

## Research Summit on Flowering Rush St. Paul, January 27, 28, 2010

Managers and staff of the Pelican River Watershed District recently attended a 2-day meeting in St. Paul to discuss future plans for treating Flowering Rush (FR) in area lakes. The meeting, jointly sponsored by the District and the Minnesota Department of Natural Resources and held at DNR headquarters, was attended by the Department's Aquatic Invasive Species specialists from throughout the state as well as by invited scientists John Madson, University of Mississippi, Peter Rice, University of Montana, Michelle Marko, Concordia College in Moorhead, and John Skogerbo, US Army Corps of Engineers. Representatives from the City of Detroit Lakes, and Lake Detroiters Association also were present. A series of presentations by the invited scientists described current FR research, alternative strategies for treatment, and related topics.

Several concepts concerning FR emerged from discussions.

- FR is very difficult to control; among other reasons is that it quickly develops a large reservoir of energy in the rhizomes
- The key to FR control is killing the plant's rhizome
- Because of the rhizome structure and size, mechanical harvesting control is not a means for control; hand-removal will be successful only in small infestations
- Dredging and similar mechanical means (e.g. suction) are prohibitively expensive, would face insurmountable regulatory barriers and are unlikely to produce favorable outcomes
- Treating only emergent FR has not achieving complete control because of the small part of the plant's biomass that is treatable; future control efforts must include, if not focus upon, submerged plant treatment
- Control of FR will take several years after effective treatment is determined
- A thorough understanding of carbohydrate translocation timing is key to successful treatment of emergent FR
- Herbicides exhibit plant-specific efficacy with respect to application rates, contact times, and other attributes
- Future *operational demonstration studies* should be carefully monitored, evaluated
- Additional research is needed to determine the plant's phenology and ecology, efficacy of different products, and required application rates and concentration/exposure times.

An important outcome of the meeting was consensus on the need for a multi-pronged research program, to include studies of...

1. the phenology and ecology of flowering rush, hardstem bulrush and possibly other native plants,
2. Concentration/exposure times of various herbicides and at various levels of detail
3. Evaluation of demonstration studies in Detroit and Curfman, using different treatment rates
4. Relative sensitivity of hardstem bulrush
5. Investigation of fungal control possibilities
6. Emergent foliar trials
7. Dissipation and fate studies
8. Sequential treatment efficacy

Attending the meeting on behalf of PRWD were Managers Kral, Jordan, Wickum and Imholte, Administrator Guetter, and Senior Advisor Hecock.

Dick Hecock, 1/29/10