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GREAT BAY TERRAPIN PROJECT IN 2011

By Ben Wurst, Habitat Program Manager

In 2010 we began a new project that was focused on reducing the high number of northern diamondback terrapins that are killed or injured each year on a road in southern Ocean County. The road is Great Bay Boulevard (GBB) or Seven Bridges Road which is at the southern extent of Barnegat Bay. The road bisects one of the largest state wildlife management areas along the entire coast of New Jersey which is also designated as the Jacques Cousteau National Estuarine Research Reserve. Designation as a National Estuarine Research Reserve is “to promote the responsible use and management of the nation's estuaries through a program combining scientific research, education, and stewardship.” The habitat alongside the road is home a diverse array of wildlife and one species, the northern diamondback terrapin, often crosses the roadway to get to prime nesting areas along the road shoulders. Last year, Conserve Wildlife Foundation of NJ (CWF) continued their work along GBB with funding from the Trust for Public Land, Exelon, Absolutely Fish, Jenkinson’s Aquarium, and private donors to help reduce terrapin road kills and to educate the public about terrapins and their threats.

In the fall of 2010 we decided to temporarily remove our barrier fence to make changes to its design and installation methods for a more permanent solution. From June 3-5, 2011 with help from several dedicated volunteers and in-kind support from Sambol Construction we successfully installed ~ 4,000 linear feet of extruded plastic barrier fencing. Updates to the design were placing the fence in a 6-8” deep trench for a permanent installation and the use of 3’ metal t-posts to ease installation and prevent sagging of fencing.



Volunteers help roll out barrier fencing that was installed in early June. © Ben Wurst

The barrier fencing has been placed on the first stretch of road where previous studies have indicated that up to 30% of terrapins are killed while attempting to find suitable nesting areas (Szerlag and McRobert, 2006). This first section of road is not utilized as much by terrapins but it gets the most vehicle traffic (936 mean vehicles/day) during the peak nesting season for terrapins (Szerlag and McRobert, 2006). We plan to eventually fence the entire 9,000 stretch of road to help eliminate road kills in this portion of the road.

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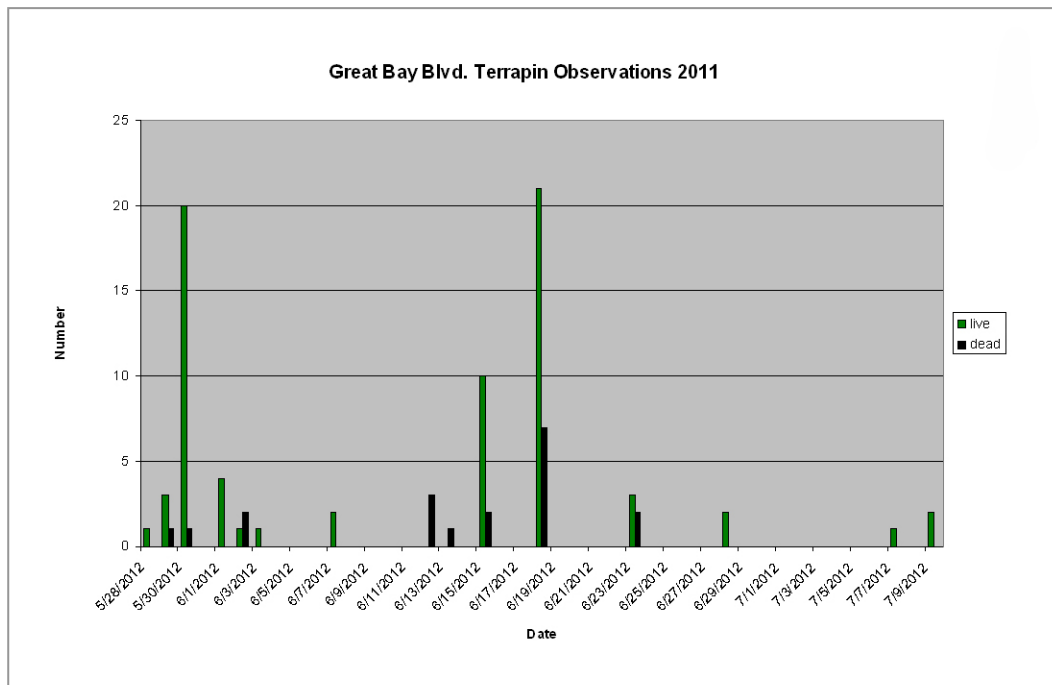
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We believe that fencing this first section also helps bring much needed awareness to drivers when they enter the wildlife management area to slow down and be aware of terrapins that are actively crossing the road.

During the summer and fall months maintenance and repairs were performed on the barrier fencing. Vegetation was trimmed back so that it did not interfere with the fence. Cool season grasses were trimmed twice during the summer. Vandalism occurred several times throughout the year. Many fence posts were stolen and some sections of the fence were driven over by motor vehicles. Maintenance of the fence will continue to be an issue and we are planning on testing a new type of barrier this year that we hope will be less costly to maintain and repair.

Figure 1: Bar graph of terrapin sightings on Great Bay Blvd. from May-July.



This year we developed a new program to help increase awareness for terrapins and to help lower their high mortality rates. We recruited volunteers to act as “Terrapin Stewards” whose mission was “to educate visitors along Great Bay Blvd. about terrapins and to help reduce the amount of road kills.” Volunteers talked to people engaged in outdoor recreation and handed out brochures to make them aware of terrapins and our project there. They also recorded sightings of live and dead individuals while conducting road surveys from May 29 – July 31. Terrapins on the roadway were moved to the shoulders and out of harms way. In all a total of 90 terrapins were observed either crossing or nesting along the edge of GBB. A total of 19 individuals were found dead from being hit-by-car. One terrapin was found to have 7 viable eggs which were harvested and transferred to a hatchery on Long Beach Island in partnership with John Wnek and Project Terrapin at the Ocean County Marine Academy of Technology and Environmental Science. Unfortunately the eggs did not hatch.

We hope to expand this portion of the project in 2012 by having an increased survey presence by recruiting more volunteers and by developing a paid internship position with CWF to assist us with the project.



A new “Terrapin X-ING” sign installed on Radio Rd. on Osborne Island. © Ben Wurst

In addition to our public awareness campaign we maintained a total of three “Terrapin X-ING” signs along GBB. Theft continues to be an issue since only one sign remains. We have also reached out to the Ocean County Roads Department about another road-kill “hot spot” in Little Egg Harbor on Radio Rd. In late 2011 they installed two “X-ING” signs on Osborne Island. We continue to work with Little Egg Harbor Twp. to address the issue of the high (50mph) speed limit along GBB. We hope that they will consider lowering the speed limit to 30mph to increase visibility of terrapins on the road and help reduce the chances that someone gets seriously injured while helping a terrapin to safely cross the road.

In conclusion, terrapins are an important part of the ecosystem in the Barnegat Bay estuary. They spend their entire lives in the brackish water of the bay and only leave the protection of the water to nest. This is where they’re the most vulnerable. This conservation project, through our outreach and educational, and from our hands-on efforts to individual terrapins, helps the conserve their population and the overall health of Barnegat Bay through the benefits they provide.

Thank you to all of the organizations, businesses, and private donors who help fund this project which gets no state funding. And a special thank you to our dedicated terrapin stewards who make this project a success: Betty Leshner, Steve Zeck, Billie Brockhum, Terry McQueeney Cynthia Coritz, Frank Simon, Jeff Ruemeli, Joe Bilotta, Jackie Lindeborn, John Woods, Fred Strang Sr., Terry McQueeney, Rosanne Finley, and Stephanie Egger for her knowledge and expertise about terrapins in the Great Bay Watershed.

REFERENCES:

- Szerlag, S., S.P. McRobert. 2006. Road occurrence and mortality of the northern diamondback terrapin. Journal of Applied Herpetology 3: 27-37.

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