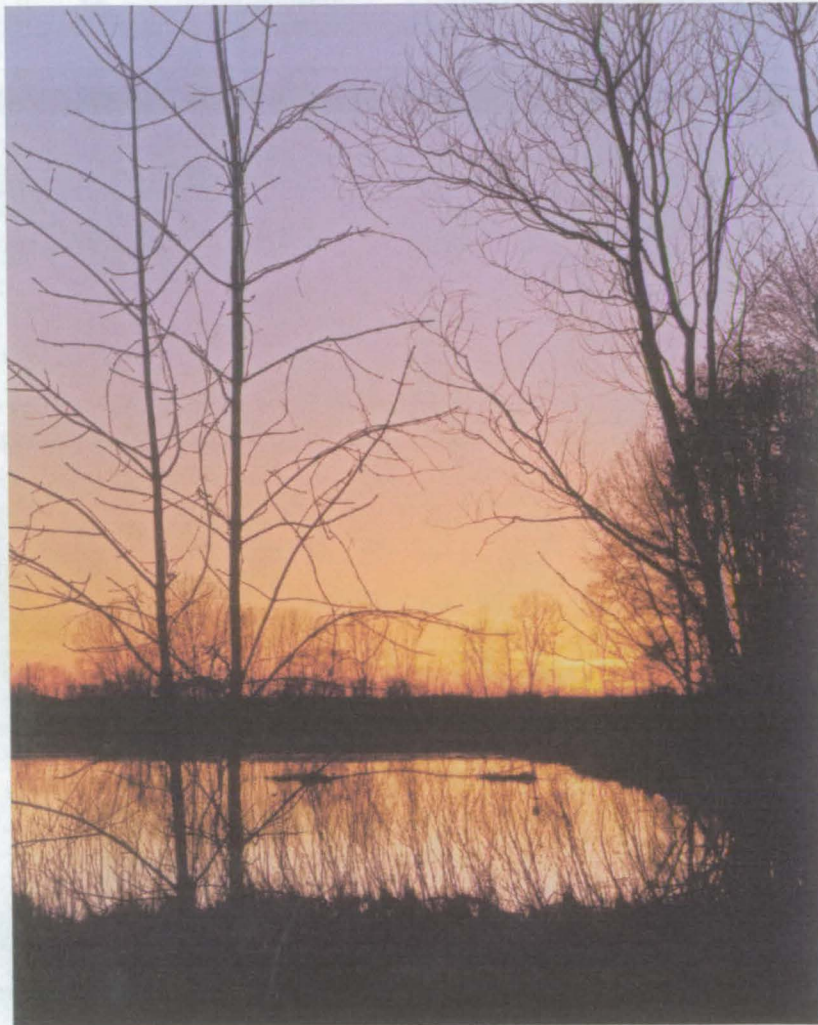


# SHIAWASSEE NATIONAL WILDLIFE REFUGE

Saginaw, Michigan

## ANNUAL NARRATIVE

Fiscal Year 2005



*[Signature]* 10-23-2006  
Refuge Manager Date

*[Signature]* 10-27-06  
Refuge Supervisor Date

*[Signature]* 10.27.2006  
Regional Chief, NWRS Date

"Day's end at Shiawassee"  
by Doug Thornhill - 2005  
Refuge Photo Contest,  
Refuge Manager's Choice  
and 2<sup>nd</sup> place in Habitat  
category.

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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 is 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.

Shiawassee NWR, a portion of an area known locally as the *Shiawassee Flats*, has a contributing drainage area of approximately 6,260 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.).

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 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 48 counties in central and southern Michigan. It includes 115 easements (159 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 staff the Shiawassee NWR. The positions include a refuge manager, a refuge operations specialist, a wildlife biologist, a fish and wildlife biologist, an administrative support assistant, a tractor operator, an engineering equipment operator, and two park rangers.

## HIGHLIGHTS

- First record of clay-colored sparrow on Refuge (Section 1A).
- Refuge water levels reach normal levels (Section 3A).
- Refuge forest inventory continues (Section 3E).
- Dioxin issues associated with the Tittabawassee River continue (Section 6C).
- Michigan governor plus many others "discover" Shiawassee NWR (Section 7).
- Several refuge staff changes occur during the year (Section 8B).
- Refuge improvement projects benefit fish, wildlife, and the public (Section 8B).

## CLIMATE DATA

The climatic conditions experienced by Shiawassee NWR moved through three distinct patterns. The winter and early spring were wet with above average temperatures, late spring through most of the fall conditions were dry and cool, and from late fall through early winter the refuge experienced a wet climate with average temperatures. Spring migrants responded by pushing through the area quickly. In various refuge habitats, plants responded with early development and vigor, mast production was excellent, and crops were harvested on time though yields were average to low. Just when regional Great Lakes water levels were nearing long term averages, precipitation deficits again dropped lake levels back towards record lows. This makes a significant difference in frequency and duration of flooding on refuge lands, and affects the ability for mechanical manipulation of water levels. With the higher levels at the start of the year, the refuge was able to inundate portions of the green tree reservoirs and provide some migrant waterfowl use. However, dry conditions anchored the next seven and a half months, providing only a very narrow September window to place water on the moist soil units.

# 1. MONITORING AND STUDIES

## A. SURVEYS AND CENSUSES

Appropriately so for a refuge established as a migratory bird sanctuary, birds continued to be the dominant group of animals surveyed at Shiawassee NWR in 2005. A vacant bio-tech position most of the year meant that forest interior bird point counts were not conducted, and effort given to bi-weekly waterfowl surveys was reduced. However, the loss in overall effort that this represented was offset by the reintroduction of a marsh bird taped-call playback survey, now in an improved, standardized version; and by an increase in the number of informal surveys, particularly of passerines. The one bird survey conducted at the refuge from which results are submitted to a continental bird monitoring database is the International Shorebird Survey (ISS), which has been conducted here weekly since 1988, during all months that shorebirds are present.



Sandhill cranes nested in two locations on the refuge this year. This colt was seen on May 5, 2005. Photo by Ed DeVries

The most uncommon bird sighting during the surveys this year was a pair of clay-colored sparrows. This represented the first record of this species for the refuge and for Saginaw County as well. Other out of the ordinary bird species recorded included snowy egret, Ross' goose (an annual visitor to Shiawassee NWR, but still considered rare in Michigan), trumpeter swan, red-necked phalarope, and cerulean warbler. The previously mentioned increase in the number of informal songbird surveys resulted in new single day peak counts for at least eight species. These included not only those which are migrants, such as gray catbird and golden-crowned kinglet, but also a number of year round residents, such as red-bellied woodpecker and hairy woodpecker.

Other than the previously mentioned ISS, the only other refuge survey that contributes to a collective database used specifically for population monitoring is the Michigan Frog and Toad Survey route, which is coordinated by the state. 2005 was the tenth consecutive year this survey was conducted. The route was also accepted into U.S. Geological Survey's North American Amphibian Monitoring Program (NAAMP) in mid-

2004, so this year was the first time data from the survey was also submitted to this program. Results from this year's survey were encouraging from a breeding population perspective, with full choruses heard at a record number of stops for wood frog, western chorus frog, and northern leopard frog.

No formal invertebrate surveys were conducted in 2005, but work to at least catalog these important components of refuge biodiversity continues on an ongoing informal basis. Some specific efforts for damselflies and Orthoptera were initiated, but this didn't take place until rather late in the year, so a limited number of species were catalogued. Work will be continued in spring 2006.

Refuge white-tailed deer populations are surveyed via a winter aerial count and summer vehicle counts. The former produced a total of 455 in January, while the later indicated a buck to doe sex ratio of 1.4:1.

## **B. STUDIES AND INVESTIGATIONS**

Long-time volunteer Bob Grefe, together with volunteer Caroline Szaroletta and others from the Saginaw Valley Audubon Society, operated a Monitoring Avian Production and Survival (MAPS) station again in 2005. Located in Gosen Marsh, this is one of the few MAPS stations to be located in open meadow habitat. Red-winged blackbird, bobolink, and sedge wren are the primary nesting species being mist-netted and banded.

The frog abnormality investigation, carried out by Barbara Hosler (Ecological Services Field Office, Lansing) and refuge staff, was canceled this year. Refuge reports showed outstanding leopard frog tadpole populations at the intended sample locations. As the dates for sampling these sites drew near and tadpoles matured reaching a stage of metamorphosing, they simply disappeared. Surveys and sampling could find no signs of tadpoles or recently metamorphosed frogs. Leopard frog populations on other portions of the Refuge also declined from bumper numbers observed the previous two years. No explanation could be found for the crash in the populations at the sample sites.

Refuge staff and volunteers assisted members of the Alpena Fisheries Resources Office, providing labor during field operations investigating lake sturgeon on the Saginaw River system. On a daily basis, throughout the spring period, volunteers helped monitor set lines (trot lines) and egg mats below barriers on the four major tributaries forming the Saginaw River. This was the first year of a three year project to document lake sturgeon use on this river system and evidence of spawning. The project is funded through the Saginaw Bay Watershed Initiative Network and the National Fish and Wildlife Foundation. Partners include Michigan Department of Natural Resources, Dow Chemical, the city of Frankenmuth, Friends of Shiawassee NWR, and refuge personnel. Friends of Shiawassee volunteers and refuge staff provided approximately 160 hours to the project in 2005 and have committed to providing additional assistance in the coming years.





Refuge staff and volunteers assisted Alpena FRO with a sturgeon study on area rivers in April, 2005. Photo by Ed DeVries.

Dr. Kurt A. Buhlmann visited Shiawassee NWR for a three day period in August as part of a larger investigation covering Habitat Management Recommendations for Turtles of Conservation Concern on National Wildlife Refuges. During this timeframe, members of the staff accompanied Kurt on a visual evaluation of refuge habitats. The purpose was to assess whether appropriate habitat, both current and historical, exists for Blanding's turtles. Although no Blanding's turtles were observed during the three days, assessment of potential habitat, photographic evidence and verbal accountings document the occurrence of these turtles on the refuge. Documenting the presence of viable, reproducing populations would be the logical next step and funding sources are being sought to carry out this work. A report summarizing his work has been provided to the National Fish and Wildlife Foundation.



Although this is clearly a painted turtle, Dr. Kurt Buhlman was looking for Blanding's turtles as part of an assessment study on August 5, 2005. Photo by Ed DeVries.

## **2. HABITAT RESTORATION**

### **A. WETLAND RESTORATION**

#### **OFF-REFUGE**

The Shiawassee National Wildlife Refuge administers a 22 county Private Lands Wetland Management District (PLWMD) located in central Michigan. In FY 2005, Shiawassee NWR restored 132.5 acres (31 basins) of wetlands in 15 counties in the Saginaw Bay Watershed. These restorations were accomplished under the Service's Partners for Fish and Wildlife (PFW) Program in partnership with Ducks Unlimited Inc.- Great Lakes/Atlantic Region, and the Arenac, Gladwin-Claire, Huron, Isabella, Lapeer-St. Clair, Mason-Lake, Ogemaw and Sanilac Conservation Districts.

One of the restored sites was at the Oaktree Elementary School, part of Goodrich Area Schools in Genesee County. The site was a small emergent wetland drained by a ditch that led to a pond on a neighboring farm. The Oaktree Elementary teachers started a program for the students, using the site to study wetlands, but because the site dried up during portions of the year, it was not fully useable for their program. The wetland is surrounded by a hardwood forest with a trail system used by the school's physical education class, the cross country team and local community members. The trail user's only way to cross the ditch was via a few logs. This drainage ditch was not only a hindrance to the developing environmental education curriculum but a safety hazard for the trail users.

The PFW program designed a wetland restoration for this site which included a culvert set to raise the water level by 1.5 feet. A 2.5-foot high ditch plug with a top width of 10 feet and 5:1 slopes now provides a safe, useable crossing for the trail users, and a great access site to the wetland for the students to use when studying the habitat and wildlife using the area.

A grassland/wildflower site was also established upstream of the restored wetland. This site will also be incorporated into the environmental education program and be used by the trail users of the school. The grassland site is approximately 3 acres in size and was previously a large spoil pile created from building the new junior high school on the same parcel. This site was sprayed and tilled in 2004 to kill the existing grasses and then was planted in the spring 2005 with a native warm season prairie and wildflower mix. Both of the restored habitats are responding nicely and the school has received many comments on the crossing improvements as well as the wildlife use.

Another project completed in 2005 was referred to the PFW by the Ogemaw County NRCS/ Conservation District office. The property owner contacted the NRCS in hopes of restoring a 30-40 acre emergent wetland which was drained due to a breach in an existing beaver dam. The dam, approximately 200' long and 30' wide, was a truly impressive structure but was abandoned by the beavers for unknown reasons. The landowner had rebuilt the dam which he used as a crossing to access a 15-acre landlocked



area of his 80-acre parcel. The berm included 3 culverts ranging from 6" to 30" in diameter. The largest culvert was set on the bottom of the plugged ditch, which allowed the wetland to drain down to a minimal size and become inundated with reed canary grass.

The wetland was restored by replacing 3 culverts with a rock spillway in an existing ditch crossing. Michelle Vander Haar worked with the MDEQ and the landowner to apply for a permit to take out the culverts and replace them with a rock rip-rap spillway. In order to maintain an existing farm crossing further upstream, the spillway was placed 2.5 feet higher than the culverts and the restoration was limited to 20 acres in size. This wetland has a watershed greater than 300 acres with natural springs along the way.

The wetland is surrounded by a variety of habitats including active agriculture, hay ground and bottomland hardwoods including a great mix of cedars, firs, oaks and other tree species. There was also a buffer created along the wetland edge to provide some grass nesting cover for local waterfowl.

This project was designed to include different types of habitats for migrating birds. The wetland basin is filling well and wildlife is responding. Within one week after construction was finished there was a pair of sandhill cranes, a green heron, great blue herons, and a few mallards using the site. When the site is fully established, it will include feeding, nesting, resting and brood rearing habitat for shorebirds, wading birds and dabbling duck species. It will also attract local reptiles, amphibians and mammals. A number of bald eagles nest in this county and could benefit from a restoration of this size. This site will also serve as a placement site for wood duck boxes, which will be constructed and put up by an Eagle Scout project through Shiawassee National Wildlife Refuge.

## **B. UPLAND RESTORATION**

Nothing to Report

### **3. HABITAT MANAGEMENT**

#### **A. WATER LEVEL MANAGEMENT**

The enduring low water cycle experienced by Saginaw Bay and Lake Huron again had direct impact on management of refuge wetlands. Greentree reservoirs and moist soil units carried standing water only during the spring period and were dry the remainder of the year. Low river levels have encouraged continued development of emergent and moist soil plants along portions of the waterways. Precipitation during the summer was minimal and fall rains were late in coming. These combined factors altered the types and abundance of species using many of the habitat units.

Results of management on the various pools, marshes and moist soil units are summarized in the following sections.

##### **POOL 1A**

This 315 acre open water unit offers year round habitat to a variety of waterfowl, marsh and water birds, and occasional seasonal habitat for shorebirds. Along with the adjacent 241 acre mosaic of shallow seasonal pools, moist soils, emergent marsh and grasslands in the Trinklein Tract, this pool acts as part of a larger complex used by the birds. The refuge operated this pool as an emergent marsh/open water area during the spring flights and the pool was used chiefly by waterfowl as a loafing area during this time. As summer progressed, the pool was set to operate approximately 6 to 12 inches lower than the previous year. A summer and early fall drought, along with water management manipulation to operate the pool at a lower level created a change in the vegetative response. The portion of the pool normally inhabited by submergent vegetation was covered in a large part by a community of emergent water lily. As evaporation continued to lower water levels the refuge decided to take advantage of the situation and renovate portions of the cross dike exposed to wave action and erosion. By early fall, portions of the pool developed mudflats. However, these sites occurred too late in the year to encourage germination of moist soil plant communities. This provided some habitat for shorebirds during the fall flights. When fall rains finally came and river levels permitted water management, the refuge chose not to add water to this unit, in order to continue the dike renovation. The habitat conditions mentioned above along with fall flights arriving late for the second straight year, reduced waterfowl use during this timeframe.

##### **Grefe Pool**

This is a 190 acre sister unit to Pool 1A and part of the pools/conversion complex described in the previous segment. Management objectives for this pool are also the same as Pool 1A. This pool also is an open water/emergent marsh habitat. It has a unique feature of woody plants encroaching along scattered islands and dikes offering some distinctive sites for wading birds and has reached a height that offers some potential for nesting night herons. Grefe Pool water management was designed to operate at water depths 1 to 1.5 feet deeper than Pool 1A. Evaporation and drought from spring through

much of the fall lowered water levels a little over 1.5 feet. This lower level allowed a more diverse group of birds to use the pool during the fall period, including waterbirds, marsh and shore birds, ducks and geese. Water levels finally turned around in late fall and early winter (just before ice-up) when precipitation raised depths of approximately ½ foot.

## **Pool 2**

A mid-January thaw with rains elevated water levels in this recently renovated 115 acre wetland to "pool full"; over topping its low level dikes. Weather patterns quickly reverted to normal winter conditions, encasing the pool in ice and retaining water depths at their maximum level. In early April, conditions at last melted the ice and the refuge was able to commence a gradual drawdown, lowering the depth to a foot below the top of the spillway. From this point, the water management plan called for retaining as much water as possible, in hopes that muskrat populations would be nurtured and provide major impacts to the dense emergent vegetation. In an effort to foster this goal, trapping on the pool was limited to the dike. The recent invasive plant incursion of purple loosestrife along dike edges in this unit has been checked by the proliferation of *Galerucella* beetles on the refuge. Future water management plans for this pool will be centered on moving the area to a hemi-marsh condition. Nesting waterfowl and marshbirds used this unit extensively.

## **Pools 3 and 5**

Management of these two adjacent "greentree reservoir" pools, totaling 820 acres, is intended to provide secure loafing and feeding areas for waterfowl during migration periods. As in the past few years, these units could be used as greentrees only during the spring migration. An early winter thaw with rains elevated river levels high enough to overtop the spillways and cover about ½ of the wooded area. Afterward, the pools quickly became ice covered and remained that way into early April, thus limiting the duration of waterfowl use in the spring. By early May, the pools were lowered to protect the forest tracts. Warm weather and lack of precipitation left the units with only scattered standing water going into September. A quick set of rains allowed the refuge to add water to the pools and provide standing water in the slough meandering through Pool 3. However, this surge of water didn't last long enough to push up into Pool 5, which was left with only scattered standing puddles throughout the slough. The refuge was unable to place additional water into the pools during the remainder of the year, thereby reducing fall waterfowl use.

## **North Marsh**

This 113 acre wetland is providing an emergent marsh habitat used by waterfowl, marsh and shorebirds plus a variety of other wildlife. Over the last few years renovations have molded North Marsh into a wetland complex. The complex incorporates Eagle Marsh, North Marsh and Moist Soil Units 3 and 4. Spillways have been set at heights allowing a more natural state of water movement. A typical spring season results in flooding this entire set of management units. As water recedes it leaves a mosaic pattern of shallow open water, emergent marsh, and wetland grasses. The draining is gradual, encouraging successful fish spawning, egg development, and fingerling movement and

growth.

This marsh unit followed the same seasonal pattern mentioned above in the other pools. A winter thaw covered the entire area with standing water, which quickly iced over and remained this way into April. When things finally warmed up, migrating and nesting species quickly moved into the area. A gradual decline in water depth continued from April through early September when the refuge pumped water into the marsh. This brought the unit back to a condition where standing water covered the area to spillway height. For the remainder of the year the marsh fluctuated around the spillway height until ice again covered the area. A few scattered *phragmites* plots were observed this year and some received chemical treatment.

### **Trinklein 1N, 1C, 1S**

These three wetlands totaling 241 acres complete the wetland complex mentioned in the first two sections. They comprise a mosaic pattern of semi-permanent marsh, moist soil areas, and brood habitat. At the beginning of the year the units were wet and ice covered. This persisted into April with birds anxious and waiting to use the area. As soon as the areas thawed, wildlife made extensive use of the units. Boards were pulled from the water control structure in Trinklein 1N to develop conditions for a prescribed fire planned for this portion of the complex. The other units were allowed to function naturally with evaporation gradually drying the areas out. A state-wide burning ban prevented the refuge from carrying out the fire within the prescription window as planned. After the spring period, the units remained dry for almost the remainder of the year. Invasive plants have not been a problem in these units since the 2003 treatments, though the refuge is somewhat concerned with the reed canary grass encroachment into portions of these units.

## **B. MOIST SOIL MANAGEMENT**

The refuge currently has five units designed for moist soil management in various states of operation. The following summarizes activities and results for the year.

### **MOIST SOIL UNIT 1**

This 137 acre wetland is usually operated for optimum waterfowl feeding potential during the spring and fall flights. The unit sometimes provides mudflats for shorebirds after waterfowl migration. Last year was the second year of a new cycle of moist soil management for the unit. In 2002-03, agricultural practices were used to eliminate invasive plant communities and move the unit back to preliminary stages of management. The weather pattern and water regime experienced throughout the area in 2005 also affected management of this moist soil unit. As with all the wetlands on the refuge this past year, MSU 1 remained frozen and ice covered through early spring. When the unit thawed in early April, the tract immediately commenced a gradual drawdown as planned. By the end of the month most of the field was mudflat except the northwest corner. Precipitation kept the tract in this condition through May. Even though wildlife use was delayed by cold temperatures, extensive numbers of migrating birds still managed to use the field during the spring. In June, plant surveys showed

excellent production of smartweed with cocklebur also quite common. From this point the refuge moved to a program of adding water to the unit at every opportunity. This only occurred at the end of June and the first part of September, where standing water only developed in the interior ditches and a small portion of the northwest corner. This spring and summer water regime created a plant community which was 60% smartweed and some late millet, 10% sedges, 15% emergents such as cattail and bulrush, and 15% upland plants such as cocklebur. Purple loosestrife and woody plant growth was not reported. The unit went into the fall mostly dry as previously noted and little waterfowl use was recorded.

## **MOIST SOIL UNIT 2**

This 75 acre unit is operated and managed with the same intent as MSU 1, and is sub-divided into two separate water controlled moist soil units (MSU 2E and 2W). The renovation of MSU 2E, originally scheduled for 2002, was finally carried out last year. This tract, as with MSU 1, went through an early drawdown starting in the first part of April. By the first part of June the field was dry enough to commence the renovation work. A 27 acre portion of the moist soil unit was treated to remove a dominant reed canary grass and purple loosestrife community. This resulted in an 80% kill of these plants and was followed by mowing and double disking in August. The refuge tried to add water to the field after these preparations, using the chopped plant matter as a media for invertebrate development. This occurred in the first part of September with most of the renovated area holding standing water. For the remainder of the year the tract vacillated from mudflat to standing water, resulting in three distinct biomes. A reed canary grass community covers the southeast portion of the MSU, a renovated bare soil area with standing water dominates the largest portion of the field, with moist soil plants composing the central core.

Moist Soil Unit 2W started the year virtually dry with water only in the ditches. Over the winter and early spring enough precipitation occurred to cover the field with standing water. This situation provided some waterfowl use until evaporation gradually dried the tract out. The unit remained dry from June into September when the refuge was able to pump water into the edges of this field. The plant community showed little change from 2004, with reed canary grass dominant throughout the field. Other common plants were cattail, sedges, rushes, smartweed and ditch stonecrop on the wetter sites and burdock and squirreltail grass on the drier locations. Wildlife use during the summer was pretty much limited to grassland birds such as bobolink. MSU 2W went into the fall totally dry except for ditches along the edges and received almost no waterfowl use.

## **MOIST SOIL UNIT 3**

This 92 acre field 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. MSU 3 is positioned on the southwest quarter of the North Marsh Complex and bears the highest elevations of any portion of the area. The unit is dominated by an interesting historic wetland prairie community; primarily cordgrass with a moist soil understory. MSU 3 offers ideal spring waterfowl use, and during wet periods fall use by waterfowl and marsh birds is also good. The hydrology of the unit and complex also benefits fish as this natural cycle frequently provides ideal spawning conditions for adult fish, and plenty of



cover for juvenile fish, along with easier movement patterns in and out of the unit.

In 2005, the unit went through a winter thaw that flooded the entire site and then quickly froze again. Water levels under the ice continued to decline leaving shelf ice throughout the field; a dangerous condition for wildlife. The tract remained in this condition into early April, with water continuing to drop. This offered little waterfowl use during the spring migration. After the unit thawed, water continued to decline through the summer. In early September, water was pumped into the tract. Still, evaporation had pretty much dried the unit out by the end of the month. With fall rains late in coming and heavy vegetation covering the unit, waterfowl use was deterred. Cordgrass still dominated the field with emergent species found in the northwest portion of the field. A small *phragmites* community found along the eastern ditch was treated and appears to have been eradicated.



Portable Moist Soil Unit pump used for M.S.U.'s 3 and 4. Photo by David Peters.

#### MOIST SOIL UNIT 4

This unit is the last portion of the North Marsh Complex mentioned above, and the 82 acre moist soil unit operates under the same cycles. This tract went through the same water regime reported for MSU 3. Shelf ice and late winter weather impacted spring waterfowl use. When the field finally thawed, the tract was used extensively by waterfowl during the remainder of the spring migration. A gradual decline in water level continued through summer and early fall, until the refuge added water to the area by pumping in early September. Water levels remained in the range of 581.85 m.s.l. through the rest of the year. Plant response to this water regime was identical to past years, with an emergent /moist soil plant community covering the northern 1/3 of the tract, woody vegetation dominated by willow over the middle 1/3, and a cordgrass/reed canary grass site covering the southern 1/3 of the field. A prescribed fire planned for the year had to be delayed due to a state wide burning ban. A small encroachment of *phragmites* located between the emergent and woody communities will be chemically treated in 2006.

#### KAUFMAN TRACT

This unit was formerly a 71 acre farm tract, and was recently converted to

wetland. In most years, the unit operates naturally as a moist soil unit. However, with private property issues along the west boundary of the tract, little if any active management can take place. Currently the refuge has repaired breaches to the dike by placing spillways in these locations set at the height of 590.00 and added an Agri-Drain water control structure along the east side. This should relieve the pressure on weakened dikes along the south and east sides and permit some future water management. However, with flooding concerns and the lack of dikes along the north and west sides, the refuge has been limited to a narrow window of water control. Currently, the refuge manages spring water levels with four boards set in the Agri-Drain. Any river water levels deeper than this will carry water through the tube or over the spillways until the river recedes. Afterwards, water will gradually drain through the Agri-Drain until the four-board level is reached. At this point, the tract will have standing water covering from  $\frac{1}{2}$  to  $\frac{2}{3}$  of the unit, with the northwest  $\frac{1}{4}$  dry. This appears to be a good compromise with neighboring land owners. As the spring wanes, the refuge places additional boards in the water control structure to prevent any flooding into the area unless the river overtops the spillways. The unit is allowed to gradually evaporate during the summer and fall, until crops have been harvested, then boards are again removed, leaving just four in place. This pattern has resulted in a plant community with grasses (reed canary grass) dominating most of the area, with some woody and other invasive plants developing along the transition line between the grass areas and the lower sites dominated by moist soil plants. In 2005, as in most years, waterfowl made good use of the area during the spring period but avoided the area during the fall, when the field was totally dry.

## **C. 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 are 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 throughout the year. Management of a portion of this grassland acreage calls for prescribed burning, and with tracts such as the Trinklein Conversion and the prairie cordgrass community, more burning activity has been planned. The 91 acre Bremer Tract, a portion of the Trinklein Conversion, was set for a prescribed fire in 2005 but had to be canceled due to a state wide burning ban. Burns are intended to reduce fuels and understory matting, reduce woody encroachment, and improve nesting cover for grassland birds. The success or lack of success of using this technique could be partially evaluated from the Monitoring Avian Production and Survival (MAPS) data being gathered on this tract. The long term average for captures on this site totaled 60 birds per season. One year after the 2003 prescribed burn the trap total increased to 123 birds. This would seem to indicate that prescribed fire may be a valuable tool for grassland maintenance. Generally, bird numbers have responded well to recent conversions from agricultural use and improvement of habitat conditions. The results have included very large flights of migrating grassland birds, increased nesting, and increased wintering populations of



hawks and owls.

## D. FARMING

The refuge managed 1,270 acres as cropland under a soybean/corn/small grain rotation last year. The primary objective for the program is to provide food for waterfowl during spring and fall flights, support a greater complexity of habitats within the refuge, and support the managed goose hunt. The 2005 growing season was about average for the cooperators, with good corn yields and just slightly below average soybean harvests. The cool spring and late spring rains delayed the planting of many of the fields. The late planting was followed by normal temperatures and only scattered rains during the growing season. The late planting resulted in reduced yields in some crops. However, the delay in fall moisture did permit farmers to harvest the crops as they matured and dried. Waterfowl made good use of these areas during migration periods, as well as the winter season for feeding and loafing. Especially notable was the lack of waterfowl use in the barley units during the fall migration period. This was attributed to the delay in fall flights due to warm weather, and the large quantity of food sources available to the birds when they arrived post harvest.

The 51 acre Houlihan Rd. Tract which was retired in 2003, was mowed in 2005 to reduce competition to the warm season grasses. The additional acreage (180 acres involving the land exchange with the State of Michigan) that was to be retired in 2005 was again farmed as a result of delays in obtaining grant funds to restore natural habitats on the designated tracts. The cooperator was asked to plant soybeans over the entire tract to reduce mechanical preparations on the site and permit work to be started later in the fall if funds were available. This work is now scheduled for 2006.

## E. 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 hardwood made up of second growth, even-age stands. The exception is the upland tract of the Cass River Unit totaling 18 acres. Especially notable in this stand are the very mature beech trees and the abundance of understory forbs such as trilliums (see photo at left). The refuge's forest management goal is

to develop a two tier canopy forest, favoring mast and cavity producing trees without jeopardizing populations of forest interior birds. Regeneration of the selective and clear cuts carried out in the late 1980's has shown steady improvement. Seedlings such as

green ash and cottonwood have shown significant growth. Other trees species such as oak, hickory and maple appear to be improving, but a significant portion of the year's growth is browsed by deer. Seedlings, planted by the refuge in lowland areas appear to be a marginal proposition. These plantings suffer exceedingly high mortality (often 90 % or more) as a result of periods of severe drought or flooding, wildlife browsing, poor planting techniques and mowing. Glossy buckthorn has invaded the edges of several wooded tracts. Efforts to set back this invasion were carried out along tracts off Creswell, Houlihan and Evon Roads along with some efforts on the Woodland Trail system and in the North Marsh area. Plants were given a combination treatment of mowing and chemical applications. Initial observations indicate early treatments were very successful, but as the growing season waned, the sites frequently required follow up treatments to be effective.

A long-term project begun in 2003 to inventory and analyze the forested habitat throughout the Shiawassee and Michigan Islands NWR's, was delayed in 2005. This was the result of a loss in staff and funding. The purpose of this inventory is to use the information obtained to evaluate current forest habitat conditions relative to our habitat management goals as outlined in the refuge Comprehensive Conservation Plan. These are the initial steps in developing a forest management plan for the refuges. After reviewing several different inventory systems, the refuge decided to base the inventory on the U.S. Forest Service FS Veg Common Stand Exam protocols. So far over 900 acres of forest have been examined and inventoried.

In 2005, a final report on Michigan Islands NWR Inventory Project was submitted to the Michigan Department of Environmental Quality, which provided the funds to carry out the project work. The refuge has been working with Huron-Manistee National Forest silviculturalists to ensure protocols have been followed, in order to evaluate and analyze the data collected. Early in 2005, the first two years of data collection had been analyzed by the Forest Service, and output of tables and graphs had been received.

Additional work on the forest inventory project will be carried out as staffing and funding permit. Some effort by the current staff needs to be placed into incorporating the outputs from the first years into GIS attribute mapping layers.

## **F. FIRE MANAGEMENT**

In 2005, fire was not used as a management tool on the refuge. New policies, procedures, staffing, limited number of burn plans, personnel scheduling problems, and weather patterns (which infrequently fit prescription parameters) have all narrowed the window for prescribed fire operations. Two fires were scheduled for 2005, but both had to be delayed when the State of Michigan instituted a state-wide burning ban. No wildfires were recorded on the refuge and with better weather conditions out west this summer, refuge personnel were not needed to contribute to the national fire fighting effort.



## G. PEST PLANT CONTROL

Field observations of the Bremer marsh revealed treatments carried out in 2003 were very effective, with no woody invasion reported this past year. A few scattered purple loosestrife plants were recorded in this unit, but the plants showed sign of beetle impacts. No control efforts were undertaken, with hopes that the beetles will completely deter development of this pest in 2006.

Scattered small encroachments of willows and cottonwood were individually spot treated with chemicals. A few colonies of giant reed (*Phragmites sp.*) totaling a couple acres in the North Marsh Complex were treated with glyphosate. The heavy outbreaks of invasive garlic mustard reported in 2004 were reduced in 2005 by natural causes and no control efforts were expended on this pest species. In MSU 2E, about 27 acres were plowed and double disked to control reed canary grass and purple loosestrife.

Major efforts were expended to control invasive glossy buckthorn in a number of areas on the refuge. Control efforts started at the Cresswell parking area and moved north along the Birch Run drain, up into the Houlihan Road area, moved west to the Birch Run Bridge, continued north on the cross road between Houlihan and Evon road, and finally extended west along Evon Road, heading into the North Marsh Complex. Cutting and chemical techniques were used to rid the refuge of the plants in these locations. Treatments continued through August and ended with the refuge obtaining good control of most treated sites. Efforts will continue in 2006.



*Galerucella* larvae on purple loosestrife. Photo by Ed DeVries.



## 4. FISH AND WILDLIFE MANAGEMENT

### A. BIRD BANDING

The Eagle Marsh nest produced a single eaglet which was banded in May. Banding efforts carried out by refuge personnel to assist the Michigan DNR with resident Canada geese and mallards in the early fall were canceled in 2005. The refuge made no effort to band black ducks this past year, due to a change in priorities. The MAPS (Monitoring Avian Production and Survival) banding site was operated again this year. Volunteers were able to capture and band 67 birds comprised of sedge wrens, bobolinks, American goldfinch, red-winged blackbirds, common yellowthroat, yellow warbler, mourning warbler, phoebe, northern flicker, savannah sparrow, swamp sparrow, song sparrow, indigo bunting, brown-headed cowbird, and downy woodpecker.



East Lansing Field Office Biologist Carrie Tansy and Refuge Biologist Jim Dastyck banded and took samples from a female refuge eaglet in May, 2005. Photo by Ed DeVries.

### B. DISEASE MONITORING AND TREATMENT

The Saginaw County Mosquito Abatement Commission again removed discarded tires from the refuge. In addition, they continued to monitor disease vector mosquitoes in 2005. The outbreak of West Nile Virus that was so active in 2002 has pretty much run its course, though there was a slight upswing in activity in 2005, with 31 dead birds reported with the virus, although none came from the refuge. No human cases were reported for Saginaw County in 2005. Refuge monitoring of mosquitoes did show positive samples for the virus from the refuge.

### C. REINTRODUCTIONS

Nothing to report

## **D. NEST STRUCTURES**

Shiawassee NWR has both wood duck and bluebird nest structures. Volunteers Gary VanKirk and Lidia Godina manage these nest boxes, respectively. A total of 37 wood duck nests structures were available in 2005, a mix of 54 double and single apartment boxes. Of these, 39 were used by wood ducks, 7 were used by both wood ducks and hooded mergansers, and another 5 were used just by hooded mergansers. Three nest boxes were not used during the year. Three of the nests showed owl use after wood ducks used them. Of the total 551 wood duck eggs laid, 223 hatched (41%) and 5 eggs were removed for the dioxin study (see Section 6C). A total of 39% out of 86 mergansers eggs hatched, with 5 removed for the dioxin study. Six dump nests were found in the boxes, where a dozen or more eggs were laid and then abandoned. This may be due to nests being in close proximity to each other. For this reason, double nest boxes are gradually being replaced with single structures.

During the 2005 season there were 30 bluebird nest boxes available for use. Of these, four were used by bluebirds with 5 nestlings fledged. Tree swallows nested in 8 of the boxes with 30 nestlings fledged. The remaining boxes were used by house wrens with 115 eggs laid and 107 nestlings fledged.

## **E. PREDATOR AND EXOTIC CONTROL**

Nothing to Report



## 5. COORDINATION ACTIVITIES

### A. 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.

Refuge staff also participated in Saginaw County's Vision 2020, which has a goal of providing future direction for the County by developing strategies and actions in the areas of education, economic development, quality of life, government, infrastructure, and leadership. The refuge participates in the River Corridor Task Force which has a goal of protecting the Saginaw River system while providing recreation and further riverfront development in an environmentally responsible way.



U.S. Congressman Dale Kildee visits with Refuge Manager Steve Kahl during his visit here in June, 2005. Photo by Ed DeVries.

## **B. TRIBAL COORDINATION**

Nothing to Report

## **C. PRIVATE LANDS ACTIVITIES**

The Shiawassee NWR-PLWMD is responsible for a 48 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.

Shiawassee NWR has two staff members who are responsible for the management of 93 easements. In addition, the Michigan Private Lands Office (MIPLO) in E. Lansing inspects 22 easements.

Resale of easements and property (easements) division continues to occur. Of the 115 easements managed by this office, we identified 159 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.

Approximately one quarter of the easements were visited this year in order to resolve violations, check boundary signs, and to speak with new landowners. In April, the Warner and Bryans units of the Selby Easement in Barry County were surveyed and re-posted following a long period of time when no boundary signs existed as they had been removed in years past. Re-rod was driven underground at the survey points so ensure their integrity.

Special use permits (SUP) are issued every year to conservation easement landowners to assist with habitat management and improvement. In 2005, permits were issued for grassland maintenance, pond development and to establish food plots. The development of general guidelines for timber cutting was also initiated in 2005. These guidelines will be given to interested landowners to assist with the development of their timber management plans in order to receive a SUP for this practice.

### **TECHNICAL ASSISTANCE PROGRAMS**

Approximately 52 private land sites in the Shiawassee PLWMD 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). Only one Debt for Nature or debt write down request was received in 2005 to protect 80 acres of tillable and non-tillable farmland with a 50 year easement.

The Shiawassee NWR-PLWMD assisted the NRCS, Saginaw Bay Wetland Reserve Program (WRP) teams in determining wetland eligibility and ranking requirements for 1,014.5 acres signed up for the 2005 Wetland Reserve Program across southern Michigan. The WRP team consists of an NRCS soil scientist, engineer and district conservationist, a Department of Environmental Quality (DEQ) biologist and a Service or State biologist. Assistance was also given on several Conservation Reserve Program (CRP) and Conservation Reserve Enhancement Program (CREP) potential easements.



## 6. RESOURCE PROTECTION

### A. LAW ENFORCEMENT

At the beginning of the year there was one commissioned refuge officer on the refuge staff (Ed De Vries); a dual function law enforcement officer/refuge operations specialist. However, because the Regional Office approved filling Shiawassee's full-time park ranger (LE) position in November, Ed decided to concentrate his efforts on refuge management and turn in his law enforcement credentials. Ed's final day of providing law enforcement for Shiawassee NWR was May 5, 2005. Zone Law Enforcement Officer Kevin Shinn continued to be housed here at Shiawassee NWR and provided a much-needed law enforcement presence from the time Ed De Vries gave up his law enforcement credentials to when the new full-time park ranger (LE) reported for solo duty.

On January 15, 2005 Jonathan Priday was hired to fill the full-time park ranger (LE) position vacated when Kevin Shinn was promoted to the Zone Law Enforcement Officer for Michigan, Indiana and Ohio. Jonathan Priday came to Shiawassee NWR without prior law enforcement credentials and therefore was required to attend the Federal Law Enforcement Training Center (FLETC) in Glynco, GA for 19 weeks, Refuge Officer Basic School in Shepherdstown, WV for 2 weeks and the Service's field training program for 10 weeks prior to conducting solo law enforcement. Jonathan's field training consisted of 4 weeks at Detroit Lakes WMD, 1 week at Crab Orchard NWR and 5 weeks at Shiawassee NWR. Kevin Shinn acted as Field Training Officer for Jonathan's field training conducted at Shiawassee NWR.



In these two cases, failure to display a required recreational use permit at Crab Orchard NWR lead to vehicle stops and Refuge Officer Priday issuing citations for marijuana possession and driving under the influence of a controlled substance. Photo by Geoff Donaldson.

In September, Jonathan Priday and Kevin Shinn participated in a special operations team comprised of USFWS Special Agents, Refuge Officers, Zone Officers and Sherburne County Sheriff's Deputies tasked with apprehending the cultivators of 170 marijuana plants discovered growing within the Sherburne National Wildlife Refuge, Sherburne, MN. A week of round-the-clock surveillance resulted in Jonathan executing

an arrest, serving a search warrant on the suspect's residence, transporting the suspect to a detention facility, transferring custody of the suspect to the Federal Marshals in Minneapolis, MN and submitting written testimony to a Federal Grand Jury.

Despite sporadic law enforcement coverage provided to Shiawassee NWR in FY 05, law enforcement officers managed to spend approximately 300 hours in the field, visit 10 conservation easements and issue a total of 5 Notices of Violation (NOVs). Notices of Violation were issued for offenses including hunting, trespass, motor vehicle violations, and dumping. Jonathan Priday is expected to complete his field training in October 2005 and as a result it is expected that the number of NOVs issued in FY 06 will increase.

## **B. PERMITS AND ECONOMIC USE MANAGEMENT**

A total of 18 special use permits were issued this year for activities which included archaeological research, contaminant assessments, wildlife research, trapping, and wildlife photography within closed areas.

## **C. CONTAMINANT INVESTIGATION**

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 regarding this carcinogen, 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 then 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 the DEQ posted area boat landings with public health risk advisory signs.

In 2003, the State of Michigan issued a report commissioned through Galbraith Environmental Sciences which detailed the risks associated with sediments in the Tittabawassee River. The report, entitled "Tittabawassee River Aquatic Ecological Risk Assessment Report" stated that dioxin and furan contaminated sediments in the Tittabawassee River downstream of the City of Midland pose significant reproductive, embryo, and early life-stage mortality risk to fish-eating birds and mammals. In addition, the DEQ sampled residential properties along the Tittabawassee floodplain throughout 2003, and found dioxin levels as high as 5,660 parts per trillion (ppt) of dioxin toxic equivalence. The DEQ has currently established that dioxin concentrations below 90 ppt in soil are acceptable for direct human contact on residential property. Subsequent to this, the DEQ sent out a warning to school districts to advise them against using township and county parks along the Tittabawassee River for field trips and events, in order to

avoid exposure to high levels of dioxin. Approximately 11,000 homes along the river may also face DEQ designation as hazardous waste facilities

Based on a wild game study performed in 2003, the Michigan Department of Community Health (DCH) issued a health advisory for consuming wild game from the Tittabawassee River Floodplain. The advisory stated that eating deer, turkey, or squirrel from this area could result in adverse health effects. Subsequently, Shiawassee NWR posted this advisory at refuge parking areas near the Tittabawassee River, and letters regarding this advisory were sent to refuge deer hunters who had been issued permits to hunt in that area the past two years.

Currently, there is a fish consumption advisory for consuming fish from the Tittabawassee River, Saginaw River, and Saginaw Bay. In the late 1970's, the U. S. Environmental Protection Agency (EPA) identified Dow Chemical as the primary contributor to dioxin contamination in the Tittabawassee and Saginaw Rivers, as well as Saginaw Bay. Studies in 1983 determined that dioxin contamination in fish from these waters posed a risk to fish consumers. In July, 2004 the EPA again produced a statement which determined that dioxins in Tittabawassee River fish present unacceptable risks to public health. Based on recent studies by Dow and the Michigan DEQ, the EPA called for another complete and comprehensive look at the dioxin issue, using a multimedia approach and risk analysis of the dioxin problem. A public health consultation released in July, 2005 by the U. S. Department of Public Health and Human Services' Public Health Service, assessed the health risk of eating walleye, bass, catfish, and carp from the Tittabawassee River. The consultation recommended that people should continue to follow fish consumption advisories previously issued.

In 2004, the Department of Community Health drew blood from 25 residents of the Tittabawassee floodplain to determine levels of dioxin. The blood sampling was conducted at Green Point ELC as part of a \$40,000 study. Dust samples were also taken from the residents' yards. Dow also sponsored a \$15 million study through the University of Michigan to take blood samples from 548 people along and near the Tittabawassee River, as well as from 183 residents of Jackson and Calhoun counties for comparison purposes. Dust and soil samples were taken from their residences, and a questionnaire for 1,300 people was completed. Results from these studies will be available in summer, 2006.

In another study, Limno-Tech, a consulting firm hired by Dow, has placed clad pads in various areas along the Tittabawassee River, including the refuge, in order to measure solids accumulation. Chemical characterization will be performed on the accumulated solids. In a third study, launched in May, 2005, the Michigan State University Aquatic Toxicology Lab initiated a 4-year project to evaluate the effects of contaminants on passerine birds, great blue heron, kingfisher, great horned owl, bald eagle, and mink along the Tittabawassee River. This \$5 million study includes dietary analysis, tissue analysis, nesting productivity assessment, and egg sampling.



By years end, the East Lansing Ecological Field Office had begun the initial steps in pursuing a Natural Resource Damage Assessment evaluation for dioxin and furan (PCDD/F) releases to the Tittabawassee River.

## **D. CONTAMINANT CLEANUP**

In response to an environmental audit conducted in 2003, it was determined that floor drains located in the Zone LEO office/garage building and in the Bridgeport Barn required removal. The contract to perform this work was let out at the end of the year.

## **E. WATER RIGHTS MANAGEMENT**

Nothing to Report

## **F. 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 28 sites within the refuge boundaries, 16 of which hadn't been previously recorded. Artifacts salvaged from the refuge date from 1000 BC through the mid-late 19<sup>th</sup> century. The survey will continue in 2006. All cultural items collected, as well as information and field notes are stored and secured at the Saginaw Archeological Commission repository.



Shovel test pit digging and artifact collecting at an archaeological site on the refuge Photo by Jeff Sommer.

## **G. LAND ACQUISITION SUPPORT**

Nothing to Report

## **7. PUBLIC EDUCATION AND RECREATION**

### **A. PROVIDE VISITOR SERVICES**

**The Refuge recorded 53,566 visits in FY 2005. During the year 23 special events were held.**

#### ***Special Events***

The refuge and Friends of Shiawassee NWR began the "Nurturing Nature – First Wednesday Series" on January 5, 2005. This series was held on the first Wednesday of every month and covered a wide range of topics from outdoor cooking to landscaping for wildlife to history. It was geared to expose people to the refuge, educate them, recruit new Friends members, and raise money for the group. Admission for each program was \$2 per person, \$5 for a family and free for members of the Friends group. Janet Martineau, Activities Coordinator for the Friends, and Park Ranger Becky Goche organized the series. Martineau provided a small stipend for each presenter, too. From January through September, there were 8 programs with a total of 154 people attending.

Four guided night hikes were led by Park Ranger Becky Goche and Refuge Volunteer Steve Gasser throughout the year which drew 85 people. The Saginaw Valley Audubon Society, Shiawassee staff, and Friends of Shiawassee NWR hosted guided bird tours for the public and the American Bird Association conference (May 17, 18 and 20). Altogether they reached 167 people.

The weather did not cooperate again this year for the annual International Migratory Bird Day Celebration on Saturday, May 14, 2005. Rainy weather and soft roads from previous rainy days caused the cancellation of the self-guided auto tour, just like in 2004.

Nearly a new record – 821 people in 327 vehicles drove the self-guided auto tour held on Saturday during the annual Refuge Open House Weekend on September 10 and 11, 2005. For a bit of history, in FY1999 there were 940 people and in FY2001 (2-day auto tour) there were 1,352 people that drove the route. The auto tour was from 10:00 a.m. to 4:00 p.m. Sixteen volunteers and Friends members donated 76.5 hours and three refuge staff worked the event.

Ten photographers submitted 17 photos in the Refuge Amateur Photo Contest. The photos were on display at the Refuge Headquarters during the Open House Auto Tour where, 112 people voted for their favorite photos. Winners for the contest were recognized on October 5, 2005, at the First Wednesday Nurturing Nature program. Winners in the "Wildlife and Plantlife Category" were: First place – Benjamin Martinez, Saginaw; Second place – Kim LeBlanc, St. Charles; and Third Place – Steve Gasser, Saginaw. Winners in the "Habitat Category" were: First place – Kim LeBlanc, St. Charles; Second place – Doug Thornhill, Saginaw; and Third place – Ronald Cauvin, Wayne. Winners in the "People Category" were: First place – Steve Gasser, Saginaw;



and Second place – Kim LeBlanc, St. Charles. Doug Thornhill won the “Refuge Manager’s Choice” and Benjamin Martinez won the “Friends of Shiawassee NWR Choice.” Some of the photos from the contest are used throughout this narrative.

### ***Environmental Education***

Environmental education accounted for 1,351 visits both on-site (1,141 students) and off-site (210 students), up from FY 2004 (1,177 visits – 841 on-site and 336 off-site).



Children participating in the Summer Discovery Camp explore the pond to see what kind of insects and plants are found there. Photo by Joy Clark, Refuge Volunteer.

The Summer Discovery Camp for children aged four to six, was held on Saturday, June 25 and again on Saturday, July 23. Eighteen children and 10 parents participated this year. The Junior Refuge Manager Academy for third and fourth graders was canceled due to lack of participants.

### ***Hunting and Trapping***

The refuge offered goose hunting, deer hunting and trapping. Steve Kent with Mid-Michigan Computer Consultants (MMCC) in Bay City, MI, continued to modify and fine tune the software program he developed in FY2003 to select deer hunters using a priority point system. This marked the first year that hunters could apply for deer hunts online. The online application was available to hunters from June 15 through August 1, which marked the deadline for receiving applications. Hunters accessed MMCC’s application site from a link on the refuge’s website. Sixty percent of all hunter applications were received online, three times as many as refuge staff had estimated! Of the 4,658 hunters entered into the deer drawing, 2,797 were done online. The remaining 1,861 applications were entered manually by refuge staff. A summary of deer hunting, goose hunting and trapping can be found in the following tables.



**Table 1: Summary of Deer Hunting for FY2005, FY2004 and FY2003**

	<b>FY05 Hunters</b>	<b>FY04 Hunters</b>	<b>FY03 Hunters</b>	<b>FY05 Visits</b>	<b>FY04 Visits</b>	<b>FY03 Visits</b>	<b>FY05 Hours</b>	<b>FY04 Hours</b>	<b>FY03 Hours</b>
<b>October</b>	147	NA	NA	455	NA	NA	2594	NA	NA
<b>November</b>	297	249	230	792	739	699	5370	5681	5392
<b>December</b>	639	568	272	1670	1494	457	11684	11369	3669
<b>Total</b>	1083	817	502	2917	2233	1156	19648	17050	9061

**Table 2: Summary of Goose Hunting and Trapping for FY2005, FY 2004 and FY 2003.**

	<b>FY05 Visits</b>	<b>FY04 Visits</b>	<b>FY03 Visits</b>	<b>FY05 Hours</b>	<b>FY04 Hours</b>	<b>FY03 Hours</b>
<b>Goose Hunting</b>	644	572	727	3628	2825.5	3635
<b>Trapping</b>	92	80	82	418	320	332

### *Volunteers*



In FY2005, 130 volunteers donated 4429 hours. A Volunteer and Friends Recognition Dinner was held on April 27, 2005. Thirty-six volunteers and Friends enjoyed a catered meal followed by a special program hosted by Assistant Manager Ed DeVries and Park Ranger Becky Goche. Each volunteer received a refuge water bottle. Twelve individuals were recognized for donating 40 or more hours during the year. Dan Patillo received a 1500 hour pin. Bob

Grefe was awarded a 4000 hour pin and was recognized for volunteering at the refuge for 22 years! He became a volunteer on February 24, 1983. Larry Hess was selected as the 2004 Refuge Volunteer of the Year for his efforts in caring for the Woodland Trail. Above photo: Bob Grefe shows a bird he just banded to a young boy. Photo by Becky Goche.

On April 27, 2005, 13 Cub Scouts and 35 sixth grade students from Bridgeport-Spaulding Middle School helped refuge staff plant 350 trees at the Cass River Unit in Bridgeport Township. Park Ranger Becky Goche worked with teacher Aileen Kushner, who had received a grant from the Michigan State University Extension Agency to help get students involved with conservation in their own backyard. The Friends of Shiawassee NWR received a grant (\$191) from the Michigan Arbor Day Alliance which paid for the tree seedlings purchased through the Saginaw Conservation District. Altogether, 58 people donated 80 hours of volunteer time valued at \$800 on this project.





Students who helped plant trees in Bridgeport on April 27, 2005. Photo by Becky Goche.

## B. OUTREACH



The refuge and many other partners sponsored the Kids' Free Fishing Day on June 11, 2005, for 400 children between the ages of three and fifteen. The contest ran from 8:00 a.m. to 11:00 a.m., with registration beginning at 7:30 a.m. Each child received a FWS bag with tape measure, 7-Eleven Slurpee coupon, McDonald's cookies, a Michigan DNR fun fact fishing book, a FWS fishing coloring book and ticket for the prize drawing. For each fish returned, the child was given another ticket thereby increasing his or her chance for the much coveted bicycles. Meijer Stores, Inc. donated nearly 100 prizes valued at over \$1000. The Sons of Italy provided refreshments, most free. Partners included FWS Challenge Cost Share Grant program, Friends of Shiawassee NWR, The Saginaw News, City of Saginaw, Meijer Stores, Dow Chemical Michigan

Division Fishing Club, Saginaw Children's Zoo, Saginaw County Sheriff's Posse, 7-Eleven Stores, and McDonald's. Thirty-four volunteers donated 171.5 hours helping out on the day of the event. Park Ranger Becky Goche coordinated the event. Refuge Manager Steve Kahl and Zone LE Officer Kevin Shinn also assisted. Above photo: A young boy and his father proudly show of the catfish that he caught during the annual Kids' Free Fishing Day on June 11, 2005. Photo by Becky Goche.

The Friends of Shiawassee NWR provided good outreach for the refuge. They participated in the "Pioneer Christmas" held each year at Bridgeport Historical Society's museums. Hundreds of people attend this event and saw the refuge display hosted by Friends members. In addition to helping the refuge sponsor the "Nurturing Nature" series and working with the Saginaw Valley Audubon Society to organize guided bird tours, the

Friends group sponsored two workshops. The "Drawing in Nature Workshop" was held at Green Point on June 4, 2005. Eugene Beckham, a nature artist and illustrator from Midland taught eight people the basics of nature drawing. A "Monarch Magic Workshop" held on June 25 was canceled when the people registered for the class failed to show up. Local naturalist and butterfly expert Denny Brooks was the instructor.



## **8. PLANNING AND ADMINISTRATION**

### **A. COMPREHENSIVE MANAGEMENT PLANNING**

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

### **B. GENERAL ADMINISTRATION**

This year saw several staff changes on the refuge. The Park Ranger (LE/Refuge) position which had been vacant since November, 2003 was filled with the arrival of Jonathan Priday on January 23. Jonathan came to the refuge from an endangered species biologist position at the Ecological Services Field Office in Fairbanks, Alaska. The refuge manager position, which had been vacant since June, 2004, was filled by Steve Kahl on February 6. Steve transferred to Shiawassee from the refuge manager position at Wallkill River NWR in Sussex, New Jersey. Biological Services Technician Rick McAvinchey resigned from the Service effective April 8. Rick's position was not filled due to budget constraints.

The following is a list of employees who were members of the Shiawassee NWR staff in Fiscal Year 2005:

1. Dastyck, James J. - Wildlife Biologist, GS-11, EOD 11/04/90, PFT
  2. De Vries, Edward P. - Refuge Operations Specialist, GS-12, EOD 02/09/92, PFT
  3. Gillette, Mary Ann - Administrative Support Assistant, GS-07, EOD 11/30/03, PFT
  4. Goche, Rebecca S. - Park Ranger, GS-11, EOD 08/22/93, PFT
  5. McAvinchey, Richard J. - Biological Sciences Technician, GS-05, EOD 04/26/98, PPT. Resigned effective 04/08/05
  6. Nowosatko, Marion L. - Engineering Equipment Operator, WG-09, EOD 06/29/78, PFT
  7. Peters, David J. - Tractor Operator, WG-07, EOD 02/01/98, PFT
  8. Priday, Jonathan - Park Ranger (LE), GS-09, EOD 01/23/05, PFT
  9. Kahl, Steve - Refuge Manager, GS-13, EOD 02/06/06, PFT,
  10. Vander Haar, Michelle A. - Fish and Wildlife Biologist, GS-07, EOD 06/29/03, PFT
-



Jim Dastyck



Ed De Vries



Mary Ann Gillette



Becky Goche



Steve Kahl



Rick McAvinchey



"Butch" Nowosatko



David Peters





Jonathan Priday



Michelle Vander Haar



## FACILITIES AND EQUIPMENT

A major project which was completed this year was the improvement of the former DNR boat launch at the M-13/Cass River site. The parking lot boundary area is defined by large concrete blocks, as past use of the site precluded the ability to auger posts and install railings. The 180 linear feet of shoreline are reinforced with a woven mat of concrete blocks with an open cell design. The 16 foot wide by 64 foot long boat launch is made of the same woven concrete material. The parking area received vehicle stops to control parking, and the lot was graded with fresh gravel. A directional island was seeded with native grass seed. The lot can accommodate 14 vehicles with trailers. Funding for this project was provided by the Saginaw Bay Watershed Initiative Network and through a U.S. Fish and Wildlife Service Challenge Cost Share Agreement. Most of the planning, site preparation, and labor were performed force account by refuge maintenance staff.



Before renovation of the boat launch at the Cass River, anglers fished from a steep, uneven bank.



Engineering Equipment Operator Butch Nowosatko and Tractor Operator David Peters prepared the area before they installed the woven mats of concrete.





Looking from the the boat launch area near the bridge down the bank.



Bremmer Road before (left) and after improvement.

Bremer Road, which is an access road to the Misteguay Dike and pump, was improved with the addition of 815 tons of Zone 4 gravel and crushed limestone.

A total of 1300 tons of crushed limestone was also truck spread on the Ferguson Bayou Nature Trail. A timbered catwalk with railing was constructed to provide access to the Misteguay Pump, and a new entrance gate was installed at the southwest corner of the refuge, on the Misteguay dike.

The 1970 International flatbed truck was replaced with a 5-yard International Model 4400 4x2 dump truck.



New dump truck.

#### FUNDING - FY 2005

1121.....	\$ 148,961.00
1261.....	818,173.00
1262.....	217,432.16
6351.....	37,639.67
7201.....	11,602.09
9263.....	<u>13,341.00</u>
Total	\$1,247,148.92

The FY 2005 budget saw a 12.5 % decrease in fixed costs and a 2% cut in annual maintenance funding. Contaminants cleanup funding totaled \$31,500 for floor drain removal, and the Zone Law Enforcement Officer position housed at the refuge added \$107,542 to the budget for salary, support, and travel.



# WILDERNESS AND SPECIAL AREAS

## 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 islands 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 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 17 nesting census by refuge staff revealed 1,563 double-crested cormorant nests, 210 ring-billed gull nests, 117 herring gull nests, 81 Caspian tern nests, 1 great blue heron nest, and 1 black-crowned night heron nest.

The U.S. Fish and Wildlife Service manages Thunder Bay Island under a Cooperative Agreement with the Bureau of Land Management (BLM). Region 3 Realty is currently working with BLM to acquire the north 2/3 of 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 and Alpena Township to gain management of the buildings on 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. A section line boundary has been agreed upon and following contaminants cleanup by the US Coast Guard, the next step will be for the BLM to transfer ownership of the south part of the island to Alpena Twp. and the north portion to the FWS. The Management Agreement states that Alpena Township will have ownership of all the buildings except for the boathouse, while the FWS will maintain management rights over the wildlife and habitat.

In August, the Alpena Fisheries Research Office completed a gillnet survey to obtain fishery data on four islands in Thunder Bay, including Scarecrow and Thunder Bay islands. The work was funded through a Challenge Grant to obtain baseline data and monitor future trends. The work was a cooperative project with the Michigan DNR. The islands provide important feeding, spawning, and nursery habitat for a diversity of fish species, however, population data is needed. Results from species identification, weights, age structure data, and stomach contents data were pending at year's end.

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. Where an old, dilapidated U.S. Coast Guard lighthouse from the 1880's once stood on the southwest portion of the island, there is now a privately owned house. The house stands adjacent to the Big Charity light tower. The owner, Robert Wiltse, who once owned the entire island, ferries visitors out to the island for visits and lodging. A riprapped harbor of refuge was constructed by Wiltse 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.

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 June 9 found 1,604 double crested cormorant nests, 656 herring gull nests, 49 great egret nests, and 15 great blue heron nests.

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, to protect island cultural resources, provide education to the public, and acquire additional Lake Huron islands for further habitat and resource protection.



# CREDITS

Personnel responsible for narrative sections are as follows:

- James D. Dastyck: *Climate Data, Sections 1b, 3 and 4*
- Edward P. De Vries: *Introduction, Highlights, Sections 5a, 5b, 6b-6d, 8, Wilderness and Special Areas, Credits, Appendix, Information Packet, editing, layout, narrative coordination, and compilation*
- Rebecca S. Goche: *Cover page, Table of Contents, Section 7, editing, final layout and production*
- David J. Peters: *Section 1a*
- Jonathan Priday: *Section 6a*
- Michelle Vander Haar: *Sections 2 and 5c*



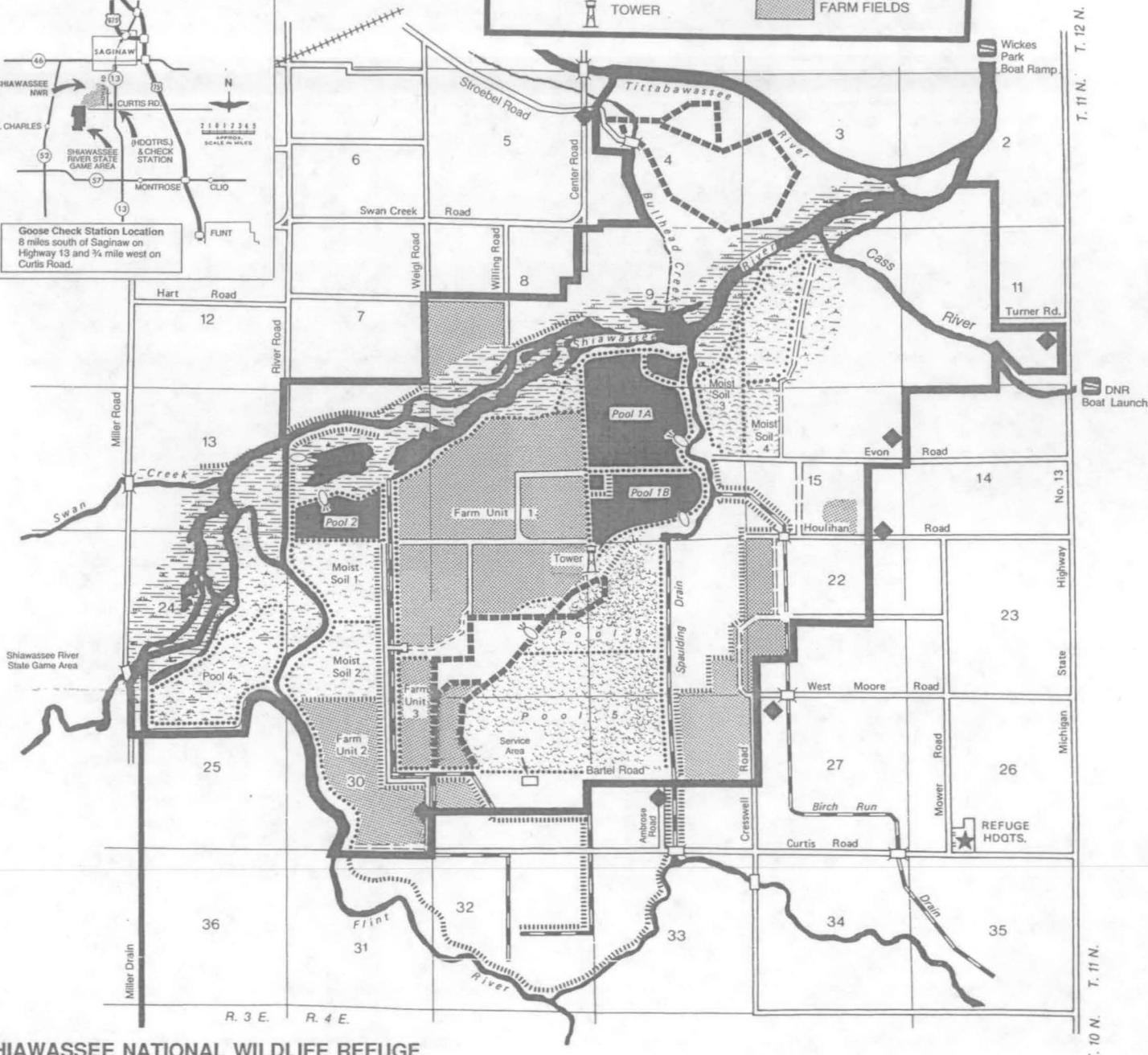
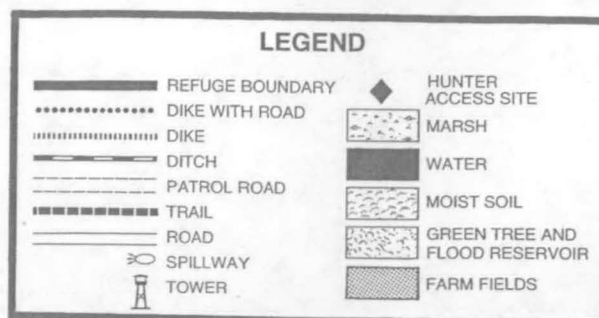
**Enjoy!**

Public Use is restricted to the nature trails.

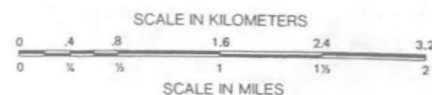
# SHIAWASSEE NATIONAL WILDLIFE REFUGE

DEPARTMENT OF THE INTERIOR  
U.S. FISH AND WILDLIFE SERVICE

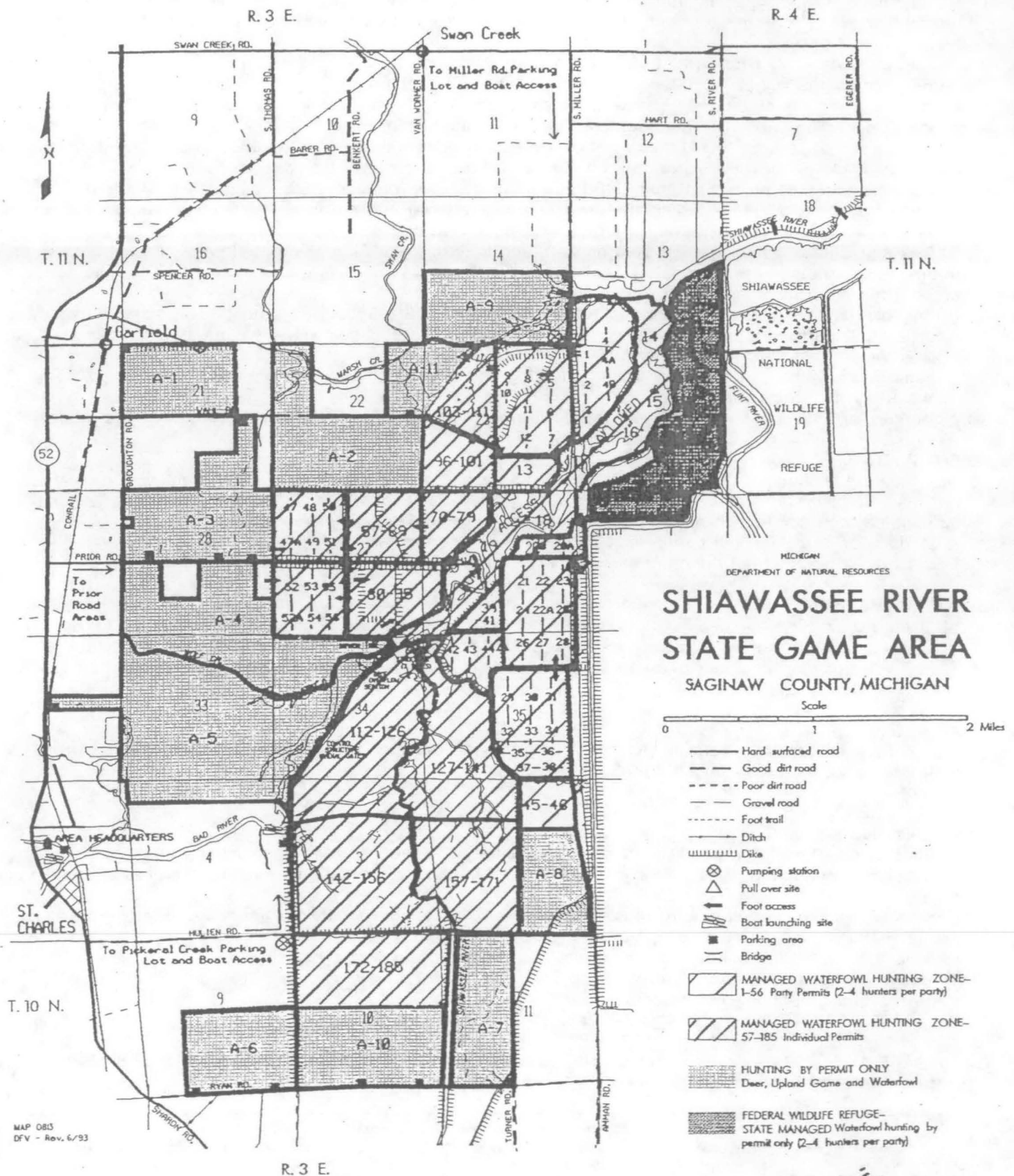
## Refuge Location



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







Hunter Monies Made This Area Possible **DNR**



# 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.**

7/26/94

### 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 6th Avenue, Detroit, MI 48826.

For information or assistance on this publication, contact Michigan Department of Natural Resources, Wildlife Division, P.O. Box 30028, Lansing, MI 48909.



# Refuge Reporter

## Happenings at Shiawassee National Wildlife Refuge

Volume 8, Issue 1

### Friends and Volunteers

By Ed DeVries, Acting Refuge Manager

Recently, Becky and I attended a U.S. Fish & Wildlife Service meeting at the Jordan River National Fish Hatchery (NFH). This fish hatchery is located near Elmira, MI in the beautiful Jordan River Valley just west of Gaylord. The hatchery raises lake trout from the egg stage to fingerling size for release in the Great Lakes. The hatchery has a small visitor reception area which welcomes people to tour their operation. It's an interesting, educational place to visit, and it's only a two hour drive from Saginaw.

What's that got to do with us? Well, the Jordan River NFH is attempting to start a Friends group, so the manager and staff have been sort of picking our brains

lately as far as ideas for starting this group. We have given them some of the obvious suggestions. For example, we advised them to find an energetic, organized community leader or group of leaders to get things kicked off, insure that there are common goals to strive for, make sure they garner publicity for meetings and events, etc. But the hatchery staffs' question to all of this was, why? Why would people want to volunteer to do those things? What's the "hook" you refuge guys use? That's a good question, especially coming from fishery people, and one I have actually thought about quite often. Why would volunteers want to do the work they do on the refuge for free? I suspect we all would have a slightly different answer to that interesting query. Many of us already volunteer for a variety of organi-

(Continued on page 3)

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### New Manager to Report on February 6, 2005

By Barry Christenson, Refuge Supervisor

Steve Kahl has been selected as the new Project Leader of Shiawassee. Mr. Kahl is currently the Project Leader of Wallkill River NWR in New Jersey and will report on February 6. Mr. Kahl has also worked at Iroquois and Montezuma NWR's in New York

and has a Masters of Science degree in Fish and Wildlife Biology from the State University of New York in Syracuse. He has experience in a wide range of resource issues, has excellent communication skills, has extensive experience working with partners on habitat projects, and will be a tremendous addition to an already first rate staff at Shiawassee.

#### Special Point:

- Please check the trail closure schedule before you come out to the Refuge in December.



# Invertebrate Colonist in the New World

Article and Illustration by David Peters, Tractor Operator

Most readers of this newsletter are familiar with invasive species. The zebra mussel and that newest nemesis, the emerald ash borer beetle, are two widely publicized examples of the tremendous effects that non-native wildlife can have on the indigenous biological communities. Both were transported to America unknowingly, through failures to respect the fact that stowing away on an ocean going vessel is, and always has been, a convenient way for small organisms and seeds to make their way abroad. But there are also far too many instances where foreign species have been released on purpose, and due to a lack of thorough scientific evaluation, or just plain negligence, they subsequently spread out of control across the landscape.

The colors red and orange are synonymous with autumn. Traditionally this is for the color of falling leaves, but in recent years it is also the color for the multitude of lady beetles found congregating in and around buildings as winter approaches. Because this exploding "ladybug" population came to be seen as a nuisance to so many people, it was soon well known that these mobs were in fact lady beetles of Asian origin, deliberately released in this country to prey on tree aphids. There has been much discussion of methods for eradicating them from kitchens, but far less consideration of the biological cost of this introduction run amok. Unfortunately, it is now evident that the Asian lady beetle is likely to be a major contributing factor in the widespread decline of native lady beetle species.

beetles, including the nine-spotted, to be entirely absent. Similar findings continue to emerge from all across the country. Despite lady beetles being less obscure than most insects, these declines have occurred rapidly and almost without notice, and the results appear to be devastating.

The connection between the rise of the Asian lady beetle, and the decline of the natives, lies in the fact that the large populations of the more aggressive introduced species, which is also far more general in what it will eat, are simply able to out-compete indigenous lady beetles for food resources. Subsequently, the rich diversity of the North American lady beetles is in jeopardy, and a little more of the overall natural biodiversity of the land is eroded, including that of Shiawassee NWR, where introduced lady beetles are now the most common species.

This case illustrates the results of the global mixing of species that is now occurring at its fastest rate ever. Nowhere, not even within the boundaries of a National Wildlife Refuge, are America's plants and wildlife, be they rare or as common as lady beetles, safe from the threat of introduced invasive species. While it would be foolish to believe that unintentional introductions of non-native organisms could be fully eliminated, they can, with far better care than has been taken in the past, be reduced. Concerning purposely introduced species, such as the insect just discussed, there is no justification in this day and age to allow such releases without first thoroughly researching any potential negative effects. For your part, remember to plant only native plants or those proven to be non-invasive, and by all means, please don't buy insects to release in your garden. They have wings and will find it on their own, maybe even a hungry nine-spotted lady beetle or two.



There are, or were, five hundred distinct species of lady beetles indigenous to North America. Some are generalist in their habitat, others more restricted in distribution, but they are the dominant natural predator of aphids and other such soft-bodied insects. However, recent surveys of the native nine-

spotted lady beetle, which ranged across the United States and was the most common lady beetle in the northeast, did not find any in that region, and only a few individuals in the Midwest and West. Surveys in South Dakota have found several once common lady



## Friends and Volunteers...the "hook"

(Continued from page 1)

zations, including churches, libraries, community improvement groups, and so forth. We all achieve a certain amount of satisfaction from being a part of these "bigger pictures." Many of us have a deep-seated need to give back to our communities and their various components. We'd also like to have a sense of ownership. And besides all that, we feel a sense of accomplishment when mutual goals are met. I guess I've answered my own question. What do you think?

To answer the "hook" question, quite likely the hook is Shiawassee NWR itself. The refuge is an easy sell. As refuge staff, we never tire of talking about this place, and we enjoy sharing it with others. And if some group wants a tour of the area, we always try to accommodate them. It gives us a chance to show off this wonderful gem to others and experience it anew through their eyes. Besides, we love to be out there too! Many of you have already taken advantage of opportunities to get a "behind the scenes" look at the refuge. You've already seen and experienced the "big picture." There will be similar opportunities in the future for the rest of you. These experiences will naturally increase your sense of ownership and partnership with the refuge, and will renew your appreciation for what our mission is. The product of this is that you'll be better "missionaries" for us, helping us inform the greater community as to what Shiawassee NWR is all about, and why we do the things we do.

And speaking of this, I just want to say that it's wonderful to see volunteers working on refuge events, trails, gardens, hunts, displays, etc., throughout the year. We also appreciate the uncounted hours the Friends Board invests in monthly meetings, which have the interests of the Shiawassee NWR in mind. We need friends and volunteers to continue to help promote the refuge and support it in many ways. Some of you are already involved in this effort through grant writing and involvement in the legislative process. As we do these things, we need to keep refuge goals in the forefront. For instance, the proposed refuge boundary expansion has yielded a gain of only 333 acres since the expansion proposal was approved eight years ago. That total is only four percent of the refuge's planned land acquisition. This boundary expansion will help meet the refuge's ultimate goal for protecting, restoring, and managing wetlands, forested habitats, and their associated fish and wildlife communities along

area river systems. This acquisition takes funding, and funding, in part comes from making sure the right folks have the right information. Letters of support from non-government sources can assist in that effort. The refuge also seeks to improve public access and comfort for folks visiting the refuge. A restroom facility at the Cass River Unit, and possibly another at the old picnic area on the Ferguson Bayou Trail would be nice. Grants, fund-raising events, and similar funding vehicles can help make those facilities a reality. There are other needs which have been discussed lately, and I think it's outstanding that the Friends Board has now formed eight or nine separate committees to help with grant writing, volunteer coordination, membership drives, finances, activities, and promotions to help us achieve some of our goals. If interested in serving on one of these committees, please ask a Board member for more information. They're a great group of people! And if you're asked, please consider joining them in their effort. The goals of the Friends Group are discussed monthly at their meetings, and all these goals are achievable if we work together, keeping the mission of the refuge ever before us.

*"These experiences will naturally increase your sense of ownership and partnership with the refuge..."*

I'll see you on the refuge, hopefully sooner rather than later. And, oh yeah, if you get up there to Jordan River National Fish Hatchery, make sure you tell their staff why you do the wonderful things you do. I'm sure they'd like to hear from you folks.



*Short-eared owl*



# A "New" Bird for Shiawassee

By David Peters, Tractor Operator

If there is one bird that comes to mind for most people when you mention Shiawassee NWR, it is the Canada goose. The sight and sound of these "honkers" is synonymous with the Shiawassee Flats. As Acting Refuge Manager Ed DeVries wrote about in past issues of *Refuge Reporter*, the Refuge played an important role in reestablishing a now thriving population of resident Canada geese in the Saginaw Bay area. All across the country, the Canada goose, (albeit a blue one), is the official symbol of the National Wildlife Refuge System.

Each year, tens of thousands of Canada geese visit Shiawassee during their migration to and from nesting areas. Among these flocks are a few individuals that are notably smaller. These are not "babies," as even some goose hunters checking in at the Refuge have mistakenly assumed, but a subspecies of Canada goose known (until this year) as *Branta canadensis hutchinsii*, or Richardson's Canada goose. With the publication of its 45<sup>th</sup> Supplement to the AOU Checklist of North American Birds this summer, the American Ornithologists Union have separated *B.c. hutchinsii* and the three other recognized small Canada Goose subspecies into their own species. They are now known as *Branta hutchinsii*, or Cackling goose. The seven remaining recognized larger subspecies, including the interior (*B.c. interior*) and giant (*B.c. maxima*) Canada geese that compose the vast majority of flocks at Shiawassee, remain as *Branta canadensis*, Canada goose.

The cackling geese that occur at the Refuge (*B.c. hutchinsii*) nest in Arctic Canada and winter along the Gulf coast of Texas and Mexico, so only relatively few venture this far east of their flyway. In coloration, they are similar in tone to the interiors and giants, but they are notably smaller in overall size, with relatively shorter necks and bills. They also have a distinctly different call, a cackle as their name implies, rather than a honk. I myself have had the unique opportunity to observe cackling geese at Shiawassee on numerous occasions. They possess unique, admirable characteristics that set them apart from their larger, more mundane relatives. For this purely personal point of reason, beyond the scientific justification, I think they deserve our recognition as a species of their own.

So for all you birders and other interested naturalists,

take time to study the Canada goose flocks at Shiawassee, particularly in the fall, and you will eventually encounter one of North America's "newest" bird species.

## What is Snow?

By Becky Goche, Park Ranger

When water freezes inside clouds, ice crystals form. Ice crystals form around tiny bits of dirt that have been carried up into the atmosphere by the wind. The ice crystals join together creating snow flakes. Once the flakes are heavy enough they fall to the ground as snow. Each snowflake is made up of from 2 to about 200 separate crystals.

Snow is actually clear or transparent. Snow appears white because the crystals act as prisms, breaking up the light of the sun into the entire spectrum of color. The human eye is unable to handle that kind of sensory overload. Therefore, we see snow as white or sometimes blue. Snow can also take on the color of the environment you live in. For example, in places where the soil is red, the snow may be pink.

Most snowflakes are less than one-half inch across. The largest snowflake recorded was 15 inches in diameter! Imagine shoveling a driveway full of those! All snowflakes have six sides and no two snowflakes are alike. Scientists think that there are five different shapes of snow crystals: a long needle shape, hollow column that is shaped like a six-sided prism, thin and flat six-sided plates, six-pointed stars and intricate dendrites.

The shape that a snow crystal will take depends on the temperature at which it was formed. When the temperature is around 32° F to 25° F thin six-sided plates are formed. At 25° F to 21° F long needle shapes are formed. At 21° F to 14° F hollow columns are formed. At 14° F to 10° F six-point stars are formed. At 10° F to 3° F dendrites are formed. The colder it is outside, the smaller the snowflakes that fall. The fluffiest snow falls at temperatures around 15° F.

(Taken from [www.youthonline.ca](http://www.youthonline.ca))



# First Wednesday Series is Back as "Nurturing Nature First Wednesday"

By Janet Martineau, Activities Committee Chair

With the start of 2005, the Friends of the Shiawassee National Wildlife Refuge group is debuting a "Nurturing Nature First Wednesday" series at the Green Point Environmental Learning Center, 3010 Maple. The monthly series starts at 7 p.m. on the first Wednesday of each month and is free to Friends members and \$2 for non-members — all the better reason to sign up for a membership! The topics covered include backyard birding, the importance of the rain forest, landscaping for wildlife, outdoor cooking, growing ornamental grasses in the garden, life with the Woodland Indians and endangered species. Each program is geared for the family and will run 60 to 90 minutes, with most including visuals like slides or PowerPoint presentations. Question and answer periods also are a part of the evening. See enclosed flier for the entire list.

The Friends activities committee also is working on lining up guided weekend birding caravans into the refuge, led by Larry Abraham, Bob Greffe and Carolyn Szaroletta, all members of the Saginaw Valley Audubon Society. Look for one a month during the migration months of March, April, May, September, October and November — when the refuge is a hot spot.

And coming next summer are two workshops at Green Point: "Drawing in Nature" and "Monarch Magic." We also are planning a "Shiawassee Nature Photography" session at the Refuge, but have not yet set a date.

## It's Party Time!

It has been awhile since the Friends of the Shiawassee National Wildlife Refuge hosted a party. So make plans for the Holiday/Winter Potluck Party at 7 p.m. on Wednesday, December 1, at the Green Point Environmental Learning Center, 3010 Maple.

Bring: (1) A dish to pass, your own plate, utensils, napkins, and beverage. (2) Five to 10 nature-oriented slides (or prints) for a show-and-tell session. (3) A friend, co-worker, relative, or significant other who is not a Friends member. He or she will receive a free membership for a year. Families are welcome but children must be accompanied by an adult. Cost: Free. And there may be a door prize or two.

## The Trailhead Store Update

By the summer of 2005, the Friends of the Shiawassee National Wildlife Refuge hope to open a Friends store — selling books, nature gear, clothing apparel, nature-related toys and games for children and concessions. The refuge has donated the use of an unused trailer, meaning we can put the store on wheels to visit various venues and events.

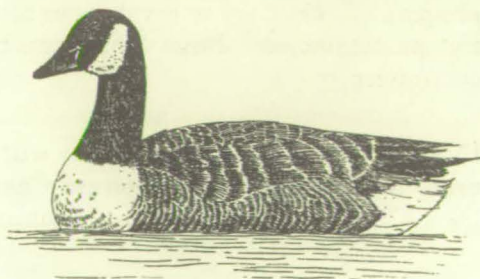
And we also want to establish a permanent facility at the developing Cass River Unit in Bridgeport.

*"...make plans for the  
Holiday/Winter Potluck at 7  
p.m. on Wednesday, December  
1, at Green Point..."*

Needed this winter are carpenters/builders to convert the trailer, an artist interested in creating a Shiawassee NWR logo, nature buffs to research product lines, business types who can set up business procedures and volunteers to staff the store. Please e-mail [jmartineau@thesaginawnews.com](mailto:jmartineau@thesaginawnews.com), or call (989) 790-7341, if you are interested in helping. Friends' stores at other refuges are major fund-raising avenues to help refuge operations and programs.

## "The Wild Goose Chase"

It has been suggested that we consider having a walk/run in October, 2005 at the Refuge, called "The Wild Goose Chase." There could be a walk/run component for the adults and older kids with a "Gosling Gallop" for the little tykes. T-shirts would be included in the registration. First, second and third place prizes to be awarded in a variety of categories. It has the potential to be a very fun day! **WHAT DO YOU THINK?** We are actively soliciting feedback on this idea as well as volunteers to plan and work the event. You can e-mail Susan Scott at [SuHunSco@aol.com](mailto:SuHunSco@aol.com) or call (989) 791-9270.



Canada goose



# Friends Group Organization for 2005 Operations

*By Charles Hoover, Friend President*

The purpose of our organization is to promote the use of the refuge by our community while working to preserve it as a sanctuary for wildlife. We are a not-for-profit, 501-C3, membership corporation. Our methods of operation include, but are not limited to the following:

- (1) Develop programs and activities that educate and involve the public in our refuge.
- (2) Develop and operate a visitor center with an interpretive trail and trailhead store on the Cass River Unit of the refuge.
- (3) Increase our membership to a number that is able to make an impact with our programs.
- (4) Assist the refuge staff in their projects of maintaining and operating the refuge. As a 501-c-3, not for profit organization, raise money and channel grants for projects in our refuge.

In order for our organization to better operate next year, we will share our programs and projects with the general membership of our Friends group. Our governing body is an elected Board of Directors of up to 15 members. We will operate through a series of working Committees of our membership to plan, develop, and operate our programs and projects. The Chair of such a committee will be a member of the Board of Directors. The following is a list of the present operating committees with their responsibilities:

**MEMBERSHIP:** They keep track of our membership, promote renewals, and organize membership recruitment programs. Susan Scott will chair this committee.

**ACTIVITIES:** They organize our events, projects, and programs. They try to involve our members with active participation. Janet Martineau now chairs this committee.

**INTERPRETIVE TRAIL:** They will develop and operate the interpretive trail on the Cass River Unit. Dick Von Berg now chairs this committee.

**TRAILHEAD STORE:** They will develop and operate a store at our Cass River Unit trailhead, and also a traveling "trailer store" to be taken to our events. Janet Martineau will chair this committee.

**PROMOTIONS:** They will promote and market our programs and activities to the public to encourage participation.

**FINANCE AND GRANTS:** They will develop our operating budget, organize fund raising programs, apply for grants, and keep track of our financial assets. Rich Hodge will chair this committee.

We will be surveying our membership as to what area they would be willing to join in and assist a committee in our operation next year. If you want to join our Friends Group or if you are already a member and want to get involved, you may contact me at (989) 790-3836. Looking forward to working with you and having some fun for a good cause, our refuge!

## Meet a Friends Board Member

*By Ann Davis, Friends Board Member*

I heard about the Friends group while attempting to attend the rained out Refuge drive through in the spring. I do not have a great deal of exposure to the interior of the Refuge, yet. I hope to visit further into its depths through the Friends organization. My favorite activity is direct interaction with animal life in the Refuge. My desires are to more closely observe the life cycles and behaviors of the Refuge animals. I also look forward to seeing which flowers and natural animal foods grow within.

I have degrees from Delta, SVSU, and MSU. After earning a Master's in Criminal Justice, I decided to stay in school, adding classes such as civil law and computer literacy. I also enjoy non-credit classes including Home Depot U, Nikonus Shootout Underwater fish I.D./photography, and crafts. I have visited 37 states and 7 foreign nations, seeing many museums, parks and historical points of interest. My hobbies include photography, reading and nutrition.



## Renew Your Friends' Membership Today

*By Susan Scott, Membership Committee Chair*

I would like to introduce myself. My name is Susan Scott. As a Saginaw resident and a long time user of the Shiawassee trails for walking and biking, I feel I have a vested interest in the Refuge. Therefore, I was flattered to be asked to join the Friends organization as a member of the Board. I own my own Massage Therapy business and when not working on clients, I like being outdoors doing almost anything. Biking, walking the dog, rollerblading and cross-country skiing are some of my preferred activities. As a Master Gardener, my volunteer hours have included some work in the Refuge's flowerbeds. I also am an avid reader with eclectic tastes in literature.

As the Board works to become a better organized and a more effective voice for the Refuge, we have created a series of committees. I currently chair the membership committee. I have two main goals at this time. The first goal is to get the membership lists up to date. While many of you still get the newsletter, your dues have **lapsed**. You will note a **RED MARK** next to your

name on the address label. This means that your membership is up for renewal. Please take the time to fill out the enclosed form to continue to receive the Refuge newsletter. Your membership allows us to be able to put on events, maintain the trails, alert the community to the benefits of the Refuge and much more.

My second goal is to get our members more involved within the organization. Perhaps you have some time you could devote to working on one of the committees that have been formed? Volunteers are also needed to work at events that are planned, to help with some of the maintenance and even to assist with mailings and the newsletter. To this end, on the membership renewal form enclosed with the newsletter is a list of possible volunteer activities. Please check all those that may be of interest to you. The more volunteers we have, the less work any one of us will need to perform yet everything that needs to be accomplished will be completed.

If you're not already a member consider joining us. Fill out the enclosed application and send it in today!

## Refuge Trail Closures for Deer Hunting

The trails on the Refuge will be closed the following times for our hunting program. Only hunters with Refuge permits are allowed in the trail areas during the closed periods. Signs will be posted at each of the trail heads to let visitors know when they are closed.

### **Ferguson Bayou Trail at Curtis Road**

December 1—18, 2004

December 27—31, 2004

### **Woodland Trail at Stroebel Road**

December 11—18, 2004

### **Cass River Unit in Bridgeport Township**

December 1—10, 2004

December 27—31, 2004

### **Green Point ELC in Saginaw**

Trails remain open for hiking during daylight hours, everyday. Bicycles and pets are not allowed.

## Christmas Gifting Early

*By Dick Von Berg, Friends Trail Committee*

The Trails Committee wishes to remind you of a gifting opportunity. In the 1.5 miles of trail being proposed at the Cass River Unit, there will be need for a number of benches. The small benches are \$150 and the large benches are \$500. These can be an enduring memorial gift that keeps on giving. Since this will be an all weather trail, the benches will be used year round. If you are interested in a larger memorial, the river viewing platform will cost \$6,000 and the "Heron Lake" platform will cost \$2,000. You can call Ed DeVries at the Refuge or any of the Friends Board members.

**Shiawassee NWR's "Refuge Reporter"**

**Acting Refuge Manager: Ed DeVries**

**Editor: Becky Goche**

**Refuge Website: <http://midwest.fws.gov/shiawassee>**



Shiawassee NWR  
6975 Mower Rd.  
Saginaw, MI 48601  
Phone: 989-777-5930  
Fax: 989-777-9200  
Hours: M - F, 7:30 a.m. to 4:00 p.m.

Refuge Reporter is published quarterly  
by the Friends of Shiawassee NWR.

We're on the web!

[Http://midwest.fws.gov/shiawassee](http://midwest.fws.gov/shiawassee)



*Is there a red mark by your name? See page 7 on how to renew your membership.*

## Teachers, How about a Program Brought to Your Classroom?

*by Becky Goche, Park Ranger*

Brrrr! It feels like the cold weather is here to stay. It's still a great time to bring your students out to Green Point for a field trip, though. We have several programs for you to choose from. See our "Educator's Guide" on our website or call Green Point at (989) 759-1669 to receive a copy. Can't bring your students to us? No problem, we'll come to you!

We have several programs that we can bring to your classroom. One of our most popular programs is our "Endangered Species" program. In this program, your students will learn about endangered species in Michigan and from all over the world. Lots of confiscated wildlife items will be passed around for your students to see up close. This program is good for all grades. Another popular program, especially with older stu-

dents, is our "Careers in the Fish and Wildlife Service" program. Students will learn about the many different careers that are available in our agency and how to prepare to work for us or any other natural resource agency. See our "Educator's Guide" for other programs.

Green Point also has 7 trunks that you can borrow for two weeks to use in your classroom. Each trunk is based upon a theme and includes videos, posters, activities and curriculum ideas that you can use with your students. Once again, see our "Educator's Guide" for more information.

All of these programs are free! Call me at Green Point at (989) 759-1669 for more information or to schedule a program or a trunk.



## **Nurturing Nature First Wednesday Series**

- All programs begin at 7:00 p.m. and last 60 – 90 minutes.
- Held at the Green Point Environmental Learning Center, 3010 Maple Street, Saginaw, unless otherwise noted.
- Admission: \$2 for individuals or \$5 for a family. FREE for members of the Friends of the Shiawassee NWR.

### **Friends of Shiawassee NWR Holiday Party December 1, 2004**

Bring a dish to pass, your own serveware, beverage and five nature-related slides you'd like to share — as well as a friend who's not a member of the Friends. Your guest will receive a year's free membership in the organization, which gets him/her free admission to the new Friends First Wednesday Series starting in January.

### **Backyard Birding Buffet January 5, 2005**

Cherri Allen from Cherri's Feed-n-Seed & Birder's Boutique in Auburn will discuss ways to attract birds to your yard and feeder preferences of different birds. She will hand out information on bird housing and plants, and will offer other tips about our feathered friends, like how to make life easier for them in the winter.

### **Endangered Species February 2, 2005**

Becky Goche, Park Ranger for the Shiawassee NWR, will discuss endangered and threatened species from around the world and the role of the U.S. Fish and Wildlife Service in their protection. Numerous confiscated wildlife items will be available for viewing. The program is good for all ages.

### **Upcoming First Wednesday Programs:**

Ornamental Grasses for the Garden – March 2  
Landscaping for Wildlife – April 6  
Rainforest Review – May 4  
Wildflower Folklore – June 1  
Cooking in the Great Outdoors – July 6  
Summertime at the Refuge Friends Picnic – August 3  
Just what is a Refuge and why is there one in Saginaw? – September 7  
Studying and Carving Birds – October 5  
Woodland Indian Life – November 2

# **Calendar of Events**

## **Refuge Night Hike**

**January 21, 2005, 6:30 p.m.**

**Begins at parking lot at west end of Curtis Road**

Come explore the Refuge on a cold winter's night! This hike is geared for cold weather adventurers and is not recommended for young children. Dress for the weather and bring something warm along to drink afterwards! We will be hiking about 5 miles along the Refuge's trails under the light of the moon.

## **Looking Ahead in 2005**

Shorebird Sister School Workshop – April TBA

International Migratory Bird Day Celebration – May 14

Kids' Free Fishing Day – June 11

Summer Discovery Camp for Kids – June 25 & July 23

Jr. Refuge Manager Academy – July 19-21

Refuge Open House Weekend – September 10-11



For more  
information, contact  
Green Point ELC at  
(989) 759-1669.



# FRIENDS OF SHIAWASSEE NWR MEMBERSHIP PAGE

## 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: \_\_\_\_\_

Make checks payable to "Friends of Shiawassee NWR", PO Box 20129, Saginaw, MI, 48602.

### Friends' Volunteer Opportunities

- \_\_\_\_ Making phone calls
- \_\_\_\_ Writing letters
- \_\_\_\_ Stuffing envelopes
- \_\_\_\_ Public speaking
- \_\_\_\_ Staff store
- \_\_\_\_ Work events
- \_\_\_\_ Writing newsletter articles
- \_\_\_\_ Concession stand
- \_\_\_\_ Committee member
- \_\_\_\_ Children's activities
- \_\_\_\_ Organize events

### Do you have any of these skills?

- \_\_\_\_ Computer skills
- \_\_\_\_ Photography
- \_\_\_\_ Carpentry skills
- \_\_\_\_ Business organizational skills
- \_\_\_\_ Research
- \_\_\_\_ Artistic skills
- \_\_\_\_ Fund raising
- \_\_\_\_ Grant writing
- \_\_\_\_ Researching/Ordering merchandise
- \_\_\_\_ Other – please list: \_\_\_\_\_

### Board of Directors Meetings

Board meetings held on the second Wednesday of each month at 7:00 p.m. at the Green Point Environmental Learning Center, 3010 Maple Street in Saginaw. General meetings with special programs are held at various times throughout the year. Friends Board of Directors Officers are:

President – Charles Hoover

Vice President 1 – Dick Von Berg

Vice President 2 – Steve MacAlpine

Treasurer – Richard Hodge

Secretary – Barb Werle



# Refuge Reporter

Volume 8, Issue 2

Spring 2005

## New Refuge Manager Steve Kahl Reports for Duty

By Steve Kahl, Refuge Manager



Greetings Friends and Volunteers of Shiawassee NWR! I officially started at my new

position as refuge manager on February 6. My previous positions include refuge manager at Wallkill River NWR in Sussex, New Jersey, deputy refuge manager at Wallkill River NWR, and supervisory refuge operations specialist (assistant manager) at Iroquois NWR in western New York. I have been a U.S. Fish and Wildlife Service employee for 6 years. I also donated more than 2,000 hours as a

volunteer and undergraduate intern at Montezuma NWR in central New York.

My academic background includes Bachelor's and Master's degrees from the State University of New York - College of Environmental Science and Forestry in Syracuse. My major area of study for both degrees was Fish and Wildlife Biology and Management. My graduate professor was Guy Baldassarre who wrote the book *Waterfowl Ecology and Management* and was executive editor of the *Journal of Wildlife Management*. To earn my Master's degree I worked for the Central & Western NY chapter of The Nature Conservancy at a preserve on the eastern shore of Lake Ontario. Here I completed an inventory of the preserve's vascular plants, fish,

(Continued on page 3)

### Inside this issue:

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Shorebird Workshop on April 16	3
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Friends Committee Updates	5

### Special Points:

- Shorebird Workshop offered on April 16. See inside for more information.
- International Migratory Bird Day (IMBD) will be celebrated on Saturday, May 14. Come see the Refuge from your own vehicle from 10 a.m. to 4 p.m., weather permitting.
- Looking for volunteers to help with upcoming events like IMBD, Kids' Fishing Day and children's summer camps.

## Workshop Aimed at Budding Artists

Join Eugene Beckham, a nature artist and illustrator from Midland, on Saturday, June 4, for a "Drawing in Nature" workshop, a crash course in learning to draw images of nature. The session runs from 10:00 a.m. to 2:00 p.m. at Green Point Environmental Learning Center, 3010 Maple in Saginaw, and includes both classroom and outdoor work.

The workshop is open to ages 12 and up. Participants should bring a sketch pad, No. 2 H or HB pencils, and a sack lunch. The fee is \$2 per person and free to Friends members. Register by May 31 by calling (989) 759-1669. Class size is limited to 15 people. This workshop is sponsored by the Friend of Shiawassee NWR.



# Welcome Our New Park Ranger Jonathan Priday

*By Ed DeVries, Assistant Manager*



We'd like to introduce you to the newest member of the Shiawassee NWR staff, Jonathan Priday. Jonathan started here on January 24, and has filled the

Park Ranger Law Enforcement position which was vacated by Kevin Shinn in 2003. Kevin hasn't left; he just took a new position as a Zone Law Enforcement Officer with responsibilities for refuges in Michigan, Indiana, and Ohio. Jonathan transferred here from the U. S. Fish & Wildlife Service's Ecological Services Field Office in Fairbanks, Alaska. Jonathan worked with two endangered duck species there, the Stellar's Eider and spectacled eider. Prior to his 2 ½ years in Alaska, Jonathan worked for the State of Maryland as a natural resource planner in the Maryland Department of Environment's planning and monitoring division.

Originally from Greencastle, Pennsylvania, Jonathan graduated from James Madison University (Harrisonburg, VA) in 1996, and received his Master's degree from Johns Hopkins University (Baltimore, MD) in 2001. Jonathan is married to Gail, who is a native of Morristown, New Jersey, and is an art teacher. Jonathan and Gail enjoy hiking, fishing, and camping, and moved to the "Outside" to see a different part of the country, and to work in the national wildlife refuge system. They are also expecting their first child in April, so being close to their families in Maryland and New Jersey was an important factor in their decision to come here.

Most of you will have to wait to meet the Pridays, as Jonathan and Gail must now make a temporary move to Brunswick, Georgia. In order to be a refuge officer, Jonathan has to complete four months of mandatory law enforcement training at the Federal Law Enforcement Training Center. After graduating on June 16, he will have 10 weeks of field officer training at two ref-

uges in the Midwest, and then two more weeks of refuge officer basic training at the National Conservation Training Center in Shepherdstown, West Virginia. So we won't see Jonathan working on the refuge until sometime in September. But he'll be well trained and a welcome addition to our staff. Make sure you give him and Gail a welcome when you finally see them out here.

## Guided Birding Tours Scheduled

*By Janet Martineau, Friends Activities Chair*

Members of the Saginaw Valley Audubon Society will lead two migration birding events on the southern portion of the Refuge (off of Curtis Road). Both events are free!

**Saturday, April 9**, is a drive-through, starting at 10:00 a.m. and lasting 2 to 3 hours, depending on the weather and birds. Participants are asked to meet at the Refuge headquarters parking lot for carpooling. Registration is required no later than two days before the event since participation is limited to 10 people. Call Green Point at (989) 759-1669.

**Saturday, May 28**, is a 5-mile walking/hiking tour at the height of the warbler season. The grass will be wet so proper foot gear is essential as are binoculars. Meet at the Refuge headquarters parking lot at 7:00 a.m. Registration is required no later than two days before the event. Call Green Point at (989) 759-1669. Please note that weather conditions could cause this hike to be cancelled.

*Robins*





## Want More Wildlife on Your Land?

*By Michelle Vander Haar, Private Lands Biologist*

The U.S. Fish and Wildlife Service's Partners for Fish and Wildlife (Partners) Program works with private landowners and partners in a voluntary pro-active manner to restore and enhance habitat for a variety of wildlife species on private lands. Together we share resources of time, energy, and funds to help ensure that wildlife, fish, and a healthy ecosystem will be here for future generations.

The Partners Program focuses on improving habitat for migratory birds, federally-listed endangered or threatened species, and interjurisdictional fish. In Michigan, wetland restoration remains the primary focus, but restoration of grasslands, streams, and specific habitats used by federally-listed endangered or threatened species are also done. Since it began in Michigan in 1988, more than 2,500 projects have been completed. Some of the partners include Ducks Unlimited, Timberland and Saginaw Bay RC&D, Natural Resources Conservation Service, Conservation Districts, Michigan DNR and Pheasants Forever.

**Qualifying projects include:** Wetland restorations in which the project provides an opportunity to put the "wet" back into altered wetlands. Projects often involve breaking or plugging a portion of a tile line, blocking a ditch, or building a low dike or embankment. Restorations are designed to re-establish shallow-water wetlands containing a mixture of open water and vegetated areas. The program does not create farm ponds or "push outs," and does not alter existing natural, undisturbed wetlands.

Grassland restoration or establishment which provides a buffer around wetland areas to provide nesting cover for teal, mallards and other waterfowl are also a big part of the Partners program. Larger establishments, 20 or more acres in size, are also considered for cost-share assistance and can provide habitat for a number of declining grassland birds, pheasants, and other wildlife.

Efforts are underway to stabilize stream banks and improve road-stream crossings in northern Michigan watersheds that support fish. Stream improvement projects in southern Michigan will be considered on a case-by-case basis. Partners' efforts are expanding to remove invasive species in sensitive habitats and restore specialized habitats supporting endangered or threatened species. These projects are also considered on a case-by-case basis.

For more information about restoring habitat through Partners for Fish and Wildlife, please contact me at (989) 777-5930 x 12 or e-mail [Michelle\\_Vanderhaar@fws.gov](mailto:Michelle_Vanderhaar@fws.gov).

## Can't Wait 'til Spring!

*By Ed DeVries, Assistant Manager*

It's been a long, cold winter, but the staff is looking forward to what we hope to accomplish in the year ahead. One of the biggest projects we hope to complete this year is the renovation of the old DNR boat launch site on the Cass River, at the M-13 Bridge. The Cass River boat launch site was acquired from the DNR in a land exchange several years ago, and it will see some drastic improvements this year. A 220 foot section of the north bank along the Cass River will be stabilized and protected with large riprap, and a 15 foot wide flexible concrete mat will be placed to serve as a boat launching ramp. An 80 inch wide, 30 foot long floating dock will be anchored adjacent to the ramp, to serve as a boat launch and fishing pier. Finally, the parking area will be graded and topped with gravel. An earthen island in the middle of the lot will aid traffic flow. This project will greatly improve the look of this area, and will be an excellent access point for boating or canoeing into the refuge.

Last fall, a five acre shallow wetland impoundment was created on a tract of land just west of M-13 on the south side of the Cass River. This area commonly floods in the spring and attracts ducks, geese, swans, and shorebirds which can be easily viewed by passing motorists. Our hope is that by making this wetland a bit more permanent, it will hold more water for an extended amount of time in the spring and fall. This wetland restoration was accomplished using funds provided by the refuge as well as Ducks Unlimited funding, along with a grant through the North American Wetlands Conservation Act.

Farther west on the Cass River, we look forward to the results of a fishery study to be initiated this spring. Improvements made in 2003 on the Cass River dike, allowed deeper water to be retained in the Eagle Marsh unit in 2004. This work is expected to have great benefits for spawning fish such as northern pike, crappie, walleye, perch and bass. Our thinking is that early spawners such as pike, crappie, and walleye will swim into the unit during spring floods and then will be able to exit via a spillway in the north dike. We actually received late spring/early summer floods last year, so it may be that some bass and perch were able to spawn during that time period. Our hope is that there has been sufficient water over the last year or so to benefit the young fish that were produced from the 2004 spawning year. The Alpena Fisheries Resource Office plans to set some nets in Eagle and North Marshes this spring to see if we were successful. Hopefully we'll find lots of fingerlings in the nets.

The spring migrant birds will soon be in the trees and on the wetlands. The refuge table is set for their use and for our enjoyment, and hopefully the plans we've made will enhance the refuge for people and critters alike. See you on the refuge!



# Friends Committee Updates

*By Janet Martineau, Membership Committee Chair*

## Report from the Book Store Committee

**2004 report summary:** (1) In the summer, committee chair Janet Martineau attended a two-day book store workshop sponsored by the U.S. Fish and Wildlife Service. (2) Shiawassee Refuge donated the use of a trailer it no longer uses and needs. Friends want to convert it into a bookstore/concession stand on wheels: to drive to events at main refuge, Green Point and Cass River Unit as well as other events in county. (3) Friends board agreed to set up a separate checking account for book store/concessions sales.

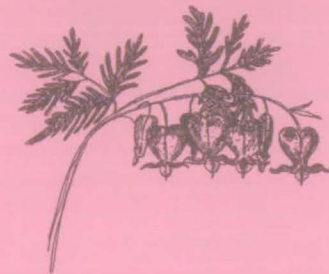
**2005 objectives:** (1) A trailer company owner (and avid hunter on refuge) has agreed to convert donated trailer into bookstore/concessions for free, using leftover material from his stop. Will need help in spring from Friends members to help him one weekend. (2) Seek \$5,000 to \$10,000 grant to stock book store. (3) Seek board approval of logo(s) for Shiawassee NWR, for use on souvenirs we sell and on letterheads. Volunteer Janie Peters is creating artwork. (4) Formation of a larger committee to help select books and other materials to sell, and to work on sales and record-keeping (contingent on membership committee's skills at growing membership).

## Report from the Activities Committee

**2004 report summary:** (1) Began the "Nurturing Nature" lecture series at Green Point in December 2004 and running through December 2005 as well as two Friends members potluck dinners. The first lecture brought 24 people through the door, five new members and \$30.50 in income from admissions/concessions. The Christmas potluck dinner included a silent auction of items donated by board members. It raised \$100. (2) Booked two in-the-field workshops at Green Point, both set for June, 2005. One is on monarch butterflies, the second on drawing on nature. (3) Cleaned up the main flower bed at Refuge headquarters. (4) Helped coordinate a farewell evening for departing Refuge manager. (5) Sponsored a spring pancake breakfast/flower sale to open the Cass River Unit. Poorly attended due to bad weather, but formed a partnership with the Cracker Barrel.

**2005 objectives:** (1) Nail down a nature photography workshop at the Refuge. (2) Start a late fall Wild Goose Chase run/walk at the Refuge that is a part of a network of runs in Saginaw County. (3) Solidify bird mi-

gration drive-throughs/hikes led by members of Friends/local Audubon Chapter. (4) Evaluate "Nurturing Nature" series and decide whether to continue it. If so, start booking people. (5) Secure grants to pay for "Nurturing Nature" series and workshops and pursue other grant possibilities. (6) Work with Saginaw Valley Master Gardener's Association on replanting the flower bed at the Refuge headquarters building. (7) Work with Becky on possibility of increasing education programs in schools via grants. (8) Pursue more silent auction possibilities.



*Bleeding Heart*

## REFUGE REPORTER

Published quarterly by Shiawassee National Wildlife Refuge with funding from the Friends of Shiawassee NWR.

Volume 8, Issue 2

Editor: Becky Goche

### Shiawassee National Wildlife Refuge

Established in October, 1953 and administered by the U.S. Fish and Wildlife Service, Shiawassee NWR provides resting, nesting and feeding habitat for waterfowl and other birds. Its mission is to preserve or manage an undeveloped expanse of floodplain forest, marshes, rivers, and associated habitat within an agricultural and urban landscape through habitat management, encouraging public stewardship, educational programs, and private lands activities.

Refuge Manager—Steve Kahl

Assistant Refuge Manager—Ed DeVries

Biologist—Jim Dastyck

Private Lands Biologist—Michelle Vander Haar

Biological Science Technician—Richard McAvinchey

Park Ranger/Volunteer Coordinator—Becky Goche

Administrative Technician—Mary Ann Gillette

Maintenance Staff—Marion "Butch" Nowosatko and David Peters

Law Enforcement Officer—Jonathan Priday and Kevin Shinn

### Friends of Shiawassee National Wildlife Refuge

A nonprofit 501 (c)(3) organization established in 1999 to promote the preservation of the natural and historical resources of the Refuge, foster its use and enjoyment by the public consistent with the protection and preservation of its environment, and engage in such educational, scientific and civic activities as will assist the management of the Refuge in carrying out its mandates.

Refuge Website: <http://midwest.fws.gov/shiawassee>



## **Nurturing Nature First Wednesday Series**

- All programs begin at 7:00 p.m. and last 60 – 90 minutes.
- Held at the Green Point Environmental Learning Center, 3010 Maple Street, Saginaw, unless otherwise noted.
- Admission: \$2 for individuals or \$5 for a family. FREE for members of the Friends of the Shiawassee NWR.

### **Ornamental Grasses for the Garden**

**March 2, 2005**

Susan Scott, an advanced master gardener, will discuss the basics of using ornamental grasses in the garden. These perennials provide three seasons of foliage, a variety of colors and textures, and are easy to grow.

### **Landscaping for Wildlife**

**April 6, 2005**

Janea Little, a senior naturalist for Chippewa Nature Center, will discuss how to landscape your back yard into an attractive haven for wildlife by using native plants and natural features.

### **Rainforest Revue**

**May 4, 2005**

Eugene Beckham, a wildlife artist and illustrator, will offer an overview of his research and trips to rainforests in Belize, Costa Rica, Peru, Bolivia and Columbia. He will explain why rainforests are so important.

### **Upcoming First Wednesday Programs:**

Wildflower Folklore – June 1

Cooking in the Great Outdoors – July 6

Summertime at the Refuge Friends Picnic – August 3

Just what is a Refuge and why is there one in Saginaw? – September 7

Studying and Carving Birds – October 5

Woodland Indian Life – November 2

### **Upcoming Workshops:**

Drawing in Nature – June 4

Monarch Magic – June 25

## **Looking Ahead in 2005**

Kids' Free Fishing Day – June 11

Summer Discovery Camp for Kids – June 25 & July 23

Jr. Refuge Manager Academy – July 16, 20 & 30

Full Moon Hike – August 19

Refuge Open House Weekend – September 10 & 11

# **Calendar of Events**

## **Earth Day Night Hike**

**April 22, 2005, 7:00 p.m.**

**Begins at parking lot at west end of Curtis Road**

Two different hikes will be offered: a shorter one for children and a 5-mile one for avid hikers. In the event of severe weather or flooding, the hike will be canceled.

## **International Migratory Bird Day Auto Tour**

**May 14, 2005, 10:00 a.m. to 4:00 p.m.**

**Begins at parking lot at west end of Curtis Road**

View Refuge birds and other wildlife from your vehicle as you take a self-guided auto tour. The tour will be canceled in the event of severe weather or muddy roads.

## **Audubon Bird Tour and Hike**

**Tour by Car– April 9.** Meet at Refuge headquarters at 10:00 a.m. to carpool together. Limited to 10 people.

**5-mile Hike – May 28.**

Meet at Refuge headquarters at 7:00 a.m.

Both programs are led by Saginaw Valley Audubon Society members and are FREE. Call Green Point to register.

## **Shorebird Workshop**

**April 16, 2005, 9:00 a.m. to 4:30 p.m.**

**Green Point ELC**

For teachers and others interested in shorebirds. Call Green Point to register. Fee \$20 per person includes lunch and lots of resources.

For more information, contact Green Point ELC at (989) 759-1669.



# FRIENDS OF SHIAWASSEE NWR MEMBERSHIP PAGE

## Friends of Shiawassee NWR Membership

### ☐ General Membership

\$10/year – Individual (1) vote.

\$25/year – Family (2) votes. (Member, spouse and children under age 18)

- Each membership receives quarterly newsletter - "Refuge Reporter."
- Each membership includes voting rights and opportunity to hold office.

☐ Supporting Memberships: "Goose" \$50/year, "Blue Heron" \$75/year, "Owl" \$100/year, "Bald Eagle" \$125+/year

☐ No membership at this time, but please accept my contribution.

Name: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip code: \_\_\_\_\_

Phone: \_\_\_\_\_ E-mail: \_\_\_\_\_

Make checks payable to "Friends of Shiawassee NWR", PO Box 20129, Saginaw, MI, 48602.

Contributions to the Friends of Shiawassee NWR, a 501 (c) (3) non-profit organization, are tax deductible according to IRS guidelines.

### Friends' Volunteer Opportunities

### Do you have any of these skills?

- \_\_\_\_\_ Making phone calls
- \_\_\_\_\_ Writing letters
- \_\_\_\_\_ Stuffing envelopes
- \_\_\_\_\_ Public speaking
- \_\_\_\_\_ Staff store
- \_\_\_\_\_ Work events
- \_\_\_\_\_ Writing newsletter articles
- \_\_\_\_\_ Concession stand
- \_\_\_\_\_ Committee member
- \_\_\_\_\_ Children's activities
- \_\_\_\_\_ Organize events

- \_\_\_\_\_ Computer skills
- \_\_\_\_\_ Photography
- \_\_\_\_\_ Carpentry skills
- \_\_\_\_\_ Business organizational skills
- \_\_\_\_\_ Research
- \_\_\_\_\_ Artistic skills
- \_\_\_\_\_ Fund raising
- \_\_\_\_\_ Grant writing
- \_\_\_\_\_ Researching/Ordering merchandise
- \_\_\_\_\_ Other – please list: \_\_\_\_\_

Board meetings held on the second Wednesday of each month at 7:00 p.m. at the Green Point Environmental Learning Center, 3010 Maple Street in Saginaw. General meetings with special programs are held at various times throughout the year. Friends Board of Directors Officers are:

President – Charles Hoover

Vice President 1 – Dick Von Berg

Vice President 2 – Steve MacAlpine

Treasurer – Richard Hodge

Secretary – Barb Werle



# Shorebird Workshop Offered at Green Point and Refuge on April 16

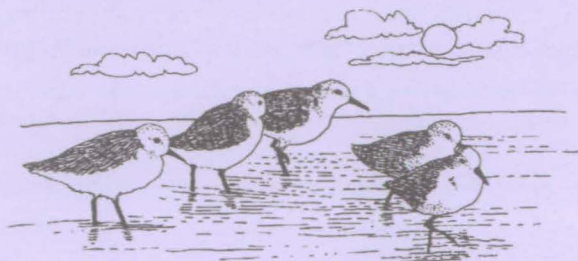
By Becky Goche, Park Ranger

Attention educators, youth groups, volunteer birders, biologists and conservation organizations...Come migrate with us! Ottawa National Wildlife Refuge, the Friends of Shiawassee NWR and the Refuge are sponsoring a **Shorebird Sister Schools Program** workshop on Saturday, April 16 at Green Point. The workshop will run from 9:00 a.m. to 4:30 p.m. and include a field trip to the Refuge. Cost for the workshop is \$20 and includes lunch, curriculum guides and many other resources. Rebecca Hinkle of Ottawa NWR will lead this workshop.

The **Shorebird Sister Schools Program** is an Internet based environmental education program that connects students, educators, biologists, and birding enthusiasts along migratory flyways. The program includes curriculum for grades 2—12, e-mail network, and web site. Partnerships with numerous organizations, schools, volunteer birders, and youth groups make this program possible. For more information about this program visit <http://sssp.fws.gov>.

This workshop will include an overview of the **Shorebird Sister Schools Program** including web components, introduction to shorebird identification, biology and conservation issues, overview of the Arctic-Nesting Shorebird curriculum, pen pal components, and a field trip to the Refuge to learn more identification skills, use of journals and habitat needs. We will also review the Shorebird Trunk which is available on loan from Green Point to assist in your shorebird curriculum.

You must register for this workshop by Wednesday, April 13. Call Green Point at (989) 759-1669 to register or for more information.



## New Refuge Manager Continued...

(Continued from page 1)

reptiles, amphibians, and breeding birds. I also promoted the Conservancy's efforts to preserve the region's dune and wetland complex.

I am very enthused to be at Shiawassee NWR because of its blend of programs, habitats, and challenges. I have a professional affinity for refuges with a strong wildlife management program. Seeing that the refuge has several impoundments including deep water, hemi-marsh, and moist soil units is especially attractive to me as a bona fide "duck farmer." I am also impressed with the refuge's deer hunting program and growing grassland management potential. As a life-long birder, and more recently herpetologist and botanist, the diversity of habitats makes the refuge a place where I can have a lot of fun. I also strongly believe that an important component of making the refuge a valued part of the community is a strong environmental education and interpretive program. So I am very enthused about the programs delivered out of the Green Point ELC. I am also pleased to work at a refuge with important challenges, such as mosquito spraying, contaminants, managing islands, and land acquisition because I wish to contribute toward resolving these types of issues.

The presence of a strong Friends group at Shiawassee NWR is also very important to me. Friends can provide immeasurable benefits to a refuge. I am proud that while I was at Iroquois NWR, I helped to establish its Friends Group. We worked together to raise over \$500K in private and federal funds to rehabilitate the Swallow Hollow Nature Trail, which includes a half-mile of boardwalk. In fact, during Congressional visits we touted the establishment of the Friends Group as one of our most important highlights.

So, I am very eager to meet everyone and I greatly look forward to working together to do good things for Shiawassee NWR!

Sanderlings



Shiawassee NWR  
6975 Mower Rd.  
Saginaw, MI 48601  
Phone: 989-777-5930  
Fax: 989-777-9200  
Hours: M - F, 7:30 a.m. to 4:00 p.m.

We're on the web!

[Http://midwest.fws.gov/shiawassee](http://midwest.fws.gov/shiawassee)



**Shorebird Workshop Offered on April 16. See inside for more details.**

## Teachers, Book Your Spring Field Trips Now!

*by Becky Goche, Park Ranger*

Even though there is still some snow on the ground, it's not too early to start thinking about field trips for your students this Spring. We have several programs for you to choose from for all ages of students. See our "Educator's Guide" on our website or call Green Point at (989) 759-1669 to receive a copy. All of the programs last 1 to 1 1/2 hours and include both inside and "field" instruction, including an outdoor hike. Students can explore field, pond, marsh, forest and river habitat at Green Point.

We also have several programs that we can bring into your classroom. Your students can explore endangered species, birds of prey and careers in the Fish and Wildlife Service. Each of these programs includes cool audio visuals and lots of neat things for your students to look

at or feel. We can do these programs at Green Point, too! See our "Educator's Guide" for more information.

Want to spice up your curriculum? Green Point has 7 trunks that you can borrow for two weeks to use in your classroom. Each trunk is based upon a theme (shorebirds, prairie, wetlands, wolves, songbirds and more) and includes videos, posters, activities and curriculum ideas that you can use with your students. Once again, see our "Educator's Guide" for more information.

All of these programs are free! Call me at Green Point at (989) 759-1669 for more information or to schedule a program or a trunk.



# Refuge Reporter

Volume 8, Issue 3

Summer 2005

## Bob Grefe Celebrates 22 Years as Refuge Volunteer

By Becky Goche, Park Ranger

Robert 'Bob' Grefe became an "official" volunteer at the Shiawassee NWR on February 24, 1983. We say "official" because Grefe had already been bird watching and helping Refuge staff band birds for 20 years prior to this! This year marked Grefe's 22<sup>nd</sup> anniversary with the Refuge. He was recognized at the volunteer and Friends dinner on April 27, 2005. He was awarded his 4,000 hours pin. To date, Grefe has donated 4,168.5 hours.

Grefe was a maintenance foreman for Dow in Midland, MI, retiring in 1980. Following retirement, he had more time to devote to his passion – birding. Grefe has been instrumental in doing Refuge bird surveys. He has seen 255 of the Refuge's nearly 270 recorded species! Grefe saw both white ibis ever recorded on the Refuge that somehow meandered here from their typical Gulf and Atlantic coastal ranges. Grefe commented that

"Every time is a new experience. You never know what you will see. Sometimes you don't see anything."



Bob Grefe shows a young boy a bird after he had banded it during a demonstration.

Grefe and his group of five volunteers coordinate the MAPS (Monitoring Avian Product-  
(Continued on page 3)

### Inside this issue:

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Refuge Recognizes Volun- teers at Dinner	2
Refuge Offers 15 Deer Hunts this Fall	3
Bob Grefe Continued	3
A Bed of Rose Leaves	4
Mobile Bookstore Taking Shape	5

### Special Points:

- The deadline for Refuge deer hunt applications is August 1, 2005. NEW THIS YEAR—APPLY ON-LINE!
- Looking for volunteers to help with children's summer camps.

## Volunteers Needed for Kids' Free Fishing Day on June 11

Kids' Free Fishing Day is Saturday, June 11, at Ojibway Island in Saginaw. Children aged 3 to 15 years enter this fishing contest to win all kinds of prizes and to eat snocones! We are looking for volunteers to help in a number of areas:

- Set up beginning at 6:30 a.m.
- Registration from 7:30 to 10:00 a.m.

- Fish Return area from 8:00 to 11:00 a.m.
- Clean up from 11:30 a.m. to 12:30 p.m.

If you can help, please call Becky Goche at (989) 759-1669 for more information.



# Shiawassee NWR—Providing Quality Habitat for Waterfowl and Nongame Birds

By Steve Kahl, Refuge Manager

The highest priority for refuge management activities is to provide habitat for waterfowl. This family of birds includes the swans, geese, ducks, and mergansers. Thirty-two waterfowl species have been observed at the refuge, including 10 nesting species. More importantly, the refuge provides a resting, and feeding area for up to 40,000 ducks and 25,000 geese during migration. The refuge provides important migration stopover habitat for the southern James Bay population of Canada geese. Consequently, the refuge is part of a focus area of the Upper Mississippi River & Great Lakes Joint Venture in the North American Waterfowl Management Plan. Further, the refuge was designated a globally significant "Important Bird Area" by the American Bird Conservancy and Partners in Flight.

The refuge also provides habitat for a tremendous diversity and abundance of other birds. Currently, the refuge's bird list includes 273 species. The refuge is a stronghold for declining marsh birds in Michigan, including pied-billed grebe, American and least bittern, Virginia rail, sora, American coot, common moorhen, and black tern. Two pairs of bald eagle nest at the refuge and as many as 65 eagles have been counted here in winter. Shorebirds are imperiled as a group. Yet, up to 1,500 sandpipers and plovers have been counted at the refuge during migration. Some of the most abundant shorebird species here include pectoral sandpiper, dunlin, and lesser yellowlegs. Wading birds find important habitat in refuge wetlands, including great egret, black-crowned night-heron, and green heron. Further, the refuge protects a great blue heronry with over 100 nests. Forest interior songbirds that winter in the tropics, such as veery, black-billed cuckoo, American redstart, scarlet tanager, and rose-breasted grosbeak, find important breeding habitat in the refuge's large woodlands. In addition, 17 birds on Michigan's list of endangered or threatened species can be found at the refuge.

Our efforts to provide habitat for waterfowl do not present a "species face-off" with our efforts to benefit other birds. For example, the refuge periodically drains marsh impoundments to promote an abundance of annual wetland plants. The seeds of these plants provide an especially rich carbohydrate food resource for migrant ducks and geese. Further, these plants provide an optimum invertebrate food base. These invertebrates are a critical protein source for waterfowl. However, as we drain these impoundments, we create mudflats and shallow waters that are critical habitats for migrant shorebirds. Further, fish become concentrated as the water goes down, creating a smorgasbord for herons, egrets, eagles, gulls, and terns. When we subsequently return water to the impoundments, ducks and geese find a full menu of seeds, insects, snails, and worms. Additional examples include our maintenance of cattail marshes for migrant dabbling ducks and breeding marshbirds; management of grasslands for nest-

ing mallard, blue-winged teal, bobolink, and sedge wren, and managing waters in our forested impoundments to benefit migrant dabblers, nesting wood duck, and forest interior songbirds. Indeed, the refuge strives to maximize opportunities to integrate our management activities so we can benefit ducks and geese and a wide diversity of nongame birds.

## Refuge Recognizes Volunteers at Dinner

By Becky Goche, Park Ranger

Shiawassee NWR recognized its volunteers and Friends members on April 27, 2005, for hours that they donated in fiscal year 2004. Thirty-six volunteers and Friends enjoyed a catered meal followed by a special program hosted by Assistant Manager Ed DeVries and Park Ranger Becky Goche.

In FY2004, the Refuge recorded 4,898 volunteer hours donated by nearly 100 people. One of the "big" volunteer projects was a forest inventory conducted on Michigan Islands NWR and Shiawassee NWR. A portion of this study was funded by a grant that the Friends of Shiawassee NWR received. Volunteers were also instrumental in the numerous special events that the Refuge hosted throughout the year including Kids' Free Fishing Day, Annual Refuge Open House, summer camps for children, guided tours/hikes, and the non-ambulatory deer hunt.

Each volunteer received a special water bottle to use on future volunteer projects. In addition, twelve individuals were recognized for donating 40 or more hours during the year. Volunteer Dan Patillo received a 1,500 hour pin. Patillo began volunteering at the Refuge in 1999 and this past fall and winter brought many minority students out to the Refuge as a part of his student internship through Central Michigan University. Bob Grefe was awarded a 4,000 hour pin. Grefe started doing bird surveys on the Refuge on February 24, 1983. Larry Hess was awarded the 2004 Refuge Volunteer of the Year award for his efforts in caring for the Woodland Trail.



Green heron



# Refuge Offers 15 Deer Hunts this Fall

By Becky Goche, Park Ranger



The Refuge will accept applications for its 2005 deer hunting season beginning June 1. We hope to offer an online application system for

our hunters this year. Hopefully, this will cut down on the number of applications that are voided because of incomplete information. Visit our website for more information. Hunters' applications will be entered into a drawing based upon a priority point system started in 2001 for the specified hunt period. Applications must be postmarked by August 1, 2005, to be eligible for the drawing and associated priority points.

The Refuge is offering the following 15 hunts this year:

## Archery Hunts

Hunt 201, October 29—November 2

Hunt 202, November 3—November 7

Hunt 203, December 1—December 5

Hunt 204, December 19—December 23

Hunt 205, December 27—December 31

## Non-Ambulatory Hunts (Must be in a wheelchair)

Hunt 206, November 15—November 16

Hunt 207, November 19—November 20

## Shotgun Hunt

209, November 19—November 20

## Special Youth Hunt (Must attend MYHEC program)

November 26—November 27

## Muzzleloader Hunts

210, December 9—December 10

211, December 9—December 10

212, December 11—December 12

213, December 11—December 12

214, December 13—December 14

215, December 13—December 14

More information about each hunt can be found on the hunter information sheets. This information and maps of the various hunt areas are on our website. People may also pick up information sheets at the Refuge Headquarters, Green Point Environmental Learning Center and at select licensing outlets and other sites around the state.

Refuge deer hunting permits cost \$10. Hunters who are selected in the drawing will be notified in early September. Deer scouting will be possible during the annual Refuge Open House Weekend, September 10 and 11, 2005.

*Above photo: A Refuge buck by Kim LeBlanc*

## Bob Grefe Continued...

*(Continued from page 1)*

tion and Survivability) study on the Refuge. The study is entering its sixth year of the total 10 year study. This group of dedicated volunteers leaves home by 4:00 a.m. to ensure that the mist nets are set up before sunrise.

Grefe has been instrumental in recruiting and mentoring other birders for the Refuge. He is seen as a bird expert in the region. When not on the Refuge, Grefe spends a great deal of time volunteering at local nature centers and State parks. He has done hundreds of bird banding demonstrations through the years for school children and adults alike. He currently serves on the Friends of Shiawassee NWR Board of Directors.

Bob is a humble man and in his words, "I haven't done anything special." The staff at Shiawassee NWR knows otherwise.



# A Bed of Rose Leaves

Article and illustrations by David Peters, Tractor Operator

Even when we don't always encounter the actual inhabitants of the natural world around us, evidence of their presence abounds. Physical signs such as tracks left by a squirrel bounding through the snow or a neat row of holes left in tree bark by a sapsucker are simple and sure indicators of an animal's occurrence.

Though less obvious, insects also leave ample signs of their activities. This is commonly seen on plants when a leaf or a portion of it has been eaten away. Knowing just what insect was responsible for this is often not possible, but when the notch in the edge of a leaf is a neat, smoothly curved oval shape, it is not likely the work of a hungry caterpillar or beetle at all, but that of a bee. Not just any bee, but one of the genus known appropriately as leaf-cutter bees. And this bee didn't eat the piece of leaf, she carried it away whole to line her nest.

There are 118 known species of leaf-cutter bees native to North America. They are medium sized, from ten to twenty millimeters in length. Like the majority of bees, leaf-cutters are solitary and each female builds and provisions her own nest. She chooses a narrow linear cavity as a nest site – typically a tunnel excavated in dead wood by a beetle, a hollow plant stem, under loose bark, or in various suitable nooks and crannies both natural and man-made.

The leaves chosen by the leaf-cutter bee are usually somewhat stiff and smooth on at least one side. When available, rose leaves are often a favorite selection. A few species also use flower petals. Regardless of which she chooses, the bee begins by positioning herself on the edge facing the base and uses her jaws to shear off a piece, cutting in a smooth arc. Just before the last cut, she vibrates her wings rapidly so she is ready for flight as soon as the piece is fully detached. The entire process of cutting one piece takes only two to three seconds. The piece is then flown back to the nest site.

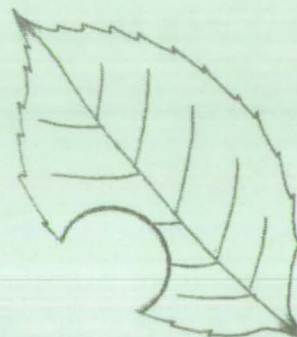
Depending on which part of her nest she is building, the bee has several different shapes she will cut. The first pieces are about the length of her body and somewhat of an oval rectangle. These are pressed together in layers at the rear of the nest forming a cup shape. As pieces are pushed into final position, she crimps the edges so that sap oozes out, effectively gluing the layers together. Once this first segment of the nest is completed, the bee begins cutting elongate oval pieces that are longer than her body. She lines the walls of the cavity with these, positioning them with the smooth side in. Once the back and walls are completed, the bee provisions the cell with a paste like food mixture of pollen and honey, and then lays a single egg. Finally, she cuts circular shaped leaf pieces and pushes them into place, plugging this first cell

and forming the back of the next cell at the same time.

Each cell takes an average of one day to complete, the total number of cell per nest varying by species. The egg inside hatch in 12-16 days and the larva feeds off the provisions until spinning a cocoon 17-18 days later, where it remains until emerging as an adult the following year.

Conservation of leaf-cutter bees is important to preserving the integrity of life. Like all bees, they are critical to the pollination of much of the world's flora, including crops. Shiawassee NWR, with its abundant supply of the natural nest sites leaf-cutter bees require, as well as flowers for their pollen and nectar needs, contributes significantly to maintaining healthy leaf-cutter bee populations. Actually they don't require large refuges to thrive. Chances are you can observe leaf-cutter bees, or more likely the oval notches they've left in leaves, in your own yard\*. And you can help them out there as well, by providing their two essentials – nectar and pollen via a variety of plants that blossom throughout the year; and places to nest such as dead plant stems or a big old branch that wood boring beetles have used. Just a simple place where the leaf-cutter bee can carefully construct her wonderful, leaf lined nest.

\* Please rest assured that leaf-cutter bees, like all native bees, are docile. Though they do have the ability to sting mildly, they do so only when their lives are severely threatened. By far, the vast majority of people who claim to have been stung by a "bee" are likely the victim of a yellowjacket, hornet, or honeybee.





## Nurturing Nature First Wednesday Series

- All programs begin at 7:00 p.m. and last 60 – 90 minutes.
- Held at the Green Point Environmental Learning Center, 3010 Maple Street, Saginaw, unless otherwise noted.
- Admission: \$2 for individuals or \$5 for a family. FREE for members of the Friends of the Shiawassee NWR.

### Wildflower Folklore

**June 1, 2005**

Valerie Blaschka from the Bay City State Recreation Area will discuss superstitions connected to wildflowers, as well as their medical "signatures."

### Cooking in the Great Outdoors

**July 6, 2005**

Tonya Thompson from the Saginaw County Parks and Recreation Commission will share recipes and samples aimed at campers and other outdoor types. Dutch oven cooking, fire vs. stove cooking, and more will be explored. **Registration is required by June 30. Call (989) 759-1669. Fee is \$5 per person.**

### Summertime at the Refuge Friends Picnic

**August 3, 2005**

**Meet at the Refuge Headquarters, 6975 Mower Road**

Bring a dish to share, your own beverage and table service. Afterwards, go on a guided tour of the Refuge.

### Upcoming First Wednesday Programs:

Just what is a Refuge and why is there one in Saginaw? – September 7  
Studying and Carving Birds – October 5  
Woodland Indian Life – November 2

### Workshops

**Drawing in Nature – June 4, 2005**

Register by May 31 – Call (989) 759-1669

**Monarch Magic – June 25, 2005**

Register by June 20 – call (989) 759-1669

## Looking Ahead in 2005

Refuge Deer Applications due – August 1

Refuge Open House Weekend – September 10 & 11

# Calendar of Events

## Kids' Free Fishing Day

**June 11, 2005, 8:00 a.m. to 11:00 a.m.**

**Ojibway Island in Saginaw**

Fishing contest for children aged 3 to 15 years. Lots of prizes to win – the more you catch, the more you could win! Bring your own pole, tackle and bait. Refreshments will be available. Register from 7:30 a.m. to 10:00 a.m. Awards given at 11:30 a.m.

## Summer Discovery Camp for Kids

**June 25 & July 23, 2005, 10:00 a.m. to 12:00 p.m.**

**Green Point ELC**

For children aged 4 to 6 years. Come to one or both sessions, each will have different activities – hikes, crafts, stories, etc. Each session costs \$2 per child.

## Night Hike

**August 12, 2005, 8:00 p.m.**

**Meet at parking lot at west end of Curtis Road**

Two different hikes will be offered: a shorter one for children and a 5-mile one for avid hikers. Bring water and mosquito spray. In the event of severe weather, the hike will be canceled.

## Jr. Refuge Manager Academy

**July 19 & 20, 2005, 9:00 a.m. to 1:00 p.m.**

**Green Point ELC & the Refuge**

For children entering 3<sup>rd</sup> and 4<sup>th</sup> grades. Cost is \$5 per child. Registration is required. See article for more information.

For more information, contact Green Point ELC at (989) 759-1669.



# FRIENDS OF SHIAWASSEE NWR MEMBERSHIP PAGE

## Friends of Shiawassee NWR Membership

☐ Renewal      ☐ New membership

☐ General Membership

\$10/year – Individual (1) vote.

\$25/year – Family (2) votes. (Member, spouse and children under age 18)

- Each membership receives quarterly newsletter - "Refuge Reporter."
- Each membership includes voting rights and opportunity to hold office.

☐ Supporting Memberships: "Goose" \$50/year, "Blue Heron" \$75/year, "Owl" \$100/year, "Bald Eagle" \$125+/year

☐ No membership at this time, but please accept my contribution.

Name: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip code: \_\_\_\_\_

Phone: \_\_\_\_\_ E-mail: \_\_\_\_\_

Make checks payable to "Friends of Shiawassee NWR", PO Box 20129, Saginaw, MI, 48602.

Contributions to the Friends of Shiawassee NWR, a 501 (c) (3) non-profit organization, are tax deductible according to IRS guidelines.

### Friends' Volunteer Opportunities

- \_\_\_\_\_ Making phone calls
- \_\_\_\_\_ Writing letters
- \_\_\_\_\_ Stuffing envelopes
- \_\_\_\_\_ Public speaking
- \_\_\_\_\_ Staff store
- \_\_\_\_\_ Work events
- \_\_\_\_\_ Writing newsletter articles
- \_\_\_\_\_ Concession stand
- \_\_\_\_\_ Committee member
- \_\_\_\_\_ Children's activities
- \_\_\_\_\_ Organize events

### Do you have any of these skills?

- \_\_\_\_\_ Computer skills
- \_\_\_\_\_ Photography
- \_\_\_\_\_ Carpentry skills
- \_\_\_\_\_ Business organizational skills
- \_\_\_\_\_ Research
- \_\_\_\_\_ Artistic skills
- \_\_\_\_\_ Fund raising
- \_\_\_\_\_ Grant writing
- \_\_\_\_\_ Researching/Ordering merchandise
- \_\_\_\_\_ Other – please list:

Board meetings held on the second Wednesday of each month at 7:00 p.m. at the Green Point Environmental Learning Center, 3010 Maple Street in Saginaw. General meetings with special programs are held at various times throughout the year. Friends Board of Directors Officers are:

President – Charles Hoover

Vice President 1 – Dick Von Berg

Treasurer – Richard Hodge

Vice President 2 – Steve MacAlpine

Secretary – Barb Werle



# Mobile Bookstore Taking Shape and Upcoming Programs

By Janet Martineau, Activities Committee Chair

Work has begun on the Refuge-donated trailer which the Friends of the Shiawassee NWR is turning into a mobile bookstore/gift shop/concession stand. Friends volunteers have ripped out the interior of the three-room dwelling and are beginning to install book shelves and other containers which will hold items for sale. They also applied for a \$5,000 start-up grant from the National Fish and Wildlife Foundation as well as additional start-up funds from Saginaw area foundations to stock the store and outfit the kitchen for concession use. And come fall, students at the Saginaw Arts and Sciences Academy will paint the exterior in a colorful montage depicting Refuge critters.

Anyone willing to help volunteer in the retooling of the trailer (work usually takes place Saturday mornings at the Refuge headquarters), with ideas for books and other nature products to sell (especially those created by Michiganders) or willing to volunteer to work once it opens (hopefully by mid-summer) please call Trailhead Store chair Janet Martineau at 790-7341 or e-mail her at [jmartineau@thesaginawnews.com](mailto:jmartineau@thesaginawnews.com).

## Upcoming Summer Events

Looking for something to do this summer in the great outdoors? The Friends of the Shiawassee National Wildlife Refuge is hosting three events of interest — two of which need advance reservations.

### Saturday, June 25, "Monarch Magic" workshop

- Starts at 1 p.m. at the Green Point Environmental Learning Center, 3010 Maple.
- Join Denny Brooks, an amateur naturalist and nature photographer from Midland, on a "hunt" for beautiful butterflies and darting dragonflies — nets and other materials provided
- For the first 45 minutes Brooks will discuss, inside, the basic life cycle and habitat of the Monarch and its yearly migration to central Mexico. And then for an hour following he and his participants will take to the field to catch and identify butterflies and dragonflies.

All ages are welcome, but pre-registration is required by June 20 since the field tour is limited to 20 participants. The fee is \$2 a person, free to Friends members. Call 759-1669 to make a reservation.

### Wednesday, July 6, "Cooking in the Great Outdoors" presentation

- Starts at 7 p.m. at the Green Point Environmental Learning

Center, as a part of the "Nurturing Nature" First Wednesday lecture series.

- Tonya Thompson, the outdoor recreation and event coordinator for the Saginaw County Parks and Recreation Commission, will rustle up two or three recipes aimed at campers and other outdoor types, discuss cooking over a fire vs. a stove, and offer tips and tricks for the outdoor enthusiast.

Pre-registration is required by June 30, and the charge is \$5 for all those attending since Thompson will cook food to sample. Call 759-1669 to reserve a spot.

### Wednesday, August 3, Summertime at the Refuge Friends Picnic

- Bring a dish to pass and your own serviceware/beverage to the refuge headquarters, 6975 Mower, for a 7 p.m. picnic followed by a private drive-through at the refuge as the sun starts setting.

## REFUGE REPORTER

Published quarterly by Shiawassee National Wildlife Refuge with funding from the Friends of Shiawassee NWR.

Volume 8, Issue 3

Editor: Becky Goche

### Shiawassee National Wildlife Refuge

Established in October, 1953 and administered by the U.S. Fish and Wildlife Service, Shiawassee NWR provides resting, nesting and feeding habitat for waterfowl and other birds. Its mission is to preserve or manage an undeveloped expanse of floodplain forest, marshes, rivers, and associated habitat within an agricultural and urban landscape through habitat management, encouraging public stewardship, educational programs, and private lands activities.

Refuge Manager—Steve Kahl

Assistant Refuge Manager—Ed DeVries

Biologist—Jim Dastyck

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Biological Science Technician—Vacant

Park Ranger/Volunteer Coordinator—Becky Goche

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### Friends of Shiawassee National Wildlife Refuge

A nonprofit 501 (c)(3) organization established in 1999 to promote the preservation of the natural and historical resources of the Refuge, foster its use and enjoyment by the public consistent with the protection and preservation of its environment, and engage in such educational, scientific and civic activities as will assist the management of the Refuge in carrying out its mandates.

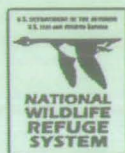
Refuge Website: <http://www.fws.gov/midwest/shiawassee>



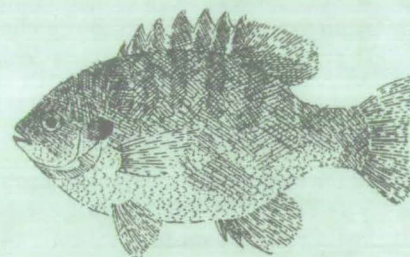
Shiawassee NWR  
6975 Mower Rd.  
Saginaw, MI 48601  
Phone: 989-777-5930  
Fax: 989-777-9200  
Hours: M - F, 7:30 a.m. to 4:00 p.m.

We're on the web!

[Http://www.fws.gov/midwest/shiawassee](http://www.fws.gov/midwest/shiawassee)



**Kids' Free Fishing Day is Saturday, June 11, for children aged 3 to 15 years**



## Summer Camps for Children Planned at Green Point

*by Becky Goche, Park Ranger*

Summer is a great time for kids to get outdoors and learn about nature. Two camps will be offered for children this summer at Green Point.

The **Summer Discovery Camp for Kids** will be held on June 25 and July 23, from 10:00 a.m. to 12:00 p.m. This camp is designed for children aged 4 to 6 years. Each Saturday session will feature different activities, crafts, hikes, stories, etc. Children can attend one or both Saturdays. Each session costs \$2 per child. Registration is appreciated, but not required. Call Green Point at (989) 759-1669 to register or for more information.

and 20, is for children entering the third and fourth grades. The Academy runs from 9:00 a.m. to 1:00 p.m. each day. The first day will be held at the Green Point Environmental Learning Center and the second day will be "in the field" at the Refuge. Children will learn about habitat, wildlife and other skills that a Refuge Manager uses every day. Of course they will have fun while they're doing it! The Academy fee is \$5 per child. Children will need to bring a sack lunch both days. Registration for the Academy is required by July 15. Call Green Point at (989) 759-1669 to register.



The **Jr. Refuge Manager Academy**, slated for July 19



## Happenings at Shiawassee National Wildlife Refuge

# Refuge Reporter

Volume 8, Issue 4

Fall 2005

### Michigan's New Jr. Duck Stamp Coordinator

*By Becky Goche, Park Ranger*

Shiawassee NWR is the new home of the Jr. Duck Stamp program for the State of Michigan. I accepted the new State Coordinator position in July and am very excited about the potential of this national program and what it can do for the Refuge and the surrounding community.

The Federal Junior Duck Stamp Conservation and Design Program is a dynamic, active, arts curriculum designed to teach wetlands and waterfowl conservation to students in kindergarten through high school. The program incorporates scientific and wildlife management principles into a visual arts curriculum. This non-traditional pairing brings new interest to both the sciences and the arts. It crosses cultural, ethnic, social, and geographic boundaries to teach greater

awareness of our nation's natural resources. This benefits not only ducks, but all migratory birds, including neotropical migratory songbirds, and hundreds of other plants and animals that depend on wetlands habitat for their survival.

This program requires an understanding of anatomy and environmental science while offering a way to express that knowledge outside the traditional science classroom. It also offers an opportunity to experience the beauty and diversity of wildlife.

The first place national winning design is used to create a Federal Junior Duck Stamp each year. Proceeds from the sales of the Junior Duck Stamps, which cost \$5, support conservation education by providing awards and scholarships for the students, teachers,

*(Continued on page 2)*

### Refuge Open House Auto Tour Scheduled for September 10

The annual Refuge Open House will be the weekend of September 10 and 11, 2005. During this weekend you can hike and bicycle anywhere on the refuge during daylight hours only. This is also the weekend when deer hunters can scout out the best spots for hunting in the fall and winter.

The self-guided auto tour will be on Saturday only from 10:00 a.m. to 4:00 p.m. The tour will start at the parking lot at the west end of Curtis Road. The route will take you into areas that are normally closed to the public. The Friends of Shiawassee NWR will have refreshments and other items for sale.

*(Continued on page 3)*

#### Inside this issue:

2005 Refuge Trail Closures	2
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Jr. Duck Stamp continued	2
Friends Mobile Bookstore Receives \$5000 Grant	3
Refuge Open House continued	3

#### Special Points:

- The Ferguson Bayou Trail at Curtis Road will be closed until 1:00 p.m. each day during goose hunting. At the time of publication, the dates had not been set. We anticipate the dates MAY be October 8 through October 30, 2005. Contact the Refuge for more information.
- The pop machine at the Refuge Headquarters has been removed. The Friends are selling Coca-Cola products by the case. Make them an offer! Contact Rich Hodge at (989) 652-9019.



## Refuge Trail Closures for 2005

Hiking trails will be **closed to all public use** on the following dates for white-tailed deer hunting. The hunting management program is necessary to maintain the Refuge deer population at a level compatible with the its purpose of protecting habitat for migratory birds. The Ferguson Bayou Trail will also be closed until 1:00 p.m. everyday during goose hunting season typically in October. Dates are pending.

### Woodland Trail at Stroebel Road

October 29 – November 2, 2005

November 3 – 7, 2005

November 19 – 20, 2005

December 9 – 14, 2005

### Ferguson Bayou Trail at Curtis Road

October 29 – November 2, 2005

November 3 – 7, 2005

November 15 – 20, 2005

November 26 – 27, 2005

December 1 – 5, 2005

## Did You Know...

...that there are 19.55 miles of roads on the Refuge? And that's not counting the miles of deer trails!

...there is 187,769 linear feet of dikes? That's over 35 miles!

...that there are 6 permanent pumps?

...that there are 20 water control structures?

The above information was compiled from the Refuge's Real Property Report by Assistant Refuge Manager Ed DeVries. One of Ed's many duties is keeping track of all the real property found on the Refuge. We hope that you found it interesting!

December 9 – 14, 2005

December 19 – 23, 2005

December 27 – 31, 2005

### Cass River Unit in Bridgeport Township

October 29 – November 2, 2005

November 3 – 7, 2005

December 1 – 5, 2005

December 19 – 23, 2005

December 27 – 31, 2005



Trails at Green Point ELC are available for hiking and cross-country skiing everyday, during daylight hours only. Bicycles and pets are not allowed on Green Point's trails.

Coyote

## Jr. Duck Stamp Program Continued...

(Continued from page 1)

and schools that participate in the program. For more information on the Junior Duck Stamp Program, visit the website: <http://www.fws.gov/duckstamps>.

Last year's national winner was from Wisconsin. I hope that within the next few years the winner will be from Michigan! But, I can't do it alone. I am learning as I go with the help of a thick handbook, other State Coordinators, and our Regional and National Coordinators. I've been told several times that partnerships with other agencies and organizations is key to a successful program so don't be surprised when I come calling! If you are willing to partner with this program, have a teacher connection or can help in any other way, please contact me at (989) 759-1669 or email [Becky\\_Goche@fws.gov](mailto:Becky_Goche@fws.gov).



Pintails



# FRIENDS OF SHIAWASSEE NWR MEMBERSHIP PAGE

## Friends of Shiawassee NWR Membership

☐ Renewal      ☐ New membership

☐ General Membership

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☐ No membership at this time, but please accept my contribution.

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Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip code: \_\_\_\_\_

Phone: \_\_\_\_\_ E-mail: \_\_\_\_\_

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\_\_\_\_\_ Organize events

\_\_\_\_\_ Computer skills

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\_\_\_\_\_ Carpentry skills

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\_\_\_\_\_ Research

\_\_\_\_\_ Artistic skills

\_\_\_\_\_ Fund raising

\_\_\_\_\_ Grant writing

\_\_\_\_\_ Researching/Ordering merchandise

\_\_\_\_\_ Other – please list:

Board meetings held on the second Wednesday of each month at 7:00 p.m. at the Green Point Environmental Learning Center, 3010 Maple Street in Saginaw. General meetings with special programs are held at various times throughout the year. Friends Board of Directors Officers are:

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Treasurer – Richard Hodge

Secretary – Barb Werle



## **Nurturing Nature First Wednesday Series**

- All programs begin at 7:00 p.m. and last 60 – 90 minutes.
- Held at the Green Point Environmental Learning Center, 3010 Maple Street, Saginaw, unless otherwise noted.
- Admission: \$2 for individuals or \$5 for a family. FREE for members of the Friends of the Shiawassee NWR.

### **What Is a National Wildlife Refuge and Why Is There One in Saginaw? September 7, 2005**

Shiawassee NWR's Refuge Manager, Park Ranger, Refuge Officer, and Wildlife Biologist will share pictures of the land where they work and will discuss their jobs managing both wildlife and people.

### **Studying and Carving Birds October 5, 2005**

Mike Ford, a member of the Tri-City Carvers, has been carving and painting realistic songbirds and waterfowl for 20 years and competes at the national level in the craft. He will present a program about the skills involved in carving birds that look real.

### **Woodland Indian Life November 2, 2005**

Kyle Bagnall, the manager of the historic program at Midland's Chippewa Nature Center, explores how native people used plant and animal resources around them to thrive in the Saginaw Valley for thousands of years before the arrival of Europeans. Participants of all ages can try such hands-on skills as brain tanning of deer hide, making cordage from plants, and starting a fire by friction.

### **Upcoming First Wednesday Programs:**

Looking for your ideas for the 2006 season – contact Green Point or the Friends Activities Chair to share them.

### **Looking Ahead in 2005**

Goose Hunting – Dates to be determined in October

Deer Hunting – Various dates from October 29 through December 31

# **Calendar of Events**

## **Nature's Halloween Hike**

**October 14, 2005, 7:00 p.m.**

### **Green Point ELC**

Learn about the Refuge's wildlife at night as you hike in guided groups along Green Point's trails. This is geared for families and is intended to be educational, NOT scary. Sign-up for one of three groups that leave at 7:15 p.m., 7:30 p.m. or 7:45 p.m. by calling Green Point. Refreshments will be available for sale from the Friends of Shiawassee.

## **Refuge Open House Auto Tour**

**September 10, 2005, 10:00 a.m. to 4:00 p.m.**

### **Begins at parking lot at west end of Curtis Road**

View Refuge birds and other wildlife from your vehicle as you take a self-guided auto tour. The tour will be canceled in the event of severe weather or muddy roads.

## **Saginaw Valley Audubon Bird Tour**

**Tour by Car – September 24.**

Meet at Refuge headquarters at 9:00 a.m. to carpool together. Limited to 10 people.

Program is led by Saginaw Valley Audubon Society members and is FREE. Call Green Point to register.

For more information, contact Green Point ELC at (989) 759-1669.



# Friends' Mobile Bookstore Receives \$5000 Grant for Renovations

By Janet Martineau, Activities Committee Chair

The Friends' bookstore committee recently received notification that the National Fish and Wildlife Foundation has approved its \$5,000 grant application to convert a donated trailer and stock it as a mobile book store/concession stand. Board members Susan Scott, Barb Werle and Janet Martineau spent a spring Saturday "gutting" the interior of the trailer to make way for specially built and designed shelving and display space. This fall students at the Saginaw Arts & Sciences Academy have agreed to colorfully paint the trailer's exterior.

Seventeen Friends groups from across the country were collectively granted more than \$800,000 in the spring 2005 cycle. This year's granting process gave priority consideration to proposals that facilitate wildlife-dependent recreation on refuges and that reach new audiences. Bookstore committee chair Janet Martineau and her committee will soon begin researching books, outdoor equipment and souvenirs to sell. Proceeds from Friends' bookstore helps fund Refuge programs and services.

## First Wednesday Series Planning

Contingent on securing a funding grant to pay the speaker fees, the Friends activities committee would like to continue the "Nurturing Nature" First Wednesday series in hopes attendance will grow. The series ends its first season in November with totals for each event so far ranging between 10 and 25 people. Committee members will meet in September to start booking the 2005-2006 lineup. Friends members and other readers of this newsletter are asked to submit possible topics and/or speakers for the series. What would you like to learn about, actually make with your own hands or see in a slide show when it comes to the natural world? Speakers are paid \$50 and each program runs 60- to 90-minutes. If you have ideas or suggestions, call activities committee chair Janet Martineau at (989) 790-7341.

## Birding Trips Planned

Members of the Saginaw Valley chapter of the Audubon Society have agreed to lead two more free birding trips through the Refuge. Two were offered during spring migration this past year, and the two new outings will find shorebirds and waterfowl returning back home "down south" during their fall migration. Both fall birding trips are guided drive-through experiences. The first one is Saturday, August 27, and the second on Saturday, Sept. 24. Meet at the Refuge headquarters parking lot, on the corner of Curtis and Mower Roads, at 9:00 a.m. on both dates. Each trip will last two to three hours. Bring binoculars. Each trip is limited to 10 participants. Registration is required at least two days before each tour. Call Green Point at (989) 759-1669 to save your spot.

## Refuge Open House Continued...

(Continued from page 1)

Vote for your favorite photos entered in this year's Refuge Amateur Photo Contest from 10:00 a.m. to 4:00 p.m. at the Refuge Headquarters on the corner of Curtis and Mower Roads.

## Volunteers Needed

We need friendly people to help visitors along the Auto Tour. We need some folks throughout the day to help at the auto tour's entrance and exit and with the photo contest at the Refuge Headquarters. If you have any questions or want to volunteer, please contact Becky Goche at (989) 759-1669.

## REFUGE REPORTER

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Volume 8, Issue 3

Editor: Becky Goche

### Shiawassee National Wildlife Refuge

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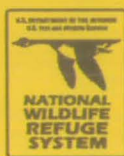
Refuge Website: <http://www.fws.gov/midwest/shiawassee>



Shiawassee NWR  
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Saginaw, MI 48601  
Phone: 989-777-5930  
Fax: 989-777-9200  
Hours: M - F, 7:30 a.m. to 4:00 p.m.

We're on the web!

[Http://www.fws.gov/midwest/shiawassee](http://www.fws.gov/midwest/shiawassee)



**Refuge Open House Weekend is September 10 & 11, 2005.**

## Plan a Field Trip to Green Point this Fall

*by Becky Goche, Park Ranger*

It's time for school and that means it's time to plan your fall and winter field trips to Green Point! Green Point offers many different programs for you and your students to come and explore the outdoors. You can view a listing of these programs on our website (<http://www.fws.gov/midwest/shiawassee>) or you can call Green Point at (989) 759-1669 to request a copy be sent to you in the mail. We have programs for all ages—you can pick a program appropriate for your class or we can suggest one based upon the grade level you teach.

We also offer programs for in your classroom, i.e. we come to you! Typically, we prefer doing these in the winter months when we have fewer visitors and school groups here, but we are flexible. How cool would it be for a real, live Park Ranger to come visit your class-

room? There are also many educational trunks covering a variety of natural resources-related topics that you can borrow for a two-week period. Each trunk contains a variety of items to enhance your curriculum including books, videos, posters, puppets, skulls, and more. All you need to do is call to schedule a time to pick one up from Green Point.



The Refuge's environmental education programs are **FREE!** For more information, visit our website and click on education or call Green Point.





## "Nurturing Nature" First Wednesday Series



- All programs begin at 7:00 p.m. and last 60 – 90 minutes.
- Held at the Green Point Environmental Learning Center, 3010 Maple in Saginaw, unless otherwise noted.
- Admission: \$2 for individuals or \$5 for a family. FREE for Friends members.

### Backyard Birding Buffet

**January 5**

Cherri Allen from Cherri's Feed-n-Seed & Birder's Boutique will discuss ways to attract birds, feeder preferences, nesting boxes and other tips.

### Endangered Species

**February 2**

Becky Goche, Park Ranger for the Refuge, will discuss endangered and threatened species from around the world and their protection. Numerous confiscated wildlife items will be available for viewing.

### Ornamental Grasses for the Garden

**March 2**

Susan Scott, an advanced master gardener, will discuss the basics of using ornamental grasses in the garden. These perennials provide three seasons of foliage, a variety of colors and textures, and are easy to grow.

### Landscaping for Wildlife

**April 6**

Janea Little, a senior naturalist at Chippewa Nature Center, will discuss how to landscape your back yard into an attractive haven for wildlife by using native plants and natural features.

### Rainforest Revue

**May 4**

Eugene Beckham, a wildlife artist and illustrator, will offer an overview of his research and trips to rainforests in Belize, Costa Rica, Peru, Bolivia and Columbia. He will explain why rainforests are so important.

### Wildflower Folklore

**June 1**

Valerie Blaschka from the Bay City State Recreation Area will discuss superstitions connected to wildflowers, as well as their medical "signatures." **Program date may change due to speaker's schedule. Call (989) 759-1669 for confirmation.**

### Cooking in the Great Outdoors

**July 6**

Donna Thompson from the Saginaw County Parks and Recreation Commission will share recipes and samples aimed at campers and other outdoor types. Dutch oven cooking, fire vs. a stove cooking, and more will be explored. **Registration is required by June 30. Call (989) 759-1669. Fee is \$5 per person.**

### What Is a Refuge and Why Is There One in Saginaw?

**September 7**

Several staff from the Shiawassee National Wildlife Refuge will show slides of the land where they work and discuss their jobs managing critters and human visitors.

### Studying and Carving Birds

**October 5**

Mike Ford of the Tri-City Carvers has been carving and painting realistic songbirds and waterfowl for 20 years and competes at the national level. He will present a program about the skills involved in carving birds.

### Woodland Indian Life

**November 2**

Kyle Bagnall, manager of historical programs at Chippewa Nature Center, explores how native people used plant and animal resources to thrive in the Saginaw Valley for thousands of years before Europeans arrived. Participants can try brain tanning of deer hides, making cordage from plants and starting a fire by friction.

## Workshops

### "Drawing in Nature"

**Saturday, June 4**

Join Eugene Beckham, a nature artist and illustrator, for a crash course in nature drawing. Ages 12 and up are welcome. Class size is limited to 15.

- 10:00 a.m. to 2:00 p.m. at the Green Point Environmental Learning Center.
- Bring your own lunch.
- Classroom and outdoor work.
- Registration is required by May 31. Call (989) 759-1669.
- Bring a sketch pad and No. 2 H or HB pencils.
- Fee is \$2 per person; free to Friends members.

### "Monarch Magic"

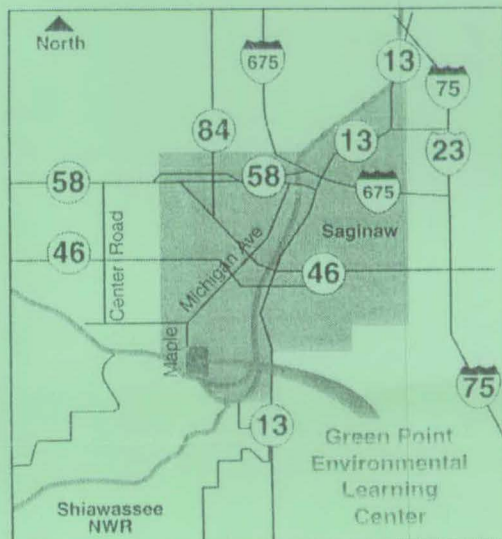
**Saturday, June 25**

Denny Brooks, an amateur naturalist and nature photographer, will lead a discussion on Monarch butterflies, their habitat and yearly migration to Mexico. All ages are welcome! Class size is limited to 20.

- 1:00 p.m. to 3:00 p.m. at the Green Point Environmental Learning Center.
- Catch and identify butterflies and dragonflies. Nets and other materials provided.
- Registration is required by June 20. Call (989) 759-1669 to register.
- Fee is \$2 per person; free to Friends members.

Programs made possible by the Shiawassee National Wildlife Refuge and the Friends of Shiawassee NWR.

For more information call Green Point ELC, (989) 759-1669





## Shiawassee National Wildlife Refuge 2005 Deer Hunt Information (Federal Hunts Only)

### Pre-Registered Drawings

**NEW THIS YEAR – APPLY ON-LINE!** Visit our website at <http://www.fws.gov/midwest/shiawassee> and click on "Hunting" for more information. Applicants may also apply by submitting cards to the Refuge. There is no fee to apply. **Cards must be postmarked by August 1, 2005, to be entered into the drawing and to be eligible for priority points.**

### Instructions for Pre-Registered Hunt Applications

1. Applicants may apply **once** and may choose only **ONE (1)** hunt. Hunt choice code numbers 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, including City, State and Zip
  - Phone Number
  - Driver's License Number or Sportcard Number
  - Hunt Choice Code Number

\*Please indicate if any of the above information has changed from past years.  
**Cards postmarked after the deadline or filled out incorrectly will not be entered into the drawing and no priority points will be awarded for the hunter.**
3. Hunters may apply with one (1) partner. Please note that one partner may not be entered into the drawing nor receive priority points if his/her card information is incomplete. Partners must apply for the same hunt choice code number. 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. **NO helper permits will be issued.**
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 by mail before September 9, 2005. Hunters may also check our website (click on "Hunting") to check if he/she was drawn.
6. Permits cost \$10. All permits must be claimed by October 28, 2005, or negative points will be assigned.

### Priority Deer Drawing System Guidelines

- A priority drawing system was started in 2001.
  - 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.
- Please note that your points may not transfer if we are not made aware of changes in your identification number.

**\*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

Hunt Choice Code #	Dates	Type	Hunt Area	Number Hunters	2004 Applicants	Harvest Permits
201	Oct. 29 – Nov. 2	Archery	1 & 5	100	231	Antlerless Only
202	Nov. 03 – Nov. 07	Archery	1 & 5	100	686	Either Sex
203	Dec. 01 – Dec. 05	Archery	4 & 5	100	271	Either Sex
204	Dec. 19 – Dec. 23	Archery	4 & 5	100	256	Either Sex
205	Dec. 27 – Dec. 31	Archery	4 & 5	100	165	Either Sex
206	Nov. 15 – Nov. 16	Shotgun (N-A*)	3	18	25	(N-A Shotgun hunts are 60% antlerless & 40% either sex permits)
207	Nov. 17 – Nov. 18	Shotgun (N-A*)	3	18	23	
209	Nov. 19 – Nov. 20	Shotgun (General)	1	30	184	Either Sex
210	Dec. 09 – Dec. 10	Muzzleloader	3	75	327	Antlerless Only
211	Dec. 09 – Dec. 10	Muzzleloader	2	25	86	Antlerless Only
212	Dec. 11 – Dec. 12	Muzzleloader	3	75	142	Antlerless Only
213	Dec. 11 – Dec. 12	Muzzleloader	2	25	63	Antlerless Only
214	Dec. 13 – Dec. 14	Muzzleloader	3	75	791	Either Sex
215	Dec. 13 – Dec. 14	Muzzleloader	2	25	196	Either Sex

\* 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:** (Maps will be included in the hunter packet if you are selected or you can visit our website to download them.)

- **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.
- **Area 5** – Cass River Unit in Bridgeport Township.

**Youth Shotgun:** Contact [www.MYHEC.org](http://www.MYHEC.org) for more information on how to register for the class on August 27 – 28, 2005, in Lansing. Twenty youth hunters will be selected from those attending the training to hunt on the Refuge from November 26 – 27 in Hunt Area 3.

**Scouting Dates:** September 10 and 11, 2005, daylight hours only, during our Open-House Weekend.

**APPLY ON-LINE:** Visit <http://www.fws.gov/midwest/shiawassee> and click on “Hunting” for more information. **Deadline to apply on-line is 11:59 p.m., August 1, 2005.**

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

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 NW, Washington, DC 20240

U.S. Fish & Wildlife Service

# Shiawasse

*National Wildlife  
Refuge Bird List*





## Shiawassee National Wildlife Refuge Bird Checklist

Welcome to Shiawassee National Wildlife Refuge. Over 9,400 acres of marsh, bottomland hardwood, grassland and agricultural lands are protected here. Four rivers cross the refuge to form Michigan's largest tributary, the Saginaw River. Frequent flooding and diverse habitat make this an excellent spot for viewing waterfowl, shorebirds, wading birds, songbirds and raptors. Bird activity on the refuge is highlighted by large waterfowl concentrations during the spring and fall migrations.

You will find 277 species of birds listed. The bird list follows the 45<sup>th</sup> American Ornithologists' Union Checklist.

Visiting birders are encouraged to share their sightings with refuge staff.

### Bird Legend

Symbols used are as follow:

- \* ..... indicates nesting on the refuge has recently occurred
- ! ..... State endangered species
- # ..... State threatened species

Sp... March – May

S.... June – August

F .... September – November

W ... December – February

a ..... abundant: a common species which is very numerous

c ..... common: certain to be seen or heard in suitable habitat, not in large numbers

u ..... uncommon: present but not always seen

o ..... occasional: seen only a few times during the season

r ..... rare: seen every 2 to 5 years

i ..... incidental: seen only once OR seen every 5 years or more

Common Name	Sp	S	F	W
<b>Swans, Geese, and Ducks</b>				
Greater White-fronted Goose	o	i	o	-
Snow Goose	u	-	u	r
Ross's Goose	r	-	r	r
Cackling Goose	o	-	o	r
Canada Goose*	a	c	a	c
Mute Swan	o	r	o	o
Trumpeter Swan	r	r	r	r
Tundra Swan	c	r	c	o
Wood Duck*	c	c	c	r
Gadwall	c	o	c	-
American Wigeon	c	o	c	r
American Black Duck	c	r	c	u
Mallard*	a	c	a	c
Blue-winged Teal*	c	c	c	-
Northern Shoveler*	c	o	c	r
Northern Pintail	c	r	c	r
Green-winged Teal	c	o	c	r
Canvasback	u	r	u	-
Redhead*	u	o	u	-
Ring-necked Duck	c	r	c	-
Greater Scaup	o	-	o	-
Lesser Scaup	c	r	c	-
Surf Scoter	i	-	-	-
White-winged Scoter	-	-	i	-
Black Scoter	-	-	i	-
Long-tailed Duck	r	-	-	-
Bufflehead	u	-	u	-
Common Goldeneye	r	-	r	r
Hooded Merganser*	c	u	u	r
Common Merganser	c	r	a	c
Red-breasted Merganser	-	r	-	-
Ruddy Duck	c	o	c	-
<b>Grouse &amp; Turkeys</b>				
Ring-necked Pheasant*	c	c	c	c
Ruffed Grouse	r	r	r	r
Wild Turkey*	c	c	c	c
<b>Quail</b>				
Northern Bobwhite	r	r	r	-
<b>Loons</b>				
Common Loon#	i	-	-	-
<b>Grebes</b>				
Pied-billed Grebe*	c	c	c	-
Horned Grebe	o	-	r	-
Eared Grebe	r	-	-	-
<b>Pelicans</b>				
American White Pelican	o	o	r	-



Common Name	Sp	S	F	W
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## Cormorants

Double-crested Cormorant	c	r	c	r
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## Hérons & Bitterns

American Bittern*	u	u	u	-
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Least Bittern*#	u	u	u	-
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Great Blue Heron*	c	c	c	o
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Great Egret	u	c	c	-
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Snowy Egret	r	r	-	-
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Little Blue Heron	i	-	-	-
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Cattle Egret	r	r	r	-
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Green Heron*	u	c	u	-
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Black-crowned Night-Heron	u	c	u	-
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Yellow-crowned Night-Heron	-	i	-	-
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## Ibises

White Ibis	-	-	i	-
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Glossy Ibis	r	r	r	-
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## Vultures

Turkey Vulture*	c	c	c	-
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## Hawks & Eagles

Osprey#	r	r	r	-
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Bald Eagle*#	c	u	u	c
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Northern Harrier	r	o	u	u
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Sharp-shinned Hawk	o	-	o	r
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Cooper's Hawk*	u	o	u	u
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Northern Goshawk	-	-	r	r
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Red-shouldered Hawk	r	-	r	r
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Broad-winged Hawk	r	-	r	-
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Red-tailed Hawk*	c	c	c	c
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Rough-legged Hawk	o	-	o	u
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Golden Eagle	r	-	-	r
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## Falcons

American Kestrel	o	o	o	u
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Merlin#	r	-	o	-
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Gyrfalcon	-	-	i	-
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Peregrine Falcon!	o	-	o	-
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## Rails & Coots

Yellow Rail	-	-	i	-
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King Rail*!	r	r	r	-
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Virginia Rail*	c	u	u	-
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Sora*	c	u	u	-
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Common Moorhen*	u	u	u	-
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American Coot*	c	c	c	-
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## Cranes

Sandhill Crane*	u	o	u	r
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Common Name	Sp	S	F	W
<b>Plovers</b>				
Black-bellied Plover	o	r	o	-
American Golden-Plover	o	r	o	-
Semipalmated Plover	u	o	u	-
Killdeer*	c	c	c	r
<b>Avocets &amp; Stilts</b>				
Black-necked Stilt	-	i	-	-
American Avocet	r	r	r	-
<b>Sandpipers</b>				
Greater Yellowlegs	c	c	c	-
Lesser Yellowlegs	c	c	c	-
Solitary Sandpiper	o	u	u	-
Willet	i	-	-	-
Spotted Sandpiper*	c	c	c	-
Upland Sandpiper	r	r	r	-
Whimbrel	i	-	-	-
Hudsonian Godwit	r	r	r	-
Marbled Godwit	r	-	-	-
Ruddy Turnstone	r	r	r	-
Red Knot	r	r	r	-
Sanderling	-	-	r	-
Semipalmated Sandpiper	u	u	u	-
Western Sandpiper	i	i	-	-
Least Sandpiper	u	u	u	-
White-rumped Sandpiper	o	o	o	-
Baird's Sandpiper	r	-	o	-
Pectoral Sandpiper	u	u	u	-
Dunlin	c	o	u	-
Curlew Sandpiper	i	-	-	-
Stilt Sandpiper	o	u	u	-
Buff-breasted Sandpiper	-	-	r	-
Ruff	i	-	-	-
Short-billed Dowitcher	u	u	u	-
Long-billed Dowitcher	-	-	u	-
Wilson's Snipe	u	-	u	-
American Woodcock*	u	u	u	-
Wilson's Phalarope*	o	r	o	-
Red-necked Phalarope	r	-	r	-
<b>Gulls &amp; Terns</b>				
Laughing Gull	i	i	-	-
Franklin's Gull	i	-	i	i
Little Gull	i	-	-	-
Bonaparte's Gull	o	-	u	o
Ring-billed Gull	c	u	a	o
Herring Gull	u	o	c	u
Iceland Gull	-	-	-	r
Lesser Black-backed Gull	-	-	-	r
Glaucous Gull	-	-	-	r
Great Black-backed Gull	-	-	-	r
Caspian Tern#	u	u	u	-



Common Name	Sp	S	F	W
Common Tern#	o	-	o	-
Forster's Tern	o	-	o	-
Black Tern*	o	o	o	-
<b>Pigeons &amp; Doves</b>				
Rock Pigeon	o	o	o	o
Mourning Dove	c	c	a	c
<b>Cuckoos</b>				
Black-billed Cuckoo*	o	o	o	-
Yellow-billed Cuckoo*	o	u	o	-
<b>Barn Owls</b>				
Barn Owl	-	i	-	-
<b>Owls</b>				
Eastern Screech-Owl*	u	u	u	u
Great Horned Owl*	u	u	u	u
Snowy Owl	r	-	-	r
Barred Owl*	u	u	u	u
Long-eared Owl#	-	-	-	i
Short-eared Owl!	o	-	u	u
<b>Nightjars</b>				
Common Nighthawk	o	-	o	-
Whip-poor-will	r	-	-	-
<b>Swifts</b>				
Chimney Swift	c	o	c	-
<b>Hummingbirds</b>				
Ruby-throated Hummingbird*	-	u	u	u
<b>Kingfishers</b>				
Belted Kingfisher*	c	c	c	r
<b>Woodpeckers</b>				
Red-headed Woodpecker	o	r	o	-
Red-bellied Woodpecker*	c	c	c	c
Yellow-bellied Sapsucker	u	-	u	-
Downy Woodpecker*	c	c	c	c
Hairy Woodpecker*	u	u	u	u
Northern Flicker*	c	c	c	o
Pileated Woodpecker*	u	u	u	u
<b>Flycatchers</b>				
Olive-sided Flycatcher	r	-	-	-
Eastern Wood-Pewee*	c	c	u	-
Yellow-bellied Flycatcher	r	-	-	-
Acadian Flycatcher	-	i	-	-
Alder Flycatcher	r	-	-	-
Willow Flycatcher*	c	c	o	-
Least Flycatcher*	u	u	o	-

Common Name	Sp	S	F	W
Eastern Phoebe*	u	u	u	-
Great Crested Flycatcher*	c	c	u	-
Eastern Kingbird*	u	u	u	-
<b>Shrikes</b>				
Northern Shrike	r	-	-	o
<b>Vireos</b>				
Yellow-throated Vireo*	u	u	o	-
Blue-headed Vireo	o	-	r	-
Warbling Vireo*	c	c	u	-
Philadelphia Vireo	r	-	r	-
Red-eyed Vireo*	u	u	u	-
<b>Crows &amp; Jays</b>				
Blue Jay*	c	c	c	c
American Crow*	c	c	c	c
<b>Larks</b>				
Horned Lark*	c	c	c	c
<b>Swallows</b>				
Purple Martin	o	r	r	-
Tree Swallow*	a	c	a	-
Northern Rough-winged Swallow*	c	u	c	-
Bank Swallow	c	o	c	-
Cliff Swallow	u	o	u	-
Barn Swallow*	c	u	c	-
<b>Chickadees &amp; Titmice</b>				
Black-capped Chickadee*	c	c	c	c
Tufted Titmouse*	c	c	c	c
<b>Nuthatches</b>				
Red-breasted Nuthatch	r	-	r	r
White-breasted Nuthatch*	c	c	c	c
<b>Creepers</b>				
Brown Creeper*	c	c	c	c
<b>Wrens</b>				
Carolina Wren	i	-	-	-
House Wren*	u	u	u	-
Winter Wren	u	-	u	-
Sedge Wren*	c	c	u	-
Marsh Wren*	c	c	u	-
<b>Kinglets &amp; Gnatcatchers</b>				
Golden-crowned Kinglet	u	-	u	r
Ruby-crowned Kinglet	u	-	u	-
Blue-gray Gnatcatcher*	c	c	u	-



Common Name	Sp	S	F	W
<b>Thrushes</b>				
Eastern Bluebird*	u	o	u	-
Veery	o	r	r	-
Gray-cheeked Thrush	o	-	o	-
Swainson's Thrush	u	-	u	-
Hermit Thrush	u	-	u	-
Wood Thrush*	u	u	u	-
American Robin*	c	c	c	o
<b>Thrashers</b>				
Gray Catbird*	c	c	c	-
Northern Mockingbird	r	r	r	-
Brown Thrasher*	o	o	o	-
<b>Starlings</b>				
European Starling*	c	c	c	c
<b>Pipits</b>				
American Pipit	u	-	u	-
<b>Waxwings</b>				
Bohemian Waxwing	-	-	-	r
Cedar Waxwing*	u	u	u	u
<b>Wood Warblers</b>				
Blue-winged Warbler	o	r	o	-
Golden-winged Warbler	o	r	o	-
Tennessee Warbler	u	o	u	-
Orange-crowned Warbler	r	-	o	-
Nashville Warbler	u	o	u	-
Northern Parula	o	-	o	-
Yellow Warbler*	c	c	u	-
Chestnut-sided Warbler	u	o	u	-
Magnolia Warbler	u	r	u	-
Cape May Warbler	o	r	o	-
Black-throated Blue Warbler	o	r	o	-
Yellow-rumped Warbler	c	-	c	r
Black-throated Green Warbler	u	r	u	-
Blackburnian Warbler	u	-	u	-
Pine Warbler	o	-	r	-
Kirtland's Warbler!	i	-	-	-
Palm Warbler	u	-	u	-
Bay-breasted Warbler	o	r	o	-
Blackpoll Warbler	o	-	o	-
Cerulean Warbler*	r	r	r	-
Black-and-white Warbler	u	o	u	-
American Redstart*	u	u	u	-
Prothonotary Warbler*	u	u	u	-
Ovenbird	u	o	u	-
Northern Waterthrush	u	o	u	-
Connecticut Warbler	o	r	o	-
Mourning Warbler	u	o	u	-

Common Name	Sp	S	F	W
Common Yellowthroat*	c	c	c	-
Hooded Warbler	i	-	-	-
Wilson's Warbler	u	o	u	-
Canada Warbler	u	r	u	-
Yellow-breasted Chat	i	-	-	-

### Tanagers

Scarlet Tanager*	u	u	o	-
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### Sparrows

Eastern Towhee	o	r	o	-
American Tree Sparrow	u	-	o	c
Chipping Sparrow*	u	u	u	-
Clay-colored Sparrow	i	-	-	-
Field Sparrow*	o	r	o	-
Vesper Sparrow*	u	u	u	-
Lark Sparrow	i	-	-	-
Savannah Sparrow*	c	c	c	-
Henslow's Sparrow	i	-	-	-
Fox Sparrow	u	-	u	-
Song Sparrow*	c	c	c	o
Lincoln's Sparrow	u	-	u	-
Swamp Sparrow*	c	c	c	r
White-throated Sparrow	c	-	c	-
Harris's Sparrow	i	-	-	-
White-crowned Sparrow	u	-	u	-
Dark-eyed Junco	c	-	c	u
Lapland Longspur	o	-	o	o
Snow Bunting	o	-	o	u

### Grosbeaks & Buntings

Northern Cardinal*	c	c	c	c
Rose-breasted Grosbeak*	u	u	u	-
Indigo Bunting*	c	c	u	-
Dickcissel*	-	i	-	-

### Blackbirds & Orioles

Bobolink*	u	u	u	-
Red-winged Blackbird*	a	a	a	o
Eastern Meadowlark*	o	o	o	r
Western Meadowlark	i	-	-	-
Yellow-headed Blackbird*	r	r	r	-
Rusty Blackbird	c	-	c	-
Brewer's Blackbird	r	-	r	-
Common Grackle*	a	c	a	r
Brown-headed Cowbird*	c	c	c	r
Orchard Oriole	o	r	-	-
Baltimore Oriole*	c	c	r	-



Common Name	Sp	S	F	W
<b>Finches</b>				
Pine Grosbeak	-	-	-	i
Purple Finch	r	-	r	r
House Finch*	u	u	u	u
Common Redpoll	-	-	-	r
Hoary Redpoll	-	-	-	i
Pine Siskin*	r	-	-	r
American Goldfinch*	c	c	c	c
Evening Grosbeak*	-	-	-	i
<b>Old World Sparrows</b>				
House Sparrow*	u	u	u	u



*Mallards, Kim LeBlanc*



*Common Yellowthroat, Steve Gasser*



*Great Egret, Kim LeBlanc*



**Shiawassee National Wildlife Refuge**  
**6975 Mower Road**  
**Saginaw, MI 48601**  
**Phone: (989) 777-5930**

**Website:**

**<http://www.fws.gov/midwest/shiawassee>**

**Individuals with hearing impairments may reach the refuge through the Federal Information Relay System at (800) 877-8339 (V/TTY)**



U.S. Fish & Wildlife Service

# Shiawasse

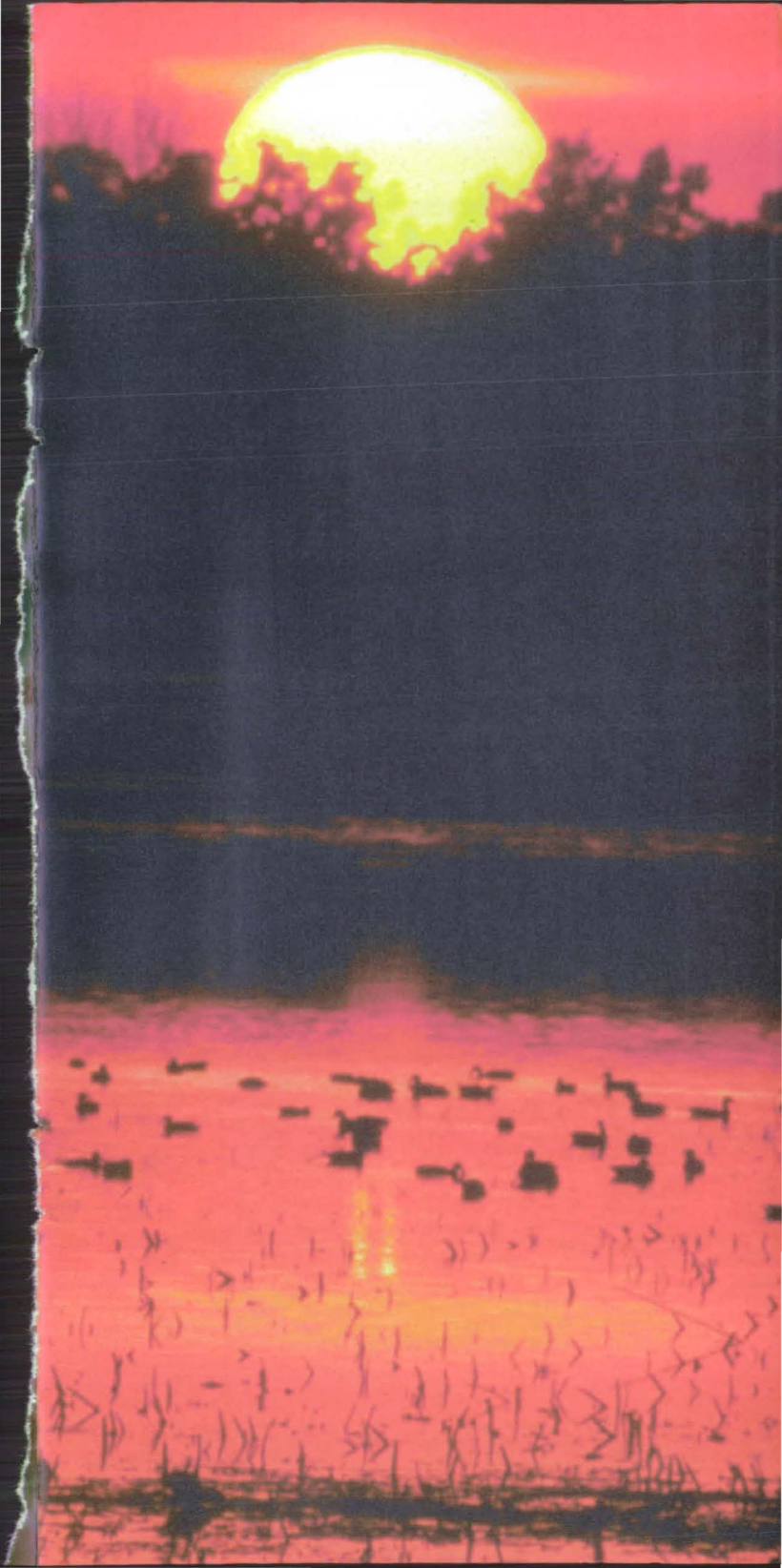
*National Wildlife  
Refuge*







*Over 10,000 years ago  
Shiawassee National  
Wildlife Refuge was  
blanketed by a large  
glacial lake that etched  
out the flat terrain and  
the area's nickname -  
The Flats. Today, it is  
one of the largest and  
most productive wetland  
ecosystems in Michigan.*







*This "Blue Goose,"  
designed by J.N.  
"Ding" Darling,  
has become a  
symbol of the  
National Wildlife  
Refuge System.*

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.



*Chickadee, Myles Willard*

## 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.



*Warbler,  
Myles Willard*

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



*Lighthouse,*  
Doug Spencer, USFWS

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.

*Dunlin,*  
Myles Willard





**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**

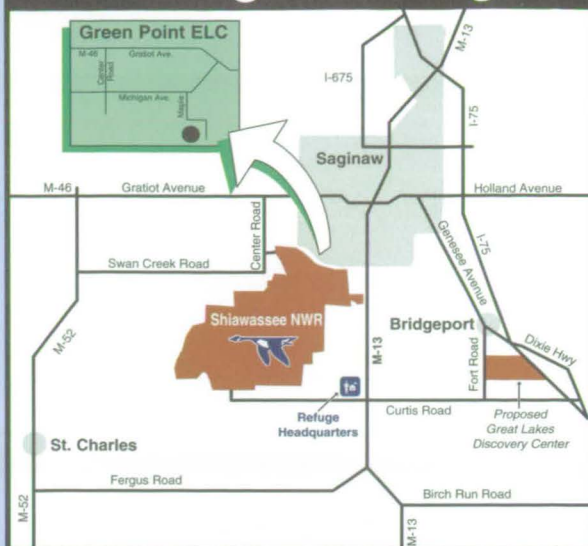
**<http://www.fws.gov>**

**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.**



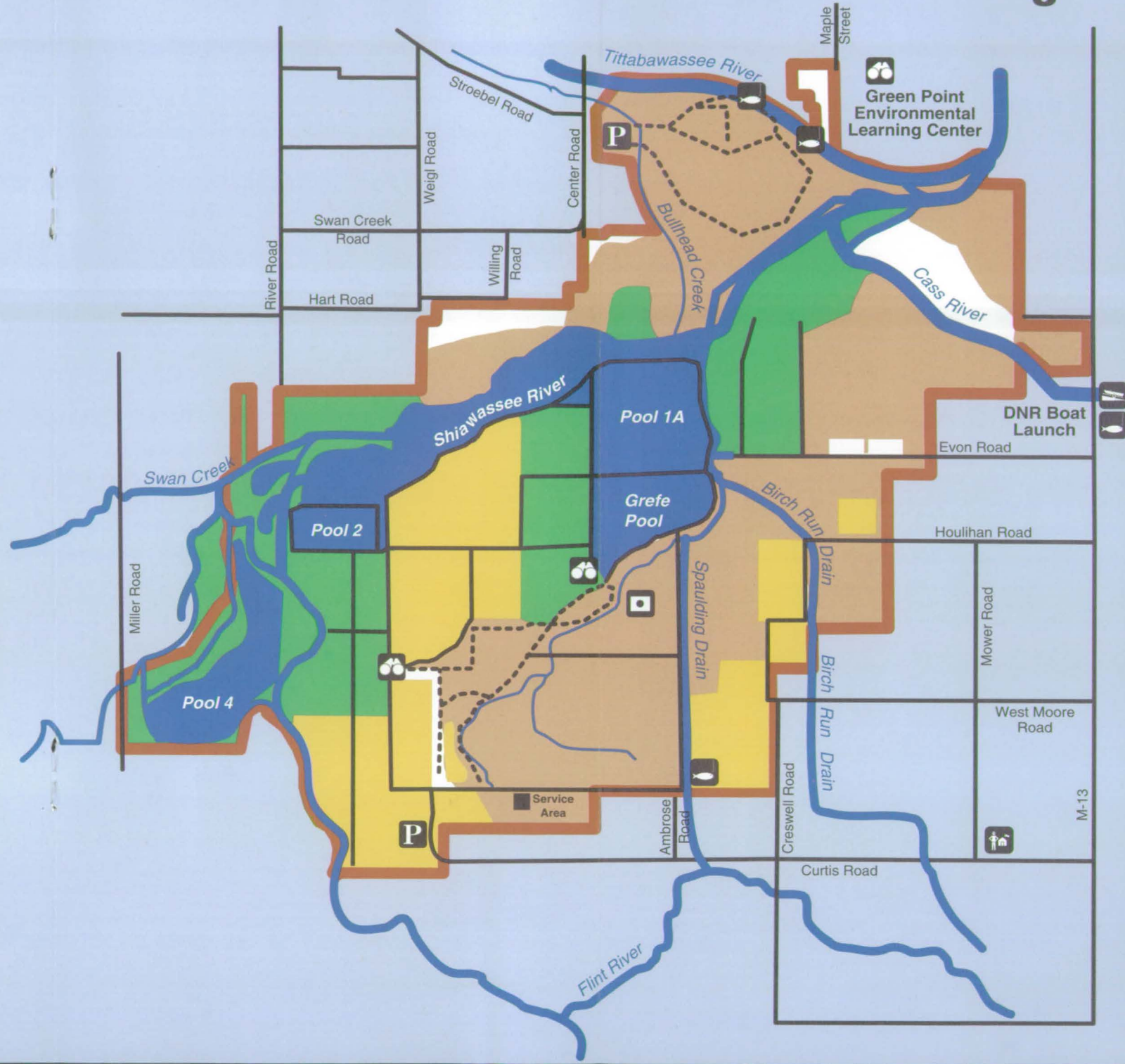
## Finding the Refuge



## Legend

- Refuge Boundary
- Trail
- Road
- Wildlife Observation Site
- Photo Blind
- Refuge Headquarters
- Parking
- Fishing
- Farmland
- Forest
- Wetland

# Shiawassee National Wildlife Refuge







White-tail Deer  
J. Mattsson, USFWS



Red Fox  
J & K Hollingsworth



Cottontail  
E. Smith



Muskrat  
J. Mattsson, USFWS

## 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

Photos (from top)  
Bicyclist, T&J Reuther,

"Look what I caught!"  
Doug Spencer, USFWS

## Environmental Education



"What kind is it?"  
Becky Goche, USFWS

### Volunteer

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.

Please  
remember!



### 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-kon and O-zhaw-wash-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!



Park Ranger  
with kids,  
Becky Goche, USFWS



Black-capped  
chickadee,  
Myles Willard

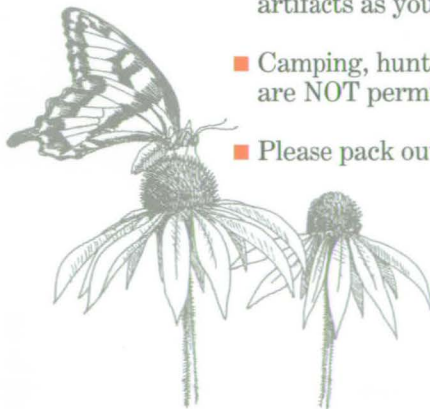


Green frog,  
Myles Willard

### 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.



### Programs

#### Hiking

### 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.

#### Visit the Interpretive Building

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.

#### Volunteer

Do trail work, help out with school groups and more.

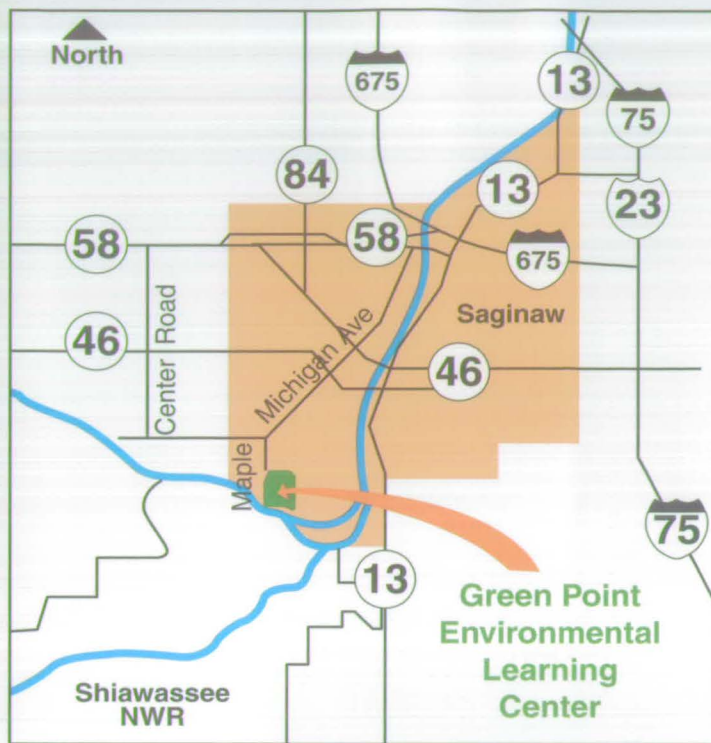
#### Cross-Country Skiing

We do not groom trails, but most can accommodate skiers.

#### Fishing

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

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.*

Shiawassee National Wildlife Refuge  
Green Point Environmental Learning Center  
3010 Maple Street  
Saginaw, Michigan 48602

<http://midwest.fws.gov/shiawassee>

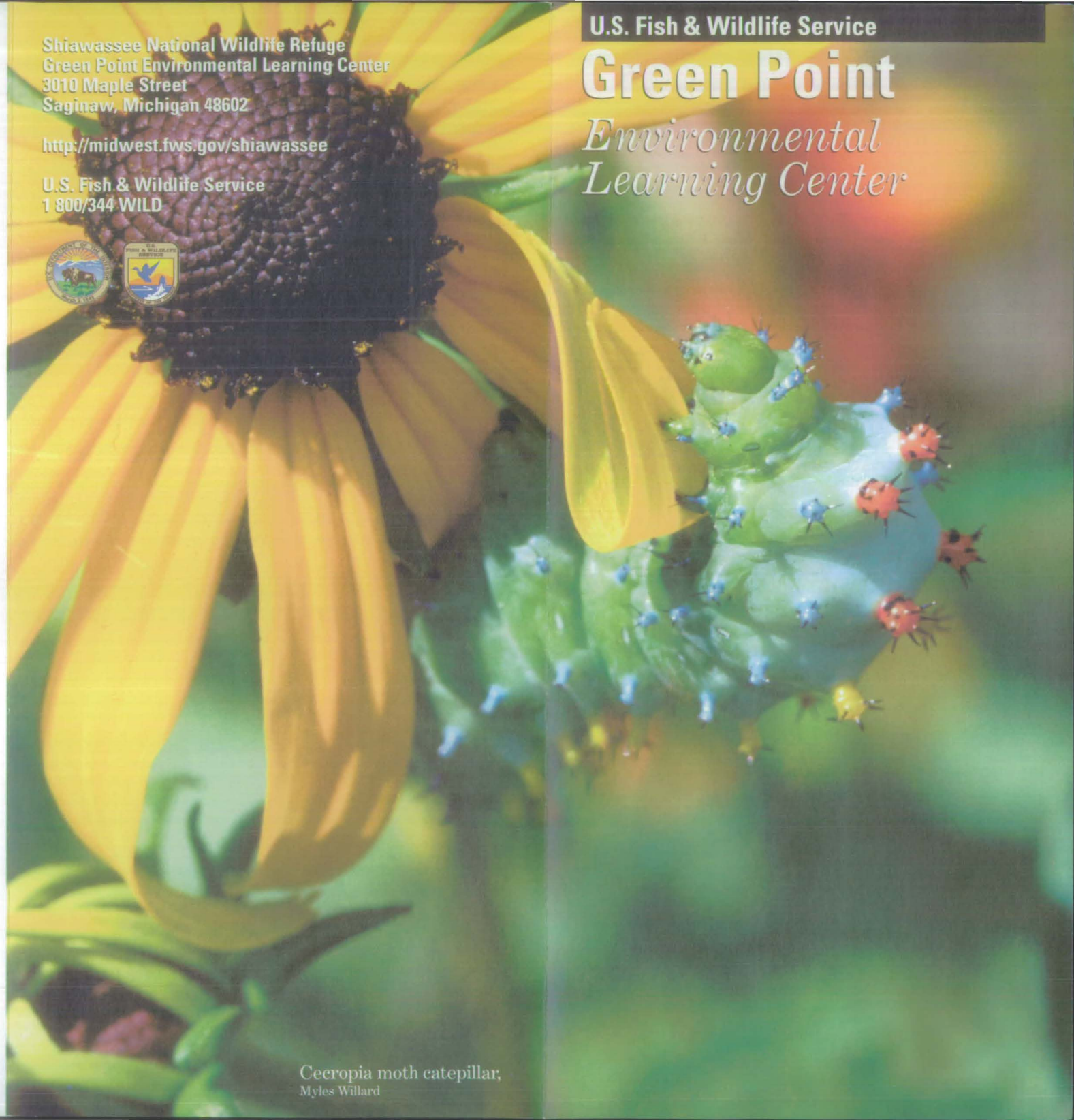
U.S. Fish & Wildlife Service  
1 800/344 WILD



U.S. Fish & Wildlife Service

# Green Point

## Environmental Learning Center



Cecropia moth caterpillar,  
Myles Willard



# Great Birding Spots in the Saginaw Bay Area...



## Saginaw Bay Birding

### ARENAC COUNTY

- Wigwam Bay [517/684-9141] ..... 1
- 1,200 acres of wetland, woodland, grassland, fields, rivers and ponds with parking, paved trails, beach, towers, platforms, restrooms, staff, maps and a Visitors Center.
  - Highlights: Waterfowl, Heron, Gulls, Sedge Wren, Rails and Warblers.
  - Seasonality: Spring through Fall.

### BAY COUNTY

- Bay City State Recreation Area [517/667-0717] ..... 2
- 2,000 acres of wooded wetlands, marsh ponds, dune ridges, sandy beach and Lake Huron shoreline featuring Visitor Center, paved parking, restrooms, trails, observation towers, maps and staff. Highlights: Warblers, Herons, Egrets, Bitterns, Passerines, Gulls and Waterfowl. Seasonality: Year round.
- Nayanquing Point Wildlife Area [517/697-5101] ..... 3
- 1,400 acres of coastal wetland and diked pools featuring parking, trails and an observation tower.
  - Highlights: Yellow-Headed Blackbirds, Terns, Herons, Rails, Snowy Owls and Waterfowl.
  - Seasonality: Year round.
- River's End Wetland Nature Trail [517/895-0480] ..... 4
- 25 acres of protected wetland on the grounds of Consumer Energy's Karn-Weadock Plant featuring parking, trails and maps.
  - Highlights: Great Egrets, Bald Eagles, Spotted Sandpipers, and large concentrations of waterfowl.
  - Seasonality: Year round.
- Saginaw River ..... 5
- Two-mile, handicapped accessible trail along the banks of the Saginaw River in Downtown Bay City.
  - Highlights: Bald Eagles, Gulls and waterfowl.
  - Seasonality: Winter

### HURON COUNTY

- Huron County Nature Center & Wilderness Arboretum [517/856-4411] ..... 6
- [next to Rush Lake Game Area & Albert Sleeper State Park]
- 120 acres of wetland, woodland, forest, fields, and ponds with parking, paved trails, towers, platforms, restrooms, staff, maps and a Visitors Center.
  - Highlights: Eastern Bluebird, Wood Thrush, Great-crested Flycatcher, American Redstart, Scarlet tanager, Rose-breasted Grosbeak
  - Seasonality: May through October.

### HURON COUNTY continued

- Port Crescent State Park [517/738-8663] ..... 7
- 565 acres of wetland, grassland, fields, rivers and hardwood forest with parking, paved trails, beach, towers, platforms, restrooms, staff, maps and a Visitors Center.
  - Highlights: Migration of Hawks including Osprey.
  - Seasonality: Spring and Fall.

### IOSCO COUNTY

- AuSable River [517/739-0728] ..... 8
- 60 miles of undeveloped, mature forest along AuSable River shoreline with foot trails and limited restroom facilities.
  - Highlights: Pileated Woodpecker, Solitary Vireo, Hermit Thrush, Scarlet Tanager, Black-throated Blue and Blackburnian Warblers, Northern Waterthrush and Bald Eagle.
  - Seasonality: Late spring through fall.
- Huron National Forest [517/739-0728] ..... 9
- 5,000 acres of marsh, wetlands and forest with limited gravel parking, gravel road and foot trails at Tuttle Marsh; Visitor Center, restrooms, maps, paved parking and high-bank viewing area at Lumbermans' Monument.
  - Highlights: Clay-colored sparrow, Upland Sandpiper, Golden-winged Warbler, Black-billed Cuckoo, Least and American Bittern and Sedge Wren.
  - Seasonality: Late spring through fall.
- Tawas Point State Park [517/362-5041] ..... 10
- 200 acres of Lake Huron shoreline with migrant trap peninsula, beaches, uplands, oak woods and wetlands featuring boardwalk, foot trails, sandy beach, restrooms, ample parking, lighthouse and seasonal staff.
  - Highlights: Warblers, Orchard Orioles, Tanagers, Common and Red-throated Loons, variety of Gulls, Falcons and Shorebirds.
  - Seasonality: mid-May through June and mid-September through November.

### MIDLAND COUNTY

- Chippewa Nature Center [517/631-0830] ..... 11
- 1,032 acres of open wetlands, flood plain and upland forest, upland fields, rivers and ponds featuring Visitor Center, paved parking, foot trails, restrooms, staff and maps.
  - Highlights: Pileated Woodpecker, Bald Eagle, Bobolink, Hooded Merganser, Pied-billed Grebe, Blue-winged Warbler, Scarlet Tanager, Red-eyed Vireo, Wood Thrush and Common Terns.
  - Seasonality: Year round.

### MIDLAND COUNTY continued

- Overlook Park ..... 12
- 1,400 acres surrounding the Dow Chemical Company and Midland Cogeneration Venture open-water cooling ponds with paved parking, picnic tables and gravel pull-off.
  - Highlights: Rednecked and Horned Grebes; Red-throated and Common loons; Phalaropes; Common Tern; Scoters and Bald Eagle; Ross' and White-fronted Geese and Western Grebe (rarities)
  - Seasonality: Fall and Winter.
- Pine Haven Recreation Area ..... 13
- 325 acres of marsh and mature woods with gravel parking, foot trails, restrooms and trail markers.
  - Highlights: Cerulean Warbler, Yellow-billed Cuckoo, Louisiana Waterthrush, Yellow-throated Vireo and Mourning Warbler.
  - Seasonality: Spring through Fall.

### SAGINAW COUNTY

- Green Point Environmental Learning Center [517/759-1669] ..... 14
- 82 acres of bottomland-hardwood forest, wetlands, fields and ponds featuring trails, maps, observation blind, staff and interpretive building.
  - Highlights: Migrating songbirds.
  - Seasonality: mid-May
- Shiawassee National Wildlife Refuge [517/777-5930] ..... 15
- 9,000 acres with 8 rivers and tributaries, river wetlands, grasslands, bottomland-hardwood forest and croplands featuring parking, gravel trails, observation towers and platforms, staff and maps.
  - Highlights: Prothonotary Warblers, Brown Creepers, Shorebirds, Bald Eagle, Tundra Swans and large concentrations of waterfowl.
  - Seasonality: March through April and August through November.
- Shiawassee State Game Area [517/865-6211] ..... 16
- 8,490 acres adjoining the Wildlife Refuge featuring restrooms and trails.
  - Highlights: Black Ducks, Wood Ducks, Geese and high concentrations of other waterfowl and shorebirds.
  - Seasonality: March through April and September through November.

### TUSCOLA COUNTY

- Fish Point Wildlife Area [517/674-2511] ..... 17
- 3,200 acres of farm fields, diked floodings, remnant prairies and extensive Great Lakes marshes featuring parking, gravel and dirt roads, maps, observation tower and trails.
  - Highlights: Abundant waterfowl, including Tundra swans, and shorebirds.
  - Seasonality: March through May.



# Birds of the Saginaw Bay

## Wetlands, Waters & Waterfowl

Few locations in the world offer an equal to the spectacle of enormous flocks of waterfowl who gather for food and protection along the shores and inland waterways of the Saginaw Bay Watershed.

Following the path that nature created, more than three million migrating waterfowl gather at the crossroads of the Atlantic & Mississippi flyways each year to rest and gather strength before continuing their long journey.

Millions of years ago glaciers carved the basin for Lake Huron — the Sweet Sea — and created a unique environment for birds and birders. Few locations in the world offer an equal to the spectacle of enormous flocks of waterfowl, especially Tundra swans, who gather for food and protection along the shores and inland waterways of the Saginaw Bay Watershed.

Located in the heart of the state's largest watershed, the mid-Michigan region is an inviting year-round destination for more than 300 species of songbirds, shorebirds and waterfowl.

More than 35,000 acres of protected natural area, featuring 15,000 acres of the nation's largest fresh water wetland system, can be found within a one-hour drive. Wander through woodland trails or along urban riverfront parks. Discover wildlife in the heart of a wetland forest or on the grounds of eco-friendly companies. Explore inland waterways from a hollowed-out canoe or scope out the Saginaw Bay shoreline from the deck of a two-masted schooner.

Whatever you're seeking, you'll discover plenty to add to your Life List in the Saginaw Bay Watershed. Fold out the map to learn more about the amazing birding opportunities in mid-Michigan.

As stewards of the Saginaw Bay Watershed, we value our shared, unique resources, and together will balance economic, environmental and social priorities to enhance quality of life for this and future generations.



### Our Vision:

This publication was produced through a grant by the Watershed Initiative Network, a collaborative effort of communities, conservationists, foundations and businesses to enhance the Saginaw Bay Watershed and create a more sustainable future for all its inhabitants.

**Saginaw County Convention & Visitors Bureau**  
One Tuscola, Suite 101, Saginaw, Michigan 48607  
800/444-9979

**Midland County Convention & Visitors Bureau**  
300 Rodd St., Suite 101, Midland, Michigan 48640  
888/4-MIDLAND

**Bay Area Convention & Visitors Bureau**  
901 Saginaw St., Bay City, Michigan 48708  
888/229-8696

**The Michigan Audubon Society**  
Statewide Bird Alert at  
616/471-4919

For more information about birding in the Saginaw Bay Watershed, look us up on the web:  
[www.saginawbaybirding.org](http://www.saginawbaybirding.org)

### Information

### Other Birding & Wildlife Attractions

**Cherri's Feed-n-Seed & Birder's Boutique** ....517/662-3333

- 301 West Midland Road, Auburn, MI 48611-9409
- A great resource for regional birding events, information and equipment.

**Johnny Panther Quests** .....810/653-3859

- Tranquil adventures through Michigan's "Everglades" at the Shiawassee National Wildlife Refuge.

**St. Charles Waterfowl Observatory**.....517/865-8287

- 110 West Spruce Street, St. Charles, MI 48655-1299
- View birds in an enclosed gazebo, aesthetically sculptured with small ponds, rocks, trickling waterfalls and Michigan's wetland-loving plants.

**Tall Ship Adventure** .....888/229-8696

- 901 Saginaw Street, Bay City, MI 48708
- A unique perspective on a precious resource! Sail the Saginaw Bay aboard the Appledore, a luxurious 85 ft., 48 passenger top-masted schooner.

### Birding & Wildlife Events

#### Bay City State Recreation Area:

Winter Festival .....February  
Wetland Wake Up Day! .....March  
Free Fishing Festival .....June  
Saginaw Bay Waterfowl Clinic .....August  
Mother Nature's Halloween Trail .....October  
Christmas for the Birds .....November

#### Chippewa Nature Center:

Maple Syrup Day .....March  
Earth Expo .....April  
Butterfly Bonanza .....July  
Fall Harvest Festival.....October  
Wildlife Art Show .....December

#### Green Point Environmental Learning Center:

International Migratory Bird Day.....May  
Summer Discovery .....June  
Open House.....September  
1st Wednesday's Nature Programs.....Monthly

### Birding Etiquette\*

- Promote the welfare of birds and their environment.
- Support the protection of important bird habitat.
- Exercise restraint and caution during observation, photography, sound recording or filming.
- Stay on roads, trails and paths where they exist; otherwise keep habitat disturbance to a minimum.
- Respect the law and the rights of others.
- Do not enter private property without the owner's explicit permission.
- Follow all laws, rules and regulations governing the use of roads and public areas.
- Practice common courtesy in contacts with other people.
- Ensure that feeders, nest structures and other artificial bird environments are safe.
- Keep dispensers, water and food clean and free of decay or disease.
- Maintain and clean nest structures regularly.
- Ensure birds are not exposed to predation from domestic animals or dangers by artificial hazards.
- Group birding, whether organized or impromptu, requires special care.
- Respect the interests, rights and skills of fellow birders and others participating in legitimate outdoor activities.
- Intervene or notify authorities if you witness unethical birding behavior.
- Be an exemplary ethical role model; teach through word and example.

### Other Great Lakes Birding Hot Spots

The following Great Lakes Birding Hot Spots are all within a three-hour drive of mid-Michigan and the Saginaw Bay.

**AuSable River Valley/Jack Pine Tour**.....517/826-3252

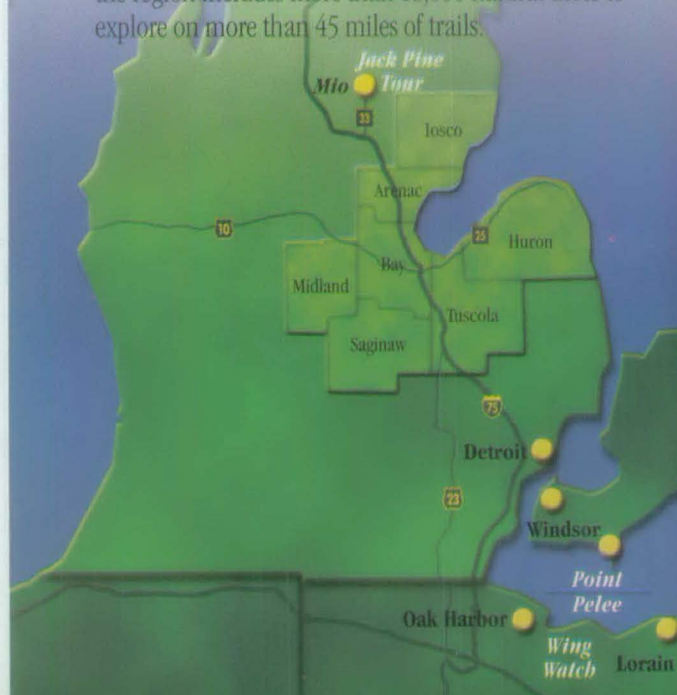
Nearly all of the remaining 3,000 Kirtland's Warblers live and nest within a 50-mile radius of Mio, Michigan, from May through September. A 58-mile, self-guided auto tour takes you through areas inhabited by the endangered bird. Guided tours and other activities occur during the annual Kirtland's Warbler Festival in May.

**Point Pelee National Park, Ontario**.....519/322-2365

Each spring and fall thousands of birds pass through the area, giving Pelee an impressive checklist of over 360 species. Point Pelee is best known for its diversity of songbirds. The fall migration of most species is less hurried but often spectacular.

**Lake Erie Wing Watch, Ohio**.....419/898-0014

The Lake Erie Wing Watch areas are home to more than 300 bird species and an abundance of other wildlife. Located between Oak Harbor and Lorain, Ohio, the region includes more than 18,000 natural acres to explore on more than 45 miles of trails.





## Who are the Friends of Shiawassee NWR?

The Friends of Shiawassee National Wildlife Refuge is a 501 (c) (3) nonprofit organization established in 1999 to promote the preservation of the natural and historical resources of the Refuge, foster its use and enjoyment by the public consistent with the protection and preservation of its environment, and engage in such educational, scientific and civic

activities as will assist the management of the Refuge in carrying out its mandates.

Organizations, families and individuals from around Michigan are members. These members act as the collective voice for the Refuge in a variety of arenas to raise awareness of the Refuge through outreach and environmental efforts.



## WHO SHOULD JOIN?

In a word, YOU! Really, anyone and everyone interested in having a direct impact on the protection of the natural resources in the Saginaw Bay Watershed are ideal candidates for Friends of Shiawassee National Wildlife Refuge. Membership funds collected from individual, family, and corporate contributors go directly into funding the diverse activities offered during the year. Some activities are run solely by the Friends and others are programs put on by the Refuge and supported, in part, by the Friends.

## WHAT ARE THE BENEFITS?

- Subscription to the *Refuge Reporter*, the quarterly newsletter from Shiawassee National Wildlife Refuge including information about Refuge and Friends events and news
- Knowledge that your dollars are helping fund educational and entertaining programming, community and political awareness efforts, and protection efforts
- Opportunities to volunteer as a Friend of Shiawassee NWR—feel like you are making a difference by writing articles about events, directing traffic, welcoming visitors to events, selling merchandise, obtaining donations, lending your computer skills and much more

## Yes, I Want to be a Friend!

Sign up for membership	Price
<input type="checkbox"/> Individual	\$10.00
<input type="checkbox"/> Family*	\$25.00
<input type="checkbox"/> Goose Supporter	\$50.00
<input type="checkbox"/> Blue Heron Supporter	\$75.00
<input type="checkbox"/> Owl Supporter	\$100.00
<input type="checkbox"/> Bald Eagle Supporter	\$125.00+
<input type="checkbox"/> Contribution	

Total: \_\_\_\_\_

Name \_\_\_\_\_

Address \_\_\_\_\_

Email \_\_\_\_\_

Phone \_\_\_\_\_

☐ Renewal

☐ New Membership

\*Family includes member, spouse and children under age 18 (2 votes)

All memberships receive quarterly newsletter, *The Refuge Reporter*, voting rights and opportunity to hold office.

### Friends of Shiawassee National Wildlife Refuge

Contributions to the Friends of Shiawassee NWR, a 501 (c) (3) non-profit organization, are tax deductible according to IRS guidelines.

Make checks payable to "Friends of Shiawassee NWR"

P.O. Box 20129

Saginaw, MI 48602

[www.friendsofshiawassee.org](http://www.friendsofshiawassee.org)

Phone: (989) 746-0465



## Ways I Can Help

Please check all that apply

I can help with the following:

- ☐ Making phone calls
- ☐ Writing letters
- ☐ Stuffing envelopes
- ☐ Public speaking
- ☐ Staff store
- ☐ Work special events
- ☐ Writing newsletter articles
- ☐ Concession stand
- ☐ Serve on a Committee
- ☐ Children's activities
- ☐ Organize events
- ☐ Refuge Work Day

I have the following skills to share:

- ☐ Computer skills
- ☐ Photography
- ☐ Carpentry skills
- ☐ Business organizational skills
- ☐ Research
- ☐ Artistic skills
- ☐ Fund raising
- ☐ Grant writing
- ☐ Researching/Ordering merchandise
- ☐ Other—please list:

P.O. Box 20129  
Saginaw, MI 48602

Friends of Shiawassee National Wildlife Refuge

Friends of Shiawassee  
National Wildlife Refuge

## MEMBERSHIP INFORMATION

*If you love wildlife, join us!*



[www.friendsofshiawassee.org](http://www.friendsofshiawassee.org)  
Phone: (989) 746-0465