



THE WETLANDS INSTITUTE

Celebrating 50 Years of Excellence in Research, Conservation and Education

Lisa Ferguson, PhD
Director of Research and Conservation

Our Mission:



To promote appreciation, understanding and stewardship of wetlands and coastal ecosystems through programs in research, conservation and education









The Wetlands Institute

- Founded in 1969 by H.H. Mills, Executive Director of World Wildlife Fund with Purchase of 5,000 Acres of Wetlands
- Protection at a Time of Rapid Wetland Loss to Development, Filling and Dredging
- Recognized the Value of Wetlands for Fisheries, Coastal Resilience and Coastal Economies

"The recent storm clealry demonstrated the importance of these marshlands. With hundreds of billions of gallons of ocean water pounding our coast and surging through our inlets to be received by these vast natural reservoirs, the pressure was relieved along the waterfront and multi-million dollar damage averted.

Cape May County Herald 12/4/1968





Joe Jacobs at Cedar Island early 1970's



Joe Jacobs Banding Osprey near Avalon early 1970's

Remarkable History of Research and Conservation

CEDAR ISLAND ACQUIRED AT LONG LAST BY GREEN ACRES

In 1962 your Society nominated Cedar Island, Avalon, Cape May County, New Jersey, for Green Acres acquisition by State of New Jersey as a natural area to preserve this 210-acre salt meadowland island as an irreplaceable breeding sanctuary for the last large concentration of Ospreys in the Garden State and many species of wading birds, Black Skimmers, Clapper Rails and other forms of wildlife.

Audubon Society Newsletter, 1969



November 21,1968

Wildlife Fund Of Washington Offers \$100,000 For Avalon Marshland

Tomorrow (Saturday) the Borough of Avalon will offer 953 acres of marshland known as Block 84 on the Borough Tax Map for sale, under tight restrictions guaranteeing the property

temain in it's natural state. The sale is a result of negotiations between the borough of Avalon and the World Wildlife Fund of Washington, D.C. Herbert Mills, Executive Director, represented

the World Wildlife Fund, who has offered the minimum price of \$100.000 to purchase the tract for the purpose of conservation. The restrictions on the sale inciude:

 A conservation easement n:ust be granted to the State of New Jersey within 30 days.

No dredging, depositing of spoils, garbage, trash or other waste material be allowed,

3. No structure of any type will be permitted.

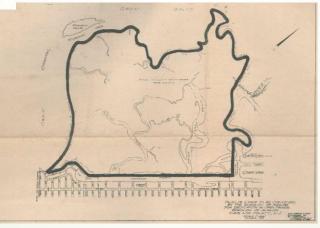
4. Easement rights for regional water or sewer lines will be permitted, but no sewer plants will be allowed.

5. If any of the above restrictions are violated, the title to the land will revert back to the Borough.

An advertisement of the sale was published in last week's issue of this paper and also appears in this issue. It includes a map of the area covered.

Copies of the notice are also available from the Borough Clerk.

Mayor Edgar V. H. Be'l stated with Cedar Island now owned by the Green Acres Division of the New Jersey Department of Conservation, and Block 84 dedicated to open spaces, more than (Turn To Page 4, This Section)



Buy and Use CHRISTMAS SEALS SEVEN MILE BEACH REPORTER

The Only Newspaper Of Avalon And Stone Harbor

20 - flat Street, Sao Isla City, New Jarsey SEVEN MILE BEACH REPORTER, FRIDAY, NOVEMBER 22, 1968

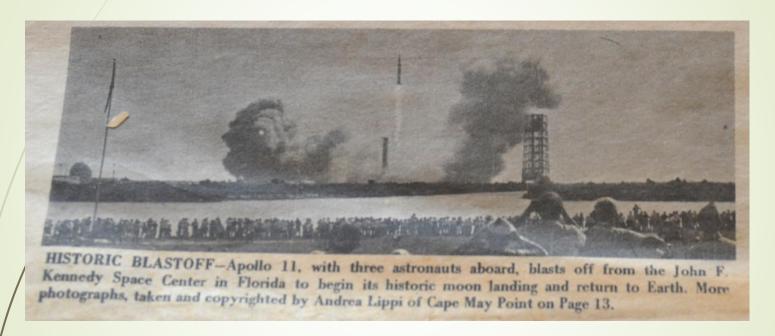
By the Year - \$4.50 Mailed Anyethers In U. S. A.

Preserving Critical Lands Near Avalon



July 1969 Tour Avalon Purchase, Avalon Dunes, Stone Harbor Bird Sanctuary

Building a conservation Ethic



July 1969 Tour Avalon Purchase, Avalon Dunes, Stone Harbor Bird Sanctuary

Building a conservation Ethic



Commissioner Roe, Herbert Mills, General Charles Lindbergh, Heronry Director Harry Letsche, Middle TSHP Mayor Leroy May Jr., CM Freeholder Leon Schuck, Arthur Godfrey, John Mladgden AHLOA, SH Mayor William Lange Jr., Dr. Roger Torey Peterson

July 1969 Tour Avalon Purchase, Avalon Dunes, Stone Harbor Bird Sanctuary

Building a Conservation Ethic



THE PEOPLE'S NEWSPAPER -

10c A COPY

\$4.50 A YEAR 3 Sections, 22 Pages PHONE 465-7146

Wetlands Institute To Be Built Near Stone Harbor

New Center Will Aid Research

Universities To Join In Program

STONE HARBOR-Work has started preparing the site for establishment of the South Jersey Wetlands Institute on the south side of Stone Harbor boulevard with a target date for completion before next summer.

The project is being sponsored by the World Wildlife Fund and a number of leading universities to carry out research in the fields of oceanography and estuarine studies When World Wildlife Fund

made its substantial purchases of wetlands in Southern New Jersey two years ago it agreed with the New Jersey Department of Conservation and Economic Development that it would sponsor an edu-

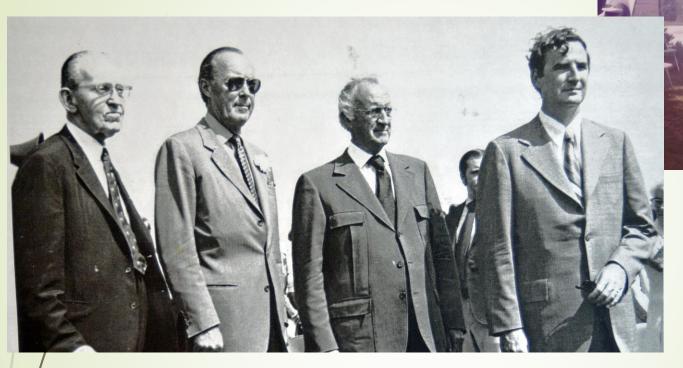


An architect's sketch shows the proposed new South Jersey Wetlands Institute headquarters that will be built soon south of the Stone Harbor boulevard in Middle Township. The center will house study and research facilities and will be used by experts in the fields of oceanography and ecology. Long range plans include seminars, lectures and other activities. A two acre section of meadows is being diked in preparation for the start of construction, according to Herbert H. Mills, of Stone Harbor, executive director of the World Wildlife Fund which purchased the land



September 1972

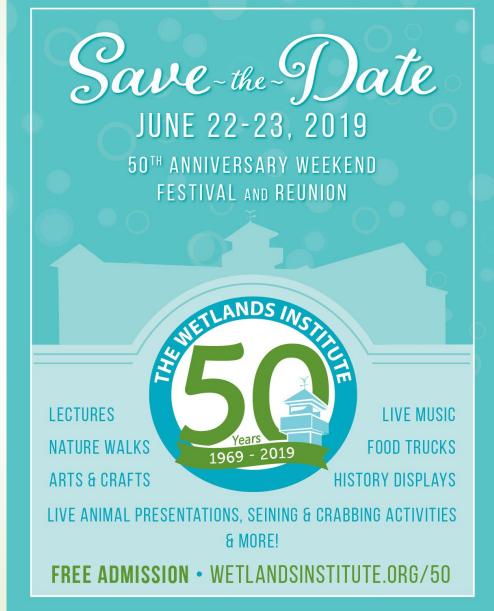
Dedicating the Institute



Ira Gabrielson (Officer WWF), Prince Bernard of Netherlands, Herbert Mills, Commissioner Robert Roe (NJ Department of Conservation and Economic Development) standing for national anthems of USA and Netherlands played by United States Coast Guard Band. September 1972

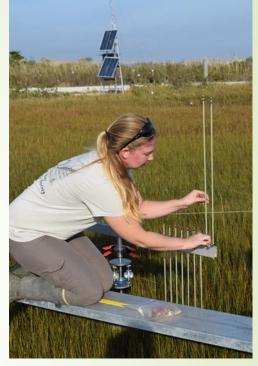
Dedicating the Institute

50th Anniversary Celebration Weekend



Research and Conservation at The Wetlands Institute

- Habitat Restoration Projects for Coastal Birds
- Marsh Health and Sustainability Monitoring
- reTURN the Favor Horseshoe Crab Habitat Enhancements and Rescue Program
- Diamondback Terrapin Research and Conservation Program









Seven Mile Island Living Laboratory

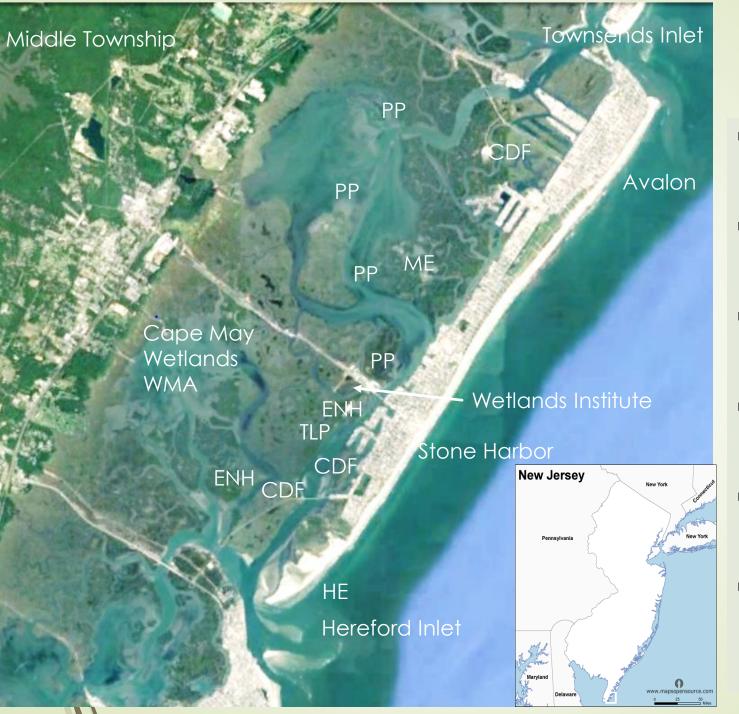
A Proving Ground Using Natural and Nature-Based Features to Provide Ecological Uplift and Enhanced Resilience for Ecosystems and Coastal Communities









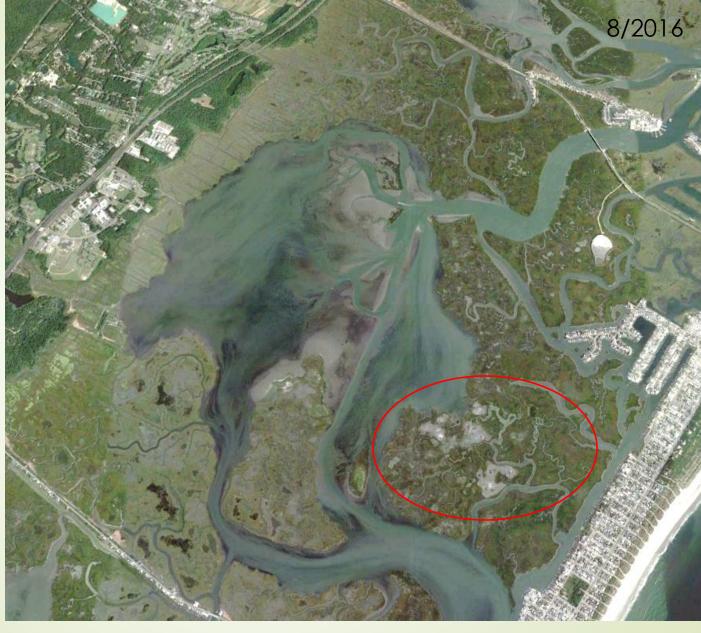


Seven Mile Island Living Lab

- ConfinedDisposalFacility (CDF)
- Elevated Nesting Habitat (ENH)
- Thin LayerPlacement(TLP)
- MarshEnhancement(ME)
- PriorPlacementSites (PP)
- Habitat Enhancement (HE)

- NWFW
 Hurricane Sandy
 Coastal
 Resilience Grant
- Pilot Testing
 Beneficial Use of
 Dredge Material
 Concepts
- Marsh Platform Enhancement
 - **2014/2015** 50,000 cy





Avalon Marsh Enhancement Project



Ring Island Beneficial Use Projects







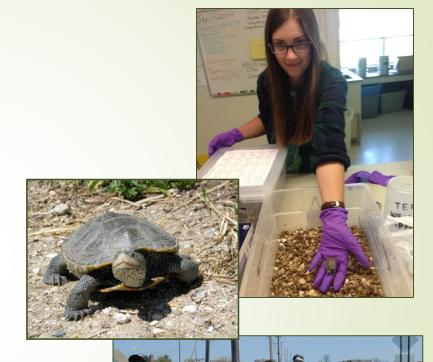




Terrapin Research and Conservation

- Roadway Hazards
 - Road Rescues and Barrier Fencing
 - Salvaged Eggs and Headstarters
 - Storm Drain Rescue Program
- Waterway Hazards
 - Ghost Trap Recovery Program
 - Bycatch Reduction Distribution
- Population Monitoring
 - Mark Recapture
 - Predator Exclosures





Threats to Terrapins: Road Hazards

- Female terrapins cross roads to find nesting sites
- On average more than 500 females killed each year on Cape May County roads we patrol

Barrier Fencing

- Install fencing to reduce mortality
 - Beginning in 2004
 - Methods have evolved
- Prevents turtles from crossing roadways
 - Current design~80% effective when maintained
 - Most effective where continuous barrier
- Over 4 km installed
- Stone Harbor, Avalon and Sea Isle.

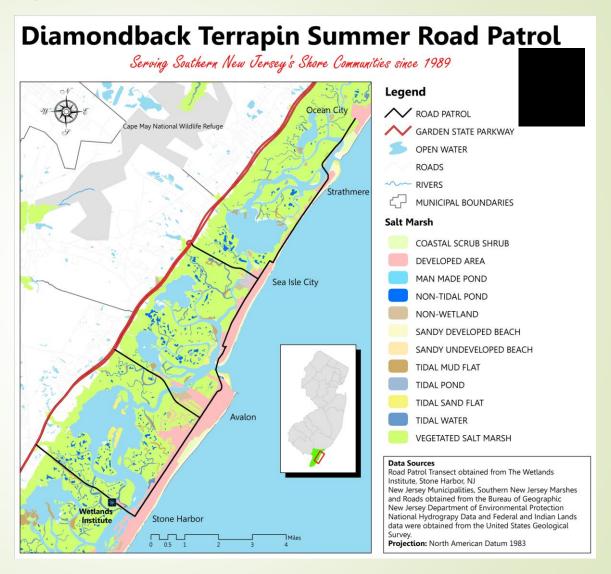




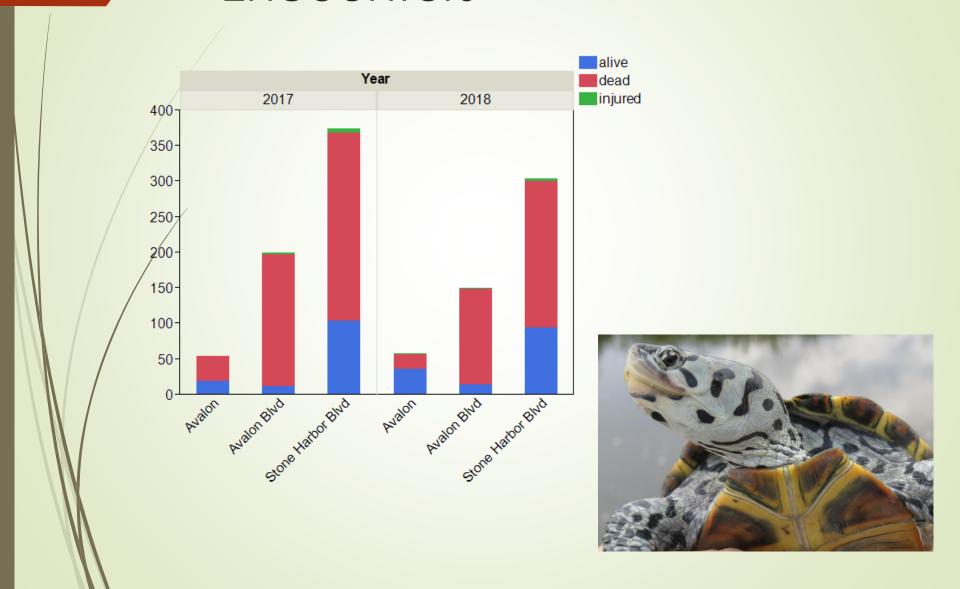
Road Transect Surveys

 Local roads surveyed daily throughout nesting period

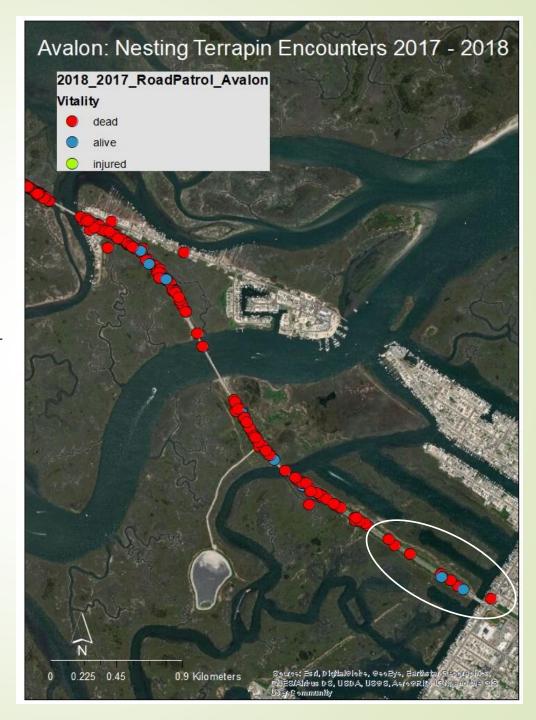




2017 and 2018 Terrapin Encounters

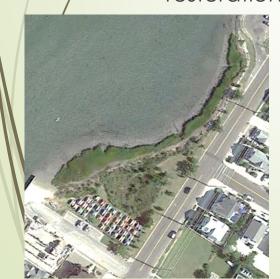


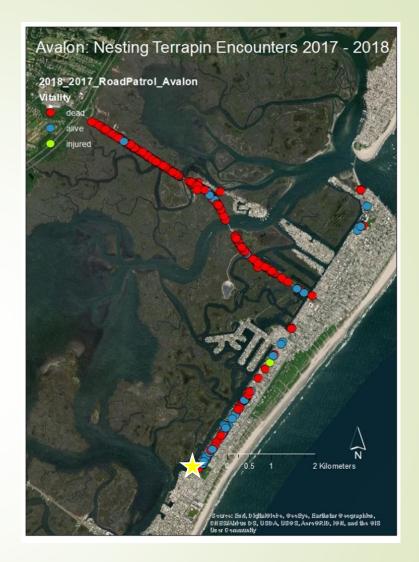
- Avalon Boulevard RoadPatrol Data for 2017 and2018
- Zoom to area with barrier fence in place and maintained
- Much lower numbers of terrapin encounters in the section with fencing



Bay Park Marina

- Identified as a nesting area for local terrapins
- Area of high potential impact from road mortality
- No bulkhead
- Rubble/debris degrade nesting suitability
- Public use area (kayak park)
- Opportunities for restoration





Project Goals

- Work with partners to:
 - Enhance terrapin nesting habitat at Bay Park Marina
 - Reduce road mortality at the site through proven and prototype barriers
 - Develop more permanent and attractive barrier design
 - Test effectiveness of prototype barrier
 - Educate residents and visitors about terrapins





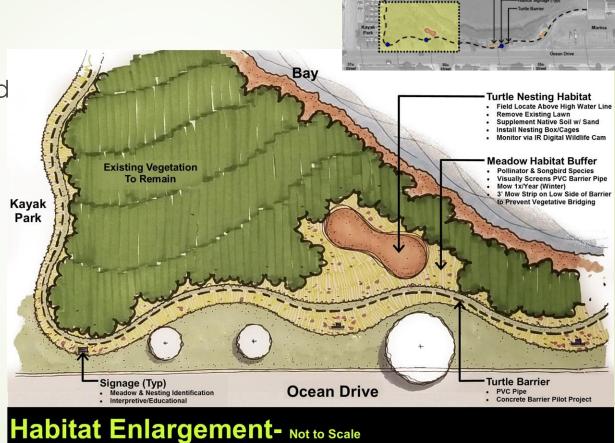






Nesting Habitat Enhancement

- Sand nesting habitats will be created behind the barrier
- Above high tide mark
- Existing lawn removed
- 1 foot of sand substrate placed on top

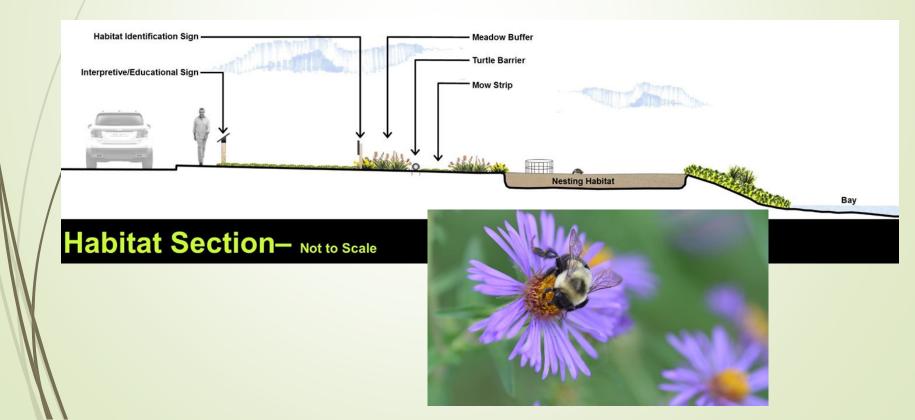






Project Cross-section

- Pollinator meadow buffer to increase utility for wildlife and improve aesthetic of tube barrier
- Educational signage
- Mow strip behind fence to prevent vegetation from compromising barrier effectiveness



Nest Monitoring

- Monitor nesting
- Located nests
 will be
 protected using
 predator
 exclosures
- All work
 conducted
 under SC
 Permits







Prototype Terrapin Barrier

- A prototype concrete barrier is being developed to improve current barrier
 - The prototype will be tested and compared with current barrier methods to assess effectiveness
 - A no-mow pollinator meadow will be created to conceal the barrier and improve habitat value and aesthetics





Turtle Fest

Saturday, April 20 9am to 3pm

- Pancake Breakfast *
- Terrapin-themed Egg Hunt *
- **ive Turtle Presentations**
- Turtle Hatchling Nature Walks
- * And More!

* Reservations recommended for Pancake Breakfast and egg hunt. Seatings: 9am, 10am, and 11:00am. Reserve on our website or by phone.

Non-Member: Member:

\$12 Adult, \$10 child, \$35 family pack of 4 \$8 Adult, \$6 child, \$25 family pack of 4

Sponsored by:

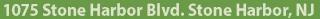




















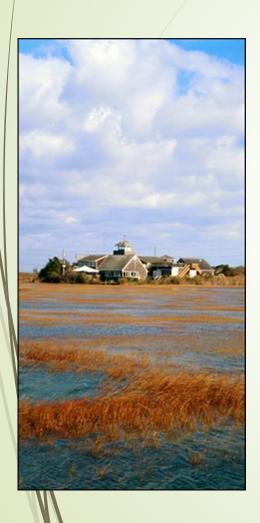


PRE-ORDER DEADLINE MAY 3
ORDER FORMS AVAILABLE AT WETLANDSINSTITUTE.ORG



Connect to Our Natural World Become a Volunteer Become a Member





- Research and Conservation Department
 - reTurn the Favor Walk Leader or Participant
 - Terrapin Nest Monitor
 - Terrapin Barrier Fence Maintenance
- Education Department
 - Summer Nature Docent
 - Summer Nature Program Assistant
 - Aquarium Teaching and Touch Tank Educator
 - Community Outreach Event Specialist
- Administration
 - Admissions/Front Desk Assistant
 - Special Events Volunteer

Be the agent of change you wish to see in the world

Be a Part of Our Journey



Wetlandsinstitute.org/donate

