

ENDANGERED & THREATENED SPECIES SERVICES

a **DAVEY** company

Since its inception in 1986, Amy S. Greene Environmental Consultants, Inc. dba Amy Greene Environmental, a Davey Company "AGE" has provided professional environmental services for Federal, State and local public agencies; and private sector clients in 11 states to facilitate and expedite planning, design, permitting and construction. AGE is a wholly owned subsidiary of Davey Resource Group.

Our Services Include:

- * Endangered and threatened vegetation and wildlife species surveys and biological assessments
- * Aquatic, Marine and Terrestrial ecological surveys and Wildlife surveys
- * Preliminary Bat Assessments on Transportation Structures
- * Habitat restoration, reforestation and management plans
- * Stream, streambank and riparian corridor restoration design and construction monitoring
- * Wetland mitigation design, installation and construction and post-construction monitoring
- * Wetland delineation, functional assessment and permitting
- * Flood Hazard Area, Coastal/CAFRA, Pinelands and Waterfront Development Permitting
- * Environmental Impact Assessments and Impact Statements NEPA, State and Local
- ✗ Soil Erosion and Sediment Control Planning and Monitoring
- ★ GIS mapping and analysis/GPS mapping
- * Tree inventories and NJDEP Green Acres approvals
- Environmental Construction Monitoring

AGE scientists have specialized expertise in conducting habitat assessments and surveys for State and Federally listed **threatened and endangered plant and animal species.** Our scientists are certified by the U.S. Fish and Wildlife Service (USFWS) in numerous States and recognized by State Resource Protection Agencies to conduct surveys and perform Biological Assessments for targeted species.

AGE scientists have expertise in birds, including shorebirds, passerines, herons and raptors; reptiles and amphibians; mammals, including bats; terrestrial and aquatic invertebrates, including freshwater mussels; and terrestrial and aquatic plants including submerged aquatic vegetation. Services regarding endangered and threatened species include: threatened and endangered species habitat assessments; presence absence surveys, including visual searches, call back response surveys, trapping and netting; impact analysis; development of measures to avoid or reduce adverse impacts; design and implementation of management plans; construction monitoring; and post-construction monitoring.









AGE has provided endangered and threatened species services for publicly-funded projects at the municipal, State, and Federal level and to private clients for diverse projects including: transportation (highway, bridge, rail, port, airport); energy generation and transmission; education; water and wastewater; solid waste; stormwater management; contaminated site remediation; parks, recreation and conservation lands; military facilities; and institutional, residential, commercial, industrial and religious development. Staff members have a positive working relationship with the USFWS, NMFS and State wildlife resource agencies.

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REPRESENTATIVE ENDANGERED & THREATENED SPECIES PROJECT EXPERIENCE

- ** Scudder Falls Bridge Replacement Project, Bucks County, PA and Mercer County, NJ. Delaware River Joint Toll Bridge Commission/Michael Baker International. AGE conducted surveys for State-listed and rare mussel species including triangle floater (*Alasmidonta undulata* NJ State Threatened*), yellow lampmussel (*Lampsilis cariosa- NJ State Threatened*), and creeper (Strophitus undulates NJ State Special Concern). Although there are no PA State-listed species in this portion of the Delaware River, a survey, salvage and relocation were conducted as an environmental commitment in the NEPA Environmental Impact Statement. The qualitative survey on the NJ side of the Delaware River identified 454 freshwater mussels of 4 different species, two of which (*L. cariosa* and *A. undulata*) are considered NJ State Threatened. The quantitative survey on the NJ side of the Delaware River identified 90 individuals of three (3) species, including the NJ State Threatened *L. cariosa*. All of the mussels collected on the PA side of the river (652) were relocated to a suitable habitat area downstream of the proposed work area. All NJ State listed species were documented and tagged. All mussels found within the direct impact area and 10 meters up and downstream of the direct impact area were relocated upstream of the Bridge. Completed the three (3) year mussel monitoring.
- ** Piping Plover Breeding Season/Nest and Construction Noise Monitoring, Ocean City-Longport Bridge, Atlantic and Cape May Counties, NJ. NJDOT/Parsons Brinckerhoff. Conducted three-year breeding season/nest monitoring of the federally threatened, state endangered piping plover during bridge construction adjacent to breeding colony. Coordinated with NJDOT, Parsons Brinkerhoff FG, Inc., Federal Highway Administration, NJ Endangered and Non-game Species Program (ENSP) and the US Fish and Wildlife Service. This three-year study was performed to determine if noise from pile driving activities for bridge construction would interfere with breeding productivity of the piping plover. In addition, gathered data for the ENSP on other colonial beach nesting birds utilizing the dunes in the area.
- ** PPL Gas-line Repairs Bog Turtle Services, Upper Mount Bethel Township, Northampton County, PA.PPL Gas Utilities Corporation. Gas pipeline maintenance project at four (4) site locations within the Township. AGE provided a staff US Fish and Wildlife Service (USFWS) Recognized Qualified Bog Turtle Surveyor (QBTS) to perform wetland delineations, perform Phase I Bog Turtle Habitat Surveys, consult with USFWS, and perform construction monitoring during the gas pipeline anomaly repairs.
- ** NJDOT Interstate 295 Resurfacing Project, Hamilton and Lawrence Townships, Mercer County, NJ. NJDOT. AGE staff biologists conducted Preliminary Bat Assessments on nine (9) bridge structures to determine presence or likely absence of federally listed bat species in accordance with the Federal Transportation Agency/State Department of Transportation (DOT) Preliminary Bat Assessment Guidelines for Bridges/Structures. Each bridge structure was visually inspected for bats and evidence of recent occupancy, including guano and/or urine staining. Bridge/Structure Assessment Forms and photograph logs were prepared for inclusion with NJDOT's overall submission package to USFWS. No individual bat species or evidence of bat occupancy was identified at any of the subject bridges.
- ** Colonial Waterbird Nest Surveys and Visual Utilization Count Surveys, Route 52 Causeway, Ocean City and Somers Point, Atlantic and Cape May Counties, NJ. NJDOT/Michael Baker Jr. Inc. Conducted an initial nest count survey of a Black and Yellow-crowned night heron (both listed species in NJ) rookery. Over 400 nests were counted. Conducted a three-year breeding season survey of the rookery to provide a baseline count of both night heron species. Based upon survey results determined utilization of the rookery by the herons. All heron species were noted flying in the vicinity of the rookery. Counted the departure and arrival flights of night herons at dawn and dusk. Coordinated with NJDOT, Michael Baker Associates, and the NJ Endangered and Non-game Species Program (ENSP). The study was conducted to provide a baseline to determine if the population of night herons will be affected by the construction of the elevated causeway and the Ocean City Visitor Center.
- ** Barred Owl, Cooper's Hawk and Red Headed Woodpecker Call-back Surveys, Ocean County Airport (Robert J. Miller Airpark), Berkley and Lacey Townships, Ocean County, NJ. Ocean County/C&S Engineers, Inc. AGE initially prepared an endangered and threatened (E&T) species survey protocol that was submitted to the New Jersey Pinelands Commission (NJPC) for their review and approval. Following approval of the protocol, AGE performed E&T species field surveys throughout the RJMA study area for nine (9) species. The surveys identified Barred Owl, pine snake, Pine Barrens treefrog, Red-Headed Woodpecker, and grasshopper sparrow utilizing the study area. Based on the results of these surveys, AGE developed critical habitat maps for the various species. Survey results, a detailed report, and the critical habitat mapping were provided to the NJPC for their review. Call-back surveys were performed for Barred Owl, Cooper's Hawk and Red-headed Woodpecker. Barred Owls were documented utilizing the wetlands at this site. Cooper's Hawks were not documented at the site and Red-headed Woodpeckers did not respond to the call-back surveys, though they were noted at the site.