

# Development of New Chemicals for Control of Harmful Algal Blooms

*Angela Poovey & Mike Netherland*

## Objective:

Develop algal-species selective application strategies to prevent blooms



## Approach:

Laboratory studies

*Microcystis aeruginosa* closed  
Lake Steilacoom, Pierce Co, WA, 2006

## Major Findings / Progress

- Conducted preliminary tests with *Lyngbya*
- Partnered with 3 groups
  - U of MS: Species that cause off-flavor in catfish
  - U of SC: Species that cause AVM\* in eagles and waterfowl
  - Purdue: Species that produce toxins or cause taste & odor problems in drinking water

\*Avian Vacuolar Myelinopathy – Neurological disease caused by toxic algae growing on *Hydrilla*

# Management and Control of Asian Carp

*Jack Killgore*

## Objectives

- Determine responses of carps to barriers (electricity, sounds, elevated water velocity)
- Provide tools to assess risks from barriers



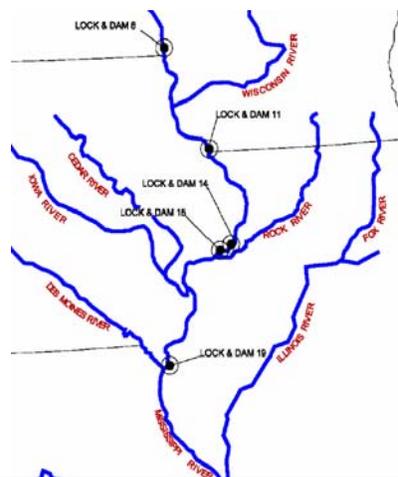
Black  
Carp



Bighead  
Carp

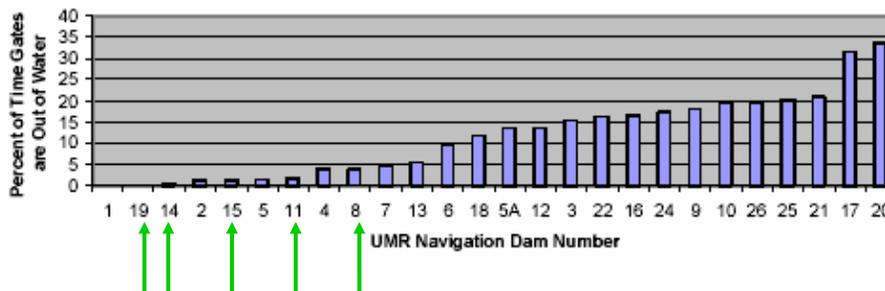
## Approach

- Focus on big river silver and bighead carp
- Evaluate barriers, population control, impacts, & management strategies



## Major Findings / Progress

- Electric Barrier used in the Chicago Ship Canal not feasible for UMRs
- Bubble-Acoustic System being considered
- Can be calibrated to be species specific



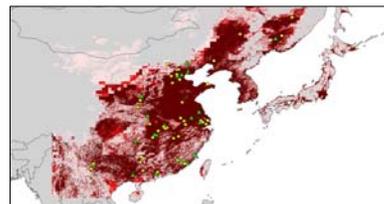
Recommended locations for barriers.

## Development of Site Assessment Technologies for Aquatic Nuisance Species

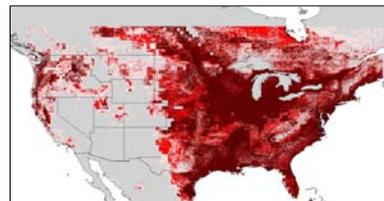
Judy F. Shearer & Michael J. Grodowitz

### Niche Modeling

1. Probability distribution defined as environmental variables
2. GARP – Genetic algorithm for rule set production—based on biological & environmental data



Black Carp in Asia



Predicted range in USA

## Approach

- **Use modeling techniques to predict invasions**
  - **Site parameters: pH, DO, depth**
  - **Species environmental tolerances**
  - **Pathways of introduction**
- **Develop monitoring strategies**

## Aquatic Nuisance Species Research

**Risk of Algal Toxins - Jeff Stevens**

**ANS Information Systems - Michael J. Grodowitz**

