



# River Currents

May 2007

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

Issue 42

## What's Happening in and around the River and the Watershed

**GREAT EGG HARBOR WATERSHED ASSOCIATION:** On May 22, 2007, the Great Egg Harbor Watershed Association proudly presented the 1<sup>st</sup> annual award of \$500.00 from the Belinda Irizarry Memorial Fund to Victoria Schmidt. Belinda devoted her life to saving the natural habitat and caring for neglected and abandoned animals, so it is only fitting that the first award should go to someone whose life mission is similar to Belinda's. Professionally, Victoria has worked for the past 29 years as a Respiratory Therapist. She currently works for South Jersey Healthcare. Her job financially enables her to pursue her passion of caring for wounded and abandoned animals, which she has done for the past twenty-three years. Victoria is a New Jersey state licensed Wildlife Rehabilitator. She uses her personal funds to maintain her animal care facility on 12 acres in



R > L: Sarah Summerville, GEHWA Trustee presented Victoria Schmidt, wildlife rehabilitator with the award.

Barnsboro. Her rehabilitation work is not supported by any agency or organization. She is certified to care for

opossum, rabbit, fox, raccoon, skunk, and squirrels, though at times she has gotten approval to handle other species. Victoria has had a high success rate for recovery and release. Victoria has released rehabilitated fox and raccoon at the Unexpected Wildlife Refuge in Buena Vista Township. She also transports wounded and abandoned birds to the Tri-State Bird Rescue in Newark, Delaware and is a member of their oil spill response team. She gives credit to her mother for the example her mom set while Victoria was growing up. "My mom's compassion for sick and injured wildlife had a tremendous influence on what I do today." Thank you, Victoria, for all that you do and a special thanks to all who have made, and continue to make contributions to the Belinda Irizarry Memorial Fund. (For more information about Victoria see "Member Meetings" below)



Belinda Irizarry



Baby Woodcocks

**FOLSOM BORO:** The Folsom Environmental Committee (EC) presented their “Environmental Pledge Program” at Folsom School on **April 20<sup>th</sup>**, as an Earth Day project. The 1<sup>st</sup> and 2<sup>nd</sup> grade students were asked to sign a



pledge as a friend

to the rivers, earth, sky and all the animals, requesting that they will: pick-up trash, recycle, not litter, etc. In the photo above, the students are wearing their “Freddy Folsom” tee-shirts. All of the students are given a tee-shirt when they sign the pledge. Belinda Irizarry started the program about 10 years ago and the Folsom EC continues to present it every two years.



**Folsom 1<sup>st</sup> and 2<sup>nd</sup> Graders and their Teachers**

**MONROE TOWNSHIP:** On **March 13<sup>th</sup> and 14<sup>th</sup>** GEHWA could be found in Paul VanHouten’s 6<sup>th</sup> grade science class at Williamstown Middle School. The first day the students were taught “What is a Watershed” and how stormwater runoff contributes to water pollution. By using a video clip of the path of an animated raindrop (the kids loved the raindrop) and the EnviroScape Stormwater Model, students gained an understanding that their actions have an impact on water quality. Since litter was a topic at a recent GEHWA trustee meeting, students were asked if they throw trash on the ground. They were very honest, and the majority replied, “Yes”. The first day students were challenged to do two things to help clean up pollutants found in stormwater runoff and, in turn, help the environment. 1. Don’t litter and pick up trash and, 2. Pick up your animal’s waste.



On the second day, using a video clip on groundwater and the Groundwater Model (the students were very interested in the Groundwater Model), the students learned “Where Does Your Water Come From?”. They also learned that their water usage can have an impact on the water supply. The students were challenged on the second day to reduce their daily water consumption. By connecting excess consumption to the additional energy required to provide for their water needs, the students gained a new awareness that it requires the burning of fossil fuels to supply the energy needed to pump their water. This in turn led to a discussion on how excessive water consumption results in greater greenhouse gas emissions. (Many of the students admitted to taking hour-long showers, much to their teacher’s horror.)

**TUCKAHOE:** Once again, BSA Troop 79 was busy picking up trash. The last clean-up the troop participated in was on the Tuckahoe River in September. On **April 21<sup>st</sup>** they concentrated their efforts on the roadsides of the Tuckahoe Wildlife Management Area (WMA). The day started out sunny but chilly. Some of the scouts, anticipating a warm day, arrived wearing only tee shirts and shorts! Many bags of trash were collected, along with tires, a boat and other



debris. It quickly became apparent that the majority of the beverage containers collected were of the alcoholic variety. Since it is illegal to carry an open alcoholic beverage container in a vehicle, the easiest method of disposal is to toss it out the window to become part of the roadside flora. Maybe folks who must complete community service due to a DWI conviction should be made to participate in a roadside clean-up. After a day picking up bottles and cans containing stale beer, and having those same smelly contents spill on their clothing, it might have an impact on their future drinking and driving habits. Due to time limitations and the extent of the roads in the WMA, the clean-up crew was not able to get to all of the roadside trash.

The day also offered some excitement that had nothing to do with trash. We found time to play peek-a-boo with the ground bee (shown in the photo at right).



**RICHARD STOCKTON COLLEGE:** GEHWA continues to support programs at Stockton. In **March**, Fred Akers taught the students in Jamie Cromartie’s Ecological Principles class about the vernal ponds that can be found on the campus. Water chemistry analysis was done. Stick samples were collected to check for macroinvertebrates. Some of the students from the class, as well as faculty from the school, also participated in evening “Frog Walks” led by “Watershed Fred” (3/22 and 3/26/2007) to four vernal ponds on campus.



Jack Connor, a Stockton professor who participated in the walks, recorded the following data: peepers calling in 100s, possibly

1000s, and chorus frogs calling in dozens on the humid and warm (high 50s/low 60s?) night of 3/22; peepers, chorus frogs, and southern leopard frogs calling on the cooler (low 40s?) night of 3/26 – in somewhat lower numbers. Peepers were calling at all four ponds visited. Professor Connor also took some interesting photos that can be viewed at the following web address: <http://nacotejack.smugmug.com/gallery/2619334/2/139023759>. If you would like to learn some frog calls, go to the following web address: <http://www.nwf.org/frogwatchUSA>.



**GREAT EGG HARBOR WATERSHED AND NEIGHBORS:** During the months of **April** and **May**, GEHWA tabled in: Atlantic County at the ACUA’s Earth Day and at the Hamilton Mall for the county’s “Government Week”; Egg Harbor Township School’s jamboree for their “Catawba Project”; Somers Point at their Bayfest; and Cumberland County at the Wheaton Arts Eco-Fair. At these events educational materials on stormwater runoff and water conservation were handed out and the Groundwater Model was used to demonstrate where drinking water comes from. Apparel and toy items (proceeds from the sale of toys go to the Belinda Irizarry Memorial Fund) were sold, and several folks became new members of GEHWA.





## Watershed Degradation Also Means More Flooding

By: Fred Akers

As our watershed becomes more developed and paved over, the natural hydrology is altered and usually degraded. In an undisturbed coastal plain watershed, over 90% of the rainwater from a storm, soaks (infiltrates) into the forest and wetlands. This process of infiltration helps filter pollutants from the water, recharge aquifers, and provides a continuous base flow to rivers and streams. These functions are all natural ecosystem services that are both free and vital to a healthy environment.

Roads, driveways, sidewalks, rooftops, compacted soils and other impervious surfaces resulting from development, block the natural infiltration of stormwater, and cause large quantities of stormwater to runoff over these impervious surfaces into rivers and streams. The runoff transports chemical, sediment, and trash pollution to the nearest waterbody. It can also cause physical changes to stream size and shape, and damage and destroy sensitive aquatic habitats. It also reduces aquifer recharge and stream base flow. It can cause flash flooding that can take both lives and property.

On April 15 and 16 of this year, a storm came through from the northeast and dumped 2.66 inches of rain at the Atlantic City Airport in Pomona, 4.75 inches at the USGS Gauging Station in Folsom, 5.82 inches at the Mount Holly Weather Station, and 5.05 inches at the Philadelphia Airport. Though the rain stopped on April 16 and less than 3 inches fell in the eastern part of Atlantic County, the Great Egg Harbor River above and below Weymouth began to flood on April 17, and crested early Wednesday morning on April 18. This flooding event was the worst I can recall. The USGS gauging station at Folsom recorded the water height at 2 feet above flood stage. Flow at the gauging station is generally measured at 100 cubic feet per second (cfs). Flow at flood stage was measured at 1000 cfs. The flood damage was significant. Homes were inundated, and roads and other structures were damaged. When the total cost of all the damages was finally estimated, Atlantic County was designated as an official disaster area and qualified for Federal Emergency Management Agency (FEMA) financial aid.

Given the fact that more rain fell to the west of Weymouth, the almost 2 day delay between the rain and the flooding at Weymouth, and the fact that the western portions of the watershed in Gloucester and Camden counties have some of the most developed areas in the watershed, I began to wonder if this flooding in the eastern portion of the watershed was an indication of growing urban stormwater management problems upstream of Weymouth. With an overall area of 600 square miles in the Great Egg Harbor Watershed, it is not a simple matter to identify all of the possible stormwater sources that would create a cumulative flooding impact down stream, or to recommend what tools to use to protect the watershed.

NJDEP 2002 land use data shows that over 66,000 acres of the 377,000 acres of the Great Egg Harbor Watershed, or about 17.5%, have been converted from natural lands to urban lands, 13,000 of those acres since 1986. Coincident to this increasing urbanization of the watershed, a number of dams in the watershed have been flagged by NJDEP to be either strengthened or decommissioned as a result of the increasing volume of stormwater runoff. As the percentage of impervious surfaces increases, stormwater runoff also increases, leading to flash flooding.

The Great Egg Harbor Watershed Association's Geographical Information Systems (GIS) department has been working on watershed land use analysis for several years now, with the goal of eventually analyzing all of the land use changes and trends for the entire watershed. Given the seriousness of the flooding in places like Hamilton Township in Atlantic County, GEHWA is working to identify the extent of impervious surfaces and stormwater discharges within the Great Egg Harbor Watershed. This updated land use analysis will help us to provide information to local and county agencies about the local and downstream impacts of stormwater runoff. Our goal is to provide local communities with a realistic approach for maintaining a quality environment within the watershed for future generations.

### **\*\*Member Meetings\*\***

#### **“What’s in Our Backyard”**

The original movie [“Protecting Our Waters –The Great Egg Harbor River and Watershed,”](#) which captured the natural beauty, historical and cultural resources, and threats to our river was first produced in video format, but is now

available in DVD format. The DVD version, complete with separate chapters, was premiered on Tuesday, **March 27** at the Members Meeting. Newer members were delighted to learn of the historical, ecological and recreational aspects of the river, while older members shared memories of the river. In addition, there was discussion on protection of the river: past, present and future.

At the **May 22<sup>nd</sup>** members meeting, Victoria Schmidt, recipient of the **1<sup>st</sup>** annual award from the Belinda Irizarry Memorial



**Raccoon**

Fund, presented a slide show of animals that she has either rehabilitated or had a part in their rehabilitation. She shared stories of her many triumphs and occasional losses. Victoria warned viewers not to assume that a baby animal has been abandoned, and told them what to look for before inadvertently “rescuing” an animal that does not need to be rescued. She used a fawn as an example. A doe will constantly groom a fawn to control parasites. If you



**Fox**

encounter a fawn that appears abandoned, check to see if it is infested with parasites (i.e. ticks). If it is not, leave it alone, as there is likely a mother caring for it.

**If you would like to support Victoria’s mission, the following are ways in which you can assist: Donations are always welcome, including PetSmart gift cards (for the purchase of wildlife formula) and cages, crates or hutches. Please feel free to contact Vicky, who is a New Jersey, state licensed Wildlife Rehabilitator, with your questions or help with injured wildlife.**

Victoria Schmidt  
115 Heritage Road  
Barnsboro, NJ 08080  
856-468-1484

**SPECIAL NOTE:** *If you encounter an animal that has been wounded or abandoned you can either contact the Division of Fish and Wildlife at **609-292-2965** or check online to find a list of NJ Wildlife Rehabilitators by Species at <http://www.njfishandwildlife.com/rehablst.htm>.*

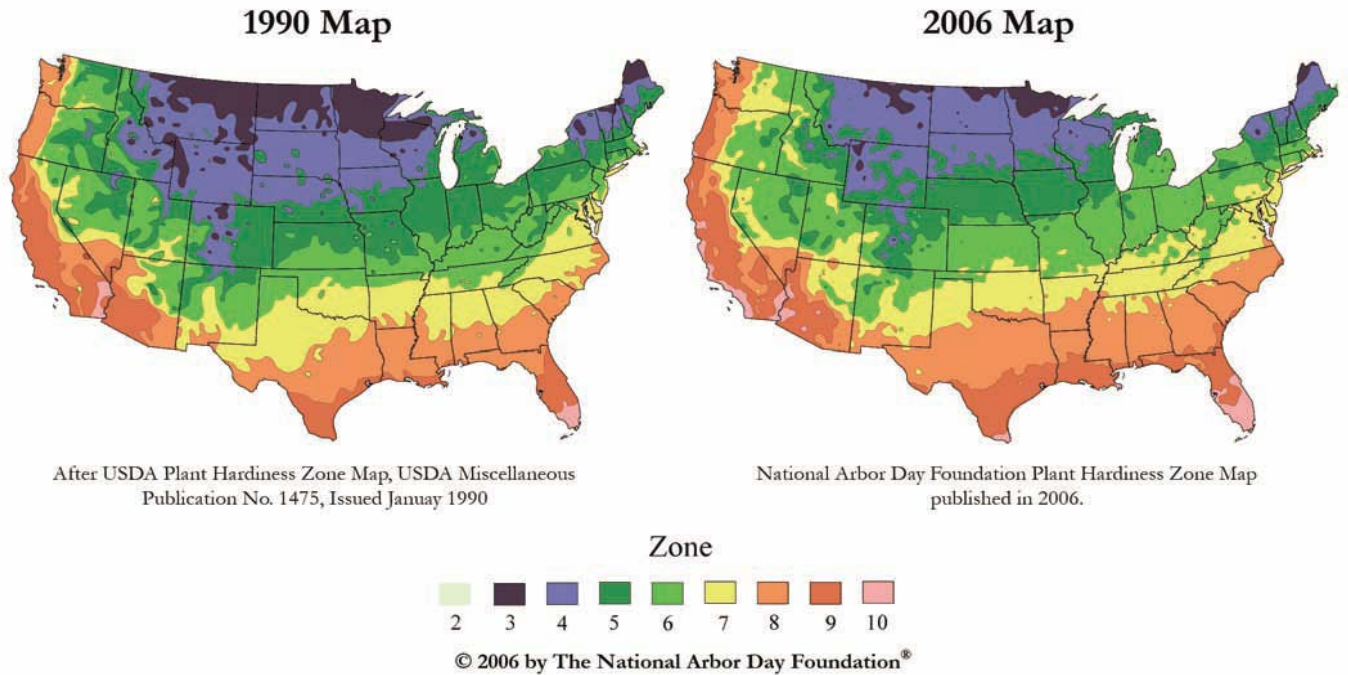
New Jersey has strict laws governing the possession of wild animals, including those injured or orphaned. Most times, what appears to be orphaned young wildlife is not and the best thing to do is leave the animal where it is found. Handling wildlife can be harmful to the animal and possibly to the person handling it. Generally, unless it is known that the mother has been killed or injured, the public is urged to leave young wildlife alone. The parent will do its best to care for it. A baby bird can be placed in a shrub to help protect it from predators, but the adult(s) will protect and feed it. It is a myth that, once handled, the human scent will keep the parent away; songbirds do not have a sense of smell!



### **What you can do!**

As science continues to provide growing evidence of “Global Warming”, humans are faced with making choices. Ignore the evidence, acknowledge the problem but make no lifestyle changes, or acknowledge the problem and make a conscious effort to change your impact on the earth. The various colors on the maps shown below are used to denote differing temperatures. Zones 2 thru 10 denote the coldest expected temperatures for that specific area of the United States. Differences between 1990 USDA hardiness zones and 2006 arborday.org hardiness zones represent changes in the coldest expected temperatures throughout the United States. On the 1990 map, NJ was predominantly in Zone 6, with the lowest temperatures ranging from: -23 to -18 C (-10 to 0 F). The 2006 map shows NJ as predominantly in Zone 7, which shows a decrease in lowest temperatures: -18 to -12 C (0 to 10 F). Over time, changes in temperature will have an impact on what will grow in an area. This change will also have an impact on animal life. The result may be the loss of

both plant and animal species in an area as they migrate to a more favorable climate or extinction due to restrictions on their migration or ability to adapt.



After USDA Plant Hardiness Zone Map, USDA Miscellaneous Publication No. 1475, Issued January 1990

National Arbor Day Foundation Plant Hardiness Zone Map published in 2006.

One of the simplest ways of making a lifestyle change is to swap an incandescent light bulb with a compact fluorescent bulb. If every American home replaced just one light bulb with an ENERGY STAR qualified bulb, we would save **enough energy to light more than 3 million homes for a year**, more than **\$600 million in annual energy costs**, and prevent greenhouse gases equivalent to the emissions of more than **800,000 cars** (U.S. Environmental Protection Agency – U.S. Department of Energy, [http://www.energystar.gov/index.cfm?c=cfls.pr\\_cfls](http://www.energystar.gov/index.cfm?c=cfls.pr_cfls)).

<b>Consumer Basics*</b>	
<b>The cost of one compact fluorescent compared to eight incandescent bulbs*</b>	
<b>Compact fluorescent</b>	<b>Incandescent</b>
<b>Wattage of one bulb</b>	
13 watts	60 watts
<b>Lifespan of one bulb</b>	
6,000 hours	750 hours
<b>Number of hours and days of use</b>	
6,000 hours (One bulb equals 1000 days* at 6 hrs per day)	6,000 hours (Eight bulbs equals 1000 days* at 6 hrs per day)
<b>Estimated retail cost of bulb(s)</b>	
\$3.50 (Cost of one bulb)	\$4.00 = .50 cents x 8 bulbs (Need to replace bulb 8 times)
<b>Annual energy cost</b>	
\$2.00	\$11.00
<b>Energy cost over lifespan of bulb(s)</b>	
\$5.48 = 2.74yrs* x \$2.00	\$30.14 = 2.74yrs* x \$11.00
<b>Total cost difference with 6000 hours of use</b>	
8.98 = \$3.50 + \$5.48	34.14 = \$4.00 + \$30.14
<b>Mercury in bulb</b>	
4.4 milligrams	None
<b>Mercury emissions (from coal power plants) over lifespan of bulbs</b>	
6.57 milligrams = 2.4 milligrams x 2.74yrs	27.40 milligrams = 10 milligrams x 2.74yrs
*Based on \$0.086 electricity rate per kWh and usage of 6 hours per day. Source: Energy Star, EPA, U.S. Department of Energy, Florida State University, Venture Lighting.	
* Eight incandescent bulbs are needed to equal the lifespan of one compact fluorescent.	
*6000 hrs / 6 hrs per day = 1000 days	* 1000 days / 365 days per year = 2.74 yrs

The table to the left makes a comparison between compact fluorescent bulbs (CFL) and incandescent bulbs. Eight incandescent bulbs would be needed to equal the lifespan of one CFL. Based on the data provided, replacing one CFL would equal a savings of approximately \$25.00 over its lifespan. If several CFLs were replaced the savings could be considerable, not just financially but environmentally as well.

<p><b>Great Egg Harbor Watershed Association</b>  Julie Akers, President (856) 697-6114  Fred Akers, Administrator (856) 697-6114  P. O. Box 109; Newtonville, NJ 08346  Email: fred_akers@gehwa.org  Web Site: <a href="http://www.gehwa.org">www.gehwa.org</a>  Lynn Maun, Coordinator (856) 453-0416  Email: lynnmaun@comcast.net</p> <p><b>National Park Service</b>  Paul Kenney (215) 597-5823  Paul_Kenney@nps.gov</p> <p><b>NJDEP Watershed Management Office</b>  Robert Mancini (609) 777-0580</p>	<p><b>Atlantic County Department of Planning</b>  Bob Lindaw (609) 645-5898</p> <p><b>US Army Corps of Engineers</b> (215) 656-6725</p> <p><b>NJDEP Regulatory Office for Atlantic County</b>  (609) 292-8262</p> <p><b>NJDEP Enforcement Officer</b>  Kevin Brown (732) 255-0787</p> <p><b>Pinelands Commission</b>  Main Number (609) 894-7300</p> <p><b>NJDEP Hotline:</b> 1-877 WARN DEP</p>
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<i>Calendar of Events</i>	
<p><b>Wednesday, June 20, 2007</b>  <i>Great Egg Harbor NS &amp; R River Council Meeting</i></p>	<p><b>Tuesday, September 25, 2007</b>  <i>GEHWA Members Meeting</i></p>
<p><b>Tuesday, July 24, 2007</b>  <i>GEHWA Members Meeting (See Notice in Newsletter)</i></p>	<p><b>Wednesday, October 17, 2007</b>  <i>Great Egg Harbor NS &amp; R River Council Meeting</i></p>
<p><b>Saturday, August 4, 2007</b>  <i>Pinelands Folk Art Festival</i></p>	<p><b>Tuesday, November 27, 2007</b>  <i>GEHWA Members Meeting</i></p>
<p><b>Wednesday, August 15, 2007</b>  <i>Great Egg Harbor NS &amp; R River Council Meeting</i></p>	<p><b>Wednesday, December 19, 2007</b>  <i>Great Egg Harbor NS &amp; R River Council Meeting</i></p>



## Membership Information

Your membership supports our mission and ensures our survival as a non-profit advocate, as we work to protect and preserve the Great Egg Harbor River and Watershed throughout the year. As a result of federal budget cuts, your support is needed now more than ever. Without you, we could not exist. Thank you for your support!

Name/Organization: \_\_\_\_\_  
Street Address: \_\_\_\_\_  
City, State, and Zip: \_\_\_\_\_  
Phone Number: \_\_\_\_\_  
Email address: \_\_\_\_\_

**Yes, I would like to receive notices by Email.**

**Annual Membership:** Individual: \$10; Family: \$15; Supporting: \$35; Patron: \$50; Corporate: \$100

*Please mail this form along with your check to:*  
Great Egg Harbor Watershed Association, Membership, P.O. Box 109, Newtonville, NJ 08346

## Come join us for our Annual campfire/picnic, Tuesday July 24, 2007, 5:30 pm until 9:00 pm, At Weymouth Furnace.

Hamburgers and Hotdogs will be provided. Please bring a tasty salad/side dish or dessert to share. The CAMPFIRE/Storytime will begin at 7:00 pm. If you plan on attending the picnic please RSVP Lynn Maun at 856-453-0415 or email: [lynnkmaun@comcast.net](mailto:lynnkmaun@comcast.net) with a



count for your family so that we know what supplies to purchase. We hope that you can join us and look forward to seeing you. If you have a good campfire story that you would like to share, please let us know. Thank you.

Great Egg Harbor Watershed Association  
P.O. Box 109  
Newtonville, NJ 08346