

Reptile and Amphibian Summer Baseline Survey

Services Provided: Wildlife Surveys

Client: Seminole Tribe of Florida

Location: Hendry and Collier Counties, FL

DESCRIPTION OF WORK:

The Brighton and Big Cypress Seminole Indian Reservations comprise nearly 90,000 acres. Large portions are undeveloped lands that are ideal for the establishment or expansion of invasive or non-native amphibians and reptiles. The Tribe wanted to know whether established or expanding populations of non-native or invasive species are present on reservation lands, particularly the invasive constrictor snakes and the Cuban tree frog. CECOS was selected to conduct a wet season baseline survey to estimate the numbers of native and non-native species and their extent. A secondary task was to prepare a Standard Operating Procedures Manual to provide staff training in various sampling methods, including identification of amphibians and reptiles, the deployment of commonly used trapping techniques, and safe handling techniques.

CECOS conducted four 2-day surveys on both reservations from late June through August 2014. Visual and auditory survey techniques were used, both during the daytime and nighttime, including road cruising and nighttime audible index surveys along transects. Several trapping techniques were used, including drift fence



arrays, pit fall traps, dip nets, minnow traps, and funnel traps.

Using a variety of sampling methods, sample times, and techniques, a total of 15 amphibian species and 16 reptile species were observed in both reservations. Certain species were encountered only in particular habitats and associated with certain water levels and some were captured only with a particular sampling method. The effectiveness of each sampling method was evaluated. A comprehensive baseline report was prepared that summarized the large data set and the species encountered by each sampling method. An evaluation of the status and trends of native and non-native species was conducted based on the sampling results. An adaptive management framework strategy with a quick response approach was proposed to control the establishment of non-native species and to sustain the native populations of amphibians and reptiles.

