

Appendix F



USFWS

Great Blue Heron at Tschache Pool

U.S. Fish and Wildlife Service Montezuma National Wildlife Refuge Land Protection Plan

Table of Contents

Introduction, Purpose, and Scope.....	F-1
Project Description.....	F-2
Status of Resources to be Protected.....	F-6
Continuing Partnership Effort.....	F-10
Action and Objectives.....	F-10
Protection Options	F-15
Acquisition Methods.....	F-17
Coordination	F-19
Socioeconomic and Cultural Impacts	F-19
Attachment 1. Parcel Maps and Table	F-21
Attachment 2. New York Department of Environmental Conservation Letter of Support	F-25
Literature Cited.....	F-26

List of Maps

Map F.1. Montezuma Wetlands Complex Acquisition Area.....	F-5
Map F.2. Land Status of Montezuma National Wildlife Refuge Project Analysis Area.....	F-12
Map F.3. Land Cover/Use Within the Project Analysis Area.....	F-14
Map F.4. Cayuga, Seneca, and Wayne County Parcels Located Within the Project Analysis Area.....	F-24

List of Tables

Table F.1. History of Land Acquisition at Montezuma National Wildlife Refuge Through 2012	F-3
Table F.2. Estimated number of marshbird pairs per 100 acres of emergent marsh on Montezuma National Wildlife Refuge and estimated total number of marshbird pairs that would be supported in the expansion area, after restoration.	F-7
Table F.3. Land Status and Approximate Acreages For Tri-County Project Analysis Area.....	F-11
Table F.4. Land Cover Acreages in the Project Analysis Area Located in Cayuga, Seneca, and Wayne Counties, New York.	F-13
Table F.5. Montezuma National Wildlife Refuge Land Protection Parcel List.....	F-22

Introduction, Purpose, and Scope

This Land Protection Plan (LPP) identifies lands for expanding Montezuma National Wildlife Refuge (NWR, refuge), as described in the U.S. Fish and Wildlife Service's (Service, we, our) final comprehensive conservation plan (CCP) for the refuge. Working with New York State Department of Environmental Conservation (NYSDEC), we delineated a project analysis area totaling approximately 2,156 acres of biologically important land in the Montezuma Wetlands Complex (MWC). The MWC is an area recognized for its role in the conservation of migratory birds, particularly waterfowl. The mission of the MWC is to protect, restore, enhance, and manage wildlife habitat; to preserve and restore ecological integrity for the long-term benefit for wildlife populations and society; and to serve as a model for landscape-level restoration and ecosystem management. The lands in the project analysis area have been identified for protection already and include lands currently owned by the Service and areas originally proposed for acquisition by New York State. Our main reason for proposing an expansion is to improve our ability to administer refuge boundaries by avoiding a patchwork of ownership between New York State and the Service.

The purposes of this LPP are to:

- Announce our intent to expand the boundary of the refuge.
- Provide landowners and the public with an outline of Service policies, priorities, and protection methods for land in the project area.
- Assist landowners in determining whether their property lies within the project area.
- Inform landowners about our long-standing policy of acquiring land only from willing sellers. We will not buy any lands or acquire easement rights if the owners are not interested in selling.

The LPP presents the methods the Service and interested landowners can use to accomplish their objectives for wildlife habitat. Map F.1 shows the previous approved refuge acquisition boundary, the project analysis area, and the land parcels in the project analysis area. A corresponding table (table F.4) identifies each parcel, its tax map number, acreage, and our priority and recommended option for acquiring and protecting its habitat.

The scope of this document is limited to the proposed acquisition of lands for the expansion of Montezuma NWR as identified in this document. It is not intended to cover the development or implementation of detailed, specific programs for the administration and management of those lands. Overall, we expect that new lands would be managed in much the same manner (with regards to natural resources, public use, etc.) as what is proposed in the refuge's final CCP.

Project Description

Original Approved Refuge Acquisition Boundary

The refuge lies in central New York, in Cayuga, Seneca, and Wayne Counties, between the cities of Rochester and Syracuse. We own 9,184¹ acres of the 19,510 acres in the previous approved acquisition boundary. Refuge habitats include emergent marshes, mudflats, open water, bottomland floodplain forest, old fields, shrublands, croplands, grasslands, and successional and mature upland forest. Signature species include a variety of waterfowl, shorebirds, and migratory songbirds, as well as bald eagle (*Haliaeetus leucocephalus*) and osprey (*Pandion haliaetus*).

In 1937, the Bureau of Biological Survey (the precursor to the Service) purchased lands just north of Cayuga Lake. This area had supported the “Montezuma Marsh.” These lands were drained when the Seneca River was lowered by the construction of a lock and dam at the northern end of Cayuga Lake (Gable 2004). The following year, on September 12, 1938, the Montezuma Migratory Bird Refuge was established through Executive Order 7971, signed by President F.D. Roosevelt (3 FR 2235). Hence, migratory birds continue to be the primary focus of our management efforts, in accordance with the central purpose of the refuge, as defined by the executive order under which we were established, “...as a refuge and breeding ground for migratory birds and other wildlife...” For other lands acquired under the Migratory Bird Conservation Act (16 U.S.C. 715-715r), as amended, the purpose of acquisition was: “...for use as an inviolate sanctuary, or for any other management purpose, for migratory birds.”

The previous approved acquisition boundary of 19,510 acres is the result of the executive order that created the refuge, a major expansion of the boundary as detailed in an Environmental Impact Statement (EIS) conducted by the Service with NYSDEC acting as a co-lead agency (USFWS and NYSDEC 1991), and several minor expansions that were conducted via NEPA categorical exclusions. The 1991 EIS was prepared for the expansion of existing lands managed by the Service and the NYSDEC. Following guidelines drawn from the North American Waterfowl Management Plan (NAWMP 2004), this expansion addressed goals and objectives for accomplishing conservation and management within a 154,880-acre focus area.

Once an acquisition boundary is established, the Service can acquire lands under a variety of statutory authorities (Refuge Manual 3 RM 1.3). To date, the Service has acquired interests in 9,184 acres for the refuge under the following authorities (see table F.1):

1. Emergency Wetlands Resources Act of 1986 [16 U.S.C. 3901(b)]
2. Migratory Bird Conservation Act [16 U.S.C. 715d]
3. Fish and Wildlife Act of 1956 [16 U.S.C. 742f(a)(4)]

¹ Acreages are current as of October 2012.

Table F.1. History of Land Acquisition at the Montezuma NWR Through October 2012.

Acquisition Date	Acreage ¹	Funding Source ²
1937	2,564	MBCF ²
1938	2,354	MBCF
1939	544	MBCF
1940	444	MBCF
1941	279	MBCF
1942	34	MBCF
1945	6	None
1959	176	MBCF
1963	27	MBCF
1965	16	MBCF
1993	53	MBCF
1995	397	MBCF
1996	186	MBCF
1997	54	MBCF
1998	608	MBCF
1999	142	MBCF
2000	87	MBCF
2001	387	MBCF, LWCF ³
2002	75	MBCF, LWCF
2004	80	LWCF
2005	106	LWCF
2006	64	MBCF
2007	381	MBCF
2008	26	LWCF
2009	63	MBCF
2012	31	MBCF
Total	9,184⁴	

¹ Acres are rounded to whole numbers. Includes lands that were donated to the U.S. Fish and Wildlife Service.

² MBCF – Migratory Bird Conservation Fund

³ LWCF – Land and Water Conservation Fund

⁴ Total includes about 402 acres that are held in conservation easements.

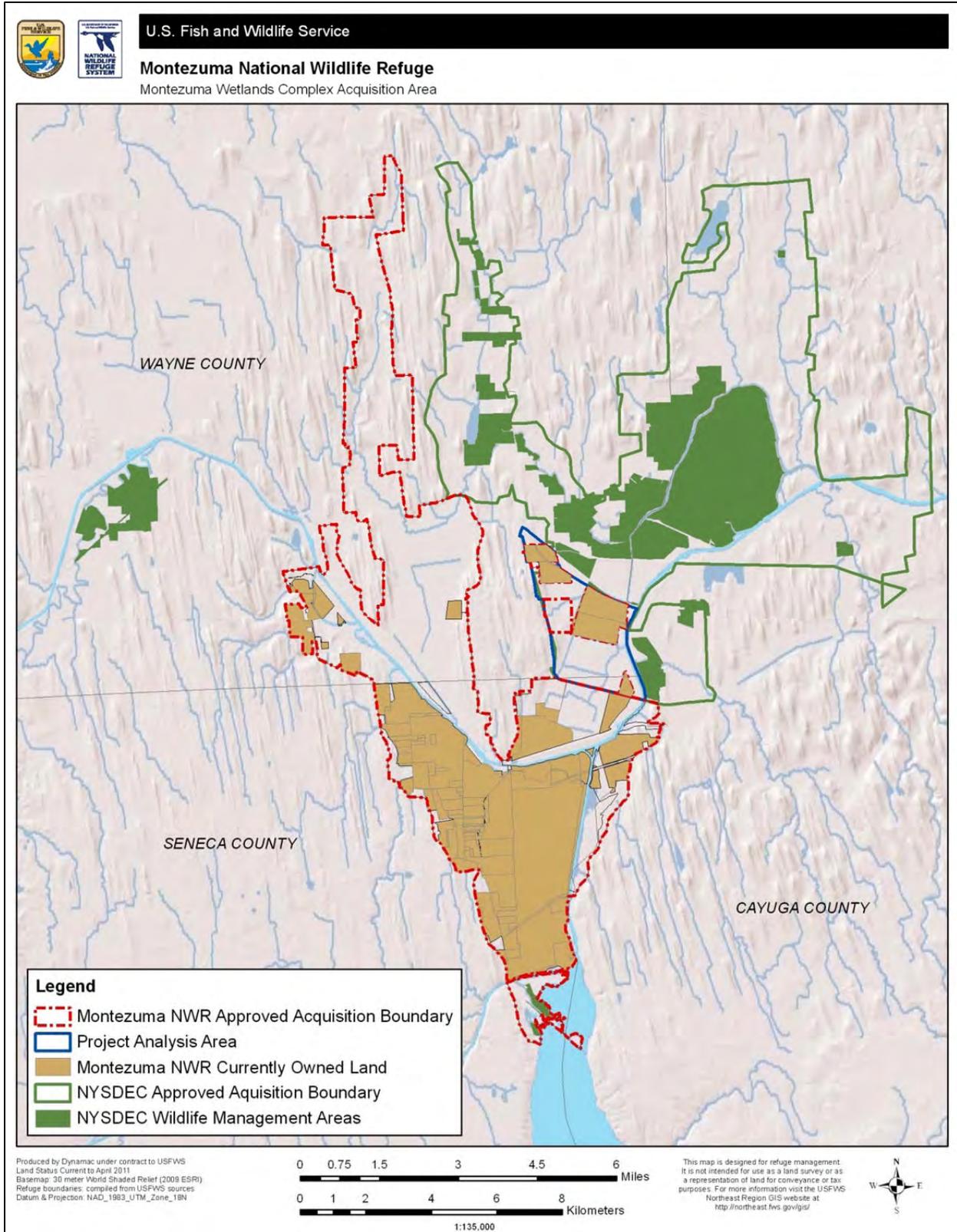
Project Analysis Area

The project analysis area is located in the MWC, between the towns of Savannah and Montezuma just north of the New York State Thruway (Interstate 90) and contains cultivated croplands (also known as mucklands), forests, and riparian areas (see map F.1). It lies in the project area identified by the Service and its partners in the 1991 EIS for the Northern Montezuma Wetlands Project (USFWS and NYSDEC 1991). The Record of Decision for the 1991 EIS established a joint Service and NYSDEC acquisition area of nearly 50,000 acres and a division line between the Federal area of interest and the State area of interest. The boundary of this division line was initially determined to be roughly the State Route 31 corridor in the eastern and central sections of three key drainage areas, with the entire westernmost drainage within the

Service area of interest. Areas to the north of this division line were designated for NYSDEC acquisition and management and areas to the south were designated for Service acquisition and management (see map F.1). The Service acquisition boundary was formalized through an LPP which was approved in 1994 (USFWS 1994). In recent years, in cooperation with NYSDEC, the Service has acquired certain parcels just north of State Route 31, in an area previously identified for acquisition by the State. This is how several units above State Route 31 have come under Service ownership. Two additional parcels north of State Route 31, totaling 208 acres, were added to the refuge's previous acquisition boundary, but we have yet to acquire interests in those parcels.

During internal scoping for the refuge's CCP, we examined the possibility of expanding the refuge's acquisition boundary. After consulting with NYSDEC, the two agencies agreed that an adjustment of the refuge's acquisition boundary would be beneficial. We worked closely with NYSDEC to identify additional parcels for Service acquisition. As stated previously, our intent was to facilitate management and avoid public confusion by consolidating ownership. We specifically excluded current NYSDEC lands, as those are already being managed for the protection of wildlife and public use. We have identified approximately 1,431 acres near the northeast section of the refuge for acquisition from willing sellers. This includes: (1) 1,223 acres which we have added to the refuge's approved acquisition boundary, and (2) two parcels (totaling about 208 acres) that were previously added to the approved acquisition boundary, but which were never actually acquired. This minor boundary expansion is made with the support and approval of NYSDEC (see attachment 2).

Much of the mucklands, once restored, would provide valuable wetlands which would support a variety of migratory waterfowl, shorebirds, and marshbirds. Similarly, riparian corridors may need to be reforested to further benefit wildlife. In addition, habitat fragmentation would be decreased, benefitting species that require large intact areas. Furthermore, the refuge already owns several parcels in the project analysis area, and acquiring the remaining parcels would consolidate the Service's land base, greatly simplifying management and avoiding a patchwork of State and Federal ownership that could be confusing to the public.



Map F.1. Montezuma Wetlands Complex Acquisition Area.

Status of Resources to be Protected

Wildlife and Habitat Resources

The MWC has been recognized as an important bird conservation area by many conservation organizations and has been highlighted in many conservation plans including: North American Bird Conservation Plan -Bird Conservation Region 13, Partners in Flight Plan, Audubon New York's Important Bird Area Program, and New York State Comprehensive Wildlife Conservation Strategy. Restoration of mucklands would improve the habitat not only for migrating ducks but also for breeding marshbirds, including species of conservation concern such as the pied-billed grebe (*Podilymbus podiceps*), least bittern (*Ixobrychus exilis*), American bittern (*Botaurus lentiginosus*), and black tern (*Chlidonias niger*). Most of the remaining lands are forested and dominated by ashes (*Fraxinus* spp.) and maples (*Acer* spp.). The forested tracts support species of conservation concern such as cerulean warbler (*Dendroica cerulean*), wood thrush (*Hylocichla mustelina*), bald eagle, and Baltimore oriole (*Icterus galbula*). Vegetation and wildlife inventories have not been completed on the privately owned parcels. Restoring these lands to forest, grassland, shrubland, or emergent marsh, would help connect these habitats with similar areas located on lands already owned by the Service (see map F.3) and our partners. The MWC also supports the second highest concentration of cerulean warblers in New York, with 87 singing males found in the Howland's Island area, 77 males found near May's Point Pool, and 20 males found in the Mud Lock area near Routes 5 and 20 (Rosenberg et al. 2000).

The MWC is already one of the largest staging areas for waterfowl migration in the Northeast, supporting over 700,000 birds that pass through on their spring and fall migrations. This includes 320 bird species, 117 of which are known to nest on the refuge. Refuge staff and volunteers conducted counts of migratory birds on the refuge 1 day a week during spring and fall migration from 1990 to 2010. During that time, highest daily counts for the following species were: 18,500 Canada geese, 12,000 canvasback ducks, and 2,650 northern pintails during spring migration and 31,300 Canada geese, 8,000 canvasback ducks, and 4,000 northern pintails during fall migration (www.ebird.org and USFWS, unpublished data).

Much of the land not yet owned by the Service in the area is muckland and is currently being farmed. The lands identified for acquisition includes 1,431 acres of non-refuge lands, 725 acres are cultivated crops (aka mucklands), and 28 acres are emergent herbaceous wetlands (see table F.5 for all of the habitat types). Because of their soil composition and the loss of wetland habitats within the region, we would likely restore the mucklands to emergent marsh after acquisition. There are 28 acres identified for acquisition that are currently categorized as emergent marsh, yielding a projected total of 753 acres of emergent marsh once all mucklands within the project analysis area are acquired and restored.

Based on data from the refuge's Main Pool collected in 2010 (USFWS, unpublished data), we estimated that the projected 753 acres of emergent marsh could support 11,750 migratory waterfowl in the spring, and about 23,000 migratory waterfowl in the fall. These estimates are based on daily high counts in the Main Pool, all species combined.

The refuge also provides important breeding habitat for marshbirds. The emergent marsh attracts several species of marshbirds, including rails, bitterns, and terns, and are an important food

source for migrating waterfowl. The number of marshbird pairs on the refuge was recorded during callback surveys in 2011 (see table F.2). Based on these data, the refuge is capable of supporting a maximum of 90 pairs of marshbirds per 100 acres of emergent marsh. Assuming all of the 725 acres of farmland within the project analysis area are restored to emergent marsh after acquisition and the existing 28 acres of emergent marsh remain, we estimate a maximum of 686 pairs of marshbirds could be supported by these lands (table F.2).

Table F.2. Estimated number of marshbird pairs per 100 acres of emergent marsh habitats on the Montezuma National Wildlife Refuge and estimated total number of marshbird pairs that could be supported in the expansion area, after restoration.

Species	Estimated # of pairs per 100 acres of marsh ¹	Estimated # of pairs within restored farmlands (753 acres of marsh)	New York State T&E ²	USFWS BCC Region 5 ³	BCR 13 ⁴	Waterbird Plan ⁵	NY Comprehensive Wildlife Conservation Strategy Priorities ⁶
American Bittern	18.4	139		X	H	H	X
American Coot	7.4	56					
Black Tern	3.3	25	E		M	M	X
Common Gallinule	25.8	194				M	
Least Bittern	3.7	28	T	X	M	H	X
Pied-billed Grebe	22.1	166	T	X	M	H	X
Sora	5.2	39				H	
Virginia Rail	5.2	39			M	M	
Total	91.1	686					

¹ Estimate is based on 2011 breeding surveys at Montezuma National Wildlife Refuge (USFWS 2011, unpublished data).

² New York State T&E = State of New York Threatened and Endangered Species List: T=Threatened, E=Endangered, SC=Special Concern.

³ U.S. Fish and Wildlife Service Division of Migratory Birds. Birds of Conservation Concern for Region 5, December 2008.

⁴ BCR 13 = Bird Conservation Region 13: Lower Great Lakes/St. Lawrence Plain. HH=Highest Priority, H=High Priority, M=Medium Priority (ACJV 2007).

⁵ Upper Mississippi Valley/Great Lakes Watershed Conservation Plan. Priorities: HI=Highly Imperiled; H=High; M=Moderate; L=Low; NR=Not at Risk; TD=To be Determined.

⁶ New York State Comprehensive Wildlife Conservation Strategy (2005). X=Species of greatest conservation concern.

Other species will benefit from the woody wetlands and deciduous forest, which account for 453 acres of the project. Both land cover types provide diverse habitat for wildlife and support foraging and breeding habitat for a variety of waterfowl, such as the wood duck in woody wetlands, migratory songbirds, such as the cerulean warbler, and amphibians and bats. In

addition to these land cover types, pasture and hay land will most likely be restored to grassland, shrubland, or forest.

There are several other wildlife species located in the refuge and within the MWC that would benefit as well. Montezuma NWR has many mammal species, including river otters (*Lontra Canadensis*), of which 21 were released at 3 different locations in the northern MWC in 1995 in an effort to reintroduce them to the area. Several frog, toad, snake, and turtle species have been recorded on the refuge, and there is potential for the refuge to provide habitat for a number of other reptile and amphibian species. Additionally, in 2003 a baseline fish inventory was conducted, which yielded 37 species of fish (Foust 2003).

Strategic Habitat Conservation

This land would help support strategic habitat conservation goals by helping to achieve specific population objectives for surrogate species in this region, once identified. By monitoring the number of waterfowl and other species on the refuge, refuge staff can continually evaluate these species to determine how refuge management and restoration efforts are contributing and to adjust conservation methods and practices if needed. Strategic habitat conservation allows the refuge to contribute to local and regional conservation priorities and goals by working with partners and the MWC. This allows the refuge to connect project- and site-specific efforts to larger biological goals and outcomes across the region and continent.

Threats to the Resource

The following section describes ongoing threats to natural resources in the vicinity of the project analysis area, based on information derived from the New York State Comprehensive Wildlife Conservation Strategy (NYSDEC 2005). This area lies in the much larger Southeast Lake Ontario Basin (see chapter 3 of the refuge's final CCP for a map and additional information on this landscape feature).

Habitat Loss and Degradation

The loss, alteration, and fragmentation of habitat all pose the greatest threats to wildlife in the Southeast Lake Ontario Basin (NYSDEC 2005). Fragmentation alters the habitat by breaking up large, contiguous blocks into smaller patches that are unsuitable for area-sensitive species. New roads fragment habitats and create barriers to animal movements between habitats. This threat affects both terrestrial and aquatic species, and includes hardening of the landscape with buildings and roads, but can also result from activities like land clearing and wetland draining for agriculture and mining. Although wetland drainage for agriculture is not presently occurring to a large extent in the basin, the impacts of past drainage are still an issue, particularly in the MWC and surrounding areas. Preserving and restoring the large, contiguous blocks of habitat that remain in the basin and maintaining their connectivity are crucial for the long-term viability of populations of area-sensitive wildlife. The discontinuity of emergent and forested wetlands, along with the loss of other suitable corridors, primarily affects species that are less likely to move between suitable habitats (e.g., amphibians, turtles). In addition, the alteration of waterways and wetlands, in combination with increased human encroachment into those riparian areas, affect all wetland-dependent species and species groups.

Contaminants and Degradation of Water Quality

Water quality dictates, to a large extent, the types and diversity of species that are able to thrive in a water body. Primary contaminants in the basin include road salt, sewage effluent, and pesticides. Chloride contamination from road salts is a concern in some of the smaller lakes and streams. Several of the lakes and many tributary streams receive discharge from sewage treatment plants in the basin. Those discharges contain nutrients, heavy metals, and endocrine (hormone) disrupting compounds. Low dissolved oxygen levels are a continuing problem for aquatic species in Onondaga Lake and the Seneca River, due in part to phosphorus loading from the county sewage treatment plant. Pesticide use on agricultural lands is of concern to reptiles, amphibians, insects, mussels, and freshwater crustacea. Agricultural pesticides are generally nonspecific in their action, often killing benign and beneficial invertebrate species (including pollinating insects) as well as the target pests. Amphibians are particularly susceptible to pesticides and other toxins. The emergence of West Nile Virus in the past few years and the persistence of Eastern Equine Encephalitis in central New York have led to widespread pesticide use in the control of mosquitoes in many wetland areas. These insecticides can be toxic to amphibians. These insecticides can also affect amphibians by depleting their natural food sources (NYSDEC 2005).

Invasive Species

Invasive (nonnative) species have the potential to negatively influence native species through habitat alteration (which can change ecological processes), resource competition, predation, or any combination of these factors. All major habitats in the basin are affected by invasive species. Notable invasive aquatic species include common carp (*Cyprinus carpio*), round goby (*Neogobius melanostomus*), lamprey (*Petromyzon marinus*), and zebra mussel (*Dreissena polymorpha*). Invasive terrestrial species include purple loosestrife (*Lythrum salicaria*), mute swan (*Cygnus olor*), and the emerald ash borer (*Agrilus planipennis*). Typically, invasive species cannot be eradicated once they become established, and perpetual and costly control efforts become an integral management component.

Some native species also can cause harm to the environment, usually as a result of high population densities due to human-induced habitat changes. For example, white-tailed deer (*Odocoileus virginianus*) numbers are considered higher than optimal in some areas, a result of increased habitat provided by patchwork of forests and fields, as well as other factors. When overabundant, deer can overbrowse areas, reducing the habitat value to other species, some of which may be rare. Other examples of native species that can be considered pests include muskrat (*Ondatra zibethicus*), beaver (*Castor Canadensis*), and Canada goose (*Branta canadensis*). As with deer, these species have benefitted from land cover alterations, declines in some predator populations, and other causes, allowing them to sometimes reach densities where they can become destructive to habitats, rare species, and infrastructure, requiring their populations to be managed at sustainable levels.

Climate Change

The climate and hydrology of the Great Lakes create unique environmental conditions that support a diversity of wildlife species and communities (TNC 2000). Substantial changes as a result of climate change are anticipated. It is projected that by 2025, spring and summer temperatures in the Great Lakes region are likely to be 3 to 4 °F above current averages (Kling et

al. 2003). Precipitation is also expected to increase between 10 and 20 percent, with winter and spring rain increasing and summer rain decreasing by up to 50 percent. These changes in precipitation may result in more frequent floods and droughts (Inkley et al. 2004).

As discussed in the refuge's CCP (USFWS 2012), refuge staff will work to first understand how climate change might be affecting hydrology, habitats, and wildlife. The information yielded from baseline surveys and monitoring efforts will then be used to develop specific adaptation and mitigation strategies to minimize the impacts of a changing climate on refuge resources. As part of this process, the refuge will continue to evaluate results of plant and wildlife surveys every 5 years and may coordinate with the National Phenology Network to document potential changes related to climate change on the refuge and broader geographic scales.

Continuing Partnership Effort

The threats to the resources described above make preserving land in the MWC crucial and challenging. We recognize the need to collaborate with other conservation organizations in the region, NYSDEC in particular, as they were the colead agency in the development of the Northern Montezuma Wetlands Project Final EIS (USFWS and NYSDEC 1991). The primary purpose of the EIS was to help protect portions of the MWC through partnerships. Many agencies, organizations and individuals (e.g., The Nature Conservancy, New York State Conservation Council, Farm Bureau) contributed to the EIS and are helping to implement it. We would continue to work with our partners to successfully implement the EIS and, if approved, this LPP.

Acquiring these additional lands would further the Service's mission by preserving and enhancing lands and waters in a manner that would conserve the natural diversity of fish, wildlife, plants, and their habitats for present and future generations. Acquiring these lands would also further the refuge's purposes. By restoring mucklands, reestablishing healthy forests, and reducing erosion, sedimentation and nonpoint source pollution, we would be able to maintain and enhance habitats for migratory birds, fish, and State and federally listed species. Furthermore, adding trails, wildlife observation areas, an auto tour route, fishing and hunting access points and lands, and interpretation and education would increase the opportunities for public, wildlife-dependent recreation. Without protection, those lands are unlikely to support (or be restored to support) fish and wildlife populations and, by default, would no longer support opportunities for compatible, wildlife-dependent recreation.

Action and Objectives

Authorities for Modifying the Refuge's Original Acquisition Boundary

We anticipate that the Service would continue to acquire lands under the same authorities that have been used to acquire lands in the past. Based on the refuge purpose, lands could also be acquired under several other statutory authorities, including but not limited to:

1. Refuge Recreation Act [16 U.S.C. 460K-1]
2. Endangered Species Act [16 U.S.C. 1534]

3. National Wildlife Refuge System Administration Act [16 U.S.C. 668dd(b)]

We expect that land acquisition within the expansion area would be funded in a manner similar to previous land acquisitions for the refuge.

Land Status of Project Analysis Area

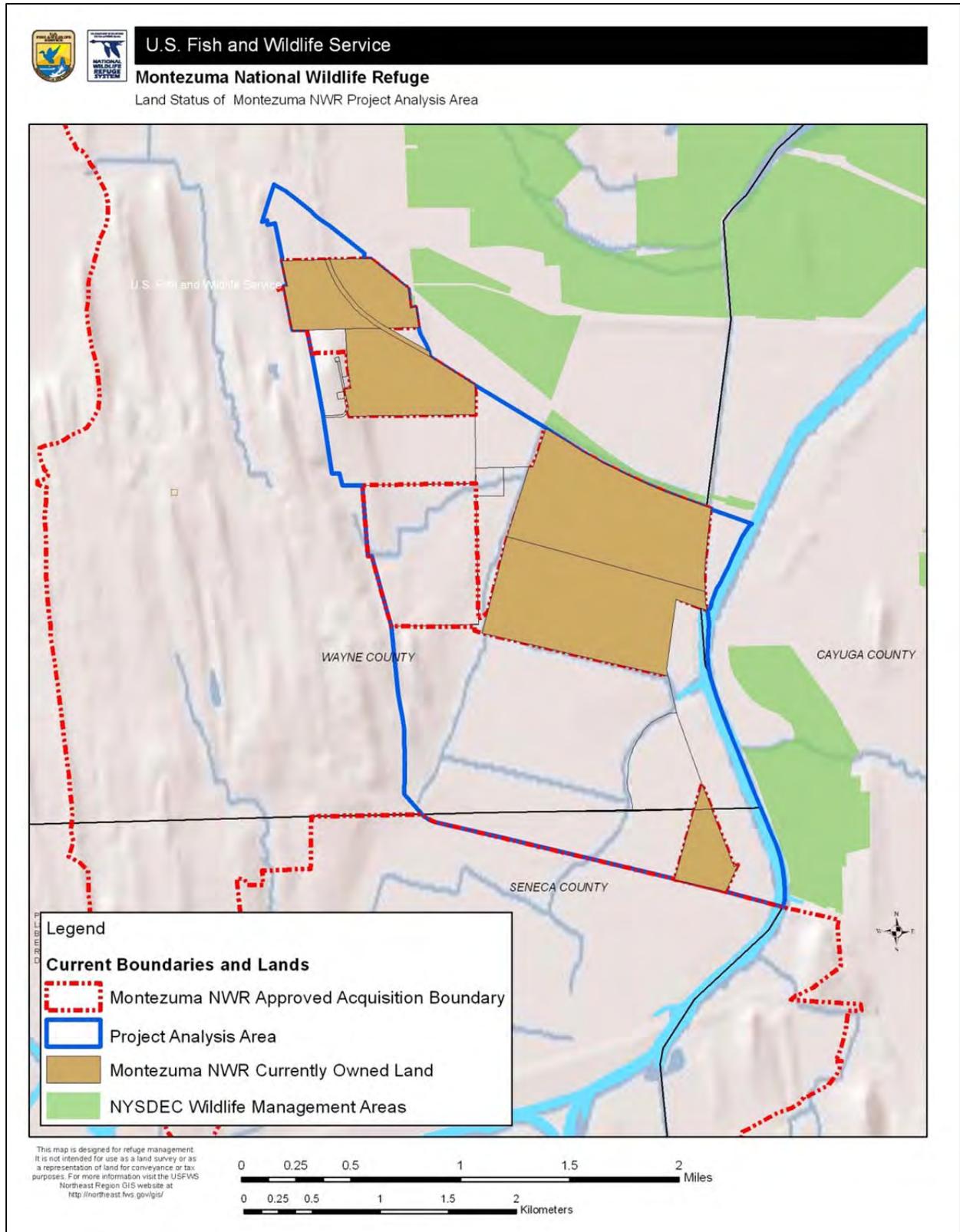
We analyzed a 2,166-acre area at the intersection of Cayuga, Seneca, and Wayne Counties depicted in map F.2. This area contains six parcels that are already owned by the refuge in fee title and total 735 acres, and two parcels totaling about 217 acres that were previously added to the refuge’s approved acquisition boundary but which were never actually acquired. Although within the refuge’s previous acquisition boundary, these two parcels are incorporated into this proposal as nonrefuge lands. There are 1,431 acres of nonrefuge lands that are under various other ownerships and would potentially be available for acquisition (see table F.3).

Table F.3. Land Status and Approximate Acreages for Tri-County Project Analysis Area.

Land Status in Project Analysis Area	Acreage (rounded to nearest acre)			Total
	Cayuga County	Seneca County	Wayne County	
Service-owned Lands	0	36	699	735
Nonrefuge Lands	27	196	1,208	1,431
			Total	2,166

Land Cover and Land Use

Although habitat types have been defined for lands owned by the refuge, vegetative community types were not available for unowned lands during development of this LPP. We used land cover types defined by the Multi-Resolution Land Characteristics (MRLC) Consortium (Homer et al. 2004) instead. The land cover data used was developed in 2001, and although land use alterations have resulted in some changes to the area’s land cover, we believe it provides an adequate approximation of current conditions for the purposes of this LPP. Table F.4 summarizes the general types of land cover of the area within and around the project analysis area (see map F.3 for land cover types and distributions). In 2001, cultivated crops were the dominant land cover type, followed by woody wetlands, deciduous forest, and pasture/hay. Shrub/scrub, emergent herbaceous wetlands, and open water each contributed less than 5 percent of the total cover. These land cover types are found in similar percentages in the nonrefuge lands see table F.4).



Map F.2. Land Status of Project Analysis Area in Cayuga, Seneca, and Wayne Counties, NY.

Table F.4. Land Cover Acreages in the Project Analysis Area Located in Cayuga, Seneca, and Wayne Counties, New York.

Land Cover Type ¹	Entire Project Analysis Area (acres)	Percent	Nonrefuge Land (acres)	Percent	Refuge Lands (acres)	Percent
Cultivated crops	1,208	56	725	51	471	64
Woody Wetlands	460	21	306	21	148	20
Deciduous Forest	176	8	117	8	66	9
Pasture/Hay	108	5	114	8	7	1
Developed Land	86	4	71	5	22	3
Shrub/scrub	64	3	56	4	7	1
Emergent Herbaceous Wetlands	43	2	28	2	7	1
Open Water	21	1	14	1	7	1
Total	2,166	100%	1,431²	100%	735	100

¹*Description of Land Cover Classes:*

Cultivated Crops—Areas used for the production of annual crops, such as corn, soybeans, vegetables, tobacco, and cotton, and also perennial woody crops such as orchards and vineyards. Crop vegetation accounts for greater than 20 percent of total vegetation. This class also includes all land being actively tilled.

Deciduous Forest—Areas dominated by trees generally greater than 15 feet tall, and greater than 20 percent of total vegetation cover. More than 75 percent of the tree species shed foliage simultaneously in response to seasonal change.

Developed—Includes areas with a mixture of constructed materials and planted vegetation (lawns, city parks, golf courses, etc.). Impervious surfaces range from 20 to 100 percent of total cover.

Emergent Herbaceous Wetlands—Areas where perennial herbaceous vegetation accounts for greater than 80 percent of vegetative cover and the soil or substrate is periodically saturated with or covered with water.

Open Water—All areas of open water, generally with less than 25 percent cover of vegetation or soil.

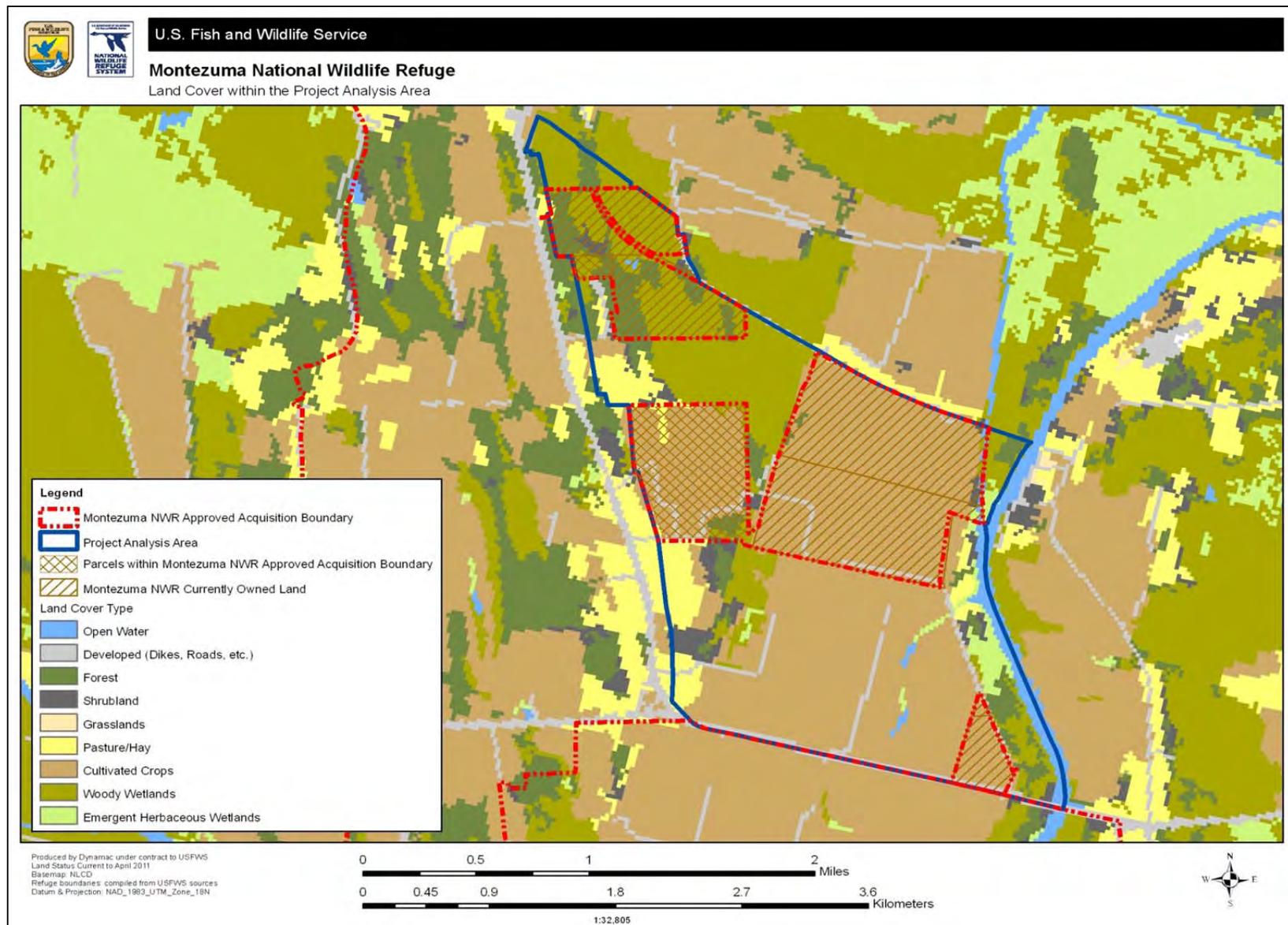
Pasture/Hay—Areas of grasses, legumes, or grass-legume mixtures planted for livestock grazing or the production of seed or hay crops typically on a perennial cycle. Pasture/hay vegetation accounts for greater than 20 percent of total vegetation.

Shrub/Scrub—Areas dominated by shrubs; less than 15 feet tall with shrub canopy typically greater than 20 percent of total vegetation. This class includes true shrubs, young trees in an early successional stage, or trees stunted from environmental conditions

Woody Wetlands—Areas where forest or shrubland vegetation accounts for greater than 20 percent of vegetative cover and the soil or substrate is periodically saturated with or covered with water

Source: Homer et al. 2004

²This includes approximately 217 acres which were previously added to the refuge’s acquisition boundary but which were never actually acquired.



Map F.3. Land Cover and Use Within the Project Analysis Area.

Land Protection Priorities

Most of the lands we have identified for future acquisition currently have (or could have, upon restoration) important resource values and high potential for helping support a range of migratory birds, in accordance with fulfilling the purpose of the refuge. Hence, our process for prioritizing future acquisitions is based on the current (or potential) value of priority habitats (e.g., emergent marsh or mucklands that can be restored, riparian habitats, etc.) which are described in detail in the CCP. In addition, we would also focus on areas adjacent to lands currently owned by the Service, thereby further ensuring habitat connectivity between the refuge and surrounding conservation lands. In general, the availability of land from willing sellers, and the availability of funding at that time would influence the actual order of land acquisition. However, as landowners offer us parcels, and as funds become available, we would base the priority for acquisition on several factors. Furthermore, our intention is to minimize the need to acquire residences and buildings on these lands, while protecting and restoring habitat, so we would evaluate those parcels on a case-by-case basis. We have assigned those lands one of the following three priority categories:

Priority 1: Parcels that are dominated by emergent marsh or mucklands (that can be restored).

Priority 2: Parcels that contain a high percentage of riparian wetlands.

Priority 3: Parcels adjacent to currently owned refuge lands.

Protection Options

We would use the following options to implement this LPP:

Option 1: No Service action

Option 2: Fee acquisition by the Service

Option 2: Less-than-fee acquisition by the Service

Option 3: Management of land owned by others

Service policy in acquiring land is to acquire only the minimum interest necessary to meet refuge goals and objectives, and acquire it only from willing sellers. Our proposal includes a combination of options 2, 3, and 4 above. We believe this approach offers a cost-effective way of providing the minimal level of protection needed to accomplish refuge objectives while also attempting to meet the needs of landowners.

Option 1. No Service Action

In option 1, we would not expand the refuge acquisition boundary or otherwise attempt to protect and manage additional habitat in the vicinity of the refuge. The draft CCP evaluated this option as part of alternative A, Current Management. We did not select this as our proposal because it would result in fragmented ownership between NYSDEC and the Service, and would likely decrease opportunities to conserve and restore these areas to benefit plants and animals within the MWC.

Option 2. Fee Acquisition

Under option 2, we would acquire parcels in fee title from willing sellers, thereby purchasing all rights of ownership. This option provides us the most flexibility in managing priority lands, and ensuring the protection in perpetuity of trust resources. Generally, the lands we would consider purchasing would require active management (e.g., wetland restoration, controlling invasive species, mowing or prescribed burning, planting, or managing for the six priority public uses). Hence, we anticipate that the use of fee acquisition would be the primary method through which we would protect lands identified herein.

Option 3. Less-than-fee Acquisition

Under option 3, we would protect and manage land by purchasing only a partial interest, typically in the form of a conservation easement. This option leaves the parcel in private (or other public) ownership, while allowing us control over the land use in a way that enables us to meet our goals for the parcel or that provides adequate protection for important adjoining parcels and habitats. Some of the lands along the Erie Canal and currently owned by the New York State Canal Corporation, could qualify as option 2 lands. The structure of such easements would provide permanent protection of existing wildlife habitats while also allowing habitat management or improvements and access to sensitive habitats, such as for endangered species or migratory birds. It may also allow for public use where appropriate. We would determine, on a case-by-case basis, and negotiate with each landowner, the extent of the rights we would be interested in buying. Those may vary, depending on the configuration and location of the parcel, the current extent of development, the nature of wildlife activities in the immediate vicinity, the needs of the landowner, and other considerations.

In general, any less-than-fee acquisition would maintain the land in its current configuration with no further subdivision. Easements are a property right, and typically are perpetual. If a landowner later sells the property, the easement continues as part of the title. Properties subject to easements generally remain on the tax rolls, although the change in market value may reduce the assessment. The Service does not pay refuge revenue sharing on easement rights. Where we identify conservation easements, we would be interested primarily in purchasing development and some wildlife management rights. Easements are best when:

- Only minimal management of the resource is needed, but there is a desire to ensure the continuation of current undeveloped uses and to prevent fragmentation over the long-term and in places where the management objective is to allow vegetative succession.
- A landowner is interested in maintaining ownership of the land, does not want it to be further developed, and would like to realize the benefits of selling development rights.
- Current land use regulations limit the potential for adverse management practices.
- The protection strategy calls for the creation and maintenance of a watershed protection area that can be accommodated with passive management.
- Only a portion of the parcel contains lands of interest to the Service.

The determination of value for purchasing a conservation easement involves an appraisal of the rights to be purchased, based on recent market conditions and structure in the area. “Acquisition Methods”, below, further describes the conditions and structure of easements.

Option 4. Management or Acquisition by Others

Although it is unlikely that we would rely heavily on this protection option for reasons previously discussed, we would consider it on a case-by-case basis.

Acquisition Methods

We may use three methods of acquiring either a full or a partial interest in the parcels identified for Service acquisition: (1) Purchase (e.g., complete title, or a partial interest like a conservation easement), (2) donations, and (3) exchanges.

Purchase

For most of the tracts in the boundary, the proposed method is listed as Fee or Easement; however, the method we ultimately use also depends on the landowner's wishes.

Fee purchase involves buying the parcel of land outright from a willing seller in fee title (all rights, complete ownership), as the availability of funding allows.

Easement purchase refers to the purchase of limited rights (less than fee) from an interested landowner. The landowner would retain ownership of the land, but would sell certain rights identified and agreed upon by both parties. The objectives and conditions of our proposed conservation easements would recognize lands for their importance to wildlife habitat or outdoor recreational activities, and any other qualities that recommend them for addition to the Refuge System.

Donation

We encourage donations in fee title or conservation easement in the approved areas. We are not aware currently of any formal opportunities to accept donations of parcels in our acquisition boundary.

Exchange

We have the authority to exchange land in Service ownership for other land that has greater habitat or wildlife value. Inherent in this concept is the requirement to get dollar-for-dollar value with, occasionally, an equalization payment. Exchanges are attractive because they usually do not require purchase funds; however, they also may be very labor intensive and take a long time to complete.

Service Land Acquisition Policy

Once a refuge acquisition boundary has been approved, we contact landowners within the approved acquisition boundary to determine whether any are interested in selling. If a landowner expresses an interest and gives us permission, and funding is available, a real estate appraiser would appraise the property to determine its market value. Once an appraisal has been approved, we can present an offer for the landowner's consideration.

Our long established policy is to work with willing sellers as funds become available. We would continue to operate under that policy. Appraisals conducted by Service or contract appraisers

must meet Federal as well as professional appraisal standards. Federal law requires us to purchase properties at their market value for highest and best use, which typically is based on comparable sales of similar types of properties.

Since the land in the acquisition boundary is already protected by the MWC, we based the acquisition boundary on maximizing administrative effectiveness. Once the acquisition boundary is approved, the Service has the authority to negotiate with landowners that may be interested or may become interested in selling their land in the future. With those internal approvals in place, the Service can react more quickly as important lands become available. Lands in that boundary do not become part of the refuge unless their owners sell or donate them to the Service.

A landowner may choose to sell land to the Service in fee simple and retain the right to occupy an existing residence. That is called a “life use reservation.” It applies during the seller’s lifetime, but can also apply for a specific number of years. At the time we acquire the parcel, we would discount from the appraised value of the buildings and land the value of the term of the reservation. The occupant would be responsible for the upkeep on the reserved premises. We would own the land, and pay revenue sharing to the appropriate taxing authority.

In rare circumstances, at the request of a seller, we can use “friendly condemnation.” Although the Service has a long-standing policy of acquiring land only from willing sellers, it also has the power of eminent domain, as do other federal agencies. We use friendly condemnation when the Service and a seller cannot agree on property value, and both agree to allow a court to determine fair market value. When we cannot determine the rightful owner of a property, we also may use friendly condemnation to clear title. We do not expect to use friendly condemnation very often, if at all. We would not use condemnation otherwise, as it counters good working relations with refuge neighbors and the public.

Funding for Fee or Easement Purchase

Much of our funding for land acquisition at Montezuma NWR has come from the Migratory Bird Conservation Fund (MBCF), which derives from Federal Duck Stamp revenue. MBCF funds would be used for properties that include large tracts of emergent wetlands or cultivated lands that can be restored to wetlands and waters important for waterfowl. Another source of funding to purchase land is the Land and Water Conservation Fund (LWCF), which derives from certain user fees, the proceeds from the disposal of surplus federal property, the federal tax on motor boat fuels, and oil and gas lease revenues. About 90 percent of that fund now derives from outer continental shelf oil and gas leases. The Federal Government receives 40 percent of that fund to acquire and develop nationally significant conservation lands. LWCF funds would typically be used for to acquire land and easements that consist mainly of upland areas. Another potential source for funding in that category is the North American Wetland Conservation Act.

Estimated Acquisition Costs

In our previous approved acquisition boundary of 19,510 acres, approximately 244 parcels remain in private or other ownership and would potentially be available for purchase (fee title or conservation easement) from willing sellers. We have proposed acquisition from willing sellers of approximately 1,431 acres near the northeast section of the refuge. This includes: (1) 1,223 acres which we have recently added to the refuge’s previous approved acquisition boundary, and

(2) two parcels (totaling about 208 acres) that were previously added to the approved acquisition boundary, but which were never actually acquired (see table F.4 and map F.4). We have estimated that it will cost about \$2.2 million (in 2010 dollars) to acquire those 1,431 acres (as full fee simple or conservation easements). This estimate is based on the following assumptions:

- All fee simple lands purchased are privately owned and primarily farmland, totaling approximately 1,255 acres. We used a median estimated price of \$1,750 per acre for farmland, based on estimates of land value completed between 2008 and 2009. Thus, the cost of acquiring all the farmland in this area will be $1,255 \text{ acres} \times \$1,750/\text{acre} = \$2,196,250$.
- All conservation easements will be forested wetlands totaling about 176 acres. We used a median price of \$300/acre for forested wetlands. Conservation easements typically cost approximately 75 percent of the full fee title value. Hence, the cost of acquiring all the available conservation easements will be $176 \text{ acres} \times \$300/\text{acre} \times 0.75 = \$39,600$.

Hence, our total estimated cost would be the costs of fee simple lands plus conservation easements or $\$2,196,250 + \$39,600 = \$2,235,850$ to purchase all 1,431 acres.

It must be noted that these costs are outlined here only to provide an approximation based on currently available information and would likely change over time.

Coordination

Throughout the planning process for the draft CCP/EA, we solicited and carefully considered public comments on Service land acquisition. We worked with the State of New York, regional municipalities, local land trusts, and local and national conservation organizations who are directly involved in land protection strategies in New York.

We contacted all land owners with parcels identified for potential acquisition to inform them of this process. A draft of this LPP was available for public review and comment for 30 days, in conjunction with the refuge's draft CCP/EA. In addition, two public meetings were held during the public comment period to obtain input from interested agencies, organizations, and individuals on the draft CCP/EA, including the draft LPP.

Socioeconomic and Cultural Impacts

We do not predict any significant adverse socioeconomic or cultural impacts. We believe there would be an overall positive effect on the socioeconomic environment as a result of the action outlined in the LPP. Were the Service to buy most of the lands identified for potential acquisition, positive benefits for communities in New York would include: towns benefiting from increased property values, increased watershed protection, maintenance of scenic values, and increased revenues for local businesses from refuge visitors who participate in bird watching, hunting, fishing, and wildlife observation.

There would likely be some adverse impacts, namely a decline of tax revenue to local towns (as lands come under Service ownership). The Refuge Revenue Sharing Act of June 15, 1935 (16

U.S.C. §715s) offsets some of the loss of local tax revenues from federal land ownership through payments to local taxing authorities. The refuge provides annual payments to taxing authorities, based on the acreage and value of refuge lands located within their jurisdiction. Money for these payments comes from the sale of oil and gas leases, timber sales, grazing fees, the sale of other Refuge System resources, and from Congressional appropriations, which are intended to make up the difference between the net receipts from the refuge revenue sharing fund and the total amount due to local taxing authorities. The actual refuge revenue sharing payment does vary from year to year, because Congress may or may not appropriate sufficient funds to make full payment. Recent revenue sharing payments to local towns have been less than what property taxes would have yielded. However, taken together, we believe there to be a net positive effect to the region.

We consider impacts of refuge activities on local communities when we purchase and restore land. We will work with interested local communities and towns as we develop our restoration plans to minimize or eliminate potential negative effects of refuge activities. We will continue to comply with all applicable Executive Orders, regulations, and laws, including NEPA and Executive Order 11988, Floodplain Management.

Expanding refuge lands would likely increase protection for existing and potential cultural resources in the area (USFWS 2010). Service ownership would protect unidentified or undeveloped cultural sites from disturbance or destruction. Our interpretation and environmental education programs would continue to promote public understanding and appreciation of the area's rich cultural resources.

Attachment 1. Parcel Maps and Table

We have identified 1,431 acres near the northeast section of the refuge for acquisition from willing sellers. This includes: (1) 1,223 acres which we have added to the refuge’s previous approved acquisition boundary, and (2) two parcels (totaling about 208 acres) that were previously added to the approved acquisition boundary, but which were never actually acquired. The parcel map (see map F.4) shows the lands identified for potential acquisition in each county. The corresponding table (see table F.5) lists each parcel, its tax map, block and lot number, acreage, our priority and recommended method for acquisition. The information is derived from the online databases for Cayuga, Seneca, and Wayne County tax offices. Please note that the acreage we derived from our GIS database may differ from the acreage on the county tax maps.

We would acquire either full or partial interest in land parcels, as available from willing sellers over time and as the availability of funding allows. Following are the definitions of the column headers in table F.5:

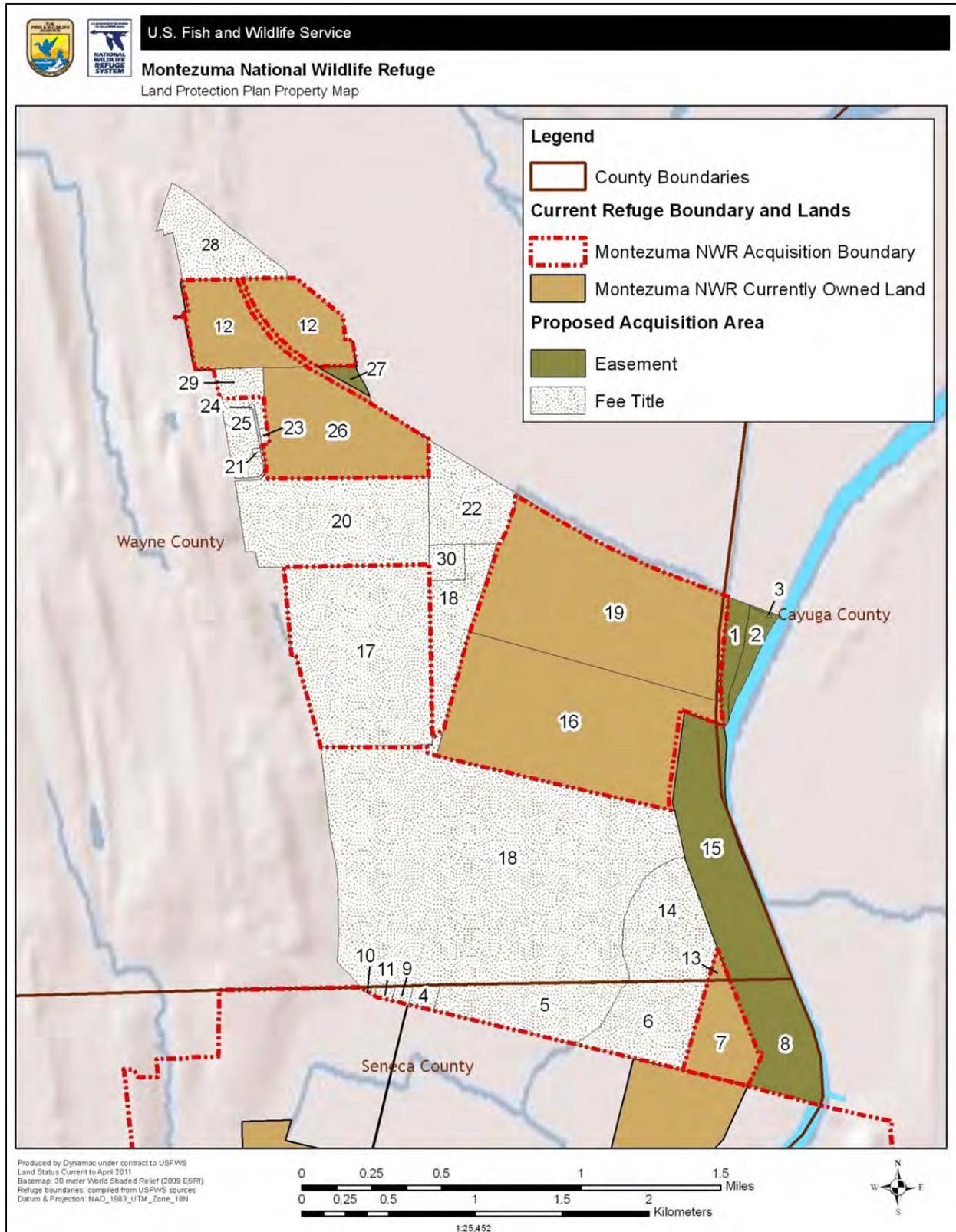
LPP Number	Our numerical identifier for each parcel in the acquisition boundary
Tax Map	County tax map number
Block Number	The block number on the tax map
Lot Number	The lot number on the tax map
Acres	GIS acres generated by Service cartographer (may differ from county tax maps)
Priority	See “Land Protection Priorities” section above for details
Acquisition Method	For lands in the acquisition boundary, whether we would acquire fee title or conservation easement (see discussion in “Acquisition Methods”), or if we are proposing to develop a management agreement
Potential Source(s) of Acquisition Funding	Which current sources of land conservation funds we believe would be most appropriate to fund acquisition of this parcel
Current Ownership	What type of entity currently owns the parcel, public (other federal, state, or county agencies or townships), public-USFWS (Service-owned property), or private (corporations, individuals, non-profit organizations).

Table F.5. Montezuma NWR Land Protection Parcel List.

LPP Number	County	Tax Map	Block/Section Number	Lot Number	Acres	Priority	Acquisition Method	Type of Acquisition Funding	Current Ownership
1	Cayuga	73	1	1	14	2	Easement	MBCF	Public
2	Cayuga	74	1	2.1	12	2	Easement	MBCF, LWCF	Public
3	Cayuga	79	1	8	less than 1	2	Easement	MBCF, LWCF	Public
4	Seneca	4	1	15	4	1	Fee title	MBCF	Private
5	Seneca	4	1	1	62	1	Fee title	MBCF	Private
6	Seneca	4	1	2	72	1	Fee title	MBCF	Private
7	Seneca	4	1	3	36	N/A	N/A	MBCF	Public - USFWS
8	Seneca	4	1	4	54	2	Easement	MBCF, LWCF	Public
9	Seneca	4	1	14	2	1	Fee title	MBCF	Private
10	Seneca	4	1	12	less than 1	1	Fee title	MBCF	Private
11	Seneca	4	1	13	1	1	Fee title	MBCF	Private
12	Wayne	0	77111	598406	101	N/A	N/A	MBCF, LWCF	Public - USFWS
13	Wayne	0	78110	418189	2	NA	NA	MBCF	Public - USFWS
14	Wayne	0	78110	310265	77	1	Fee title	MBCF	Private
15	Wayne	0	78110	385428	90	2	Easement	MBCF, LWCF	Public
16	Wayne	0	78110	105659	243	NA	NA	MBCF	Public - USFWS
17 ¹	Wayne	0	77110	716797	197	3	Fee title	MBCF	Private
18	Wayne	0	77110	986418	605	3	Fee title	MBCF, LWCF	Private
19	Wayne	0	78110	169860	240	NA	NA	MBCF	Public - USFWS
20	Wayne	0	77111	659029	93	3	Fee title	MBCF, LWCF	Private

LPP Number	County	Tax Map	Block/Section Number	Lot Number	Acres	Priority	Acquisition Method	Type of Acquisition Funding	Current Ownership
21	Wayne	0	77111	513158	less than 1	3	Fee title	LWCF	Private
22	Wayne	0	77111	922071	54	3	Fee title	MBCF	Private
23	Wayne	0	77111	527189	1	3	Fee title	LWCF	Private
24	Wayne	0	77111	480254	less than 1	3	Fee title	MBCF	Private
25	Wayne	0	77111	453213	23	3	Fee title	MBCF, LWCF	Private
26	Wayne	0	77111	661215	113	NA	NA	MBCF, LWCF	Public - USFWS
27	Wayne	0	77111	678307	5	3	Easement	MBCF, LWCF	Public
28	Wayne	10	77111	422555	45	3	Fee title	MBCF, LWCF	Private
29 ¹	Wayne	0	77111	453213	11	3	Fee title	MBCF, LWCF	Private
30	Wayne	0	77110	716797	10	3	Fee title	MBCF	Private

¹ Parcel previously added to refuge's approved acquisition boundary but not owned by the Service.



Map F.4. Cayuga, Seneca, and Wayne County Parcels Located within the Project Analysis Area.

Attachment 2. Letter of Support

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Division of Fish, Wildlife & Marine Resources
625 Broadway, 5th Floor, Albany, New York 12233-4750
Phone: (518) 402-8924 • **Fax:** (518) 402-8925
Website: www.dec.ny.gov



Joe Martens
Commissioner

June 24, 2011

Mr. Tom Jasikoff
Refuge Manager
Montezuma National Wildlife Refuge
3395 Route 5/20 East
Seneca Falls, NY 13148-9778

Dear Mr. Jasikoff:

Thank you for writing to inform me about your Land Protection Plan (LPP) that would be incorporated into the Montezuma National Wildlife Refuge's Comprehensive Conservation Plan (CCP), currently under development.

You indicate that the LPP identifies a "new adjusted expansion boundary that would expand the refuge's current approved acquisition boundary by approximately 1400 acres..." I agree with your assessment that this will provide a strong strategic basis for future acquisition and habitat protection plans, and will help with future planning efforts for habitat management in collaboration with the State of New York.

Thus, I endorse your proposal to expand the acquisition boundary by about 1,400 acres, and I support the inclusion of this in your Land Protection Plan.

We view our collaborative efforts to protect and manage a variety of habitat types on the Montezuma Complex as an exemplary case study in effective state-federal relations. We look forward to working with you as the Montezuma National Wildlife Refuge CCP is drafted, and as we explore strategies to enhance wildlife-dependent recreational opportunities, and to manage and protect fish and wildlife habitats.

Thank you.

Sincerely,

Patricia Riexinger
Director
Fish, Wildlife & Marine Resources

c: Paul D'Amato, DEC Regional Director



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