Implementation of a Streamside-Rearing Facility for Sturgeon Rehabilitation

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Streamside-Rearing Facility

Concerns from 2002 Coordination Meeting/Genetics Conservation Meeting

What Should be considered before stocking?

- Appropriate broodsource
- Genetics
- Imprinting and straying concerns
- Reasons for decline
- Cost

Concerns from 2002 Coordination Meeting/Genetics Conservation Meeting

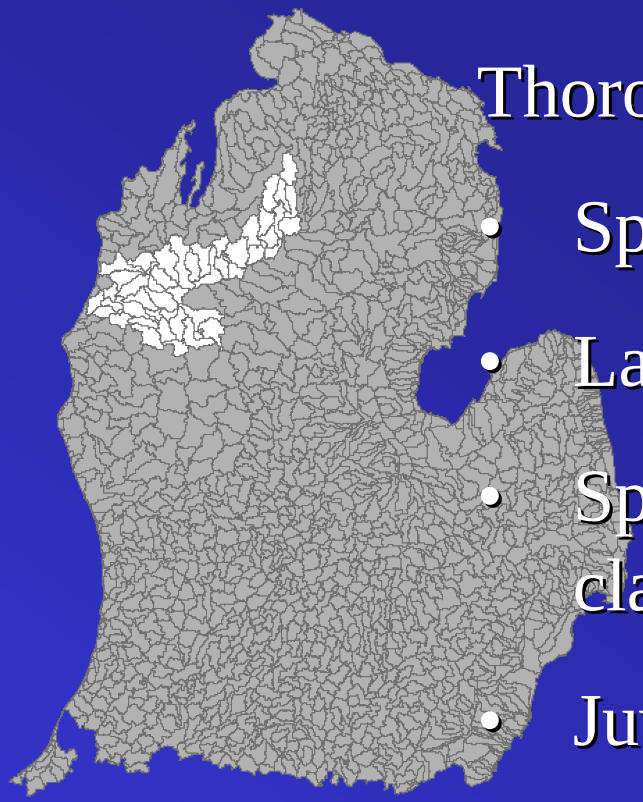
What life-stage?

- Larval availability
- Imprinting concerns

Why Stream-side Rearing?

1. Exposure to natal water source
    a. Temperature, DO, minerals, sediment, etc.
        - Maintain imprinting and physiological/metabolic attributes
2. Genetics
    a. Maintain within-population diversity
    b. Maintain among-population diversity

Manistee Population



Thoroughly Researched

- Spawner estimates (CMU)
- Larval drift monitoring (LRBOI & MTU)
- Spawning site identification and classification
- Juvenile habitat use and retention

Manistee Population

Habitat Improvement Efforts

- Recent and upcoming spawning site improvement
- EPA Watershed Initiative - Watershed scale habitat improvement

Collection of Larvae

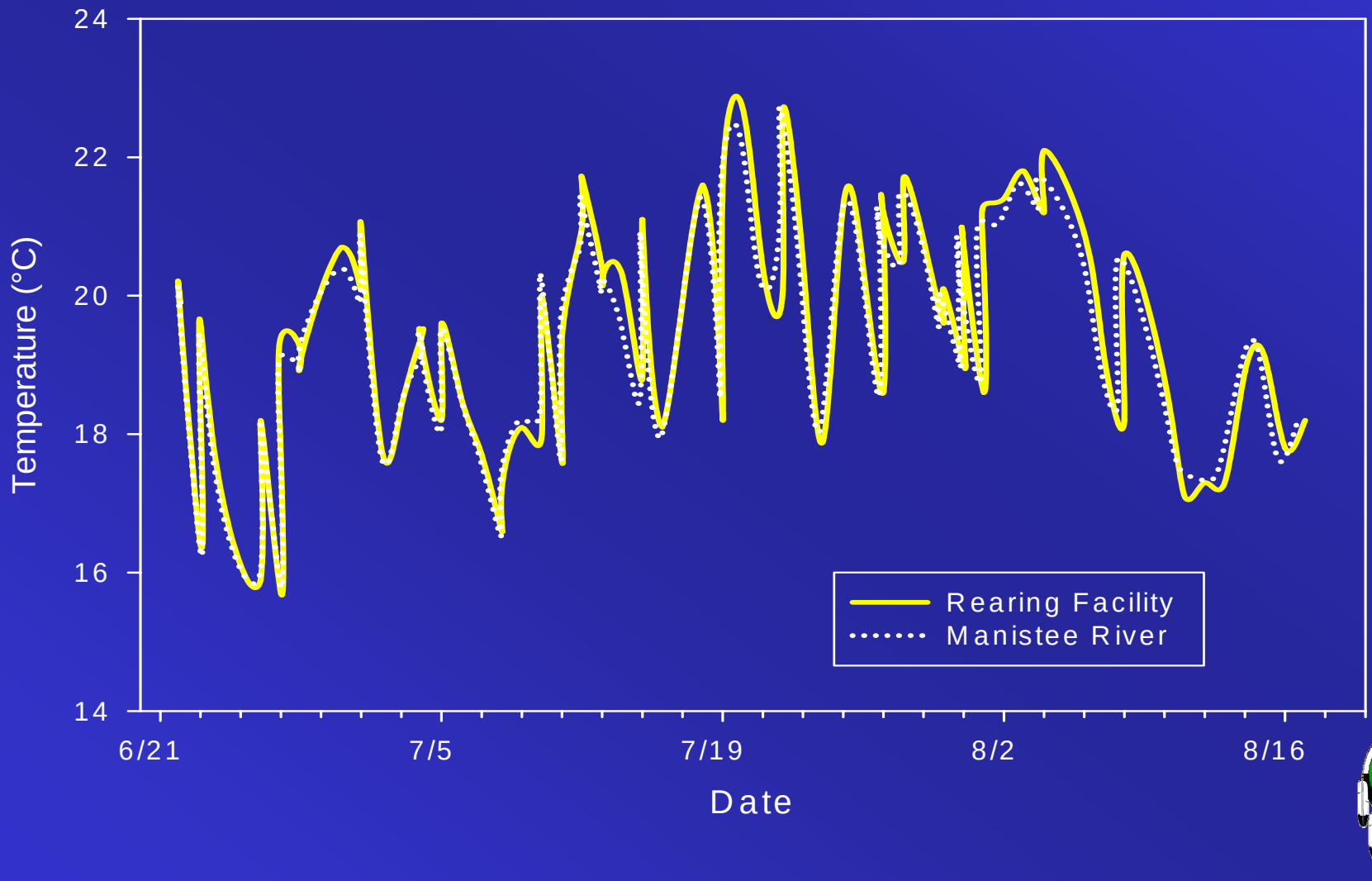
- D-frame drift nets fished from 10:00 pm-1:00 am
- Spaced evenly across river, throughout drift period
- #10 % of drift (LMLSMP suggestion)

Design of Facility – External Features

1 1/4” intake piping

Design of Facility – Internal Features

Design of Facility – Internal Features



Feeding and Growth

1. Feeding protocol similar to Wild Rose
   - Larvae fed brine shrimp *Artemia* sp.
   - Juveniles *Artemia* sp. & chironomids
   - Mainly hand fed
   - Measured Weekly

Fish Rearing 2004 and future

2004: Trial Run!

•40 larvae captured - Flood levels during entire drift duration

•6 fished reared - Some fish returned

• 3 released

Future:

•Approximately 150-600 larvae reared

All fish will be PIT tagged

Monitoring Plan

"Comparative Performance in Early-life History of Streamside and Wild-Reared Lake Sturgeon…"

- Compare growth and condition, movement patterns, habitat use and river residence time
- Compare progeny genotypes and parental contribution

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