



Minnesota DNR Rapid Response Summary

Summary of Rapid Response to observations of water hyacinth, water lettuce, and parrot's feather in Pool 5, Mississippi River

DRAFT 14 December 2012 by C. Welling

Introduction

This is a summary from the perspective of the Minnesota Department of Natural Resources (MnDNR) on an actual rapid response by the Wisconsin Department of Natural Resources (WiDNR) and U.S. Fish and Wildlife Service (FWS) to a report of the presence in Pool 5, Mississippi River of three non-native aquatic plants. The plants are water hyacinth, *Eichhornia crassipes*; water lettuce, *Pistia stratiodes*; and parrot's feather, *Myriophyllum aquaticum*. In Minnesota, both hyacinth and lettuce are unlisted nonnative species, while parrot's feather is classified as a regulated invasive species.

As Cochran et al (2006) documented, water lettuce, water hyacinth, and *Salvinia molesta* have been observed in Lake Winona in the late 1990s.

Table 1. Status of observed and referenced non-native plants.

Established in Minnesota?	Likelihood of naturalization? (M.S. 84D.04, subd. 2 (2))	Rank of threat (MISAC 2009)	Common name	Scientific name	Classification of non-native species (M.S. 84D.04)
Possibly	Low	Severe	water hyacinth	<i>Eichhornia crassipes</i>	Unlisted
Possibly	Low	[not listed]	water lettuce	<i>Pistia stratiodes</i>	Unlisted
Unlikely	Low	[not listed]	parrot's feather	<i>Myriophyllum aquaticum</i>	Regulated
No	Low	Severe	Giant salvinia	<i>Salvinia molesta</i>	Prohibited

Description of Rapid Response Activities

1. Detection

1.1 Report of observations

Observations of hyacinth, lettuce, and parrot's feather were reported to the MnDNR on 3 August in an email from WiDNR, to whom the observations were reported in an email from FWS earlier on the same day.

It is important to note that WiDNR observed that hyacinth, lettuce, and parrot's feather were found in the same general areas where they were observed in the previous year, 2011.

1.2 Observers and participants

Megan Moore, MN DNR Vegetation Specialist
Long-Term Resource Monitoring Program - Lake City, MN

Rochelle Roche, MN DNR – EWR Invasive Species Intern
1200 Warner Rd, Saint Paul, MN

Keegan Lund, MN DNR – EWR Invasive Species Specialist
1200 Warner Rd, Saint Paul, MN

Chip Welling, MN DNR – EWR Coordinator, Management of Aquatic Invasive Species
500 Lafayette Rd, Saint Paul, MN

John Sullivan, WI DNR Water Resources Management Specialist
La Crosse, WI

Scott Provost, P.S., WI DNR Water Resources Specialist
Aquatic Plant Coordinator - WCR
Aquatic Invasive Species Coordinator - WCR
473 Griffith Avenue, Wisconsin Rapids, WI 54494

Lisa Reid, USFWS Wildlife Biologist
Upper Mississippi River National Wildlife and Fish Refuge - Winona District
51 E 4th St., Rm. 203, Winona, MN 55987

Mary Stefanski, USFWS
Upper Mississippi River National Wildlife and Fish Refuge - Winona District
51 East 4th Street, Room 203, Winona, MN 55987

1.3 Confirmation of identification

Identification was done by review of photographs of the plants.

2. Assessment of distribution and abundance

The distribution of aquatic plants in a lake is defined as the spatial distribution of plants within the basin and can be estimated by sampling the frequency of occurrence of the plants. The abundance of aquatic plants in a lake is defined as amount of vegetation in a lake and can be estimated by sampling biomass, subjectively estimating the mass or volume, collecting hydroacoustic observations of the volume of the water column occupied by plants, and so forth.

2.1

In response to a report of hyacinth and lettuce again on Pool 5, USFWS searched the Upper Spring Lake area before 3 August (Figure 1) and found both hyacinth and lettuce (Figure 2). More searching was done by WiDNR in early August, with efforts by MnDNR later in the month.



U.S. Fish & Wildlife Service

Concentrations of Water Hyacinth Discovered near Buffalo City, WI

Upper Mississippi River National Wildlife & Fish Refuge

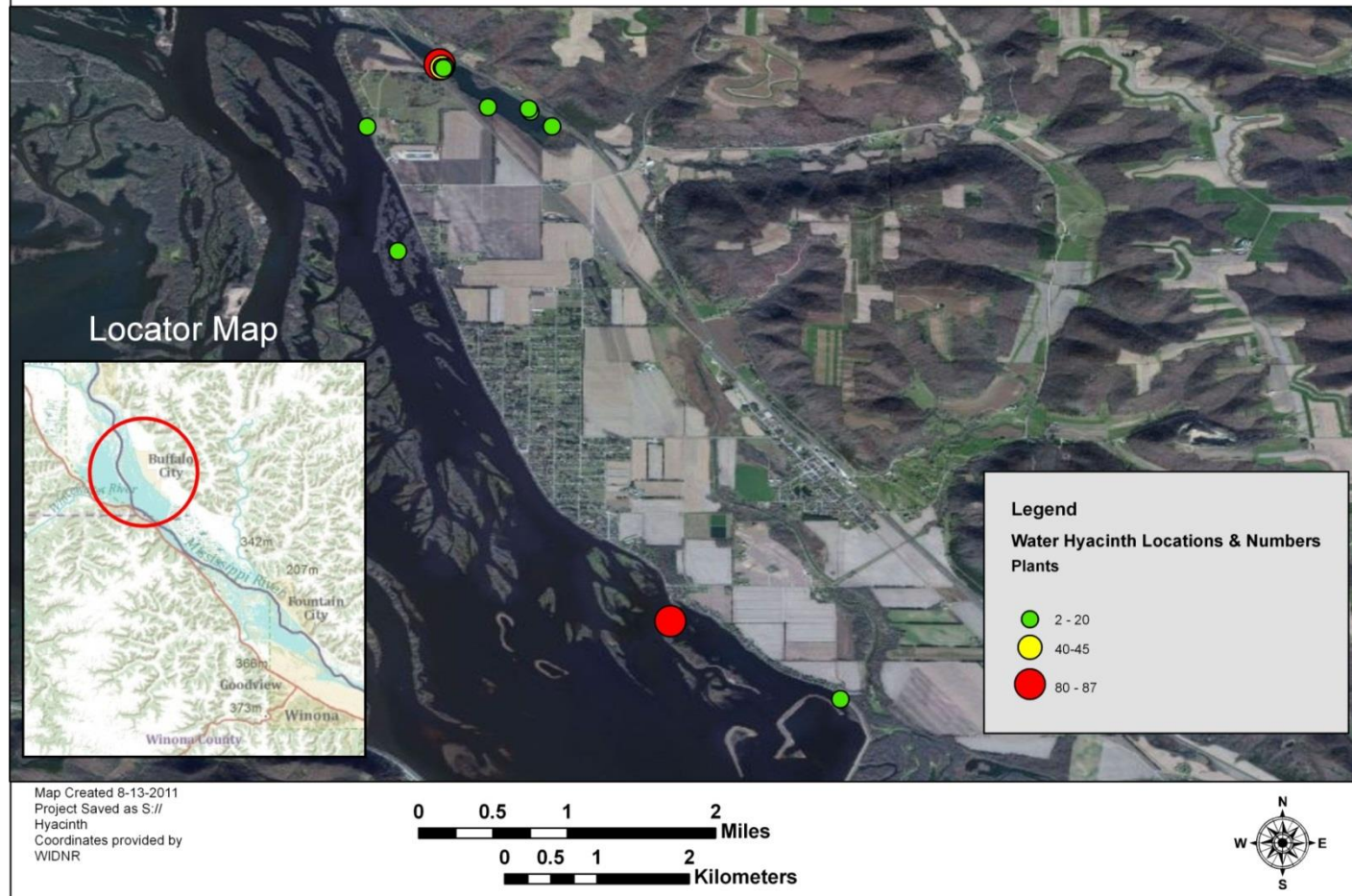


Figure 1. Location of water hyacinth in Spring Lake, Pool 5 of the Upper Mississippi River, downstream of Buffalo City, WI as reported by USFWS during late July - early August 2012



Figure 2. Water lettuce and water hyacinth in Spring Lake, Pool 5 of the Upper Mississippi River, downstream of Buffalo City, WI on 26 July 2012.

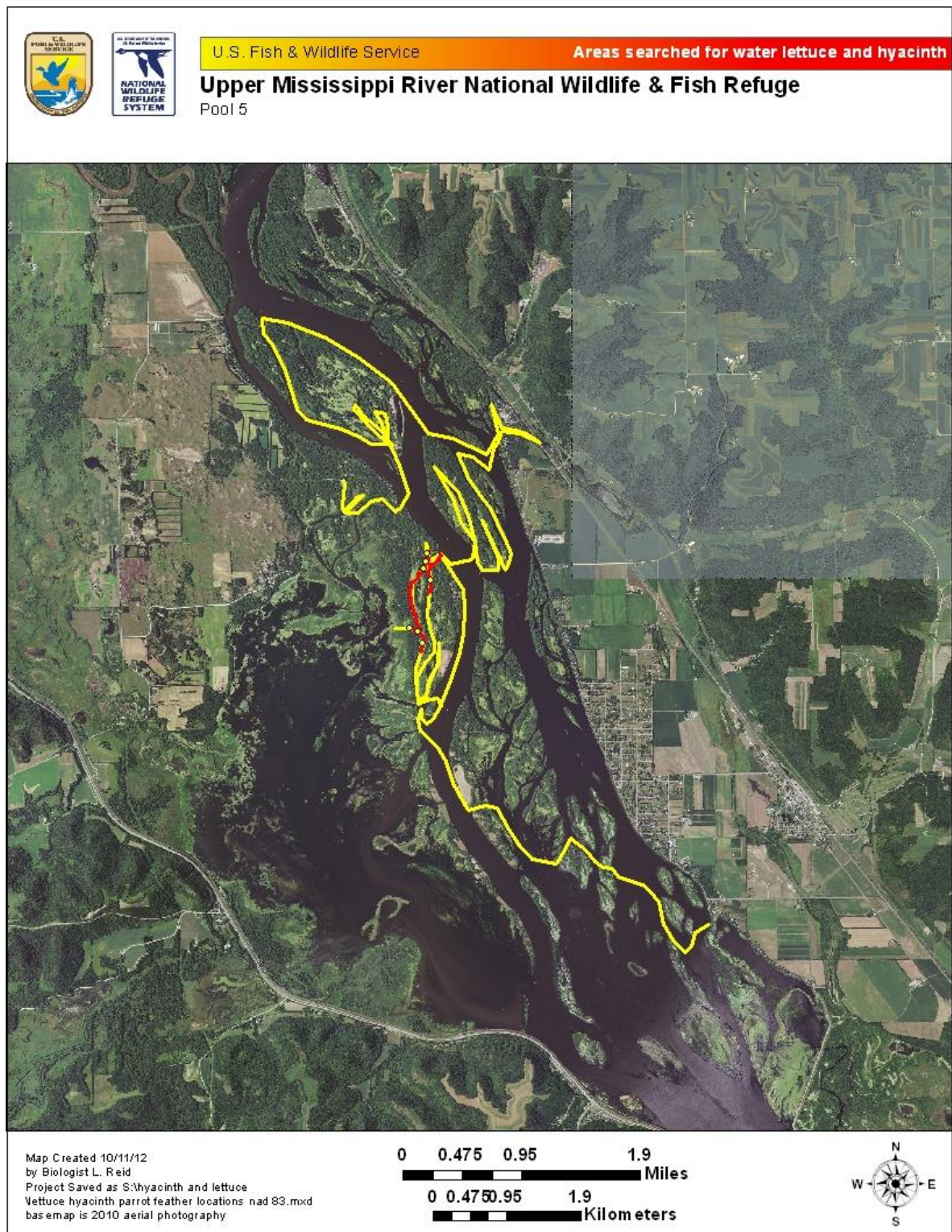


Figure 3. Areas along the Halfmoon Canoe Trail searched by UFSWS for water lettuce and water hyacinth on 24 and 27 August 2012.

3. Control of the of three non-native aquatic plants

During August, WiDNR directed a contractor to apply herbicide to plants in Spring Lake. On the Minnesota side, USFWS Biologist Lisa Reid (Upper Mississippi River Refuge) organized a water lettuce inspection and removal date for September 5, 2012. Rochelle Roche, MnDNR Invasive Species Intern, attended the event at Half Moon Landing to inspect the infestation and help pull the water lettuce. Approximately 5,000 plants were pulled from the Mississippi River on the West side of Fisher Island on the Mississippi River. The plants were mainly located in a shallow channel with mainly stagnant water. Several species of duckweed were abundant in the channel as well.



Figure 4. Water lettuce observed by MnDNR on 5 September 2012 on the West side of Fisher Island, near Halfmoon Lake in Pool 5 of the Mississippi River.



Figure 5. USFWS staff collecting water lettuce near Halfmoon Lake in Pool 5 of the Mississippi River.

During 23-25 September 2012, a number of people collected water lettuce and water hyacinth. The effort on 25 September resulted in 6-8,000 lettuce and hyacinth plants being collected at Spring Lake near Buffalo City, WI. At the site in Minnesota near the Halfmoon Lake Canoe Trail over 27,000 lettuce plants were collected earlier in the month. Last week, WiDNR went through the area one more time and picked up 22 plants.

4. Public awareness

On 17 August 2012, USFWS issued a news release, in which they described a “New Exotic Threat to the Upper Mississippi River. Shortly thereafter, Minnesota Public Radio (MPR) interviewed Doug Jensen, the aquatic invasive species program coordinator at Minnesota Sea Grant in Duluth about the plants in Pool

MPR also interviewed Chip Welling for the same story.

Literature cited

Cochran, P.A., S. Pociask, H. Warthesen, and N. Proulx. 2006. Noteworthy collection: Minnesota. *Pistia stratioides* L. (Araceae) . Waterlettuce. The Michigan Botanist 45:210-213.