

If you want to build up your biology,
why not use your mussels?

Erik Neidy
Director of Natural Resources



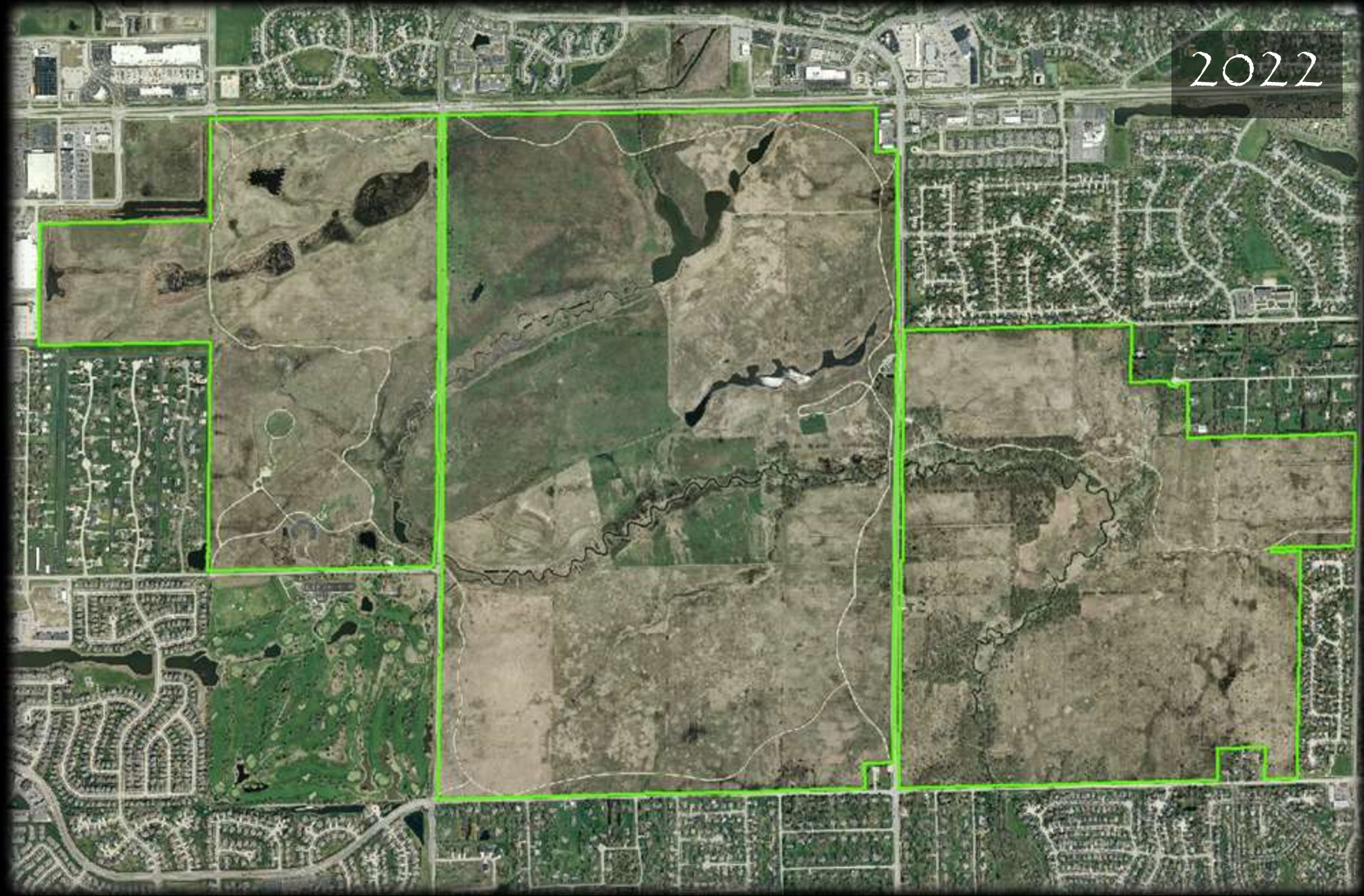


OUR MISSION

To acquire and hold lands for the purpose of preserving the flora, fauna and scenic beauty for the education, pleasure and recreation of DuPage County citizens

SPRINGBROOK PRAIRIE FOREST PRESERVE

2022





WEST BRANCH - SUPERFUND



SPRINGBROOK PRAIRIE



SPRINGBROOK PRAIRIE



THE PRESERVE AT OAK MEADOWS



SPRINGBROOK CREEK PHASE 1 AND 2





Stream Functions Pyramid

A Guide for Assessing & Restoring Stream Functions » OVERVIEW

5 BIOLOGY » *Biodiversity and the life histories of aquatic and riparian life*

4 PHYSIOCHEMICAL » *Temperature and oxygen regulation; processing of organic matter and nutrients*

3 GEOMORPHOLOGY » *Transport of wood and sediment to create diverse bed forms and dynamic equilibrium*

2 HYDRAULIC » *Transport of water in the channel, on the floodplain, and through sediments*

1 HYDROLOGY » *Transport of water from the watershed to the channel*



“No other group of animals in the Midwest is so gravely imperiled.”

U.S. Fish & Wildlife Service

- 80 species historically in IL
 - 6 extinct
 - 11 extirpated
 - 26 endangered or threatened
- Why important?
 - Natural filters
 - Good water quality
 - Food source
 - Contribute to biodiversity

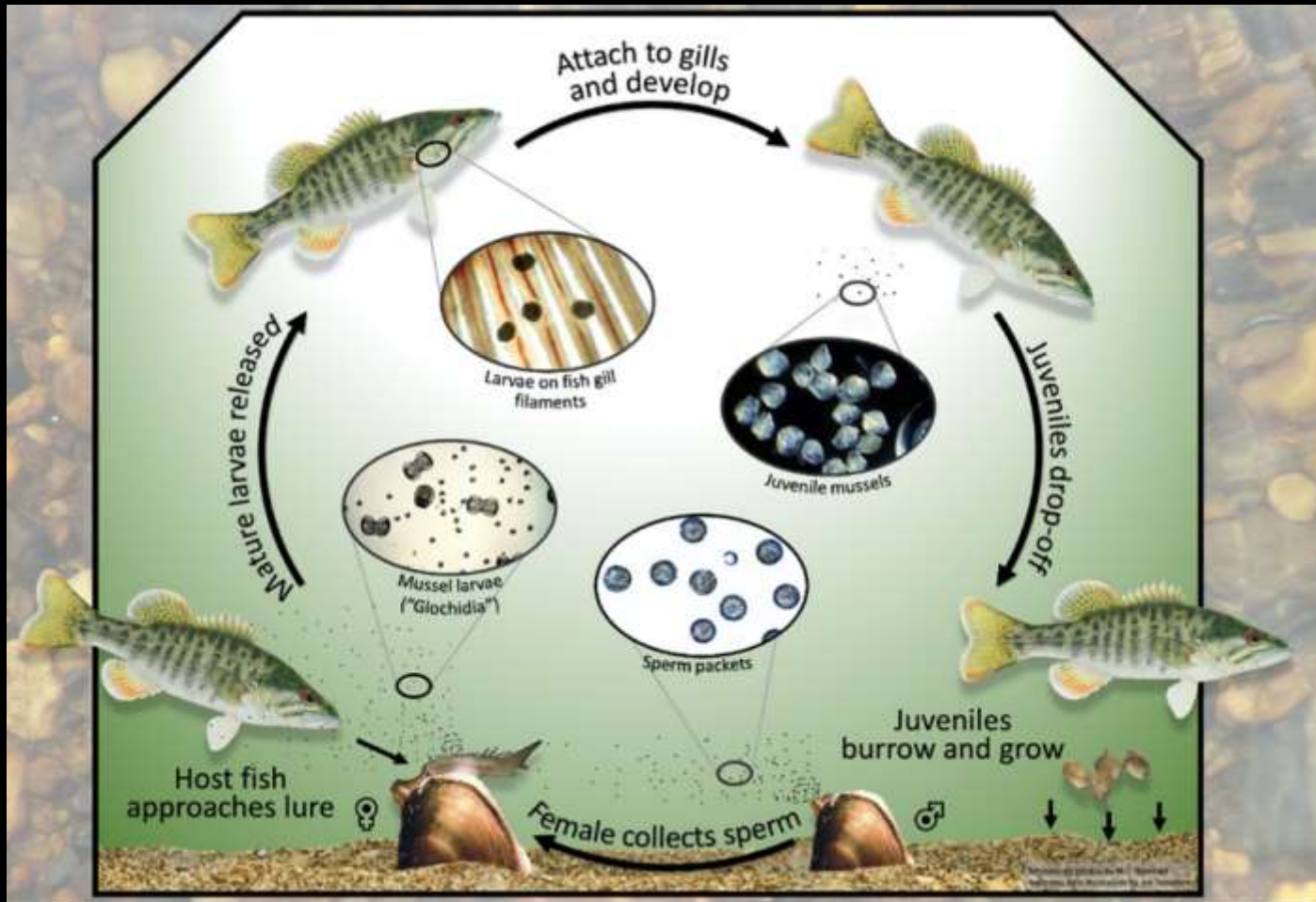


Provide Ecosystem Services

- **Indicators of water quality**
- **Filter 6 – 20 gallons a day**
- **Uptake heavy metals, pollutants, and chemicals**
- **Provide habitat for other aquatic organisms**
- **Stabilize riverbeds**
- **Source of food for other animals**
- **“the livers of the rivers”**



Life Cycle of a Freshwater Mussel



Plain Pocketbook



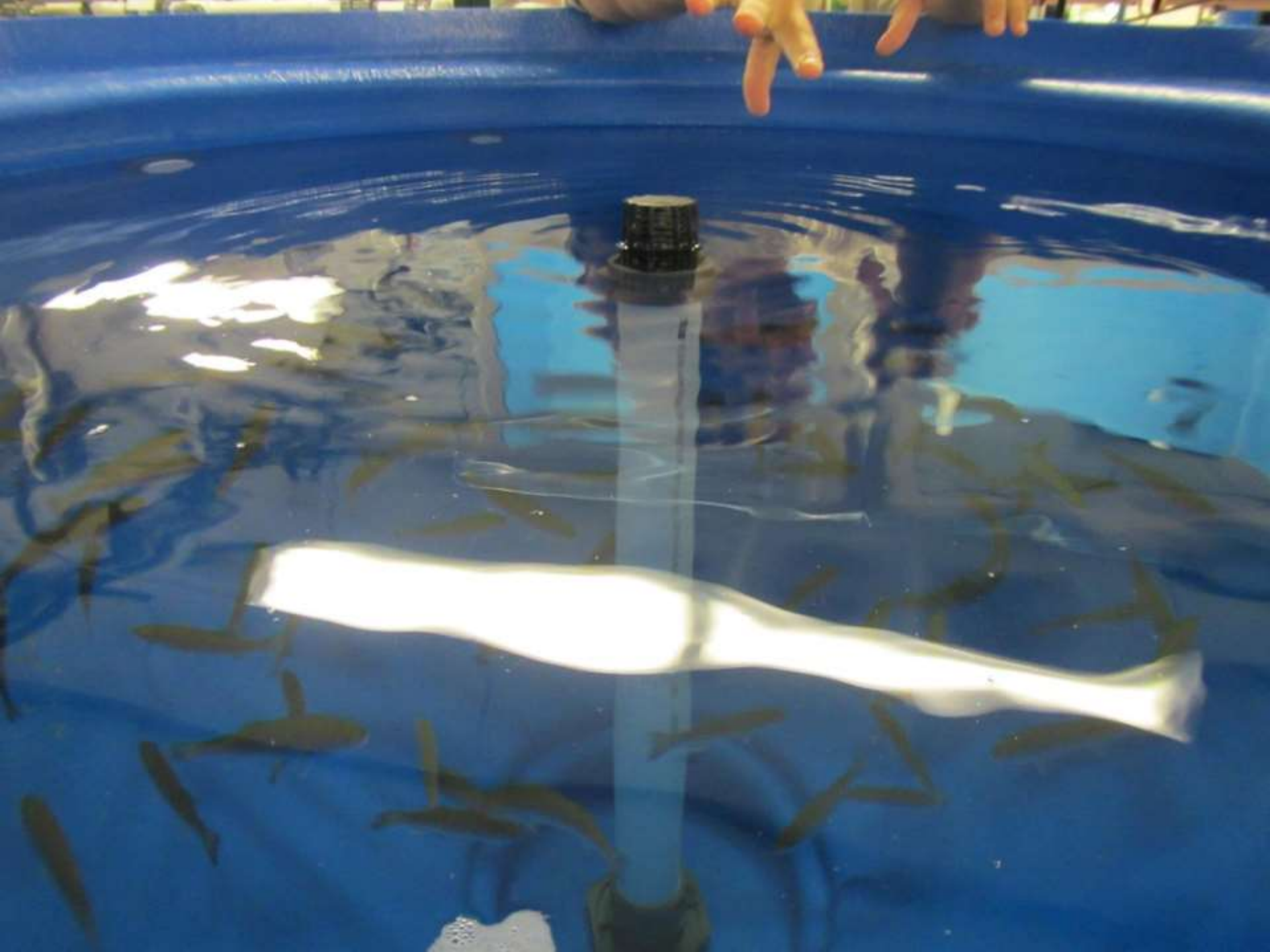






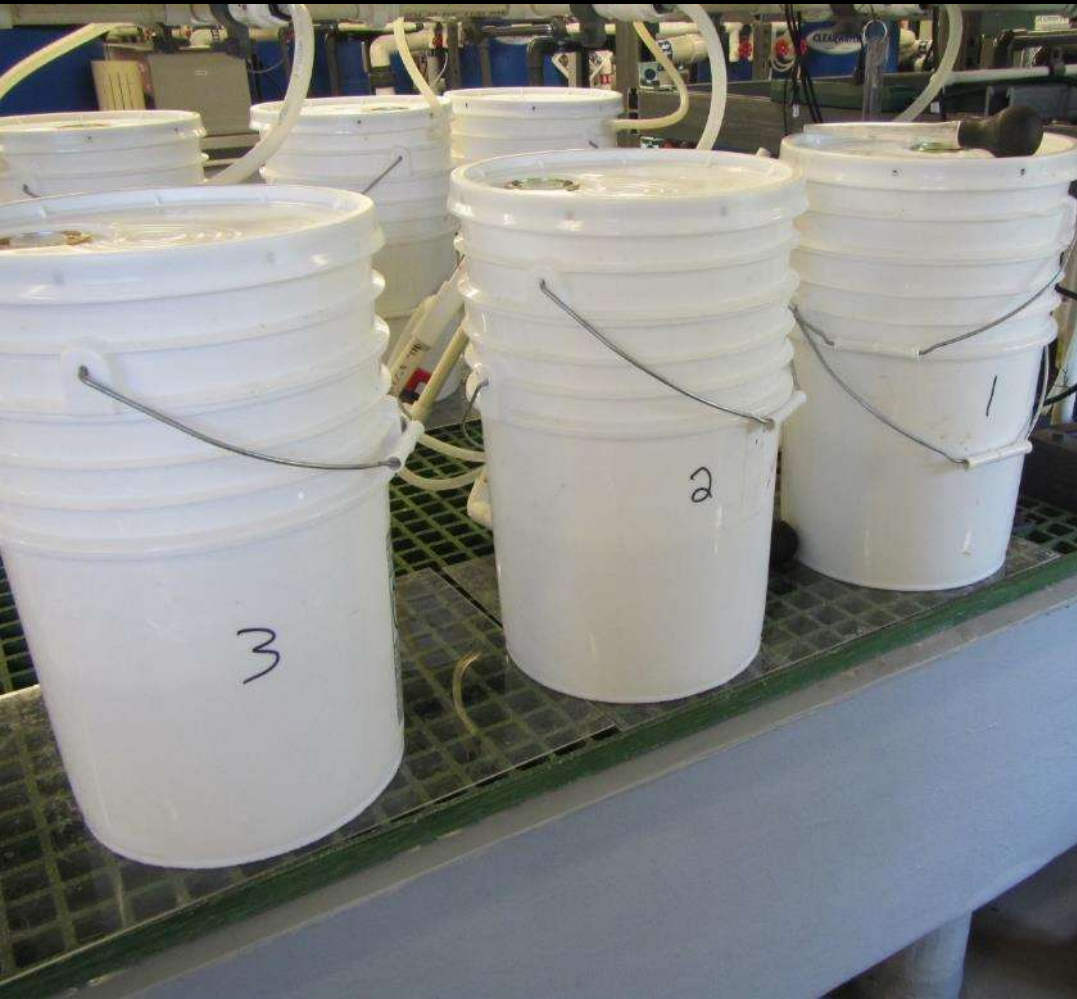


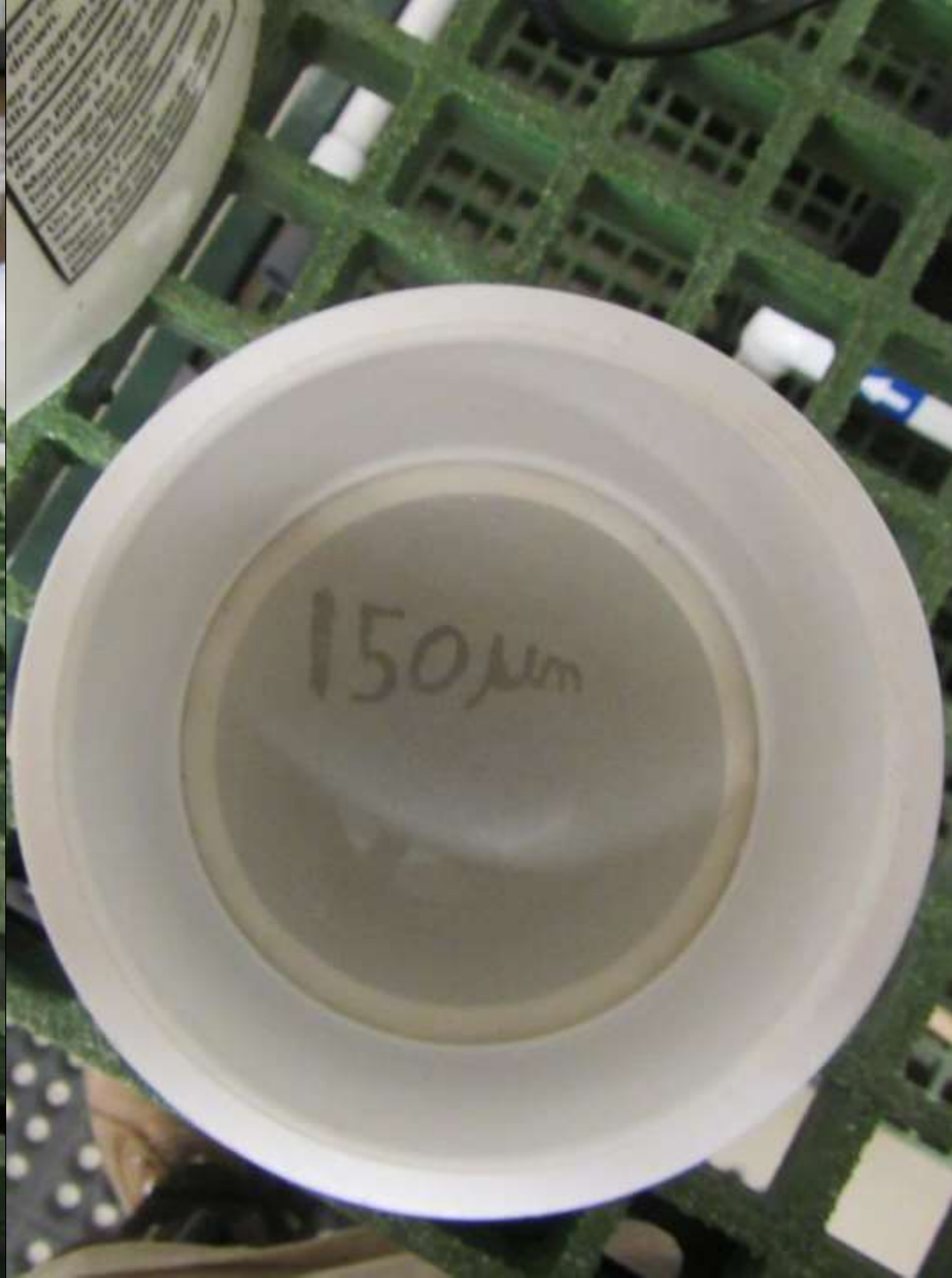


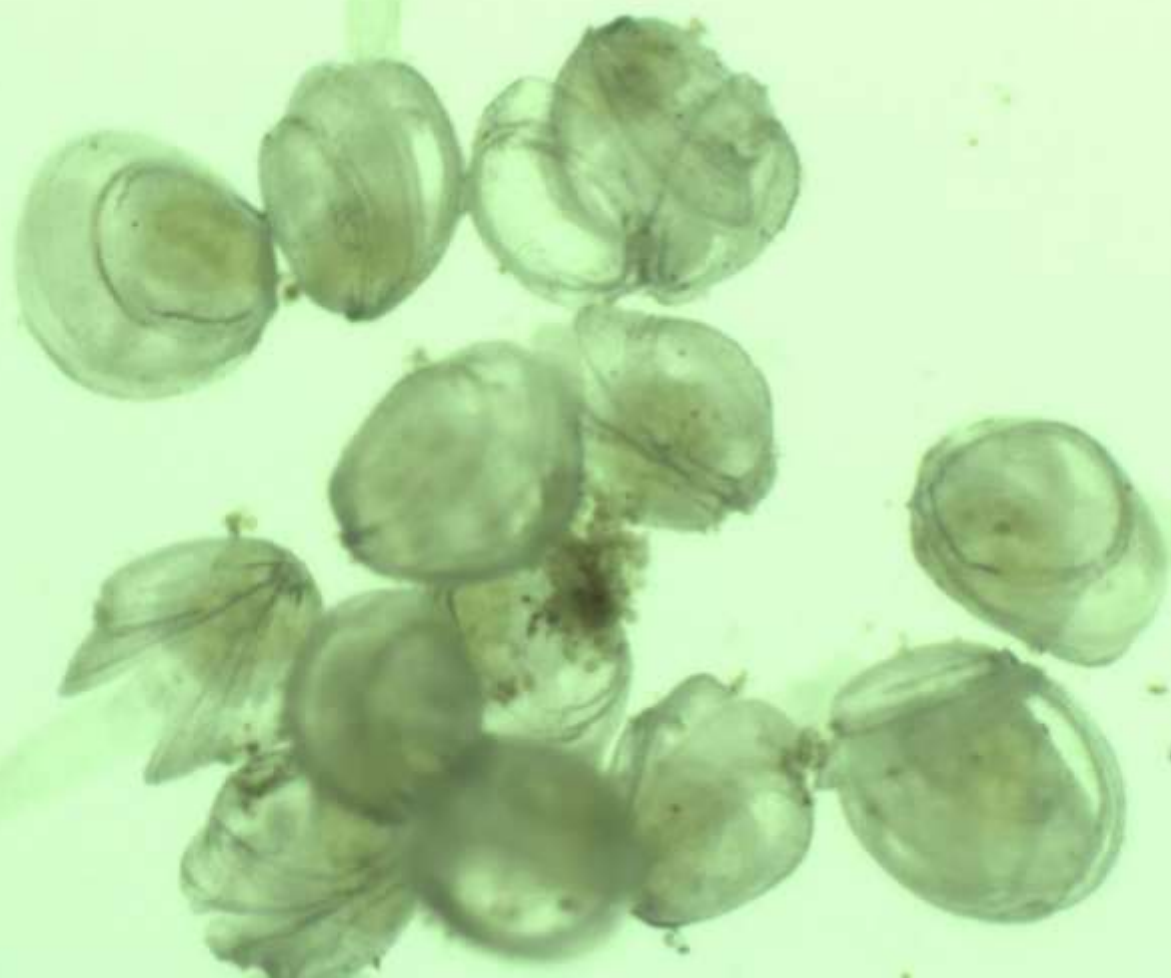




Mussel Bucket System

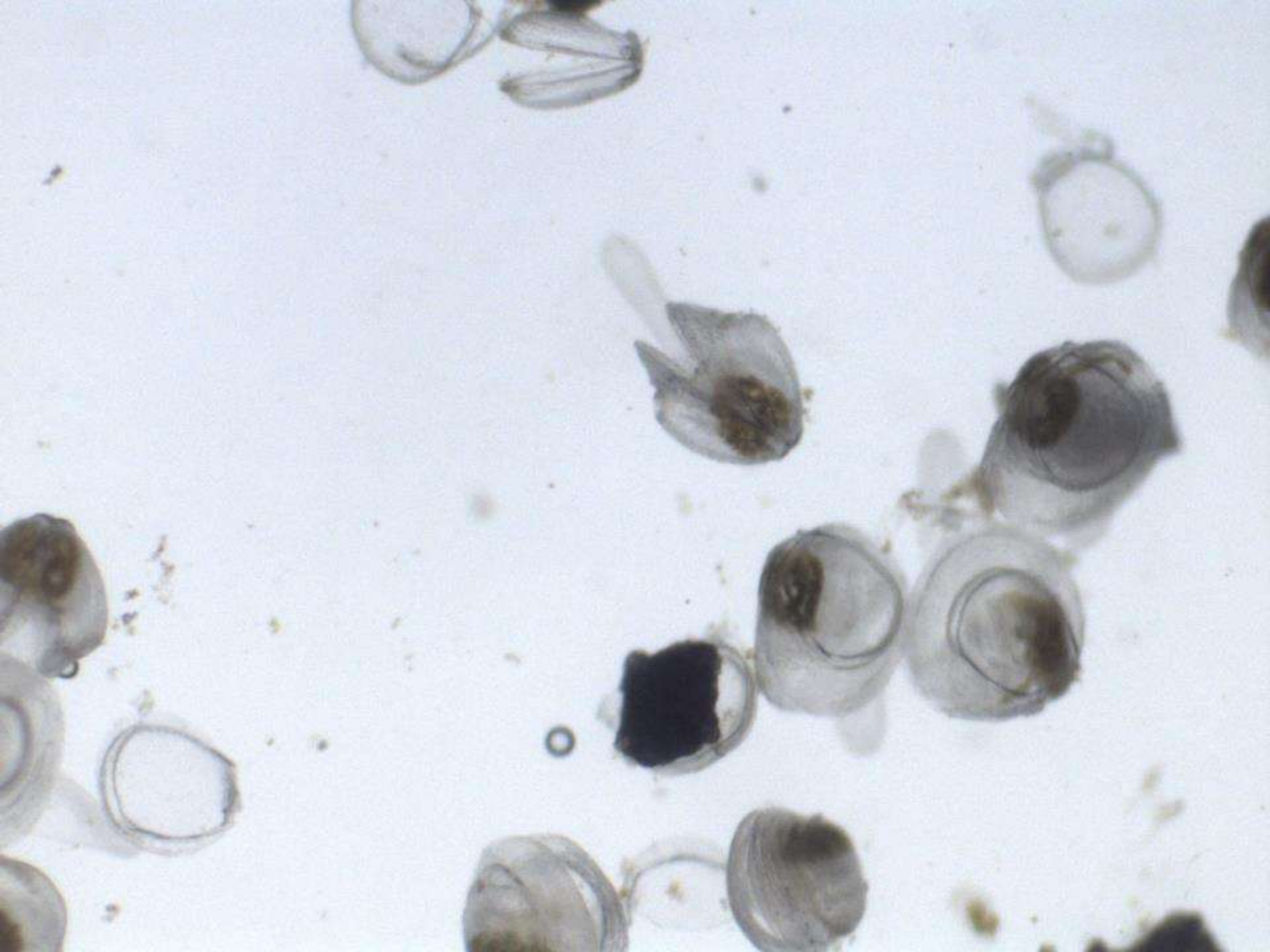








Water Source 5
This water source is used for
the water supply
for the building
for the building
for the building
for the building
for the building













05/30/2016 19:22

Outdoor Rearing System





Current Numbers in Lab



Giant floater (*Pyganodon grandis*)

DuPage – 8,300



Plain pocketbook (*Lampsilis cardium*)

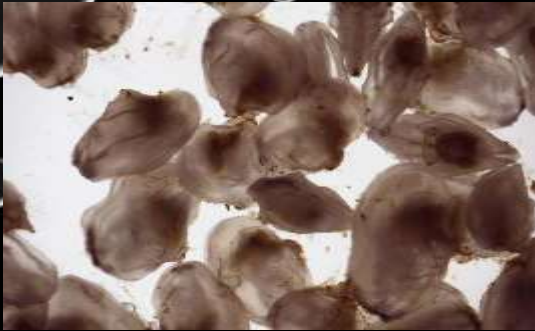
DuPage – 2,600



Creeper (*Strophitus undulatus*)

DuPage - 50

Current Numbers in Lab



Giant floater (*Pyganodon grandis*)
Urban Rivers – 5,600



Fluted-shell (*Lasmigona costata*) SGNC
Kane - 100



Elktoe (*Alasmidonta marginata*)
Kane - 115





Current Numbers in Lab

Fat mucket (*Lampsilis siliquoidea*)

Kane - 800



Plain pocketbook (*Lampsilis cardium*)

Kane - 100

90% of all reared mussels at USRC are large enough and healthy enough to be placed in outdoor rearing system. Remaining 10% not too far behind!





Marking and Monitoring



Results



Summer/Fall 2022 Plans

- **Five freshwater mussel species propagations (so far)**
 - Creeper
 - Wabash pigtoe
 - White heelsplitter
 - Plain pocketbook
 - Elktoe
- **Fish and mussel surveys**
 - East Branch DuPage River
 - Salt Creek
 - Other streams and tributaries in the Des Plaines River Watershed
- **Tag and release sub-adults reared in floating baskets**
 - Spring Brook 1 restoration sites



Accomplishments

Reared and released over 25,000 sub-adults of 6 species since 2016



Questions?

