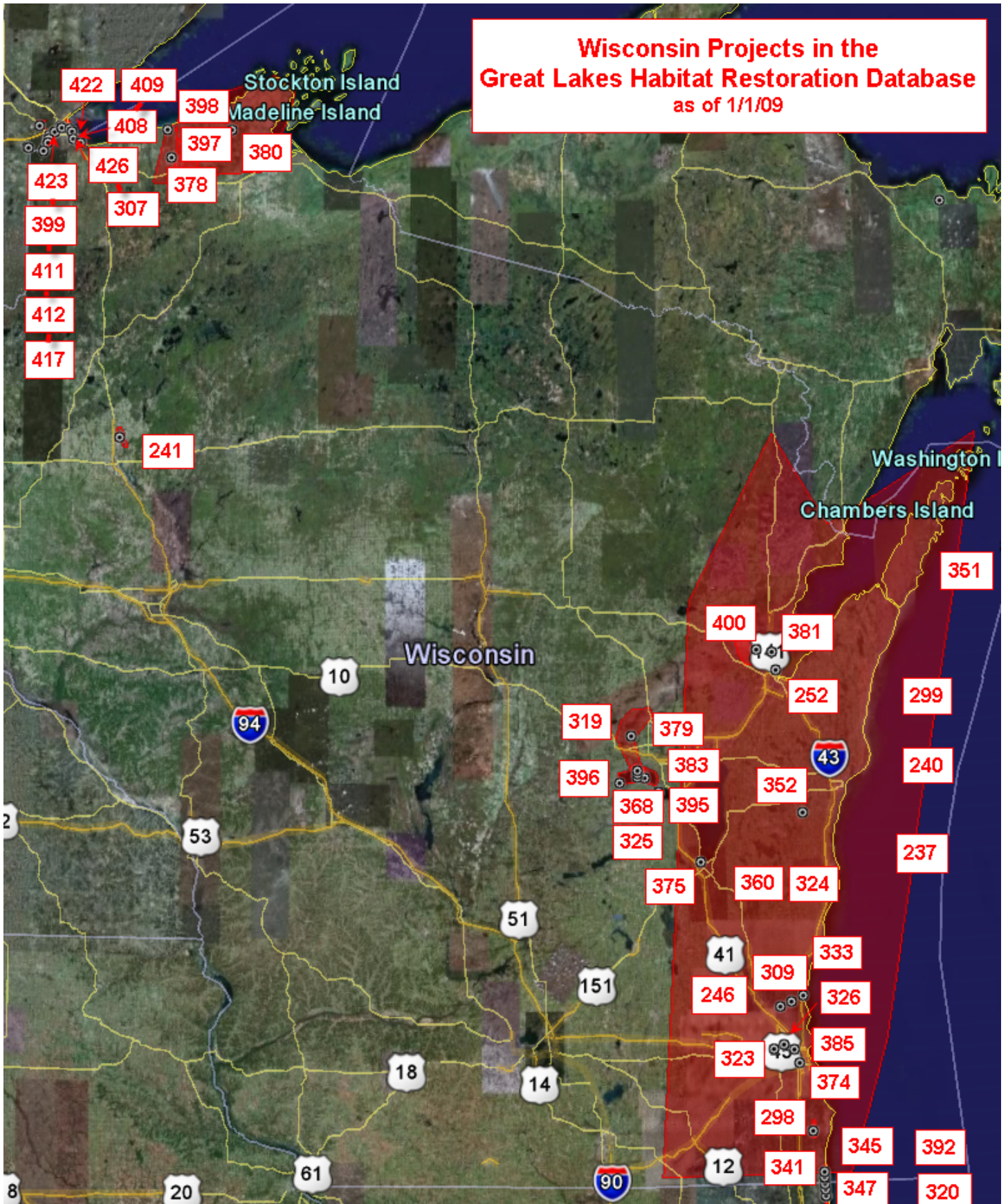


**Wisconsin Projects in the
Great Lakes Habitat Restoration Database
as of 1/1/09**



Wisconsin Projects in the Great Lakes Habitat Restoration Database

sorted by project phase
as of January 1, 2009

RESTORATION / REHABILITATION / CREATION / ENHANCEMENT / PROTECTION PROJECTS

Project ID: 237

Project Name: Western Lower Lake Michigan Watershed Program

Project Phase: Implementation Started

Location: This is a landscape-based project that targets high priority subwatersheds in the western Lake Michigan portion of Wisconsin. It includes all or portions of Brown, Calumet, Door, Fond du Lac, Kenosha, Kewaunee, Marinette, Marquette, Milwaukee, Oconto, Outagamie, Ozaukee, Racine, Shawano, Sheboygan, Washington, Waukesha, Waushara, and Winnebago Counties (WI Congressional Districts 1,4,5,6,and 8).

Abstract: The Western Lower Lake Michigan Watershed Program (WLLMWP) has a ten-year goal of conserving 40,000 acres (10% acquisition and 90% restoration). This program has tremendous potential to provide essential buffers and connecting corridors to existing conservation lands in an extremely fractured landscape. The WLMCP will also protect existing valuable wildlife habitat and restorable habitat through fee title acquisition.

Contact: Jason Hill, jhill@ducks.org

Project ID: 298 ******RECLASSIFY PROJECT TYPE TO RESTORATION******

Project Name: Pike River Restoration

Project Phase: Implementation Started

Location: The majority of the project is located in the Town of Mount Pleasant, Racine County, Wisconsin. The 5.5 miles of stream restoration proposed is in the headwaters of the Pike River, a tributary to Lake Michigan. Hydrologic Unit Code is SE02.

Abstract: The Pike River Restoration project is an effort of the Village of Mount Pleasant, Mount Pleasant Storm Water Drainage Utility District to reduce flooding along 5.5 miles of the Pike River by restoration of the wetlands and environmental corridor. Collaboration for the Pike River Project began in 1992 with a team of multi-disciplinary team of experts that created an environmentally sensitive plan to improve water quality, restore wetlands, provide an environmental corridor and reduce flooding impacts in a community of 23,000 people. Because of the extensive work and costs involved, the project was divided into nine phases. Permits for the project have been issued by the U.S. Army Corps of Engineers, the Wisconsin Department of natural Resources and Racine County to allow all nine phases of the project. During the permit process, public hearings were held and there was strong public support from the public for the proposed project. The Pike River Project is presently in Phase 4 of implementation. Common to all nine phases of the project, the major project objectives for Phase 4 restoration work include: stream realignment for flood control; stream meanders and in-stream habitat work; wetland protection & restoration work; land acquisitions to secure flood storage area; bridge and culvert work with end-of-pipe treatment; storm water ponds and infiltration basins; site prairie restoration and erosion control work; and generation of a buffer strip of 40-200 feet wide created on both sides of Pike River.

Contact: Sonny Haven, shaven@mtpleasantwi.gov

Project ID: 351 ******REVISIT PROJECT AREA******

Project Name: Great Lakes Piping Plover Recovery Program

Project Phase: Implementation Started

Location: Great Lakes Shoreline Areas in Michigan and Wisconsin

Abstract: The Great Lakes Piping Plover Recovery program strives to protect the species and its habitat along portions of the Great Lakes shoreline. The Great Lakes population of the piping plover is a species listed as endangered under the Endangered Species Act. It occupies the wide sandy beaches and dune complexes along lakes Michigan, Huron, and Superior. A multi-partner recovery effort is underway to protect and monitor nesting pairs as well as to enhance and/or restore its coastal habitat. Habitat efforts have focused on protection, enhancement of nesting substrate and the control of invasive plant species. Other federally listed species co-occur with piping plover and habitat efforts benefit these species as well.

Contact: Jack_dingledine@fws.gov

Project ID: 422

Project Name: PROJECT 2-23: Nesting Bird Habitat – Wisconsin Point

Project Phase: Implementation Started

Location: Wisconsin Point, Douglas County, Wisconsin

Abstract: Piping Plovers, a federally endangered species, require large sandy areas, usually beaches, for nesting and young rearing in the Great Lakes region. Due to human use and alteration of this habitat type and natural plant succession they have been extirpated from the St. Louis River estuary as a breeding bird. Piping Plovers, an endangered species, require large sandy areas, usually beaches, for nesting and young rearing in the Great Lakes region. This habitat type is in very short supply due to human alteration and use of this habitat type and due to natural plant succession. The goal of this project is to improve nesting habitat for piping plover on Wisconsin Point through appropriate vegetation management

Contact: frederick.strand@wisconsin.gov

Project ID: 320 ******CHECK APPLICABILITY TO WISCONSIN WORKSHOP******

Project Name: Community Enhancement of Illinois' Northeastern Coastal Natural Areas

Project Phase: Design Completed

Location: The project is located in Northeast Illinois just south of the Wisconsin state line, within the Lake Michigan coastal wetland complex of Illinois Beach State Park (IBSP, 3100 acres owned by IDNR) and Spring Bluff Nature Preserve (SBNP, 275 acres owned by Lake County Forest Preserve District, LCFPD). IBSP / SBNP complex represents the largest contiguous tract of coastal communities in Illinois and is contiguous with the 410-acre Chiwaukee Prairie (WI) coastal area.

Abstract: The project aims to complete coastal habitat enhancement (improvement), including brush clearing and invasive species removal, on 240.24 acres of permanently protected, high quality Lake Michigan dune and swale communities within the 3,375-acre ecological coastal wetland complex of Illinois Beach State Park (IBSP, 3100 acres owned by IDNR) and Spring Bluff Nature Preserve (SBNP, 275 acres owned by Lake County Forest Preserve District, LCFPD). The IBSP / SBNP complex represents the largest contiguous tract of coastal communities in Illinois and is contiguous with the 410-acre Chiwaukee Prairie (WI) coastal area (Figure 1). Project partners: IDNR, LCFPD, The Alliance for the Great Lakes, Friends of Illinois Beach, and private corporate landowner, Johns Manville Manufacturing Company. The IBSP / SBNP complex contributes significantly to the national and regional biodiversity of our coastal wetland ecosystems and preserves critical habitat for declining plant and animal species. Together, the

coastal area supports 14 community types, including the globally declining pannes, of which IBSP contains over 66 acres (state conservation status-S1, global ranking-G3). The sites support more than 500 species of plants and 300 species of animals, including three Federally Threatened and one Federally Endangered species: *Charadrius melodus* (Piping Plover), *Platanthera leucophaea* (Eastern Prairie Fringed Orchid), *Cirsium pitcheri* (Pitchers Thistle), and *Lycaeides melissa samuelis* (Karner Blue Butterfly), respectively. Much of the shoreline within IBSP was designated by the U.S. Fish and Wildlife Service (USFWS) as critical habitat for the Piping Plover (2001) and the foredune supports a reintroduced population of Pitcher's Thistle. In addition to Federally listed species, the complex provides habitat for 160 migratory bird species and over 50 state-listed species, including the state-threatened *Emydoidea blandingii* (Blanding's Turtle). As demonstrated by the successful Pitcher's Thistle reintroduction at IBSP, recovery efforts for rare species is a priority in this coastal area. An on-going population study at SBNP recently identified a regionally significant source population of the Blanding's Turtle. The data collected on foraging and nesting habitat preferences of the turtle has helped develop habitat enhancement goals within SBNP. The study has also catalyzed a management partnership between IBSP/SBNP staff and neighboring Chiwaukee Prairie (WI). These nationally significant resources are threatened directly and indirectly by the expansion of invasive plant species (both exotic and aggressive native species). Although fire management and invasive species control are conducted on an annual basis in IBSP and SBNP, historical disturbances, post-settlement fire suppression and increased abundance of invasive species adjacent to the coastal area have facilitated the establishment and spread of these species within the complex. Without large-scale, intensive invasive plant control efforts, there will be a gradual degradation of IBSP / SBNP critical coastal habitats. Removal of invasive plant populations and restoration of native canopy structure will improve habitat for rare plant species, facilitate more effective prescribed burns, improve the quality of forage and nesting habitat, and restore natural hydrology. The proposed work meets the goals and objectives of the Great Lakes Strategy 2002, and the Lake Michigan Lakewide Management Plans. In addition, this project will provide a unique opportunity to educate students and the public about the ecology and management of coastal natural areas

Contact: debnelson@il.gov

Project ID: 368

Project Name: West Bay Canes Protection and Restoration Project

Project Phase: Design Completed

Location: The project is located approximately one half mile off the north shore of 14,102 acre Lake Poygan in east central Wisconsin in Winnebago County. Lake Poygan is part of the four lake chain that comprises the Winnebago pool, which contains approximately 17% of Wisconsin's inland surface water acreage.

Abstract: The West Bay Canes Protection and Restoration Project will protect, enhance and restore a critical aquatic plant community, known as the West Bay Canes, located in the open waters of Lake Poygan. The site attracts a diverse fishery including top predators such as walleye and northern pike, and is home to Wisconsin's largest nesting colony of endangered Forster's terns. The project entails partial encirclement of a major portion of the West Bay Canes with seven rock breakwall totaling 3200+ feet. The breakwalls are designed and located to provide windward side protection from wave and ice energy. Project goals are to preserve and enhance the fishery, and to provide permanent protection, and possible expansion, of the primary nest sites of Forster's terns.

Contact: Arthur.TechlowIII@wisconsin.gov

Project ID: 375

Project Name: Supple's Marsh Carp Barrier - Lake Winnebago

Project Phase: Design Completed

Location: Supple's Marsh is a large wetland consisting of shallow emergent marsh and open water plant communities. It is located adjacent to the mouth of the Fond du Lac River where it empties into Lake Winnebago on its southern end in Fond du Lac County. Lake Winnebago is Wisconsin's largest inland lake at 137,708 acres.

Abstract: Supple's Marsh is a large wetland consisting of shallow emergent marsh and open water plant communities. It is directly connected to the Fond du Lac River and Lake Winnebago on the lake's southern end. The marsh formerly had excellent water quality, and held a diverse and abundant fishery. It also provided high quality habitat for waterfowl and other water birds, including the endangered Forster's and common terns. There has been a long term decline of fish and wildlife on the marsh, largely because of habitat degradation due to large numbers of summer resident carp. Water quality has suffered as well. This project intends to restore water quality and habitat for desirable fish and wildlife through the use of two carp barriers. This will be the fourth application of a successful, proven technique for managing carp on the Winnebago pool lakes.

Contact: Arthur.TechlowIII@wisconsin.gov

Project ID: 381 ******RECLASSIFY PROJECT TYPE TO RESTORATION******

Project Name: Suamico River Habitat Restoration

Project Phase: Design Completed

Location: 1.5 miles upstream from Green Bay in Brown County along the Suamico River

Abstract: The Wisconsin Department of Natural Resources (WDNR) purchased 11 acres of river frontage property on the Suamico River (Brown County) approximately 1.5 miles upstream from Green Bay. The subject property was purchased from a commercial fishermen who utilized water control structures adjacent to the river for harvesting carp and minnows. The property and associated water structures have fallen into disrepair and the water bodies have accumulated silt and serve limited function to the fishery community. The project will include removing the old, non-functioning control structures, dredging and removing the accumulated silt and sediment in the two channels; and installing new control structures. Other activities would include filling the channels or oxbows with water in the spring to enhance spawning habitat for cool water species such as northern pike, walleye, and yellow perch. Water levels would be manipulated as deemed necessary for fisheries management. The areas would also be available as a secondary function for waterfowl species to use for limited nesting and migration resting/ feeding activities

Contact: Michael.Donofrio@wisconsin.gov

Project ID: 396

Project Name: Poygan Marsh/Pine River Protection and Restoration Project - Lake Poygan

Project Phase: Design Completed

Location: The project is located on the western end of 14,102 acre Lake Poygan at the mouth of the Pine River in Waushara County. Lake Poygan is part of the four lake chain that comprises the Winnebago pool, which contains approximately 17% of Wisconsin's inland surface water acreage.

Abstract: This project will protect a small, eroding wetland peninsula separating 14,102 acre Lake Poygan from a 20 acre embayment of the Pine River at its mouth. This embayment provides high quality habitat for a diverse fish community consisting of northern pike, largemouth and smallmouth bass, and panfish, as well as amphibians and other aquatic life. In addition, the bay supports many species of

wading birds, migratory waterfowl, and other water birds such as the endangered Forster's tern. A series of low profile rock structures, totaling 955 feet in length, will be constructed offshore and parallel to the peninsula. In addition to stabilizing the peninsula while keeping the shoreline "soft", water quality and vegetation in the bay will be restored and approximately 1/2 acre of littoral habitat on the lake will be enhanced and restored.

Contact: Arthur.TechlowIII@wisconsin.gov

Project ID: 246

Project Name: Little Menomonee Creek Wetland Restoration

Project Phase: Planning Initiated

Location: The property is located in SW quarter of section 29 in T9N R21E in the southeast corner of Ozaukee County, Wisconsin and is approximately 100 acres in size.

Abstract: The Milwaukee Metropolitan Sewerage District (MMSD) through their Greenseams Program is working to preserve what is needed to help prevent future flooding in the region. Greenseams is an innovative, flood management program that permanently protects key lands containing, water absorbing soils. The property is currently in active agriculture and is directly downstream from a series of springs. Restoring full wetland functions, especially flood storage, would help achieve better flood control measures within the sewerage drainage area.

Contact: Kate.Barrett@wisconsin.gov

Project ID: 252

Project Name: Cat Island (Wisconsin) Section 204

Project Phase: Planning Initiated

Location: The former Cat Island chain of islands is located at the base of Green Bay in Wisconsin, several hundred feet off shore, and parallel to, the Green Bay shoreline. This City of Green Bay, Brown County, Wisconsin, is located in east-central Wisconsin, approximately 130 miles north of Milwaukee, and is the outlet for the 6,385 square mile drainage of the Wolf-Fox River basin. The Green Bay Harbor navigation project is maintained approximately 4 miles upstream of the mouth of the Fox River, and provides an entrance channel approximately 12 miles into Green Bay (Figure A-1). Although deep-draft navigation is the harbor's primary use, Green Bay and the Fox River also serve power generation, industrial, and recreational interests.

Abstract: Since the early 1970s, the Cat Island chain of islands, located in Green Bay, Wisconsin, has experienced severe erosion as a result of high water levels and wave attack. It is believed that the loss of island area has contributed to the subsequent loss of extensive emergent and submerged aquatic vegetation between the islands and along the mainland shoreline located south and west of the islands. The purpose of this project is to restore and protect the Cat Island Chain and aquatic habitat shoreward of the islands. The Project study is to investigate the potential for using dredged material from the Outer Green Bay Harbor navigation channel, to restore the Cat Islands archipelago (chain), thereby providing protection to allow submerged aquatic vegetation to reestablish. The proposed action is needed to restore a damaged ecosystem to promote habitat diversity.

Contact: david.w.bowman@usace.army.mil

Project ID: 307

Project Name: Allouez Bay Habitat Protection

Project Phase: Planning Initiated

Location: Wisconsin, Douglas County, adjacent to the natural mouth of the St. Louis River and the confluence with the Nemadji River.

Abstract: Shallow wetlands, sheltered bays and their adjacent riparian lands have been degraded from past industrial practices and are not adequately protected from poorly planned development. Allouez Bay lies adjacent to the natural mouth of the St. Louis River and the confluence with the Nemadji River. Existing, naturally occurring habitat is not adequately protected from uses incompatible with the Lower St. Louis River Habitat Plan conservation goal for sheltered bays.

Contact: Jane Anklam, wwlt@wwlt.org

Project ID: 309

Project Name: Milwaukee River Thiensville Dam Fishway

Project Phase: Planning Initiated

Location: Thiensville Dam is on the Milwaukee River 19.7 miles upstream of the embayment and Lake Michigan in Ozaukee County; it is owned and operated by the City of Mequon and Village of Thiensville.

Abstract: Twenty-one miles upstream of its confluence with Lake Michigan, the Milwaukee River is dammed at Thiensville Park. The dam sits as an almost complete barrier to fish passage. At the request of the City of Mequon, the dam was the subject of a 2004 Condition Survey by the Corps of Engineers (COE), Detroit District. The report expressed a concern for the integrity of the dam and recommended a more detailed investigation and the development of construction contract documents for the accomplishment of the needed repairs, maintenance, and improvements. Among the list of necessary improvements was the need to investigate seepage during low-flow periods through the spillway and repair of the south abutment. Independent of the Condition Survey, concerns have arisen regarding the passage of fish at the dam. Will Wawrzyn, a senior fisheries biologist with the Wisconsin Department of Natural Resources (WDNR) described the existing fish ladder or ramp at the dam as “nonfunctional” for all but the largest of fish (telephone conversation with Karen Sands, October 24, 2006). Habitat improvements are warranted to ensure the upstream migration of fish in the Milwaukee River. In addition, anecdotal accounts include small boats going over the dam, and thus the dam creates a safety hazard for small boats during high flows. To address these issues, Mequon wishes to restore fish passage at the dam through construction of a fishway that can be constructed in at least two different configurations. The work necessary to move forward prior to construction includes: a feasibility study, design, permitting and environmental investigations, and construction/bid documents. This grant application requests \$100,000 to undertake this effort.

Contact: william.wawrzyn@wi.gov

Project ID: 323 ******RECLASSIFY PROJECT TYPE TO RESTORATION******

Project Name: Underwood Creek Channel Restoration

Project Phase: Planning Initiated

Location: Underwood Creek, which flows through the center of the Village of Elm Grove, is part of an 18.2 mile sub-watershed of the Menomonee River Watershed within the Milwaukee River Basin. The Menomonee River Watershed has a tributary drainage area of approximately 136 square miles in portions of Washington, Waukesha and Milwaukee counties in southeast Wisconsin.

Abstract: Underwood Creek, which flows through the center of the Village of Elm Grove, is part of an 18.2 mile sub-watershed of the Menomonee River Watershed within the Milwaukee River Basin. The Menomonee River Watershed has a tributary drainage area of approximately 136 square miles in portions of Washington, Waukesha and Milwaukee counties in southeast Wisconsin. Underwood Creek is a tributary of the Menomonee River and is classified as a non-continuous, urban stream. Stream and wetland modifications and pollution runoff are major contributors to degraded water and habitat quality within this watershed. Underwood Creek is one example of a stream within this watershed that has been concrete-lined, straightened and/or enclosed at multiple stretches of its course. This project seeks to remedy this deficiency. The Village of Elm Grove has experienced major flooding along

Underwood Creek, most recently in 1997 and 1998, and in response, initiated analysis of flood control alternatives in order to recommend one for final design and construction. In November, 2005 the Village of Elm Grove was issued a Chapter 30 permit from the Wisconsin Department of Natural Resources (WDNR) for the Underwood Creek Flood Management Project. Implementation of the flood management project, currently in progress and anticipated for completion in the summer of 2007, will achieve the following results: 1) creation of over ten acres of wet and dry flood retention areas; 2) removal of non-native species and re-vegetation of native species and 3) enhancement in public safety and property values through controlled conveyance of floodwaters (i.e. significant reduction in overall floodplain impact area). As a component of the WDNR's Chapter 30 permit issuance, a memorandum of understanding (MOU) between the Village of Elm Grove and the WDNR was created. This MOU assures a commitment from the Village to work cooperatively with the WDNR on a plan for daylighting the portion of Underwood Creek that currently flows through an underground culvert in the downtown area. The proposed work would replace the existing box culvert with an open channel and naturalized creek. In addition to the environmental benefits, a naturalized Underwood Creek would be designed as an amenity and attractive feature of the downtown business community. The naturalization of Underwood Creek would constitute a final component of the Underwood Creek Flood Management Project and would likely be constructed in 2010-2011 (pending coordination with the Wisconsin Dept. of Transportation on replacement of a bridge abutting the project area). Detailed plans and specifications would be prepared for an 800-foot to 1100-foot long naturalized stream channel along the east edge of the existing parking lot, curving from the crossing at Watertown Plank Road to a discharge point located near Wall Street. Detailed plans and specifications would be prepared for an 800-foot to 1100-foot long naturalized stream channel along the east edge of the existing parking lot, curving from the crossing at Watertown Plank Road to a discharge point located near Wall Street.

Contact: Sharon.Gayan@wi.gov

Project ID: 325

Project Name: Lake Poygan (Wisconsin) Ecosystem Restoration (Sect 1135)

Project Phase: Planning Initiated

Location: Lake Poygan, located in Winnebago County near the town of Winneconne, is an expansive widening of the Wolf River totaling over 14,000 surface acres in Winnebago and Waushara counties. Lake Poygan is part of the Winnebago Pool, a series of interconnected lakes fed by both the Fox and Wolf Rivers. The eastern third of the lake is often referred to as Lake Winneconne.

Abstract: The Wisconsin Department of Natural Resources (WDNR) requested Corps of Engineers' assistance to participate in an investigation to determine the extent of the Corps' water level management strategy on the depletion of fish and other aquatic habitat within Lake Poygan, Winnebago County, Wisconsin. Lake Poygan once provided abundant high quality habitat for waterfowl and other birds, furbearers, and diverse warm water fishery. Much of this habitat has deteriorated in recent years. The existing water level management strategy is being reviewed to determine its role (if any) in the degradation. Water levels at Lake Poygan have been managed under the Corps' Fox River project since 1872. The project would involve the construction of a breakwall on Lake Poygan at the mouth of the Wolf River for the purpose of protecting, improving, and restoring fish and other aquatic wildlife habitat. Like the other lakes of the Winnebago Pool, Lake Poygan is quite shallow, with an average depth of 6 to 7 feet and a maximum depth of approximately 11 feet. Via the Wolf River, boaters can find navigable passage to Lake Butte Des Morts and Lake Winnebago downstream (near Oshkosh), and upstream to Partridge Lake and Partridge Crop Lake (near Fremont and New London). A variety of fish species can be found in the lake including walleye, freshwater drum, white bass, largemouth bass, smallmouth bass, carp, flathead catfish, channel catfish, northern pike, crappie, yellow perch, bluegill and sturgeon. Many consider Lake Poygan to be one of the most productive fisheries on the entire Winnebago Pool.

Contact: adam.p.fox@usace.army.mil

Project ID: 326

Project Name: Underwood Creek (Wisconsin) Section 206

Project Phase: Planning Initiated

Location: Underwood Creek is a tributary to the Menomonee River located in the Menomonee River watershed in southeast Wisconsin. The Underwood Creek subwatershed is an approximately 20 square mile area that includes portions of the Cities of Brookfield, Milwaukee, New Berlin, Wauwatosa, West Allis, the Village of Elm Grove, and the Town of Brookfield. The Mainstem of Underwood Creek originates in the City of Brookfield, in Waukesha County, Wisconsin and flows easterly for 8 miles where it enters Milwaukee County and merges with the Menomonee River. The proposed project is about 4000 feet in length and is entirely in the City of Wauwatosa, Milwaukee County.

Abstract: Underwood Creek has been modified to incorporate flood protection in the Menomonee River Watershed, which has greatly altered the riparian and aquatic habitat within the river system. The banks and the creek bed are lined with concrete and there are a series of drop structures throughout the creek. These changes have degraded fish and invertebrate habitat. Without an ecosystem restoration project, Underwood Creek will continue to be a degraded stream habitat. Also, as the project exists, runoff material has accumulated behind the drop structures. This material requires removal as part of Milwaukee Metropolitan Sewerage District's (MMSD) operation and maintenance of the flood control project. The proposed project would return the creek to a more natural state, while maintaining its functionality as a flood way. The concrete lining would be removed and replaced with stone. The channel would be widened in areas. Riffles and pools would be constructed to provide fish and invertebrates rest and spawning areas. The drop structures along the creek would be removed as well. This would allow for free fish passage upstream.

Contact: adam.p.fox@usace.army.mil

Project ID: 379

Project Name: Lake Poygan Breakwall

Project Phase: Planning Initiated

Location: The project is located at the mouth of the Wolf River on the north shore of 14,102 acre Lake Poygan in east central Wisconsin in Winnebago County. Lake Poygan is part of the four lake chain that comprises the Winnebago pool, which contains approximately 17% of Wisconsin's inland surface water acreage.

Abstract: This project will protect approximately 9000 feet of wetland shoreline, and enhance and restore over 600 acres of critical fish and wildlife habitat on the north shore of Lake Poygan at the mouth of the Wolf River with a series of rock breakwalls totaling approximately 2 miles in length. Major beneficiaries of this project will be fish such as northern pike, walleye, largemouth bass, panfish, and forage species. Other wildlife beneficiaries include furbearers, migratory waterfowl, coots, rails, herons, terns (including the endangered Forster's tern), bald eagles and ospreys. This area formerly was a major feeding and resting site for canvasbacks and other diving ducks

Contact: Arthur.TechlowIII@wisconsin.gov

Project ID: 385 ******RECLASSIFY PROJECT TYPE TO RESTORATION******

Project Name: Urban Stream and Fish Passage Restoration, Menomonee River, Milwaukee County, Wisconsin

Project Phase: Planning Initiated

Location: Lake Michigan Basin, Milwaukee River Basin, Menomonee River Watershed, Menomonee River, City of Milwaukee, Milwaukee County Wisconsin. 4-river miles upstream of the Milwaukee River Estuary and Lake Michigan

Abstract: The Urban Stream and Fish Passage Restoration, Menomonee River, Milwaukee County, Wisconsin will restore or enhance local instream and corridor fish, other aquatic life and wildlife habitat requisites; Lake Michigan and Estuary potadromous and anadromous fish passage and access to critical upstream habitat including the state Threatened listed Greater Redhorse; improve dissolved oxygen and temperature regimes; and expand recreational fishing opportunities along an additional 20-miles of river. Especially noteworthy would be the 100's of acres wetlands located in the upper reaches of the watershed that could once again be accessed by fish and wildlife populations. Approximately 0.6 miles of the original 0.9 miles of Menomonee River concrete invert remain as a major factor limiting the biological integrity and recreational use potential of the Menomonee River. Those 0.6 miles of invert would be removed and replaced with a self-sustaining natural substrate bed and bank channel.

Contact: william.wawrzyn@wisconsin.gov

Project ID: 398 ******RECLASSIFY PROJECT TYPE TO RESTORATION******

Project Name: Fish Ladder at Orienta Falls

Project Phase: Planning Initiated

Location: Orienta Falls in the NW1/4, Section 10, T49N, R9W, Bayfield County

Abstract: After removal of the Orienta Falls Dam in 2001, a fish barrier was constructed to prevent upstream migration of sea lampreys which also blocked all other fish from reaching the upper reaches of the Iron River watershed. Prior to the construction of the dam, salmonids were able to move into spawning areas upstream of the dam. Restoration of upstream passage of Lake Superior salmonids into the 56 miles of trout streams in the 83 square mile watershed would greatly increase the recruitment of salmonids into the fisheries of the western Lake Superior basin and would improve recreational opportunities for the public in both the lake and the streams in the Iron River watershed.

Contact: Kate.Barrett@wisconsin.gov

Project ID: 241

Project Name: Rice Lake (Wisconsin) Restoration

Project Phase: Proposed

Location: Rice Lake is a 212-acre lake located in west-central Wisconsin in Forest County. It is about 75 miles northeast of Minneapolis/St. Paul Minnesota. The lake is completely contained within the boundaries of the Mole Lake Reservation. The project study area includes the entire wetted perimeter of Rice Lake and 1500 feet of the Swamp Creek inlet and 3000 feet of the outlet, both of which are also completely contained within the reservation boundaries.

Abstract: This analysis evaluates and investigates a potential project to determine the causes of depletion of wild rice (*Zizania palustris*) stands in Rice Lake, Wisconsin, and solutions to re-establish wild rice growth and decrease the growth of competitive native and non-native emergent species in the area, primarily within the shallow shoreline waters of Rice Lake and its tributaries. Rice Lake is primarily contained on lands of the Mole Lake Band reservation in Forest County, Wisconsin. Wild Rice is a food of significant cultural and religious significance to the Sokaogon Chippewa tribe. The management of the

rice growth and harvest is delegated to important tribal leaders, the Rice Chiefs. The tribe organizes important tribal gathering around the harvest of rice, which serves to reconnect and reinforce social interaction within the tribe. Rice is described as a gift from the creator provided to the Chippewa. The religious teaching of the genesis of rice connects, people and place. The loss of rice at Rice Lake would diminish this important connection to the tribal land. Rice needs to persist at Rice Lake to perpetuate the tribal culture of the Sokaogon Chippewa.

Contact: adam.p.fox@usace.army.mil

Project ID: 324 ******RECLASSIFY PROJECT TYPE TO RESTORATION AND CHECK AREA******

Project Name: Sheboygan River Johnsonville Dam Resolution - Repair & Fishway or Removal

Project Phase: Proposed

Location: This structure is located on the Sheboygan River approximately 200 yards upstream of the County Trunk Highway "JM" bridge. Legal description: SW 1/4 of the NE 1/4 of Section 6, T15N, R22E, Sheboygan County.

Abstract: Dam removal is a valuable management practice for restoring fragmented riverine and Great Lake potadromous and anadromous fisheries and wildlife. Unfortunately, no matter how extensive the beneficial environmental reasons may be for removing a dam, the decision to remove or maintain a dam is usually postponed until such time the dam reaches the end of its engineered life cycle. In instances where a dam has not come to the end of its engineered life cycle or institutional resistance to removal cannot be overcome, opportunities to provide cost effective and ecologically sound "natural" fishways may exist. Functional and cost effective fishways can be constructed to meet the objectives of fish and wildlife passage until such time that economic, institutional and environmental factors bring about dam removal as a viable long-term management option. In addition, unlike dam removals fishways can be modified or abandoned to recreate the original dam barrier should exotic species or diseases threaten water resources upstream of the dam. This project will: 1) conduct an engineering assessment of the condition of the dam and determine what is necessary to bring the dam into compliance with current state statutes; 2) contract with the Army Corps of Engineers (ACOE) Cold Regions Research & Engineering Laboratory (CRREL) to model the function of the current structure to prevent ice dams in the Sheboygan River; and 3) and if the dam does not provide protection from ice dams and an owner cannot be secured that is committed to long-term maintenance of the dam, the dam will be removed.

Contact: Brent.Binder@Wisconsin.gov

Project ID: 333

Project Name: Concordia University (Wisconsin) Section 206

Project Phase: Proposed

Location: Concordia University is located 15 miles north of downtown Milwaukee on 155 acres of Lake Michigan shoreline, in the city of Mequon in Ozaukee County, Wisconsin.

Abstract: Concordia University is a 155-acre campus is located along 2,720 feet of Lake Michigan shoreline. The bluff face, approximately 135 feet high, is eroding due to the effects of wind, wave, and groundwater. Approximately 0.5 to 2.0 feet of the bluff face is lost annually due to natural forces, which is adversely impacting the valuable lakefront biological habitat.

Contact: adam.p.fox@usace.army.mil

Project ID: 341

Project Name: Chiwaukee Prairie Large Woody Invasive Removal Project

Project Phase: Proposed

Location: The project is on the Chiwaukee Prairie State Natural Area in the Village of Pleasant Prairie, in Kenosha County. The wooded areas are in the middle of the DNR portion of the project.

Abstract: Chiwaukee Prairie is the most intact coastal wetland in southeastern Wisconsin. The prairie contains exceptional diversity of plants and animals – more than 400 species of vascular plants have been found here. The natural area features a mosaic of plant communities, ranging from southern sedge meadow, wet prairie, and wet-mesic prairie in the low areas, to dry-mesic prairie and oak savanna/oak woodland on the slightly too moderately elevated sandy ridges. This variety of habitats, coupled with their location in the extreme southeastern corner of the state, allows several rare and geographically restricted plants, amphibians, reptiles, birds, invertebrates and mammals to thrive here. Fire is an important tool that has helped to maintain these varied habitat types. In certain portions the lack of fire has allowed medium to large size woody invasives (e.g., black locust, cottonwood, box elder, buckthorn, honeysuckle, etc.) to become established. In these areas the woody vegetation is at a point where fire no longer can control, reduce or eliminate it. This is due to the fact that there is not enough fuel, herbaceous plants, to carry a fire hot enough to scorch the woody plants. The presence of these woody invasives creates shade that prevents quality herbaceous plants from growing in the wet prairie and crowds the woodland/savanna areas preventing regeneration of oaks and quality understory vegetation. In the past dealing with woody vegetation meant using chain saws and chipping, which is time consuming (e.g., cutting, chipping, hauling chips, etc.) and costly. Recently the department has had access to forestry mowers that can handle trees up to 10” in diameter, shredding the trees into manageable size that burn easily. These mowers allow the trees and debris to be handled on site instead of handling the trees multiple times thru cutting-chipping-hauling process and taking them off site. Once these woody invasives are removed and these areas are exposed to the right conditions and management (e.g., burning, etc.) the quality herbaceous vegetation will return.

Contact: BMartinus.Johnson@wi.gov

Project ID: 345

Project Name: Chiwaukee Road Abandonment Project

Project Phase: Proposed

Location: The project is located in the Carol Beach Subdivision in Pleasant Prairie. The road, 3rd Avenue, is one block west of Lakeshore Drive and one block south of 91st Place in Kenosha County.

Abstract: Chiwaukee Prairie is most intact coastal wetland in southeastern Wisconsin. The prairie contains exceptional diversity of plants and animals – more than 400 species of vascular plants have been found here. The natural area features a mosaic of plant communities, ranging from southern sedge meadow, wet prairie, and wet-mesic prairie in the low areas, to dry-mesic prairie on the slightly elevated sandy ridges. This variety of habitats, coupled with their location in the extreme southeastern corner of the state, allows several rare and geographically restricted plants, amphibians, reptiles, birds, invertebrates and mammals to thrive here. Chiwaukee Prairie is recognized as a National Natural Landmark by the National Park Service and was designated a State Natural Area in 1967. The Chiwaukee Prairie Management Plan calls for the removal of select platted roads to further restoration efforts. The current proposal calls for the removal of approximately 617 feet of a 33-foot wide gravel road in the Carol Beach subdivision. Road removal will improve wildlife habitat by linking two blocks together, creating a larger block of habitat and improve the travel corridor. Removal will restore approximately .46 acres of wet-mesic prairie habitat for critical plant and animal species. Removal will restore the swale system that the road currently bisects, improving water movement and distribution in the system.

For the road removal project to occur a petition for road abandonment must be submitted to the Village of Pleasant Prairie. This process involves doing a certified survey and submitting the survey to receive approval, allowing the project to proceed. The village has already expressed support for this project.

Contact: bmartinus.johnson@wisconsin.gov

Project ID: 352 ******REVISIT PROJECT AREA******

Project Name: Landscapes of Opportunity: Land Conservation in Wisconsin's Lake Michigan Basin

Project Phase: Proposed

Location: The sites identified in the planning process span Wisconsin's Lake Michigan coastline and represent a variety of ecosystems—coastal wetlands, escarpment features, beaches, and rivers, among others.

Abstract: This project will protect existing unimpaired conditions and prevent future impairments by permanently protecting identified high-quality land at 18 sites throughout Wisconsin's Lake Michigan watershed. This project is the final stage of an ongoing process which began with region-wide land conservation planning and site prioritization throughout the entire Lake Michigan watershed in Wisconsin. The sites identified in the planning process span Wisconsin's Lake Michigan coastline and represent a variety of ecosystems—coastal wetlands, escarpment features, beaches, and rivers, among others. Sites were chosen in part based on their importance to threatened species such as the Hines Emerald Dragonfly and Dwarf Lake Iris.

Contact: Julia Soloman, Gathering Waters Conservancy

Project ID: 360 ******CHECK PROJECT AREA******

Project Name: New Paris Dam Removal and Mullet River Restoration

Project Phase: Proposed

Location: The dam is located between STH 67 and Short Cut Road on the Mullet River. Legal description: In the SE 1/4 of the SW 1/4 of Section 27, T15 N, R21E, town of Plymouth in Sheboygan County.

Abstract: Dam removal is a valuable management practice for restoring fragmented riverine ecosystems and wildlife. The New Paris Dam, formerly named the Brickbauer Dam with Field File # 59.05, has been neglected and has been in a state of disrepair since the head race failed. It is unknown when the failure occurred but it was documented for the first time during the summer of 2002. The raceway structure was not rebuilt so only remnants of the structure still exist. The dam remains along with the existing remnants of the impoundment and all of the Mullet River flows down the former raceway channel. The original Mullet River channel downstream of the dam is still evident. This project will provide for the removal of the remaining structure and direct the river back down its original channel. The clay-bottom raceway that the Mullet River flows down now will be filled. Our proposed project would open 15.7 miles of the Mullet River to a free flowing condition, stretching from the Richardson Dam near Sheboygan Falls to the Plymouth Dam in the City of Plymouth. Following completion of the project floodplain modeling should be undertaken to revise FEMA's floodplain mapping. The Sheboygan River Basin Team has identified objectives for improving water quality, fisheries, and recreational opportunities in the Sheboygan River Basin. These objectives were identified in the State of the Sheboygan Basin Report (October 2001, PUBL WT 669 2001). In addition, the Sheboygan Land and Water Partnership Team supports these objectives. Dam and obstruction removal was identified in the report as a way of improving water quality by eliminating impacts of impoundments, and allowing for the free movement of warmwater fish species.

Contact: Brent.Binder@Wisconsin.gov

Project ID: 374

Project Name: Wilson Park Creek (Wisconsin) Section 206

Project Phase: Proposed

Location: Wilson Creek is part of the Kinnickinnick River, which drains and flows through the City of Milwaukee, Wisconsin in Milwaukee County.

Abstract: The project would involve removing approximately 4,400 feet of the existing concrete channel lining of the flood damage reduction project from the South 20th Street bridge crossing (River Mile 0.87) downstream to the South 27th Street bridge crossing (River Mile 1.70) in the City of Milwaukee, Wisconsin, for the purpose of restoring the areas aquatic ecosystem habitat.

Contact: adam.p.fox@usace.army.mil

Project ID: 378

Project Name: Iron River Watershed Restoration - Fish Passage and Hydrologic Restoration

Project Phase: Proposed

Location: This project is located in Bayfield County Wisconsin and includes the Iron River Watershed. The Iron River Watershed includes approximate 200 square miles of land area and 147 stream miles.

Abstract: The Iron River Watershed Restoration project will provide fish passage and hydrologic restoration on the river. The project objectives included: reconnecting Lake Superior with the Iron River, provide spawning and nursery habitat, and reconnecting fish populations. This project is part of efforts to restore coaster brook trout populations. Note that the fish passage will ensure restricting passage of exotic species

Contact: charles.ledin@wisconsin.gov

Project ID: 380

Project Name: Lake Superior South Shore Fisheries Restoration and Protection

Project Phase: Proposed

Location: A unique set of streams drain into the western-most region of Lake Superior along the central portion of Wisconsin's south shore. These streams extend from the Bois Brule River eastward around the Bayfield peninsula to the head of Chequamegon Bay all in Bayfield County.

Abstract: The Lake Superior South Shore Fisheries Restoration and Protection project will restore the pre-settlement stream hydrology. A number of streams draining to Lake Superior have coastal wetlands at their mouths which are important fish and wildlife spawning and nursery habitats. The Lake Superior Bi-national Program identified these small tributaries to Lake Superior as important to the integrity of the Lake Superior ecosystem for coastal wetlands and fish and wildlife. The project objectives are: to improve habitat for spawning and reduce sedimentation for the benefit of anadromous fish in Lake Superior.

Contact: charles.ledin@wisconsin.gov

Project ID: 383

Project Name: Hindenburg Line Breakwall - Lakes Poygan and Winneconne

Project Phase: Proposed

Location: The project is located at the juncture of Lakes Poygan and Winneconne, 14,102 and 4507 acres respectively, in east central Wisconsin in Winnebago County. These lakes are part of the four lake chain that comprises the Winnebago pool, which contains approximately 17% of Wisconsin's inland surface water acreage.

Abstract: This project will protect, enhance and restore several hundred acres of deep water marsh and open water plant communities through the use of 5000-6000 feet of rock breakwalls. It will have lake and pool-wide benefits for fish and wildlife.

Contact: Arthur.TechlowIII@wisconsin.gov

Project ID: 392 *****CHECK PROJECT AREA*****

Project Name: Wisconsin-Illinois Lakeplain Prairie/ Great Lakes Shoreline Habitat Enhancement for Species of Greatest Conservation Need

Project Phase: Proposed

Location: This lakeplain prairie complex is located along the Lake Michigan shore south of Kenosha, WI to northern Waukegan, IL.

Abstract: The Chiwaukee-Spring Bluff-Illinois Beach is a large, partially fragmented, coastal lakeplain prairie complex of both wetland and upland communities including prairies, fen, sedge meadow, savanna and dunes. The low, sandy beach ridges and interceding swales, created when the level of glacial Lake Michigan was lowered in stages, characterize the best parts of this site and provide many microhabitats that support an extremely rich flora (over 400 plants have been documented). Many species of rare plants and animals are found here. Much of the site is protected by the state of Wisconsin, the Nature Conservancy, the Lake County Forest Preserve District, and the state of Illinois. This site contains the only lakeplain prairie complex in Wisconsin, supports exceptional diversity and is large enough to provide suitable habitat for sensitive animals. It is currently threatened by development, altered hydrology (wetland filling, ditching, diking), fragmentation by roads and subdivisions, and non-native plant invasions. This site adjoins Spring Bluff Forest Preserve and Illinois Beach State Park, which also contain exceptional ecological features. This site remains a high protection priority for the Wisconsin DNR, The Nature Conservancy, the Lake County Forest Preserve District, and the Illinois DNR. Enhancement activities will include: hydrological mapping and manipulation to restore more natural surface flows and maintain groundwater; improvement of water quality by reduction of sediment and nutrient loading; vegetation management to control invasive plant species and maintain high-quality wet prairie and sedge meadow communities; removal of shoreline armoring and re-connection of dunes and beach to Lake Michigan; and monitoring of rare and invasive species populations and water quality to ensure the health of this unique ecosystem.

Contact: owen.boyle@wisconsin.gov

Project ID: 395

Project Name: Scotts Bay Breakwall – Lake Butte des Morts

Project Phase: Proposed

Location: Scotts Bay is located at the confluence of the Wolf and upper Fox Rivers on the west end of 8857 acre Lake Butte des Morts in east central Wisconsin in Winnebago County. Lake Butte des Morts is part of the four lake chain that comprises the Winnebago pool, which contains approximately 17% of Wisconsin's surface water acreage.

Abstract: This project will protect, enhance, and restore extensive wetland frontage and open water plant communities by partially enclosing a large bay with a series of rock breakwalls totaling up to 2 miles in length. Major beneficiaries will be northern pike, largemouth bass, panfish, forage fish, furbearers, bald eagles, ospreys, and migratory waterfowl and other waterbirds including the endangered Forster's and common terns.

Contact: Arthur.TechlowIII@wisconsin.gov

Project ID: 397 ****CHECK PROJECT AREA****

Project Name: Land Acquisition at the former Orienta Falls Flowage

Project Phase: Proposed

Location: Sections 10, 15, 22, 23 and 27 in T49N-R9W, Bayfield County

Abstract: Land purchase on the Iron River on and adjacent to the former Orienta Falls Flowage in Sections 10 and 15, T49N-R9W, Bayfield County. Xcel Energy owns approximately 920 acres in this area where the former Orienta Falls Dam was removed in 2001. The Iron is a high quality trout stream and this property provides a valuable wooded riparian corridor for protection of this stream, in addition to providing connectivity between Lake Superior and the headwaters of the 83 square mile Iron River watershed for a vast variety of wildlife species. With the fragmentation and development of large blocks of land in northern Wisconsin, it is important to retain some of these large parcels for the public. Another private property owner with land in Sections 22, 23, and 27, T49N-R9W also has expressed interest in selling property to the state should the Xcel property be acquired. The property along the Iron River is listed in the 2006 Wisconsin Land Legacy Report as land in need of greater protection.

Contact: Duane.Lahti@wisconsin.gov

Project ID: 399

Project Name: Improve habitat for colonial waterbirds on Interstate Island Wildlife Management Area

Project Phase: Proposed

Location: St Louis River Estuary in Douglas County, Wisconsin and St. Louis County, Minnesota

Abstract: Improve nesting habitat for the common tern at Interstate Island through the addition of sand and gravel, planting of native vegetation, and control of ring-billed gulls was identified in the Lower St. Louis River Habitat Plan of 2002 as a priority action item. Common tern populations near the Great Lakes have declined since the 1960s. Loss of suitable breeding habitat is a factor. Common terns, associated with large bodies of water, need relatively vegetation-free islands or peninsulas, naturally protected from most predators, to safely scoop their cup-shaped nests into the ground. Interstate Island, created by dredge wastes, is appropriately named with part of the island in Minnesota and part in Wisconsin. In 1989 the Minnesota DNR, using Reinvest in Minnesota funding, cleared the woody vegetation to suit tern nesting needs. Terns colonized the island with 81 pairs nesting that year and they have successfully nested there every year since then. The only common tern nesting colony in the Lower St. Louis River is on Interstate Island; The Island was recently designated by USFWS as "critical habitat". While many of the less disturbed areas in the Lower St. Louis River provide important ecological functions, nearly all have been modified in some way that either threatens conservation targets or impairs their function. Priority restoration projects should improve the health of conservation targets by reducing or eliminating the sources of stress.

Contact: frederick.strand@wisconsin.gov

Project ID: 408

Project Name: PROJECT 2-1, Barrier Beach & Dune Communities – Wisconsin Point

Project Phase: Proposed

Location: Wisconsin, Douglas County, Wisconsin Point

Abstract: Beach and dune communities along Lake Superior in the area of the St. Louis River estuary were largely unaltered by humans until European settlement in the area. Since then, much of the beach and dune communities have been altered and/or destroyed by human use of these areas. Lake Superior beach and dune communities have been altered and degraded by human use and alteration of these community types. Goals: work with landowners and appropriate agencies to remove old structures,

parking lots, and fences on Wisconsin Point that are no longer in use, not considered historic, and are not suited for future uses; restore the areas to more natural habitat.

Contact: frederick.strand@wisconsin.gov

Project ID: 409

Project Name: PROJECT 2-2, Baymouth Bar Communities (Dune Pine Forest) – Minnesota Point and Wisconsin Point

Project Phase: Proposed

Location: Minnesota, St. Louis County and Wisconsin, Douglas County, Minnesota Point and Wisconsin Point

Abstract: Minnesota Point and Wisconsin Point represent a rare global feature, fresh water baymouth bars. Minnesota Point contains rare species and native plant communities that do not occur anywhere else in Minnesota and are rare within the Great Lakes basin. The introduction of non-native invasive species threatens the viability of these rare species and unique native plant communities. Goals: Remove non-native plants from pine forests on Minnesota Point and Wisconsin Point

Contact: Bruce.Carlson@state.mn.us

Project ID: 411 ******REVISIT PROJECT AREA******

Project Name: PROJECT 2-4, Upland Conifer & Hardwood Forests – Clough Island

Project Phase: Proposed

Location: Minnesota, St. Louis County, in the upper St. Louis River

Abstract: Upland conifer and hardwoods forest habitats were much more abundant and diverse in the St. Louis River estuary prior to European settlement in the St. Louis River estuary. Most of the habitats on Clough Island have been disturbed and altered by past human use of the island. Goals: restore areas of degraded forest habitat on Clough Island; the island currently contains significant remnants of forest, wetlands, and undeveloped shoreline that provide important habitat for numerous migratory and breeding birds and other species; these habitats should be restored and expanded

Contact: frederick.strand@wisconsin.gov

Project ID: 412 ******INCOMPLETE AND REVISIT PROJECT AREA******

Project Name: PROJECT 2-5, Sheltered Bays/Shallow Wetlands – Clough Island Wetlands

Project Phase: Proposed

Location: Minnesota, St. Louis County, in the upper St. Louis River

Abstract: Clough Island is a large (approximately 600 acres), privately owned island located along the northeastern edge of Spirit Lake. Historically, development on the island has been light and focused on farming. Until the recent sale and subsequent plans for intensive development, human activity on the island has been very light for the last 20 years. Except for loss of emergent vegetation in the shoal-waters of the west and north shores, wetland resources surrounding Clough Island have remained relatively intact. The Clough Island wetland complex located at the heart of the estuary near the mouth of Pokegama Bay and along the main river channel is the most critical habitat feature of the estuary. The shallow sheltered bays surrounding the island provide habitat for fish and wildlife as well as recreational users. Critical habitat functions associated with these wetlands are in jeopardy of being degraded as a result of intensive development. Historical loss of emergent wetlands around portions of Clough Island are in need of restoration. Goals: protect critical habitat functions of the wetland complex surrounding Clough Island through acquisition of the island; restore historical emergent wetlands surrounding Clough Island; implement erosion control projects on Clough Island to benefit shorelines and shoreline wetlands

Contact: dennis.pratt@wisconsin.gov

Project ID: 417

Project Name: PROJECT 2-7, Sheltered Bays/Shallow Wetlands – Spirit Lake

Project Phase: Proposed

Location: Minnesota, St. Louis County, Spirit Lake with some overlap into Douglas County, Wisconsin

Abstract: The portion of the St. Louis River estuary commonly referred to as Spirit Lake is located approximately one mile downstream of the Oliver Bridge and is contained primarily within the State of Minnesota. All of Spirit Lake, except the river channel curving around its eastern edge and the two areas within the USX Superfund Site, is currently described as an upper estuary, open-water flat. Historically, however, emergent wetland vegetation was distributed over most of the surface area of Spirit Lake. Most probably, habitat within Spirit Lake began to shift from emergent macrophytes to open-water flats due to wave action and other physical forces related to human activity. Once fragmented, beds of emergent vegetation would have been more susceptible to further erosion from natural and unnatural wave action. Contamination has also accumulated in the benthic sediments of Spirit Lake around two effluents from the USX Steel facility. Historical human impairments have resulted in reduction of emergent vegetation and deposition of contaminated sediments in portions of Spirit Lake. Goals: remediate contaminated sediments in Spirit Lake as the first step toward restoration; establish barrier islands to reduce wave action energy and restore sediments capable of supporting diverse communities of emergent, floating-leaf, and submergent macrophytes characteristic of healthy, shallow sheltered bay habitat; restore emergent vegetation to a substantial portion of Spirit Lake.

Contact: john.lindgren@dnr.state.mn.us

Project ID: 423

Project Name: PROJECT 2-22, Nesting Bird Habitat – Interstate Island

Project Phase: Proposed

Location: Wisconsin, Douglas County, Interstate Island

Abstract: Common terns, a Wisconsin endangered species, are a ground-nesting colonial waterbird. There are only two common tern nesting colonies in the entire Lake Superior basin; one is in the St. Louis River estuary, the other in Chequamegon Bay, Ashland, WI. Biologically suitable nesting and young rearing habitat is usually islands or peninsulas which have sparse vegetation and are free of predators. In 1989, after the MN and WI DNRs completed habitat creation work, terns colonized the Interstate Island Wildlife Management Area (IIWMA). Current management of IIWMA includes vegetation management and control of ring-billed gull nesting in the “tern nesting area”; and monitoring of tern nesting and young rearing. In recent years, about 200 pairs of terns and 10,000 pairs of ring-billed gulls have nested annually on the IIWMA. Common terns nesting and young rearing habitat on the IIWMA is sub-optimum due to the low elevation of part of the island, vegetation encroachment, and competition for nesting space from ring-billed gulls. Goals: improve nesting and young rearing habitat for the common tern at Interstate Island through the addition of sand and gravel, vegetation management and management of the ring-billed gull population.

Contact: frederick.strand@wisconsin.gov

Project ID: 426

Project Name: PROJECT 2-16, Sheltered Bays/Shallow Wetlands – Hog Island Inlet

Project Phase: Proposed

Location: Wisconsin, Douglas County, Hog Island Inlet

Abstract: Prior to human alterations of the lower St. Louis River estuary it was a slow, winding river surrounded by wetlands. Human alterations to the estuary have deepened and channelized the river

and have eliminated almost all of the wetlands. The lower end of the estuary originally contained extensive areas of sheltered bay/shallow wetland habitat. Harbor development activities including dredging, dock filing and dredge spoil disposal have severely altered and/or destroyed most of this type of habitat in this reach of the estuary. Quality sheltered bays and shallow wetlands in the lower St. Louis River harbor area are lacking. Goals: enhance/restore habitat at the Hog Island Inlet remediation site; develop the public use facilities of Hog Island to help protect and preserve the public use aspects of Hog Island Inlet.

Contact: frederick.strand@wisconsin.gov

MONITORING / MANAGEMENT / RESEARCH / EDUCATION ACTIVITIES

Project ID: 299 ******RECLASSIFY PROJECT TYPE TO OTHER******

Project Name: Development of biological control of invasive *Phragmites australis*

Project Phase: Design Completed

Location: Nationwide, not restricted to Great Lakes Region

Abstract: Introduced *Phragmites australis* is one of the most serious wetland invader in North America. Failure of chemical, physical or mechanical means to control populations resulted in the initiation of research to assess the feasibility of biological control. Since 1998 work in Europe and North America has identified several promising stem-mining moths species as potential biological control agents. Preliminary host specificity tests have indicated that these species have a strong preference for the invasive *Phragmites* genotypes and do not appear a threat to endemic North America subspecies *Phragmites australis americanus*. Before any introductions occur, these preliminary data need to be supported by more extensive testing of different genotypes of the endemic subspecies plus testing of other native plant species and a stakeholder survey. This work is currently ongoing at Cornell University, University of Rhode Island and with support by CABI Bioscience Switzerland.

Contact: Bernd Blossey, bb22@cornell.edu

Project ID: 240

Project Name: Biological control of invasive *Phragmites australis*

Project Phase: Planning Initiated

Location: This study will occur throughout the Great Lakes region and North America.

Abstract: Invasive introduced genotypes of the grass *Phragmites australis* continue their invasions throughout the Great Lakes watershed. Associated with the invasion are reductions in biodiversity with particular negative impacts on native plants, birds and amphibians. Current control methodologies (largely herbicide) are unable to control the plant long-term or prevent future expansion. Implementation of biological control is anticipated to reduce the invasiveness of *P. Australis* and restore diverse native communities, but long-term information about the local food webs of the Great Lakes region must be collected before control agents are released.

Contact: Kurt Anderson, kanderson@ducks.org

Project ID: 319 ******RECLASSIFY PROJECT TYPE TO OTHER AND REVISIT PROJECT AREA******

Project Name: Inventory Native Mussels along the Wolf River - Including Rare & Threatened Species

Project Phase: Proposed

Location: Wolf River in Waupaca and Winnebago Counties, Wisconsin.

Abstract: Mussels are a critical and threatened component of aquatic ecosystems. Over half of the mussel species reported in Wisconsin are listed as endangered, threatened, or of special concern and

twenty six of these mussel species are listed as “Invertebrate Species of Greatest Conservation Need” in the Wisconsin Wildlife Action Plan. Habitat destruction and alteration is one of the primary reasons for the decrease of many mussel species. There is concern that piers and similar structures may be harming the mussel populations in warm water riverine communities. This study will determine impacts of piers, pilings and boat lifts on mussel populations and habitat. The findings will be used to develop guidelines for DNR permit decisions to protect mussels and their habitat. Changes in mussel habitat caused by the structures will be used to determine impacts on the mussel host species including the mudpuppy.

Contact: randal.piette@wi.gov

Project ID: 347

Project Name: Chiwaukee Prairie Hydrologic Study

Project Phase: Proposed

Location: Chiwaukee Prairie Natural Area is located in Kenosha County along the Lake Michigan shoreline in T1N R23E.

Abstract: The Chiwaukee Prairie wetland complex is a unique lowland lake prairie that supports over 400 plant species, including 20 rare species (white fringed prairie orchid- federally threatened and smooth phlox- state endangered) and rare communities such as a calcareous fen. The area also supports several rare animal species- Red-tailed Leafhopper (state endangered) and the Blanding’s turtle (state threatened). This community is heavily tied to Lake Michigan water levels and groundwater flow. Over time changes have occurred on and off site that have in the past and currently caused impacts (e.g., hydrology, invasive plants, etc.) to the coastal wetland. Significant changes on site include residential development resulting in wetland filling, road development, increased nutrient loading and ditching all which impact water flow, infiltration and quality which in turn affect flora and fauna on the prairie. In recent years continued development within the Chiwaukee Prairie watershed has raised concerns. In the Illinois’ segment of the coastal wetland complex impacts from development within the Spring Bluff Creek and the Illinois Beach State Park watersheds are being seen- increased erosion from stormwater flow and expansion of invasives plants. Currently Chiwaukee Prairie has been experiencing a decrease in water levels which is impacting the plant community. Visible signs of changes include an increase in the presence of upland plant species in wet areas and swales with no standing water for long periods of time. It is thought that these impacts are mainly due to Lake Michigan’s low water levels and possible changes to groundwater flow, but how much is attributed to each is not clear? And if the groundwater flow to Chiwaukee is decreasing, how would a continued reduction in groundwater flow in addition to low lake levels affect the prairie? Data collecting efforts would include installing and monitoring groundwater wells; installing and monitoring stream gauges to measure stage and flow; and taking water quality samples from waterways and wells. In addition vegetation transects would be developed to look at the moisture gradient of wetlands of concern. Some of these efforts have already been started with the case study done by the Southeastern Wisconsin Regional Planning Commission called *Identifying Delineating Problem Wetlands In the Lake Michigan Basin Using An Integrated Approach: A Case Study of Two Seasonal Wetland Types*. An Illinois contingency is working on carrying out hydrologic data collection and the same effort is needed in Wisconsin. (The group submitted a proposal to the Great Lakes Habitat Initiative called Surface Water Study Proposal for the Northeastern Illinois Coastal Complex: Dead Dog & Kellogg Creek Watersheds.) The ultimate goal is to develop groundwater and surface water models that can be used to protect Chiwaukee Prairie coastal wetland complex. (Example of a model can be found in “USGS: Evaluating the Effects of Urbanization and Land-Use Planning Using Ground-Water and Surface-Water Models”.) These models would be used to evaluate how development (e.g., impervious surfaces, ditches, etc.) would impact the plant community in the coastal wetland. It would also be used as a planning tool to see how impacts could be avoided or minimized when looking at future development within the watershed.

Contact: BMartinus.Johnson@wi.gov

Project ID: 400

Project Name: Mapping low order streams for northern pike habitat protection

Project Phase: Proposed

Location: Suamico and Little Suamico Rivers Watershed in Brown and adjacent counties

Abstract: Wisconsin DNR has long understood the value of low order streams towards the sustenance of fish populations. We have specifically identified that small, often ephemeral, streams (0 and 1st order) and connected wetlands provide critically important northern pike spawning and rearing habitat. Scientists have determined that these small streams are sites where a very large percentage of nutrients and sediments enter waterways. The goal of this grant was to increase awareness of the importance of 0 order and 1st order waterways within the western shores of Green Bay's coastal zone and ultimately increase protection of those low order waterways and connected wetlands. To accomplish this task, within the Suamico and Little Suamico River Watershed, we will map 0 order and 1st order streams not currently identified on topographic maps.

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