



the Swamp Scene

friends of great swamp national wildlife refuge

ISSUE FIFTY-FOUR
JULY 2017

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COMMEMORATIVE BRICK CAMPAIGN RELAUNCH

June 1—December 31, 2017



The patio at the entrance to the Helen C. Fenske Visitor Center is a place of love and inspiration. Commemorative bricks memorialize loved ones, honor friends and family, or eloquently express the donor's commitment to nature and the Refuge.

Friends of Great Swamp NWR is offering another opportunity to order custom-engraved bricks. Costs per brick range from \$150 to \$350 depending upon size and design. An updated brick order form is available at the Visitor Center, on the Friends

website, and on page 10 of this issue of Swamp Scene.

A lot has happened at the Helen C. Fenske Visitor Center since 2009 when the Friends first launched a commemorative brick campaign. The Visitor Center is now open seven days a week welcoming thousands of visitors each year, from around the country—and around the world. School groups come to explore nature and learn about the natural world first hand. There are three trails of varying difficulty for visitors of all ages. Viewing scopes bring the



birds up close, purple martins chatter and soar around the two gourd racks, and native plant demonstration gardens offer visitors ideas for their own gardens. It's a vibrant, educational, and exciting place to visit.

You can help the Friends further enrich and expand visitor experiences at the Refuge by purchasing a commemorative brick to be placed in the patio at the Helen C. Fenske Visitor Center. You may wish to buy one brick or several. Just complete the Brick Campaign Order Form and mail it to the Friends along with your check. Credit card payments are accepted at the Friends'

Nature Shop located in the Helen C. Fenske Visitor Center. You will receive an acknowledgement letter for your tax deductible donation. Individuals, organizations, and formal and informal groups are welcome to purchase bricks. Bricks will be sold through December 2017.

Your support for Great Swamp National Wildlife Refuge will leave a lasting impression—on the patio and on the future of this special place.

Help us in creating a path to the future ... one brick at a time.



NEW FRIENDS BUTTERFLY DEMONSTRATION GARDEN BECOMES A REALITY



November 2016: GardenKeepers lay newspaper down to kill the grass over the winter.

February and April 2017: Meetings with members of the North Jersey Chapter of the North American Butterfly Association and from the Native Plant Society of NJ provide expert guidance on the selection of plants for butterflies—both host plants for laying eggs and nectar plants for adult butterflies. Thank you so much for your time, interest, and expertise.

April: Master Naturalist Garry Annibal takes the long list of recommendations from the meetings and develops a shopping list of plants to purchase—and a garden design—by color!

April 14: Enthusiastic employees from AIG corporation dig up the beds for the new garden plots.

April 22: Employees and families from Brother International Corporation lay bricks to outline the beds and walkways.

Early May: Henkel Corporation provides a generous donation for Friends to purchase native plants.

May 15: Friends travel to Bowman's Hill Wildflower Preserve to take advantage of this amazing resource in nearby New Hope (PA). The Friends receive a partner discount (isn't that nice?) which means we can buy even more plants!

May 24: Employees from Henkel Corporation put the plants their donation purchased into the ground ... now just add water!

June 30: The Friends new Butterfly Demonstration Garden is showing off.

Thank you to all who helped with this exciting new project. There are still flower beds to plant and weeding of course, but we are well on our way.

The native plant gardens at the Visitor Center have been created to inspire visitors to take ideas home for their own gardens and to highlight the value and importance of native species.

Are You Interested in Helping?

Volunteers have created and maintain all of the gardens and we can always use more help. Regularly scheduled GardenKeeper work days are on our Calendar of Events: July 29, August 26, September 24, October 13, and November 5. We work from 9:00 to 11:00 am at the Visitor Center. Join us any time. No experience necessary. We share stories, laugh a lot, and pull weeds! *What could be more fun?*



WHAT IS A FEDERAL DUCK STAMP GOOD FOR?

By Laurel M. Gould, Friends Volunteer

So, what exactly is a Federal Duck Stamp good for?

- You can't use it to mail a letter.
- Sure, it's a required license to hunt waterfowl—but you don't hunt.
- Yes, it serves as a free entry pass to any refuge that charges a fee—but there is no fee at Great Swamp National Wildlife Refuge.

What the Federal Duck Stamp was designed to do was ensure a steady source of funding in order to purchase land for refuges—and, since its inception in 1934, it has been very good at doing that.

Sales of the stamp have raised more than \$950 million to conserve nearly 6 million acres of wetlands habitat on national wildlife refuges around the nation, including nearly 3,000 acres at Great Swamp NWR. This past year, more than \$7.8 million in Duck Stamp funding was approved and will be used to conserve 2,629 acres on four national wildlife refuges: Blackwater NWR (Maryland), Dale Bumpers White River NWR (Arkansas), Felsenthal NWR (Arkansas), and Upper Klamath NWR (Oregon)

Over the years, there has been a decline in the sales of duck stamps. This translates to fewer dollars to purchase and conserve wetlands, which are disappearing at an alarming rate. At the same time, refuge visitation is on the increase, approaching 46 million people per year.

Refuge lands provide excellent recreational opportunities for all of us who enjoy birding, hiking, wildlife observation, photography—or just finding a quiet place of solitude. One of the most effective and easiest ways to help ensure that these opportunities continue to exist is to purchase a Federal Duck Stamp.



The current 2017-2018 Federal Duck Stamp depicts Canada geese, painted by Minnesota artist Jim Hautman.

A Federal Duck Stamp costs \$25.00. And it's a good investment, as 98 cents out of every dollar is used to purchase or lease wetlands. Duck stamps are sold at the Visitor Center, and are also available at some post offices. We will happily take an order and mail your duck stamp if that's more convenient. Just send a check for \$25.00 to Friends of Great Swamp NWR, 32 Pleasant Plains Road, Basking Ridge NJ 07920.

So what's a Federal Duck Stamp good for? Quite a lot as it turns out. But it's up to all of us to make sure these lands and wild birds exist into the future. Won't you buy your Federal Duck Stamp today?

MARK YOUR CALENDARS FOR FALL EVENTS AT GREAT SWAMP NATIONAL WILDLIFE REFUGE

CELEBRATE THE WONDERS OF WATER—FALL FESTIVAL, SEPTEMBER 16, 2017

Join us for our annual Fall celebration at the Helen C. Fenske Visitor Center.

This year the theme is water—after all, it is a swamp.

A day of fun activities for all ages. Photo contest winners will be announced. Free hot dogs on the grill.

New this year, the Watershed on Wheels exhibit from U.S. Fish and Wildlife Service. Don't miss it!



CELEBRATE NATIONAL WILDLIFE REFUGE WEEK SUNSET WALKS, OCTOBER 8—14, 2017

Join the Friends for a walk into the Management Area (normally closed to the public) to watch ducks and geese descend into the Refuge pools to spend the night. It's awesome!

5:30 pm—dusk. Come one night, or many!

MUSKRATS THRIVE AT GREAT SWAMP NATIONAL WILDLIFE REFUGE

Story and photos by Leo Hollein, Volunteer

Muskrats are semi-aquatic mammals that inhabit areas with an abundance of water, like wetlands, ponds, lakes and marshes. Muskrats spend much of their time in the water and are well suited for their semi-aquatic life. They are excellent swimmers and can swim under water

Muskrats and beavers are the only mammals that build their homes in the water. Both reside in the Refuge. Beavers build dams in order to block off streams and create ponds. Muskrats do not. Both animals make lodges, which are dome-shaped structures where they sleep and give birth. Muskrat lodges are

much smaller and less substantial than beaver lodges. Muskrats pile plants, including cattails, over a firm base such as a tree stump, using a little mud to hold the shelter together. Canada



for about 15 minutes. The Great Swamp impoundments are ideal muskrat habitat which support a robust muskrat population. Muskrats are active year round. They feed at all times of the day but are most active at night or near dawn and dusk.

geese often nest on top of these as well as on beaver lodges. Beavers use a lot of mud to help hold layered logs and sticks in a dome shape. Their lodges are strong enough to deter predators like bears and coyotes. They are used for multiple years.



Muskrat lodge in Refuge impoundment area.

Even though muskrats and beavers are only distantly related, they can be hard to tell apart. Beavers at 40 pounds are about 10 times the weight of a muskrat. They're both brown, furry, rotund animals with bare, fleshy tails. Beaver tails are wide, flat and paddle-shaped, while muskrats have long, skinny tails with flat sides. While swimming at the surface, muskrats expose much of their heads and backs as shown above. Their long, slender tails are

slightly flattened vertically, a shape unique to them. The tails make unmistakably clear cuts through the water propelling the muskrat forward. Beavers have flattened tails that they sweep up and down while swimming. Typically only the beaver's head is visible above the water's surface. Unlike the muskrat, the beaver ears are clearly visible when swimming.

Muskrats are omnivores, but they mainly enjoy a plant-based diet consisting of the roots, stems, leaves and fruits of aquatic vegetation. They consume lots of reeds which helps reduce the vegetation in the pools. Muskrats do not store food for the winter, but sometimes eat the insides of their lodges. As local plant food becomes scarce, muskrats will feed on small aquatic animals such as insects, fish, crawfish, small turtles and amphibians. Freshwater mussels are a dietary staple in the wintertime. Muskrats follow trails they make in swamps and ponds. When the water freezes, they continue to follow their trails under the ice.

Muskrats provide an important food resource for many Refuge animals, including mink, foxes, coyotes, bears, snakes, and large raptors (owls, hawks and eagles). Otters, snapping turtles, and large fish also prey on baby muskrats. In the spring of 2016, I observed kit foxes feeding on an adult muskrat that their parents apparently caught. Humans have historically trapped muskrats for their attractive pelts.

As monogamous breeders, muskrats live with their mates and their young. They are very territorial, especially during breeding season. Muskrats, like most rodents, are prolific breeders. Females can have two or three litters a year of six to eight young each. The babies are born small and hairless, and weigh less than an ounce. Muskrats mature in less than twelve months in the Refuge. If you see a brown furry animal swimming in the Refuge, don't assume it is a beaver.



2017 INTERNS PROVIDE MUCH NEEDED ASSISTANCE—AND LEARN A LOT!

By Laurel Gould, Friends of Great Swamp NWR Volunteer

Summer interns are such an important part of the seasonal staff at Great Swamp National Wildlife Refuge. Working with staff, Friends, volunteers, and partners, they provide much needed assistance with refuge projects while gaining valuable hands-on field experience to help them prepare for the future. This year, there are six interns at the refuge.



Jessica Frago and Angela Oviedo are from Groundwork Elizabeth, sponsored by the Friends. Groundwork Elizabeth is a non-profit organization focused on building a sustainable future by developing community based partnerships.



Daniel Correa and Kelly Vera are from the Hispanic Access Foundation, sponsored by U.S. Fish and Wildlife Service. The Hispanic Access Foundation is a non-profit organization working with the Latino community. "We build bridges that connect the Latino communities with the information and services they need for a better life."

Sarah Carruthers is from Dublin, Ireland and is doing a six-week volunteer internship at Great Swamp NWR and at The Raptor Trust.

Amelia Russell is from the University of Georgia's Savannah River Ecology Lab, sponsored by the Friends. Amelia is responsible for the day-to-day summer work with the head-start turtle project at the refuge.

Amelia Russell is from the University of Georgia's Savannah River Ecology Lab, sponsored by the Friends. Amelia is responsible for the day-to-day summer work with the head-start turtle project at the refuge.

The interns this year have worked hard. Using canoes, they have pulled the invasive water chestnut out of the impoundments. They have assisted with goose banding, bat surveys, invasive species control. They have monitored the purple martin gourds racks on a weekly basis, collected duckweed for The Raptor Trust, and mastered weed whacking and mowing. They have traveled to the other refuges in our Complex to assist there. They have helped lead group walks and have even led a few of their own. On the fun side, they have taken part in archery open shoots, canoed the Passaic, and spent a day at Duke Farms.

They have high aspirations: plans to join the Peace Corps, or partner with international organizations to work outside the United States helping communities become more sustainable, or share their experiences with underrepresented ethnic groups, or continue their own education to pursue advanced graduate degrees. All of us who have met these six outstanding young people wish them great success in their future endeavors. They are aiming high!



Interns at work (l to r): Kelly Vera, Angela Oviedo, Amelia Russell, Jessica Frago, Daniel Correa (Photo by Lia McLaughlin/USFWS)



Interns at play (Duke Farms) (l to r): Daniel Correa, Jessica Frago, Angela Oviedo, Sarah Carruthers, Kelly Vera (Photo by Laurel Gould)

Thank you to Friends of Great Swamp NWR, Groundwork Elizabeth, Hispanic Access Foundation, Mushett Family Foundation, Great Swamp Watershed Association, The Raptor Trust, and U.S. Fish and Wildlife Service for sponsoring and supporting the 2017 intern program at Great Swamp National Wildlife Refuge.



REFUGE VOLUNTEERS & FRIENDS DONATE 14,068 HOURS IN FISCAL YEAR 2016 *Photos by Carl Woodward*

The 31th annual Volunteer and Friends Recognition Event was held on Saturday, June 3, 2017 to recognize and celebrate the exceptional contribution of volunteers and Friends to Great Swamp National Wildlife Refuge.

This year the event, co-sponsored by the Friends and the Refuge, was again held in the Richard J. Guadagno Pavilion where 100 volunteers, staff, interns and guests enjoyed a delicious buffet dinner followed by the awards ceremony.



100-Hour Club (l to r): Brenda Bourassa, May Duttonhoeffer, Lois Harold, Dionis Ramirez, Sharon Sperduto, Carolyn Rubinfeld, Lucille Dwyer, Dave Katz



500-Hour Awards (l to r): Greg Henderson, Jim Mulvey, Esther Warner



THE HEAD-START TURTLES ARE BACK!

After having spent the winter in Massachusetts, in June the wood turtles returned to the Refuge to be released. These young hatchlings are now four times larger than their siblings who spent the winter hibernating, thus have a "head-start" on survival.

Attendees at the Volunteer Recognition Event were on hand to welcome the turtles back to Great Swamp NWR. The Friends have been funding this ground-breaking and very successful research for seven years. *Thank you Friends!*

NOTABLE VOLUNTEER MILESTONES

100 HOUR CLUB

Jim Angley, Brenda Bourassa, Lillian Cahill, May Duttonhoeffer, Lucille Dwyer, Olivia Haller, Lois Harold, Jim Halsey, Dave Katz, Lauretta Koch, Lorraine Novinski, Dionis Ramirez, Johnny Roush, Carolyn Rubinfeld, Sharon Sperduto, Bridget Vogtman

150 HOURS

Jim Angley, Jane Bell, Barry Bowman, Lucille Dwyer, Brian Gallagher, Jim Halsey, Steve Herdman, Terry Kulmane, Dionis Ramirez, Johnny Roush, Jolynn Schmidt, Ed Sullivan, Bridget Vogtman, Amanda Winford

250 HOURS

Jim Angley, Brian Gallagher, Ellen Greenhorn, Mary Beth Hansbury, Steve Herdman, Jim Marquis, Melinda Nye, Dionis Ramirez, Johnny Roush, Ed Sullivan, Bridget Vogtman, Barbara Whitmore

500 HOURS: Jim Angley, John Berry, John Breault, Greg Henderson, Jim Mulvey, Emily Scully, Bridget Vogtman, Esther Warner

1,500 HOURS: Jim Detizio

2,000 HOURS: Jack Higgins, George Solovay, John Wilmot

2,500 HOURS: Susan Garretson Friedman, Nancy Schenck

3,000 HOURS: Randi Emmer

3,500 HOURS: Randi Emmer, Dorothy Smullen

4,000 HOURS: Laura Nally, Louis Pisane

7,000 HOURS: Judy Schmidt

9,000 HOURS: Laurel Gould

PRESIDENT'S VOLUNTEER SERVICE AWARD

- Laura Nally
- Louis Pisane

Active volunteers with the total number of hours contributed since becoming a volunteer (through March 31, 2017)

Susan Ahlstrom (9.5)	Julie Gerke (6.5)	Jim Marquis (324)	Deb Scala (1,766.5)
Patrick Ambrosio (45)	Jim Gilbert (18)	Judy Marsh (33.5)	Joe Scala (426)
Mike Anderson (3)	Lynda Goldscheim (61.5)	Bryan Mathis (61)	Nancy Schenck (2,513.5)
Jim Angley (515)	Russell Gonier (60)	Ernie Mazzarisi (57.5)	Jolynn Schmidt (202.5)
Nick Annese (464)	Charles Gould (225)	Lois McDonald (4.5)	Judy Schmidt (7,045.5)
Garry Annibal (75)	Laurel Gould (9,060)	Julie McGovern (10)	Ben Schumer (16)
George Apgar (40)	Kimberle Gray (10)	Matthew McInerney (7.5)	Ginnie Scott (55)
Joann Apgar (341)	Ellen Greenhorn (254.5)	Betty Mills (83.5)	Emily Scully (607.5)
Fabian Aquino (7)	Steve Gruber (976.5)	Allegra Mitchell (74)	Elaine Seckler (1,489.5)
Pete Axelrod (447.5)	Tom Gula (46.5)	Reshma Mongia (32.5)	David Sharpe (11)
Joseph Balwierczak (762)	Olivia Haller (100.5)	Lauren Morse (7.5)	Christine Shoengold (18.5)
Jane Bell (236.5)	Jim Halsey (175)	Evelyn Morton (77)	Mark Shoengold (13)
Steve Bell (4)	Mary Beth Hansbury (261)	Bridget Mracek (472)	Ashley Sidhu (3)
John Berry (769)	Lois Harold (125)	Heather Mulvey (10.5)	Shary Skoloff (29)
Betsy Boles (742.5)	William Haskins (13)	Jim Mulvey (615.5)	Gina Smith (195.5)
Brenda Bourassa (121.5)	Anne Hebenstreit (388.5)	Wendi Mulvey (46)	Bill Smullen (223)
Barry Bowman (220)	Eileen Heider (2)	Kate Murphy (16.5)	Dorothy Smullen (3,522.5)
John Breault (554.5)	Kayla Heider (2)	Kevin Murphy (16.5)	Lyn Snyder (17.5)
Robert Brennan (1.5)	George Helmke (1,144)	Ruth Nahm (88.5)	George Solovay (2,256)
Maggie Brucker (37.5)	Greg Henderson (596.5)	Joe Nally (313)	Margaret Southwell (7)
Steve Byland (923)	Stephen Herdman (429.5)	Laura Nally (4,008)	Sharon Sperduto (101)
Lillian Cahill (110)	Jack Higgins (2,055)	Susan Nanney (62)	Janet Stadelmeier (108)
Ann Campbell (268)	Maryann Higgins (119.5)	Olivia Nguyen (1.5)	Chris Stadtmueller (298)
Mark Canavan (69)	Helen Hoffman (468.5)	Lorraine Novinski (129.5)	Matt Steffens (186.5)
Terry Carruthers (194)	Bob Hofmann (494.5)	Melinda Nye (253.5)	Kent Stevens (143)
Teri Catalano (626)	Victoria Hogg (33)	Brian Oates (2)	Lydia Stinson (15)
Peter Clark (23)	Leo Hollein (5,639.5)	Arlene O'Connor (15)	Ed Sullivan (251.5)
Tom Colandro (3.5)	Linda Jadach (36)	Bonnie O'Connor (41)	Florence Swanstrom (1.5)
Janis Cole (283.5)	Brian Katz (4)	John O'Connor (27.5)	Rachel Swanwick (487.5)
Ray Cole (137)	Dave Katz (104.5)	Brian Osborn (144)	Elaine Taub (607.5)
Scott Czarkowski (4.5)	Susan Katz (81.5)	Claudia Osborn (200.5)	David Towell (8)
Christina DeGaray (4.5)	Jane Kendall (1,311)	Peter Osborn (216.5)	Siobhain Towell (2)
Jim Detizio (1,567.5)	Sandy Ketelson (13.5)	Tom Ostrand (201)	Andrew Tsai (23)
David Dietz (92.5)	Neil Klingenburg (771)	Candace Paska (740)	Bridget Vogtman (739)
Judi DiMaio (431)	Bill Koch (584)	Terri Pedone (3)	Emma Wahlig (25.5)
Allen Dreikorn (73)	Lauretta Koch (115.5)	Kenneth Peters (5.5)	Bob Waldstein (4.5)
Patricia Dreikorn (12)	Alice Koster (12.5)	Wayne Petko (1.5)	Ellen Waldstein (27.5)
Rich Dufort (1,159)	Murali Krishna (19.5)	Chris Petrillo (118.5)	Barbara Wallace (2)
May Duttenhoeffer (130.5)	Melene Kubat (18.5)	Gail Petrillo (183)	Mary Jane Walsh (448.5)
Lucille Dwyer (231)	Peter Kubat (23)	Louis Pisane (4,210)	Kevin Ward (87.5)
Tyler Eccles (13.5)	Zaven Kubat (23)	Timothy Place (3)	Esther Warner (558)
Randi Emmer (3,822.5)	Terry Kulmane (213)	Giannamarie Porambo (8)	Barbara Wefing (9)
Corinne Errico (87)	Ericson Lac (7)	Alice Qian (50.5)	Bianca Wentzell (8.5)
Nancy Felicito (1,143)	Andy Lamy (14)	Dionis Ramirez (459)	Larry West (351.5)
Paul Fenske (873)	Lorrie Lane (312.5)	Gail Rapaport (590)	Elaine Weyuker (175)
Andreana Field (9.5)	Bonnie Langdon (70)	Fernanda Reisinger (22.5)	Barbara Whitmore (318)
Jonathan Field (6.5)	Shannon Lenahan (18.5)	Roberto Reisinger (87)	Chuck Whitmore (1,042)
Alexa Fiumarelli (4)	Aaron Levine (3.5)	Donna Ricca (41)	Kathleen Willwerth (240)
Paul Ford (318)	Ethan Lim (14.5)	Edythe Risberg (1,438)	Walter Willwerth (970.5)
Alyssa Frediani (520)	Gary Lim (7)	Katrina Roberts (9)	John Wilmot (2,038.5)
Leon Freeman (18.5)	Winnie Lim (1.5)	Simon Roberts (48.5)	Dona Wilson (5.5)
Charlie Friedman (52.5)	Robert Lin (71.5)	John Rolfe (2)	Amanda Winford (169)
Susan Garretson Friedman (2,566)	Daria Lisco (47.5)	Johnny Roush (261.5)	Mark Winford (129)
Laura Fuhro (92)	Bob Loveland (3)	Carolyn Rubinfeld (107.5)	Carl Woodward (632)
Brian Gallagher (440)	Linda Loveland (3)	Michael Rubinfeld (23)	Kathy Woodward (6,549)
Pat Garvin (1,316.5)	Garrett Lukaszek (11)	Mike Savage (1.5)	Bob Yurkovic (15)
	Pegg Lyons-Roehm (3.5)	Paula Savage (1.5)	Xinqiao Zhang (3)

PARTNERING TO MANAGE WETLANDS AT GREAT SWAMP NWR: FIRST PRESCRIBED FIRE A SUCCESS!

By Dorothy M. Wells, *Refuge Biologist*

This past spring, Great Swamp National Wildlife Refuge (NWR) successfully conducted the first prescribed fire ever at the refuge with the help of 34 firefighters from the Service's Northeast Regional fire program, Pennsylvania, New Jersey, the National Park Service, Albany Pine Bush, and Wallkill River, Patuxent, Montezuma, and Moosehorn National Wildlife Refuges.

to control. In the late 1960s, after the refuge was established, many ditches were plugged and short dikes with water control structures were created to restore wetlands in the refuge's Management Area. Then, in the 1970s and 1980s, five managed wetlands [Pool 1, Pool 2, Pool 3a, Pool 3b, and Middle Brook Pool], totaling 460 acres, were constructed to provide migrating, nesting, brood-rearing, and feeding habitat

changing plant communities and reducing the amount of open water. Additionally, standing dead vegetation has formed thick mats, further reducing access for waterfowl. As stated in the refuge's Comprehensive Conservation Plan, we needed to 1) re-evaluate each of the refuge's managed wetlands for its ecological contribution to waterfowl and other priority species, and 2) develop and implement strategies to maximize each wetland's ecological contribution at a landscape scale.

It became clear pretty quickly that the artificial wetlands are worth maintaining. Thanks to the Friends of Great Swamp NWR (Friends) for funding cooperative research between the Service and Frostburg State University, we have gained a better understanding of the fish and aquatic insects that thrive in these wetlands, the degree that mammalian predators may be impacting ducks and geese, the timing of migration for various waterfowl species that feed and rest on the refuge during the fall and spring migration periods, and the extent that invasive plants (water chestnut) and animals (carp) have invaded these wetlands. Currently, the refuge is using multiple techniques to restore these important habitats. For example, since 2015, relatively high water levels have been maintained in an attempt to kill encroaching trees.



Firefighters from the Service's Northeast Regional fire program, Pennsylvania, New Jersey, National Park Service, Albany Pine Bush, and Wallkill River, Patuxent, Montezuma, and Moosehorn NWRs partnered with Great Swamp NWR to carry out a controlled burn on the refuge. *Photo credit – Gerald Vickers, Regional Fire Management Specialists Northeast Region*

The burn took place on one of the Refuge's 5 managed wetlands (Pool 2), a 234 acre wetland, whose purpose is to provide habitat for many wildlife species, particularly ducks and geese during the spring and fall migration periods. Prescribed fire is just one of the tools that the refuge is using to restore these managed wetlands, which originally were created to conserve wetland habitat and provide benefits for migratory birds.

Some history: In the mid-1900s, the hydrology of the Great Swamp area was disturbed significantly by draining and ditching for farming activities and stream alterations for flood and mosqui-

for ducks and geese. In general, the pools are characterized by open water, emergent forb and cattail marsh, and scrub-shrub wetland components as well as live and standing dead trees.

Over the past decade, through natural succession and relatively low water levels, woody vegetation has encroached into these wetlands,



Prescribed fire along east side of Pool 2 at Great Swamp NWR. *Photo Credit – Ken Witkowski, Wallkill River NWR*

Also, during the winter of 2015-2016, invading woody shrubs (primarily buttonbush) were mowed in Pools 2, 3a, and 3b. Prescribed fire is a new tool we are implementing to help restore these areas.

Planning for the burn started last summer with the Services Northeast Regional fire program and Refuge staff putting together a comprehensive prescribed burn plan, establishing protective fire lines, and notifying the local community and other conservation partners. Pools 2, 3a, and 3b were included in the burn plan. Pool 2 was the most overgrown, so it was our highest priority. Conditions were not right to burn all of the units this spring, but we were able to burn Pool 2. The objective was to reduce the build-up of standing dead vegetation, primarily cattail, bur-reed, and smart-

weeds that had formed thick mats as well as scattered thickets of woody vegetation (i.e., willows, buttonbush, swamp rose), and encroaching red maple and ash trees. The burn was a success! Nearly 200 acres (includes vegetation in the fire line) were burned in one day and a significant amount of dead vegetation was removed from the wetland.

The 2017 controlled burn at Great Swamp NWR marks the beginning of the use of prescribed fire to manage wetlands for wildlife on the refuge and lays the foundation to use fire as a viable tool to maintain these and other refuge habitats in the future. For wetlands, the refuge, with the help of the Friends and other partners and volunteers, has achieved great progress over the past 5 years. However, there is

more work to do! Plans are to continue to reduce encroaching vegetation to desired levels by maintaining relatively high water levels in Pools 2, 3a, and 3b. We will continue to mow and conduct prescribed fires in all three of these managed wetlands. We are also determining the best way to address the spillways, which were built to allow overflow during large rain events, but have eroded over time. Thanks to the support of the Friends, we have recently repaired three small water control structures that were no longer functional. Finally, this summer, Friends members, volunteers, and refuge staff and interns will join forces to remove invasive water chestnut from Pool 1. All of these efforts are great examples of how partners with limited resources can cooperate to achieve meaningful conservation goals across the landscape.



Pre- and Post-burn photos of Pool 2 showing the significant amount of dead vegetation that was removed from the eastern side of the wetland. *Photo Credit – Dorothy Wells, Great Swamp NWR*

SPRING SEASON AT THE WILDLIFE OBSERVATION CENTER

By Judy Schmidt, Friends volunteer; Photo (Indian pipe) by Dorothy Smullen, Friends volunteer

Spring came and so did a large number of families for great wildlife viewing. The big attraction this year was a barred owl who showed up often to feed on crayfish and pose for pictures. The frog and snake numbers were down, most likely due to the drought over the past two years. But the turtles were many and once again the snappers came out to lay their eggs—always exciting to watch. We also had a great spring migration of birds and a successful nesting season. Two mallards nested near the boardwalk for everyone to see and a blue-grey gnatcatcher built its nest near the kiosk entrance. Tree swallows occupied one of the new nest boxes. Our eagles were sighted often. Large clumps of the parasitic plant, Indian pipe, were particularly impressive this year. A new pollinator garden, planted near the restrooms by students from Madison High School, is drawing a lot of attention. Many children started working on their Junior Refuge Manager badge and many were excited to be sworn in.





2017 Brick Order Form

Orders accepted from June 1–December 31, 2017

PURCHASER INFORMATION

Name: _____

Street Address: _____

City: _____ State: _____ Zip: _____

Phone (Home or Cell?) _____ Email: _____

PAYMENT INFORMATION

Use separate forms as needed. Make checks payable to Friends of Great Swamp NWR. Mail check and forms to Friends of Great Swamp NWR, 32 Pleasant Plains Road, Basking Ridge NJ 07920. Credit card payments accepted at the Friends Nature Shop in the Helen C. Fenske Visitor Center. Please call for Friends Nature Shop hours: 973-425-9510.

BRICK SIZE AND COST	AMOUNT
4" x 8" brick with 3 lines of text @ \$150.00 each	\$.00
8" x 8" brick with 6 lines of text @ \$300.00 each	\$.00
8" x 8" brick with Blue Goose Logo and 4 lines of text @ \$350.00 each	\$.00
Total Amount Enclosed	\$.00

BRICK INSCRIPTIONS: ONLY ONE CHARACTER IN EACH BOX. ALL LETTERS, PUNCTUATION, AND SPACES COUNT AS ONE CHARACTER.

4" x 8" Brick—3 lines, 20 characters per line.

8" x 8" Brick—6 lines, 20 characters per line.

8" x 8" Brick with Blue Goose Logo at bottom, 4 lines, 20 characters per line.

FRIENDS OF GREAT SWAMP NATIONAL WILDLIFE REFUGE MEMBERSHIP APPLICATION

The Friends of Great Swamp is an independent, non-profit organization organized in 1999. Our operations and activities are managed by an all-volunteer Board of Directors. As our mission statement indicates, our focus is Refuge-centric — we support the goals, projects, and mission of the Great Swamp National Wildlife Refuge.

To become a member of the Friends of Great Swamp, fill out the information on this form, and mail with your check to:

Friends of Great Swamp National Wildlife Refuge
32 Pleasant Plains Road, Basking Ridge, New Jersey 07920

ANNUAL MEMBERSHIP APPLICATION

☐ **EASTERN BLUEBIRD—\$15-\$49**

☐ **PAINTED TURTLE—\$50-\$99**

☐ **RIVER OTTER—\$100-\$249**

☐ **MONARCH BUTTERFLY—\$250-\$499**

☐ **WOOD DUCK—\$500 +**

☐ **New Member?**

TOTAL ENCLOSED \$ _____

You may also join online at www.friendsofgreatswamp.org

Name _____

Address _____

City _____

State, Zip Code _____

Phone Number _____

E-Mail Address _____

Gift Membership From: _____

(If this is a gift, please include your full name on the line above so we may notify the recipient)

We need more Friends ...

**Become a Friend Today—or,
Give a gift membership to a friend.**

Thank you



Memberships help support the projects and programs at Great Swamp National Wildlife Refuge.

Membership Benefits

- The Swamp Scene Newsletter.
- A 10% discount in Friends Nature Shop .
- Notifications of upcoming events.
- Satisfaction in knowing you are helping protect wildlife and wild places while safeguarding a national treasure for future generations.

Gift Memberships will include a coupon redeemable at the Friends Nature Shop for a free Great Swamp pin or Great Swamp patch.

Friends of Great Swamp NWR
32 Pleasant Plains Road
Basking Ridge NJ 07920



THE SWAMP SCENE JULY 2017

Friends of Great Swamp National Wildlife Refuge
Is an independent, volunteer, non-profit organization
dedicated to

Promoting stewardship of the natural resources of the Refuge,

Inspiring an appreciation of nature through education and outreach,

Engaging in partnership activities that support and enhance the Great Swamp National
Wildlife Refuge and the National Wildlife Refuge System.