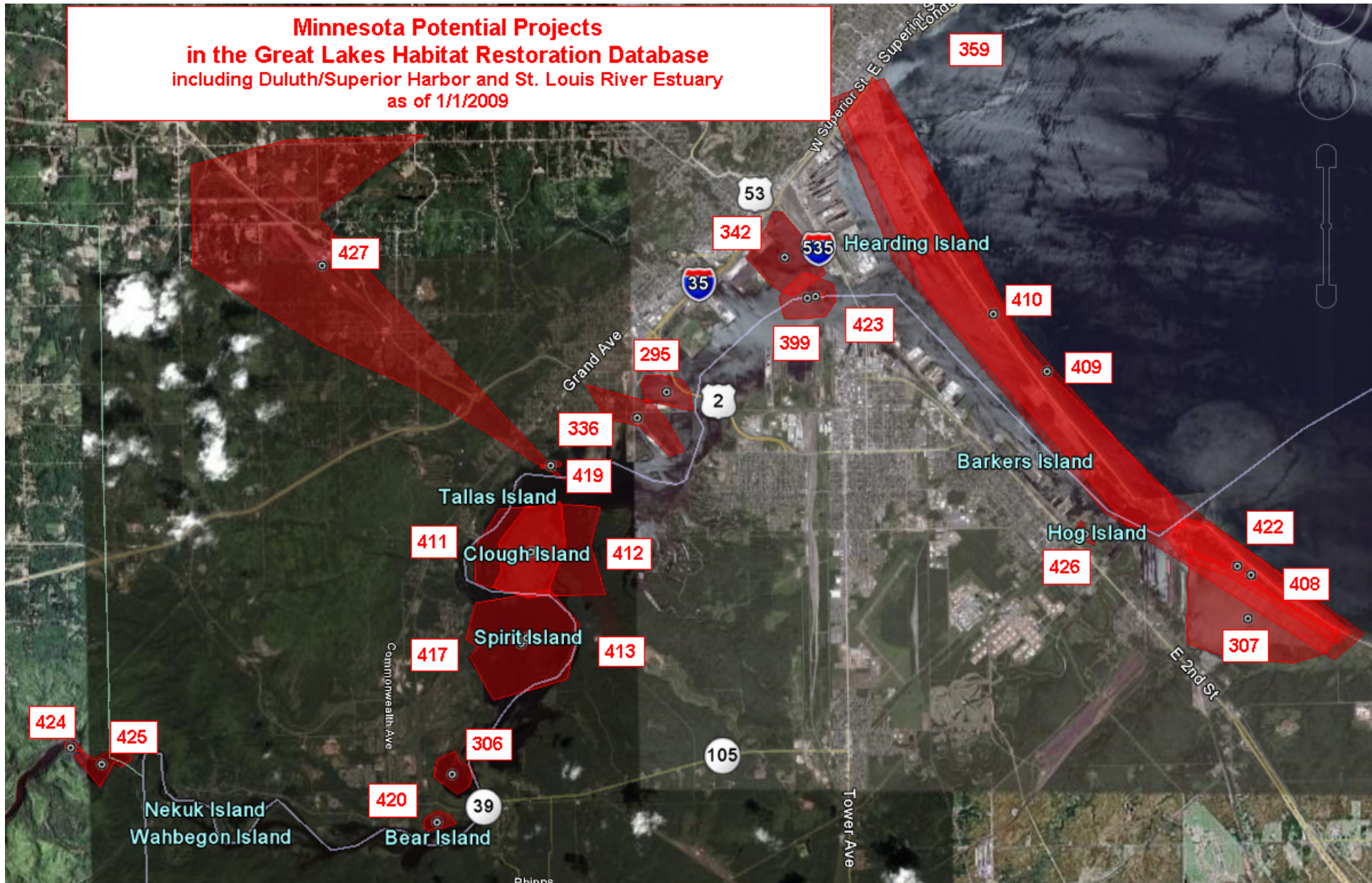


**Minnesota Potential Projects
in the Great Lakes Habitat Restoration Database
including Duluth/Superior Harbor and St. Louis River Estuary
as of 1/1/2009**



Minnesota Projects in Great Lakes Habitat Restoration Database
including Wisconsin Projects around Duluth-Superior Harbor and St. Louis River Estuary,
sorted by project phase
as of January 1, 2009

RESTORATION / REHABILITATION / CREATION / ENHANCEMENT / PROTECTION PROJECTS

Project ID: 422

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

Project Phase: Implementation Started

Location: Wisconsin, Douglas County, Wisconsin Point

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. This habitat type is in very short supply due to human alteration and use of this habitat type and due to natural plant succession. Goals: improve nesting habitat for piping plover on Wisconsin Point through appropriate vegetation management.

Contact: frederick.strand@wisconsin.gov

Project ID: 342

Project Name: Twenty-first Ave. Complex Habitat Restoration

Project Phase: Design Completed

Location: Minnesota, St. Louis County, located about 3 miles upstream from the mouth of the St. Louis River, being one of the largest sheltered bays encountered in the lower portion of the river.

Abstract: Emergent wetland and sheltered bay habitat is limited in the lower part of the St. Louis River estuary. The 21st Ave. complex provides a relatively large area of habitat potential. Diversifying habitat at this location would also enhance connections between fish and wildlife habitat associated with the river channel and other sheltered bays. An improved connection would increase habitat value for species such as lake sturgeon, walleye, muskellunge and channel catfish. This is a significant fishery habitat in that the winning fish in a national contest was caught here.

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

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: 336

Project Name: Keene Creek Fish Habitat

Project Phase: Planning Initiated

Location: Minnesota, St. Louis County, small tributary to the St. Louis River located in west Duluth, MN; designated trout stream with significant watershed and wetland importance within the St. Louis River Area of Concern.

Abstract: The lowest reach of Keene Creek was redirected out of Hallet Slip #7 through a constructed channel and into Grassy Point in 1992. The wetland on Grassy Point was the historical estuary of Keene Creek. However, the constructed channel was not geomorphologically correct, which isolated two wetland areas. Baseline habitat functions of Keene Creek from Waseca Industrial Avenue to the St. Louis River estuary have been impaired due to channelization, degradation and isolation of available wetland habitat. Impairments include loss of substrate diversity and assumed reduction in diversity of benthic macroinvertebrates, loss of stream habitat diversity and wetland function and assumed reduction in fisheries habitat value. Establishing a more natural course for the creek would reduce impacts of future erosion and open wetland areas for spawning and nursery habitat. Goals: acquire a 100-ft. wide conservation easement from the St. Louis River estuary upstream for approximately 4,000 ft; after acquisition, develop a management plan that will mitigate the affects of channelization on this stretch of Keene Creek; reconnect two wetland areas to Keene Creek; identify the responsible party for removing tires and other garbage deposited in the abandoned Keene Creek channel which flowed into Hallet Slip 7 Reduce impacts of channelization and restore connections to wetlands adjacent to the creek from Waseca Industrial Road downstream to the St. Louis River estuary.

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

Project ID: 295

Project Name: Stora Enso Bay/Coffee Ground Flat habitat restoration

Project Phase: Planning Initiated

Location: Minnesota, St. Louis County, located in a bay with historic industrial influence containing remnant docks; accumulated wood waste and other contaminants have impacted the characteristic estuarine function of this wetland/sheltered bay.

Abstract Historic industrial activity has severely impaired baseline habitat functions with this bay. Some characterization and evaluation of contamination had been completed, but no responsible party had been identified. Non-native sediments from historic wood processing operations are also present, but have not been accurately assessed. Sheltered bays provide spawning areas for many species of fish. They support a high diversity and abundance of invertebrates. The extensive emergent wetlands are very important for waterfowl and wading birds. Wild rice, an aquatic plant of significant ecological and native cultural importance, grows in some sheltered bays. The health of these bays varies from one location to another; some have been impacted by excessive sediment inputs, and some exhibit lower than expected species diversity and/or invasion by exotic species. Purple loosestrife and other undesirable exotic plant species have become established in a number of sheltered bays. The location and size of patches of open water and wetland vegetation will vary over time due to variations in the hydrologic regime. Wet meadows and shrub swamps should be present in some areas around the perimeter of sheltered bays. The hydrologic regime of contributing watersheds, along with sediment deposition and transportation should be within the natural range of variation. The diversity of native fish, birds, and other species utilizing this habitat should continue to be high.

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

Project ID: 306

Project Name: Mud Lake Restoration Project

Project Phase: Planning Initiated

Location: Minnesota, St. Louis County, downstream of the Oliver Bridge and adjacent to the USX Superfund Site and other industrialized land

Abstract: Mud Lake is a shallow sheltered bay on the Minnesota side of the estuary downstream of the Oliver Bridge and adjacent to the USX Superfund Site and other industrialized land. A Northern Pacific Railroad causeway bisects the bay, reducing seiche affect and habitat function in its northwestern section. The causeway also reduces boat-based fishing opportunities. Goals: establish a more vital connection between the estuary and the wetlands north of the causeway; enhance wetlands for migratory birds at Mud Lake; establish wild rice beds within the wetland north of the causeway; mitigate the loss of past recreational opportunity by establishing a deepwater connection from the St. Louis River channel to a deep hole (12-15 ft.) that will be created in the middle of Mud Lake; a deep hole with Mud Lake will provide winter habitat for bluegill and black crappie, and increase winter angling opportunities; and assess and remediate any contaminated sediment present.

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

Project ID: 359 ******REVISIT PROJECT AREA******

Project Name: Lost Forest Initiative

Project Phase: Proposed

Location: North Shore of Lake Superior in St. Louis, Lake and Cook counties, Minnesota

Abstract: This project remediates existing impairments by restoring native conifer forest (the "Lost Forest"). This forest is not returning on its own due to deer browse, land development, and missing ecological processes such as fire. The project will restore enough native conifer forest along the Minnesota shore of Lake Superior (the "North Shore") to act as seedbanks for complete restoration down the road. Key species are white cedar, white pine, white spruce, and woodland caribou, which depend on conifer forests for their survival.

Contact: Andrew Slade, Sugarloaf: The North Shore Stewardship Association

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: 410 ******REVISIT PROJECT AREA******

Project Name: PROJECT 2-3, Barrier Beach & Dune Communities

Project Phase: Proposed

Location: Minnesota, St. Louis County, Minnesota Point

Abstract: The only known location of *A. breviligulata* in Minnesota is on Park Point (Minnesota Point) in Duluth, MN, a baymouth bar of the Lake Superior harbor. The beach grass population on Park Point also represents the most western extent of the species natural distribution in North America (Maun and Baye, 1989). The limited and unique population of *A. breviligulata* in Minnesota as well as its ecological role as a dune colonizer and stabilizer (Olson, 1958a, b) has made it one of great conservation interest and concern. Consequently, the population has been added to the state's Threatened Species List. [Anderson & Etterson, 2006]. In Minnesota, historical dune restoration projects introduced non-local propagules of American Beachgrass (*Ammophila breviligulata*) from Michigan to augment the threatened native population. MI-C genotypes may outcompete or "swamp" threatened MN genotypes as a result of vegetative and reproductive fitness advantages. Furthermore, molecular evidence suggested that the genetic diversity of introduced beachgrass is low relative to the native MN population. This could lead to an overall loss of genetic diversity if introduced beachgrass becomes

dominant on Park Point. [Anderson & Etterson, 2006]. Goals: develop a source of local (Minnesota Point) beachgrass for dune restoration projects on Minnesota Point; require the local source of beachgrass in any plantings of American Beachgrass on Minnesota 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 ****** 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. In fact, 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 arguably the most critical habitat feature of the estuary. The shallow sheltered bays surrounding this island provide important habitat for fish and wildlife as well as recreational users. Critical habitat functions associated with wetlands surrounding Clough Island are in jeopardy of being degraded as a result of intensive development. Historical loss of emergent wetlands around portions of Clough Island is 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: 413

Project Name: PROJECT 2-6, Upper Estuary Flats – Spirit Island

Project Phase: Proposed

Location: Minnesota, St. Louis County, Spirit Island

Abstract: Spirit Island is a small (6 acres), privately owned island located in the middle of Spirit Lake. The island has a substrate type dominated by sand and clay. Topography of the island is steep and the shoreline is not protected from wave action, which has resulted in severe erosion along the north half of the island. Currently, the island is in private ownership. The Spirit Island property is composed of four parcels. Three of the parcels are entirely below the ordinary high water mark (OHWM) and most of the other parcel, which contains Spirit Island, is also below the OHWM. The four parcels are currently

assessed at \$18,300. The Nature Conservancy, in partnership with MnDNR, negotiated for purchase of Spirit Island in 2005-06, but was unable to reach an agreement with the landowner for a purchase price of \$38,000. Spirit Island is privately owned and has severe erosion around much of its shoreline. Goals: protect Spirit Island through acquisition; implement erosion control and a revegetation project along riparian land; establish beds of emergent vegetation in the shoal-water surrounding the island.

Contact: Bruce.Carlson@state.mn.us

Project ID: 417

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

Project Phase: Proposed

Location: Minnesota, St. Louis County, Spirit Lake

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: 419

Project Name: PROJECT 2-10, Sheltered Bays/Shallow Wetlands – Tallus Island

Project Phase: Proposed

Location: Minnesota, St. Louis County, in the upper St. Louis River across from Clough Island

Abstract: Tallus Island is currently a degraded shallow sheltered bay on the Minnesota side of the St. Louis River estuary across from Clough Island. Aerial photos taken of the wetland complex located behind Tallus Island in 1961 and 2003 document the affects of increased sedimentation from Knowlton Creek. Prior to 1961, the wetland complex behind Tallus Island was connected to the estuary and was providing habitat functions of a shallow sheltered bay. By 2003, erosional deposition from Knowlton Creek had converted a large portion of the wetland complex to upland and almost completely isolated the remaining wetland from the estuary. The wetland complex will be restored to 1961 conditions as mitigation for remediation of the Sediment Operable Unit at the SLRIDT Superfund Site. Erosional deposition from Knowlton Creek has severely degraded the shallow sheltered bay behind Tallus Island. Goals: restore the wetland complex behind Tallus Island to a pre-1961 condition; provide for adequate seiche affected discharge of the project area by connecting the northeast and southwest sides of the wetland complex with a 5-7 foot channel; provide for increased angler access to the area (boat and shore based); minimize future impacts of sedimentation by installing a sediment trap upstream of the mouth of Knowlton Creek; minimize future impacts of sedimentation by eliminating OHV and other inappropriate recreational activities along Knowlton Creek.

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

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

Project ID: 427

Project Name: PROJECT 2-19, Fish Habitat - Kingsbury Creek

Project Phase: Proposed

Location: Minnesota, St. Louis County, Kingsbury Creek

Abstract: Kingsbury Creek flows down the steep grade of Spirit Mountain and Thompson Hill through the Lake Superior Zoo before emptying into a shallow sheltered bay along the Minnesota side of the St. Louis River estuary. Historically, an undisturbed mix of forest cover protected the steep gradients of Kingsbury Creek riparian corridor. Habitat degradation within the riparian corridor resulting from unmanaged recreational activity has increased sediment loads to the creek and the estuary. Loss of riparian habitat and unmanaged recreational activity has increased sediment loads to Kingsbury Creek and the St. Louis River estuary. Goals: reduce sediment loads to Kingsbury Creek and the St. Louis River estuary by eliminating OHV use along the creek; restore in-stream and riparian areas along Kingsbury Creek damaged by OHVs; minimize impacts of zoo waste on the creek and estuary.

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

Project ID: 425

Project Name: PROJECT 2-20, Fish Habitat – Fond du Lac dam spawning habitat improvement

Project Phase: Proposed

Location: Minnesota, Carlton County, Fond du Lac dam located next to Sturgeon Lake

Abstract: The area below the Fond du Lac Dam is an important spawning area for several fish species present in the St. Louis River estuary and Western Lake Superior (lake sturgeon, walleye, smallmouth bass, longnose sucker, white sucker, and muskellunge). The area from the Minnesota/Wisconsin Border Cable to Fond du Lac Dam is designated as a spawning sanctuary and fishing is prohibited. A large, rock weir (wing dam) was constructed into the St. Louis River channel in 1979. The weir was intended to protect a system of docks and direct walleye into the trapping system for collection of eggs. Due to heavy flow conditions during spawning operations, use of the facility was discontinued in 1990, but the rock weir has remained within the channel. It has been determined that the weir alters characteristics of flow below the dam to the detriment of spawning fish and has also been identified as a fish stranding hazard. As lake sturgeon from the St. Louis River estuary rehabilitation program have neared maturity, maximizing flow and habitat characteristics for spawning was identified as a goal. A derelict, non-native rock wing dam is constricting the flow of the St. Louis River below the Fond du Lac Dam. The wing dam

has also been documented as a fish stranding hazard. Goals: improve spawning habitat for lake sturgeon, walleye, and smallmouth bass below the Fond du Lac Dam; remove the existing wing dam and construct three riffles across the channel; construct a “J-Hook” vane to reduce erosion along first outside bend in the St. Louis River below Fond du Lac Dam.

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

Project ID: 424

Project Name: PROJECT 2-21, Fish Habitat – Lake Sturgeon

Project Phase: Proposed

Location: Minnesota, Carlton County, Lake Sturgeon

Abstract: Lake Sturgeon were extirpated from the St. Louis River by the early to mid-1900s. MnDNR and WiDNR stocked sturgeon from 1983 through 2000. Adults are beginning to return to historical spawning locations below the Fond du Lac Dam. The population will need protection until it is deemed self-sustaining. The Lake Sturgeon is one of the last fish species to re-establish a self-sustaining population in the St. Louis River estuary. Maturing fish and their critical habitats need to be protected and/or enhanced to reach self-sustainability. Goals: re-establish a naturally reproducing lake sturgeon population; protect the population until it is self-sustaining; protect critical habitat; enhance spawning habitat (see Project 2-20); develop a brochure on lake sturgeon rehabilitation in St. Louis River estuary

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: 399

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

Project Phase: Proposed

Location: Wisconsin, Douglas County, located about 3 miles upstream from the mouth of the St. Louis River, being one of the largest sheltered bays encountered in the lower portion of the river.

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: 420

Project Name: PROJECT 2-11, Sheltered Bays/Shallow Wetlands – Radio Tower Bay (Cedar Yard Bay)

Project Phase: Proposed

Location: Minnesota, St. Louis County, Radio Tower Bay, just upstream from the Oliver Bridge

Abstract: Radio Tower Bay is a shallow sheltered bay located on the Minnesota side of the estuary just upstream from the Oliver Bridge. The bay is a 65-acre wetland complex with 35 acres of open water. An AM radio station is located on the upland north of the bay. A copper wire grid is located underwater in the bay to aid in radio signal transmission. Historically, several sawmill operations were located in the area and slab wood and chip wood deposition has resulted from these operations. Deposition of non-native material (slab wood) from historical logging operations has reduced the biological and recreational functions of the bay. Goals: accurately assess the current composition of the sediments in Radio Tower Bay; investigate the current status of the copper wire grid; remove non-native material from the sediments in the bay; restore a bathymetry of approximately 5-7 feet with clean, native sediments; establish an interpretive trail for observation of wetland flora and fauna; maintain current use within the bay (radio transmission tower); increase use by recreational boaters and anglers.

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

Project ID: *****INCOMPLETE; CHECK TO SEE IF SAME AS ID#420*****

Project Name: Radio Tower Bay/Cedar Yard Bay (Restoration of shallow sheltered bay)

Project Phase: Proposed

Location: Minnesota, St. Louis County, just upstream of the Oliver Bridge

Abstract: Deposition of non-native material (slab wood) from historical logging operations has reduced the biological and recreational functions of the bay. Radio Tower Bay is a shallow sheltered bay located on the Minnesota side of the estuary just upstream from the Oliver Bridge. The bay is a 65-acre wetland complex with 35 acres of open water. An AM radio station is located on the upland north of the bay. A copper wire grid is located underwater in the bay to aid in radio signal transmission. Historically, several sawmill operations were located in the area and slab wood and chip wood deposition has resulted from these operations. Restoration within the project area would address three "Beneficial Use Impairments" associated with the St. Louis River Estuary Area of Concern. Impairments include: #2 Degraded fish and wildlife populations; #4 Degradation of Benthos; #9 Loss of fish and wildlife habitat. Goals: remove non-native material from the sediments in the bay; restore a bathymetry of 5-7 feet with clean, native sediments; establish an interpretive trail for observation of wetland flora and fauna; maintain current use within bay (radio transmission tower); increase use by recreational boaters and anglers.

Contact: john.lindgren@dnr.state.mn.us (submitter)

Project ID: *****INCOMPLETE*****

Project Name: PROJECT 2-12, Sheltered Bays/Shallow Wetlands – Perch Lake

Project Phase: Proposed

Location: Minnesota, St. Louis County (?), Perch Lake

Abstract: Perch Lake is a 25-acre wetland complex adjacent to the channel on the Minnesota side of the St. Louis River estuary between Rask and North Bays. The wetland complex was probably first referred to as a lake after it was isolated from the estuary by Evergreen Memorial Highway (Minnesota Highway 23) causeway, which cuts across its connection to the estuary. A small culvert was placed to facilitate flow between the two portions of the estuary. It is presumed that the biological functions of Perch Lake are impaired by disconnection with the estuary. This disconnection also impairs boat-based recreational activity between the estuary and Perch Lake. The Highway 23 causeway, which cuts across the mouth of Perch Lake, is currently reducing seiche affect recharge and is reducing its biological functions. Goals: revitalize the biological connection between Perch Lake and the St. Louis River estuary; increase recreational opportunity by providing a pathway for boaters between Perch Lake and the estuary.

Contact: Michael.Poe@pca.state.mn.us (submitter)

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. These invasions have reduced biodiversity with 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 would reduce invasiveness of *P. Australis* and restore 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