


To Treat or Not to Treat?

The Decision Making Behind Invasive Species Management Through the Lens of China and Barrett Ponds

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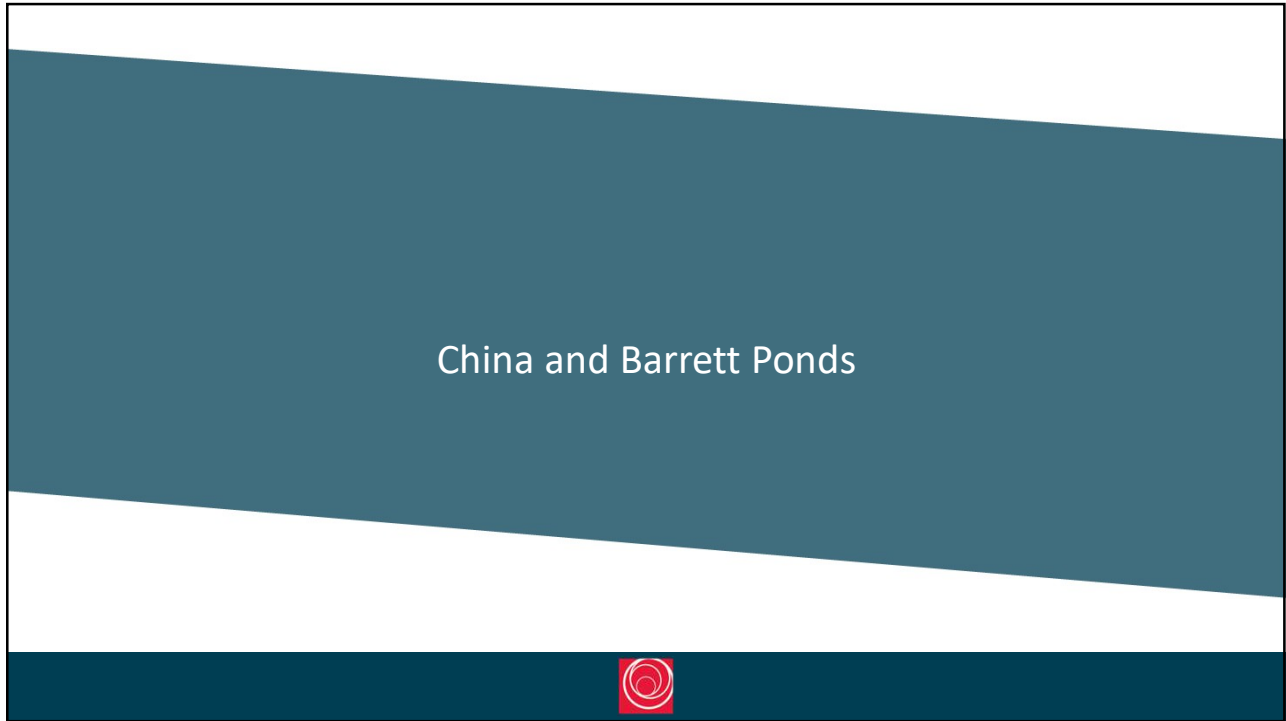


Outline

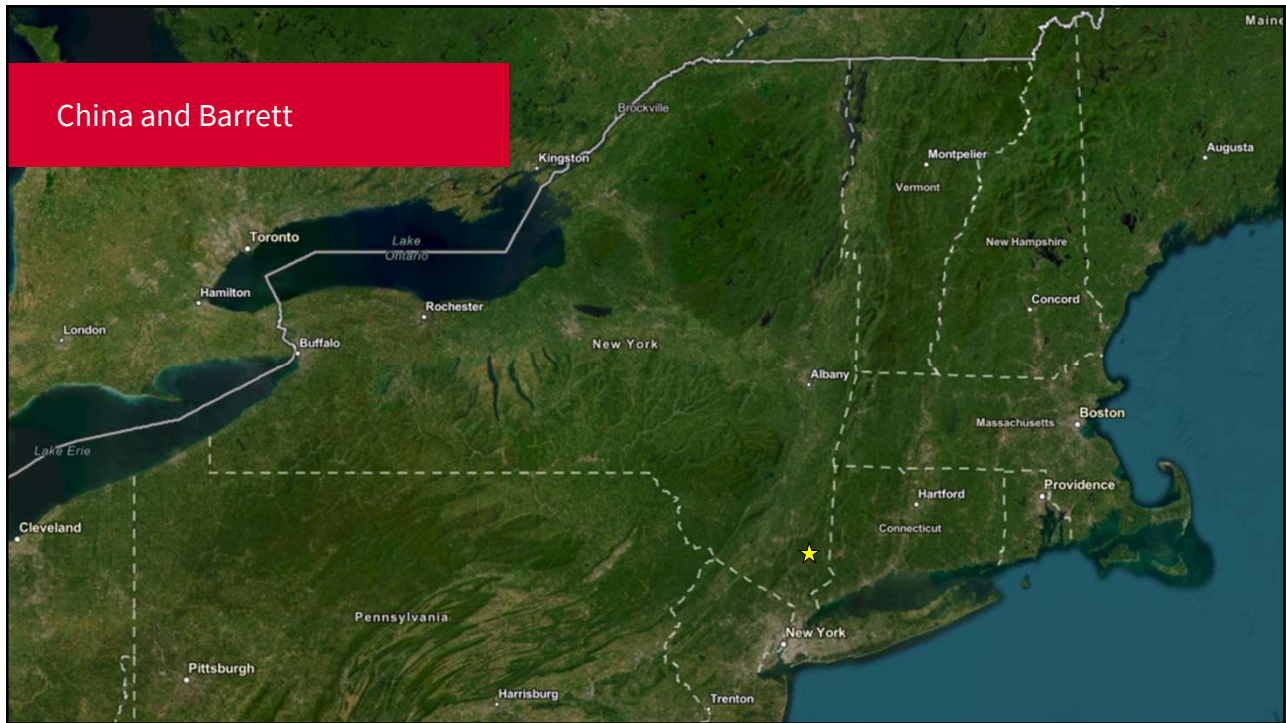
- China and Barrett Ponds Background
- Management Decision Making
- Looking Forward
- Key Takeaways



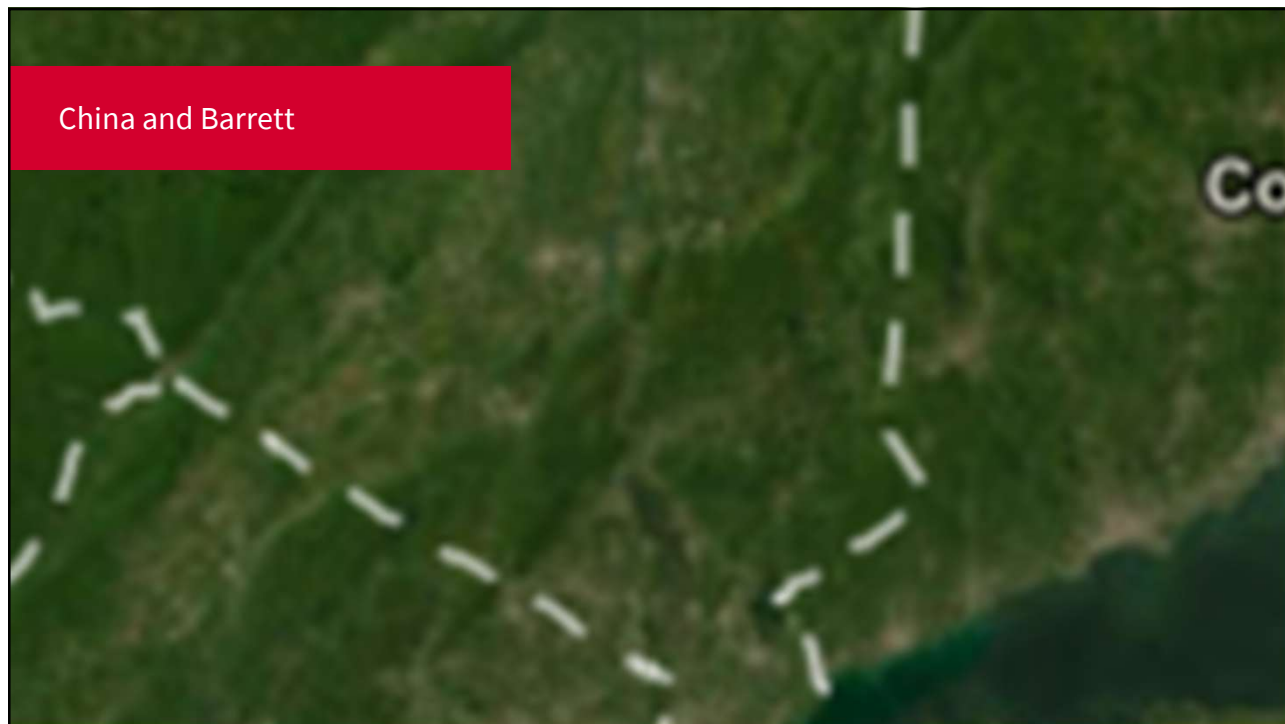
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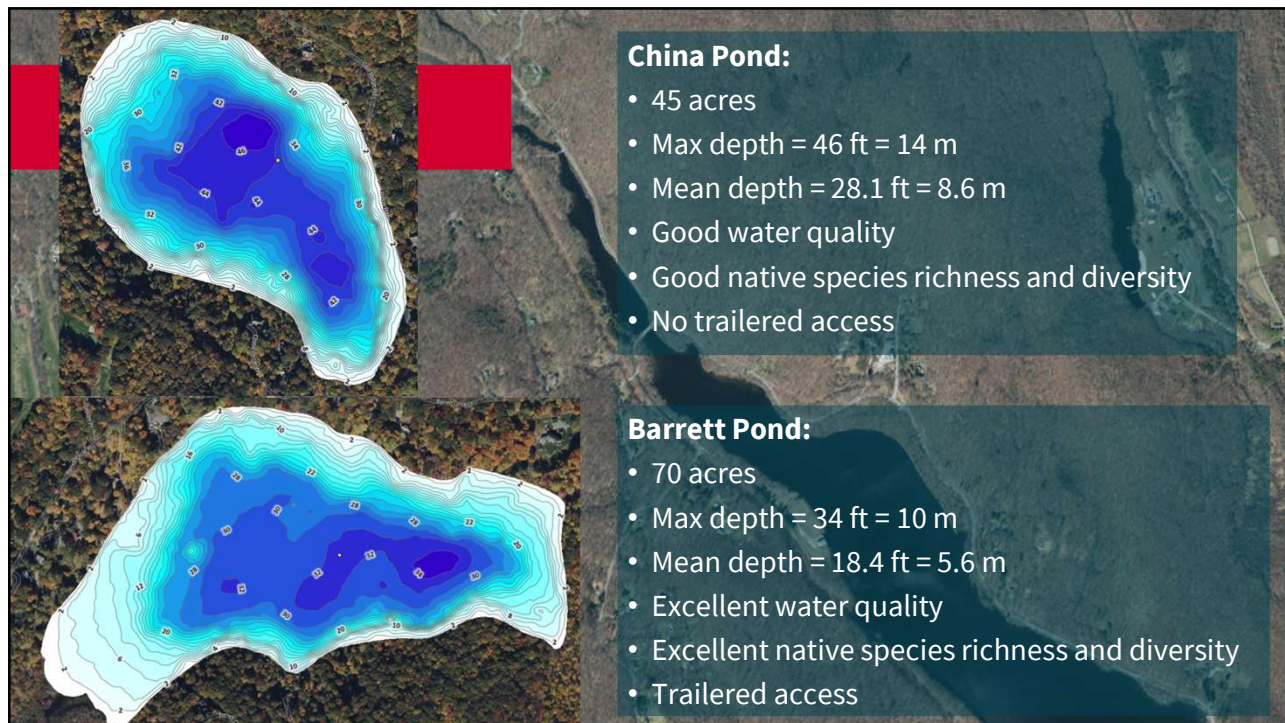
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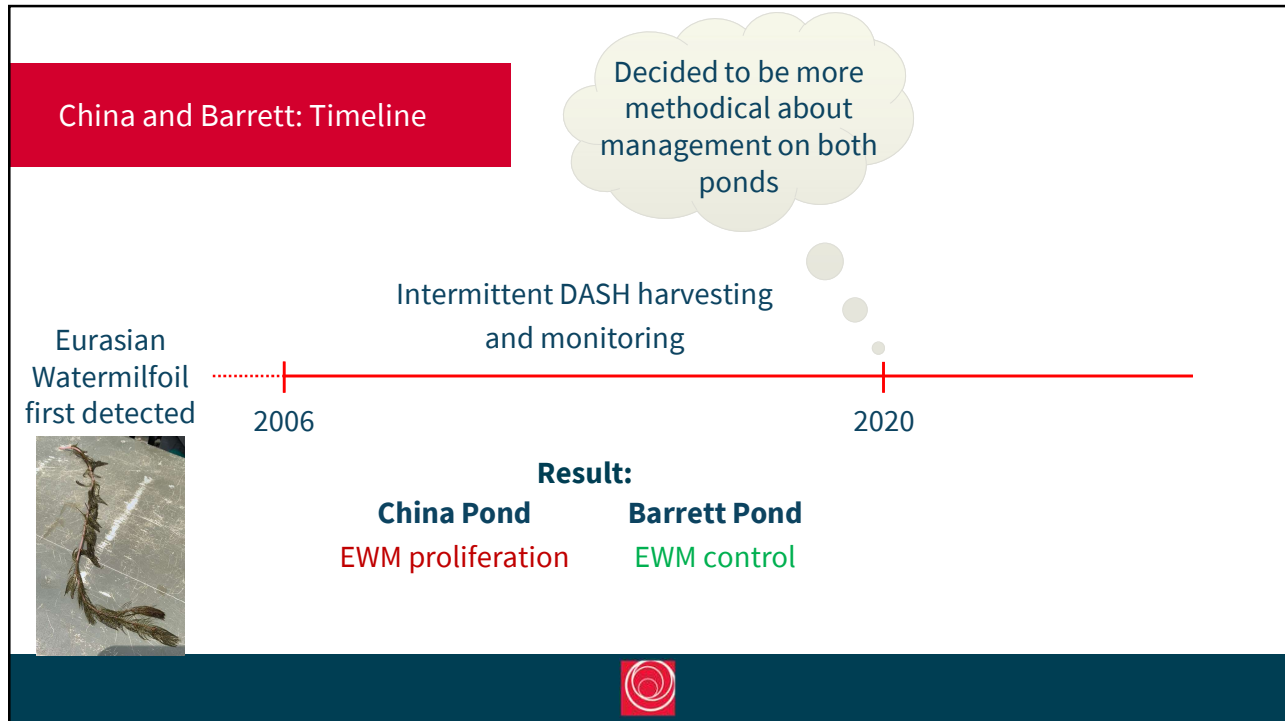
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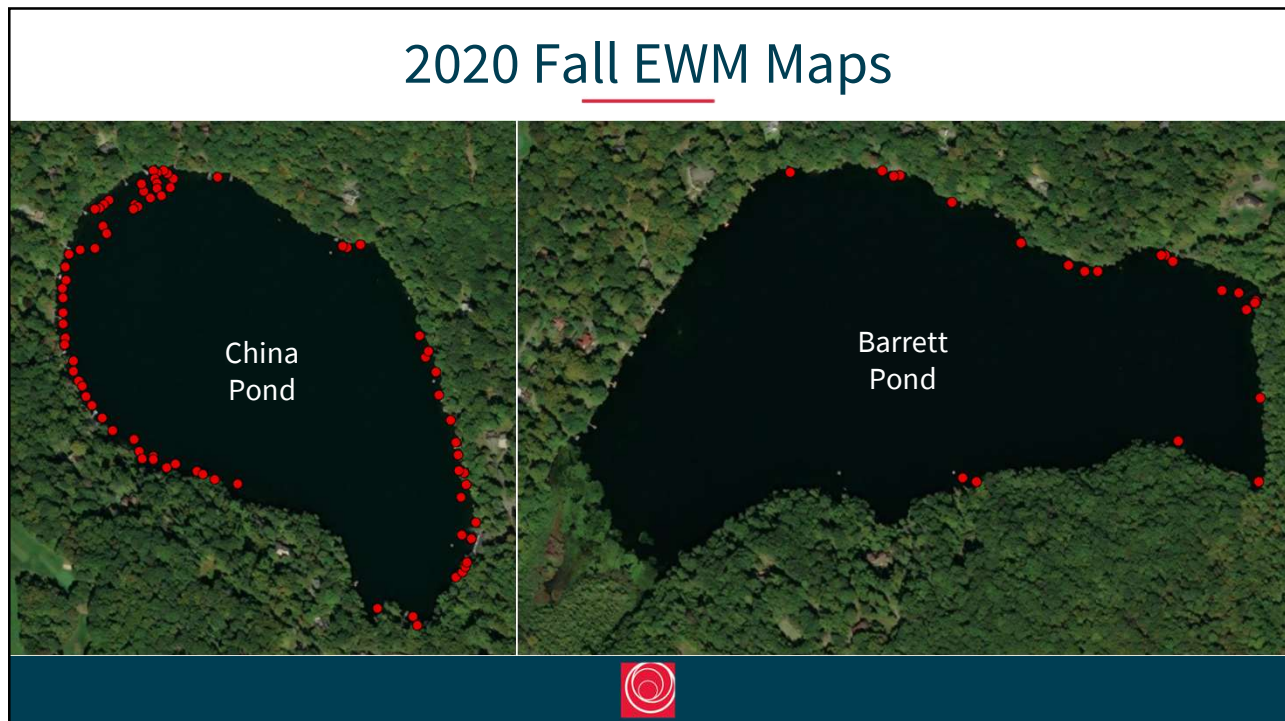
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EWM Takeover!



The slide features three photographs of aquatic vegetation. The top-left photo shows a close-up of green and brown plants with fallen leaves. The bottom-left photo shows a stream with dense green vegetation and reflections. The right photo shows a large area of water covered with thick green and brown vegetation.




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China and Barrett: Timeline


What do we do about the EWM?

What management should we pursue?



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Management Decision Making





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Management Decision Options

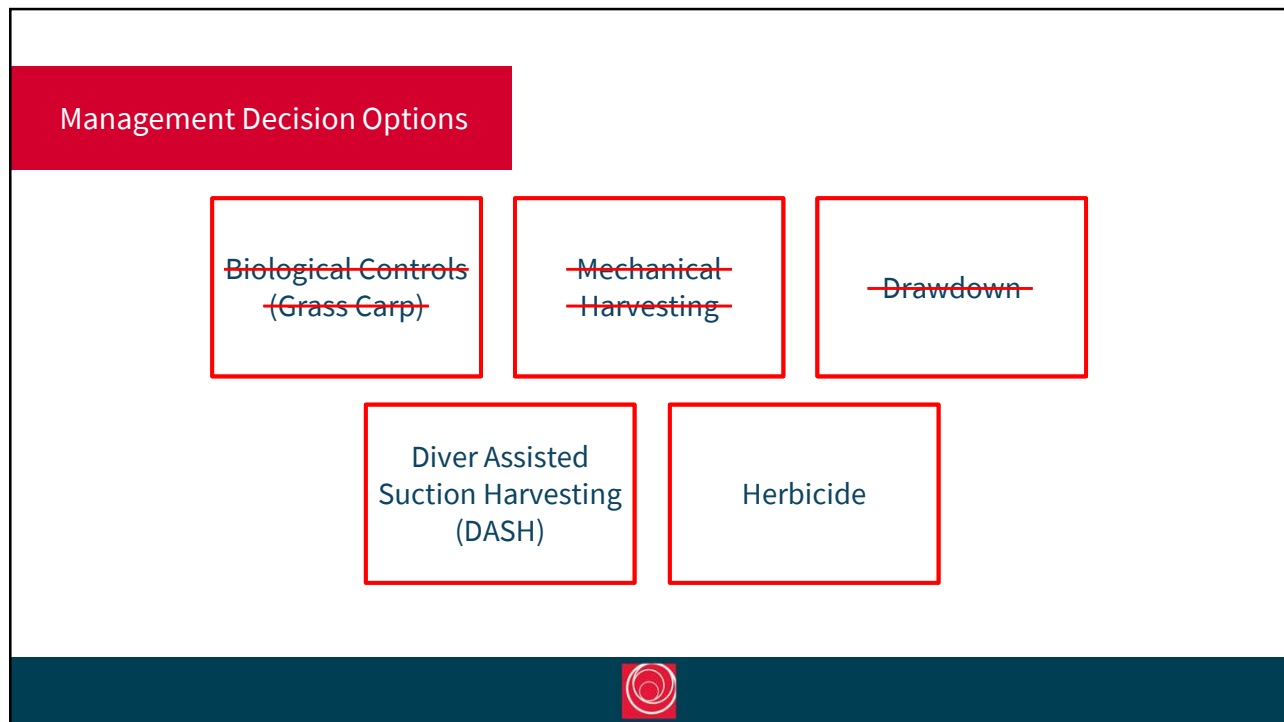
Considerations:

- Logistical constraints
- Cost
- Ecological Integrity
- Use (recreation) benefits
- Efficacy
- Societal Considerations

<div style="border: 2px solid red; padding: 5px; text-align: center; margin-bottom: 10px;"> Biological Controls (Grass Carp) </div> <ul style="list-style-type: none"> • Nonselective • Reduces native species abundance • Negatively affects lake ecology 	<div style="border: 2px solid red; padding: 5px; text-align: center; margin-bottom: 10px;"> Mechanical Harvesting </div> <ul style="list-style-type: none"> • Nonselective • No easy access (no trailered access) • EWM spreads via fragmentation → 	<div style="border: 2px solid red; padding: 5px; text-align: center; margin-bottom: 10px;"> Drawdown </div> 
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Diver Assisted Suction Harvesting (DASH)

Pros:

- Highly selective
- Effective for small infestations because of highly local nature
- Best in high clarity conditions

Cons:

- Need to revisit sites multiple times
- Access can be limiting
- Expensive \$\$\$\$
 - \$2,500 – \$3,000 / day
 - 1 acre in 2-10 days

(Source: New England Aquatic Services)

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Herbicide

- Different types of herbicides:
 - Contact
 - “Burn” epidermis of plants
 - Systemic
 - Absorbed and translocated by plant
- Different modes of action:
 - Disrupt essential cellular pathways (e.g. disrupts amino acids, growth hormones, photosynthesis, cell membranes, root growth, shoot growth, etc.)
- Selective vs Nonselective



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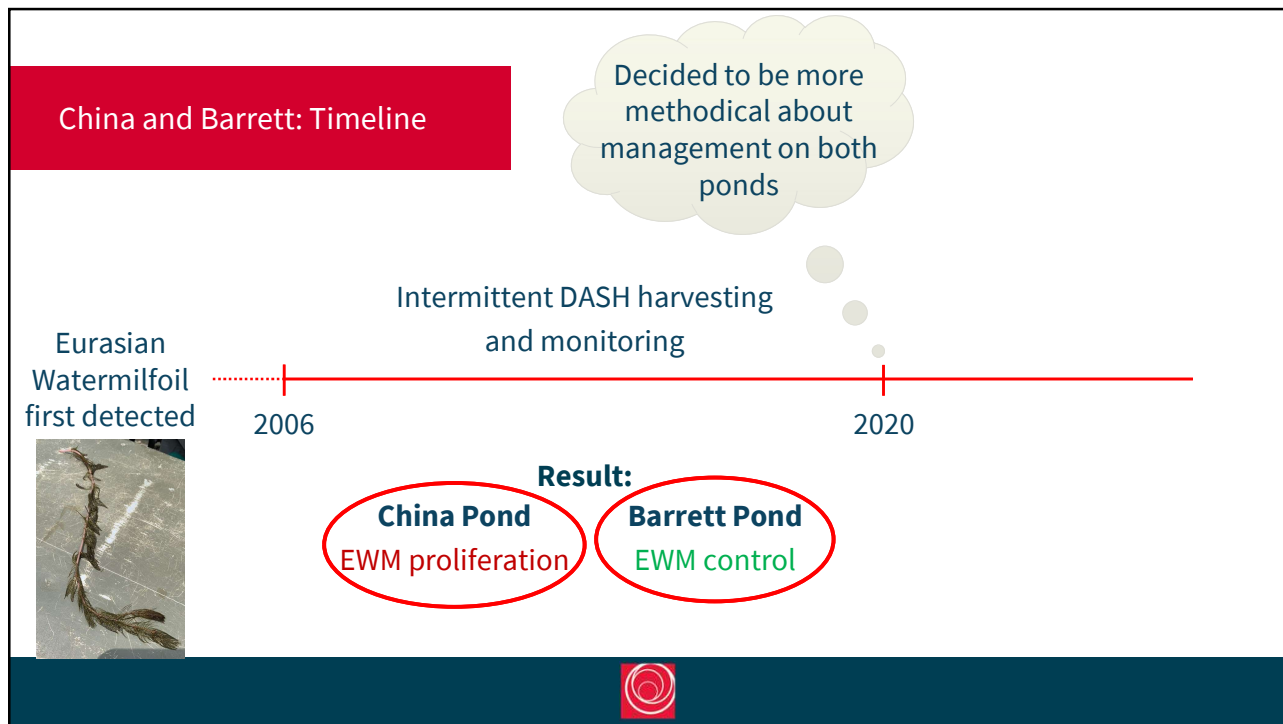
Herbicide: ProcellaCOR® EC*

- Florpyrauxifen-benzyl
- Mode of action: synthetic auxin (growth hormone)
 - Mimics indole-3-acetic acid
- Mean half life: 2.5 – 8.5 days
 - In practice, no detection within 1 day
- In the NE USA, functionally selective towards Milfoil species (EWM)
 - Use rates EWM: 1-3 pdu (1.93-5.79 ug/L)
- Cheaper \$\$ / unit area
 - \$1,400 – \$1,800 / acre

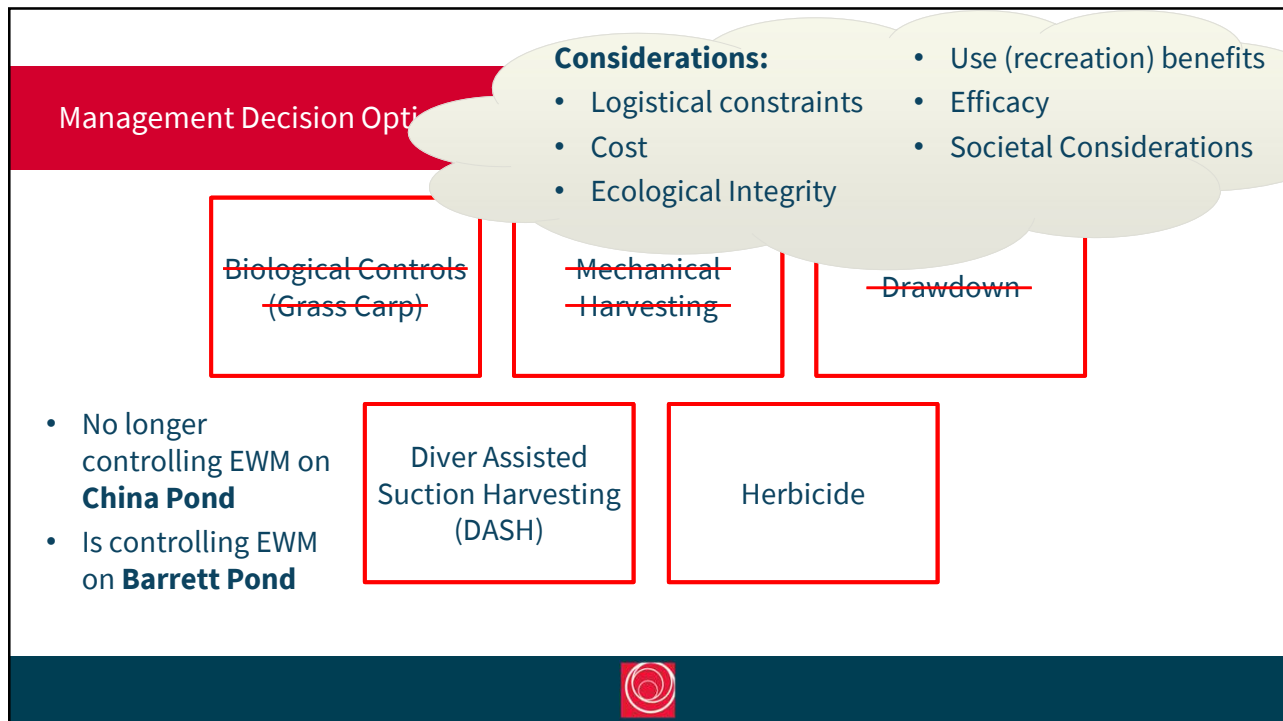


*Not sponsored, for informational purposes only

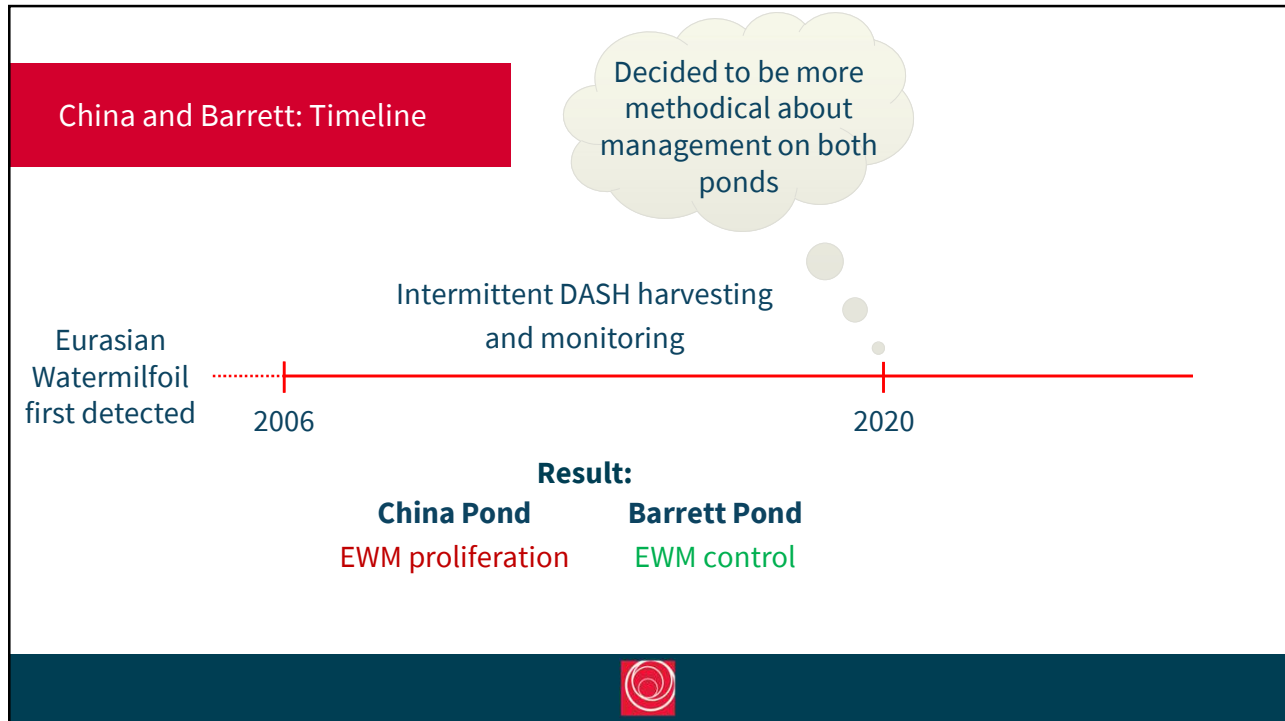
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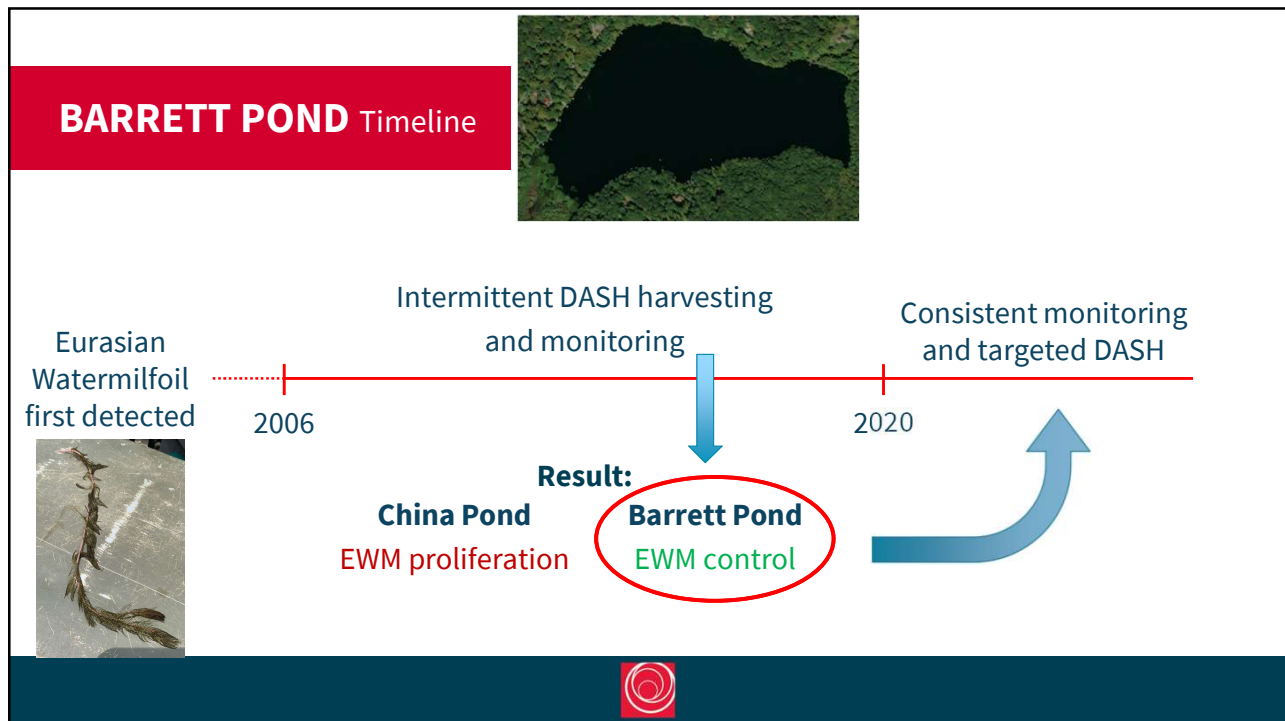
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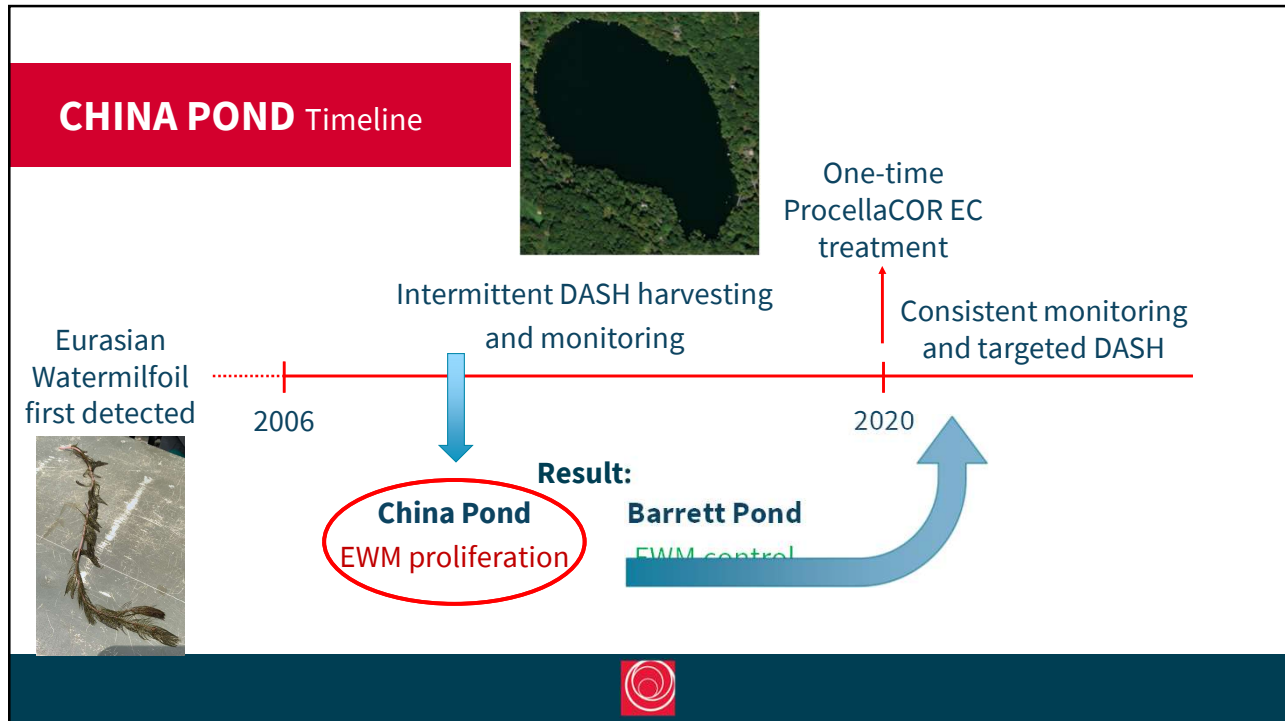
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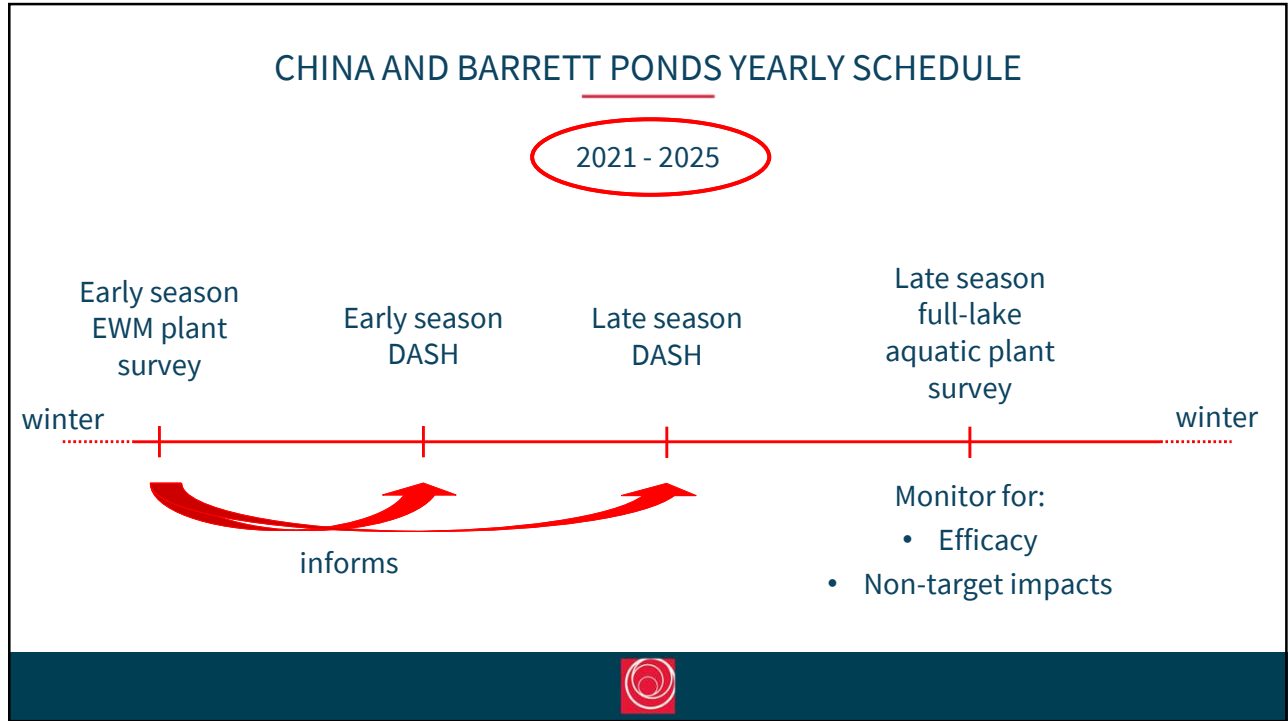
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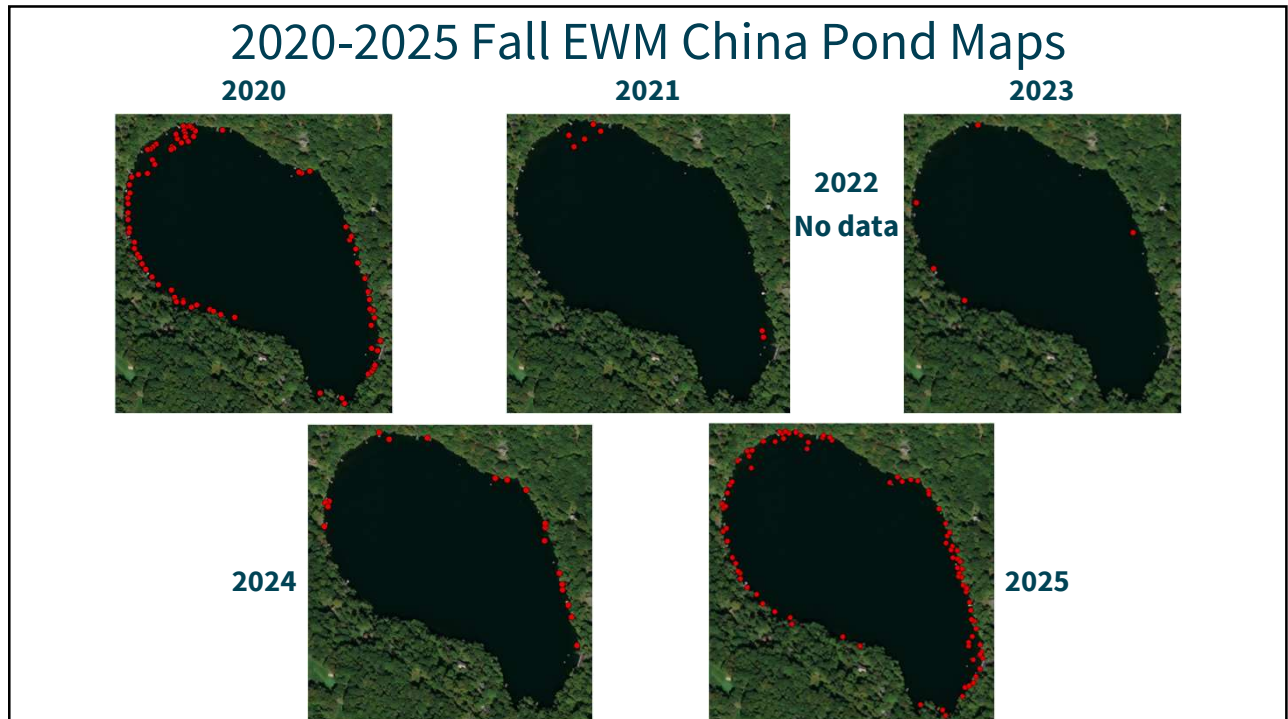
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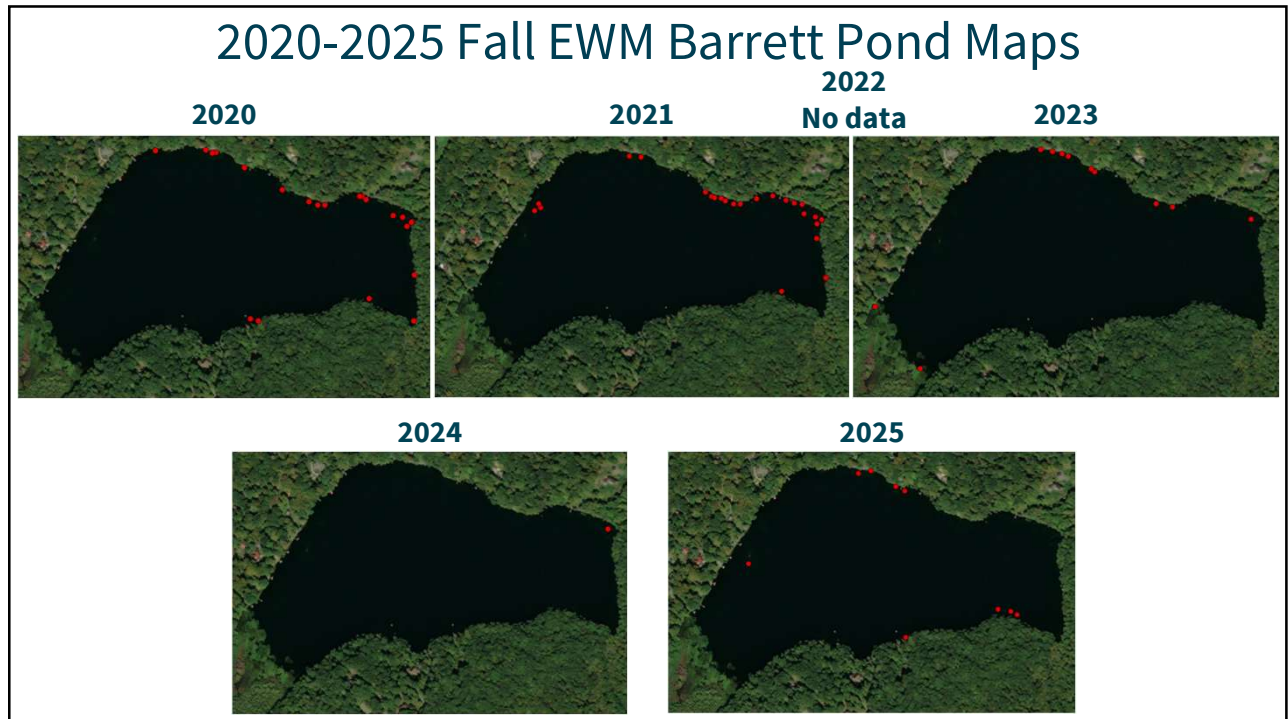
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Management Results (as of 2025)

- Typical lifespan of ProcelleCOR EC is 2-3 years of very good control
- Used targeted DASH yearly to elongate control window
- China - very good control for ~4 years following treatment
 - 2025: EWM growing at pre-treatment levels

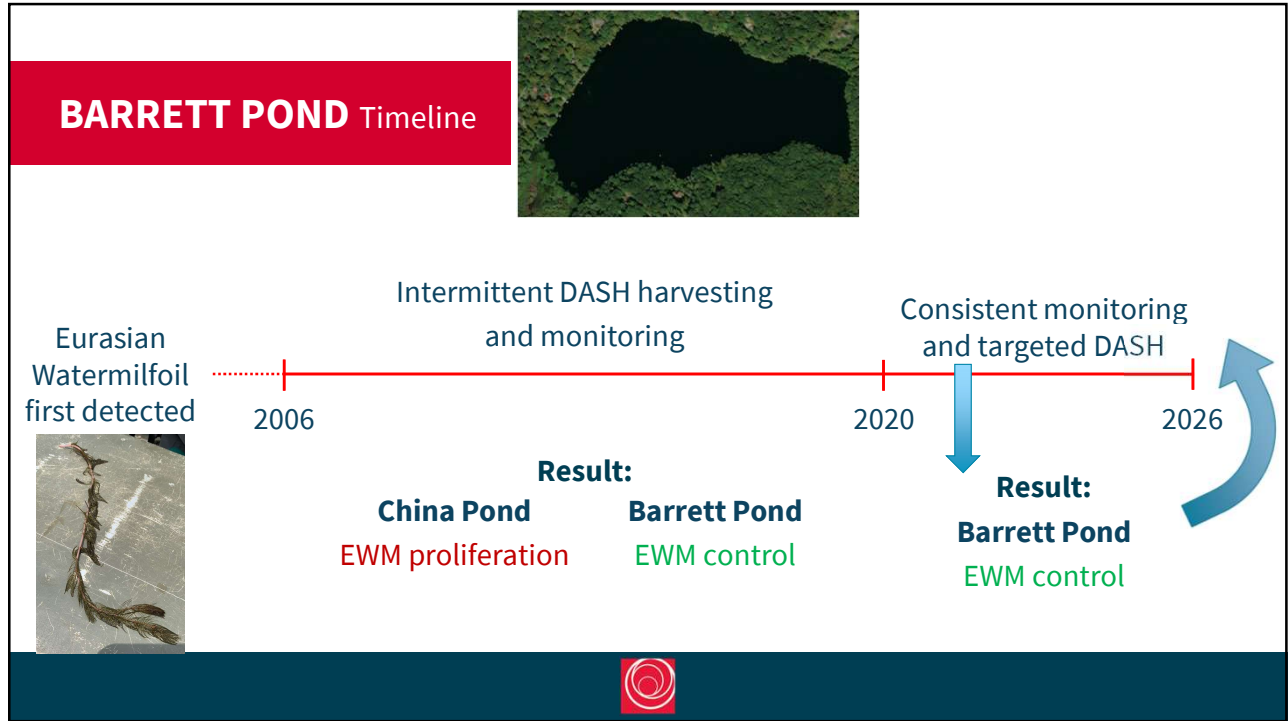


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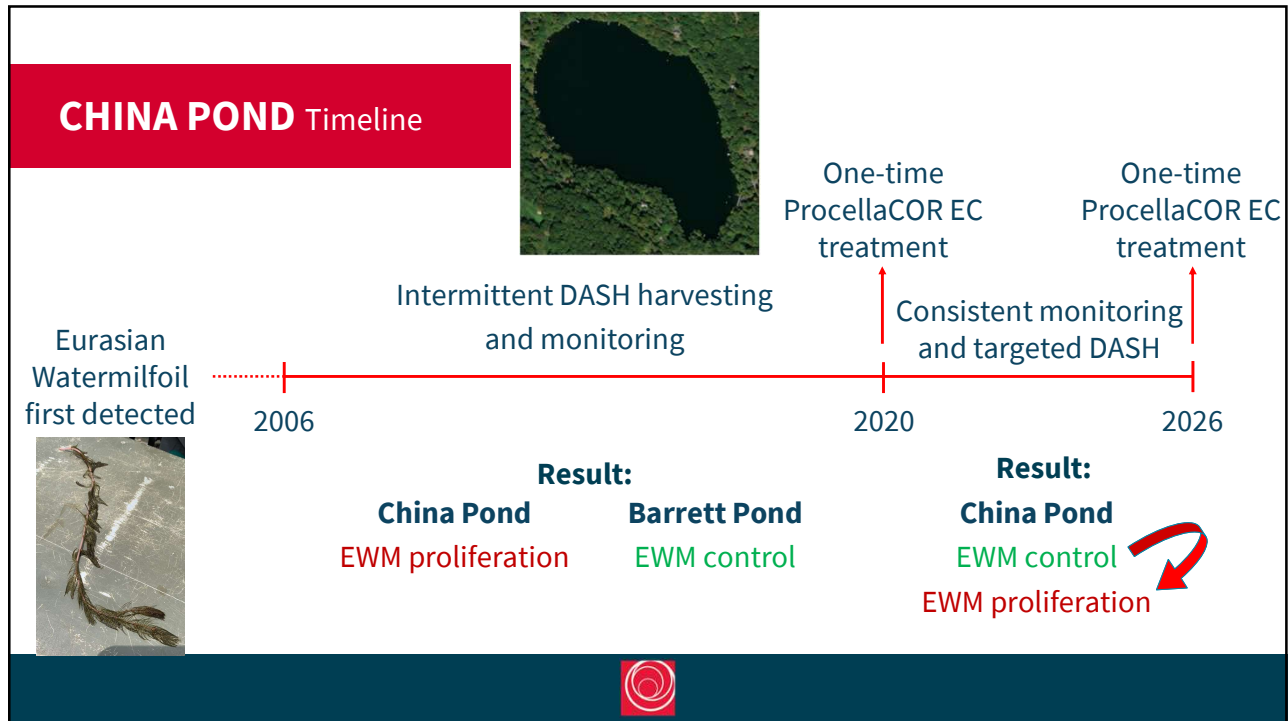
Looking Ahead



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Other Projects at China/Barrett Ponds

- Septic system upgrade community fund
- Nearby golf course drainage improvements for lake water quality benefit
- Ongoing water quality monitoring
- (Pending) Lower Hudson PRISM growing experiment of Robbins' Pondweed (low-growing native)



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Key Takeaways



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Key Takeaways

- **Integrating management techniques** can lead to better control!
- Support your management with ongoing **monitoring!**
 - How else can you prove it is working (or not)?
- Individual lakes need **individualized strategies!**
- **Public engagement!**

Considerations:

- Logistical constraints
- Cost
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Thank you!!

China and Barrett Homeowner's Association

Pond and Lake Connection

New England Aquatic Services

Northeast Aquatic Research



THE POND AND LAKE
CONNECTION



New England
Aquatic Services



the Sedgebrook club



Northeast Aquatic Research



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