Starry Stonewort (*Nitellopsis obtusa*) Removal Using Diver Assisted Suction Harvesting – Silver Lake, Washington County, WI

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Starry Stonewort Invasion – Discovered August 2015

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Infested area determined to be about 1 acre in NE corner of Silver Lake near boat launch.
Treatment Options for Starry Stonewort

**CHEMICAL**
- Copper sulfate and hydrothol
  - “Gives haircut”
  - Unknown how many treatments are needed
  - Unknown results for bulbils
- Flumioxazin
  - Trials were occurring at the time
- **BOTH ARE NOT SELECTIVE TREATMENTS**

**VS.**

**MECHANICAL**
- Hand Pulling
  - Hard to be efficient
- Harvesting
  - Did NOT want to spread bulbils
  - Fragmentation?
- DASH Removal
  - Have not tried on small population yet . . .
  - **HAS THE ABILITY TO BE SELECTIVE**
Diver Assisted Suction Harvesting - DASH

- Able to physically remove bulbils from sediment
- Native plants stay in place for competition and wildlife habitat
- Avoids using chemicals that have not worked in past

Native plants stay in place for competition and wildlife habitat
Grant Requirements:

• DASH Harvesting

• Hand-pulling

• Clean Boats, Clean Waters efforts from Silver Lake Protection and Rehabilitation District

• Post-treatment surveys
  • Meander and P.I.

• Report summarizing each removal event and CBCW data
DASH from August 20<sup>th</sup> - 26, 2015
Initial Distribution of Starry Stonewort

2015 Results

Starry Stonewort Distribution after DASH Removal

80-90% Reduction in visible population of starry stonewort
Monitoring After Removal - 2016

- Conducted more PI and meander surveys
- 479 points, 208 sampled
- Snorkeled around treated area
- Used buoys/trimble gps unit to mark areas where SSW was still present
Results One Year Later - 2016

- Starry stonewort is still present
- Scattered populations
- Growing in shady areas
- Satellite populations found further away from original population
Implications

▪ Results of DASH did not fully eliminate population
▪ Turbidity
▪ Attention to detail
▪ Time restraints/funding
▪ Training of divers
▪ Neutral Buoyancy of divers
▪ Type of sediment/marl
▪ Life cycle of starry stonewort
Moving Forward

- It is competing with native Chara and Nitella species
- Keep strong focus on Clean Boats, Clean Waters efforts
- Continue monitoring starry stonewort and adapt to successfully manage residual populations
- Monitor and hand pull satellite populations
Keep Education and CBCW Efforts Strong

- Silver Lake PRD was actively involved
- Emphasized Clean Boats, Clean Waters
  - 12 Lake Members were trained
  - Contributed over 100 volunteer hours past the required 83
- DNR, County, and contracted worked together as a team
- Keeping and expanding these partnerships is integral to continuing strong efforts against starry stonewort
Thank You!!

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