

Appendix G: Land Acquisition Maps

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The following maps show potential land protection or conservation areas by river navigation pools within the Refuge. Existing Refuge lands include lands acquired by the Service and lands acquired by the Corps of Engineers but managed as part of the Refuge through a cooperative agreement between the Fish and Wildlife Service and the Corps of Engineers. Many of these acquired lands have been submerged since the 1930s when a series of constructed locks and dams raised water levels to improve navigation. Thus, the Refuge generally includes areas shown in green (lands) and areas shown in blue (water) on the maps.

These acquired lands, combined with lands within the Approved Expansion Boundary in the 1987 Master Plan, the Halfway Creek Preliminary Project Proposal, and the Lost Mound Unit Memorandum of Agreement (former Savanna Army Depot), encompass the entire authorized Refuge. All numbered tracts on the maps are thus within the approved boundary of the Refuge.

All tracts are coded A, B, C, or D to denote their relative resource value. This classification system was developed in the 1987 Master Plan for the Refuge, and is still a useful comparison and prioritization tool. The classification system is included below.

RESOURCE CLASSIFICATION A: High value fish and wildlife habitat which is unique and irreplaceable on a national basis or in the ecoregion.

- # Known or very probable federal endangered species habitat. Includes bald eagle and Peregrine Falcon nesting sites and Higgins' eye pearly mussel beds.
- # Essential habitat for state endangered species.
- # Water bird nesting colonies and one-quarter-mile buffer area from the closest nesting tree; includes herons, egrets, cormorants, and terns.
- # Essential production habitat or concentration areas for Regional Resource Plan (RRP) National Species of Special Emphasis (NSSE) where the Upper Mississippi River plays a special role in supporting these species. Species include: Wood Duck, Mallard, Ring-necked Duck, Canvasback, Tundra Swan, Osprey, Peregrine Falcon, and Bald Eagle.
- # Tail water areas with high fisheries and raptor feeding values.
- # Main channel border; side channels and river lakes/ponds with known crucial values for fish spawning, rearing, and wintering; and diverse mussel habitat.

RESOURCE CLASSIFICATION B: Valuable fish and wildlife habitat which is relatively scarce or becoming scarce on a national basis or in the ecoregion.

- # Prime waterfowl habitat (criteria include but are not limited to dispersed habitats for RRP species such as Wood Duck, Mallard, Ring-necked Duck, and Canada Goose.)
- # Primary habitat for remaining RRP NSSE species: Northern Pintail, American Black Duck, Redhead, Greater White-fronted Goose, Snow Goose, Trumpeter Swan, Greater Sandhill Crane, American Woodcock, Least Tern, Mourning Dove, and Golden Eagle.

- # Primary habitat for at least three of five major wildlife groups (fish, waterfowl, furbearers, raptors, water/shore birds) using the river.
- # Areas which state threatened or endangered species are known to occur.
- # Wing dams and other important fisheries habitat; includes most main channel border areas, side channels, river lakes/ponds, and sloughs.

RESOURCE CLASSIFICATION C: Medium value habitat, usually altered.

- # Primary habitat for one or two of the five major wildlife groups (includes most of the main river channel, agricultural lands, revegetated spoil sites, and upland forest).
- # Utility corridors (transmission lines, pipelines).

RESOURCE CLASSIFICATION D: Low value habitat, developed.

- # Developed areas including roads, bridges, railroad tracks, residential areas, airports, commercial/industrial areas, barge fleetings and terminal sites, power plants, etc. These areas will be designated based on review and concurrence from the Upper Mississippi River Refuge District Managers and Service Ecological Services staff.
- # Water areas with low fisheries value.

Note:

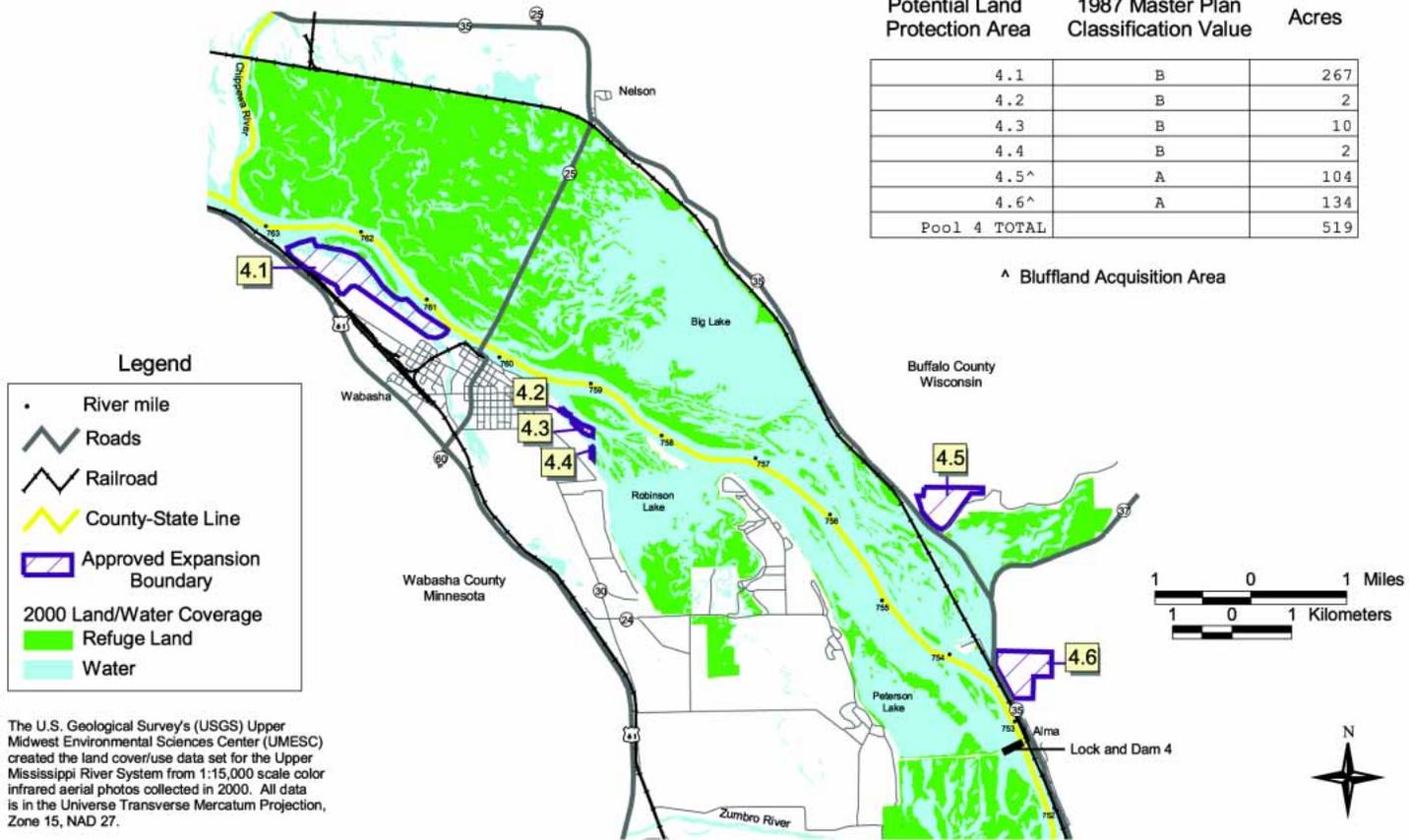
- # The scarcity and relative importance of some habitat types generally increase in downstream portions of the refuge. This factor was considered in the habitat classification exercise, and some units in the lower pools may have been placed in higher classification categories based on importance to the local ecological system rather than overall biological productivity.
- # Habitat evaluations are based on the current status of the resource. Proposals for enhancement, commitments for GREAT-designated disposal sites, and other projects planned for the future were not factors in the determination of resource classifications.

Potential Land Protection* Areas, Pool 4, within the Authorized Refuge Boundary, Upper Mississippi River National Wildlife and Fish Refuge.

* Conservation options may include: fee title and conservation easement acquisitions (willing sellers only), and cooperative efforts with state and non-governmental organizations.

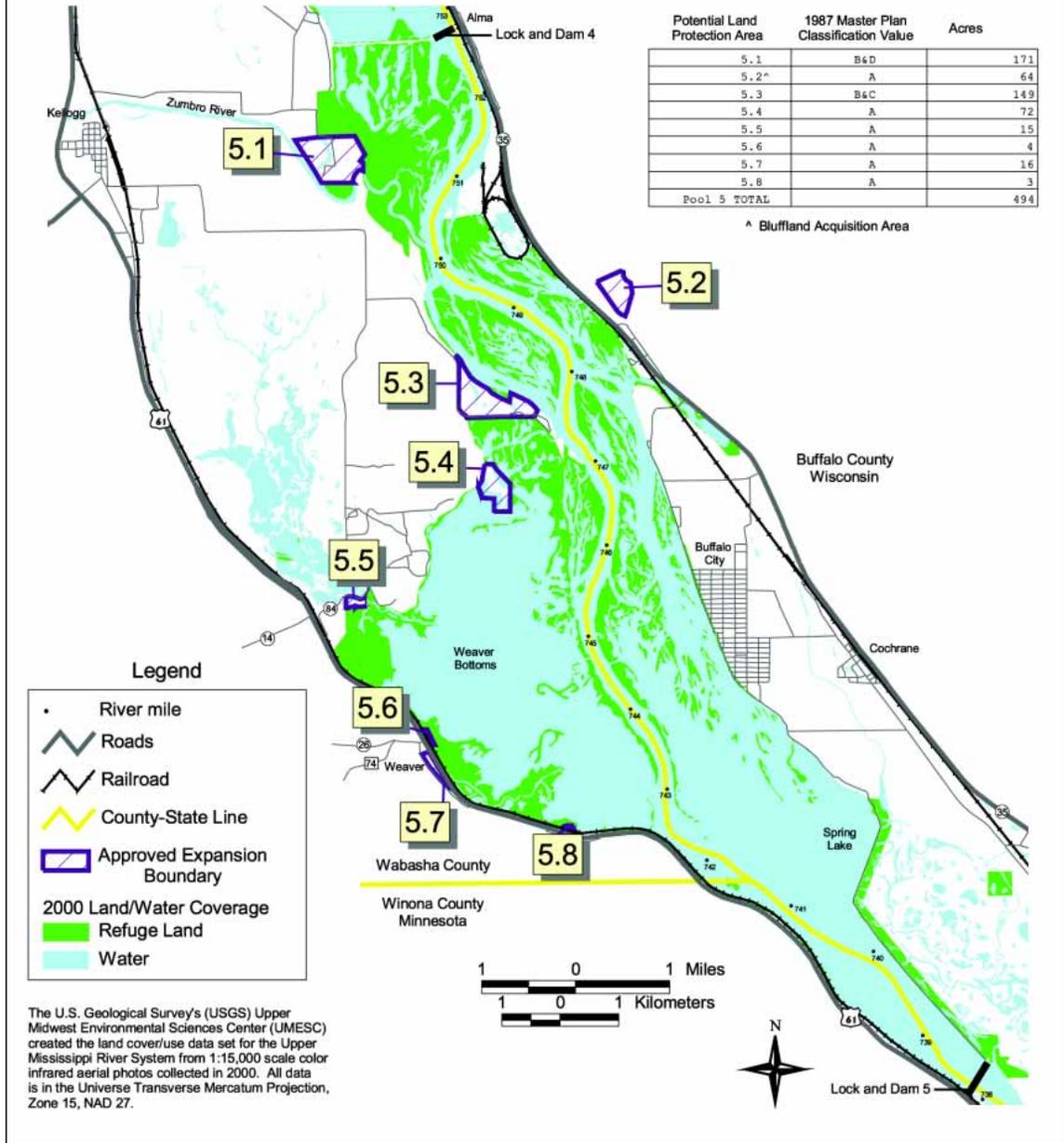
Potential Land Protection Area	1987 Master Plan Classification Value	Acres
4.1	B	267
4.2	B	2
4.3	B	10
4.4	B	2
4.5 [^]	A	104
4.6 [^]	A	134
Pool 4 TOTAL		519

[^] Bluffland Acquisition Area



Potential Land Protection* Areas, Pool 5, within the Authorized Refuge Boundary, Upper Mississippi River National Wildlife and Fish Refuge.

* Conservation options may include: fee title and conservation easement acquisitions (willing sellers only), and cooperative efforts with state and non-governmental organizations.

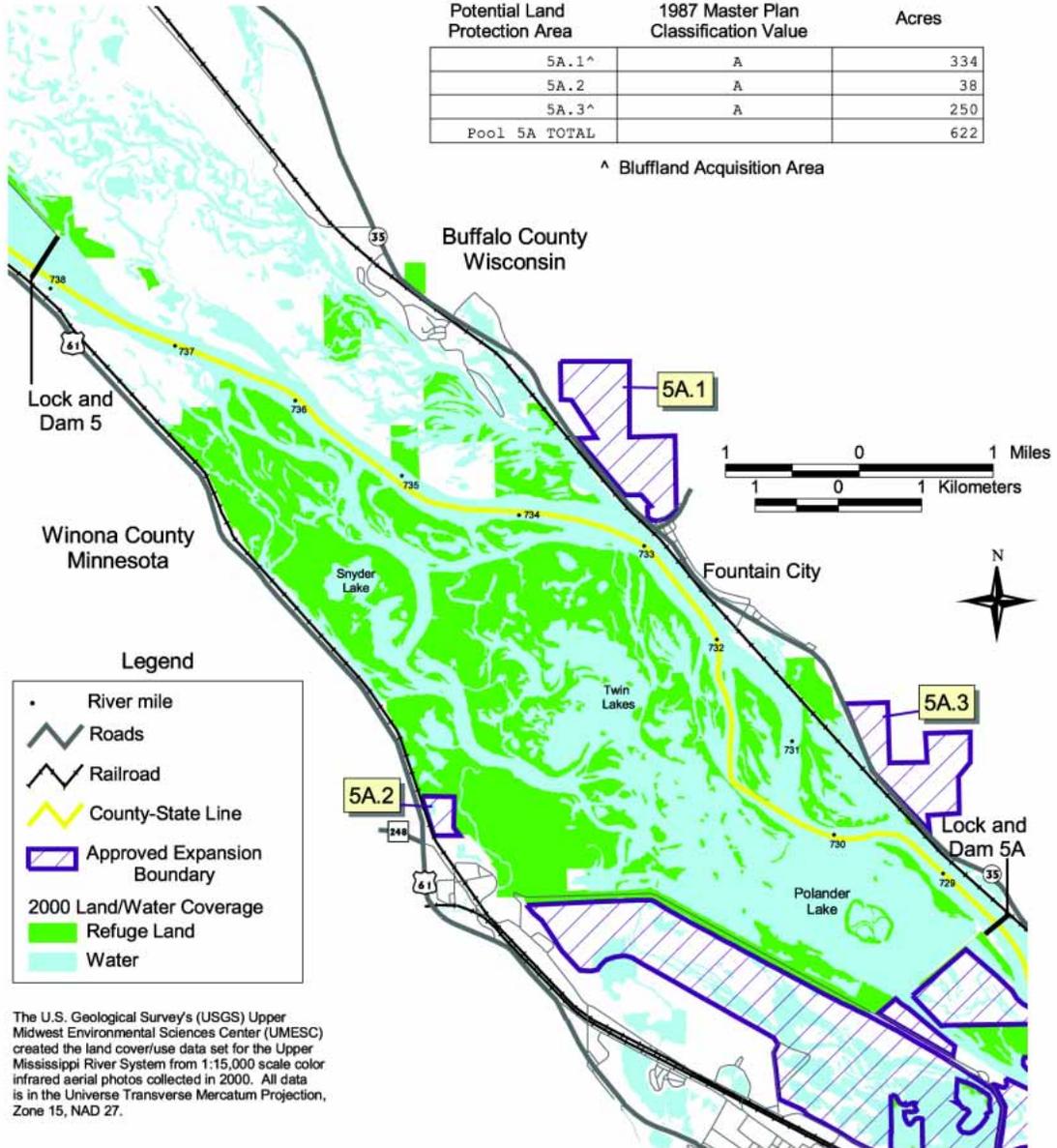


Potential Land Protection* Areas, Pool 5A, within the Authorized Refuge Boundary, Upper Mississippi River National Wildlife and Fish Refuge.

* Conservation options may include: fee title and conservation easement acquisitions (willing sellers only), and cooperative efforts with state and non-governmental organizations.

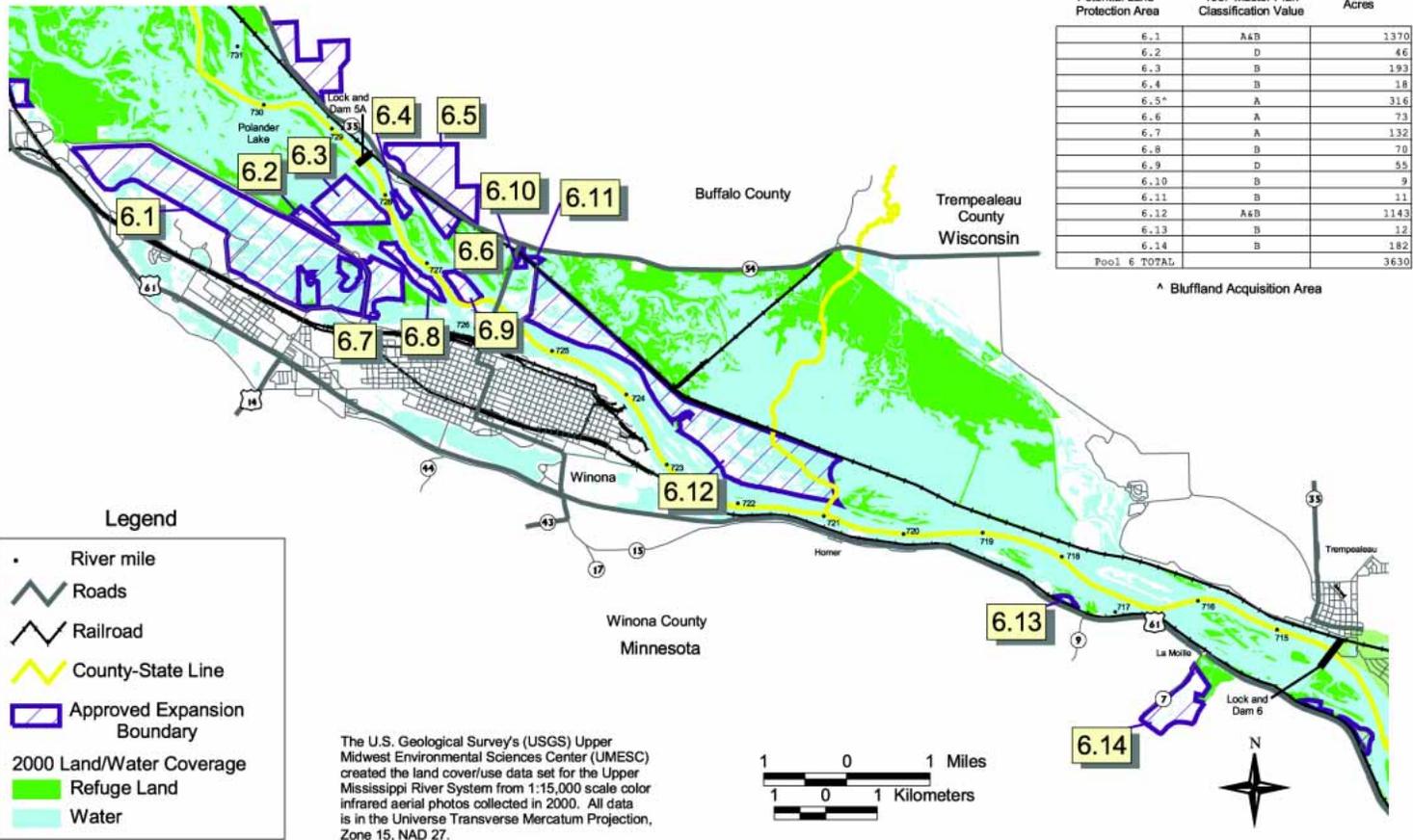
Potential Land Protection Area	1987 Master Plan Classification Value	Acres
5A.1 [^]	A	334
5A.2	A	38
5A.3 [^]	A	250
Pool 5A TOTAL		622

[^] Bluffland Acquisition Area



Potential Land Protection* Areas, Pool 6, within the Authorized Refuge Boundary, Upper Mississippi River National Wildlife and Fish Refuge.

* Conservation options may include: fee title and conservation easement acquisitions (willing sellers only), and cooperative efforts with state and non-governmental organizations.

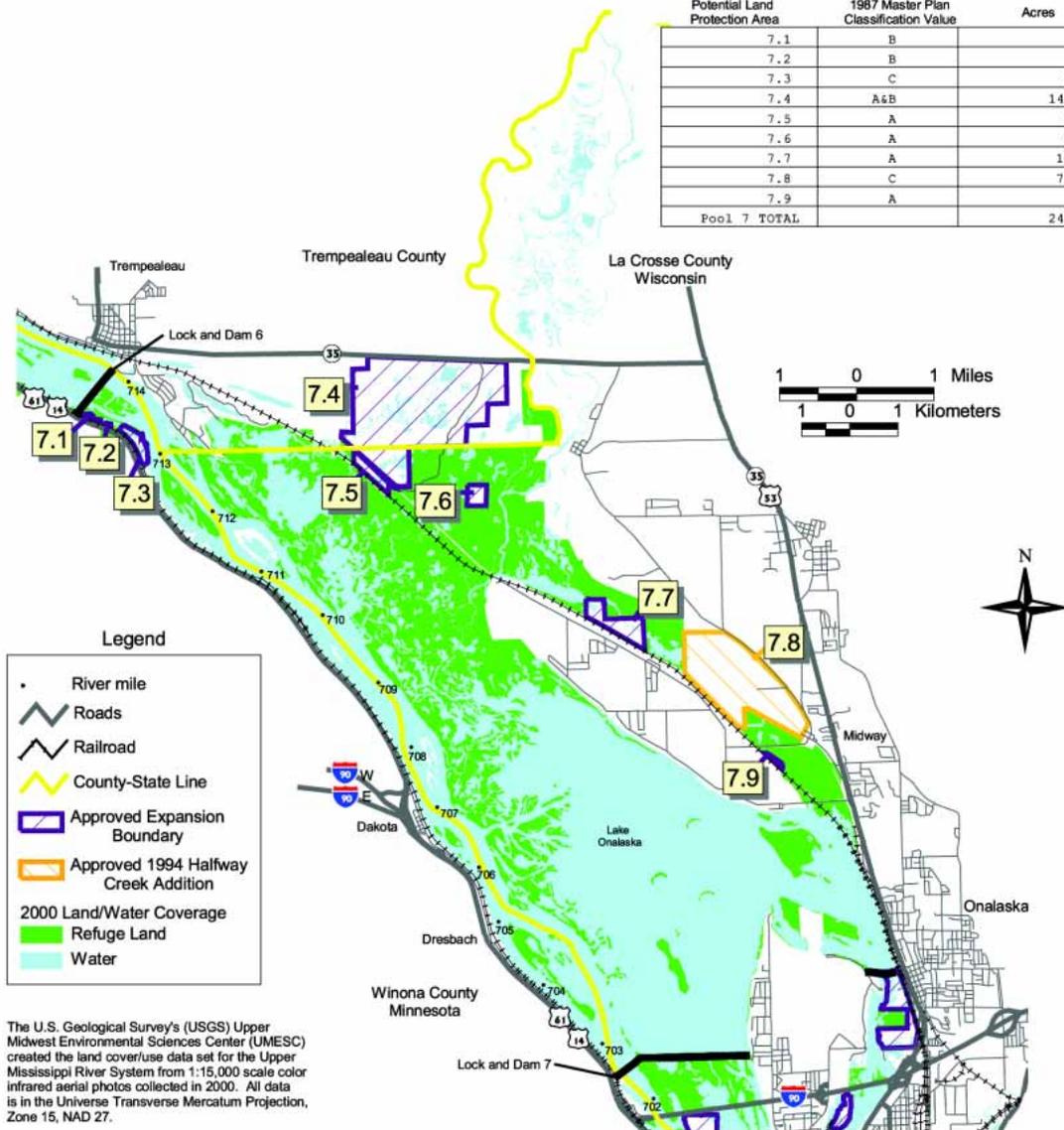


The U.S. Geological Survey's (USGS) Upper Midwest Environmental Sciences Center (UMESC) created the land cover/use data set for the Upper Mississippi River System from 1:15,000 scale color infrared aerial photos collected in 2000. All data is in the Universe Transverse Mercatum Projection, Zone 15, NAD 27.

Potential Land Protection* Areas, Pool 7, within the Authorized Refuge Boundary, Upper Mississippi River National Wildlife and Fish Refuge.

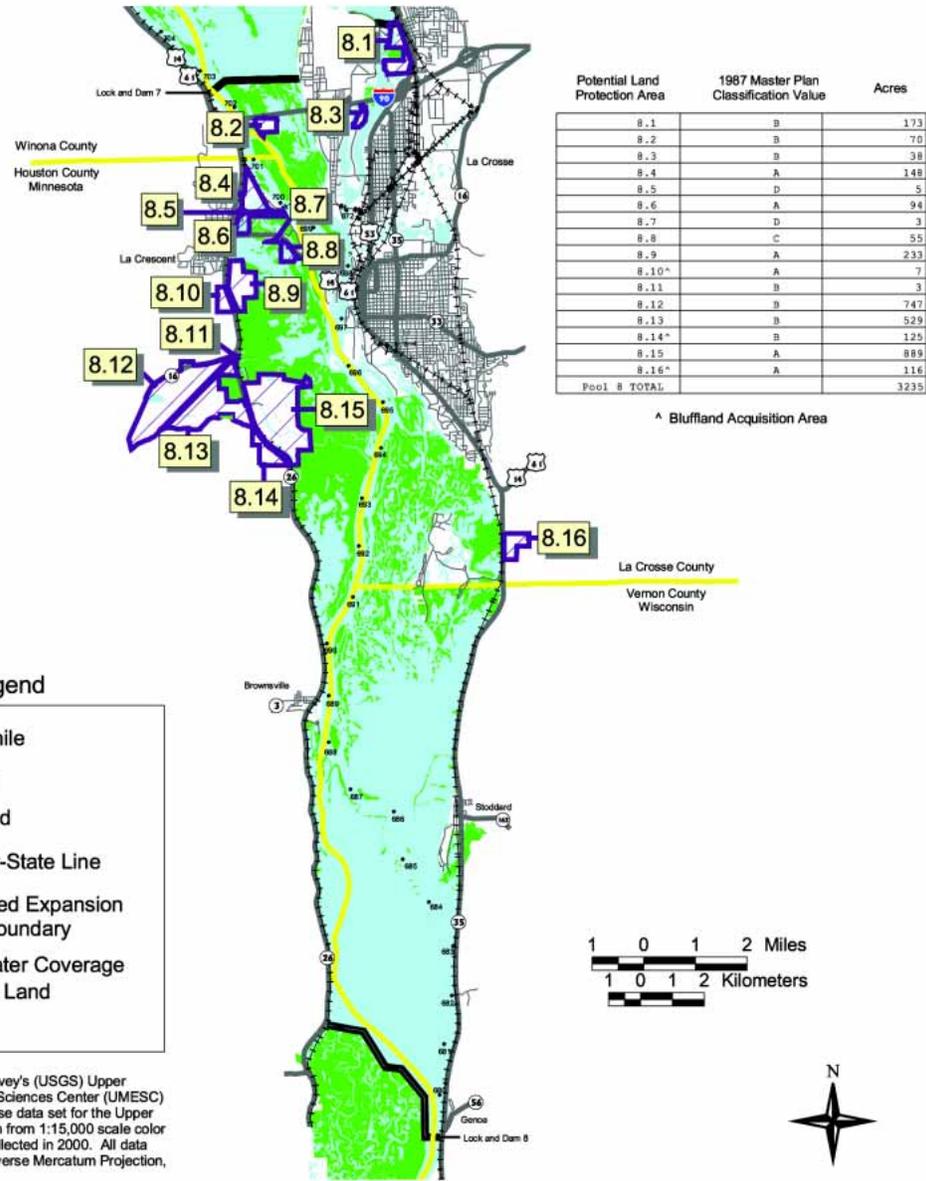
* Conservation options may include: fee title and conservation easement acquisitions (willing sellers only), and cooperative efforts with state and non-governmental organizations.

Potential Land Protection Area	1987 Master Plan Classification Value	Acres
7.1	B	8
7.2	B	2
7.3	C	46
7.4	A&B	1449
7.5	A	49
7.6	A	43
7.7	A	126
7.8	C	745
7.9	A	7
Pool 7 TOTAL		2475



Potential Land Protection* Areas, Pool 8, within the Authorized Refuge Boundary, Upper Mississippi River National Wildlife and Fish Refuge.

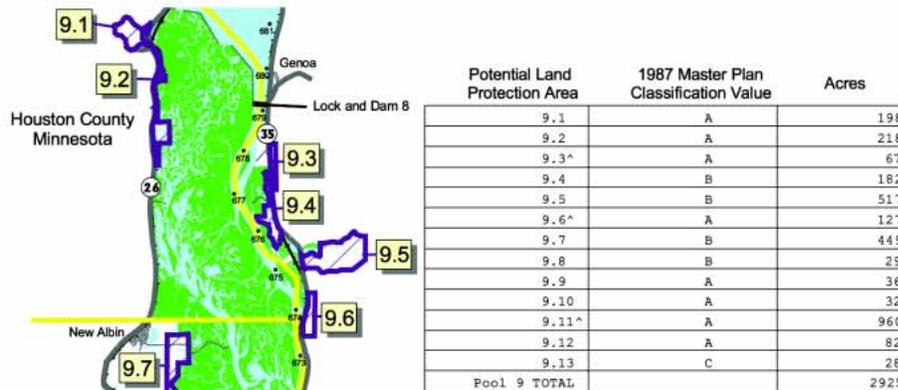
* Conservation options may include: fee title and conservation easement acquisitions (willing sellers only), and cooperative efforts with state and non-governmental organizations.



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Potential Land Protection* Areas, Pool 9, within the Authorized Refuge Boundary, Upper Mississippi River National Wildlife and Fish Refuge.

* Conservation options may include: fee title and conservation easement acquisitions (willing sellers only), and cooperative efforts with state and non-governmental organizations.



[^] Bluffland Acquisition Area

Legend

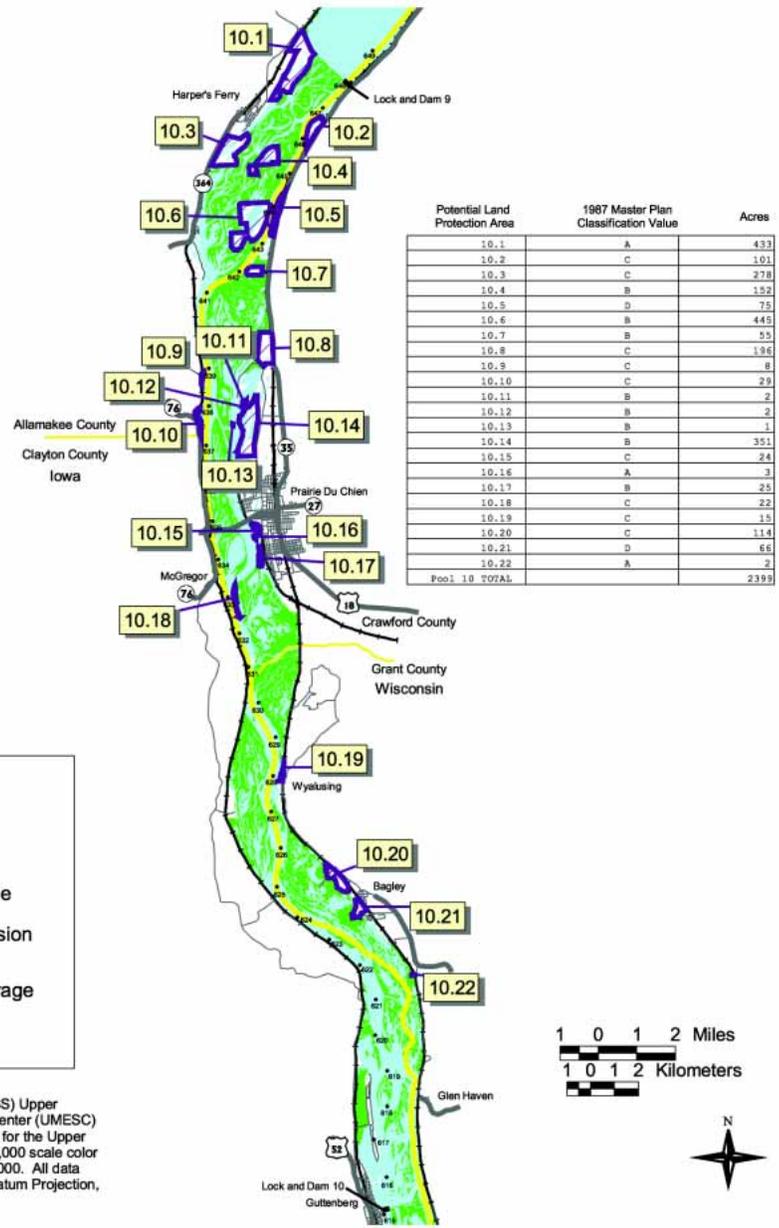
- River mile
- Roads
- Railroad
- County-State Line
- ▭ Approved Expansion Boundary
- 2000 Land/Water Coverage
- Refuge Land
- Water

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Potential Land Protection* Areas, Pool 10, within the Authorized Refuge Boundary, Upper Mississippi River National Wildlife and Fish Refuge.

* Conservation options may include: fee title and conservation easement acquisitions (willing sellers only), and cooperative efforts with state and non-governmental organizations.



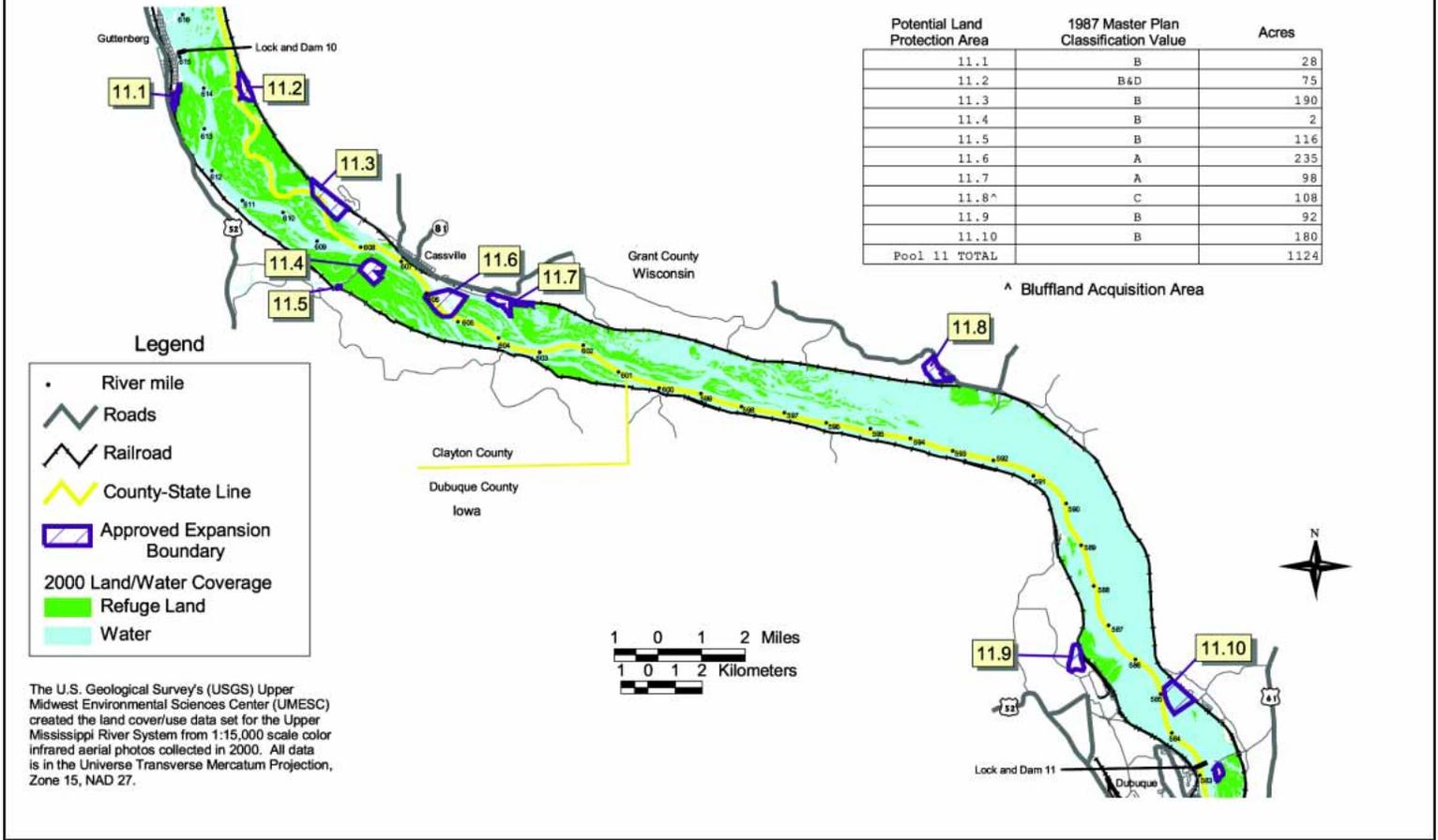
Legend

- River mile
- Roads
- Railroad
- County-State Line
- Approved Expansion Boundary
- 2000 Land/Water Coverage**
- Refuge Land
- Water

The U.S. Geological Survey's (USGS) Upper Midwest Environmental Sciences Center (UMESC) created the land cover/use data set for the Upper Mississippi River System from 1:15,000 scale color infrared aerial photos collected in 2000. All data is in the Universe Transverse Mercatum Projection, Zone 15, NAD 27.

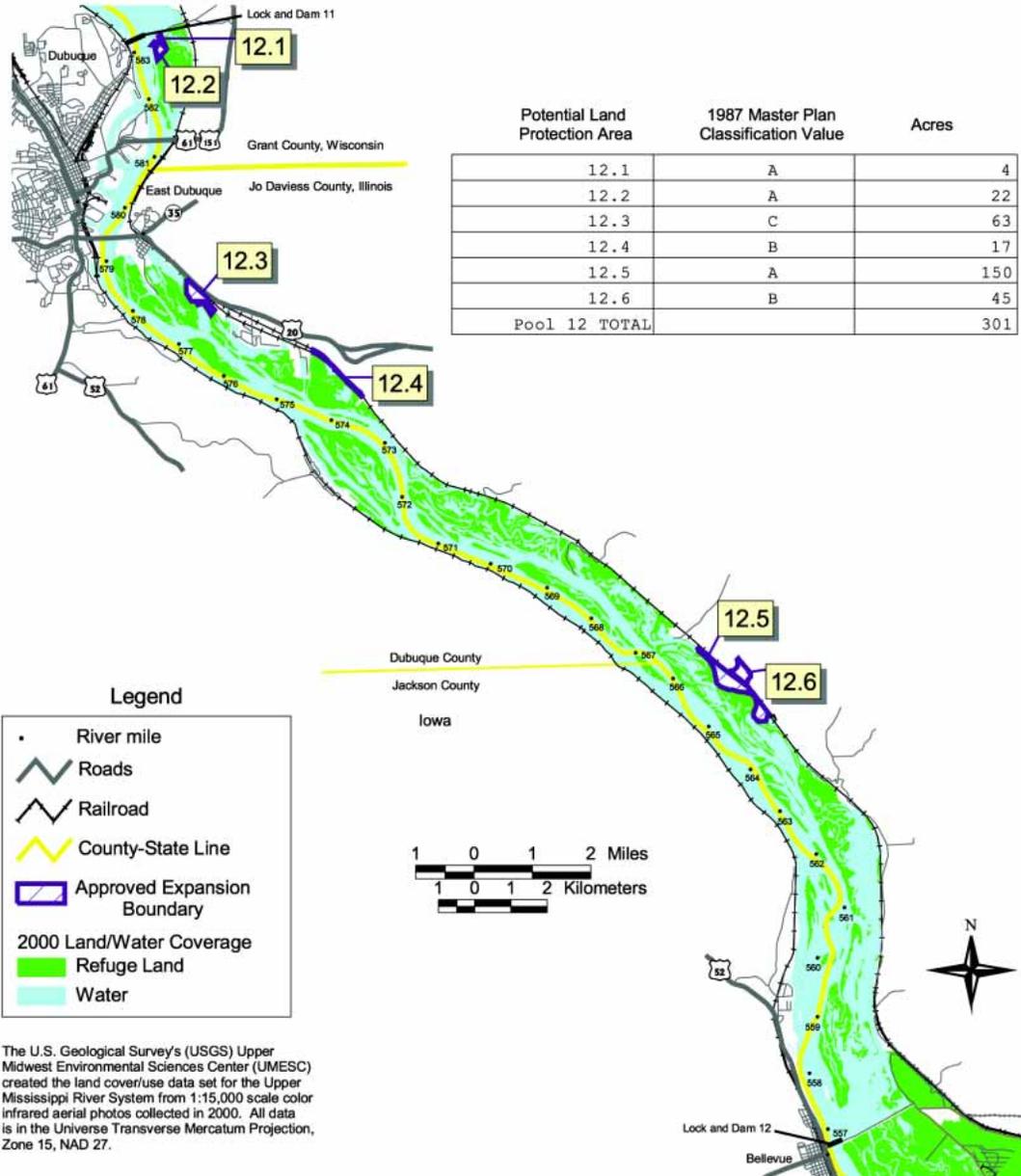
Potential Land Protection* Areas, Pool 11, within the Authorized Refuge Boundary, Upper Mississippi River National Wildlife and Fish Refuge.

* Conservation options may include: fee title and conservation easement acquisitions (willing sellers only), and cooperative efforts with state and non-governmental organizations.



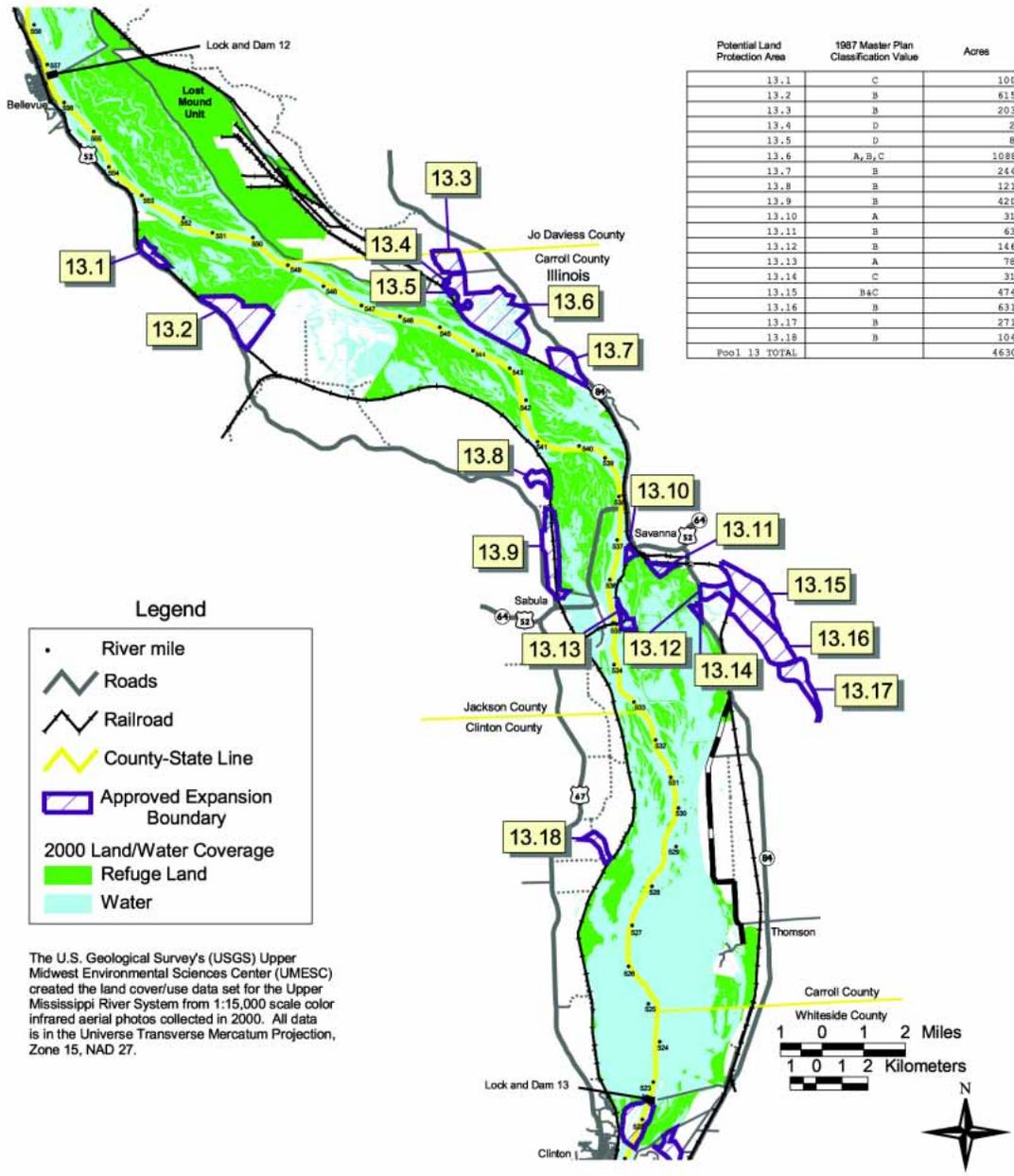
Potential Land Protection* Areas, Pool 12, within the Authorized Refuge Boundary, Upper Mississippi River National Wildlife and Fish Refuge.

* Conservation options may include: fee title and conservation easement acquisitions (willing sellers only), and cooperative efforts with state and non-governmental organizations.



Potential Land Protection* Areas, Pool 13, within the Authorized Refuge Boundary, Upper Mississippi River National Wildlife and Fish Refuge.

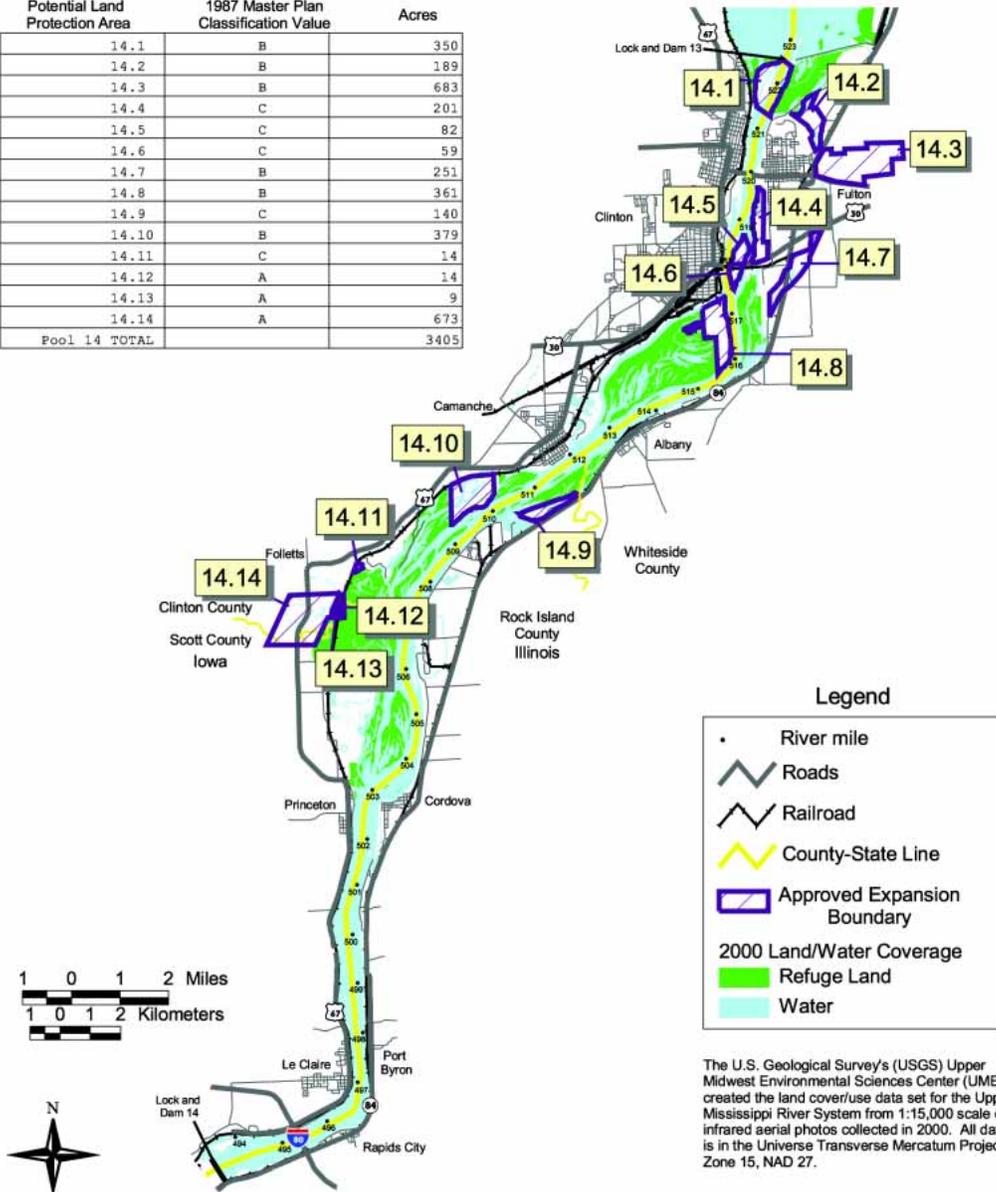
* Conservation options may include: fee title and conservation easement acquisitions (willing sellers only), and cooperative efforts with state and non-governmental organizations.



Potential Land Protection* Areas, Pool 14, within the Authorized Refuge Boundary, Upper Mississippi River National Wildlife and Fish Refuge.

* Conservation options may include: fee title and conservation easement acquisitions (willing sellers only), and cooperative efforts with state and non-governmental organizations.

Potential Land Protection Area	1987 Master Plan Classification Value	Acres
14.1	B	350
14.2	B	189
14.3	B	683
14.4	C	201
14.5	C	82
14.6	C	59
14.7	B	251
14.8	B	361
14.9	C	140
14.10	B	379
14.11	C	14
14.12	A	14
14.13	A	9
14.14	A	673
Pool 14 TOTAL		3405



Legend

- River mile
- ⚡ Roads
- ⚡ Railroad
- ⚡ County-State Line
- ▭ Approved Expansion Boundary
- 2000 Land/Water Coverage
- Refuge Land
- Water

The U.S. Geological Survey's (USGS) Upper Midwest Environmental Sciences Center (UMESC) created the land cover/use data set for the Upper Mississippi River System from 1:15,000 scale color infrared aerial photos collected in 2000. All data is in the Universe Transverse Mercatum Projection, Zone 15, NAD 27.