SHIAWASSEE NATIONAL WILDLIFE REFUGE
Saginaw, Michigan

ANNUAL NARRATIVE
Fiscal Year 2002

Photo by Tom Gasser

Refuge Manager  Date

Refuge Supervisor I  Date

Regional Chief, NWRS  Date
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INTRODUCTION

Shiawassee National Wildlife Refuge (NWR) is located in the central portion of Michigan's Lower Peninsula, near the south end of Saginaw Bay. The north boundary of the refuge adjoins the south boundary of the City of Saginaw. The refuge is in the fourth and fifth U.S. Congressional Districts of Michigan. The Michigan Islands NWR and the Detroit River International Wildlife Refuge (IWR) are also administered by Shiawassee NWR.

The establishment of Shiawassee NWR was authorized in March, 1953, by the Migratory Bird Conservation Commission under the Migratory Bird Conservation Act (16 U.S.C. 715-715s) "...as an inviolate sanctuary, or for any other management purpose, for migratory birds." As a result of local and regional conservationists' initiatives, the state of Michigan established the Shiawassee River State Game Area adjacent to the refuge. Together, these two areas encompass approximately 20,000 acres of some of the most valuable wetland habitat in the State. The refuge is 9,427 acres in size, which includes 413 acres of refuge-managed land leased from the City of Saginaw and Bridgeport Township under long-term agreements. The acreage is down from 9,706 acres following a land exchange with the Michigan DNR.

Shiawassee NWR, a portion of an area known locally as the Shiawassee Flats, has a contributing drainage area of approximately 6,060 square miles (10.6 percent of the state of Michigan). Four rivers converge in the Shiawassee NWR and account for the majority of the contributing drainage area. These rivers, along with their drainage area at the nearest U.S. Geological Survey gauge, are as follows: the Tittabawassee, with a 2,400 square-mile drainage at gauge on river mile 23; the Flint, with a 1,200 square mile drainage at gauge on river mile 12; the Cass with an 850 square-mile drainage at gauge on river mile 17; and the Shiawassee, with a 640 square mile drainage at gauge on river mile 14. In addition to the four main tributaries, several smaller streams enter the Shiawassee River within or just upstream of the Refuge. The largest of these are the Bad River, draining 248 square miles; Misteguay Creek, draining 137 square miles; and Swan Creek, draining 176 square miles. At the northeastern edge of the Shiawassee NWR, at the confluence of the Tittabawassee and Shiawassee Rivers, the Saginaw River proper begins. The Saginaw River, 22 miles long, flows northerly from this point through the cities of Saginaw and Bay City to discharge into Saginaw Bay, which opens to Lake Huron.

Topography on the Shiawassee NWR is flat and generally ranges from 580 to 590 feet Mean Sea Level (M.S.L.). Flooding of the refuge area occurs often, due to the Saginaw River's inability to carry the full load of runoff from the various tributary rivers. Flooding may be compounded by ice blockage of the various river channels during late-winter breakup. Water level elevations in the Saginaw Bay also have a heavy influence on flooding events in this area. Saginaw Bay water levels are influenced by winds, which may change water level elevations by four feet or more. The average water level in Saginaw Bay is 579.5 feet M.S.L.; however, deviations above and below that level are the rule rather than the exception. Although water level fluctuations from these "wind tides" are not as high in magnitude on the refuge as on the Bay, daily changes of one or two feet are quite common.
The combination of high Bay water levels and high river discharges occurring concurrently poses the greatest threat to flooding.

As recognized during its initial establishment, Shiawassee NWR provides a valuable stopover for waterfowl migrating through the Saginaw Valley. In the fall, peaks of 35,000 ducks utilize the refuge, including up to 4,000 black ducks. The significance of this last figure is such that the refuge is included within one of six focus areas designated by the lower Great Lakes/St. Lawrence Basin Joint Venture of the North American Waterfowl Management Plan. The area also remains an important migration site for the Southern James Bay Population of Canada geese, with current spring/fall peaks of 25,000/23,000, respectively. Due to its habitat diversity, the entire refuge serves as endangered and threatened species habitat for a number of federal and state-listed wildlife species.

The Shiawassee NWR Private Lands Wetland Management District (PLWMD), established in 1988, covers 45 counties in central and southern Michigan. It includes 115 easements (158 landowners) totaling 4,780 acres, located in 34 different counties. The District also manages a 22-county area for private land wetland and native grassland restoration projects.

In September 1993, Shiawassee NWR entered into a partnership with the City of Saginaw to manage Green Point Nature Center, a city-owned, environmental education facility. Renamed by the Service as Green Point Environmental Learning Center (ELC), the Center is located on the Tittabawassee River, which flows through the refuge.

Currently, nine permanent employees, one SCEP employee and one STEP employee staff the Shiawassee NWR. The positions include a refuge manager, two refuge operations specialists, a wildlife biologist, an administrative technician, one tractor operator, one engineering equipment operator, a biological sciences technician, two park rangers, and a student trainee.

Photo by Mike Miller
HIGHLIGHTS

- A number of newly observed bird and insect species recorded (Section 1a).
- Second phase of Spaulding Drain Dike rehabilitation completed (Section 2a).
- Lower Detroit River experiences largest oil spill in 12 years (Section 6c).
- Land acquisition program very active in FY-02 (Section 6g).
- Refuge interpretive and outreach programs provide information to the public in a variety of ways (Section 7).
- Finally – permanent comfort facilities on the nature trails (Section 8b)!
- Detroit River International Wildlife Refuge established on December 21, 2001 (Wilderness and Special Areas).

CLIMATE DATA

Shiawassee National Wildlife Refuge experienced above average precipitation through the spring and summer before dry conditions prevailed through the fall months. Higher than average temperatures during the summer, combined with adequate precipitation provided ideal conditions for plant development. This resulted in vigorous plant growth in the grassland and wetland areas, along with above average mast crops. Even though the wet spring delayed crop planting, the warm summer and frequent rains provided excellent growing conditions and above average yields. The very dry fall pattern seemed to be tailored to assuring timely harvest of these crops. Although the area has recovered from the drought experienced in 1998 and 1999, the lakes and rivers are still well below their average depths. Rivers remained too low to permit even mechanical water manipulations in some areas. This required the refuge to hold more water in its wetlands through the spring than the last few years. However, when drawdowns were carried out later in the year, there was little or no opportunity to place water back on these units. The forest tracts were generally dry and for the third straight year received little or no impact from river flooding and resultant silt deposition.
1

MONITORING AND STUDIES

1A. SURVEYS AND CENSUSES

A total of 147 migratory bird surveys were conducted on Shiawassee NWR in 2002. Of these surveys, 82 were conducted by refuge staff. The other 65 surveys were conducted by volunteer birders Bob Grese (63 surveys), Carolyn Szaroletta (36 surveys) and Larry Abraham (6 surveys), usually working in groups of two or three. These volunteer birders greatly supplement our bird data, especially on songbirds, water birds and raptors, having surveyed birds on the refuge nearly every week in 2002. With help from other local Audubon Society members, the volunteers also ran a mist-netting operation (Monitoring Avian Production and Survivorship survey) on the refuge to census summer birds. We are very much indebted to them for their faithful efforts. Refuge staff also conducted specific surveys for birds of the forest interior, bald eagles, woodcock and marsh birds. The woodcock survey route, which is off the refuge, has not produced woodcock for two consecutive years, and is therefore considered an inactive route and will no longer be resurveyed each year.

Supplemental wildlife survey data are also gathered through informal observation. The insight provided benefits long term species population monitoring, produces effective management planning, and aids in the development of new initiatives, as well as the important ongoing “as needed” decisions made throughout the year. This year marked the 15th consecutive year of Shiawassee NWR’s contribution of weekly shorebird population numbers to the International Shorebird Surveys. A celebration of sorts occurred with the visit of a curlew sandpiper among a flock of dunlins on May 30. This was the first official record for the entire Saginaw Bay Area. Other birds recorded on the refuge this year for the first time were a little gull and a little blue heron. Unusual or rare bird species encountered on the refuge in FY-2002 included Ross’ Goose, greater white-fronted goose, Wilson’s phalarope, peregrine falcon, golden eagle, and Carolina wren. These sightings illustrate that Shiawassee NWR is an extremely important international migratory stopover as well as an important breeding ground for many birds.

Red-winged blackbirds arrived on the refuge February 20. Canada goose numbers peaked at 25,483 on March 11, and at 13,151 during the first week of October. Duck numbers peaked at 5,302 on March 11, however a peak of 702 green winged teal was reached in early April, and 113 buffleheads were present in mid-April. Fall duck numbers peaked at 10,501 the week of October 8. Tundra swans were present in the 300-400 range from late January through mid March, and reached a fall peak of 443 on October 29.
Following a brief three year period when early spring water was scarce, optimum breeding conditions were once again present in 2002 as breeding frog and toad populations awakened. Amongst them were several wood frog populations that we can best assume simply waited out the dry spell, and were once again calling at their traditional breeding ponds along the ten-site Michigan Frog and Toad Survey route. Proper breeding conditions remained throughout spring, and at the opposite end of the season, green frogs were recorded in the highest numbers yet for the seven-year-old program. The most surprising result was the rapid colonization by western chorus frogs. First appearing last year as individuals at three of the sites, the species was present at all but one site in 2002 and in full chorus numbers at two of the sites. Though we are uncertain as to the how and when of it all, this is an excellent illustration of the dispersal ability of this diminutive frog.

Knowledge of the refuge’s invertebrate life continues to grow. Not only did refuge wetlands provide for birds and frogs, but 2002 also saw above normal populations of many dragonfly species, including the common green darner, blue dasher, and calico pendant. Two previously unrecorded species were noted. The first was a small population of ten unicorn clubtails, located in the main ditches of the adjoining Moist Soil Units 3 and 4. Prior to last year’s replacement of inoperative water control structures and cleaning of heavily silted-in supply ditches, the water these dragonflies were now using to breed in would have been marginal, if indeed present at all. The other new species encountered was the band winged meadowhawk. Just a few meadowhawks were present, perched on grass stems atop the main dike.

The refuge’s first official record for the tawny emperor butterfly occurred in July. The refuge lies near the historical northern range limit of these species. These insects feed exclusively on hackberry tree leaves. Other hackberry specialists occur here as well, including the hackberry emperor and the American snout butterfly, the former is present on a consistent, annual basis. Inspired by their presence, an initiative to enhance habitat for these species was undertaken. It was decided that the next scheduled refuge forest management plan will include provisions to prohibit the cutting of hackberry trees within managed cutting
programs. The tree will also be given priority status in any reforestation efforts that take place in sites preferred by this species. Development of signs interpreting this insect/plant relationship is also planned.

1B. STUDIES AND INVESTIGATIONS

In June, two East Lansing Ecological Services Field Office staff spent two days on the refuge working with refuge staff, volunteers, and the Youth Conservation Corps crew sampling three small wetland sites for northern leopard frogs. The sampling was done to aid in research of the causes of frog deformities across the United States. The leopard frogs captured were limited to those which had recently transformed from the tadpole stage. A total of 106 frogs were captured during several days of effort. All captured frogs were examined and measured, and those with any deformities were euthanized, the deformities described in detail, and bodies packaged for further study. The deformities included missing limbs, digits, abnormal eyes, and limbs oriented at unusual angles. The actual cause of the deformities will be determined through x-rays and other examinations at the National Wildlife Health Lab in Madison, Wisconsin.

A graduate student, Jennifer Kirts, from Central Michigan University, has been studying habitat use and population distribution of short-eared owls in Michigan. She has included Shiawassee NWR as one of her study sites, and made 11 trips to the refuge in 2002 where at least one and as many as four individual owls were observed. The study will continue in 2003.
2

HABITAT RESTORATION

2A. WETLAND RESTORATION

ON-REFUGE

A total of 657 acres of emergent and forested wetland habitat were restored and enhanced on the refuge, utilizing refuge maintenance staff and construction contracts.

Rehabilitation of an existing dike along the east boundary of Pool 5, along the Spaulding Drain was contracted out to Hovey Construction, Rosebush, Michigan. Construction activities included the removal of trees, reshaping and sloping of 1700 feet of dike, the placement of rock riprap and the installation of a water control structure and emergency spillway. The Moist Soil Unit 1 (MSU-1) rehab project (137 acres), resulted in the plowing, disking and planting of the unit to crops to control tree and weed species regeneration. This unit will be placed back into wetland production following the 2003 cropping year. The existing ditch along the northern edge of MSU-1 (mainline dike) was dug out (1000 feet) and the toe of this dike was rebuilt and sloped force account.

Table 2-1. On-Refuge Wetland Restorations.

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<tr>
<th>Unit</th>
<th>Acres</th>
<th>Activity</th>
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<tbody>
<tr>
<td>Pool 5-Spaulding Dike</td>
<td>520</td>
<td>Completed phase II (1700 feet) of Spaulding dike reconstruction along east side of Pool 5.</td>
</tr>
<tr>
<td>Phase II</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MSU 1</td>
<td>137</td>
<td>Rehab MSU 1, plowed, disked and planted unit to corn for next 2 years. Resloped MSU-1 and south side of main dike along ditch (1000 ft).</td>
</tr>
<tr>
<td>Totals</td>
<td>657 acres</td>
<td>2700 feet of dike and ditch rehabilitated.</td>
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OFF-REFUGE

The Shiawassee National Wildlife Refuge administers a 22 county Private Lands Wetland Management District (PLWMD) located in central Michigan. In FY2002, Shiawassee NWR restored 175.75 acres (70 basins) of wetlands in 14 counties in the Saginaw Bay Watershed. These restorations were accomplished under the Service's Partners for Fish and Wildlife Program in partnership with Ducks Unlimited Inc.-Great Lakes/Atlantic
Region, the Timberlands Resource Conservation and Development Council, and the Huron, Lapeer-St. Clair, and Mason-Lake Conservation Districts.

2B. UPLAND RESTORATION

The Partners for Fish and Wildlife (PFW) program restored 116 acres of native prairie grassland habitat on 8 properties in 8 different counties adjacent to existing or restored PFW wetland projects. These restorations will provide nesting cover for waterfowl and other songbirds.

2C. DEEPWATER/RIVERINE RESTORATION

The Shiawassee NWR, PFW program was able to complete several riparian and instream fish habitat restoration projects in the 22 counties of the Shiawassee PLWMD. In partnership with the Saginaw Bay Resource, Conservation and Development Council, and the Gladwin Conservation District, a total of 12 projects totaling 1,950 linear feet of stream habitat were completed along 5.0 miles of river reach on the Rifle River and Cedar Creek Watersheds. The Rifle River and Cedar Creek are sub-watersheds of the larger 22-county Saginaw Bay Watershed that includes Shiawassee NWR.
HABITAT MANAGEMENT

3A. WATER LEVEL MANAGEMENT

The ability to manage refuge wetlands is tied directly to the level of the Saginaw River System and Saginaw Bay, part of Lake Huron. Over the last 12 months the lake levels remained at depths well below average, which had implications for management of refuge wetlands. Water levels have remained low enough to develop extensive mudflats over a large portion of the Shiawassee River. Slightly higher portions of the flats were extensively invaded by emergent wetland plants. These combined factors altered the types of species using this habitat area.

The results of management on the various pools, marshes and moist soils are summarized in the following two sections.

POOL 1A

This 315 acre open water unit operates chiefly as a loafing area for waterfowl. The unit also supports year round habitat for a variety of marsh birds and occasional seasonal habitat for shorebirds. With the conversion of 241 acres in the Trinklein Tract, this pool acts as one portion of a complex used by the birds. The refuge operated the unit as an emergent marsh/open water area during the spring flights. Heavier precipitation levels and improved ground water conditions enabled the refuge to hold standing water over the entire pool during the breeding season. With more water on the unit at the beginning of the year, evaporation through the summer did not result in mudflats as found in early fall, 2001. The unit again provided large amounts of moist soil seed production used by wildlife, and provided exceptional breeding habitat with near record numbers of water birds produced.

GREFFE POOL

This 190 acre unit operates in a similar fashion to Pool 1A. The objective for this pool is also the same. Encroachment of woody species along scattered islands and dikes has developed a unique habitat for some of the wading birds such as herons and bitterns. The trees have reached a height that offers nesting potential for night herons. This pool is the second portion of the complex used by a wide variety of birds. Grefe Pool started the year following the same water pattern as reported above, with the unit holding water over its entire area through the spring. Waterfowl and wading birds took advantage of these wet conditions. As summer approached, the unit was slowly drained to provide mudflat conditions for shorebirds in late summer. Plans also called for dike renovation along the east side of the unit to be carried out through the fall and winter. These lower water levels provided needed habitat for early migrants, drying conditions for the dike repair, and the ability to quickly draw down the entire unit when construction commenced. The unit went into “ice up” 95% dry with over 80% of the construction project completed. This will offer
some opportunity for shallow water conditions during the spring flight which should provide ideal circumstances for some ducks and shorebirds.

POOL 2
This 115 acre pool has just recently become a manageable wetland once again. For years structural failure of the north dike allowed the unit to revert to a homogeneous stand of cattails. Repairs carried out from 1994 through 1997 permitted the refuge to place water on the pool year round and encourage muskrats to help move the unit back toward a hemi-marsh condition. However, in 1998 and 99 the pool took a step back with the drought and drawdowns leaving 95% of the pool dry for most of the year. This allowed the unit to slip back towards a homogeneous stand of cattails with few if any muskrats present. This was the second year the pool carried standing water over its entire area from spring runoff through the end of the year. This has allowed muskrats to recolonize the area with around 100 lodges, with signs of open water developing in the homogenous cattail stands.

POOLS 3 AND 5
These two units are 820 acres in size and are managed as a greentree reservoir. The continued low lake and river levels permitted the units to be used as greentrees only during the spring migration. Water depths from early flooding reached approximately 1/3 of the wooded areas. Birds responded well to these areas. Low river levels prevented the refuge from gravity feeding water into the pools for the fall flights. This, along with evaporation during the summer, left the units with only scattered standing pools.

POOL 4
Land exchange negotiations with the State of Michigan for this isolated 440 acre tract were finally completed in 2002, with title transfers now in the Refuge office. The State of Michigan will be renovating the dikes around this pool during the coming year through a Ducks Unlimited grant. A local sportsman’s group again provided some minor dike reinforcement and paid to pump additional water into the unit for fall waterfowl hunting.
NORTH MARSH

North Marsh is a 113 acre wetland providing a stable emergent marsh habitat used by waterfowl, marsh and shorebirds plus a variety of other wildlife. Continuing low river and lake levels gradually moved this wetland unit from a mosaic of wet and dry area to an area entirely dry except for the extreme north central portion of marsh. This resulted in a lush growth of moist soil plants. However, the continued dry conditions resulted in low bird use through the late summer and early fall until water was pumped back onto the area with excellent fall response by migrating birds.

Over the last couple years renovations to this wetland complex has allowed the unit to operate in a more natural state. The typical spring season results in flooding of this entire complex. As the water recedes it leaves a mosaic pattern of shallow open water, emergent marsh, and wetland grasses. This draining is gradual, allowing successful fish spawning, egg development and fingerling movement and growth. This also benefits spring migratory waterfowl, waterbirds and shorebirds. If rains raise river levels anytime during the year water can move into or out of the unit in a more natural state with free passage of adult and juvenile fish. If rains do not raise river levels, the unit goes through a natural drying process through the year to mudflat conditions over most of the open water areas. At this time fish move to the deeper channels and pool areas. Screw gates in MSU 3 and 4 allow the refuge to add water to the complex for the fall flights if needed.

TRINKLEIN 1N, 1C, AND 1S

These three wetlands total 241 acres and complete the complex mentioned in the first two sections. They comprise a mosaic pattern of semi-permanent marsh, moist soil units and grassy nesting cover. This area was used extensively by wildlife as a feeding, loafing and brooding area. At the beginning of the year the units were wet, offering excellent waterfowl use during the spring flight. In late spring, boards were removed from the water control structures to provide more of an interchange between the wet and dry areas for shorebirds. Gradually, through the summer the units dried out leaving little opportunity for birds during the fall flights. Some use was noted in the ditches, borrow pits, and mowed areas. The heavy moist soil plant development that occurred will offer excellent habitat for birds moving through the area on their spring flights.

3B. MOIST SOIL MANAGEMENT

The refuge currently has five units designated as moist soil in various states of operation. By the end of the year the refuge had made improvements to MSU 1 water control structures and feeder ditches. The following summarizes activities and results for the year.

MOIST SOIL UNIT 1

This 137 acre wetland is usually operated for optimum feeding potential for waterfowl during the spring and fall flights. The unit also provides mudflats for shorebirds after the waterfowl migration. In 2002 water was retained only for the very beginning of the spring flights with a two week drawdown providing mudflats by mid April.
Towards the end of the month, the ditches and water control structures were being renovated and the unit was completely dried out to prepare it for farming for the next two years. Low lake and river levels have limited water manipulations and intensified invasive plant problems. Over the last two years the unit could not be flooded in the fall because of changes in the flow of the Flint River and low river levels. With conditions well below optimum for moist soil plant management, water control structure repair needs, and the problems mentioned above, the refuge felt the best recourse was to move the unit to a farming operation for two years. This will allow time for lake and river levels to recover (increasing moist soil management capabilities), bring water control structures up to peak performance and move invasive plant problems back to more manageable levels. Problems could still be severe after 2003 if lake and river levels have not recovered. Corn will be the only crop planted in this unit over the two year period to maximize wildlife use and allow the most latitude in eliminating invasive plant problems. The MSU finished the year with a good crop of standing corm on the refuge share, to be utilized as hot food during the spring migration.

**MOIST SOIL UNIT 2**

This unit is operated and managed with the same intent as MSU 1, and it experienced the same water regime through the year. Migrating birds were able to make good use of the unit during the spring. This field has now been sub-divided into two separate water controlled moist soil units (MSU 2E and 2W). This allows us to time the drawdowns separately, thereby optimizing use by puddle ducks and shorebirds, and allows the refuge to stimulate desired moist soil plants. MSU 2E was targeted for renovation in 2002, but this was delayed when good numbers of Galerucella beetles were observed in the unit and plans followed to farm MSU 1. As in the past couple of years, the low river levels offered little opportunity for water manipulations to alter vegetative response. Under these conditions the units have moved from moist soil plant dominated fields to tracts dominated by wetland grasses and some moist soil plants. The refuge was not able to add water to the units in the fall and little bird use occurred.

**MOIST SOIL UNIT 3**

This 92 acre unit is part of the larger North Marsh complex and is intended to operate in a natural fashion dictated by area weather patterns and water cycles as much as possible. The field is positioned on the southwest quarter of this wetland area and bears the highest elevations of any portion of the complex. The unit is dominated by an interesting historic wet prairie plant community. This is composed primarily of cordgrass with a moist soil plant understory. During low water cycles the unit is covered by standing water only in the spring and gradually dries out through late spring and early summer, offering habitat for waterfowl and shorebirds during the migration with little fall use. High water cycles provide excellent waterfowl and shorebird use during spring periods, while periodic standing water other times of the year offers ideal conditions for waterfowl and marsh birds. As a result, the management objective of providing feeding and loafing habitat for migratory birds varies with unpredictable weather and water patterns. The hydrology of the unit and complex also benefits fish as this natural cycle offers ideal spawning conditions for adult fish, and plenty
of cover for juvenile fish along with easier movement patterns in and out of the marsh complex.

**MOIST SOIL UNIT 4**

This 82 acre unit operates under the same cycles and is part of the same complex mentioned earlier. This unit, as with all of the moist soil units, suffered from low river and lake levels which left the field dry for most of the year. Some spring use was reported in the northern part of the unit where puddles and mudflats offered some habitat use. In addition, water was added to the complex during the fall flights and offered some habitat for birds in the northern 1/4 of the field. The unit has separated into three minor habitat types; with an emergent marsh in the northern section, woody shrubs and brush dominating the central section, and the southern portion comprised of grasses and wetland vegetation. Future goals are to operate this land unit as the one true moist soil unit in this North Marsh Complex dedicated to production of moist soil foods. To do this a dike must be constructed on the north and east sides.

**KAUFMAN TRACT**

This 51 acre wetland is managed as a moist soil unit. Low water levels this past year offered ideal spring use by wetland bird species, with no summer or fall use of any kind. About the only use this unit experienced this year after the spring flights was by raptors and some grassland species. This tract has water management problems associated with adjacent land owners. Historically, the landowners near this wetland drained their fields through the Kaufman Tract, with the previous owners consent. Now that the refuge is operating the area as a moist soil unit, the adjacent landowners have had to find alternate means for moving water from their fields and are very conscious of any flooding we do. They want to make sure any depth we hold does not create problems for them through flooding or leaching water. To accommodate the landowners the unit was allowed to drain in late spring to a depth which left standing water only on the lower 1/3 of the tract. Evaporation resulted in the unit finishing the year totally dry with standing water available only in the lowest portion of the ditches.

**3C. GRAZE/MOW/HAY**

The refuge has about 580 acres of grasslands in several scattered parcels. Most of the tracts are naturally maintaining themselves in meadow-like conditions while the remainder is slowly converting to brushlands. None of the grasslands are being managed for grazing or haying. The objectives for management of the refuge grassland units are to provide habitat for migrating grassland bird species, nesting opportunity for resident species, and a ready food source for raptor populations during the year. Two small grassland tracts (near the Curtis Road parking lot and observation platform) seeded in 1998 showed signs of increased development in the big bluestem community. Growth of forbs seeded with the grass also displayed limited progress. The refuge has mowed the fields several times early in the growing season to set back cool season plants. However, it will take a few more years before we can tell how robust these grassland communities will be. Management of some of this grassland acreage calls for prescribed burning, and with tracts such as the Trinklein
Conversion and the cordgrass community, more burning activity will be planned. Bird numbers have responded well to recent conversions and improvement in habitat conditions, with very large flights of migrating grassland birds, increased nesting, and increased wintering populations of hawks and owls.

3D. FARMING

The refuge manages 1,180 acres as cropland under a soybean/corn/small grain rotation. The primary objective for the program is to provide food for waterfowl during the spring and fall flights, support a greater complexity of habitats within the refuge, and support the managed goose hunt. The 2002 growing season was good for the cooperators. A wet spring delayed planting and it appeared this would significantly affect yields. However, warmer than normal temperatures, along with well timed rains, provided ideal growing and maturing conditions, and crop yields were high. By fall, the dry conditions that prevailed during the summer months allowed the farmers to harvest crops with no delays or problems. Waterfowl made good use of these units during migration periods, as well as during summer and winter seasons, for feeding and loafing. Significant changes in location and acreage of the cropland units are expected in 2003 with conversion of some tracts to natural wetlands and the addition of other crop areas through the land exchange with the State of Michigan.

3E. FOREST MANAGEMENT

The 4,225 acres of forested habitat at Shiawassee NWR includes two tracts that operate as a greentree reservoir. The acreage is almost exclusively bottomland hardwoods made up of second growth even age stands. Regeneration of the selective and clear cuts carried out on the late 80's has shown steady improvement. Seedlings such as green ash and cottonwood have shown significant growth. Other tree species such as oak, hickory and
maple appear to be improving, but a significant portion of the year’s growth was browsed by deer. Seedlings planted along Evon Road and at Greenpoint ELC in 1997 have suffered very high mortality, now totaling near 90%, as a result of improper planting techniques, periods of severe drought or flooding, wildlife browsing, and illegal mowing. Tree planting in these lowland areas appear to be a marginal proposition. Glossy buckthorn is invading the edges of several wooded tracts. Efforts to set back this development will be a high priority in 2003. The forest management goal is to develop a two tier canopy forest, favoring mast and cavity producing trees without jeopardizing populations of forest interior birds.

3F. FIRE MANAGEMENT

In 2002, even though the area experienced an early warm up, prescribed burns were not carried out because of new policies and procedures, a limited number of approved plans, personnel scheduling problems and weather patterns which infrequently fit prescription parameters. No wildfires were experienced this year. The new fire management master plan was approved and signed by the Regional Office Fire Coordinator. Refuge personnel contributed to the national fire fighting effort, assisting with fires in Wyoming, South Dakota, Colorado, and Arizona.

3G. PEST PLANT CONTROL

A good deal of effort was given to combating shrubs and small trees that were invading dike slopes, undesirable herbaceous species in wetland areas, and invasive trees along forest edges. Nearly 11 miles of roads and dikes were treated using foliar applications of glyphosate (Roundup or Rodeo) or triclopyr (Garlon 4), or cutting small trees and shrubs off near ground level and painting the fresh stumps with glyphosate. Numerous non-native grasses and weeds, such as bird’s foot trefoil, negatively affect the ability to maintain gravel (crushed stone) road surfaces when they colonize the less traveled road center and edges. This “sod” causes considerable difficulty for grading operations. This year, the edges and/or center of the entire main dike and Ferguson Bayou nature trail roads were sprayed with glyphosate in order to set back this encroachment, prior to the application of a new layer of aggregate. In addition, over 100 acres of wetland areas were treated with Roundup, Garlon 4 or 2,4-D to reduce invasion by cottonwoods, willows, reed canary grass, purple loosestrife, phragmites and other invasive plants. Total herbicide use this year was 108 ounces of triclopyr, 608 ounces of glyphosate, and 12 ounces of 2,4-D.

Mowing continues to be used in the interim for areas where chemical control has yet to be applied. Over 112 acres of open grassy areas were mowed to set back colonization of willows, cottonwoods and purple loosestrife. The tops and sides of most of the refuge hiking trails and several dike roads were also mowed to maintain grassy cover and reduce woody species.
4

FISH AND WILDLIFE MANAGEMENT

4A. BIRD BANDING

The refuge operated three banding programs this year. These included the waterfowl banding program, the MAPS (Monitoring Avian Production and Survivorship) survey banding site, and the refuge provided assistance to the Michigan DNR with resident goose population banding.

During the fall, refuge staff captured and banded 22 black ducks. The refuge also assisted DNR personnel with banding over 100 mallards and approximately 100 local Canada geese in the Shiawassee Flats Area. The MAPS banding location is the only grassland banding site in the national MAPS survey, and is located in the Trinklein Conversion 1S tract. Volunteers operating the banding site were able to capture and band 46 birds, including red-wing blackbirds, sedge wrens, common yellowthroats, yellow warblers, American goldfinches, tree swallows, swamp sparrows, savannah sparrows, bobolinks, robins, song sparrows, common grackles, yellow-shafted flickers, and barn swallows.

4B. DISEASE MONITORING AND TREATMENT

Since the establishment of the refuge in 1953 the area has been secure from diseases or outbreaks, with conditions rarely offering opportunities for such situations. However, since low lake levels experienced in 1998 to the present there have been periodic optimum conditions for the potential outbreak of botulism. The wetlands were characterized by shallow water, high ambient temperatures, low oxygen content and rotting carcasses of fish. Refuge staff watched diligently for problems to occur, but recorded no incidents, though outbreaks were reported in other areas such as in Saginaw Bay. Other outbreaks reported in Michigan such as bovine tuberculosis in deer and the West Nile Virus found in birds and humans have not occurred on the refuge. The refuge is watching closely for any signs of these outbreaks in the wildlife populations.

4C. REINTRODUCTIONS

Nothing to Report
4D. Nest Structures

The refuge provides nest boxes for both wood ducks and bluebirds. The wood duck boxes are managed by Gary Van Kirk, and the bluebird box program is managed by Lidia Godina, both refuge volunteers. Wood duck boxes have been placed at 36 locations on the refuge, most of them double apartment boxes. A total of 51 nesting spaces were available for wood ducks during the 2002 nesting season. Of these, 42 apartments were used by wood ducks, two (2) were used by both wood ducks and hooded mergansers, and another four (4) were used only by mergansers. Four boxes were also used by owls after wood ducks used them. Of the 558 wood duck eggs laid, 195 (34.9%) hatched, and only two of those died in the nest. Eight of 65 merganser eggs hatched (12%). Part of the reason for low hatch rates appears to be the tendency of the ducks to make “dump” nests, where a dozen or more eggs are laid in a nest box and then abandoned by the adults. There were 12 such dump nests found in boxes in the 2002 nesting season. This may be due to the nests being in close proximity to each other. For this reason the double apartment nest boxes are gradually being replaced with single boxes. Refuge staff plan to determine whether sufficient natural nest cavities are being used at locations before installing new wood duck nest boxes.

A total of 20 nest boxes have been placed on the refuge for bluebird use. Eighteen of the boxes were used, but only eight boxes successfully fledged birds due to predation from raccoons, snakes, and house wrens. The 2002 results showed nesting use from 14 tree swallows, 11 house wrens, 2 eastern bluebirds, a great-crested flycatcher, and a black-capped chickadee. A total of 28 house wrens, 8 tree swallows, and 5 eastern bluebirds were fledged.

4E. Predator and Exotic Control

Nothing to Report
5
COORDINATION ACTIVITIES

5A. INTERAGENCY COORDINATION

Throughout the year, refuge staff participated in the Saginaw Bay Watershed Initiative Network (WIN). This group is made up of federal, state, and local governments and organizations that are located in or associated with the Saginaw Bay Watershed and interested in the environmental improvement of the watershed. Refuge staff participate in the Agricultural, Land Use, Wildlife Stewardship, and Water Resources Task Groups. The Dow Foundation and The Conservation Fund are the lead funding organizations involved in WIN.

Each year Shiawassee NWR coordinates both the goose and deer hunting programs with the Michigan DNR and the Shiawassee Flats Advisory Council. Regularly scheduled meetings hosted by the Advisory Council are held the second Monday evening of each month at the DNR field office in St. Charles, to discuss management issues on the state and federal areas. With goose and deer populations viewed as one management unit within and surrounding the state and federal areas, the Michigan DNR has designated this area as Deer Management Unit 173 and the Saginaw County Goose Management Unit.

This station participates in the Midwest Natural Resources Group (MNRG) for the Saginaw Valley Watershed and the Lake St. Clair/Detroit River focus areas. The MNRG consists of the 14 federal agencies that deal with natural resources within the Midwest. This group has identified these two focus areas as areas of concern. Refuge staff have provided habitat and wildlife management guidance within both focus areas.

Refuge staff participated throughout the year in many meetings regarding the Detroit River International Wildlife Refuge. These meetings involved the Canadian government, U.S. federal agencies, the State of Michigan, several county governments, and many municipalities. Non-government organizations have included the Trust for Public Lands, The Nature Conservancy, the Friends of the Detroit River, and many other such groups. These meetings have identified refuge projects and goals that federal, state, and local agencies, as well as private organizations could collaborate on through combined funding or in-kind services.

5B. TRIBAL COORDINATION

Nothing to Report
5C. PRIVATE LANDS ACTIVITIES

The Shiawassee NWR-PLWMD is responsible for a 47 county area located in southern Michigan. Currently, the PLWMD administers 115 conservation easements in 34 counties, totaling 4,779.79 acres. In addition there are 2 conservation easements (totaling 214 acres) that were transferred in fee title to County Soil and Water Conservation Districts to be managed as outdoor education areas, which the Service monitors. One new conservation easement in Osceola County (Puska-12c-45.3 acres) was added in FY 2002.

Shiawassee NWR has three staff members who are responsible for the management of 89 easements. In addition, the Michigan Private Lands Office (MIPLO) in E. Lansing inspects 22 easements and Ottawa NWR reviews 4 easements in Jackson County, Michigan. Easement review assistance was provided to Shiawassee NWR by the MIPLO, and Ottawa NWR. Ottawa NWR inspected 4 easements, checked easement boundaries and habitat conditions and sent information letters to all landowners involved.

In FY 2001, all easements were inspected, files and databases were updated and problem easements were addressed. FY 2002 was more typical. Easement inspections were reduced to an “as requested” procedure due to staff workload changes. Service personnel reviewed a total of 31 conservation easements out of a total of 115.

Resale of easements and property (easements) division continues to occur. Of the 115 easements managed by this office, we identified 158 landowners with ownership in some portion of a conservation easement. This easement division will continue to occur and result in more staff time and effort each year, just to maintain the basic easement management requirements.

Six special use permits were issued to conservation easement landowners. Permits were issued to excavate a small fishpond for recreational use, for tree cutting, for grassland maintenance, to establish a food plot, and to burn the grassland portion of an easement.

TECHNICAL ASSISTANCE PROGRAMS

A total of 130 private land sites in 22 counties received technical assistance from the refuge concerning potential wetland development, fishpond development, game species management, and other wildlife habitat program and management information.

SwampBuster actions are non-existent with the Natural Resource Conservation Service (NRCS). Three Debts for Nature or debt write down requests from farmers to protect non-farmland with 30 or 50 year easements occurred this past year. These are the only farm program activities with the U.S. Department of Agriculture that still mandate Service involvement.

WETLAND RESERVE PROGRAM (WRP)

The Shiawassee NWR-PLMMD assisted the NRCS, Saginaw Bay Wetland Reserve Program (WRP) teams in determining wetland eligibility and ranking requirements for two
sites signed up for the 2002 Wetland Reserve Program across southern Michigan. The WRP team consists of an NRCS soil scientist, engineer and district conservationist, and a Service or State biologist.
6

RESOURCE PROTECTION

6A. LAW ENFORCEMENT

There were two commissioned refuge officers on the staff in FY-2002. Six violation notices and seven warnings were issued during the year, mostly for hunting regulation and refuge trespass violations. In June, refuge officer Spencer served as a security manager on the Mission Ridge Fire in Durango, Colorado. In late August, refuge officer De Vries assisted Saginaw County and state law enforcement personnel in a search for an elderly Alzheimer’s victim who had wandered from his home. The search was conducted both on and off refuge lands with no success. The body of the missing person was found by deer hunters two months later, in a thicket across the river from the refuge. The area was an old, overgrown former factory site which had been posted as a contaminated area by the Michigan Department of Environmental Quality. Consequently, due to liability concerns only a limited search had been made of that property in August.

In April, both officers completed law enforcement refresher training at Region 5’s session at the National Conservation Training Center. Semi-annual weapons requalification was completed in September.

6B. PERMITS AND ECONOMIC USE MANAGEMENT

A total of 27 special use permits were issued this year for activities which included archaeological research, wildlife research, trapping, and wildlife photography within closed areas.

6C. CONTAMINANT INVESTIGATION

Level I surveys were conducted in three locations within the identified boundaries of the Detroit River International Wildlife Refuge. These contaminant surveys were carried out on Calf Island, Humbug Marsh and the Brancheau Tract. Humbug Marsh was elevated to a level II survey to be conducted by the East Lansing Field Office and the Brancheau Tract procured a clean bill of health and advanced to the RO Realty section to process an offer of purchase.

In October, 2001, the state of Michigan released reports detailing dioxin contamination in soil along the Tittabawassee River, including the Green Point ELC and surrounding environs. Soil in this area was found to have dioxin levels 80 times higher than the state’s standards for safe human contact. The soil samples had initially been collected in 2000 by the Michigan Department of Environmental Quality (DEQ) as part of a wetland
mitigation project. Due to public health concerns, additional samples were taken in 2001 and 2002 and a second report was generated. A series of public meetings ensued following the report’s release to the media, including a meeting with local residents hosted by Lieutenant Governor Granholm at the Green Point ELC. Residents of the affected areas have been advised to avoid unprotected contact with the soils in those areas, and area boat landings were posted with public health risk advisory signs by the DEQ. Cleanup plans/responsibilities hadn’t been drafted and dioxin sources hadn’t been legally or formally identified by years end, although discharges from Dow Chemical in Midland are considered the likely source.

On April 12, refuge staff responded to an oil spill in the lower Detroit River, part of the Detroit River International Wildlife Refuge. Up to 5,000 gallons of industrial-grade waste oil was released into the Rouge River and subsequently the Detroit River and Lake Erie during the period of April 9-10. In the late evening of April 12 or early morning of April 13, a second, much larger spill into the Rouge occurred after a heavy rainfall, probably due to sewer outfalls. This spill was confined to the Rouge because booms had already been placed from the earlier spill, and most of it was removed by vacuum.

A total of 27 miles of river shoreline were involved, and over 90 personnel from 7 U.S. agencies and Canada responded. More than 60,000 gallons of oil were spilled, and 50,000 gallons were recovered. A total of 10 birds and 2 turtles directly affected by the spill were found dead. The spill cleanup involved the use of a high volume deluge system on the shoreline, vacuums, and heavy equipment to remove soiled debris. By May 8, cleanup from the largest Detroit River spill since 1990 was declared complete, at an estimated cost of $3.7 million.

The oil spill investigation involved the US Coast Guard, the Environmental Protection Agency (EPA), and the Michigan DEQ. In June, federal agents from the FBI, Coast Guard, US Customs, and EPA executed a search warrant at Comprehensive Environmental Solutions, an oil reclamation facility in Dearborn. Computers and documents were seized during the search. Civil penalties are capped at $27,500 per violation per day under U.S. law if the spill was deliberate, and in addition, responsible parties are required to pay the entire cost of the cleanup. The case is currently being investigated by a Grand Jury, with results projected to be received by mid-2003.

6D. CONTAMINANT CLEANUP

Nothing to Report

6E. WATER RIGHTS MANAGEMENT

Nothing to Report
6F. CULTURAL RESOURCE MANAGEMENT

The lower Saginaw Valley has been a central place for human habitation in the Saginaw Bay area for the past 6,000 years. As such, significant cultural resources are present on the refuge and recent research continues to document the richness of this area from the standpoint of historic resources.

Due to low river levels and the potential for loss of archeological information as sites are exposed through erosion, an Archaeological Resources Protection Act permit (2002-MI/3-2) was issued by the Region 3 Regional Director to the Historical Society of Saginaw County to monitor and collect surface artifacts from exposed sites, and document additional sites.

Since 1998, Jeffrey D. Sommer of the Saginaw Archaeological Commission has documented 19 sites within the refuge boundaries, 7 of which hadn’t been previously recorded. Artifacts salvaged from the refuge date from 1000 BC through the mid-late 19th century. As many as 164,168 artifacts have been retrieved thus far, and are being identified, labeled, and catalogued. The survey continued through the end of FY-2002, and will likely continue in 2003. All cultural items collected, as well as information and field notes are stored and secured at the Saginaw Archeological Commission repository.

6G. LAND ACQUISITION SUPPORT

Throughout the year both the Michigan DNR and the Service continued the process of transferring the Service’s Pool 4 area to the state, with the DNR purchasing approved lands based on the Shiawassee NWR expansion plan. Agency agreement on property descriptions, a reversionary clause in a quit claim deed, and approval of deed transfers was reached this year, and the exchange was completed in June. In exchange for 468.10 acres of refuge wetland in the Pool 4 area, the state of Michigan transferred 189.01 acres of land plus an equalization payment of $53,000.00 to the Service. The land received by the refuge is mostly agricultural land adjacent to the present east boundary of the refuge. The transferred Pool 4-area land is located on the western boundary of the refuge, adjoining the DNR state game area boundary. Due to management/access concerns this exchange was deemed necessary and advantageous for both parties.

In December, U.S. Congressman John Dingell (MI-15) announced the acceptance of a $1,000,000 North American Waterfowl Conservation Act grant for southeast Michigan, to be administered by Ducks Unlimited, Inc. A portion of the grant funds were used to purchase Calf Island in the lower Detroit River. The 11 acre island was acquired by The Nature Conservancy and then donated to the Service on September 26, 2002, as an addition to the Detroit River International Wildlife Refuge (DRIWR).

Humbug Marsh/Island is one of the last remaining tracts of land along the American side of the Detroit River that hasn’t been developed. The 400 acre tract provides valuable
wildlife and habitat values to the river system. A private developer purchased the tract for $4 million and may be willing to sell the entire tract for $7 million. The Trust for Public Lands is negotiating the purchase of this wetland for the Service, and Congressman Dingell has garnered $3.5 million from Congress for that purpose.

Meetings were held throughout the year regarding the DRIWR acquisition of the Daimler-Chrysler Paint Plant in Trenton. This former paint facility has been vacant since the 1980's and Daimler-Chrysler has spent $14 million cleaning up the land. It is located in an area with excellent access by road, 900 feet of Detroit River waterfront, and is adjacent to Humbug Marsh. The 44 acre tract would serve as an excellent site for an environmental education/interpretive facility, and for nature trails, native prairie plantings, fishing facilities and observation decks.

The Service’s concern with the Daimler-Chrysler tract is the liability due to contaminants in some of the soils, and has requested that the contaminant cap on the tract be increased to at least 3 feet in depth to avoid disturbance to the soils. Wayne County Metro Parks has applied for a grant from the National Oceanographic and Aeronautical Administration (NOAA) to obtain funds to purchase the site. The total cost for the site will be $2.55 million with $1 million coming from the NOAA grant and the remainder considered as a donation from Daimler-Chrysler. Wayne County will try to get a bond for the site to build interpretive facilities. By years end, Wayne County had requested that the Service complete a MOU or a lease for the site, and discuss how each agency would restore and manage the land. The county will also haul in fill to serve as a contaminant cap for the soil. The Service will assist in management of the non-contaminated areas of the Daimler-Chrysler Tract, and will partner with Wayne County to maintain a visitor center and office space.

Refuge staff have also been involved in land assessments farther south on the Detroit River. The Brancheau Estate in Monroe is a 150 acre tract which lies adjacent to Lake Erie and Swan Creek. The site is presently diked and pumped to provide farming. If added to the Detroit River IWR, it has the potential to be converted into a moist soil unit to attract waterfowl and shorebirds. There are two buildings on the site, a dock for boats, and good road access.

Also in Monroe, the Fermi II nuclear plant has approximately 550 acres of upland and wetlands that Detroit Edison would like to see the Service manage under a MOU. They would like the Service to assist in wildlife surveys, prescribed burns, and boundary posting of the site with “National Wildlife Refuge” signs, possibly assist them in constructing a dike to restore a wetland along Swan Creek, protect a bald eagle nest there as well as other threatened and endangered species, and assist them in enforcing wildlife laws.

The U.S. Environmental Protection Agency (USEPA) has ownership of a former Nike missile site on Grosse Ile. This tract includes wetlands, uplands, grasslands and bottomlands along the Detroit River shoreline, and is currently used for environmental education by local schools.
The site is still being remediated for contaminants by the US Army Corps of Engineers. Once the site is declared clean, it may be transferred from the USEPA to the Service. The USEPA has also offered office space for future Detroit River IWR staff.
7
PUBLIC EDUCATION AND RECREATION

7A. PROVIDE VISITOR SERVICES

The refuge began "Counting Down to the Centennial" in FY-2002. A number of special events were held throughout the year in preparation for the Centennial year in 2003. A special "NWR System 99th Birthday Party" was held at Green Point ELC on March 14. The Friends of Shiawassee NWR helped sponsor Joe Rogers and his birds of prey program. Ninety-one people attended the event due in part to special media coverage by the Saginaw News, TV-12 and WSGW 790 AM. The first ever Refuge Amateur Photo Contest was held and 22 photos were entered into the contest. Other special events held included "Bats of Americas" program in October; Refuge Clean-up Day in April; International Migratory Bird Day Celebration in May, featuring an auto tour and workshops; "Breakfast of Champions" sponsored by Saginaw County Convention and Visitors' Bureau in June; Summer Discovery Camp for preschoolers in June; Fishing Clinic for Kids in July; and the annual Refuge Open House in September. All of these programs promoted the approaching Centennial. Altogether, the refuge had 59,514 visits, up from 57,054 visits in FY 2001.

Park Ranger Michelle Vander Haar helps students look for aquatic insects during a pond study program at Green Point ELC. Photo by Becky Goche.

During the year, 3,686 people visited the refuge for environmental education. Counts showed that 1,814 of these students were taught on-site and 1,732 students were taught off-site, at their schools. Refuge staff provided teacher workshops for the staff and volunteers of Chippewa Nature Center, the volunteers of Forest Hills Nature Center, and local schools. They reached 79 educators.
The first ever Jr. Refuge Manager Academy was offered at Green Point ELC in July. Eight children, in 3rd and 4th grades, participated in the Academy on every Tuesday in July. The children learned about bird identification, local habitats, endangered species and how to track and identify animals. They made plaster tracks, constructed and colored a “moving wetland,” and played an endangered species form of the game “Lucky Ducky” among other activities. On the last day, a graduation ceremony was held and the students and their families were treated to a personal tour of the refuge. After the tour, “Puddles” greeted the families and gave them all pencils and posed for pictures. The Friends of Shiawassee NWR helped sponsor the Academy and presented a nature journal to each of the graduating students. The refuge presented the students with a folder containing a “Jr. Refuge Manager” badge, tattoos, and other handouts.
The refuge offered goose hunting, deer hunting and trapping. The software program that was written to help with the priority deer hunt did not work. Many hours of staff time were spent entering last year’s deer hunter information and information from those applying for the current hunting season. Staff used Microsoft Access to build the hunter data base and once again did the drawing by hand, with assistance from the filters available on Access. Unfortunately, this way of doing the drawing was not without flaws and more time was spent reviewing those selected. Hopefully new software that actually works can be written in time for the hunting season in FY-2003. A summary of deer hunting is in Table 1 and a summary of goose hunting and trapping is in Table 2.

Table 1: Summary of Deer Hunting for FY 2002.

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<th>Hunters</th>
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<td>834</td>
<td>6642</td>
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<tr>
<td>December</td>
<td>526</td>
<td>1366</td>
<td>10553</td>
</tr>
<tr>
<td>Total</td>
<td>765</td>
<td>2200</td>
<td>17195</td>
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Table 2: Summary of Goose Hunting and Trapping for FY 2002.

<table>
<thead>
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<th></th>
<th>Visits</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goose Hunting</td>
<td>771</td>
<td>4219</td>
</tr>
<tr>
<td>Trapping</td>
<td>36</td>
<td>155</td>
</tr>
</tbody>
</table>

In FY2002, 115 volunteers donated 2900.5 hours. Three Eagle Scouts completed projects on the Refuge. Rob Reichle rebuilt the photo blind on the Ferguson Bayou Trail in December and January. He and 10 workers donated 68.5 hours completing the project. In June, Eric MacKinnon and his crew of workers spent 233 hours building a 90’ long, accessible boardwalk to this photo blind. In July, Eric Kubica and his crew woodchipped a trail at Green Point ELC and put up tree identification signs. They spent 33 hours working on this project.
Eagle Scout Eric MacKinnon tries out the boardwalk. Visitors can now walk year round to the photo blind to view the waterfowl using the area. The boardwalk is also handicapped accessible. Photo by Mrs. MacKinnon.

A group of Scouts work on the trails at Green Point ELC, as part of an Eagle Scout project by Eric Kubica. Photo by Becky Goche.

7B. OUTREACH

Eight stations from the Great Lakes Ecosystem hosted a FWS display at Outdoorama in Novi, Michigan February 22 to March 3. Outdoorama is the largest outdoor event of its kind in the state of Michigan and is sponsored by the Michigan United Conservation Clubs (MUCC). Twenty-seven staff and four volunteers staffed the FWS display over the 10 days. The display featured live sturgeon and lake trout and the upcoming NWR System Centennial. Puddles greeted and mingled with children throughout the show and handed out Centennial
materials. Children also had an opportunity to decorate their own blue goose to take home or put on display at the show. Thousands of people attended this event and received FWS information from the display. Another bonus was that the Friends of Shiawassee NWR had their booth next to the FWS and were able to provide visitors with information on what they can do to help refuges.

Young visitors to the FWS booth at Outdoorama could decorate a blue goose mobile and add to the flock. Photo by Doug Spencer.

The refuge and many other partners sponsored the Kids’ Free Fishing Day on June 8 for 450 children between the ages of three and fifteen. Each child received a small prize from the refuge when he or she registered. Children had a chance to win a variety of prizes in three different age categories. Prizes included bicycles, rods and reels, tackle boxes and toys. Meijer Stores, Inc. and the Saginaw Field and Stream Club donated nearly 100 prizes. State Representative Carl Williams helped hand out prizes. The Sons of Italy provided free sno-cones, popcorn, cookies and orange drink to the participants. Hotdogs, coffee and donuts were available for a small fee. The Saginaw Children’s Zoo provided a live animal program before the winners were announced. Other sponsors of this event included the City of Saginaw, Midland Division Fishing Club, the Saginaw News, the Saginaw County Sheriff’s Posse, Dick’s Sporting Goods, 7-Eleven Stores, GKC Cinemas and Mobile Medical Response. Forty volunteers helped the day of the event. The estimated “cost” of this program was $7810, of which $3000 was a FWS Challenge Cost Share Grant.

Above photo: A big smile over a big fish for a youngster at Kids’ Free Fishing Day. Photo by Becky Goche.
Kids had a special night all to themselves at “Friday Night Live – Kids’ Night Out” in downtown Saginaw on August 9. “Friday Night Live” is a free 6-week program, featuring different musical entertainment, kids’ activities and food vendors, sponsored by many area businesses and organizations. This year’s Kids’ Night Out featured games, free craft activities/exhibits, educational exhibits, pony rides and food. Park Rangers Becky Goche and Michelle Vander Haar, Administrative Technician Shirley Adams and Volunteer Dale Adams hosted a booth where kids could practice casting a fishing pole on a course that contained hula hoops and Frisbees. If the kids landed their plastic plug inside any of these, they won their choice of a prize including fishing line, frisbees and bubble pens! Several thousand people attended the event and 175 children tried casting, some for the first time. Each child received a Michigan Fishing Fun booklet and a fish tattoo just for trying.

Above photo: Administrative Technician Shirley Adams helps a young boy cast at Kids’ Night Out in downtown Saginaw. Photo by Becky Goche.
PLANNING AND ADMINISTRATION

8A. COMPREHENSIVE MANAGEMENT PLANNING

The final Comprehensive Conservation Plan (CCP) and Environmental Assessment for Shiawassee NWR was approved by the Regional Director on September 19, 2001, and the draft for the Michigan Islands NWR was completed.

The Wyandotte NWR CCP and Environmental Assessment were approved on September 29, 2001; however, with the establishment of the Detroit River International Wildlife Refuge (IWR) two months later, a fourth CCP was initiated.

In February, 2002, Region 3 Planner Gary Muehlenhardt was assigned to assist in the development of the Detroit River IWR CCP. Planning began in April as far as involvement and the scope of the CCP. The E. Lansing Ecological Services Field Office (ELFO) was asked to contribute concerning endangered species and contaminant issues, and the Alpena Fisheries Resource Office was asked to assist with fishery-related issues.

In June, refuge staff, regional staff and Lisa Williams (ELFO), along with the assistance of the Michigan DNR provided two CCP scoping workshops to the public in Wyandotte and Monroe. This workshop was the first phase of acquiring information from the public and agencies for the future of the new refuge. Two more workshops were held in September. Major issues of concern described by the public at these workshops included habitat protection, environmental education, and protection of waterfowl hunting rights.

In September, refuge and DNR staff participated in an Industrial scoping meeting at Lake Erie Metro Park. Representatives from BASF, Detroit Edison, and National Steel attended and requested that a fund account be developed that industry could contribute to, to assist in the cleanup or long term management of contaminated soils found within the boundaries of the refuge. The industry representatives feel that once they remediate a site, the FWS could include these tracts in the refuge. The fund would take care of any future liabilities that may occur and the industrial firm involved would be relieved of their environmental responsibilities for the tract. This meeting was followed by a second public scoping meeting during which more comments were documented.

At years end, further meetings were being planned for public input, to be followed by the compilation of draft sections of the CCP for public comment in 2003.
8B. GENERAL ADMINISTRATION

With the establishment of the Detroit River IWR this year, Refuge Manager Douglas Spencer was officially detailed to Detroit as the Refuge Manager, effective April 21, 2002, while ROS Edward De Vries was authorized as Acting Refuge Manager of Shiawassee NWR, on the same date.

Student Career Experience Program (SCEP) Biological Trainee Aleisha Troendle worked her second summer at the refuge, from June 17 to August 23. She worked with the public use program and was responsible for helping coordinate the Youth Conservation Corps (YCC) program with Park Ranger Becky Goche.

The following is a list of employees who were members of the Shiawassee NWR staff in Fiscal Year 2002:

1. Adams, Shirley L. - Administrative Technician, GS-07, EOD 08/17/97, PFT
2. Dastyck, James J. - Wildlife Biologist, GS-11, EOD 11/04/90, PFT
3. De Vries, Edward P. - Refuge Operations Specialist, GS-12, EOD 02/09/92, PFT
4. Goche, Rebecca S. - Park Ranger, GS-11, EOD 08/22/93, PFT
5. Hazelman, James T. - Refuge Operations Specialist, GS-11, EOD 10/02/94, PFT
6. McAvinchey, Richard J. - Biological Sciences Technician, GS-05, EOD 04/26/98, PPT
7. Nowosatko, Marion L. - Engineering Equipment Operator, WG-09, EOD 06/29/78, PFT
8. Peters, David J. - Tractor Operator, WG-07, EOD 02/01/98, PFT
9. Spencer, Douglas G. - Refuge Manager, GS-13, EOD 09/01/91, PFT
10. Troendle, Aleisha M. - Student Trainee (SCEP), GS-04, EOD 06/03/01, LWOP 08/25/01
11. Vander Haar, Michelle A. - Park Ranger (STEP), GS-05, EOD 01/22/01
Christina Sanders was selected to serve as the Social Services Aid (YCC Crew Leader) through the Student Temporary Employment Program (STEP). YCC enrollees included: Erica Baker, Danielle Brzezinski, Donald Poppe, and Qonte Works. A diverse group of 12 girls and 9 boys from local high schools applied for the four positions. The YCC camp started July 1 and continued through August 23. The crew worked on many refuge projects including removing fence at the Cass River Unit, staining benches and observation decks, mowing refuge lawns, helping with environmental education programs, posting
boundary signs, caring for the butterfly gardens, assisting with frog surveys and picking up litter. All enrollees and the crew leader received training in Cardia Pulmonary Resuscitation. In addition, the group went on field trips to the Charity Islands (part of the Michigan Islands NWR), Kirtland’s Warbler management area, Hartwick Pines State Park and the Detroit Zoo to learn about other natural resources-related careers and to see new areas.

The refuge recognized its volunteers who donated hours from October 1, 2000 to September 30, 2001 at a potluck picnic (featuring wild game entrees) on May 30. Thirty volunteers and refuge staff attended the event held at Green Point ELC. Dale Adams was selected as the 2001 Refuge Volunteer of the Year. He received a Centennial cap and fleece jacket. Thirteen volunteers donated 40 or more hours and received Centennial t-shirts. Volunteers had a chance to win Blue Goose beanies, donated by the Friends of Shiawassee NWR, by answering Centennial-related and other NWR trivia questions. State Representative Jim Howell provided special certificates for each volunteer recognizing his or her efforts in helping the refuge.

Volunteer Program

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FACILITIES AND EQUIPMENT

The refuge took delivery of a JCB 214S Sitemaster Series 3 backhoe loader in early FY 02, replacing a Case 580C. Choice of this particular machine was influenced by its loader capabilities, which greatly reduce the need to rent front-end loaders at times when heavy or large amounts of materials are being hauled.

The refuge’s smallest tractor, a John Deere 4400 4WD compact utility model with a 430 loader and bucket, was delivered early in the year as well. Through subsequent small acquisitions of attachments such as a 74” offset flail mower, a log splitter, a back blade w/scarifier, front forks, and a post hole digger, this machine has proven to be a very versatile and frequently used addition.

Three new tractors were purchased this year for refuge maintenance. Photo by Ed De Vries.

One of the station’s oldest pieces of equipment, an International 2606 tractor, was replaced in July with a John Deere 6320 4WD tractor. The refuge’s two primary equipment hauling trailers were also replaced. A Trail King TKT-40 w/20 ton capacity trailer and a Landoll LT1016 w/5 ton capacity trailer were acquired. These are both exceptionally well built items, providing considerable operational improvements over the trailers they replace, including state-of-the-art brakes and tilt beds.

New digital radios were installed in eight (8) refuge vehicles in February to comply with the Congressional mandate to transition to narrowband frequencies. A 100 foot radio tower was also erected at the shop maintenance facility where the repeater is housed.

A new parking lot was built by the refuge maintenance staff at the Cass River Unit parking lot in Bridgeport. The lot is 11,520 square feet in size and has a gravel surface. It is bordered with a vehicle barrier of treated post and railing, and has a kiosk at one corner. The lot will be used by the public for access to the nature trail and other proposed facilities.
Three public restroom facilities were constructed on the refuge, at two sites on the Ferguson Bayou Nature Trail and at the Woodland Trail access parking lot. The vault restrooms are pre-fab kits purchased from Romtec, Inc., and were constructed via contract. The two single and one double facility are made of smooth-face concrete with a stucco exterior.

![Comfort facilities were constructed at three nature trail sites. Photo by Ed De Vries.](image)

**FUNDING - 2002**

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WILDERNESS AND SPECIAL AREAS ADMINISTERED BY SHIAWASSEE NWR

MICHIGAN ISLANDS NWR

The Michigan Islands National Wildlife Refuge was established by Executive Order in 1943 as a refuge and breeding ground for migratory birds and other wildlife. Shoe (2 acres) and Pismire (3 acres) Islands in Lake Michigan, and Scarecrow Island in Lake Huron, were the first acquired. Thunder Bay Island in Lake Huron was added in 1965, by a U.S. Coast Guard/FWS agreement under a revocable permit with five-year renewal periods, for secondary FWS jurisdiction on 121 of the island's 168 acres. The U.S. Coast Guard ceded Lake Michigan's Gull Island (230 acres) to the FWS in 1969. Gull Island is the westernmost island of the Michigan Islands NWR. In 1970, PL 91-504, Stat. 1104, designated Shoe, Pismire, and Scarecrow Islands as Wilderness Areas. A sixth island was added to the Refuge in 1995, when the Nature Conservancy transferred Hat Island to the Service. Ten acres in size, it is located in Lake Michigan, to the north of Shoe Island. Big and Little Charity Islands (250 acres and 5.4 acres respectively) were added to Michigan Islands NWR in 1999.

Due to the geographic location of the eight islands, the management of Michigan Islands NWR is split between Seney NWR and Shiawassee NWR. Shiawassee NWR administers Thunder Bay and Scarecrow islands, located in northern Lake Huron, and “the Charities” in Saginaw Bay. Gull, Shoe, Pismire, and Hat islands in the Beaver Island group in northern Lake Michigan, are administered by Seney NWR.

Both Scarecrow and Thunder Bay Islands lie within the waters of the newly designated Thunder Bay National Marine Sanctuary and Underwater Preserve. The National Oceanic and Atmospheric Administration gave this designation to the area in 2000. The designation gives federal protection to over 100 well-preserved shipwrecks that litter the bottom of Thunder Bay, located near Alpena, MI. Once part of a major shipping channel, this 448 square-mile sanctuary is the first national marine sanctuary in fresh water, and is located in an area which was known as “Shipwreck Alley” in the 1800's.

Scarecrow Island is a nine-acre, limestone bedrock island covered with boulders and gravel, with a minimal soil layer supporting shrubs, scattered forbs, and a few snags. A June 11 nesting census by refuge staff revealed 1,890 double-crested cormorant nests with 3,485 eggs in various stages of incubation, 350 herring gull nests/486 eggs, 113 ring-billed gull nests/159 eggs, 2 black-crowned night heron nests, 1 great blue heron nest, and a mallard nest.

The U.S. Fish and Wildlife Service manages Thunder Bay Island under a Cooperative Agreement with the Bureau of Land Management. Region 3 Realty is currently working with BLM to acquire the island in fee title. Thunder Bay Island is made up of limestone bedrock, with a substantial layer of soil. This soil supports a dense interior forest of
American yew, white cedar, spruce, fir, and birch. The island shoreline includes cobble beach, a limestone pavement alvar, and freshwater, coastal wetlands. Alvars are naturally open landscapes formed of a thin layer of soil over limestone, and are found only in the Great Lakes region, the Baltic, and in Northern Ireland. Dwarf lake iris *Iris lacustris* (federal-threatened) is also found on the island as well as 180 other plant species. Typically, this island provides nesting for 10,000-12,000 ring-billed gulls as well as over 100 herring gulls. However, since 1998, ground-nesting success has been reduced to zero by the presence of a coyote or other large carnivore. It appears the ring-billed gulls have abandoned Thunder Bay Island for other locations, including Scarecrow Island.

The Thunder Bay Island Preservation Society (TBIPS) is interested in the historic preservation of the Thunder Bay Island Lighthouse (1857), and has been in negotiations with the Service to gain ownership or management of the southern portion of the island, where the lighthouse is located. Their intent is to protect, document, and uncover historic artifacts, but also to restore the lighthouse for visitation within the next five years. Boundaries have been agreed upon and the agreement states that the TBIPS will have ownership of all the buildings except for the boathouse, while the FWS maintains management rights over the wildlife and habitat.

Through a legal settlement with General Motors Corporation under a Natural Resources Damage Assessment, Big and Little Charity Islands were transferred to the Service on December 16, 1999. These islands are both located near the mouth of Saginaw Bay, approximately seven miles from the mainland. Big Charity is 250 acres in size and is heavily wooded, with an 11-acre lake in the center. Bald eagles nest on the island, and Pitcher’s thistle, *Cirsium pitcheri* (federal & state threatened) are found there. There is an old, dilapidated U.S. Coast Guard lighthouse from the 1880's located on the southwest portion of the island. A riprapped harbor of refuge was constructed by the former landowner in 1992, followed by the installation of boat slips and a picnic shelter. The channel entry to this harbor is protected by a breakwall, however the entry area behind the breakwall is becoming more restrictive due to siltation. Hiking paths crisscross the island, while picnic tables, barbecue grills, and benches are located in several locations.

Years of neglect have reduced the 135 years old lighthouse keeper’s quarters to a pile of rubble. Photo by Doug Spencer.
Little Charity Island is an undeveloped 5.4-acre island approximately two miles from Big Charity. The island is wooded and colonial water birds such as cormorants, herons, and gulls nest throughout the island. A nesting survey of the island on May 28 found 2,195 double crested cormorant nests, 1,060 herring gull nests, 86 ring-billed gull nests, 70 great egret nests, 14 great blue heron nests, 3 red-winged blackbird nests, 2 mallard nests, and 1 Canada goose nest. Several other visits were made to the Charity Islands during the summer to post and inspect the islands and to remove a raccoon from Little Charity Island.

The Service goal for the Michigan Islands NWR is to restore and protect endangered and threatened wildlife and plant species, as well as species of concern which use these islands, protect island cultural resources, provide education to the public, and acquire additional Lake Huron islands for further habitat and resource protection.

 DETROIT RIVER INTERNATIONAL WILDLIFE REFUGE

The Detroit River was designated as an American Heritage River in 1998, and forms an International boundary between the U.S. and Canada. As such, the natural resources in this area generate an international interest. In 2001 the river received Canadian Heritage River designation, making it the first international heritage river in North America. The lower Detroit River area from Mud Island south along the American shoreline to Grosse Ile, and wrapping back to the north along the Canadian shoreline is known as the Conservation Crescent. Over 300,000 diving ducks of various species utilize the Detroit River as a migrational stop, and walleye fishing is top-notch. On many days up to 150 or more boats can be seen trolling the lower river for game fish.

In 2000, Congressman John Dingell (MI-15) proposed the establishment of an international wildlife refuge on the lower Detroit River. This led to introduction of the Detroit River International Wildlife Refuge Establishment Act, HR 1230 in Congress on March 27, 2001. The legislation was approved by the Senate and signed by President Bush on December 21, 2001 (P.L. 107-91). This refuge incorporates the former Wyandotte NWR, with boundaries from the Rouge River along 18 miles of the Detroit River shoreline to western Lake Erie, including islands, shoals, and wetlands which will be acquired from willing sellers on both the Canadian and United States portions of the Detroit River. The refuge will conserve, protect, and restore habitat for 29 species of waterfowl, 65 species of
fish, and 300 species of migratory birds. A study area from the Rouge River to Lake St. Clair along the Detroit River was also included in this legislation.

Refuge Manager Doug Spencer was detailed to oversee the planning and management of this new refuge until a permanent staff is established. John Merriman from Environment Canada, Burlington, Ontario, represents the Canadian lands associated with the international wildlife refuge. Although Canada doesn’t have the ability to pass an Act to create an international wildlife refuge on the Canadian side, both governments will work together in the development of management plans. To that end, in September, refuge staff participated in a scoping meeting held in Windsor, Ontario. Many of the Canadian agencies involved in the refuge provided displays and gathered information from the visiting public. The Service provided exhibits for the Detroit River IWR, Coastal Wetlands, and updates on the Comprehensive Conservation Plan.

The Detroit River International Wildlife Refuge (DRIWR) currently totals 405 acres and consists of Grassy Island, Mud Island, Mamajuda Island Shoal, Calf Island and adjacent shallow water areas. Public access is not permitted on the islands, although Mamajuda Island no longer has significant land above the waterline. Mamajuda, in fact, is actually just a small portion of land with a navigational light. Mamajuda Island historically was 29 acres in size, and is named for a native American woman who camped and fished on the island prior to 1807.

Mud Island, located near Ecorse, Michigan, was enlarged from \( \frac{1}{2} \) acre to its present size of 8 acres in the early 1960’s. In 1963, the US Army Corps of Engineers (COE) placed dredged material from the Trenton Channel within a containment dike built around the island. These materials are comprised mostly of soft, sandy clay, gravel, and silt. The island is nearly 100 percent forested with red and silver maple, ash, cottonwood, and willow. The nearby aquatic shoals average two feet in depth and support extensive wild celery beds. Large concentrations of scaup and canvasbacks utilize this area during migrational periods.
Both juvenile and adult lake sturgeon have been captured in these waters, indicating the importance of these waters and associated shoals as spawning and nursery sites.

Historically, Grassy Island was a 4-acre shoal. Today it is a 72-acre island, which is covered to a depth of 12 feet (within the dike) with a total of 1.9 million cubic yards of material containing contaminated sediments from the nearby Rouge River, Trenton Channel, and Lake Erie. All these sediments were placed on the island between 1961 and 1983 when it was utilized by the COE as a confined disposal facility for dredged material. The dike, which surrounds the island, is built up to an elevation of approximately 30-40 feet above the river, and was constructed from material dredged from the nearby shoal.

Calf Island (11 acres) was acquired by The Nature Conservancy through a NAWCA grant and then donated to the Service on September 26, 2002. This island was formerly in private ownership, and had a residence on it until the 1960's. The residence was lost to fire at some point and all that remains today is the foundation. The island is thickly wooded with a small emergent wetland on the north end of it.

In 1995, the Department of the Interior designated Grassy Island as a Hazardous Materials Management (HAZMAT) demonstration site. Soil and water samples collected from the island and shoals during 1997 and 1998 confirmed the presence of polychlorinated biphenyls (PCBs), polyaromatic hydrocarbons (PAHs), copper, mercury, lead and zinc in the island soils. In 2001, $750,000 was appropriated by Congress for remediation of the contaminant issue on Grassy Island. Beginning in February, 2003, there will be a Service contaminants biologist (Contaminants Branch-ELFO) co-located with the EPA at the Grosse Isle office. This individual will explore contaminants issues on Grassy Island and will assist the refuge with related issues.

On May 14, U.S. Representatives John Dingell and Marcy Kaptur (Ohio) introduced HR 4722, a bill to extend the boundaries of the Detroit River International Wildlife Refuge from the City of Monroe to East Sandusky Bay in Ohio. The bill to create the Lake Erie Western Basin Wildlife Refuge was forwarded to the U.S. House Committee on Resources where a hearing regarding the bill was held on July 18. By years end the 107th Congress still hadn’t voted on the bill.
CREDITS

Personnel responsible for narrative sections are as follows:

James D. Dastyck: Climate Data, Sections 3 and 4

Edward P. De Vries: Cover page, Table of Contents, Introduction, Highlights, Sections 5a, 6, 8, Wilderness and Special Areas, Credits, Appendix, Information Packet, editing, layout, narrative coordination, and compilation

Rebecca S. Goche: Section 7, editing, final layout and production

James Hazelman: Sections 2 and 5c

Rick McAvinchey: Sections 1 and 4d

David J. Peters: Sections 1a and 3g
Public Use is restricted to the nature trails.

SHIAWASSEE NATIONAL WILDLIFE REFUGE
DEPARTMENT OF THE INTERIOR
U.S. FISH AND WILDLIFE SERVICE

Refuge Location

LEGEND

- REFUGE BOUNDARY
- DIKE WITH ROAD
- DIKE
- DITCH
- PATROL ROAD
- TRAIL
- ROAD
- SPILLWAY
- TOWER

- HUNTER ACCESS SITE
- MARSH
- WATER
- MOIST SOIL
- GREEN TREE AND FLOOD RESERVOIR
- FARM FIELDS

SHIAWASSEE NATIONAL WILDLIFE REFUGE
6975 MOWER ROAD, RR #1
SAGINAW, MICHIGAN 48601
PHONE: (517-777-5930)

REVISED NOV. 1988
Hunter Monies Made This Area Possible
SHIAWASSEE RIVER STATE GAME AREA SPECIAL USE AND HUNTING RULES

WATERFOWL HUNTING
1. Reservations by mail are required to hunt during the first weekend of goose season and the first weekend of the regular waterfowl season. Contact your local DNR office between August 15 and September 5 for information.
2. On all other dates the check station is open from 4:30 a.m. to 4:00 p.m. to check game and issue hunting permits. Drawings will be held each day at 5:00 a.m. and 11:00 a.m.
3. Parties of 2 to 4 hunters may choose all areas and individuals may choose areas 57-185. Parties of 2 may register one or two absentee members with those hunters’ licenses.
4. Only hunters not participating in the drawing may join an individual or party after the drawing. Registered hunters that passed or forfeited their draw will be considered as having participated in the drawing.
5. Morning permits will be issued until 10:00 a.m. and afternoon permits will be issued until 4:00 p.m.
6. On any day that you have participated in a morning drawing and are issued a hunting permit, you may not participate in the afternoon drawing, but may be issued an unused permit.
7. Parties must hunt at their chosen post or strip, and leave only to retrieve downed game. Permit holders must return their permits to the designated location within two hours after their hunt. All game taken must be reported and/or presented for examination.
8. During the regular waterfowl season, each hunter is limited to 25 shells. During goose-only season, each hunter is limited to 15 shells. It is unlawful to possess or use shot shells loaded with any material other than steel shot; BBB is the largest shot size permitted.
9. Canada goose hunting is permitted during morning and afternoon hunts on weekends, but during weekdays is restricted to morning hours only.
10. A $3 daily or $10 seasonal managed waterfowl area permit is required to hunt waterfowl on the area.

DEER HUNTING
1. Deer hunting is by permit only. From October 1 to the end of waterfowl season, deer hunting is permitted only in areas A1-A11. The entire game area is open from the end of waterfowl season to January 1. For permit information, contact your local DNR office between August 15 and September 5.
2. A $3 daily or $10 seasonal permit is required to hunt deer on the area.
3. Permits must be returned during check station hours and within 24 hours of harvesting deer.

SMALL GAME HUNTING
Small game hunting is permitted in areas A1-A11 only during the waterfowl season. All hunting is by permit only. (Special permits will be issued for raccoon hunting during evening hours.) No small game hunting until the opening of waterfowl season. The area is closed to small game hunting November 15-30 and during the muzzleloader season.

TRAPPING
Trapping of furbearers is by permit only. Information may be obtained by contacting St. Charles Field Office, 225 East Spruce, St. Charles, Michigan 48655, (517-865-6211).

SPECIAL USE RULES
These activities are prohibited:
1. Hunting or shooting from any dike, road, or trail, safety zone, buffer zone or retriever zone.
2. Constructing a shooting pit or permanent blind. Portable blinds permitted, but must be removed at end of each hunt.
3. Using an amphibious or all-terrain vehicle or other motor-driven vehicle while in the game area. Outboard motors are permitted, but they must be operated at a safe, no-wake speed.
4. Parking outside of designated parking areas. (See map for parking lot locations.)
5. Trapping, except under written permit.
6. Camping during April 1, December 31.
7. Taking cans or glass bottles into game area.

BE A SAFE HUNTER — A safe hunter obeys laws governing hunting and boating and is alert to any conditions hazardous to personal safety of the hunters and others.

EQUAL RIGHTS FOR NATURAL RESOURCE USERS
The Department of Natural Resources provides equal opportunities for employment and for access to Michigan’s natural resources. Both State and federal laws prohibit discrimination on the basis of race, color, national origin, religion, disability, age, marital status or sex under the Civil Rights Acts of 1964 as amended, MI PA 453 and MI PA 220, Title V of the Rehabilitation Act of 1973 as Amended, and Americans with Disabilities Act. If you believe that you have been discriminated against in any program, activity, or facility, or if you desire additional information, please write the Office of Human Resources, U.S. Fish and Wildlife Service, Washington, D.C. 20240, or the Michigan Department of Civil Rights, State of Michigan, Plaza Building, 1200 8th Avenue, Detroit, MI 48226.
For information or assistance on this publication, contact Michigan Department of Natural Resources, Wildlife Division, P.O. Box 30028, Lansing, MI 48909.
Shiawassee National Wildlife Refuge
2002 Deer Hunt Information
(Federal Hunts Only)

Pre-Registered Drawings
Applicants apply by submitting cards to the Shiawassee National Wildlife Refuge. There is no fee to apply. Cards must be postmarked by September 10, 2002.

Instructions for Pre-Registered Hunt Applications
1. Applicants may apply, once and may choose only ONE (1) hunt. Hunt choice code #’s are listed on back.

2. Hunters must mail a card (at least 3" x 5", but not larger than 4" x 6", not a piece of paper) to Shiawassee NWR Deer Hunt, 6975 Mower Rd., Saginaw, MI 48601 with the following complete information printed or typed on one side of the card:
   - Name
   - Address
   - Phone Number
   - Driver Licence # or Sportcard #
   - Hunt Choice Code #

   CARDS POSTMARKED AFTER THE DEADLINE OR FILLED OUT INCORRECTLY WILL NOT BE ENTERED INTO THE DRAWING. No priority points will be awarded.

3. Hunters may apply with one (1) partner in which case each will receive a permit or neither will receive a permit. Partners must apply for the same hunt choice code #. Each hunter must fill out a card and then mail both cards in one envelope. Youth applying for hunts must have one (1) supervising adult listed as their partner. HELPER PERMITS ARE PROHIBITED.

4. Hunters who are successful for antlerless permits will be notified with instructions on how to purchase a Deer Management Unit 173 Public Lands Antlerless Deer license using the Retail Licensing system.

5. Only successful applicants will be notified. They will be notified by October 15, 2002, or you can check our website at: http://midwest.fws.gov/shiawassee (click on “Hunting”) to see if you were drawn.

6. Permits cost $10. Permits must be claimed by November 1, 2002 or an additional late fee of $10 will be charged.

Priority Deer Drawing System Guidelines
- The 2001 year was the first year for the priority drawing system from which all priority points were developed.
- All applicants who apply for an either sex hunt, but are not selected, will receive one (1) priority point towards a higher preference each year he/she is unsuccessful in the drawing.
- All applicants who apply for an antlerless only hunt will receive two (2) priority points towards a higher preference for an either sex permit and one (1) priority point towards a higher preference for an antlerless only hunt.
- When an applicant is drawn for a permit, the points that he/she has accumulated to that point will return to zero for that type of permit. Any points for the other type of permit will remain.
- If an applicant is selected and fails to pick up his/her permit, all points accumulated up to that point for both types of permits will be lost. In addition, the applicant will receive a negative total of two (2) points for both types of permits.
- There is no penalty for the hunter who cannot make it into the field.
- Only two (2) people can apply together as partners.
- Law enforcement data banks will be tied to the program to automatically delete those applicants who are still serving probation periods.
- Probation periods assigned to refuge violations will be served consecutively.

*You can also apply for a State hunt. Contact the DNR Field Office in St. Charles, MI at 989/865-6211.*
**Shiawassee National Wildlife Refuge**

**Pre-Registered Hunts**

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<td>Dec. 13 - Dec. 14</td>
<td>Muzzleloader</td>
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<td>70</td>
<td>336</td>
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<td>211</td>
<td>Dec. 13 - Dec. 14</td>
<td>Muzzleloader</td>
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<td>25</td>
<td>63</td>
<td>Antlerless Only</td>
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<td>Dec. 17 - Dec. 18</td>
<td>Muzzleloader</td>
<td>2</td>
<td>25</td>
<td>208</td>
<td>Either sex</td>
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* N-A shotgun hunts are Non-Ambulatory hunts (You must be confined to a wheelchair).

**All hunters harvesting a deer must use a valid license to tag the deer.**

**Hunt Areas:** (For a map, visit our website)
- **Area 1** - The entire Refuge
- **Area 2** - Area bordered by the northern boundary of the Refuge, south to the Shiawassee and Cass Rivers, plus Green Point Island
- **Area 3** - Entire Refuge except for the area north of the Shiawassee and Cass Rivers, and Green Point Island
- **Area 4** - Green Point Island and the entire Refuge except trails by Stroebel Road bounded by Bullhead Creek, Shiawassee and Tittabawassee Rivers

**Youth Shotgun:** Contact www.MYHEC.org for more information on how to register by August 12, 2002.

**Scouting Dates:** September 7 and 8, 2002, daylight hours only, during our Open House Weekend.

Shiawassee National Wildlife Refuge
6975 Mower Road
Saginaw, MI 48601
Phone: 989/777-5930
V/TTY Users: 800/649-3777 (Michigan State Relay System)

Website: http://midwest.fws.gov/shiawassee

Available in alternative formats upon request.

Equal opportunity to participate in, and benefit from programs and activities of the U.S. Fish and Wildlife Service is available to all individuals regardless of physical or mental disability. For information please contact the U.S. Department of Interior, Office for Equal Opportunity, 1849 C Street N.W., Washington, D.C. 20240
Witnessing the collapse of the World Trade Center's twin towers on September 11 via television, the last place in the world I wanted to be at that moment was in New York City. I was glad to be out on a national wildlife refuge, a place of sanctuary and retreat for wildlife and people, far from the terrorism of suicide attackers, and far from "big city" targets. Like many of you, in the following days I wanted to respond in some way to this disaster, and a little over two weeks later Doug Spencer and I were given just such an opportunity. We were assigned to a security detail through a cooperative agreement the refuge has with the US Forest Service Huron-Manistee National Forest.

We made ourselves available in the same way we have for wildfire assignments in the past. Our job was to provide law enforcement support to FEMA (Federal Emergency Management Agency) operations in lower Manhattan as part of the Forest Service's Southwest Area Incident Management Team. So we packed up the Expedition and drove out to New York on the afternoon of September 29. The next morning, as we approached Manhattan from the New Jersey side of the Hudson River, I saw to the south, in the darkness of early morning, the surreal spectacle of smoking rubble bathed in the blue glow of generator lights. That was my first view of Ground Zero, the former site of the WTC twin towers and associated buildings. This was reality. Here we are in New York City. And yes, I was pinching myself in disbelief that I was in the area which two weeks previously was virtually a mountain of smoke and fire.

Approximately 2,000 federal employees were working with FEMA at this time. Our assignment was to provide security at the Jacob Javits Convention Center (FEMA Command Post) and at the nearby warehouse which stockpiled supplies, materials, and donated items for use in recovery efforts at Ground Zero. The Convention Center is in lower Manhattan, just a few miles from Ground Zero, and served as quarters for Urban Search and Rescue Teams from Nebraska, California, Nevada, and Colorado, among other places. Our team of eight officers (including 6 Forest Service officers) was divided into two teams of four, working around the clock in 14-hour shifts. There was a strong police presence throughout lower Manhattan, and near Ground Zero there were National Guard troops as well, checking identification at every blockaded corner within the vicinity of the WTC. To get to the actual site required wearing a FEMA identification badge, and there were checkpoints all around the area to keep out unauthorized people. I was told as many as 7,000 people were working on the site, including not only rescue workers but also electricians, plumbers, engineers, truckers, and heavy equipment operators.

See New York City on page 3...
Conservation Easements Are Little Wildlife Refuges

by Rick McAvinchey, Refuge Wildlife Technician

Most of you know about the National Refuge System with over 92 million acres on over 530 refuges that the US Fish and Wildlife Service administers. Did you know that we also are charged with administering hundreds of conservation easements across the country, small parcels of private lands that have some significant wetland or other important wildlife habitat? Conservation easements are permanent restrictions attached to these lands, and can only be removed by an act of Congress. Most of these easements were established in the 1980's when the landowners lost the land due to loan default or non-payment of taxes. If the loans were through the US Department of Agriculture, the Farmer's Home Administration (FmHA) became temporary owners of these farms. While in FmHA ownership the lands were examined for any valuable wetlands or other wildlife habitats. People from the Soil Conservation Service (now the Natural Resources Conservation Service - NRCS) walked the lands to verify the value of any such habitat, and permanent conservation easements were placed on the most important portions of the land. At this point the lands were offered for sale, and the US Fish and Wildlife Service became administrators of the easement.

Sometimes the lands were purchased from FmHA by the same family that had lost it to the USDA. Some of these folks were not happy with the government for adding easement restrictions to the land. More often the lands were purchased by new owners, many of whom are quite happy to have the conservation easement restrictions because they want to do what they can to improve and protect wildlife habitats. The lands can be sold or subdivided, but the conservation easements remain, some with multiple owners.

At Shiawassee NWR we are responsible for administering 114 conservation easements across the southern half of Michigan’s lower peninsula. These total 4,750 acres, with the smallest being 0.62 acre. Three of us on the staff, Jim Hazelman, Ed DeVries and I are dividing up the administration of all these easements, with some help from folks at the USFWS Private Lands office in East Lansing, and the Ottawa NWR in northern Ohio. Our task this calendar year has been to at least visit each of the easements assigned to us, talk with the landowners if possible, and check to see if the corners are marked with conservation easement signs, if the habitat is healthy and if the covenants are being followed. We will make follow-up visits this fall and winter to some easements that have missing signposts or other irregularities.

In all, the conservation easement program has a dual purpose: to protect valuable wildlife habitats from development or farming; and to promote good land stewardship practices among the owners of these little refuges. We hope that most of these landowners develop a positive opinion of the US Fish and Wildlife Service as well, and of the work that we do.

Winter Bird Feeding Tips

by Becky Goche, Park Ranger

Have you got your backyard bird feeder out and filled? If you don't, it's not too late! Bird feeders provide needed food for birds and hours of enjoyment for you.

Different birds prefer different types of seeds, but the seeds that attract the greatest number of species are black-oil sunflower. These seeds are nutritious and high in fat, and their small size and thin shells make them easy for small birds to handle and crack. You can also attract insect-eating birds such as chickadees, woodpeckers, and nuthatches to your yard by offering peanut butter or suet. You may want to tempt robins, thrushes, bluebirds, and waxwings to your feeder by offering dried fruits such as raisins or currants soaked in water or sliced fresh fruit, like an apple.

Birds need a dependable supply of fresh, clean, unfrozen water, too. You can set out a shallow pan of warm water a few times during the day. Or better yet, place a heater in your bird bath or small pond.

Place your feeder close to natural shelters such as trees or shrubs. Make sure its easy to see so you can watch the birds. Keep your feeders clean by scrubbing them with soap and water and dipping them in a 1:9 bleach solution. Rinse well! Rake up the bird seed hulls from under your feeders. If you set out a new feeder, it may take a while for the birds to find it. Scatter some seed on the ground to make it more visible to them. And then just sit back and enjoy the sights and sounds of birds feasting at your feeder!
New York City Continued

In the days following 9/11, the fourth grade class at Waylee Elementary in Portage, MI put together an 86-page booklet of art and notes to send to New York. My sister-in-law is one of their teachers, and when she found out I was going to NYC she made sure I brought the book with me. On October 1, I delivered this booklet to the firefighters at Ladder 10 Engine 10, literally a stones throw away from the twisted metal and smoking rubble of the south tower. Station 1010 lost 5 men who responded to the call on 9/11. I talked to firefighters at other stations who lost more. The booklet joined other tributes, flowers, and memorials outside the station door. Ground Zero covers a 16-acre area, and the rubble is currently a graveyard for over 3,000 people. It’s treated as a crime scene but it’s also regarded almost like holy ground by those who visit and work at the site. It looks like a huge demolition site but it certainly doesn’t feel like one. There were many sobering sights in the area. In one place I saw souvenirs from the former WTC gift shop strewn about, in another place I saw a lady’s shoe wedged in a steel beam. Articles and bits of clothing were evident everywhere. I watched a New York National Guard bomb squad explore the caverns and crevices of the pile 27 feet down, using a robotic, tracked vehicle. A monitor screen revealed what the vehicle was encountering. Surrounding Ground Zero, damage to nearby buildings is extensive, with facades blackened, windows missing, and structural damage suffered from debris which was hurtled into them as the towers collapsed. There was still a lot of instability in the area, with metal dangling from the sides of buildings, and glass and light debris blowing off roof tops.

It will be a long time before the area is restored, but the events of 9/11 and what followed will never be forgotten. People are resilient and those New Yorkers proved it to us. We shared many stories and even a few laughs with fire fighters, police officers, and truck drivers who had witnessed and responded to the tragedy first hand. People passing us in the street would thank us for being there, or wave to us as we drove by. Often times our uniform patches initiated conversations with people in lobbies and elevators. Doug and I are grateful for the opportunity we had to represent the Refuge and the US Fish and Wildlife Service in the FEMA relief efforts in lower Manhattan. It was an eye-opening experience and made this "war" against terrorism seem much more real and close. After all, NYC is really not that far from us, only a day’s drive from the peaceful setting of Shiawassee NWR. It certainly makes one grateful we have a place of refuge and serenity to retreat to, in a Country which enjoys so many freedoms and blessings. I hope that during this season of thanksgiving and sharing you’ll take the time to reflect on these gifts. And remember - there’s no better place for reflection than Shiawassee National Wildlife Refuge. Enjoy it.

December Trail Closures

Hiking trails will be closed to all public use on the following dates, due to deer hunting in the area. The deer hunt helps us maintain the Refuge deer population at a level that is compatible with the Refuge’s purpose of protecting habitat for migratory birds.

Woodland Trail at Stroebel Road
December 14 to 19, 2001

Ferguson Bayou Trail at Curtis Road
December 1 to 5, 2001
December 14 to 24, 2001
December 27 to 31, 2001
Green Point: A Hidden Treasure in the City of Saginaw

by Michelle Vander Haar, Park Ranger

The Shiawassee National Wildlife Refuge. What a beautiful place! Most of you readers know about the Refuge and have shown some type of interest in our activities and probably have done some type of volunteering or attended some of our special events. But, have you heard of Green Point Environmental Learning Center? Green Point is our educational center for the Shiawassee NWR and we offer activities for people of all ages, especially children, throughout the year. Green Point is located inside the City of Saginaw, off of Michigan Avenue, on Maple Street. If you have never been here before you must come see what's in store! We have two freshwater aquariums and a Mediterranean Spur-thighed tortoise from Lebanon which we care for. There are also many mounted birds, a black bear skin, and a wildlife feeding and observation area.

Our main purpose here at Green Point is environmental education. We have many programs available for school children throughout the year. The Center is open to the public free of charge and our programs are also free. If your child has attended a field trip here before you know how much fun he/she had. If your child has not been able to attend a program here at Green Point, please encourage his or her teacher to bring the classroom out for a fun and educational program. We have an Educational Guide showing all of our available programs and it can be mailed to anyone interested in bringing a group to the Center or you can view it on our website.

Believe it or not, there is wildlife in the City of Saginaw and we can provide some interpretation of the wildlife, their habitat and their activities. So many visitors come to Green Point for the first time and say, "I have lived in Saginaw for years and I never knew this place was here!" We would like everyone to know that we are here and have some great programs and activities to offer. Come see us soon and bring a friend!

Shiawassee NWR Sports a New Web Site

by Becky Goche, Park Ranger

Shiawassee NWR has gotten into the information age and now has its own web site for people to browse while surfing the Internet. Hunters who applied for our Refuge deer hunt were among the first people to use the new site.

Each year, literally thousands of people apply for our Refuge deer hunt. This year we had around 800 deer permits available. In past years, the Refuge office has been inundated with calls from people wondering if they were selected or not. We do send out confirmation letters to the hunters who are drawn, but many are eager to make plans and don't want to wait for a letter, that may or may not arrive (depending if they were selected or not). By developing a web site, hunters could determine if they had been selected or not. It saved the hunters time and cut down on the number of hunter phone calls to our office.

Not only does the web site have hunting information, but it also contains historical information and facts, maps, rules and regulations, our bird list, information on our educational and volunteer programs, a calendar of events and more. The site is continually changing and is updated on a regular basis. Be sure to check out our new site at http://midwest.fws.gov/shiawassee. You may want to add it to your "Favorites" list so that Refuge information is just a click away. If you have any comments or suggestions for the site, please e-mail us at fw3shiawassee@fws.gov or contact Becky Goche at 989/759-1669.
Friends Corner: Bats at Green Point

by Michelle Vander Haar, Friends Board of Directors

We have (ok, had) bats at Green Point! The “Bats of the Americas” program was presented by the Organization for Bat Conservation in celebration of National Wildlife Refuge Week in October. It was co-sponsored by the Friends and the Refuge. There was standing room only with a crowd of 89 people! Our next meeting will be January 17 at Garber Buick on State Street in Saginaw. We have yet to schedule a program so if you are interested in a special topic, let me know.

We will have a raffle starting in December or January as a fundraiser for the Friends and the Great Lakes Discovery Center. We would like to thank the prize donors and Rich Hodge and Ed Becker for getting all the information and prizes together. We hope this raffle is a big success so sell, sell, sell!

Great Lakes Discovery Center News
We are making progress on the Great Lakes Discovery Center. A committee is working on collecting information for a Business and Marketing Plan. If you have experience with this or would like to help in some way, please let us know. It is imperative that we start to gather the interest and support of our Congressional folks including Dave Camp, Debbie Stabenow and others. You can help by writing these people and asking for their support with this project. If you are not familiar with the planning of the Discovery Center, please attend the Pioneer Christmas in Bridgeport, MI, sponsored by the Bridgeport Historical Society on December 14, from 5:00 p.m. to 9:00 p.m. We will have the proposed plans on display and will be able to answer any questions you may have about the Center.

Thank You to Our Donators
The Friends want to thank all the people who have made donations to the organization and/or the Refuge. These donations are very important and help cover the costs for publishing this newsletter, special events, etc. Remember that the Friends of Shiawassee NWR is a non-profit organization and your donations are tax deductible! If you would like to make a donation, please send it to: Friends of Shiawassee NWR, P.O. Box 20129, Saginaw, MI, 48602. If you would like the money to be earmarked for a particular reason, just attach a note stating such.

Keep in mind that we still have bricks that will be placed at the Discovery Center and fruit trees for sale.

Thank You for Your Help
During the Refuge Open House weekend in September, 1351 people drove the auto tour route. Thank you to the 28 volunteers and 7 staff people who helped!

Thank you to all our new members who have recently joined us. We appreciate your interest and hope to see your participation at Refuge events. There is a calendar of events on the refuge web site (url on back page). Friends members also attend community events to show support and voice an opinion for the Refuge. If you are interested in assisting with these, please contact me at michelle_pete@msn.com.

National Friends Conference

SAVE THESE DATES! On February 22 - 25, 2002, the U.S. Fish and Wildlife Service and the National Wildlife Refuge Association is hosting the First Annual National Friends Conference. The conference will be held in Washington D.C. and all Friends members are welcome.

On February 22 - 23 the conference features skills building and networking opportunities. On February 24 - 25 we will visit with members of the Congress. This is an excellent opportunity for us to visit with other Friends groups and share ideas and to meet with our political representatives to let them know what we need for our refuge as well as needs for the Refuge System as a whole.

There is a $200 National Refuge Friends Conference registration fee which includes hotel lodging at the Wyndham Washington Hotel for Friday, Saturday, Sunday and Monday nights, continental breakfast each morning, conference break refreshments during breakout sessions, an evening reception and a Capitol Hill meeting room for attendees convenience while meeting with Congressional representatives on Monday.

If you are interested please contact Michelle Vander Haar at michelle_pete@msn.com and your name will be added to our list for registration. The deadline is February 1, but there is limited seating so it is first come, first served. If you would like more information go to www.refugenet.org.
Calendar of Events

Christmas Holiday
December 25
Both offices are closed.

New Year’s Day Holiday
January 1
Both offices are closed.

Managed Deer Hunt
Through December 31
Specific areas of Refuge. Trails may be closed for hunting in area.

Friends Group Meeting
January 17, 7:00 p.m.
Garber Buick, 5925 State, Saginaw
Program to be announced.

Martin Luther King, Jr. Holiday
January 21
Both offices are closed.

Presidents’ Day Holiday
February 18
Both offices are closed.

Outdoorama 2002
February 22 - March 3
Novi Expo Center, Novi, MI
Visit the FWS booth at the State’s largest outdoor show.
Refuge Reporter

Happenings at Shiawassee National Wildlife Refuge & Green Point Environmental Learning Center

NWR System Turns 99 on March 14

by Becky Goche, Park Ranger

In 1903, President Theodore Roosevelt was told about a tiny island off the coast of Florida that was home to nesting brown pelicans that were in jeopardy due to market hunting. Acting upon the advice of an aide, he declared that this island, Pelican Island, be set aside as a sanctuary for the brown pelican – the start of our National Wildlife Refuge System.

From its humble beginnings in 1903, the National Wildlife Refuge System has grown to more than 530 refuges in all 50 states and U.S. territories. Virtually every ecosystem found in the United States is represented in the Refuge System's 94 million acres. More than 700 species of birds, 1000 species of fish, 220 mammals, 250 reptiles and amphibians and nearly 260 threatened and endangered species are protected in the Refuge System. Managed by the U.S. Fish and Wildlife Service, the Refuge System is the only network of national lands established specifically to conserve fish and wildlife.

On March 14, 2003, the National Wildlife Refuge System will celebrate a century of service to the American people. Here at Shiawassee NWR, we're going to start celebrating this year! We have many Centenniel events planned for the next two years to celebrate this once-in-my-lifetime occasion. We kick things off with a special birthday party on March 14, 2002, at Green Point ELC at 7:00 p.m. Joe Rogers from "Wildlife Recovery Associates" will bring several of the birds he rehabilitates for a program. Our "Refuge Photography Contest" will officially start this day. And we'll top off the evening with birthday cake!

We have many other events planned so look for more information in this newsletter and future ones.

Photo Contest Announced

The Shiawassee NWR and Friends of Shiawassee NWR announce their first annual 2002 Amateur Photo Contest. The sole purpose of this contest is to encourage you to visit and enjoy the Refuge this year. Up to three (3) entries total per person may be submitted in any of the following categories:

Wildlife/Plantlife - mammals, birds, fish, insects, reptiles, wildflowers, grass, trees, etc.

Habitat - a Refuge scene with or without wildlife.

People - engaged in an activity or included in a scene on the Refuge (volunteers, people hunting, fishing, birdwatching, school program, etc.)

......Continued on page 2
Photo Contest Continued

The photos will be unveiled at the Refuge Open House Weekend on September 7 and 8, 2002. They will then be on display at the Refuge Headquarters through September 28. The photos will then be moved to the Green Point Environmental Learning Center and will remain on display there until the end of 2002. The public will vote for their favorite photo in each category. Each category will have a first, second and third place photo. In addition, two special awards, "Refuge Manager's Choice" and "Friends' Choice," will be given. Certificates, ribbons and prizes (e.g. books, t-shirts, hats) will be awarded. Official contest rules are as follow:

1. Photographers must be non-professional; this is an amateur contest. All entries must be photographs taken at Shiawassee National Wildlife Refuge and Green Point Environmental Learning Center.
2. All photographs should be 5"x7" or 8"x10". Black and white or color photos are acceptable.
3. No matted photos, please!
4. Mail or deliver all entries to Shiawassee National Wildlife Refuge Photo Contest, 6975 Mower Road, Saginaw, MI 48601. On the back of the photo, include your name, address, phone number, category entered, the name of the photo, and the date it was taken.
5. All entries must be received by September 1, 2002.
6. Winning photographs will become the property of the Shiawassee National Wildlife Refuge and may be used for non-profit publications, web pages and presentations.
7. Entries not selected will be retained by the Refuge and may be used for non-profit publications, web pages and presentations, unless a request is made to return them to the participant.
8. While extreme care will be taken in handling all entries, the Refuge cannot be responsible for any damage to photographs.
9. Winners will be announced at our National Wildlife Refuge Week Celebration on October 17, 2002, starting at 7:00 p.m. This event will be held at the Green Point Environmental Learning Center, 3010 Maple Street in Saginaw.

We are offering two "Wildlife Photography Workshop" sessions on Saturday, May 11, at the Refuge Headquarters, during our International Migratory Bird Day Celebration. Refuge volunteer and photographer Kim LeBlanc will share some basic photography tips with you. Reservations are required. See the flyer insert for times and other information.

For further information about this contest or the upcoming "Wildlife Photography Workshop," please call Becky Goche at (989) 759-1669. Good luck and we hope you enjoy your Refuge while capturing those winning shots with your camera!

Volunteer Help Needed

by Becky Goche, Volunteer Coordinator

Volunteers are needed this spring and summer! Our annual Refuge Clean-up Day is April 20. Bring your gloves, rakes, shovels, etc. to Green Point at 9:00 a.m. We will send you to other Refuge areas from there.

In May, we will need help operating the auto tour route and other International Migratory Bird Day activities on Saturday, May 11. We need people at the entrance and exit gates, at Grefe Tower to help visitors identify birds, and at the Curtis Road parking lot to assist with children’s craft activities. At least 4 volunteers are needed each hour from 10:00 a.m. to 6:00 p.m.

We are searching for someone to “adopt” the Ferguson Bayou trail off of Curtis Road. This person would pick up litter in the parking lot and along the trails and notify Refuge staff about any safety hazards along the route. Larry Hess, one of our dedicated volunteers, has been taking care of the Woodland Trail system off of Stroebel Road for the past few years. We appreciate his help and hard work!

If you have teaching experience or just like working with kids, one of these may interest you! Free Fishing Fun Day is Saturday, June 8. You can spend a rewarding morning by helping with this fishing contest for kids. On the mornings of June 26 and 27, Green Point ELC will be hosting a camp for pre-schoolers. July children’s programs include the Jr. Refuge Manager program for third and fourth graders and a Fishing Clinic for kids.

If you are already a Refuge volunteer or want to become a Refuge volunteer and can help with any of these, please contact Becky Goche at (989) 759-1669 to sign up or for more information.
Michigan Is Home to First International Wildlife Refuge

The efforts of an unprecedented partnership of federal, state, county and local governments, private industry, conservation groups and citizens to improve the quality of life along an enduring industrial river in Detroit, Michigan, paid off on December 21, 2001, when President George W. Bush signed a bill officially creating the Detroit River International Wildlife Refuge. The refuge, the first international refuge in North America, will conserve, protect and restore habitat for 29 species of waterfowl, 65 kinds of fish and 300 species of migratory birds on more than 5,000 acres along the lower Detroit River in Michigan and Canada.

“This is a great day for the people of Michigan and for the National Wildlife Refuge System,” said Bill Hartwig, Midwest regional director of the U.S. Fish and Wildlife Service (Service), the federal agency that will manage the refuge. “The Detroit River International Wildlife Refuge will help link the people of Michigan and other Americans with their natural treasures—the birds, fish and waterfowl that live on and depend on the Lower Detroit River. The refuge also goes a step further by linking Americans and Canadians in a living symbol of both nations’ commitment to wildlife conservation.”

The refuge includes islands, coastal wetlands, marshes, shoals and riverfront lands along 18 miles of the Lower Detroit River from Zug Island south to the southern boundary of Sterling State Park in Monroe County, Michigan. The new refuge also includes Mud Island and Grassy Island, lands managed by the Service as Wyandotte National Wildlife Refuge (NWR). The 330-acre Wyandotte NWR will be re-designated part of Detroit River International Wildlife Refuge.

“As managers of the refuge, one of our first initiatives will be to reach out and engage partners and citizens and involve them in the planning process, to help us plot conservation and recreation decisions for the future of the refuge,” said Refuge Manager Doug Spencer. “As a new member of the National Wildlife Refuge System, it is our policy to make areas of this refuge open to hunting, fishing, wildlife observation, wildlife photography, environmental education and environmental interpretation.”

In March 2001, Michigan Representative John D. Dingell introduced legislation to create the refuge. The bill, H.R. 1230, encourages public-private partnerships to promote wildlife conservation and habitat restoration while protecting private property rights. The bill also authorizes the Service to acquire future lands for the refuge through cooperative agreements, donations or to buy outright from willing sellers at fair market value. Similarly, Herb Gray, Deputy Prime Minister of Canada and Susan Whelan, member of Canadian Parliament, are working to enact the Canadian component of the international refuge.

“The creation of an international wildlife refuge is a significant step towards restoring the health and vitality of this invaluable natural resource,” Dingell said. “The legislation demonstrates how, working as a team, federal, state and local officials in the United States and in Canada can work with businesses, conservationists and citizens to create something special that will improve the quality of life for all our citizens.”

The Lower Detroit River contains shipping channels and shoals and islands that serve as habitat for numerous fish and wildlife. Located at the intersection of the Atlantic and Mississippi Flyways, an estimated three million ducks, geese, swans and coots migrate annually through the region. More than 300,000 diving ducks stop each year to feed on wild celery beds in the river. The Canada-United States North American Waterfowl Management Plan has identified the Detroit River as part of one of 34 waterfowl habitat areas of major concern in the U.S. and Canada.

The Detroit River is also known for its duck hunting and fishing opportunities, activities the Service plans to continue on parts of the refuge. “Among our first goals will be to establish hunting and fishing plans that provide ample opportunities for these activities while incorporating refuge goals and conserving habitat,” Spencer said. “Long term, restoring habitat on refuge land will benefit hunters and fishers all along the river.”
Local Officials Buzzing about Mosquito Policy on Refuge

by Doug Spencer, Refuge Manager

This will be the first year that Shiawassee NWR will not allow the Saginaw County Mosquito Abatement Commission to aerial spray 1000 acres of flooded woods with a larvicide known as BTI, to assist in reducing nuisance mosquitos. The refuge has never permitted the use of an adulticide to control nuisance mosquitos.

During the planning process for the Comprehensive Conservation Plan a few years ago, it was noted that Shiawassee NWR was the only Refuge in the midwest that allowed control of nuisance mosquitos. The question was why? If it was to control a disease outbreak, then it would continue, but to only control nuisance mosquitos was not a good reason biologically. Deer flies, ants, raccoons, mice, some birds, even the neighbor’s dog or cat may be a nuisance to some people, but the county doesn’t spray for or control these species. The county states that mosquitos can carry disease. All species can carry disease, even us!

The mosquitos is a major part of the ecosystem and food chain. They provide a food base for many of the wildlife that you come to enjoy at the refuge. Adding pesticides to refuge habitat solely to control a nuisance species isn’t enough justification to allow it. Many come to the refuge to view butterflies, lightning bugs and other beneficial insects. Outside of the refuge, it is hard to find these species. This may be caused by habitat loss or the over use of insecticides. The refuge prohibits any insecticide to be applied to refuge lands unless it is applied to control a disease outbreak in humans. The following is Region 3’s mosquito abatement policy that our refuge is abiding by.

Region 3 Policy Statement
It is the policy of Region 3, U.S. Fish and Wildlife Service (Service), to allow mosquito control on units of the National Wildlife Refuge System (System) only when there is a documented human health emergency. Control measures designed specifically to reduce “nuisance” mosquitos will be prohibited on units of the System. The Service will continue to cooperate with local mosquito control districts in the monitoring of mosquito populations and in the removal of tires, tanks, and associated debris that serve as artificial breeding sites for mosquitos on System lands.

Determination of Human Health Emergency
For purposes of treatment of System lands for disease carrying mosquitos, a human health emergency will be determined by state/county public health care offices in consultation with the Refuge Manager of the Service and the U.S. Centers for Disease Control. The Refuge Manager will contact the Regional Chief, National Wildlife Refuge System, of his/her decision regarding mosquito control treatment within 24 hours. As per this policy, units of the System mean only those lands, or interest, thereof, where we have the right to control access and use.

Human Health Emergency
The Service may allow mosquito control on System lands when:
1) there is documented incidence of mosquito borne disease activity within published flight range(s) of vector species that have been documented to breed on System lands. The disease may be identified in birds, mosquitos, humans, and/or other mammals, and,
2) current surveillance data indicate that refuge-based mosquitos pose an imminent threat to human health. The term “imminent threat” used here would mean high larval and/or adult populations of known vectors of a particular disease having been found on the refuge, and,
3) the Refuge Manager, in consultation with recognized health care professionals (i.e. state, county, local public health offices), determines there is a high probability that disease carrying mosquitos originating from system lands may infect humans.

Treatment of System Lands
The Refuge Manager, in consultation with recognized experts (i.e. biologists/entomologists), and Human Health Care authorities, will respond appropriately to a mosquito borne disease threat when the above conditions have been met. The term “appropriately” means using the most effective agents practicable to address the specific human health risk, and would include larviciding or in cases where infected mosquitos have been found on System lands, adulticiding. The use of pesticides on System lands will only occur when: 1) there is evidence of an increasing risk for human infection, 2) this risk will be substantially lowered by the pesticide(s), and 3) the application of pesticides to the System is superior to other available approaches to manage disease risk. Any emergency treatment lasting beyond 30 days will require a compatibility determination.
Celebrate International Migratory Bird Day
Saturday, May 11, 2002
at the Shiawassee National Wildlife Refuge

Bird Workshop for All Ages at 8:00 a.m.
Meet at the parking lot on the west end of Curtis Road off of M-13
Join local bird experts to learn what kind of birds are at the Refuge and where the best places are to find them. Bring your binoculars and dress for the weather.

Wildlife Photography Workshop at 10:00 a.m. & 12:00 noon
At Refuge Headquarters on corner of Curtis and Mower Roads
Learn basic film and lighting tips and blind techniques from a Refuge photographer. Reservations are required by calling (989) 759-1669.

Auto Tour from 10:00 a.m. to 4:00 p.m.
Start at the Curtis Road parking lot off of M-13
From the comfort of your vehicle, you will have an opportunity to see all sorts of wildlife along this 7-mile, self-guided tour. *Please note that the auto tour will be cancelled if there are poor road conditions due to excessive rain.

Fun Activities and Food Throughout the Day!
From 10 a.m. to 4 p.m., there will be children’s activities, such as face painting, balloon animals, and crafts available at the Curtis Road parking lot area. The Friends of Shiawassee NWR will be selling hot dogs, chips and beverages along with t-shirts and other items.

This event is free and open to everyone.
Call (989) 759-1669 for more information about any of these events.

Sponsors for the International Migratory Bird Day Celebration events include:
Shiawassee NWR, Friends of the Shiawassee NWR, and the Saginaw Valley Audubon Society.
Celebrate International Migratory Bird Day  
Saturday, May 11, 2002  
at the Shiawassee National Wildlife Refuge

Rides begin at 9:00 a.m., 10:00 a.m. and 11:00 a.m.  
Meet at the Evon Road parking lot off of M-13

You provide the horse, riding gear and riding helmet! We take you on a guided tour of the Shiawassee National Wildlife Refuge. Birds and other wildlife will provide us with the beautiful sights and sounds!

Reservations are required.  
Hurry, space is limited. Call Ed DeVries at (989)777-5930, ext. 5 to reserve your spot or for more information. All horses must have had a Coggins test. In the event of rain or poor trail conditions, the ride will be postponed to Saturday, May 18, 2002 (same times).

This event is free.

Sponsors for the International Migratory Bird Day Celebration events include:  
Shiawassee NWR, Friends of the Shiawassee NWR,  
and the Saginaw Valley Audubon Society.
Friends Corner: Filling Board Vacancies

by Michelle Vander Haar, Friends Board of Directors

At the time of printing this newsletter, we have four vacancies on the Board of Directors to be filled. All paying members will cast their ballots by February 28. The nominees for the Board are: Ed Becker - current President, Michelle VanderHaar - current Board member and Special Events Coordinator, Janine Spencer - interested in increasing membership numbers, Dick VonBerg - interested in working with a new Trails Committee and developing the Discovery Center property, Steve Gasser - interested in chairing a new Tours Committee, Wil Hufton - interested in web site maintenance and a new Wildlife Viewing Committee, and Elise Nanos - interested in membership numbers. Watch in the next newsletter to see who was elected.

Friends Have a New Web Site
We are working with the help of Joe Davila and others, to develop a web site which should be up and running soon. The site name is friendsofshiawassee.org. Many items will be included on this site such as our Friends sale products, membership information, Board member contacts, Board of Directors meeting minutes, a calendar of events, volunteer opportunities and more. Next time you’re on the Internet, check to see if we’re on-line yet.

Refuge Centennial Items for Sale
The Friends can help you get into the spirit of the National Wildlife Refuge System Centennial. You can purchase one-of-a-kind Refuge Centennial products! Some products are on-hand and others, such as clothing, can be ordered from a new brochure we have available. You also can find other Friends items for sale.

Upcoming Events
FEBRUARY 22 - MARCH 3: We are staffing a “Friends” booth at Outdoorama, the biggest outdoor related show in Michigan.

MARCH 14: The National Wildlife Refuge System’s 99th Birthday. We will be co-sponsoring the “Live Birds of Prey” program by Joe Rogers. The event will be at Green Point Environmental Learning Center at 7:00 p.m.

APRIL 18: General membership meeting. Visitors are welcome! A Fisheries Biologist from the Alpena Fisheries Research Office will be talking about the Great Lakes fisheries. Refreshments will be provided.

APRIL 20: Celebrate “Earth Day” with a Refuge Clean-up Party. An important part of habitat management is a healthy, clean environment. You can help by assisting refuge staff with litter pick-up, trail maintenance, lawn and garden care, etc. If you would like to attend please contact Becky or Michelle at (989)759-1669 for more information or to sign up.

MAY 11: International Migratory Bird Day. A celebration of the return of the migrating bird population will include a bird watching workshop, photography workshop, refuge auto tour and many children’s activities. Our Friends group will be selling concessions as well as t-shirts, sweatshirts, hats, license plates, centennial products, etc. See insert for more information.

 Volunteers are needed at all of these events. PLEASE don’t be shy, come join the fun!!!

Sign Up as a Member Today!
Your membership is important to us and the Refuge! Membership fees and cash donations go towards refuge projects like newsletter publication, maintaining trails, sponsoring programs, and buying bird seed. Fill out the application below, detach and mail with your check.

Friends of Shiawassee NWR Membership

□ Individual: $10/year or $25 for 3 years
□ Family: $25/year or $60 for 3 years
□ Supporting: $50/year*
*Includes your choice of t-shirt, sweatshirt or hat. Please indicate your choice.

Name: __________________________________________
Address: _________________________________________
City: __________________________ State: __________
Zip: ________________ Phone: ____________________
E-mail: ______________________________

Make checks payable and send to: Friends of Shiawassee NWR, P.O. Box 20129, Saginaw, MI 48602

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Calendar of Events

Outdoorama 2002
February 22 - March 3
Novi Expo Center, Novi, MI
Visit the FWS and Friends booths at the State’s largest outdoor show.

NWR Birthday Party
March 14, 7:00 p.m.
Green Point ELC
Celebrate 99 years with us! See live birds up close and enjoy some birthday cake.

Friends Group Meeting
April 18, 7:00 p.m.
Green Point ELC
Program on the Great Lakes fisheries.

Refuge Clean-Up Day
April 20, 9:00 a.m.
Green Point ELC
Bring your gloves and rakes. Will divide up and send to various Refuge locations.

Bird Day Celebration
May 11, 8:00 a.m.
Parking lot on Curtis Road
Birding workshop, photography workshop, auto tour and more. See insert for more information.

Horses and Herons
May 11, 9 a.m., 10 a.m., 11 a.m.
Parking lot on Evon Road
See the Refuge from the back of your horse. Reservations are required.

Memorial Day Holiday
May 27
Both offices are closed.

Group Meetings at Green Point:
Shiawassee Flats Advisory Council, 7:00 p.m., 2nd Monday of the month, January through October.

Saginaw Valley Audubon Society, 7:00 p.m., 4th Tuesday of the month, September through May.
Enter Refuge Photo Contest Today!

The Shiawassee NWR and Friends of Shiawassee NWR announce their first annual 2002 Amateur Photo Contest. The sole purpose of this contest is to encourage you to visit and enjoy the Refuge this year. Up to three (3) entries total per person may be submitted in any of the following categories:

**Wildlife/Plantlife** - mammals, birds, fish, insects, reptiles, wildflowers, grass, trees, etc.

**Habitat** - a Refuge scene with or without wildlife.

**People** - engaged in an activity or included in a scene on the Refuge (volunteers, people hunting, fishing, birdwatching, school program, etc.)

The photos will be unveiled at the Refuge Open House Weekend on September 7 and 8, 2002. They will then be on display at the Refuge Headquarters through September 28. The photos will then be moved to the Green Point Environmental Learning Center and will remain on display there until the end of 2002. The public will vote for their favorite photo in each category. Each category will have a first, second, and third place photo. In addition, two special awards, "Refuge Manager's Choice" and "Friends' Choice," will be given. Certificates, ribbons, and prizes (e.g., books, t-shirts, hats) will be awarded. Official contest rules are as follows:

1. Photographers must be non-professional; this is an amateur contest. All entries must be photographs taken at Shiawassee National Wildlife Refuge and Green Point Environmental Learning Center.
2. All photographs should be 5"x7" or 8"x10". Black and white or color photos are acceptable.
3. No matted photos, please!
4. Mail or deliver all entries to Shiawassee National Wildlife Refuge Photo Contest, 6975 Mower Road, Saginaw, MI 48601. On the back of the photo, include your name, address, phone number, category entered, the name of the photo, and the date it was taken.
5. All entries must be received by September 1, 2002.
6. Winning photographs will become the property of the Shiawassee National Wildlife Refuge and may be used for non-profit publications, web pages and presentations.
7. Entries not selected will be retained by the Refuge and may be used for non-profit publications, web pages and presentations, unless a request is made to return them to the participant.
8. While extreme care will be taken in handling all entries, the Refuge cannot be responsible for any damage to photographs.
9. Winners will be announced at our National Wildlife Refuge Week Celebration on October 17, 2002, starting at 7:00 p.m. This event will be held at the Green Point Environmental Learning Center, 3010 Maple Street in Saginaw.

For further information about this contest, please call Becky Goche at (989) 759-1669. Good luck and we hope you enjoy your Refuge while capturing those winning shots with your camera!
Jr. Refuge Manager Academy = Fun for 3rd and 4th Graders

by Michelle Vander Haar, Park Ranger

A new opportunity is available at the Shiawassee National Wildlife Refuge's environmental education center. Green Point Environmental Learning Center is offering a new program for 3rd and 4th graders to learn about the environment. We know, and I'm sure that all of you parents know, that kids now-a-days spend most of their time indoors watching T.V., playing video games and chatting on the computer. Wouldn't it be nice to get them outdoors and teach them a bit about what you learned as a kid, before 36 inch televisions and Pentium 4 computers were available? We all try to tell our kids stories about our childhood growing up. I know my parents have told me about the five mile walk to school every day that was uphill both ways with no shoes in the winter time. And that was the easy part; my mom always had to chase the pigs and put them back in the pen before she could leave for school!

I used to laugh at these stories, but since I have been making way for myself in the professional world, I know that my career choice would have been different if my parents wouldn't have helped me, and sometimes pushed me, to explore the outdoors. This is your chance to assist your children and teach them about the environmental world!

The Jr. Refuge Manager Academy will teach students about habitats, birds, endangered species and how to track animals. These topics will be presented through hands-on activities, crafts and games as well as through short stories and movies. The children will also have take-home activities so that you can help them learn, too. A "Graduation Ceremony" will be held on the last day where the children will receive special gifts and a personal tour of the Shiawassee National Wildlife Refuge - parents are highly encouraged to attend.

The program will be held on Tuesdays in July, starting on July 2 and ending July 23. The class will be from 9:00 a.m. to 12:00 p.m. Cost for this program is $10 and pre-registration is required. Call Green Point at (989) 759-1669 to register or for more information. Hurry, space is limited!

Volunteers Needed!

June 8 - Free Fishing Fun Day
Fishing contest from 9:00 a.m. to 12:00 p.m. We need help with set-up beginning at 6:15 a.m. and with tear down following the event. We need friendly volunteers to help with registration, hand-out bait, count and release fish, and provide fishing tips to young children.

June 26 and 27 - Summer Discovery Camp
Day camp for preschoolers from 9:00 a.m. to 12:00 p.m. You need to love kids and the outdoors, be friendly, patient and above all, able to have fun! If you have teaching experience, that's a plus! We are looking for volunteers to assist staff with leading the different sessions, preparing healthy snacks, helping with set up and clean-up, reading stories, coordinating crafts, and serving as positive role models for the children.

July 2, 9, 16 and 23 - Jr. Refuge Manager Academy
Day camp for 3rd and 4th graders from 9:00 a.m. to 12:00 p.m. See Summer Discovery Camp above for who we're looking for.

July 27 - Kids' Fishing Clinic
Day camp for 7- to 12-year-olds. Fishing experience and being able to relate it to children is a plus! Little to no fear of kids geared with fishing poles and hooks definitely needed!

If you are already a Refuge Volunteer or want to become a Refuge Volunteer and can help with any of the above, please contact Becky Goche at (989) 759-1669 to sign up or for more information.
Volunteers Help Make IMBD Celebration a Success

by Becky Goche, Park Ranger

The Shiawassee National Wildlife Refuge celebrated "Special Places for Birds," this year's theme for International Migratory Bird Day (IMBD) on Saturday, May 11. The Refuge and the Friends of Shiawassee NWR sponsored several events throughout the day, including a Birding Workshop with two of our avid birders and Refuge Volunteers, Bob Grefe and Carolyn Szaroletta; a Wildlife Photography Workshop with Volunteer photographer Kim LeBlanc and numerous children's activities. New volunteer Doug Mortson provided his artistic talents and painted several children's faces with birds they chose. Other activities included Bird Eye-Q, color a Blue Goose, free tattoos and help put together the Great Lakes Ecosystem puzzle. The most popular event, with 183 participating, was the self-guided auto tour along a 7-mile route through the heart of the Refuge. Birds were everywhere! Fortunately the rain held off until the tour was almost done and the roads were in good condition thanks to the Refuge maintenance staff.

Acting Refuge Manager Ed DeVries and Volunteer Sybil Paquette led special "horses only" guided tours on Refuge areas north of the Cass River. Nineteen horses and riders from across mid-Michigan participated.

All together 17 volunteers (many also Friends members) donated 78 hours during the day. The Friends group had hot dogs, chips and sodas available for sale to hungry visitors. A big thank you to everyone who helped!

A Day as "Puddles," the Blue Goose

by Shirley Adams, Administrative Technician

As a child, dressing up in a costume for Halloween was always a fun time. When the opportunity arose for someone to wear "Puddles," the Blue Goose symbol of the National Wildlife Refuge System at Outdooraram in Novi, I could hardly wait. It was my turn to relive some of my favorite childhood memories. As the Administrative Technician for the Refuge, I don't get many chances to interact with children in the public arena. When I do, I get to see the curiosity and interest in a child develop from what I'm saying or doing. It's wonderful!

In the picture above, you can see me as Puddles and my husband and Refuge Volunteer, Dale Adams. Puddles was extremely warm once inside, especially after moving around for a while. It was also hard to see out of the head part so a guide had to stay with me. Both of these were minor distractions once I saw the amazement on children's faces. I saw children experience a wide range of emotions when they saw Puddles. Some were so happy and excited that they hugged me. Others were very shy and some even cried at the sight of the big blue bird.

I was proud to wear the National Wildlife Refuge System's symbol. The Blue Goose, who Puddle depicts, is an important part of the System's history. J.N. "Ding" Darling, famous editorial cartoonist and Director of the U.S. Biological Survey (the forerunner of the U.S. Fish and Wildlife Service) from 1934 to 1935, designed the Blue Goose. While Director, Darling initiated the Federal Duck Stamp Program, designed the first duck stamp, and vastly increased the acreage of the National Wildlife Refuge System.
Detroit River International Wildlife Refuge Gets Grants

by Doug Spencer, Refuge Manager

Recently the U.S. Fish and Wildlife Service employees participated at three special events in the "Downriver Communities". Many of these communities lie within the boundary of the Detroit River International Wildlife Refuge (IWR). On May 8, Congressman John Dingell and John Hartig, River Navigator for the Detroit River American Heritage River Program, held a press conference informing the public that over $500,000 in grants have been approved. These grant monies will be used within the Detroit River IWR boundaries for soft engineering of the shoreline at Elizabeth Park and Grosse Ile Land Conservancy nature site; restoration of Hennepin Marsh; planting of native forbs and grasses on Grosse Ile; an office space for the Service at the Grosse Ile Environmental Protection Agency office; and the hiring of a contaminant specialist for the Service which will be overseeing the remediation of Grassy Island.

On May 13, our Regional Planning and Realty personnel and I attended the "Downriver Summit" at the Taylor Sports Complex sponsored by many of the major Detroit industries and organized by Congressman John Dingell and staff. The major themes were the Downriver Linked Greenways, Detroit River International Wildlife Refuge, Auto Heritage Area, and the Greater Detroit American Heritage River Initiative. The U.S. Fish and Wildlife Service provided two displays, the Detroit River IWR Comprehensive Conservation Plan display and the Regional Refuge System Centennial display. Service personnel were present to take questions and provide answers. We heard that in the last year, over $10,000,000 have been acquired to improve the quality of life for the residence of the "Downriver Communities". These dollars are being spent for the four theme categories listed approve. At present, the Service and partners are actively pursuing the acquisition of Humbug Marsh complex, Calf Island, Daimler/Chrysler tract, South Hennepin Marsh and the Six Point tract. Either Humbug or the Daimler Chrysler tracts maybe appropriate for a administrative facility and visitor center, both have good access off of Jefferson Avenue. Yet, there maybe other sites throughout the new refuge for such a facility. The plan being developed will assist us in making a decision on where these facilities will be located.

On May 14, Steve Muyskens, Trust for Public Lands; Lauri Elbing, staffer for Congressman John Dingell; Lois Lawson, Realty Specialist; Tom Larson, Chief of Ascertainment; Gary Muehlenhardt, Planner; Jim Dastyck, Refuge Biologist; and I spent the entire day viewing the Detroit River and the northwest area of Lake Erie on our Service boat to discuss and identify potential sites for restorations and acquisition by the Service. All of this data collecting will be included in the planning of the Detroit River IWR Comprehensive Conservation Plan.

Refuge Quick Facts

Did you know...
...that 267 different species of birds have been seen on the Refuge? Check out a Refuge Bird Checklist for all the details!
...the Refuge is designated as a U.S. Important Bird Area? This is based upon the number of Canada geese from the Southern James Bay population in Canada that migrate through here.
...the Refuge was established on October 21, 1953 for migratory birds and today encompasses over 9,300-acres?
...the diversity of the Refuge's habitats attracts other wildlife besides birds?
...that on March 14, 2003, the National Wildlife Refuge System will be 100 years old? Watch for future programs as we countdown to the Centennial!
Great Saginaw River Free

Kids Fishing Fun Day!

Saturday, June 8, 2002
9 a.m. till Noon
Ojibway Island

TO REGISTER —
To participate in the contest, each child ages 3-15 must fill out the registration form below and have a parent or guardian sign. This signed form must accompany each child when registering for the contest on Ojibway Island on June 8. Registration begins at 8 a.m.

Each child will receive treat coupons from 7-Eleven, and GKC Fashion Square Cinemas.

AGE GROUPS —
3-6 yrs old • 7-10 yrs old • 11-15 yrs old

REFRESHMENTS —
The Son’s of Italy will again sponsor the refreshment stand. They will offer FREE popcorn, snow cones, cookies and McDonald’s orange drink. There will be a small charge for hot dogs.

EQUIPMENT —
Bring your own fishing pole and bait. (A limited amount of FREE bait will be available.)

RULES AND REGULATIONS —
NO PURCHASE NECESSARY.

To participate in the 22nd annual Great Saginaw River Free Fishing Fun Day all participants must agree to abide by and follow all Michigan State Fishing Regulations. Those registering a fish must be willing to make a sworn statement that their fish was caught within the rules of the contest. The contest is free and open to all children 3-15 years of age. All fish must be caught from Ojibway Island on Saturday, June 8 from 9 a.m. - 12 noon. Entrants must personally catch any fish to be entered in this contest. Enter as many fish as you like, this will increase your chance at winning a prize. Odds of winning a prize depends on the number of entries received and the number of fish caught. Multiple prizes may be awarded. Prizes are awarded by random drawing. A ticket will be issued when each child registers. Another ticket is given for each fish caught and turned into the fish return tent located on the west side of the Island. A random prize drawing will be conducted at 12:15. 35 prizes (valued at $5 - $5) and one grand prize valued at ($50 will be awarded in each age category. Age groups - 3-6 years, 7-10 years, 11-15 years old. You must be present to win.

All fish may be registered only once, and may be marked at the fish return station. It is our goal to preserve the fish resource and return all fish to the water alive. Do not transport your fish to the fish return area in water as often as necessary. Participation is open to legal U.S. residents who are at least 2 but no older than 15 years of age as of the date of entry. Participation is open to amateur status fishing enthusiasts only. This contest is subject to all Federal, state and local laws and regulations. Void where prohibited. All decisions of the contest officials are final. Violation of any rules may lead to immediate disqualification, as determined in the contest officials’ sole discretion. Income and other taxes, if any, are the sole responsibility of the winners. Winners and or parents or guardian may be required to sign an affidavit of eligibility upon accepting the prizes or an alternate winner may be chosen. No substitutions for prizes except by sponsors in which case a prize of equal or greater value will be substituted.


GENERAL RELEASE.

By signing your name below and in consideration of your participation in the Great Saginaw River Free Fishing Fun Day held on Saturday, June 8, 2002 (the “Event”) organized by The Saginaw News, City of Saginaw, Meijer, U.S., Fish and Wildlife Service and the Saginaw Field and Stream Club ("Sponsors"), the undersigned hereby releases Sponsors and any related or affiliated companies and their respective officers, directors, agents, employees, licensees, subsidiaries, consultants and independent contractors (collectively, the “Releasees”) of and from any and all liability, claims, demands, actions and causes of action whatsoever, arising out of or related to any loss, damage, or injury, including death, that may be sustained by the undersigned, or any property of the undersigned, arising from or in connection with the Event, or any prizes awarded, including claims that are known and unknown, foreseen and unforeseen, future or contingent, or that arise out of the negligence of Sponsors. The undersigned, being fully aware of the risks inherent in participating in the Event, hereby elects voluntarily to engage in such activity. The undersigned hereby voluntarily assumes all risk of loss, damage, or injury, including death, that may be sustained by the undersigned, or any property of the undersigned, in connection with such activity.

This release shall be binding upon the distributees, heirs, next of kin, personal representatives, executors, and administrators of the undersigned.

The undersigned also acknowledges the fact that Sponsors may publish photographs of the Event and entrants names, likenesses and photographs, for advertising, editorial or publicity purposes. The undersigned hereby grants, releases and quit claims to Sponsor the right to use her/his name or likeness in the above promotional, advertising and editorial materials and acknowledges that any photographs videotape or film taken may be exhibited and reprinted without limitation or liability or further compensation.

In signing the foregoing General Release, the undersigned hereby acknowledges and agrees that he/she has read the foregoing release and fully understands it. The undersigned understands that this is a release of liability which will legally prevent him/her or any other person from filing suit or making any other legal claim against Releasees relating to the causes of actions or claims hereby waived or released by undersigned. The undersigned nevertheless enters into this agreement freely and voluntarily and agrees that is being binding upon the undersigned, his/her heirs, assigns and legal representatives.

Copies of this form are available at The Saginaw News, Green Point Environmental Learning Center, Meijer - Gratiot and Tittabawassee customer service department or call (888) 776-9701 to have one faxed to you.

REGISTRATION FORM

Participant Name

Address

City State Zip

Check appropriate age category: □ 3-6 □ 7-10 □ 11-15

I have read and agree with the General Release.

Parent/Guardian Signature

Date

22nd Annual!

FREE fishing, fun
and fantastic prizes!

The Saginaw News is sponsored by:

The Saginaw News
Helping you every day.

CITY OF Saginaw

U.S. FISH & WILDLIFE SERVICE
Shiawassee National Wildlife Refuge

This fun-filled event is sponsored by:

MEIJER

Helping you every day.

BAY CITY • SAGINAW • MIDLAND
Friends Corner: Raffle Winners

by Richard Hodge, **Friends Board of Directors** and Michelle VanderHaar, **Friends Member**

At our April 18th meeting the program was presented by Emilie of the Alpena Fisheries Resource Office, a part of the U.S. Fish and Wildlife Service. A very informative presentation was given and enjoyed by over 20 people.

We also held our drawing in our annual raffle with five winning tickets drawn. First place was won by Cory Cookingham of Frankenmuth, second place was won by Robert Dembiecky of Frankenmuth, third place was won by Russell Curtis of Saginaw. All three of these people are members of the Frankenmuth Conservation Club and purchased their tickets there. The fourth place winner was Larry Gower of Chesaning and fifth place was Barry Dickston of Saginaw. Each person selected cash over the prize. We want to thank each of these people and everyone else who purchased tickets. Your support allows the Friends group to help the Refuge with many projects, including our plan to someday have a Great Lakes Discovery Center in Bridgeport.

**Friends Have a Web Site**

If you haven’t checked our website, do so! The site name is friendsofshiawassee.org. We’re constantly trying to upgrade the site and hope to include lots of information you need about the Friends group.

**Refuge Centennial Items for Sale**

The National Wildlife Refuge System Centennial is less than one year away! The Friends can help you get into the spirit. You can purchase one-of-a-kind Refuge Centennial products! Some products are on-hand and others, such as clothing, can be ordered from a new brochure we have available. You also can find other Friends items for sale at the Refuge headquarters on the corner of Mower and Curtis Roads.

**Upcoming Events**

We will be helping Refuge staff with a few educational programs this summer, including the Summer Discovery Camp and Jr. Refuge Manager Academy. You can read more about these programs elsewhere in this newsletter. If you have experience working with kids or just plain like kids, contact either Becky Goche or Michelle VanderHaar to volunteer your time.

Our next big event will be helping with the Refuge Open House on the weekend of September 7 and 8. Refuge staff are planning an auto tour for Saturday. We are tentatively planning on hosting a Bike-a-thon on Sunday. Keep an eye out for more information. We will definitely need your help!

**Sign Up as a Member Today!**

Your membership is important to us and the Refuge! Membership fees and cash donations go towards refuge projects like newsletter publication, maintaining trails, sponsoring programs, and buying bird seed. Fill out the application below, detach and mail with your check.

**Friends of Shiawassee NWR Membership**

- Individual: $10/year or $25 for 3 years
- Family: $25/year or $60 for 3 years
- Supporting: $50/year*

*Includes your choice of t-shirt, sweatshirt or hat. Please indicate your choice.

Name: ___________________________
Address: _________________________
City: __________________ State: ______
Zip: __________ Phone: ___________
E-mail: __________________________

Make checks payable and send to: Friends of Shiawassee NWR, P.O. Box 20129, Saginaw, MI 48602
Calendar of Events

Kids’ Free Fishing Day
June 8, 9:00 a.m. to 12:00 p.m.
Ojibway Island, Saginaw, MI
A fishing contest for children ages 3 to 15. Lots of prizes and fun!

Breakfast of Champions
June 14, 7:00 a.m.
Green Point ELC
Sponsored by Saginaw County Convention and Visitors Bureau.

Region 3 Public Use Workshop
June 18-20
Fergus Falls, MN

Summer Discovery Camp
June 26-27, 9:00 a.m. to 12:00 p.m.
Green Point ELC
For kids ages 4 to 6. Pre-registration required.

Jr. Refuge Manager Academy
July 2, 9, 16, 22, 9:00 a.m. to 12:00 p.m.
Green Point ELC
For kids in 3rd and 4th grades. See article for more information.

Kids’ Fishing Clinic
July 27, 9:00 a.m. to 12:00 p.m.
Green Point ELC
For children ages 7 to 12. Learn how to tie knots, cast and catch fish. Pre-register by calling (989) 759-1669.

Kids’ Night Out
August 9, 5:30 p.m. to 9:00 p.m.
Morley Plaza, Saginaw, MI
A special night for kids sponsored by Saginaw P.R.I.D.E. featuring entertainment, games and food.

Group Meetings at Green Point:
Lone Tree Council Dioxin Issues Meeting, 6:00 p.m., 3rd Monday of the month.

Saginaw Valley Audubon Society,
7:00 p.m., 4th Tuesday of the month, September through May.
Refuge Reporter

Happenings at Shiawassee National Wildlife Refuge

Volume 5, Issue 4

Refuge Open House Weekend Set for September 7 - 8

This year’s Open House Weekend features a self-guided Auto Tour on Saturday from 10:00 a.m. to 4:00 p.m. and a Bike-a-thon on Sunday from 1:30 p.m. to 6:00 p.m. During this weekend only, the entire Refuge will be open for deer scouting, hiking and bicycling, from dawn until dusk each day.

New this year, visitors will have a chance to vote for their favorite photo in our first-annual Refuge Amateur Photo Contest from 10:00 a.m. to 4:00 p.m. on Saturday. Visitors will select their top choice in each category. Winners of the Photo Contest will be announced on October 19, during National Wildlife Refuge Week.

On Sunday, the Friends are sponsoring a Bike-a-thon to help raise money for various Refuge projects. The Friends will also be selling hotdogs, chips, soda and other items during the Auto Tour on Saturday.

We hope that you can come out for the weekend! If you have any questions, please call (989) 759-1669 or visit our website for more information.

WE NEED VOLUNTEER HELP!

Putting on the Auto Tour takes lots of help from our Volunteers and Friends. We are in need of friendly folks to help us out in different locations along the route. You can work for one or more hours at the entrance, exit or Grefe Tower! If you are interested in helping, please contact Volunteer Coordinator, Becky Goche at (989) 759-1669.

Apply for Refuge Deer Hunts by September 10

The Refuge is offering 14 pre-registered hunts composed of five archery, six muzzleloader, and three shotgun. The shotgun ones include two non-ambulatory hunts for participants confined to wheelchairs and one general hunt. In addition, a youth shotgun hunt is offered to those youngsters who completed the MYHEC-sponsored class in Lansing.

All applications must be postmarked by September 10. Information sheets are available at the Refuge or on our website.

Only successful applicants will be notified of their selection. Names will also appear on the website by the end of September.

Scouting dates are September 7 – 8, 2002.
Youth Conservation Corps Program Helps Out at Refuge

By Aleisha Troendle, SCEP

This summer we had a few extra hands at the study and education. Each week the Christmas Youth freshly started and the backyard habitat has been tended. Each ELC. Don Poppe Damelle Brzenzinski and their crew leader, Christina Sanders, tackled many projects on the refuge. Each week they mowed Shiawassee NWR and Green Point ELC. They also posted boundary signs, picked up trash at the Case Tract, removed fence and helped put in posts for a parking lot at the Cass River Unit, and maintained trails at Green Point. When you visit the Refuge you will notice a few projects right away. The kiosks and benches have been freshly stained and the backyard habitat has been tended. Weeds have been removed and some signs replaced.

An important element of the YCC program is environmental education. Each week the YCC were introduced to different aspects of the environment. This education included career awareness field trips. The YCC went to Little and Big Charity Islands, part of the Shiawassee NWR, to visit a rookery of Double-crested Cormorants, Great Egrets, Caspian Terns and Ring-billed Gulls. They also visited Hartwick Pines State Park, the Detroit Zoo and tried to find the endangered Kirtland’s Warbler south of Mio. As a part of their educational experience, the YCC helped with the Jr. Refuge Manager Program given at Green Point ELC. For four Tuesday’s in July the YCC helped the 3rd and 4th graders do projects and played games with them. One YCC enrollee, Qonte, even posed as Puddles the Goose for the graduation of the Jr. Refuge Managers.

The projects completed by the YCC are a great enhancement to Shiawassee National Wildlife Refuge and Green Point Environmental Learning Center. The Refuge staff thanks them for their hard work throughout the summer.

Green Point to Host Safari Club International Display on October 19

By Michelle Vander Haar, Park Ranger

October 13 through October 19, 2002 signifies the Centennial year celebration of National Wildlife Refuge Week! This is an annual event and a time to promote, visit and enjoy your local National Wildlife Refuge (NWR). For all of you who live in the Tri-County area, there is a 9,300-acre Refuge in your backyard called the Shiawassee NWR. The Refuge was established in 1953 and includes land owned by the City of Saginaw at Green Point Environmental Learning Center. This is the location of the National Wildlife Refuge Week 2002 celebration!

We will host Safari Club International which displays many different species of animals through mounts, skins, skeletons and more. If you’ve ever seen their display at Outdoorama, you know they have a lot to look at. There will also be activities for children based on water quality, pollution and live invertebrate identification. The Amateur Photographer Contest winners will be announced at 1:00 p.m. At 2:00 p.m. the Friends of Shiawassee NWR will draw their raffle winners who will win between $50 and $500. The event will be held on October 19 from 10:00 a.m. to 2:00 p.m. at 3010 Maple Street, Saginaw. The Friends of Shiawassee NWR will also have refreshments and gifts available for purchase.

National Wildlife Refuge Week is a great opportunity for people of all ages to explore a Refuge. There are eight of these wonderful places in Michigan including Shiawassee, Michigan Islands, Seney, Kirtland’s Warbler, Huron, Whitefish Point, Harbor Island and Gravel Island. Michigan is also home to the first ever, one and only international refuge at Detroit River International Wildlife Refuge. Visit them. Explore what great wild places they are. National Wildlife Refuges are administered by the U.S. Fish and Wildlife Service which is the only federal agency established for the protection of fish, wildlife and their habitats.
Friends of Shiawassee NWR Membership

___ Individual: $10/year or $25/three years
___ Family: $25/year or $60/three years
___ Supporting: $50/year*
   *Includes your choice of t-shirt, sweatshirt or hat. Please indicate your choice.

Name: ____________________________________________
Address: _________________________________________
City: ____________________ State: _____ Zip code: ______
Phone: ____________________ E-mail: ___________________

Please make checks payable to “Friends of Shiawassee NWR”,
PO Box 20129, Saginaw, MI, 48602

Your membership is important to us and to the Refuge!
Membership fees and cash donations go towards Refuge projects like newsletter publication, maintaining trails, sponsoring programs, buying bird see and much, much more. Fill out the above application and mail today! You can also visit our website at http://friendsofshiawassee.org for more information.

Board of Directors

Joe Davila – President
Dick VonBerg – Vice President
Kim LeBlanc – Vice President

Rich Hodge - Treasurer
Janine Spencer - Secretary

Refuge Manager: Doug Spencer
Volunteer Coordinator/Green Point Director: Becky Goche
Newsletter Editing and Layout: Becky Goche and Michelle Vander Haar
Website: http://midwest.fws.gov/shiawassee

Green Point Environmental Learning Center
3010 Maple Street
Saginaw MI 48602
(989)759-1669

Shiawassee National Wildlife Refuge
6975 Mower Road
Saginaw MI 48601
(989)777-5930
Calendar of Events

Open House Weekend
September 7, 10:00 a.m. to 4:00 p.m.
Curtis Road parking lot
- Self-guided Auto Tour
- Children’s activities
- Refreshments for sale
- Vote for your favorite photo at the Refuge Headquarters

September 8, 1:30 p.m. to 6:00 p.m.
Curtis Road parking lot
- Bike-a-thon sponsored by Friends of Shiawassee NWR
- Refreshments for sale

Goose Hunting
October 12 – November 3
- October 12 – 13: Reserved Hunting
- October 19 – 20: Youth Hunting Only
- Daily lottery drawing at 5:30 a.m. at Refuge Headquarters.
- Doors open at 5:00 a.m. for registration.
- 30 blinds available in Refuge crop lands.
- Up to 3 people per blind. A fee of $4.00 per person is charged.
- One (1) Canada goose per day.

NWR Week Celebration
October 19, 10:00 a.m. to 2:00 p.m.
Green Point ELC
- Safari Club International display
- Children’s activities
- Refreshments for sale
- Announce 2002 Photo Contest winners at 1:00 p.m.
- Friends of Shiawassee NWR raffle drawing at 2:00 p.m.

2002 Trail Closures
Hiking trails will be closed to all public use on the following dates for goose and deer hunting in the immediate vicinity.

Ferguson Bayou Trail at Curtis Road
- October 12 – 31, daily until 1:00 p.m.
- November 1 – 10
- November 15 – 18
- November 23 – 24
- December 1 – 10
- December 13 – 18
- December 27 – 31

Woodland Trail at Stroebel Road
- November 1 – 10
- November 23 – 24
- December 13 – 18
Aleisha Troendle Returns to Shiawassee for Summer

By Aleisha Troendle, SCEP

Hello, everyone. It has been good to see some of you again this summer. Yes, I have been back working here at Shiawassee. For those of you who don’t know me, my name is Aleisha Troendle. I am a SCEP (Student Career Experience Program) and I am working as an intern here at Shiawassee NWR. My emphasis this summer has been public use and I have been helping give and develop environmental education programs for school age children. I also designed a display that is at Delta College in their new biology wing which talks about Shiawassee NWR, Green Point and the Centennial celebration for the National Wildlife Refuge System. My other major duty this summer was to supervise our YCC crew and crew leader. YCC is the Youth Conservation Corp. They have been finishing different maintenance type projects around the Refuge as well as learning some environmental concepts related to working at the Refuge.

North St. Paul, Minnesota is my hometown and I attend school at the University of Wisconsin - River Falls. This December I will graduate with a major in Conservation, double emphasizing in Natural Resource Management and Environmental Science and a minor in Music. After graduation I will be looking for an environmental job hopefully with the Fish and Wildlife Service and near my home. I really enjoy teaching environmental education and want to continue in that direction.

Friends Group Proposes Visitor Contact Station at Cass River Unit

By Becky Goche, Park Ranger

The Friends of Shiawassee NWR have proposed to open a Visitor Contact Station at the Cass River Unit, site of the proposed Great Lakes Discovery Center. Board members have toured the site and have discussed various options with Refuge Manager Doug Spencer. Their plans are to remodel one of the barns currently on the property to house a book store, information desk, and a few displays. They hope to begin the remodeling work this winter and open the Contact Station next Spring. The Contact Station will be operated by volunteers and will be open to visitors on weekends during nice weather from May to October.

Staff from the Refuge have completed the parking lot on this unit and continue to do some finishing work, such as putting in gates and guide signs. A trail has been mowed to the Cass River. The Friends group will be constructing and installing a kiosk for interpretive signs in the parking lot. A fishing dock has been ordered and will be put in next Spring. The parking area for the Cass River Unit should be open this fall to the public. Activities in this area will include hiking, cross country skiing, bicycling and fishing. Please remember that no pets, horses, snowmobiles, ATVs or other motorized vehicles are allowed. All other Refuge regulations are also in effect.

Staff from the Refuge have completed the parking lot on this unit and continue to do some finishing work, such as putting in gates and guide signs. A trail has been mowed to the Cass River. The Friends group will be constructing and installing a kiosk for interpretive signs in the parking lot. A fishing dock has been ordered and will be put in next Spring. The parking area for the Cass River Unit should be open this fall to the public. Activities in this area will include hiking, cross country skiing, bicycling and fishing. Please remember that no pets, horses, snowmobiles, ATVs or other motorized vehicles are allowed. All other Refuge regulations are also in effect.

"The Friends group's primary mission is to help the Refuge in whatever way it can."

A few area organizations, besides the Friends of Shiawassee NWR, have approached the Refuge to do projects in the area funded through various grant programs. If you are interested in learning more about how you can help with a project at the Cass River Unit or with other Refuge programs, please contact our Friends group. The Friends group’s primary mission is to help the Refuge in whatever way it can. You can help just by joining and getting involved!
Eagle Scouts Complete Projects on Refuge that Visitors Can Enjoy

by Becky Goche, Park Ranger

If you have been on the trails lately off of Curtis Road or at Green Point, you may have noticed some improvements and additions. As a part of earning their Eagle Scout rank, three young men completed projects that visitors can now enjoy.

Rob Reichle, of St. Charles, constructed a photo blind overlooking a marsh along the grass loop near the Grefe Tower. Rob and his crew of volunteers spent 68.5 hours in November and December, in between all the deer hunts, completing this project.

Eric MacKinnon, of Frankenmuth Troop 275, constructed an accessible boardwalk from the trail to the photo blind built by Reichle. He and his crew spent 233 hours during June and July completing this project. The Friends of Shiawassee NWR helped purchase some of the materials.

Eric Kubica, also of Frankenmuth Troop 275, did trail maintenance at Green Point during July and August. He and his crew applied woodchips to a heavily used trail and also installed identification signs on several of the trees along the trail.

All of these young men initiated these projects by contacting us for ideas, securing materials and donations, coordinating volunteer workers, and completing the projects on schedule. They demonstrated leadership skills way beyond their years and I got just a quick glimpse of what it takes to become an Eagle Scout. Thank you Rob, Eric and Eric!
Over 10,000 years ago, Shiwaassee National Wildlife Refuge was blanketed by a large glacial lake that etched out the flat terrain and gave the area's nickname - The Flats. Today, it is one of the largest and most productive wetland ecosystems in Michigan.
Shiawassee National Wildlife Refuge is one of over 520 refuges in the National Wildlife Refuge system, a network of U.S. lands and waters protected and managed for wildlife, habitat and people by the Department of Interior's U.S. Fish and Wildlife Service.

A Look Back at the Flats
Over 10,000 years ago, much of east-central Michigan, including the present-day Shiawassee National Wildlife Refuge, was covered by a large, glacial lake. You can still see the evidence of this ancient lakebed as you look across the landscape. The terrain is very flat, hence the reason why many people call this area "The Flats."

The first people came here approximately 5,000 years ago. This area was an attractive hunting and gathering area for many early cultures and later Native American tribes, like the Odawa and Ojibwa. Ducks and geese flocked to this vast area of wetlands and rivers. Other animals including otter, fisher, marten, elk, moose, and bear were also found here.

The Flats was thought of as a swampy wilderness area and received little human impact until the late 1800s when the lumber industry expanded into this area. Coal mining began in the early 1900s and lasted until the late 1930s. In 1903 farmers began converting the land for crops and by 1950, a system of pumps, drainage tile, ditches and dikes were in place, making this an extensive agricultural area.

Where Waters Meet
Shiawassee NWR was established in 1953 to restore and enhance this historically significant wetland area for migratory waterfowl. The refuge contains over 9,200 acres of bottomland-hardwood forests, marshes, pools, fields, and croplands. An additional 7,500-acres could be added in the future. Four rivers meet on the refuge - the Tittabawassee, Flint, Cass, and Shiawassee.
Important Bird Area
The refuge’s diverse habitats and land management practices result in a great variety of wildlife species occurring here. Over 200 species of migratory birds, including raptors, shore and wading birds, and more than 100 songbird species visit the refuge annually. Shiawassee NWR is designated as a United States Important Bird Area (IBA) for its global significance to migratory waterfowl. During peak populations in late October, up to 25,000 Canada geese and 40,000 ducks are present. See the refuge’s bird brochure for more information.

Wildlife enthusiasts may see or hear muskrat, beaver, coyote, snapping and painted turtles, white-tailed deer, garter and fox snakes, leopard frogs, and a variety of insects and spiders. Patience and knowing where to look are key to seeing many of these creatures.

Wetland and Wildlife Management
The large central portion of the refuge is composed of managed wetlands. Controlling the level of water in these areas is the refuge’s most important wildlife management objective. Using dikes, pumps and gravity flow structures, the staff floods or drains these wetlands in order to achieve desirable conditions. A variety of wetland types are maintained including marshes, bottomland forests, wet meadows, and seasonally flooded impoundments. Each of these has its own distinct community of birds, plants and other life that depend upon it throughout the year.

Farming is another wildlife management tool you see used on parts of the refuge. Farmers harvest a portion of the crop, leaving the rest in the field for wildlife to use as a food source.
Partners for Wildlife

Shiawassee NWR administers the “Partners for Fish and Wildlife Program” in central lower Michigan. This program helps private landowners protect and restore wetlands, native grasslands, instream fishery and riparian corridor habitat for migratory birds and other fish and wildlife species. For further information contact the refuge or see the web site at http://partners.fws.gov.

Satellite Refuges

Shiawassee NWR also manages two other wildlife refuges in Michigan. Information about the following refuges can be obtained by contacting the Shiawassee NWR.

- Michigan Islands NWR in Lake Huron, including the Charity Islands in Saginaw Bay.
- Wyandotte NWR in the Detroit River.
Shiawassee National Wildlife Refuge
6975 Mower Road
Saginaw, MI 48601
989/777 5930

Website address:
http://midwest.fws.gov/shiawassee

U.S. Fish & Wildlife Service
1 800/344 WILD
http://www.fws.gov

Deaf/hard of hearing individuals may reach Shiawassee NWR through the Michigan State Relay System at 1 800/649 3777 (V/TTY).

Available in alternative formats upon request.
The Public Is Welcome!
There are a number of activities the public can participate in throughout the year at Shiawassee NWR.

Hiking
The refuge maintains three public trails that highlight the unique features of the area. These trails are open year-round, seven days a week, during daylight hours. Please note that hours and access to the trails may be limited during hunt periods. The Woodland Trail, at the east end of Stroebel Road, offers 4.5 miles of trails through bottomland hardwoods. You can see a large pile of shale left over from the coal mining period of the early 1900's.

Ferguson Bayou Trail
The Ferguson Bayou Trail, at the west end of Curtis Road, has over 4.5 miles of trails. This trail follows dikes and provides views of croplands, sloughs, forests, fields, wetlands and pools. There are three observation decks along the trail, two equipped with spotting scopes, to offer you a closer look at ducks, geese, deer, and other wildlife.

Green Point Environmental Learning Center
The Green Point Environmental Learning Center in Saginaw offers 2.5 miles of trails for hiking and cross-country skiing only. Trail use may be limited due to seasonal flooding and wet conditions.

Bicycling
Both the Woodland and Ferguson Bayou trails are open to bicycles. Use of the Woodland Trail may be limited due to seasonal wet and flooded conditions.

Cross-Country Skiing
We do not groom our trails, but most can accommodate skiers.

Fishing
Fishing is available by boat on navigable waterways flowing through the Refuge. Boat access into the marsh and pool units of the refuge is not allowed. Bank fishing is allowed at designated spots along the Tittabawassee River at Green Point Environmental Learning Center and off of the Woodland Trail.

Hunting
Portions of the refuge may be open to goose and deer hunting by special permit. Maps showing open areas and details on refuge hunting programs are available at the headquarters.

Environmental Education
You and your students can explore the refuge on your own or participate in a guided activity. Our Green Point Environmental Learning Center, located at 3010 Maple Street in Saginaw, provides a variety of environmental education programs for children and adults. Hiking trails, interpretive displays inside an accessible building, vegetation demonstration plots, and a wildlife viewing area provide numerous study sites. Visitors are welcome to stop by, but groups need to schedule their visits in advance by contacting the Green Point ELC at (989) 759-1669.

Share your special talents and skills. You could collect biological data, perform light maintenance, or help out with special events. If you are interested, contact the Refuge Volunteer Coordinator.

Rules and Regulations
Enjoy your visit, but remember, protecting wildlife, plants, and their habitats is our priority. Regulations exist for the welfare of wildlife, as well as for your safety. Please read and comply with the following list of regulations. The list is not inclusive.

- Obey posted "Closed Area" and "Refuge Boundary" signs
- Stay on established roads and trails
- The following are prohibited!
  - Firearms and other weapons, unless you have a refuge hunting permit and appropriate State-issued license
  - Pets
  - Collecting, removing, or damaging artifacts, plants or animals, including insects
  - Snowmobiles, ATV's, watercraft, and other motorized vehicles within the Refuge boundaries
  - Camping
  - Open fires
  - Spotlighting wildlife
  - Littering

Hours
The refuge headquarters, located on the corners of Curtis and Mower Roads, is open 7:30 a.m. to 4:00 p.m., Monday through Friday throughout the year. Closed on all federal holidays. Refuge visitors are welcome to stop by if they have questions or need assistance.
Rivers of Time
To the French it was Les Fourchettes, "The Forks"—so named for the rare merging of the Tittabawassee, the Shiawassee, and the Cass Rivers. To earlier inhabitants it was Shows-kokon and O-zhaw-wah-quah, "Green Point." The rivers provided abundant game for hunting, as well as a transportation route for traders. Many years later, these same rivers attracted lumbermen, miners, and farmers to the area.

Green Point's History
In 1977, the Goetz Grove Nature Center began providing environmental education for the Saginaw area. A year later, the city of Saginaw built the interpretive building and renamed it the Green Point Nature Center. For ten years, thousands of people learned about nature before the center closed in 1988. In 1993, the U.S. Fish and Wildlife Service and the City formed a partnership to reopen Green Point. Today, staff from the Shiawassee National Wildlife Refuge operate the center.

Water, Wildlife and You!
Our mission is to provide environmental education opportunities for the children and adults of the Saginaw Valley. Green Point's programs revolve around our theme “Water, Wildlife, and You!” In addition, we are dedicated to the protection and management of our various habitats and committed to extending access to the largest possible user population for educational and recreational purposes.

Diversity is the Key
Habitat diversity is essential to a successful environmental education facility. Located just north of the Shiawassee NWR, Green Point has 76 acres of diverse habitats that range from bottomland hardwoods to wetlands, to ponds and fields, even rivers and grassy lawns. Each of these habitats supports hundreds of life forms. It is a great place to learn about nature!

Rules and Regulations
Protect Green Point’s fragile plants and wildlife, and make your visit safe and enjoyable by following these rules and regulations.

- Stay on marked trails.
- Bicycles are not allowed on the trails.
- Dogs and other pets are not allowed.
- Leave all plants, animals, and artifacts as you found them.
- Camping, hunting and building fires are NOT permitted.
- Please pack out your litter.

Green frog,
Myles Willard

Things to Do at Green Point
We provide a variety of environmental programs throughout the year for school groups, scout groups, educators, families, and others. Contact the Center for an Educator’s Guide which lists our educational programs.

- Trails are open daily during daylight hours only. Trail maps are available in the building. Explore diverse habitats on over 2.5 miles of nature trails.
- See displays and aquariums with native fish species. Visit our Wildlife Discovery Room. Both the building and restrooms are accessible. Hours are Monday through Friday, 7:30 am to 4:00 pm. Closed on federal holidays.
- Do trail work, help out with school groups and more.
- We do not groom trails, but most can accommodate skiers.
- Allowed only on the bank of the Tittabawassee River. No fishing in the ponds.
Address
Green Point ELC, 3010 Maple Street
Saginaw, Michigan 48602

Directions to Green Point
From I-75
Take the I-675 exit. Follow I-675 and take the Michigan/Davenport exit. Head south on Michigan Avenue for about 3 1/2 miles. Turn south (left) onto Maple Street and go 1/2 mile. The Center is located on the right side of the road.

From M-46/Gratiot
Take M-46/Gratiot to Center Road. Head south on Center for 1 mile. Turn east (left) onto Michigan Avenue and go 1-1/2 miles. Turn south (right) onto Maple Street and go 1/2 mile. The Center is located on the right side of the road.

For more information or to schedule a program contact the Green Point Environmental Learning Center at (989) 759-1669. TTY users may reach us through the Michigan State Relay Center at 1-800-649-3777.
Have You Ever...
- Fished, hunted, boated or bird-watched along the rivers?
- Enjoyed a hike or bike ride on a trail through the Shiawassee National Wildlife Refuge?
- Stopped to admire the wildflowers blooming?
- Watched a Bald Eagle soar or a Blue Heron fish?

These are just a few activities and opportunities available at the Shiawassee National Wildlife Refuge. If you enjoy these activities and would like to show your support for them, become a "Friend of Shiawassee".

With your help, innovative programs and facilities will continue to be made available.

Who We Are
Membership of the Friends of Shiawassee National Wildlife Refuge is a collection of mostly local people. We enjoy nature and wildlife. We are dedicated to the continuing protection of special places to renew the spirit and soul of mankind. We are dedicated to teaching our children and the children of our communities the importance of our own very special wild places.

Our Goals
- Support the Multi-use concept
- Inform the public through interpretive tours and workshops.
- Provide opportunities for volunteers
- Locate funding for projects and activities to enhance the refuge and its facilities.
- Inform elected officials about refuge issues.

What You Can Do
Join us, be an active participant—exciting things are happening. Even if you do not have special skills or equipment we need help to:
- Stuff envelopes
- Make telephone calls
- Run errands
- Open mail
- Write articles and letters
- Attend special events

Please check the box if you can help us with any of these items:
- Writing articles
- Public Relations
- Public Speaking
- Grant writing
- Fund raising
- Newsletters
- Brochures
- Photography

Computer Skills
- Scanner
- Digital Camera
- Web page Design
- Adobe Acrobat
- CD writer

Major software used: ______________________

Specialized software: ______________________

I have access to:
- Copy machine
- Printing facility
- ______________________
- ______________________
- ______________________

I have connections with other organizations who would support the Friends: ______________________

I have another way in which I would like to help: ______________________
We Need a Few Good People

Do you enjoy the outdoors?

Do you want to help protect the natural resources in the Saginaw Bay Watershed?

Are you willing to make a difference?

If you answered yes to any of these questions, you may be the person for us.

The “Friends of Shiawassee NWR” is a local, non-profit organization devoted to protecting and preserving the natural and cultural resources of the National Wildlife Refuge. The Friends act as the collective citizen voice for the Refuge in a variety of arenas to raise awareness of the Refuge through outreach and environmental education efforts.

Yes! I want to be a Friend!

NAME _________________________________
ADDRESS ____________________________________________
CITY ____________________________
STATE ______ ZIP __________
TELEPHONE (_____) ____________________________
EMAIL ________________________________

_____ Regular membership ($10) or 3 yrs ($25)
_____ Family membership ($25) or 3 yrs ($60)
_____ Supporting membership ($50)**

Please make your check out to “Friends of Shiawassee” and send it with this form to:

Friends of Shiawassee National Wildlife Refuge
PO Box 20129
Saginaw, MI 48602

** Your choice of T-Shirt, Sweatshirt, or cap included. (Please indicate choice)