An Expanded Map of Vegetation Communities at Big Muddy National Fish and Wildlife Refuge

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ABSTRACT

In 2012, a map of vegetation communities on Big Muddy National Fish and Wildlife Refuge was expanded based on interpretation of aerial photographs and field data. National Agricultural Imagery Program aerial photographs were used to identify distinct communities on previously unmapped refuge units and newly acquired parcels. Newly mapped polygons were then visited to adjust map boundaries, classify communities according to the National Vegetation Classification System, and quantify the abundance of dominant species and non-native, invasive species of concern to the refuge and other resource management agencies along the Missouri River. The expanded map now covers 6,136 hectares representing 33 community types, including 6 previously unmapped types. The full map includes 1,113 polygons, of which 627 are new, 21 are updated from the 2009 mapping effort, and 465 are unchanged from 2009. Mortality of primarily cottonwood stems, because of growing-season floods between 2008 and 2011, has reduced foliar cover of woody stems and created more open wooded communities. In herbaceous communities, dominance by herbaceous old fields has increased due to the inclusion of refuge units dominated by lands in recent agricultural production in the expanded map. Wetland community abundance has increased slightly due to recent flooding.

The digital spatial data accompanying this report include the expanded map of vegetation communities at Big Muddy National Fish and Wildlife Refuge and community classification points used to inform map development. Also available are photographs taken at community classification points. Each layer file contains metadata describing information specific to the layer such as the attribute field names and descriptions, and projection information. An ArcGIS map document file was compiled with linkages between classification points and the vegetation map based on the map polygon within which each point is recorded.

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HOW TO OBTAIN THE DIGITAL FILES

The digital files accompanying this report can be obtained via the Internet from the U.S.Geological Survey publications website. Go to the web page at http://pubs.usgs.gov/ds/785/ and follow the directions to download the files. In order to preserve the integrity of database links, the data layers, the map document, and the folder containing photos should be placed in a common directory.

The spatial data layers and map document were designed for use in ArcGIS version 10 or higher.