



Phragmites Management Options & Case Studies

NYSFOLA Conference

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Luke J. Gervase, CLM

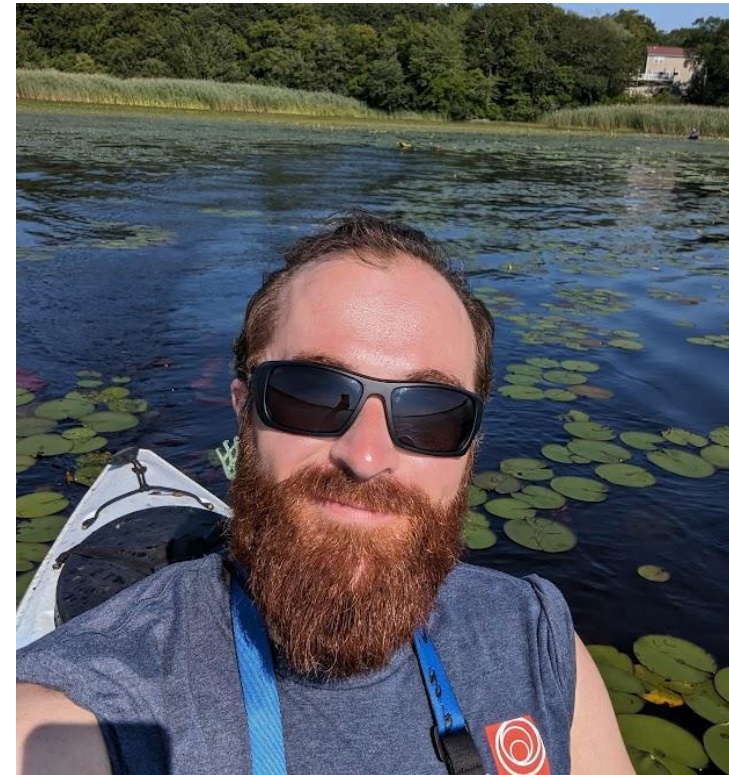
AGENDA

- 1 Introduction
- 2 Invasive vs native and the in-betweeners
- 3 Things to Consider
- 4 Case Studies
 - *West Brook Pond*
 - *Private HOA*
 - *Barrett Pond*
- 5 Q&A + Discussion



Introduction

- B.S. in Aquatics and Fisheries Science from SUNY ESF
- M.S. in Lake Management from SUNY Oneonta
- Time with NYSDEC, NJDEP, and as a watershed steward
- Aquatic Biologist with the Pond and Lake Connection
 - Direct experience with invasive species control/identification
 - Outreach and Field Projects Coordinator w/ LIISMA
 - GEI 5+ years



Invasive Species: What are they?

- Species transported to an area
- Ability to destroy an ecosystem
- No natural predators
- Fast reproducing
- Harms the economy and even human health

Image from: <http://almagottlieb.com/2017/08/what-a-brown-recluse-spider-has-taught-me/invasive-species-fish-cartoon/>



lowertrentconservation.wordpress.com



AREA INFECTED



WWW.ADTIRONDACKALMAINACK.COM



Invasive, Non-Native, Naturalized: What's the Difference?

- **Invasive:** Non-native and can destroy ecosystems
- **Non-native:** Species introduced by humans where not previously found
- **Naturalized:** Species introduced by humans and does not need human help to reproduce or maintain itself
- **Native:** Species that has developed over thousands of years in its ecosystem



Methods and Approaches of Control

- Biological
 - Introductions i.e. grass carp
- Chemical
 - Pesticides
- Physical
 - Pulling, harvesting, cutting
- Cultural
 - Influencing an area through re-planting/construction
- Prevention!!!

Image from: https://19mvmv3yn2qc2bdb912o1t2n-wpengine.netdna-ssl.com/science/files/2015/07/IMG_4408.jpg



Phragmites

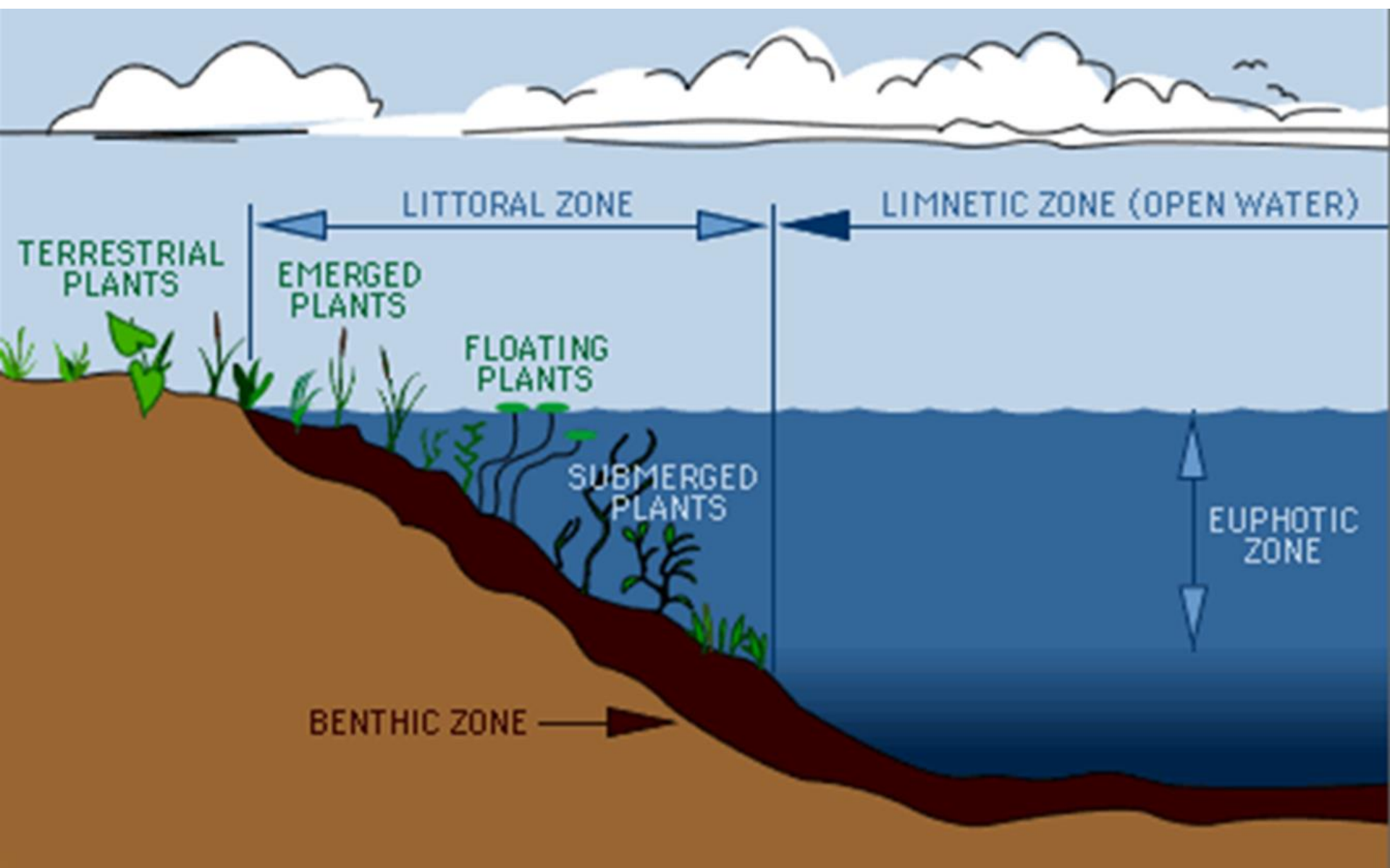
- *Phragmites australis* (common reed)
- Native to Europe
- Distributed through most of the globe
- Heights of 15 feet
- Wet soils (fresh vs tidal)



Phrag. continued

- Durable rhizome; primary means of spread and reproduction
- Seed tassel (feather duster)





Excavation

- Probably the most effective technique
- \$\$\$\$\$, dollars and environmentally
 - Permits, where to put spoils
 - Non-selective
- Still a chance for plant to return as a re-introduction
- Salinity tolerance
 - Invasive variety more tolerant



Herbicide

- High rate of success & cost effective
- Permitting aspects
- Timing is critical
- “Court of public opinion”
- Still a chance for plant to return as a re-introduction







Hand Pulling

- Highly selective
- Intense labor and potentially time/bodies
- Best suited for smaller populations



Permitting

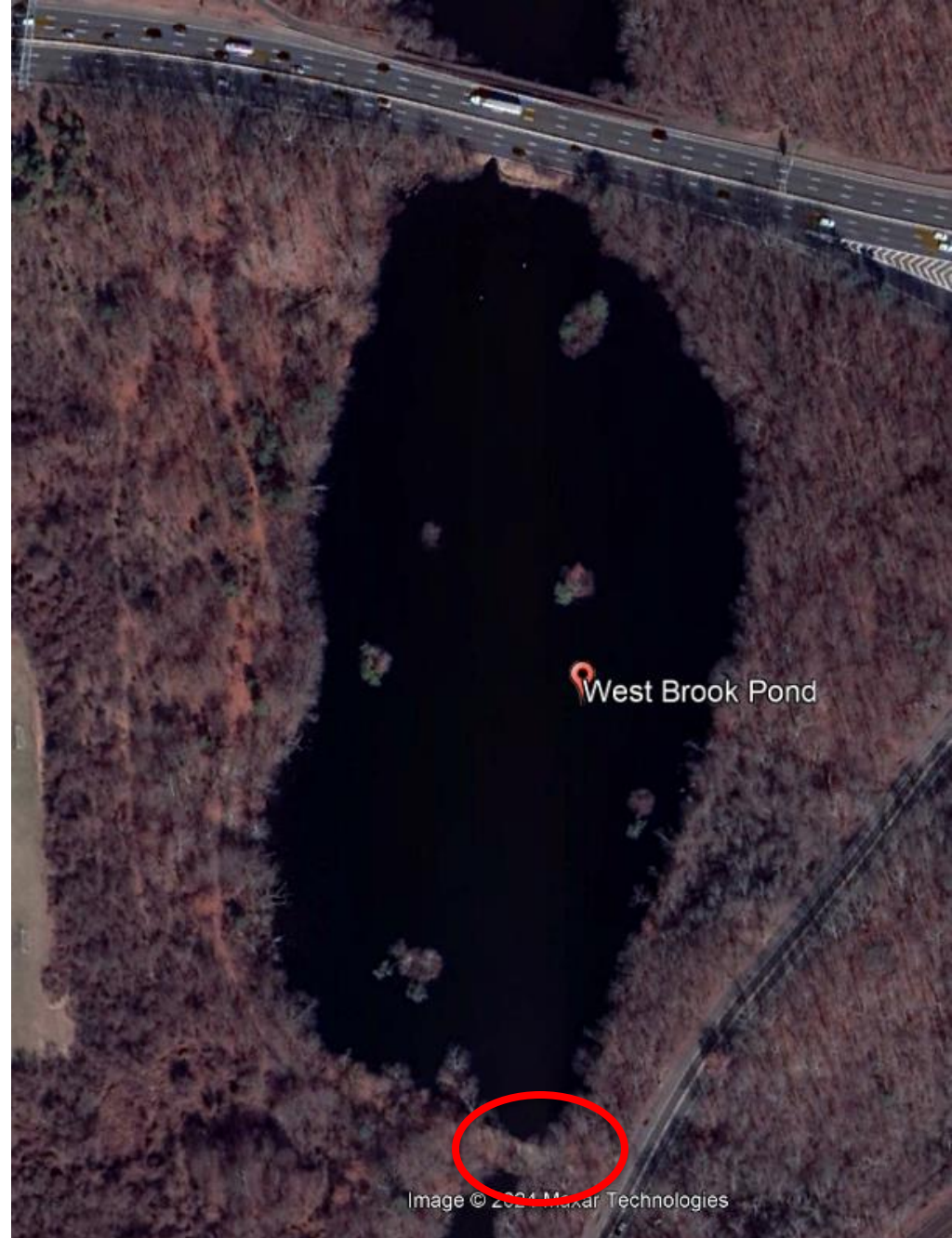
- NYSDEC Article 24 or 25 (freshwater/tidal) wetlands permit
 - Conduct work within regulated wetland or adjacent areas
- NYSDEC Article 15 permit
 - Aquatic pesticide, only if applications being made directly to water
- SPDES, NOI, job specific permits
- Local permits



Case Study #1

West Brook Pond, Great River, NY

- 11-acre pond
- February 2019 ->
- Called out to site, found VLM





West Brook Pond



West Brook Pond





West Brook Pond Invasive Species Management Project
Town of Islip
Suffolk County, New York

Seatuck Environmental Association
Islip, New York



Project 2406552

INVASIVE SPECIES MAP

September 2024

Fig. 1











Case Study #2

Private HOA, Suffolk County, NY

- Tidal wetland
- Dominated by Phrag and spots of Japanese knotweed (*Reynoutria japonica*)

















Case Study #3

Barrett Pond, Putnam County, NY

- Private pond
- Small Phrag infestation



















Natural Shoreline

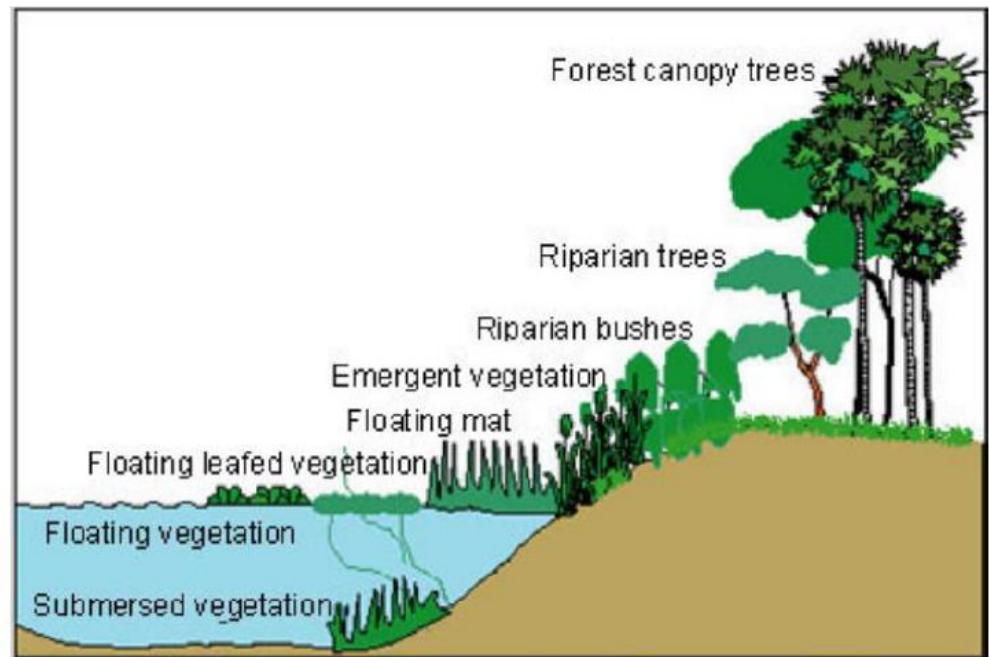


Figure I: A schematic showing an ideal riparian and lake habitat. Image from: <http://www.orangesenqurak.com>



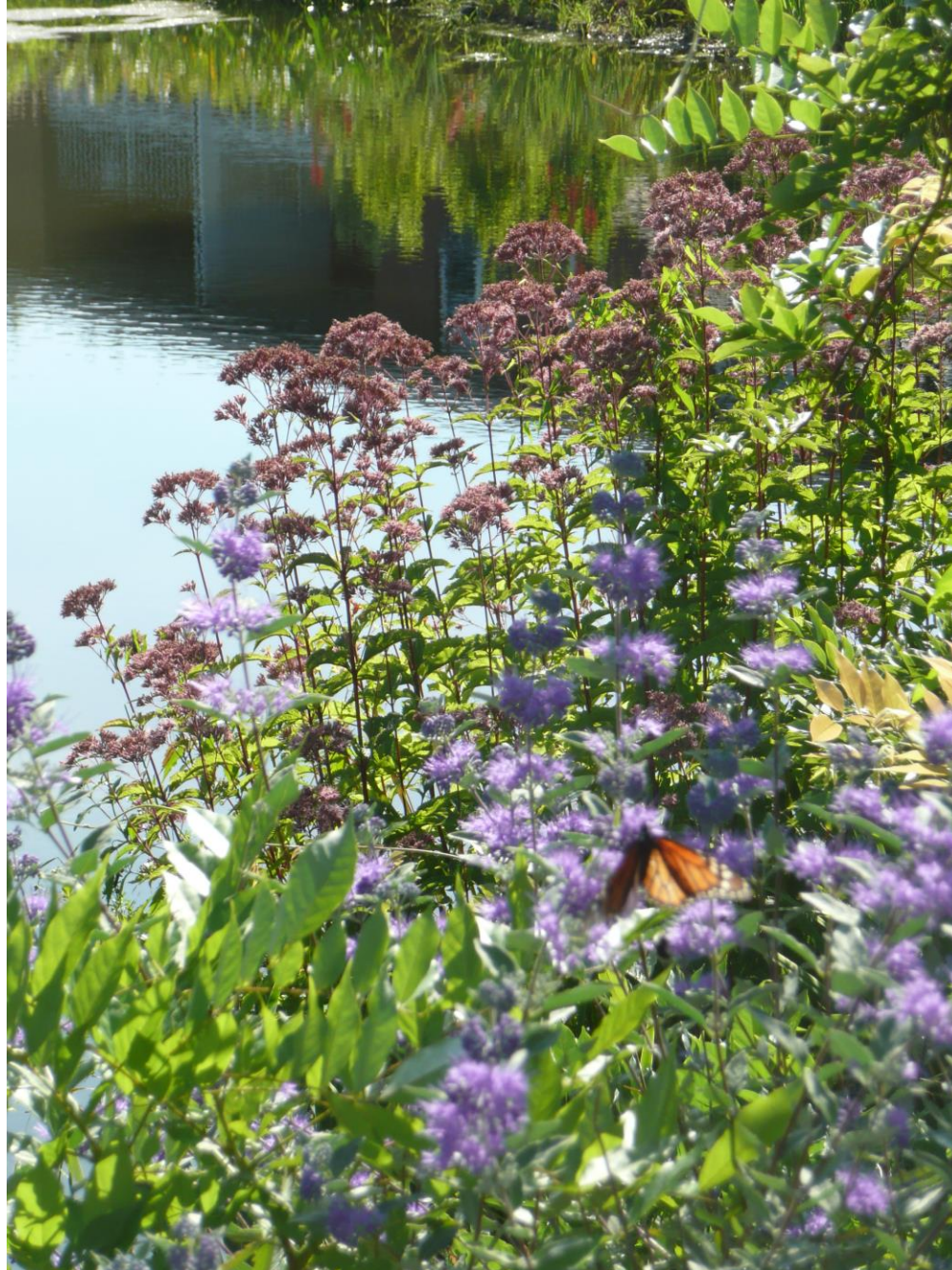
Figure II: Image illustrating a buffer zone before and after shrubs were added. Image from: <http://www.stearnscountvswcd.net/files/398.jpg>















Considerations

- 1 Permitting (correctly)
- 2 Project costs
- 3 Restoration
- 4 Monitoring
- 5 Know your target and set goals



Contact Information

Luke J. Gervase, CLM

Project Ecologist & Invasive Species Specialist

Lgervase@geiconsultants.com

Mobile: (516) 521-3774

Office: (631) 759-2965

