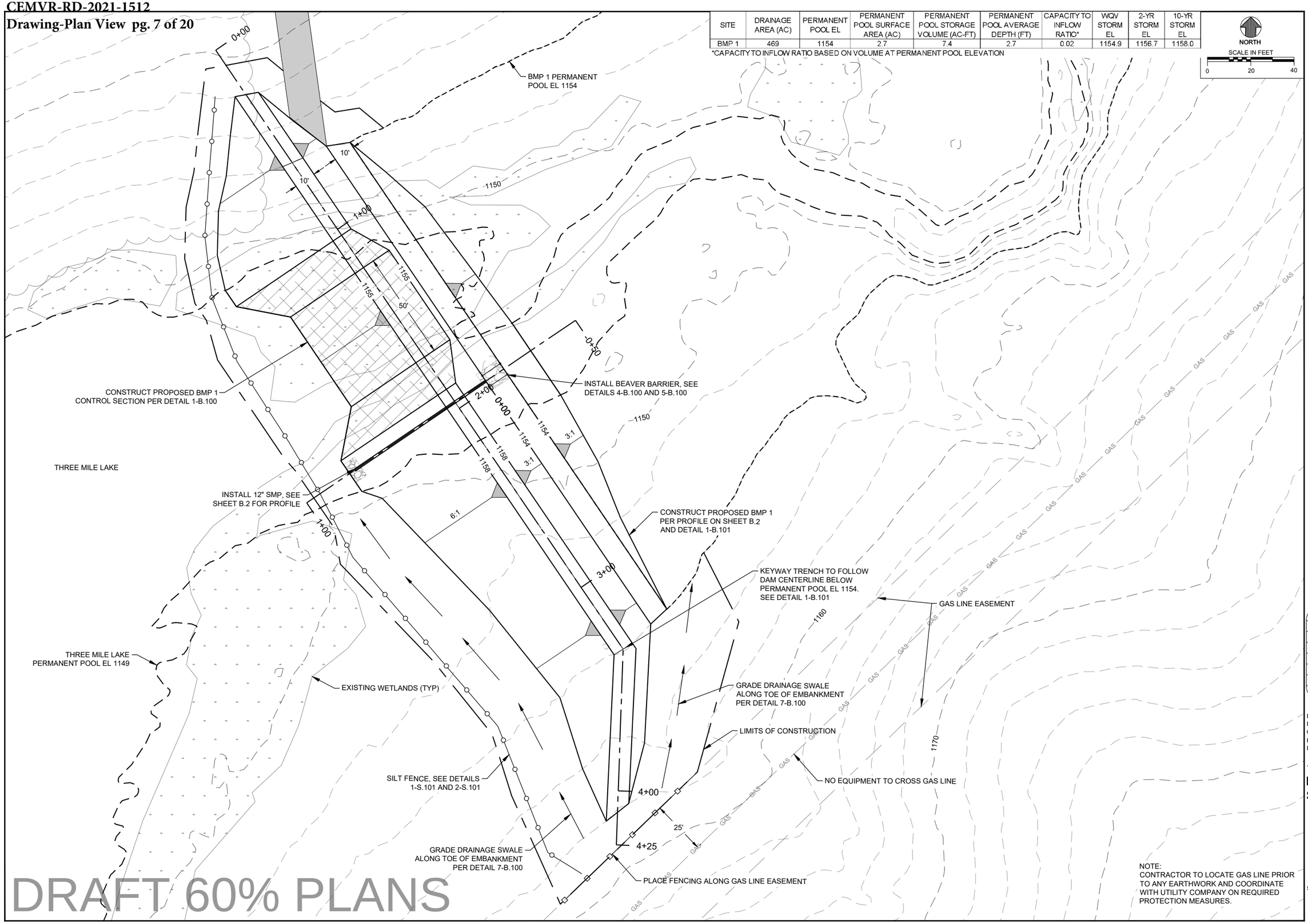
0 200 Feet

CEMVR-RD-2021-1512

Drawing-Plan View pg. 7 of 20

SITE	DRAINAGE AREA (AC)	PERMANENT POOL EL	PERMANENT POOL SURFACE AREA (AC)	PERMANENT POOL STORAGE VOLUME (AC-FT)	PERMANENT POOL AVERAGE DEPTH (FT)	CAPACITY TO INFLOW RATIO*	WQV STORM EL	2-YR STORM EL	10-YR STORM EL
BMP 1	469	1154	2.7	7.4	2.7	0.02	1154.9	1156.7	1158.0

*CAPACITY TO INFLOW RATIO BASED ON VOLUME AT PERMANENT POOL ELEVATION



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NOTE:
CONTRACTOR TO LOCATE GAS LINE PRIOR TO ANY EARTHWORK AND COORDINATE WITH UTILITY COMPANY ON REQUIRED PROTECTION MEASURES.

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UNION COUNTY, IOWA
2022

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DRAWN BY:	CKW
QA / QC BY:	MKS
PROJECT NO.:	007-20-01
DATE:	JUNE 2022

TITLE
BMP 1
SITE PLAN

SHEET
B.1

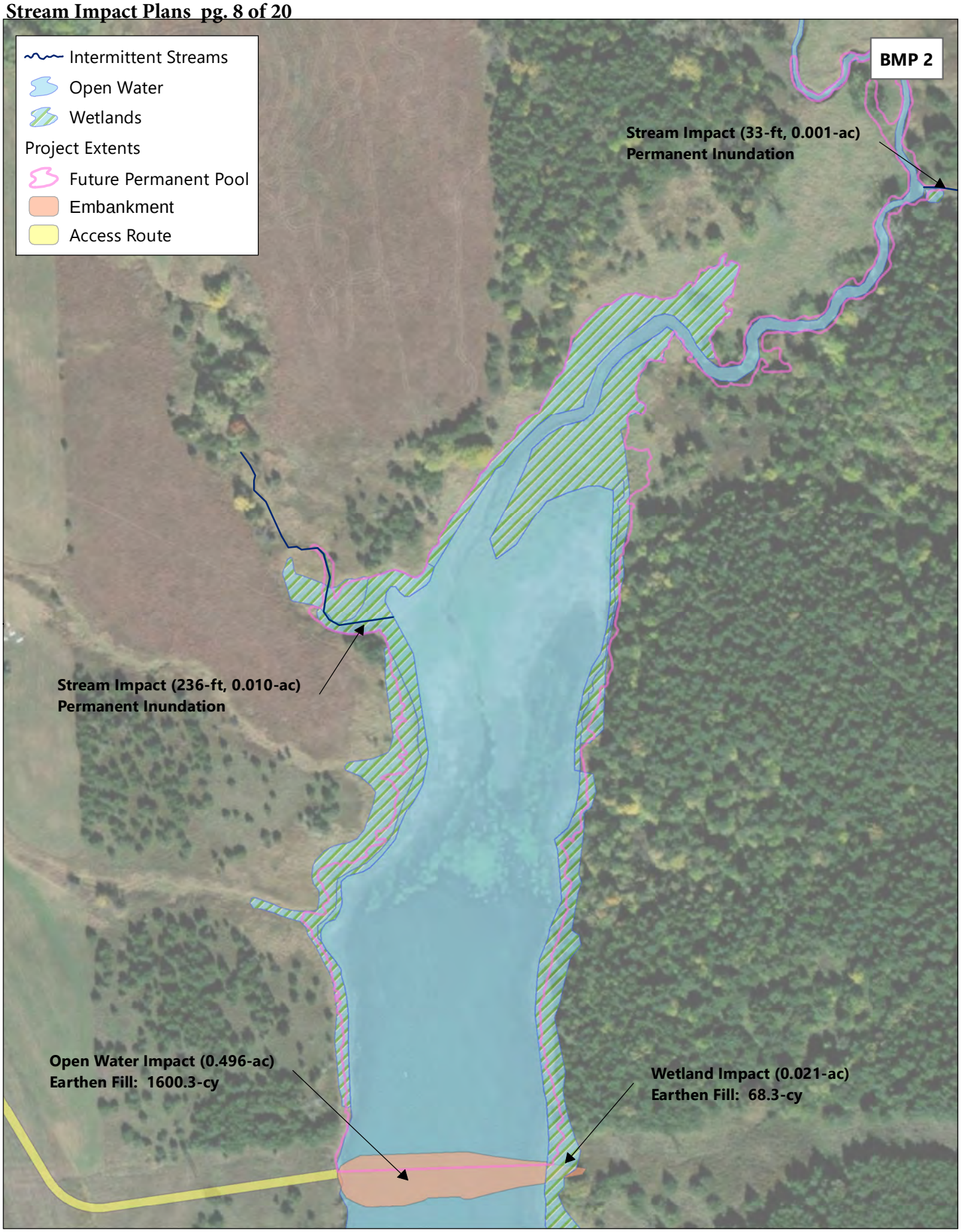
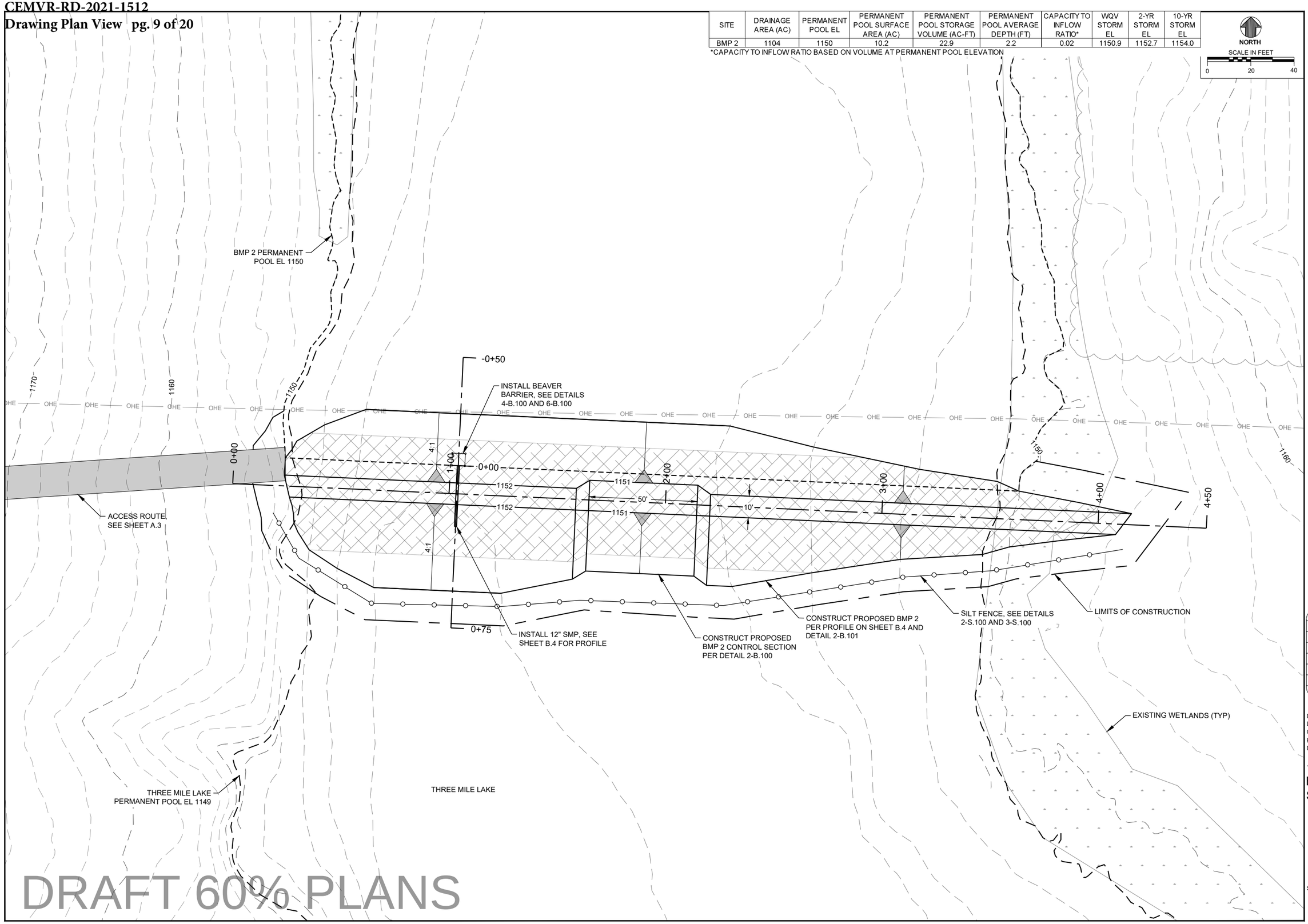


Figure 2D. Plan View
Request for Individual Permit
Three Mile Lake Restoration Project
Iowa Department of Natural Resources

SITE	DRAINAGE AREA (AC)	PERMANENT POOL EL	PERMANENT POOL SURFACE AREA (AC)	PERMANENT POOL STORAGE VOLUME (AC-FT)	PERMANENT POOL AVERAGE DEPTH (FT)	CAPACITY TO INFLOW RATIO*	WQV STORM EL	2-YR STORM EL	10-YR STORM EL
BMP 2	1104	1150	10.2	22.9	2.2	0.02	1150.9	1152.7	1154.0

*CAPACITY TO INFLOW RATIO BASED ON VOLUME AT PERMANENT POOL ELEVATION



DRAFT 60% PLANS

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IOWA DEPARTMENT OF NATURAL RESOURCES
UNION COUNTY, IOWA
2022

ENGINEER'S SEAL

REVISIONS

NO.	DATE

DESIGNED BY: SEM
DRAWN BY: CKW
QA / QC BY: MKS
PROJECT NO.: 007-20-01
DATE: JUNE 2022

TITLE
BMP 2
SITE PLAN

SHEET
B.3

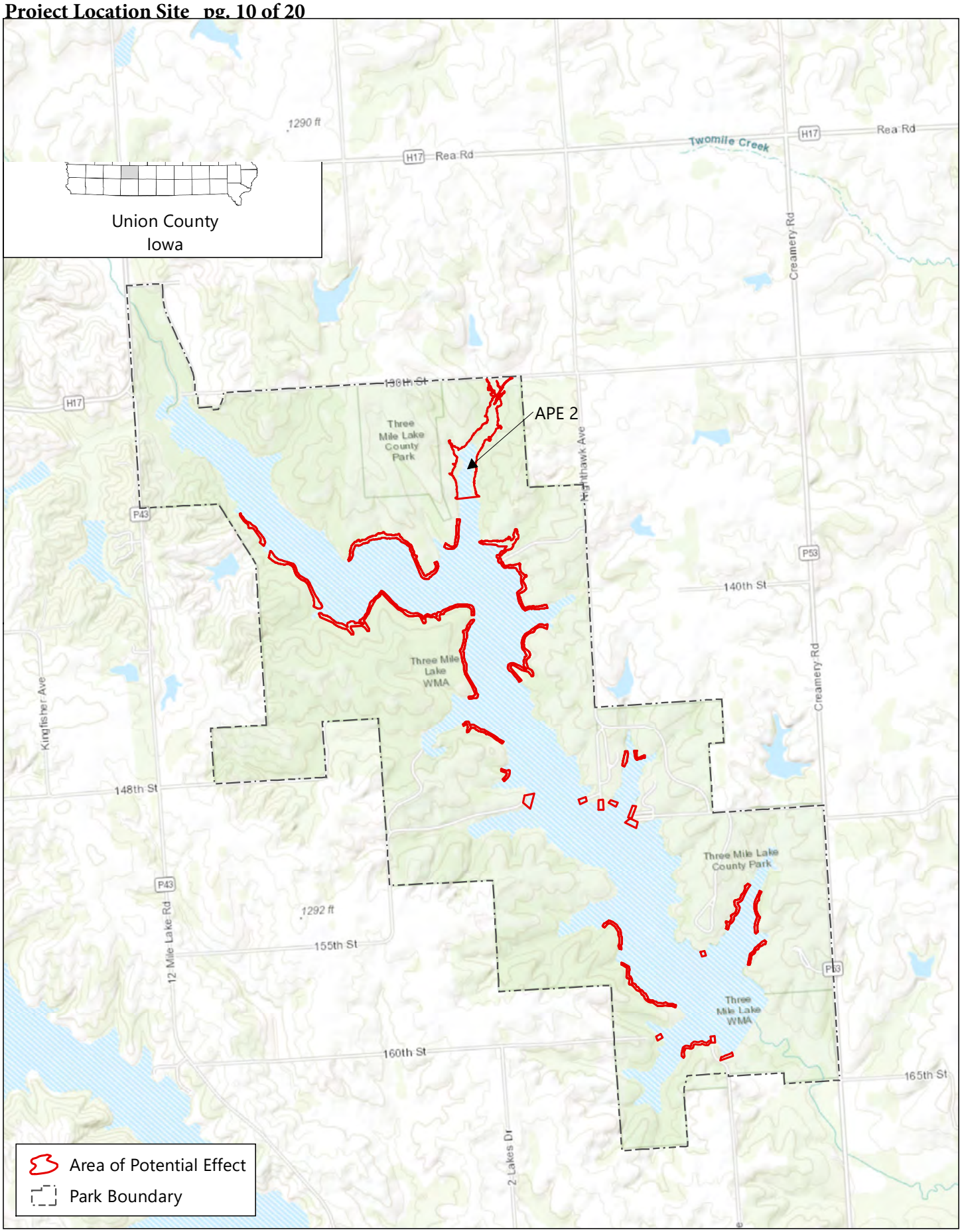


Figure 1. Project Site Location
Wetland Delineation Report: Addendum 2
Three Mile Lake Restoration Project
Iowa Department of Natural Resources

0 3,000 Feet

IOWA DEPARTMENT OF NATURAL RESOURCES

FYRA ENGINEERING

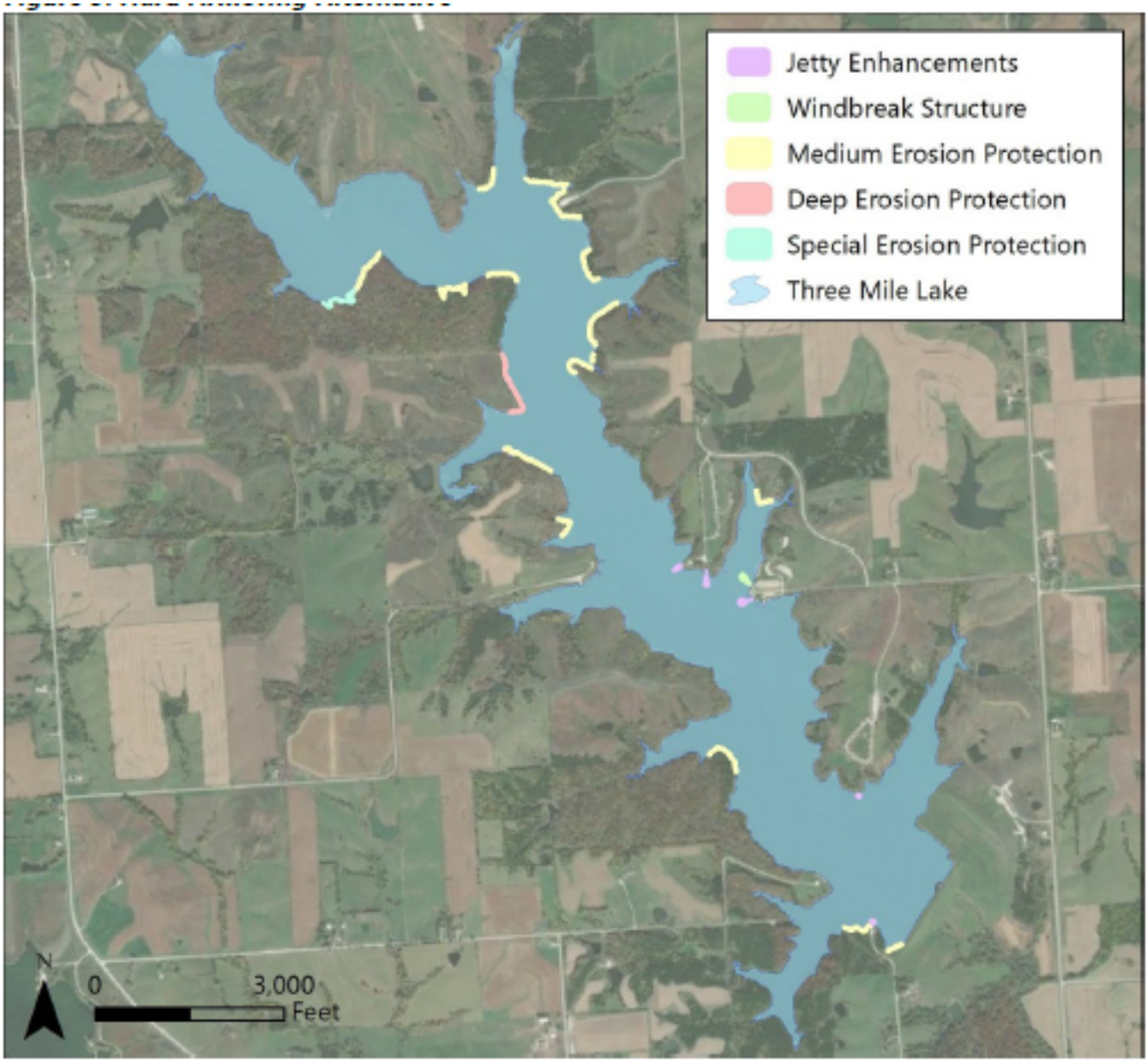

Jetty Enhancements
Windbreak Structure
Medium Erosion Protection
Deep Erosion Protection
Special Erosion Protection
Three Mile Lake
N
0
3,000
Feet

Figure 2. Deep Erosion Protection

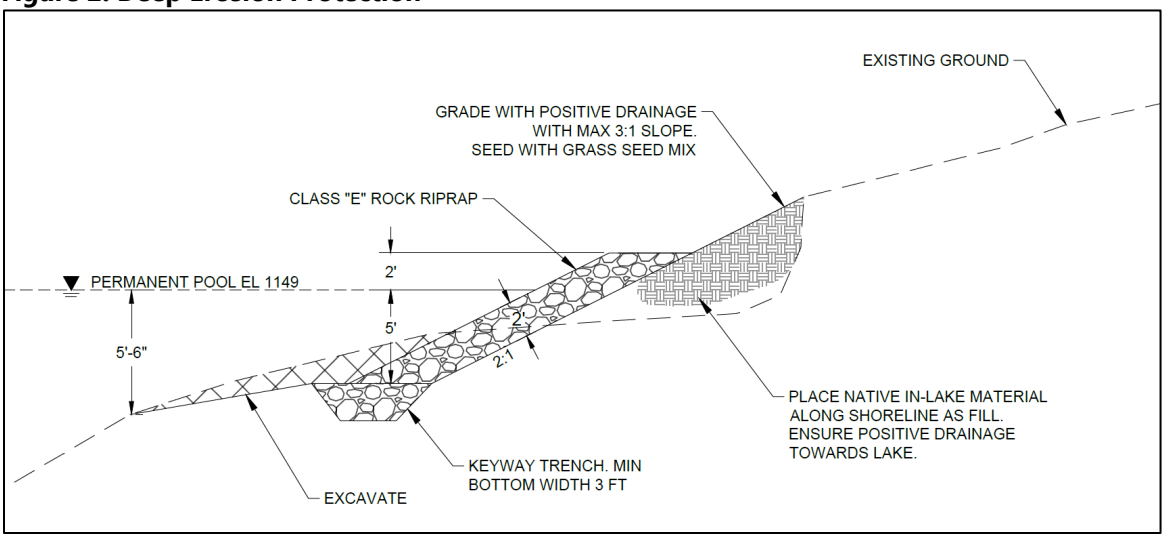


Figure 2a. Medium Erosion Protection

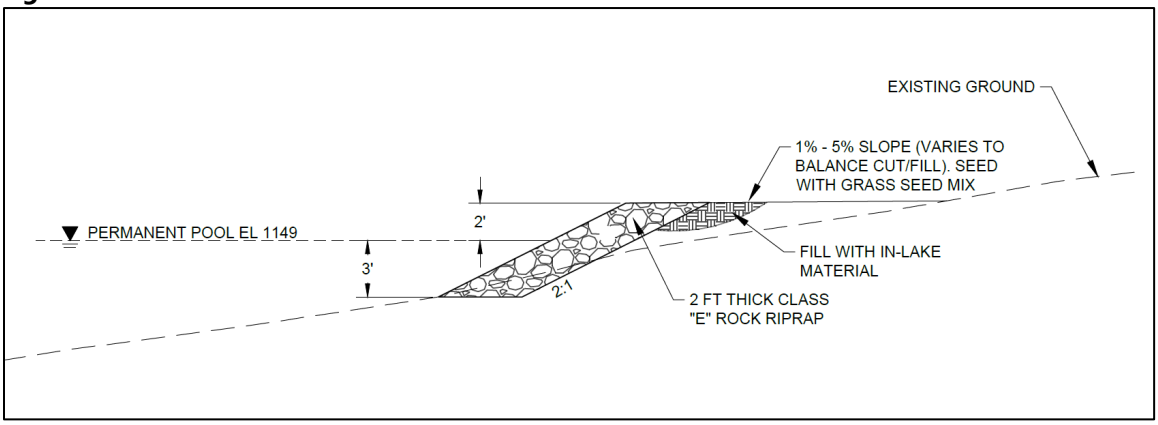
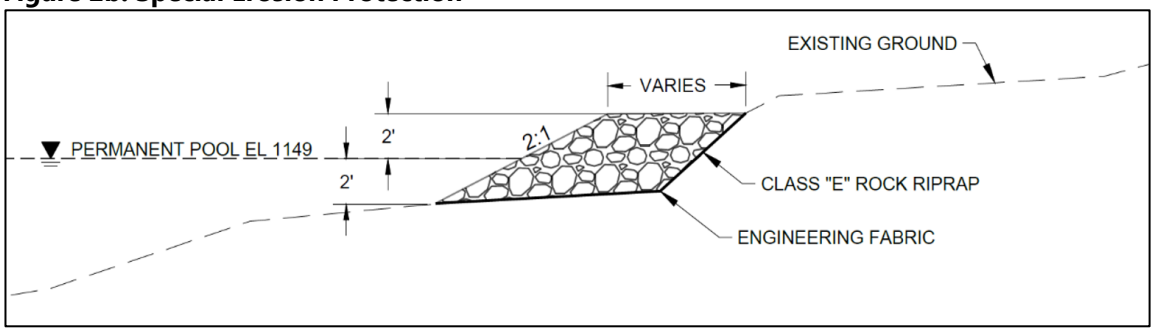


Figure 2b. Special Erosion Protection



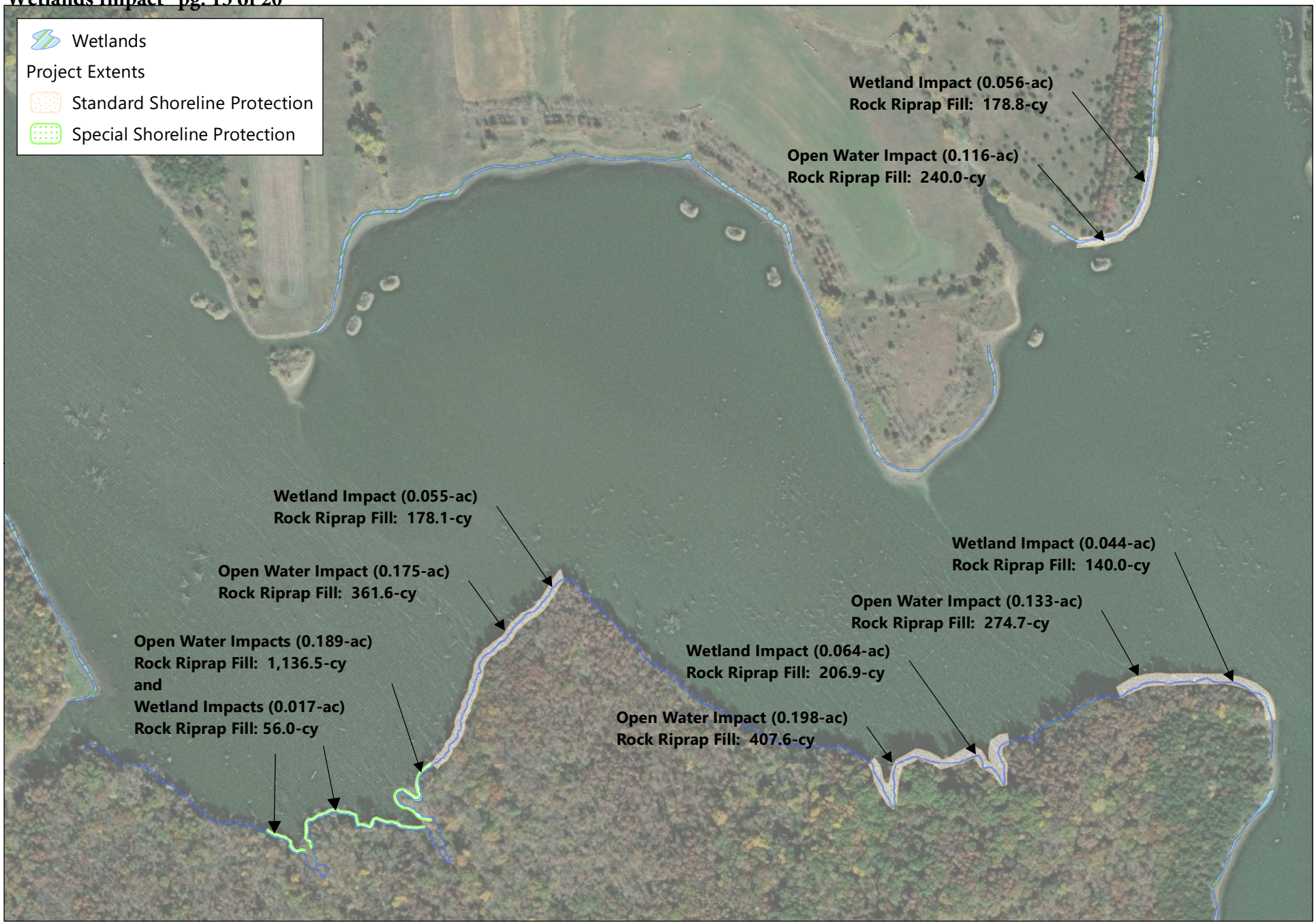


Figure 2E. Plan View
Request for Individual Permit
Three Mile Lake Restoration Project
Iowa Department of Natural Resources

0 400 Feet

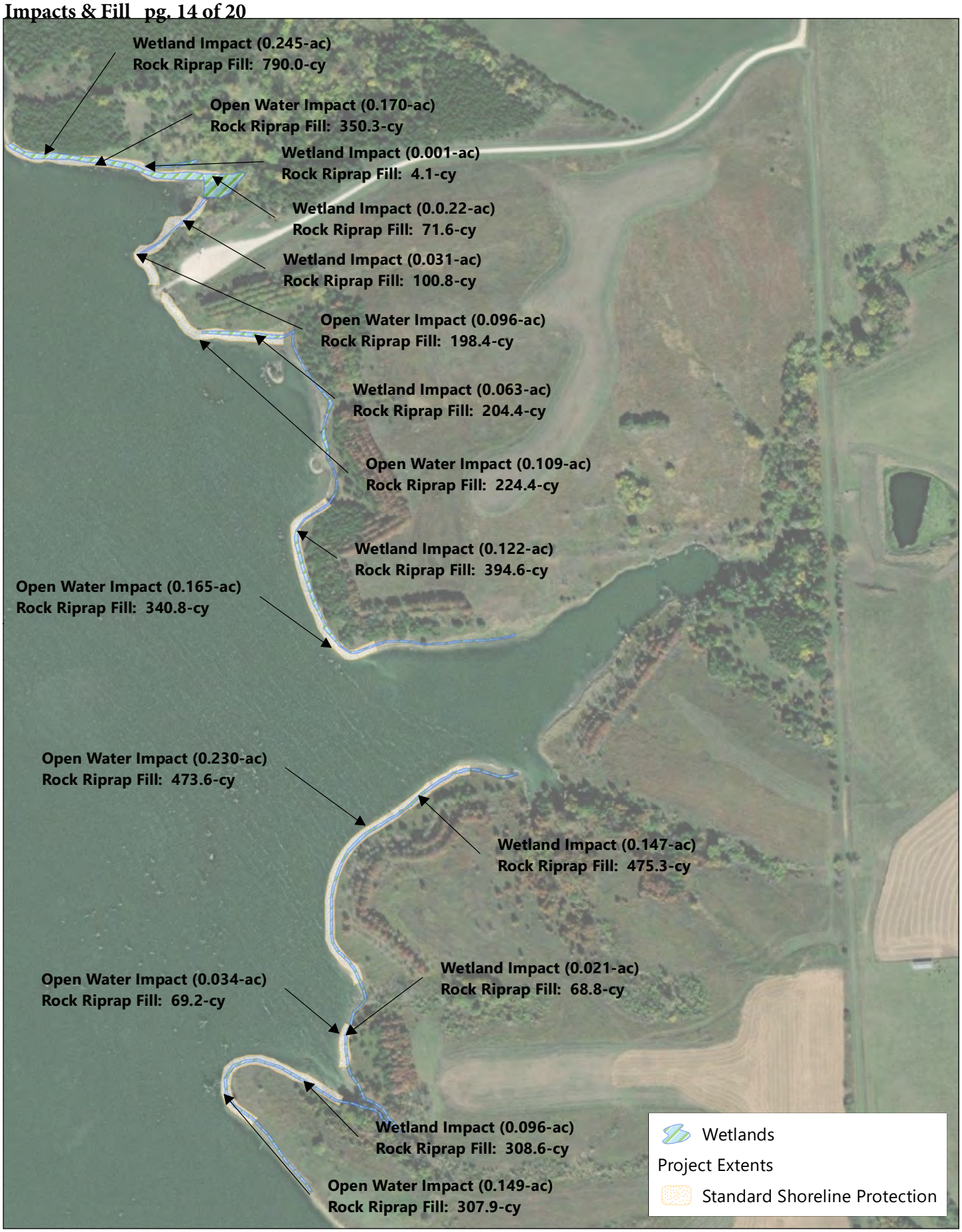


Figure 2F. Plan View
Request for Individual Permit
Three Mile Lake Restoration Project
Iowa Department of Natural Resources

0 400 Feet

Figure 2G. Plan View
Request for Individual Permit
Three Mile Lake Restoration Project
Iowa Department of Natural Resources

Figure 2H. Plan View
Request for Individual Permit
Three Mile Lake Restoration Project
Iowa Department of Natural Resources

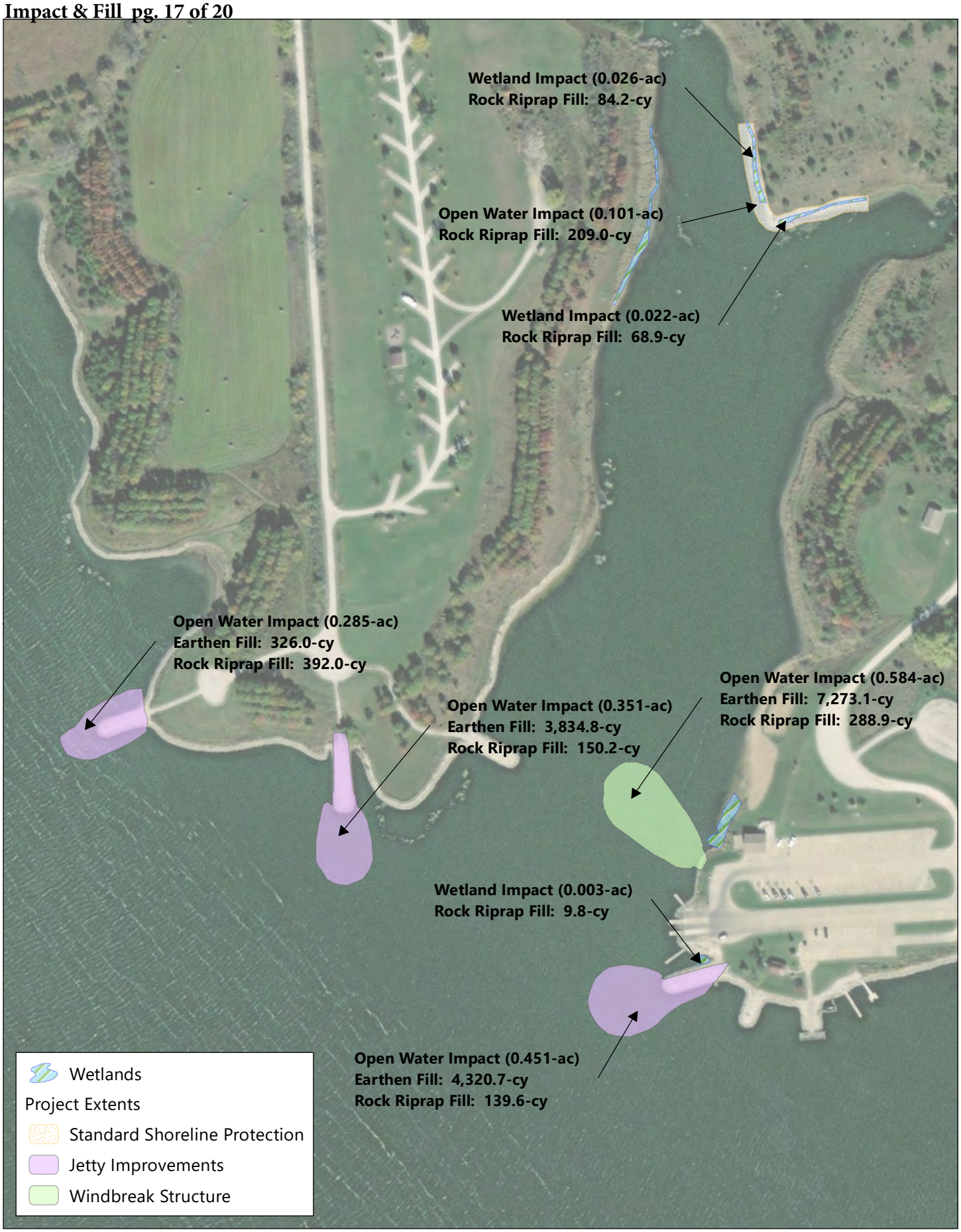


Figure 2I. Plan View
Request for Individual Permit
Three Mile Lake Restoration Project
Iowa Department of Natural Resources

Figure 2J. Plan View
Request for Individual Permit
Three Mile Lake Restoration Project
Iowa Department of Natural Resources

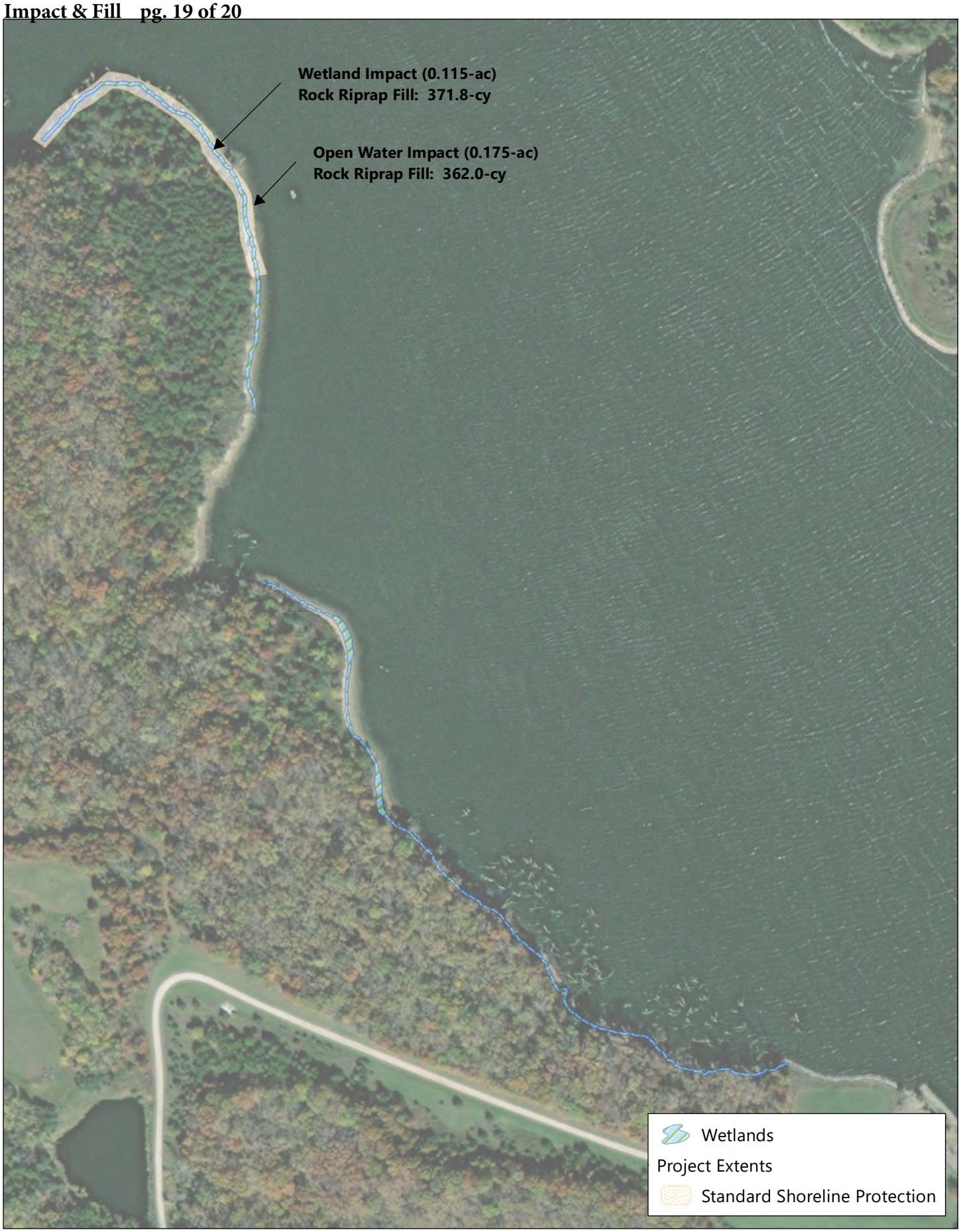


Figure 2K. Plan View
Request for Individual Permit
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Figure 2L. Plan View
Request for Individual Permit
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