

Site Redevelopment: Navigating the Wetland Permitting and Mitigation Process

Bridgette L. Rillema, PE
ZFS Solutions, LLC



Todd Losee, PWS
Niswander Environmental



Outline

Site History

Site Development Goals

Site Due Diligence

Wetland Delineation, Permitting, Mitigation

Threatened and Endangered Species

Site Development and Operation

Questions

Site History

- ▶ Pre-2007 - Agricultural property on the edge of the City of Ithaca
- ▶ 2007 - Proposed ethanol plant development
- ▶ 2008 - Site partially developed
- ▶ 2014 - ZFS Ithaca purchased site to construct a soybean processing facility
- ▶ 2014-2016 - Due diligence
- ▶ 2017 - Wetland development
- ▶ 2017 - Site development
- ▶ 2019-2020 - Facility is operational



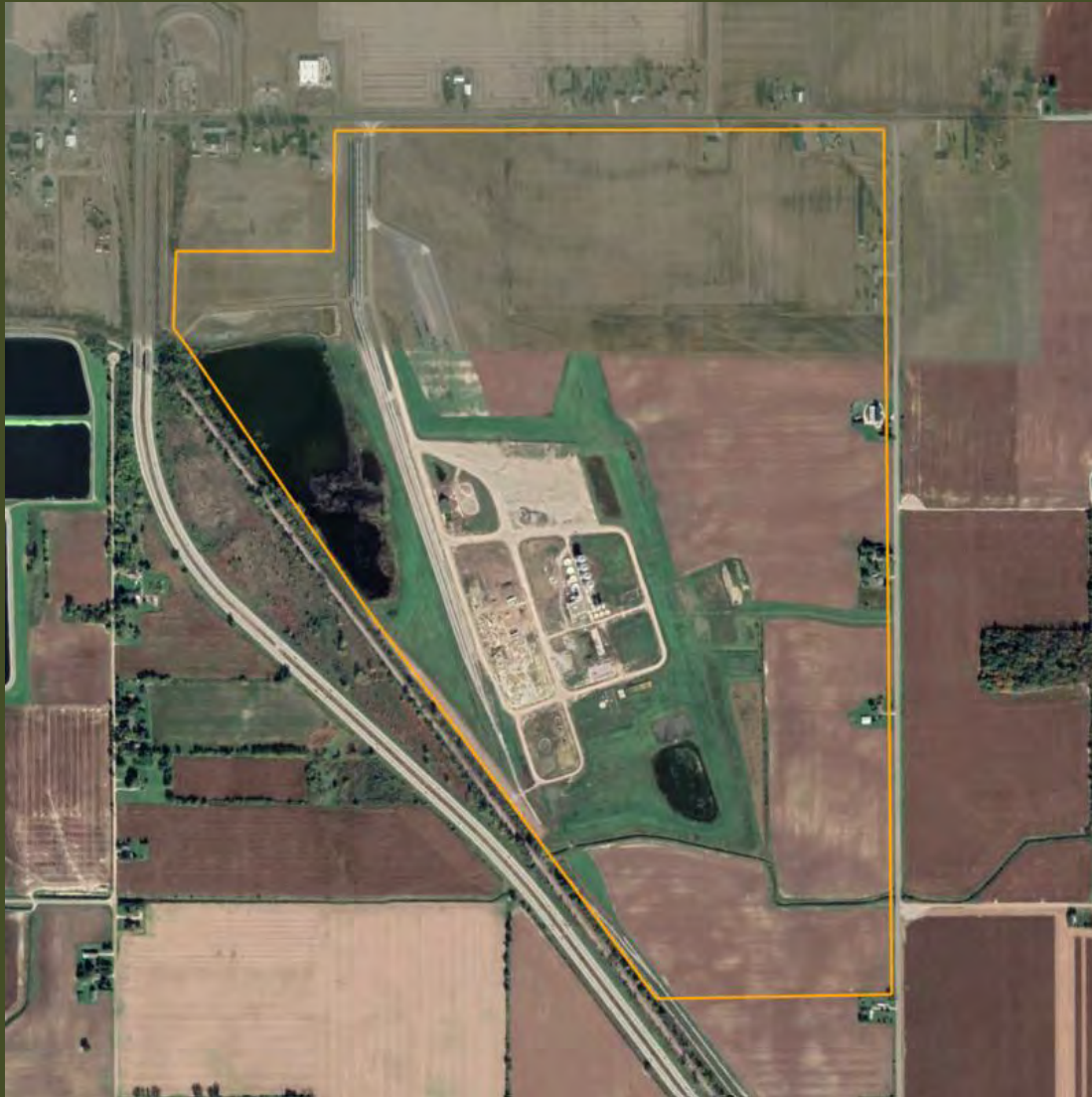
1998 - Pre-Site Development



2007 - Site Development Begins



2008 - Site Development Stalls



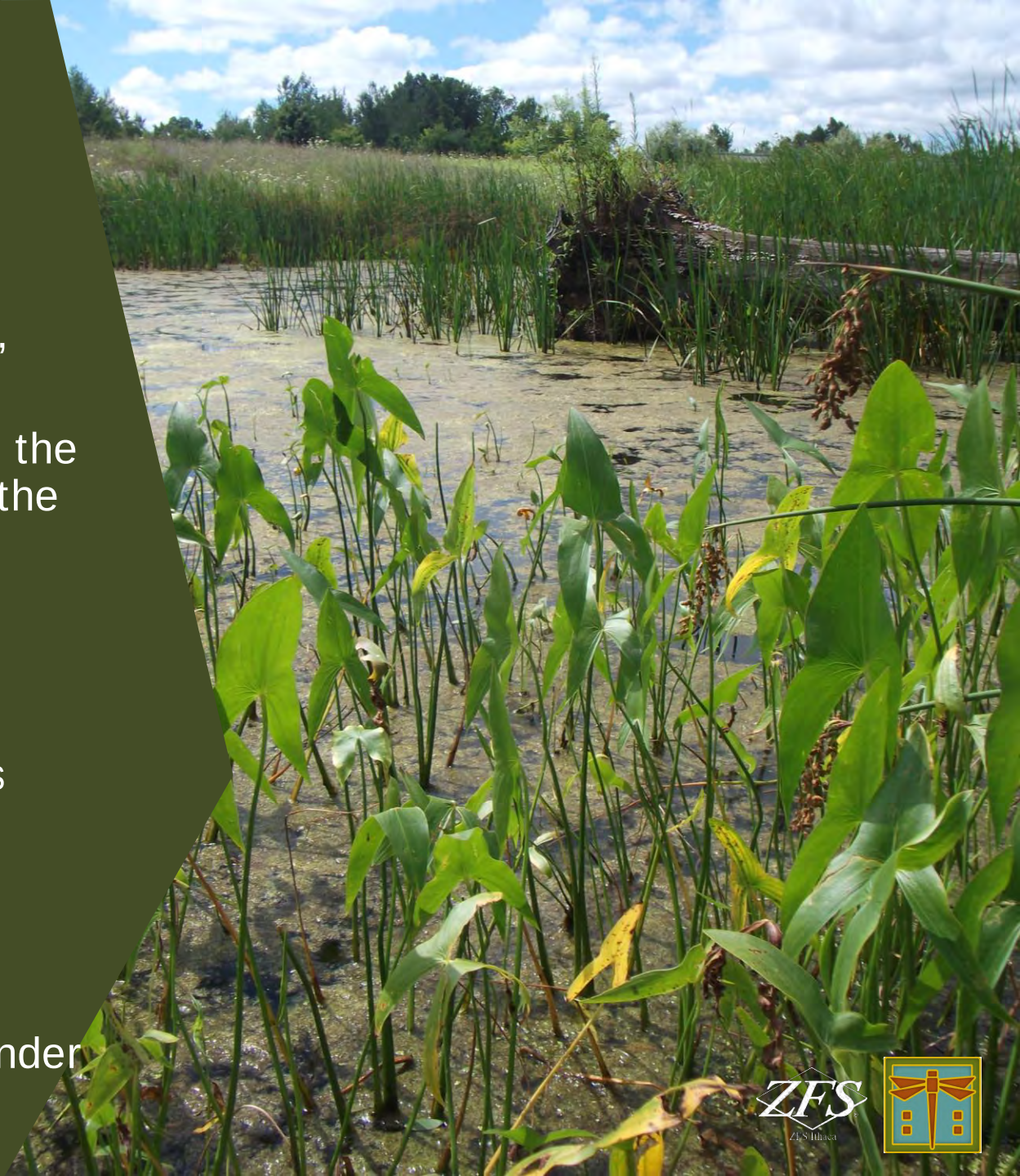
ZFS

- ▶ ZFS became interested in the property in 2014
- ▶ Due diligence included
 - ▶ Phase 1
 - ▶ Environmental permits
 - ▶ Local zoning
 - ▶ Wetland delineation

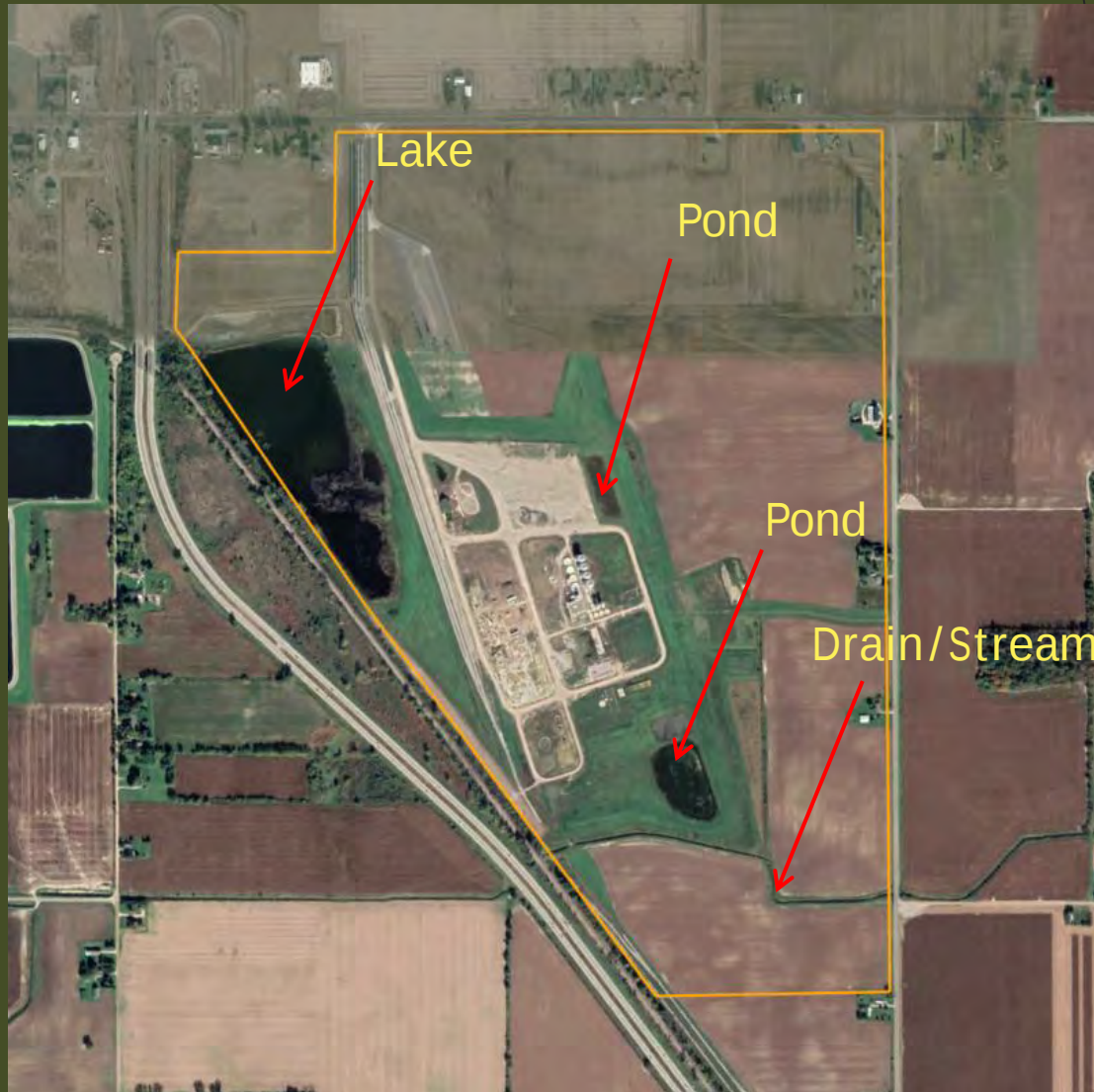


Wetland Delineation

- ▶ Process to Identify all “Waters” - Wetlands, Lakes, Streams, Ponds, etc.
- ▶ Wetland Delineation is the process of identifying the boundaries of the “Waters.”
- ▶ Part 31 - Floodplain Authority
- ▶ Part 301 - Inland Lakes and Streams
- ▶ Part 303 - Wetlands Protection
- ▶ Michigan has Federal Permitting Authority under Part 301 and Part 303



Potential Regulated Waterbodies



Potential Wetland Areas



Wetland Regulations in Michigan

Wetland means a land or water feature, commonly referred to as a bog, swamp, or marsh, inundated or saturated by water at a frequency and duration sufficient to support, and that under normal circumstances does support, hydric soils and a predominance of wetland vegetation or aquatic life.



Wetlands are regulated if they are any of the following:

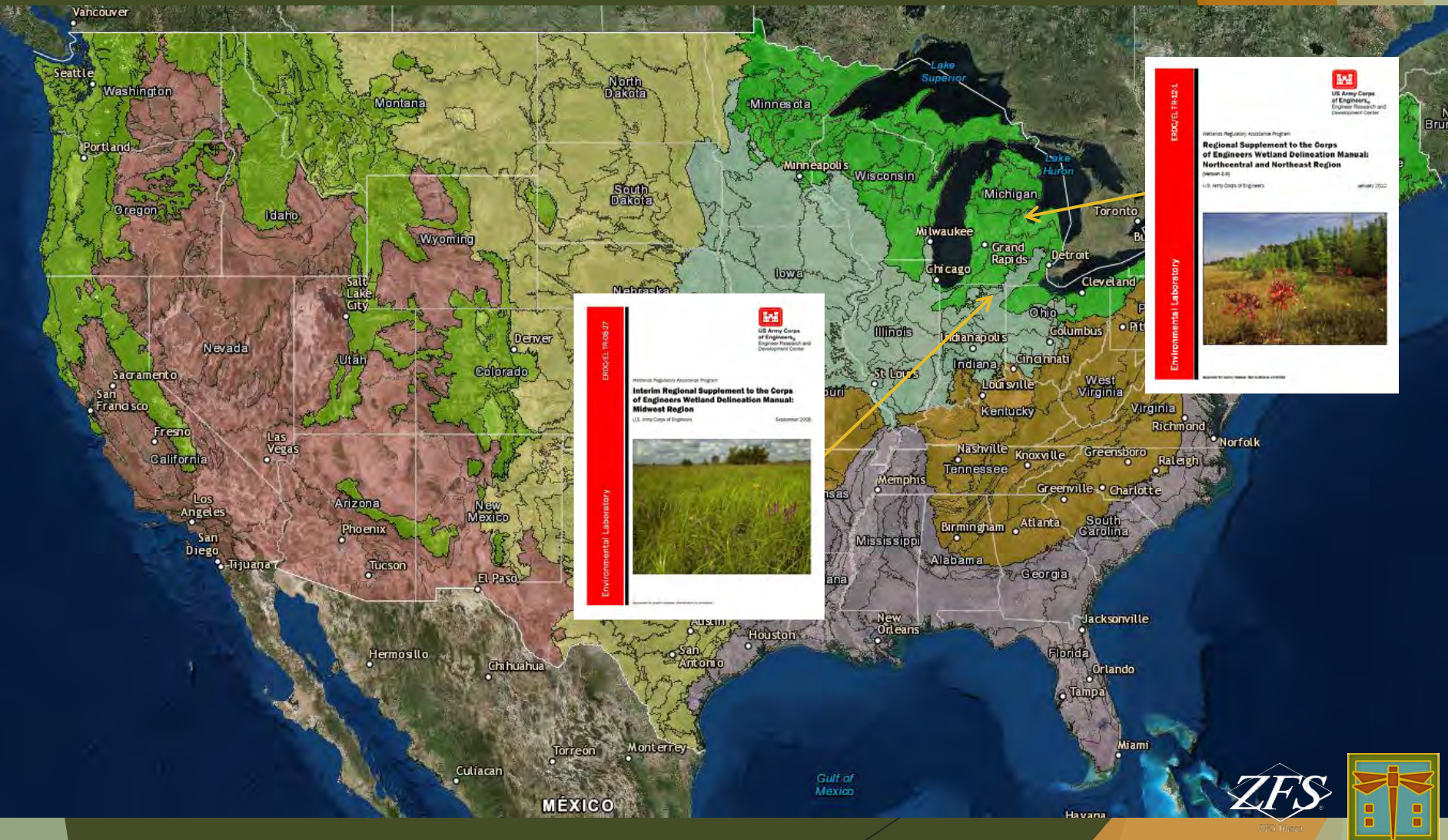
- Connected to other waters
- Within 500 feet of inland waters, or 1000 feet of the Great Lakes
- More than 5 acres in size
- Have state or federal threatened species or are rare and imperiled wetlands
- Are WOTUS under the federal CWA

Wetlands Identification

MCL 324.3031(4)

The department and local units of government shall apply the *technical wetland delineation standards* set forth in the United States army corps of engineers January 1987 *wetland delineation manual*, technical report Y-87-1, and appropriate *regional* United States Army Corps of Engineers *supplements*, in identifying wetland boundaries under this part, including, but not limited to, section 30307.

10 Regional Supplements



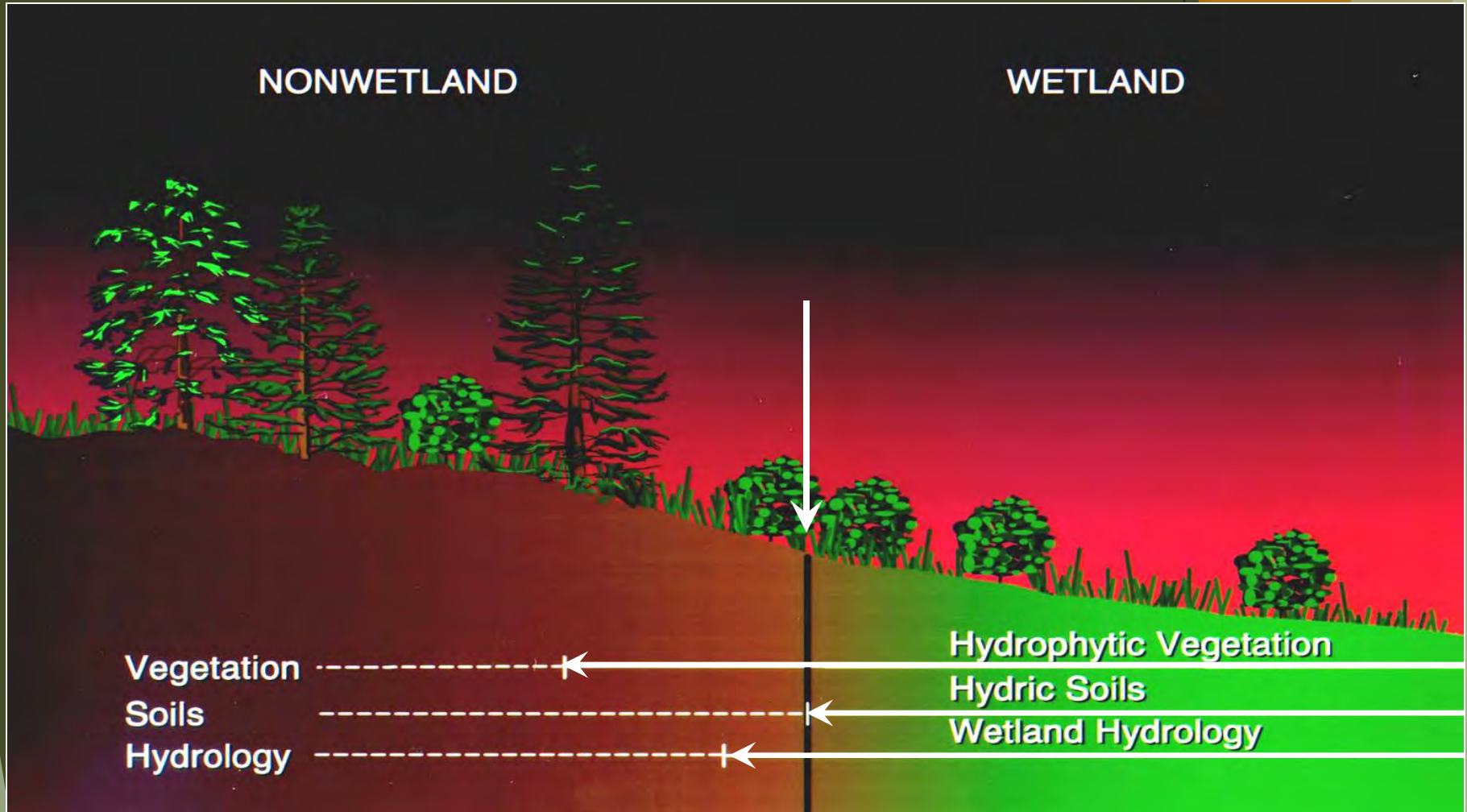
Wetlands Delineation

- ▶ The identification of wetland/upland boundaries
- ▶ Requires on the ground verification of vegetation, soils, and hydrology
- ▶ Typically flagged or staked on the site
- ▶ Flags are then surveyed and incorporated into site plans



Wetland Delineations MUST be completed in the growing season

Wetland Identification (3-Criteria Approach)



National Wetland Inventory Mapping



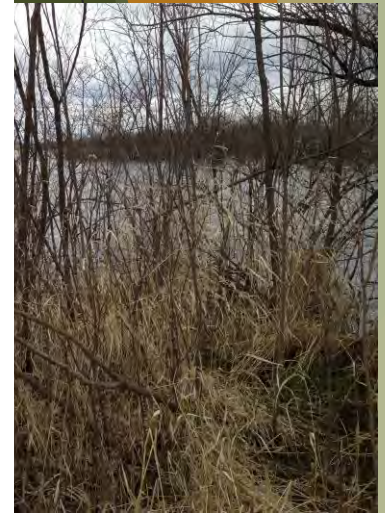
Assessing the ZFS Ithaca Site



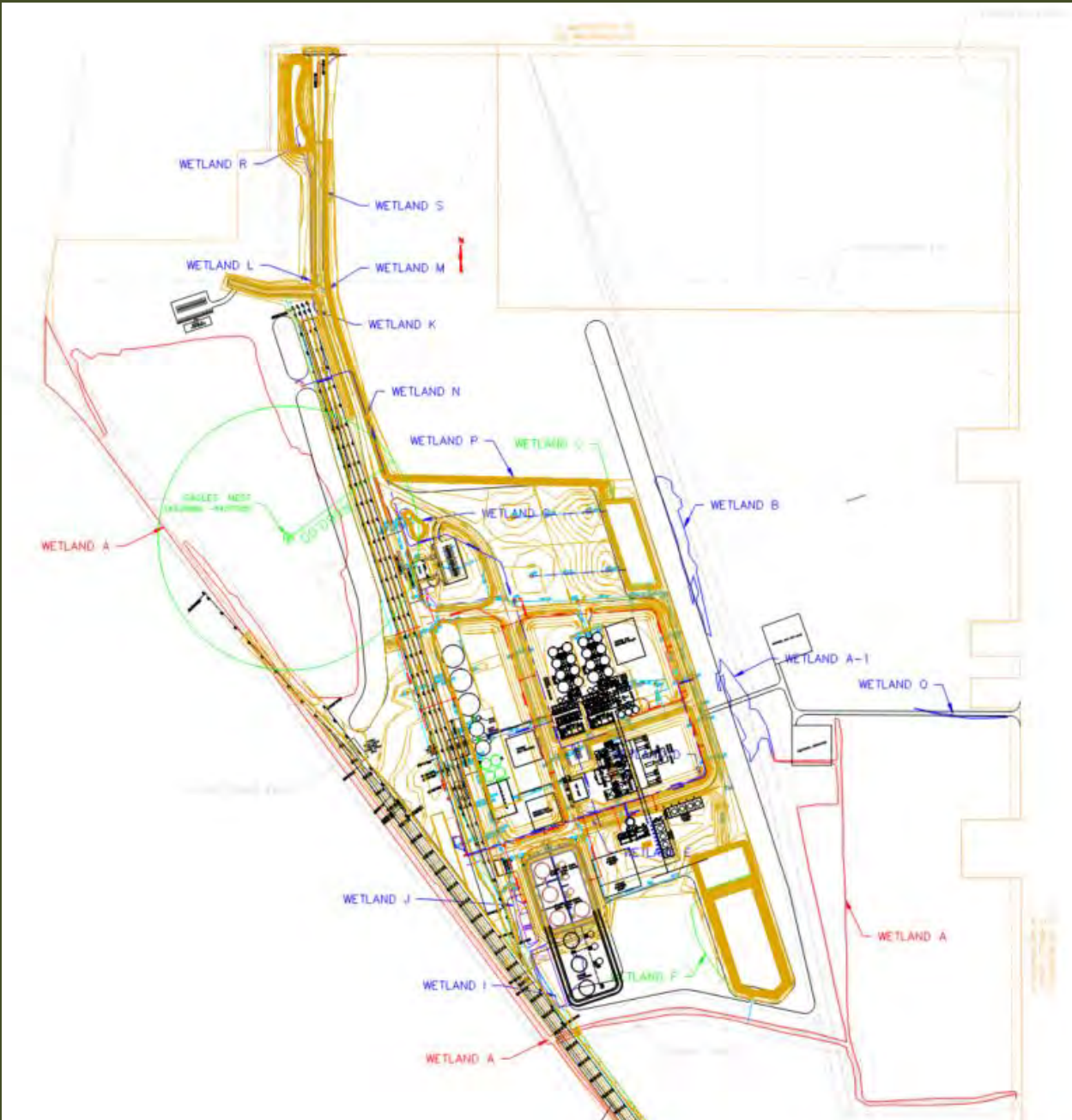




Wetland Delineation



Site Plan Development



Wetland Impact Tables

WETLANDS

REGULATED WETLANDS

Wetland Area	Square Feet	Acres	Acres to be Filled
WETLAND "A"	1,761,121.63	40.430	0.066
WETLAND "G"	21,452.52	0.492	
WETLAND "H"	1,056.18	0.024	
WETLAND "I"	55,623.80	1.277	1.277
WETLAND "J"	16,690.38	0.383	0.383
TOTALS	1,855,944.51	42.607	1.726

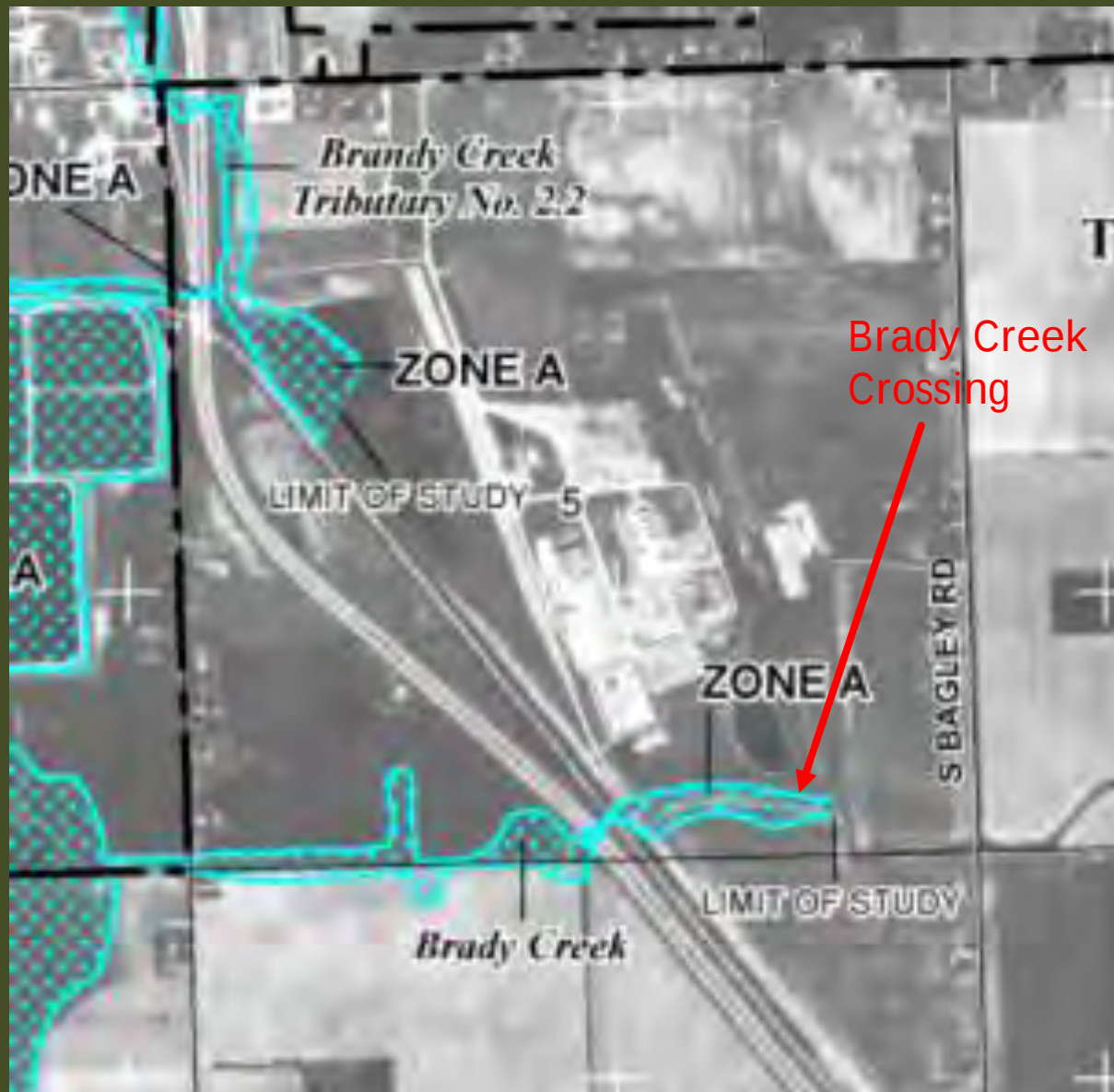
REGULATED WETLANDS (Created Ditches from Previous Development)

Wetland Area	Square Feet	Acres	Acres to be Filled
WETLAND "D"	1,897.30	0.044	0.044
WETLAND "K"	947.30	0.022	0.022
WETLAND "L"	190.98	0.004	0.004
WETLAND "M"	856.35	0.020	0.020
WETLAND "N"	10,278.08	0.236	0.236
WETLAND "Q"	3,319.47	0.076	0.076
WETLAND "R"	10,748.78	0.247	0.247
TOTALS	28,238.264	0.648	0.648

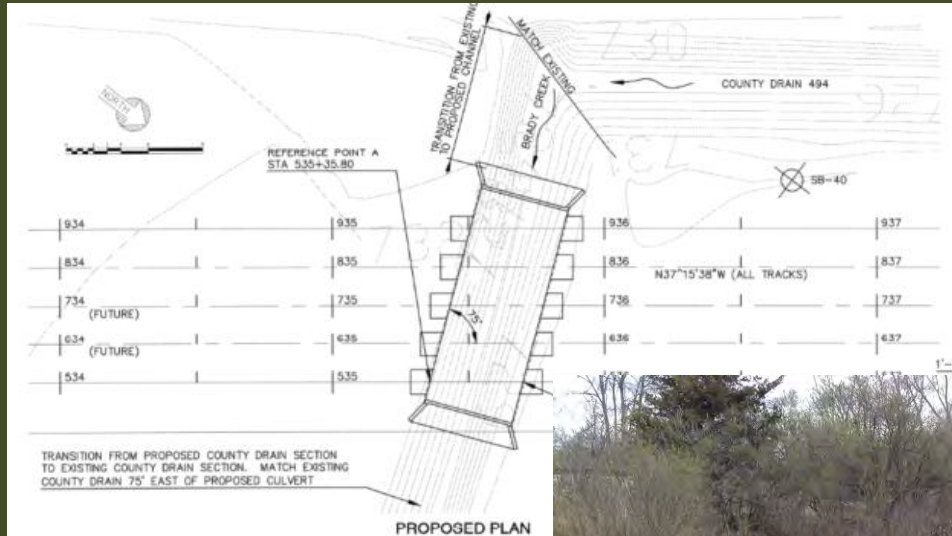
TOTAL ACRES TO BE FILLED

2.375

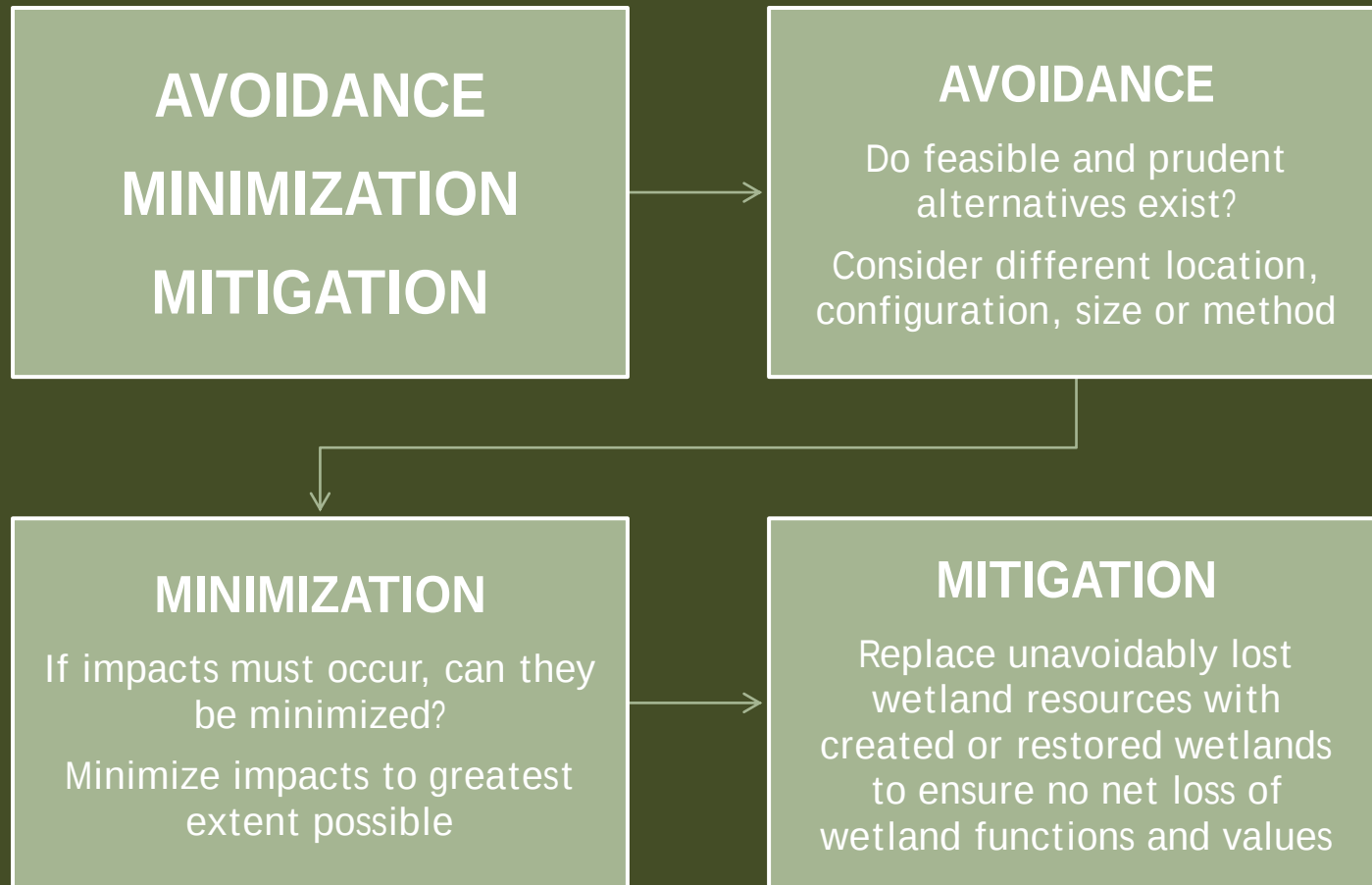
Streams and Floodplain Impacts



Streams and Floodplains



Site Development Planning





U.S. Army Corps of Engineers
Detroit District Office
Phone: 313-226-2218, Fax: 313-226-6763
Website: www.lre.usace.army.mil

Michigan Department of Environmental Quality
Water Resources Division
See staff map on page iii for contact information
Website: www.mideq.gov/jointpermit



Joint Permit Application

For Work in Inland Lakes and Streams, Great Lakes, Wetlands, Floodplains, Dams,
High Risk Erosion Areas and Critical Dune Areas

www.mi.gov/jointpermit

1 → Project Location Information For Latitude, Longitude, and TRS info anywhere in Michigan see www.mcqi.state.mi.us/wetlands/

Project Address (road, if no street address)	Zip Code	Municipality (Township/Village/City)	County
1266 East Washington Road	48847	Ithaca	Gratiot
Property Tax Identification Number(s)	Latitude	Township/Range/Section (TRS)	
46-5095210	43 291572 N	T 10N N or S; R 02W E or W	
Subdivision/Plat and Lot Number	Longitude	Sec	OR Private Claim #
NA	84 577644 W	5	0000

Contact Phone Number

City State Zip Code

3 → Project Description

Project Name ZFS Ithaca, LLC	Preapplication File Number 0000 0000 0000 P
Name of Water body un-named wetlands	Date project staked/flagged April 27, 2015
The proposed project is on, within, or involves (check all that apply)	
☐ an inland lake (5 acres or more) ☐ a pond (less than 5 acres) ☒ a stream, river, ditch or drain ☒ a legally established County Drain Date Drain was established 0000 ☐ a channel/canal ☐ 500 feet of an existing water body	☐ a Great Lake or Section 10 Waters ☒ a wetland ☐ a 100-year floodplain ☐ a dam ☐ a designated high risk erosion area ☐ a designated critical dune area ☐ a designated environmental area
Project Use ☐ private ☒ commercial ☐ public/government ☐ project is receiving federal/state transportation funds ☐ Wetland Restoration ☐ other 0000	

Indicate the type of permit being applied for: ☐ General Permit ☐ Minor Project ☒ Individual (All other projects.) → See Appendix C.

Written Summary of All Proposed Activities: The project proposes to place 11,485 cubic yards of clean fill material in 2.27 acres of emergent wetland to construct a Soybean Oil processing facility and other associated infrastructure and buildings. In addition, install three 9'2" x 10'6" concrete box culverts and 35 cubic yards of MDOT grouted heavy riprap within the Brady Creek Drain and its associated 100-year Floodplain to facilitate the completion of the construction of five railroad lines that enter the site. 3.4 acres of emergent wetland is being proposed as compensatory mitigation for the wetland impacts. Compensatory wetland mitigation is proposed at 1.5 to 1 ratio (See attached Conceptual Wetland Mitigation Plan).

The floodplain impacts are in compliance with the previously issued MDEQ permit (07-29-0007-P, issued 9/17/2007). All floodplain compensatory cuts as required by 07-29-0007-P were completed as permitted.



Typical EGLE Wetland Permit Process

Complete joint permit application (in MiEnviro)

- Includes project information

- Resources impacts (wetlands, lakes, streams, floodplains, etc.)

- Mitigation plans (wetlands, floodplains, streams)

Correction requests - clarifications (almost always)

Public notice/public hearing (rarely)

Meet with EGLE staff (usually on-site)

Modify project to further minimize impacts

Permit Decision



ZFS Permit Application Review

- ▶ EGLE's review consisted of an onsite review. Noting that a large amount of the wetlands were recently created and significant effort had been taken during site plan development to avoid impacts to the higher quality resources on the site (lake, stream, and adjacent wetlands).
- ▶ 1) Avoid - wasn't possible
- ▶ 2) Minimize - during site plan development - shifting roads, buildings, other infrastructure - satisfied EGLE
- ▶ 3) Mitigate - Although a conceptual mitigation plan was developed, a final plan was needed once Step 1 & 2 were satisfied.



What is Wetland Mitigation?

- ▶ Replacement of unavoidably lost wetland resources with created or restored wetlands
- ▶ Goals
 - ▶ No net loss
 - ▶ Replace ecological functions and societal values
- ▶ Permittee Responsible Mitigation vs Mitigation Banks



Mitigation Options - Preferential Order

Purchase of
credits from a
wetland mitigation
bank (preferred).

The restoration of
previously existing
wetland

The creation of new
wetlands

The preservation of
exceptional
wetlands.

Site Wetland Mitigation



Conceptual Mitigation Plan Overview

1. The proposed activities will result in the placement of 11,485 cyd of clean fill into 2.27 acres of low-quality regulated wetland. A wetland delineation report is attached. The impacted wetlands are extremely low quality and provide limited functions and values. The compensatory wetland mitigation is proposed on-site. The proposed restoration will involve restoring emergent wetland in an area that is currently under agricultural production adjacent to the 22-acre lake. The proposed mitigation will provide wildlife habitat, improve water quality, and have significantly higher vegetation diversity than the impacted wetlands.
2. The proposed mitigation site is located on-site adjacent to the 22-acre lake.
3. The proposed mitigation will consist of 2.75 acres of emergent wetland.
4. The proposed mitigation site is currently under agricultural production and has been for more than 20 years. The soils on the site are dominated by Capac loam and Parkhill loam, both are hydric soils.
5. The mitigation wetland will be restored by grading the mitigation area to a flat elevation in order to achieve wetland hydrology. A water control structure along with shallow berms will be constructed to allow for greater control and manipulation of onsite hydrology. The hydrology of the site will rely on direct surface runoff. The wetland area will be seeded with native wetland seed mix and six habitat structures per acre will be installed.

Proposed
Wetland
Mitigation Site



Site Name: 29-1266 East Washington Rd-Ithaca

Application Number: 2JR-KY6H-5GSJ

Date: October 12, 2016



PUBLIC NOTICE

Mr. Eric Meeuwsen, 2525 84th Avenue, P.O. Box 290, Zeeland, Michigan 49464, has applied to this office for a permit under authority of Part 301, Inland Lakes and Streams, Part 303, Wetlands Protection, and Part 31, Water Resources Protection, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA). The applicant proposes to place 11,485 cubic yards of clean fill material in 2.27 acres of emergent wetland to construct a Soybean Oil processing facility and other associated infrastructure and buildings. In addition, they propose to install three 9' 2" x 10' 6" concrete box culverts and 35 cubic yards of MDOT arouted heavv riprap within the



NOTICE OF AUTHORIZATION

Permit Number: WRP005426 v. 1

Site Name: 29-1266 East Washington Rd-Ithaca

Date Issued: February 21, 2017

Expiration Date: February 21, 2022

The Michigan Department of Environmental Quality, Water Resources Division, P.O. Box 30458, Lansing, Michigan 48909-7958, under provisions of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended; specifically:

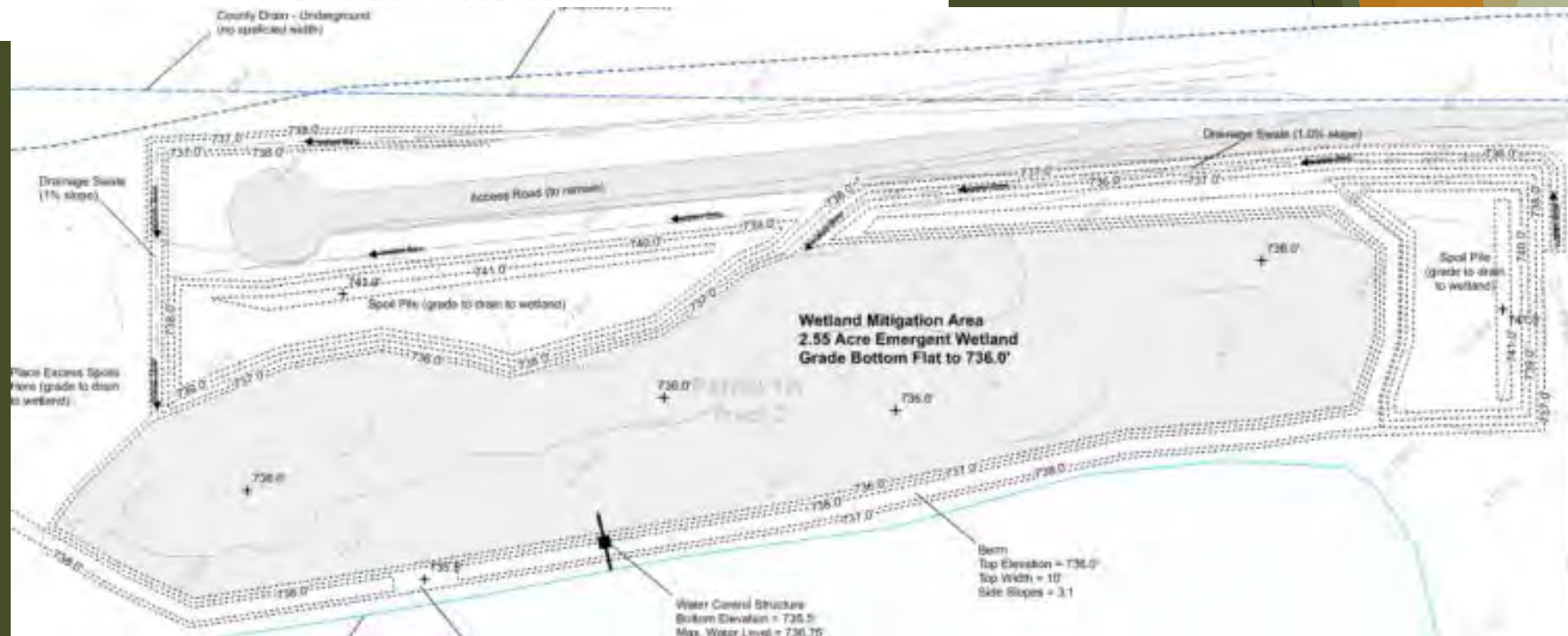
- ☒ Part 31, Floodplain Regulatory Authority of the Water Resources Protection.
- ☒ Part 301, Inland Lakes and Streams.
- ☒ Part 303, Wetlands Protection.

FINAL WETLAND MITIGATION PLAN



ZFS Ithaca 2.55-Acre Wetland Mitigation Gratiot County, MI

Permit #WRP005426 v.1

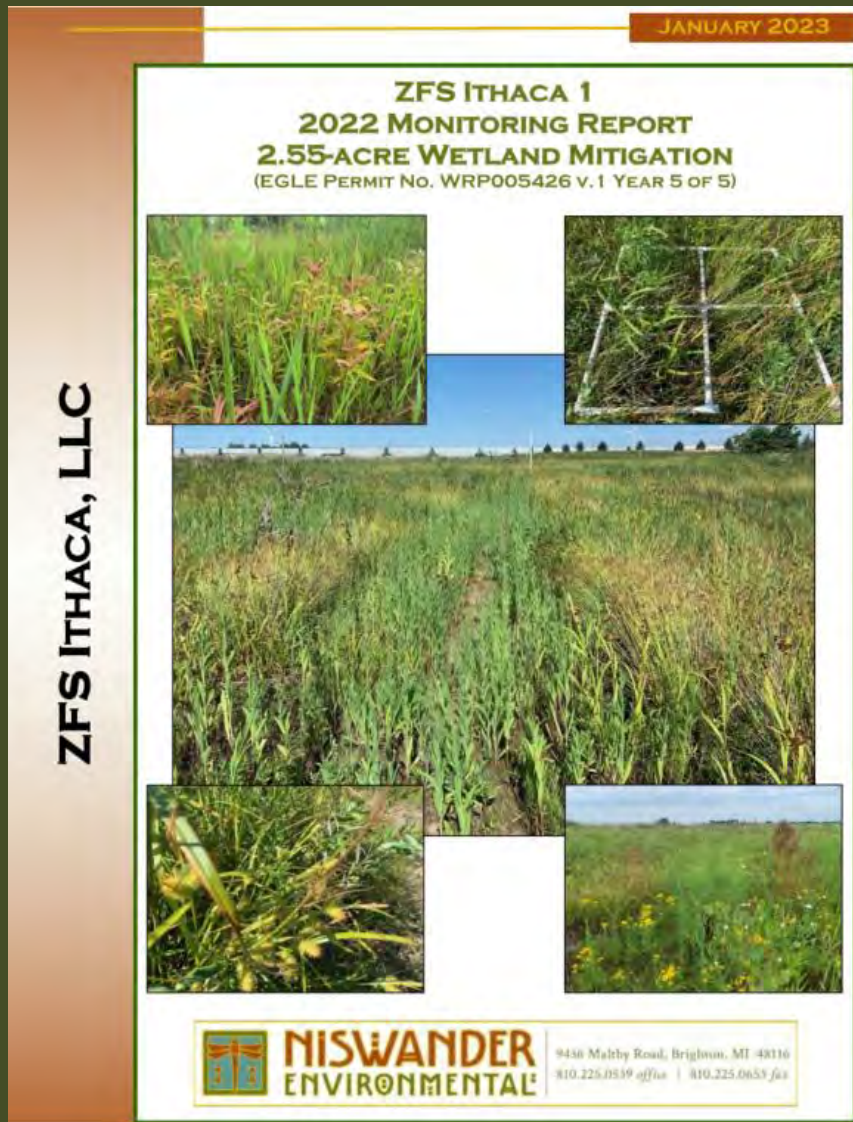




Conservation
Easements must be
placed over all
mitigation. These
areas will be
protected forever



Permit Required 5 Years of Monitoring



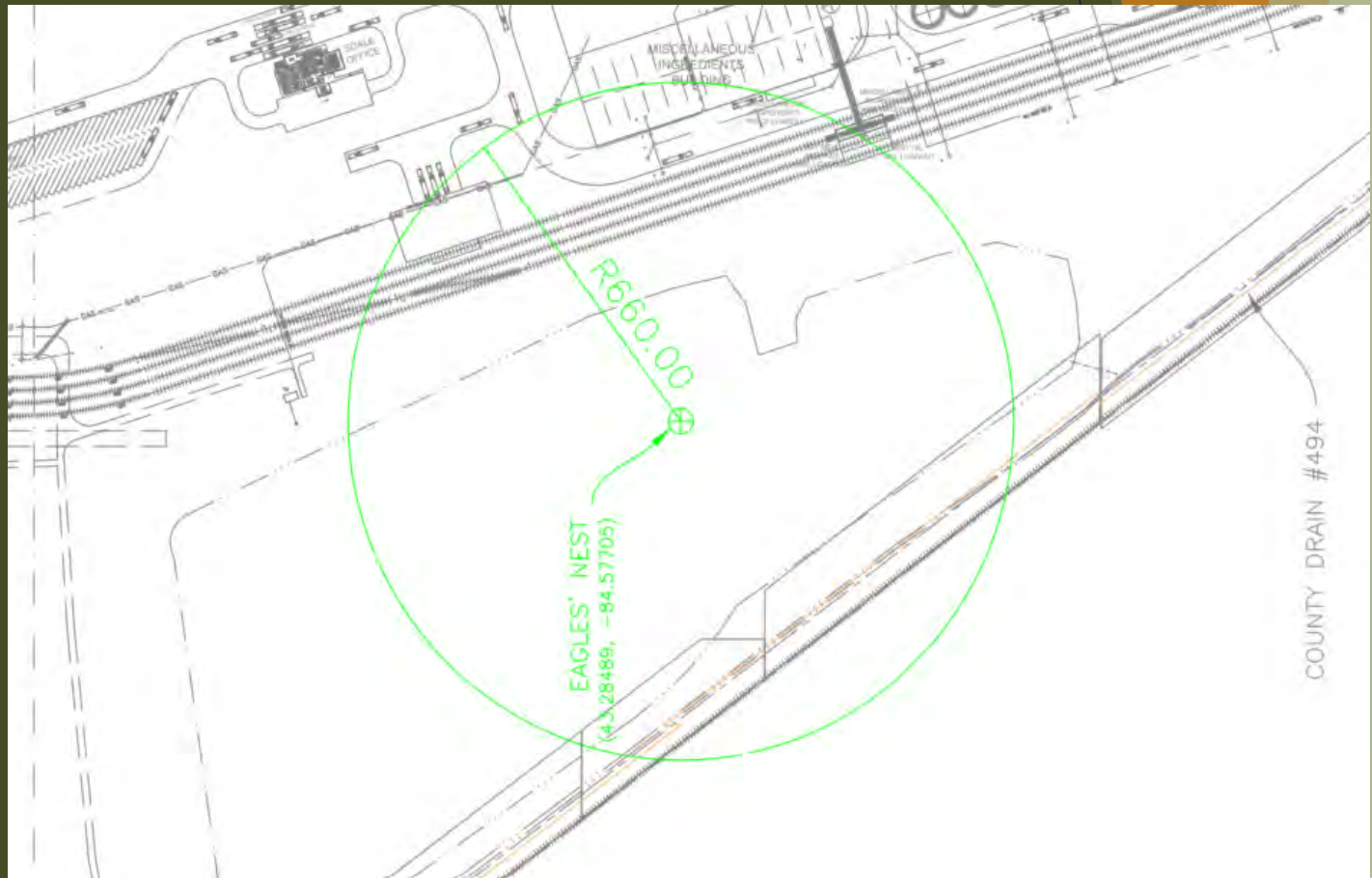
- ▶ The EGLE Permit requires Wetland Mitigation Performance Standards relating to Construction Grading, Hydrology, Plant Establishment and Diversity.
- ▶ Performance Standards must be met and all monitoring must be completed to close a permit and to get the financial assurance (Bond) returned.
- ▶ EGLE approved project in 2023 (permit issued in 2017)

Other Challenges



Eagle Regulations

- ▶ Bald and Golden Eagle Protection Act
- ▶ Regulated by USFWS
- ▶ Permits required for any impacts, including working near the nest





DEPARTMENT OF THE INTERIOR
U.S. FISH AND WILDLIFE SERVICE
Migratory Bird Permit Office

5600 American Blvd West, Suite 990 - Bloomington, MN 55437-1458
Tel: 612-713-5436 Fax: 612-713-5393
Email: permitsR3MB@fws.gov

FEDERAL FISH AND WILDLIFE PERMIT

I. PERMITTEE

ZFS ITHACA LLC

- D. You are authorized to disturb up to two (2) bald eagles tending their nests per year during 2016 & 2017 that may result in loss of productivity (1.3 chicks per year) and abandonment of their nests at: 43.28489, -84.57705, near Ithaca, Gratiot County, Michigan, during the course of the following activity: construction of a soybean processing plant including installing railroad tracks and roads and constructing soymeal building, ethanol manufacturing plant and administrative building.
- E. The authorizations granted by permits issued under this section apply only to bald eagle take that results from activities conducted in accordance with the description contained in the permit application and the terms of the permit. If the permitted activity changes, you must immediately contact the U.S. Fish and Wildlife Service (Service) to determine whether a permit amendment is required in order to retain bald eagle take authorization.
- F. In order to minimize the disturbance to a pair of nesting bald eagles you must comply with the following avoidance, minimization or other mitigation measures:
- 1) During the bald eagle nesting season (January through July), no construction will occur within the 660 foot radius of the bald eagle nest until 30 minutes after sunrise. Furthermore, all construction will cease, within the 660 foot radius 30 minutes before sunset.

Gas Line Connection

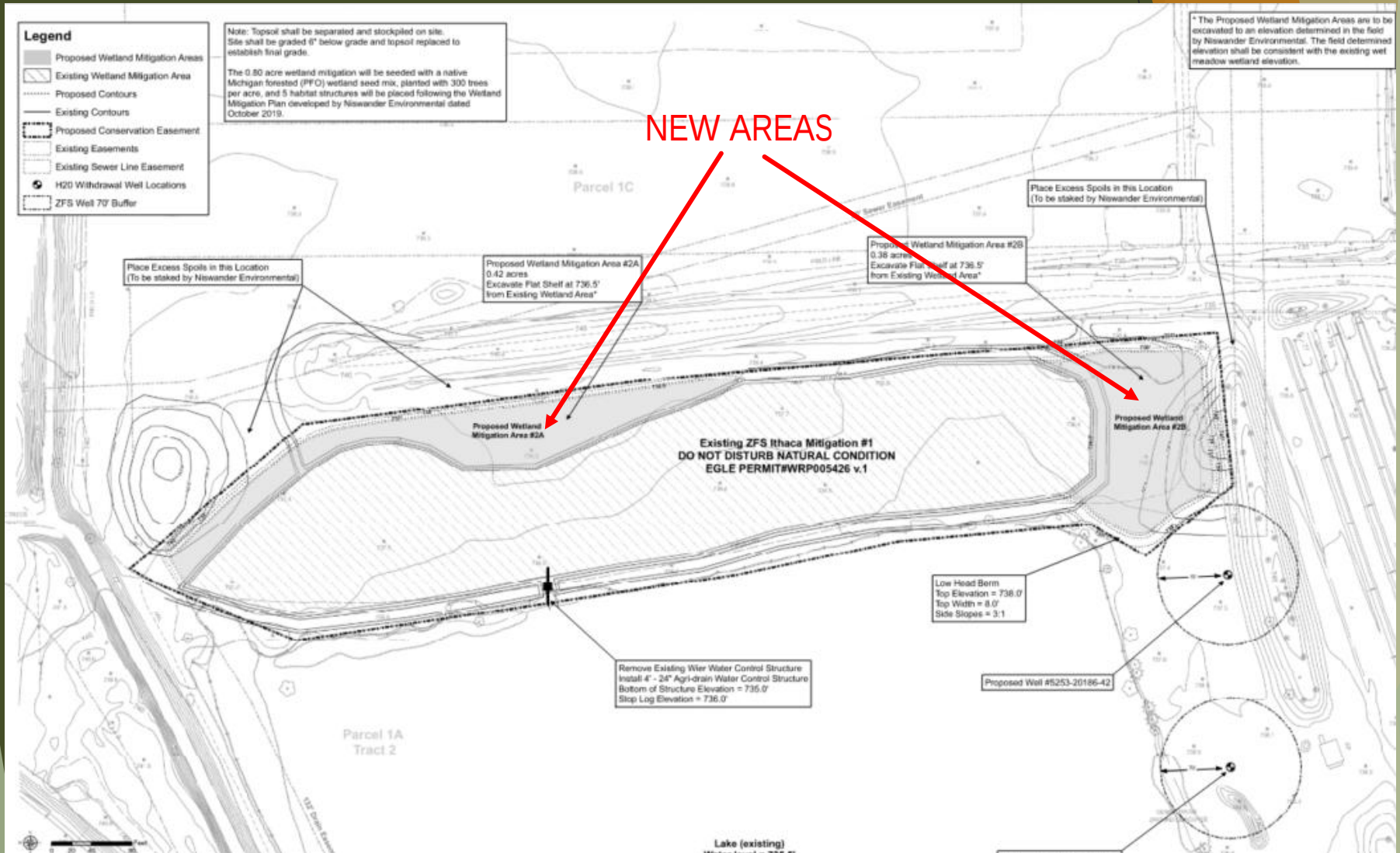
- ▶ ZFS needed a natural gas connection (off site)
- ▶ Gas company impacted 0.24 acres of wetland without an EGLE permit
- ▶ Project stopped



Gas Line Connection

- ▶ Apply for an After-the-Fact Permit (ATF) and additional new wetland impact. Including some wetland restoration of impacted areas and more mitigation
- ▶ ATF requires double the wetland mitigation (4x forested wetland)
- ▶ Proposed expanding the onsite wetland mitigation at the ZFS Ithaca site
- ▶ ATF Permit issued
- ▶ 0.80 acres of additional wetland mitigation added to the existing mitigation area

ZFS Wetland Mitigation #2



Conclusion

- ▶ Obtain Wetland Delineations as part of site due diligence, even on redevelopment sites
- ▶ Site development needs to consider and minimize impacts to wetlands, lakes, streams and floodplains
- ▶ Plan 9 months - 1 year to obtain wetland, lake and stream permits
- ▶ Check MNFI and USFWS databases for potentially threatened and endangered species (or other regulated species - eagles!)
- ▶ If wetland and stream impacts, check mitigation options - onsite, offsite, bank credits?

Questions?



ZFS Ithaca Wetland Mitigation Site



THANK YOU

Bridgette L. Rillema, PE
ZFS Solutions, LLC
bridgetter@zfsinc.com



Todd Losee, PWS
Niswander Environmental
tlosee@niswander-env.com

