

Bruce C. Layman CE, PWS

Ecologist



Mr. Layman's experience includes over 26 years of executing or managing projects that involve listed species and jurisdictional wetlands; developing wetland and listed species mitigation plans; mapping and post-permitting monitoring of environmental resources; and supporting environmental permits for wetlands and listed wildlife for both private and municipal land development projects in Florida and the Caribbean.

EDUCATION

Bachelor of Science, Zoology, Michigan State University, East Lansing, Michigan, 1988

Master of Arts, Marine Science, The College of William and Mary, School of Marine Sciences, Williamsburg, Virginia, 1992

Expert Witness, Wildlife and Listed Species Surveys, Florida, 1997

Florida Department of Transportation, Approved as qualified biologist to survey for American crocodile, Audubon's crested caracara, sandhill crane, red-cockaded woodpecker, Big Cypress fox squirrel, burrowing owl, bald eagle, gopher tortoise, and Florida scrub jay, Florida, 2009

REGISTRATIONS

Certified Ecologist, Ecological Society of America

Professional Wetland Scientist, Society of Wetland Scientists Certification Program

Advanced Open Water Diver, Professional Association of Diving Instructors

MEMBERSHIPS

Member, Ecological Society of America

Member, Society of Wetland Scientists

PROJECT EXPERIENCE

Natural Resource Damage Assessment and Oil Spill Response

Large Interstate Oil Spill in Gulf of Mexico, Gulf Port, Mississippi (Natural Resource Advisor Team Lead)*

Responsible for NRAs conducting environmental oversight of oil spill cleanup activities in compliance with an emergency consultation under Section 7 of the Endangered Species Act. Early in the Response, Best Management Practices (BMPs) were developed by the client, USCG, USFWS, NOAA, and state natural resource agencies to serve as formal technical guidance to direct oil spill cleanup activities. The objective of the BMPs was to minimize secondary impacts of cleanup activities on sensitive environmental resources, including sea turtles, bald eagles, migratory and nesting shorebirds, coastal wetlands, submerged aquatic vegetation, and dune systems. NRAs worked with cleanup operations in the field to advise crews of appropriate BMP implementation and to document compliance. As Team Lead, managed and supported NRAs; conducted regular consultations with USFWS Section 7 and Resources at Risk liaisons, state environmental coordinators, and operational managers; and submitted detailed daily reports documenting NRA activities and BMP compliance.

Bridges

SR 951 Big Marco Pass Bridge (Jolley Bridge) Design Build, Collier County, Florida (Lead Ecologist)*

Responsible for environmental support that included state and federal wetland permitting, seagrass and wetland mapping, mitigation design, listed species identification and protection, and post-permitting seagrass and crocodile monitoring. This project entailed engineering, surveying, and CEI services for the FDOT, District 1, for two new 1,600 foot-long bridge spanning Big Marco River on SR 951. Due to the close proximity of three environmentally protected estuaries, the lighting design required the incorporation of turtle/bird friendly lighting devices and design techniques. Stantec worked with the design-build team of FIGG Engineering and Johnson Brothers Construction to complete a new two-lane bridge parallel to the existing bridge span.

* denotes projects completed with other firms

Bruce C. Layman CE, PWS

Senior Ecologist

Natural Resource Services

Ginn Company Project, Lee County, Florida (Lead Ecologist)*

Responsible for generating an eight-page color brochure aimed at educating future construction contractors and residents of a 4,300-acre new community as to the potential presence of and need to protect listed species on the property. The brochure represents a compilation of 1) state and federal wildlife permitting requirements for both contractors and residents; 2) a brief synopsis of listed species, including photographs that have the potential to occur on the site; and; 3) contact information in case wildlife conflicts or concerns arise.

Monitoring and Evaluation

Wildwood Lakes Red-Cockaded Woodpecker (RCW) Survey, Collier County, Florida (Lead Ecologist)*

Responsible for conducting red-cockaded woodpecker (RCW) surveys to document on-site RCW activity including cavity tree location, cavity activity status, and on-site foraging habitat to support future permitting.

Heron's Glen Red-Cockaded Woodpecker (RCW) Survey, Lee County, Florida (Lead Ecologist)*

Responsible for conducting annual RCW surveys, per permit conditions, reporting on RCW cavity tree status, the extent of RCW foraging, and the use of the undeveloped portions of the site by RCWs for 1997, 1998, 1999, and 2000. Further field studies were performed to support proposed modification to the preserve boundaries to accommodate land plan revisions. Modifications were coordinated with Lee County and Florida Fish and Wildlife Conservation Commission.

Turkey Point Unit 5 Wetland Mitigation Area, Dade County, Florida (Project Manager)*

Responsible for ongoing client and project coordination, account management, and project scheduling. Stantec was responsible for generating a monitoring and reporting protocol and orchestrating heavily quantitative monitoring of mangrove, hardwood wetlands, and upland hammocks. All work was in accordance with local, state and federal wetland permitting requirements.

Highway and Transportation

Immokalee Road Wildlife Crossing Design-Build, Collier County, Florida (Lead Ecologist)*

Collier County Department of Transportation received a grant to design, permit, and build a 5'x10' wildlife crossing under Immokalee Road adjacent to Camp Keais Strand in the rural lands of Collier County. With environmental permits in hand, served as principle ecologist to conduct pre-work wildlife surveys to clear the construction corridor, and to provide technical assistance during construction to maintain compliance with permit requirements.

Roadside Animal Detection System (RADS) along US 41 within Big Cypress National Preserve – Wildlife Usage Study, Collier County, Florida (Ecologist)*

In advance of the Florida Department of Transportation installing a RADS along a 1.3-mile segment of US 41 within the Big Cypress National Preserve, Stantec ecologists conducted a wildlife assessment to document corridor usage by wildlife. Ecologists documented species use of the right-of-way both first hand and through the use of remote-sensing cameras. They also documented roadkill by species, location, and several locational, atmospheric, and temporal parameters. Results were compiled in a summary report for submittal to FDOT.

Colonial Boulevard (I-75 to SR 82) Six-Laning Design, Lee County, Florida (Lead Ecologist/Permitter)*

Responsible for orchestrating environmental data collection and state and federal wetland permit application and support, including panther and wood stork impact/mitigation analysis.

I-75 at Daniels Road Interchange, Lee County, Florida (Lead Ecologist/Permitter)*

Responsible for obtaining listed species clearances and jurisdictional wetland determinations, and supporting state and federal wetland permitting as the sub-consultant for interstate reconstruction project.

Santa Barbara Boulevard Six-Laning (Davis Boulevard to Pine Ridge Road), Collier County, Florida (Lead Ecologist/Permitter)*

Responsible for state and federal permitting for major reconstruction of six miles of a six-lane, arterial roadway.

* denotes projects completed with other firms

Bruce C. Layman CE, PWS

Senior Ecologist

Westclox Road Environmental, Collier County, Florida (Ecologist)*

Responsible for conducting a listed species survey over approximately 3 miles of new roadway through habitat with known occurrence of scrub jays. Project also involved mapping Type I, II, and III scrub jay habitat and designing innovative buffering to minimize potential impacts of the road on resident scrub jays.

I-75 from Lockett Road to SR 80, Lee County, Florida (Lead Ecologist/Permitter)*

Responsible for obtaining listed species clearances and jurisdictional wetland determinations, and supporting state and federal wetland permitting as the prime consultant for interstate reconstruction project.

Business 41 (Littleton Road to US 41), Lee County, Florida (Lead Ecologist/Permitter)*

Responsible for obtaining listed species clearances and wetland jurisdictional determinations, and supporting state and federal wetland permitting for this \$20 million dollar road widening project.

Marine & Port Facilities

Las Olas Marina, Broward County, Florida (Lead Ecologist/Permitter)*

Responsible for conducting benthic survey of intercoastal waterway using SCUBA to map seagrass beds, and conducting a visual underwater inspection of existing bulkhead and boardwalk to assess structural integrity.

Isle of Capri Kayak and Canoe Launch, Collier County, Florida (Lead Ecologist/Permitter)*

Responsible for environmental data collection and support of local and state permitting of a public kayak and canoe launch facility within Rookery Bay Aquatic Preserve.

Naples Community Sailing Center, Collier County, Florida (Ecologist/Permitter)*

Responsible for environmental surveys included documenting oyster beds, submerged aquatic vegetation, and aquatic infauna within the estuarine environment. Permitting included justification for manatee protection and additionally required Governor and Cabinet approval for the consistency of the proposed use with bay bottom dedication conditions for sovereign submerged lands.

Key West Bight, Monroe County, Florida (Lead Ecologist/Permitter)*

Responsible for conducting water quality monitoring; marine benthic assessment and mapping; environmental resource permitting; and submerged land lease modification requiring Governor and Cabinet approval for the 142-slip marina and over-water harborwalk.

Boca Chica Marina, Naval Air Station, Monore County, Florida (Lead Ecologist)*

Responsible for conducting aquatic survey using SCUBA to document and map mooring basin bathymetry and biota in support of state and federal permitting.

Matanzas Harbor Land Base, Lee County, Florida (Ecologist)*

Responsible for supporting the environmental permitting of a seven-slip boat basin to serve municipal and research vessels, and an adjacent 400' long commercial shrimp-boat dock. Responsible for designing the grading and planting plan to create a tidal mangrove wetland as mitigation for dock facility impacts. The mitigation design incorporated a raised boardwalk and observation deck that overlooked not only the mitigation area, but also Matanzas Pass. This educational feature was designed to be tied directly to a future marine research facility and an existing city park.

Oil & Gas

Raccoon Point Wellfield Electrification, Multiple Sites, Florida (Lead Ecologist/Permitter)*

Responsible for generating a draft environmental assessment, in accordance with NEPA guidelines, to be used by the U.S. Park Service in justifying the means to provide commercial electrical power to an existing wellfield within Big Cypress National Preserve.

** denotes projects completed with other firms*

Bruce C. Layman CE, PWS

Senior Ecologist

Raccoon Point 3-D Seismic Oil and Gas Exploration, Multiple Sites, Florida (Environmental Team Member)*

Responsible for oversight of the three-dimensional seismic oil and gas exploration in the Big Cypress National Preserve to make certain that it was conducted within the strict guidelines of a zero-tolerance environmental impact program. Seismic exploration included the establishment of 38 linear miles of subsurface dynamite charges covering a grid of 14 square miles. Environmental compliance with the program extended through implementation of the 3-D testing. Post-testing environmental monitoring continued for 5 years.

Environmental Assessments

El Morro Promenade, San Juan, Puerto Rico (Co-Lead Ecologist)*

The Municipality of San Juan, as part of a comprehensive planning vision, called The Walkable City, is creating a facility along the shoreline of San Juan to provide recreational public access to the waterfront. The El Morro Promenade (the Project) represents a 1.3-mile extension of the existing promenade and it extends from Castillo San Felipe del Morro to the Capitol Building along the northern shore of Old San Juan. The Project corridor traverses National Park Service lands and requires an Environmental Impact Statement (EIS), under the National Environmental Policy Act, as a result. The Project involved conducting a floral and faunal study, to support the EIS, and included mapping terrestrial, intertidal, and subtidal communities, as well as documenting the presence or absence of protected plants and animals, along the Project corridor

Sailport Planned Development, Lee County, Florida (Ecologist)*

Responsible for mapping bathymetry and submerged aquatic vegetation along 1.2 miles of estuarine man-made canals. The survey was completed in relation to potential for the canal to support manatee foraging.

Fleishman Parcels, Collier County, Florida (Lead Ecologist)*

Responsible for groundwater monitoring, conducting listed species surveys, and reestablishing expired state and federal jurisdictional wetland boundaries on the 50-acre property.

Ave Maria University, Collier County, Florida (Lead Ecologist)*

Responsible for designing two on-site preserve areas totaling 73 acres, including grading plans to create open water, emergent marsh, hydric forest, and forested upland habitats. A raised timber walkway was included to promote environmental awareness. Supported state and federal wetland permitting and four years of annual preserve monitoring per the resulting environmental permits. Additionally responsible for orchestrating species-specific field surveys on 5,000-acre property for the sandhill crane, burrowing owl, southeastern American kestrel and Audubon's crested caracara, in addition to general species surveys to Florida Fish and Wildlife Conservation Commission standards.

Ave Maria University and Town Wildlife Impact Evaluation, Collier County, Florida (Ecologist)*

Responsible for executing a road-kill monitor program along approximately 14 miles of rural roadway in Eastern Collier County. The monitoring and reporting protocol was consistent with that prescribed in East Collier Wildlife Movement Study, by Noss and Smith, December 2006.

Panther Passage Conservation Bank, Hendry County, Florida (Ecologist)*

Responsible for habitat mapping and vegetation sampling per U.S. Fish and Wildlife Service (FWS) criteria for a 4,009-acre private panther habitat conservation bank in Hendry County. The Panther Passage Conservation Bank represents the first conservation bank located within the Panther Dispersal Zone, identified by FWS as critical habitat necessary for the survival of Florida panther.

West Bay Sector Plan for St. Joe Company, Bay County, Florida (Ecologist)*

Responsible for conducting a listed species survey and contributing to report generation to support a Comprehensive Plan Amendment to the West Bay Area Sector Plan.

** denotes projects completed with other firms*

Bruce C. Layman CE, PWS

Senior Ecologist

Mediterra Master Planned Community, Collier and Lee Counties, Florida (Ecologist)*

Responsible for mapping vegetation communities and delineating jurisdictional wetlands across the 1,686-acre property. Also conducted a listed species survey to Florida Fish and Wildlife Conservation Commission and Lee County standards and participated in a gopher tortoise survey and subsequent relocation permit application preparation for the Florida Fish and Wildlife Conservation Commission.

Environmental Impact Assessments

Cockroach Cay, Berry Islands, Bahamas (Ecologist)*

Responsible for conducting an Environmental Impact Assessment (EIA) for marina, condominium, resort cottage, and residential lot improvements on a privately-owned, undisturbed 80-acre island. Field support included terrestrial and aquatic habitat mapping, bathymetric mapping, listed wildlife documentation, and wetland mapping. The assessment included analysis of potential impacts to terrestrial habitats, wetlands, marine environments, and wildlife that could result from development of the project. The EIA was drafted as a requirement of the Bahamas Environment, Science, and Technology (BEST) Commission to support project design review within the region.

Environmental Resource Permitting

Pelican Marsh, Collier County, Florida (Project Ecologist/Permitter)*

Responsible for supporting dredge and fill permit application preparation, wetland jurisdictional determination, habitat mapping, WRAP analysis, listed species assessment, gopher tortoise relocation oversight, hydrologic assessment, and inspection during construction. The project demanded all aspects of habitat assessment, mitigation design, permitting, and coordination with state and federal agencies. The focal point of the site is a restored wetland slough system, the award-winning Cocohatchee Strand, which serves as both a preservation area and water management feature.

North Naples Fire Station Number 48, Collier County, Florida (Lead Ecologist/Permitter)*

Responsible for identifying wetlands and listed species habitats, conducting field assessments, and coordinating with environmental agencies to support local state and federal environmental permitting to build a new fire station.

Florida Apartment Club of Naples, Collier County, Florida (Lead Ecologist/Permitter)*

The Florida Apartment Club of Naples is an eight-building, 220-unit multi-family residential/rental community, with amenities. Consisting of mostly jurisdictional wetlands, several unsuccessful attempts were made by another engineering consulting firm to develop the property. Stantec took over the project, implemented a new land plan, prepared a new design, obtained the required permitting for construction, and conducted post-construction preserve monitoring.

Winding Cypress Development of Regional Impact, Collier County, Florida (Ecologist/Permitter)*

Responsible for State and Federal wetland permitting that included developing a project design that met the criteria for permit approval from the U.S. Army Corps of Engineers, South Florida Water Management District, U.S. Fish and Wildlife Service, Florida Fish and Wildlife Conservation Commission, and Florida Department of Environmental Protection through the Rookery Bay National Research Reserve as managers of the receiving waters of the project. An ecological theme for the project centered around a 795-acre wetland slough, originating in the Picayune Strand State Forest immediately east of the property, passing through the center of the project, and outfalling to the headwaters of the Rookery Bay Aquatic Preserve, an Outstanding Florida Waterbody.

Madison Park Residential Community, Collier County, Florida (Lead Ecologist)*

Responsible for executing state and federal wetland permitting and species-specific permitting involving red-cockaded woodpeckers (RCWs) and gopher tortoises on a 262-acre single family and multi-family residential development. RCW permitting required functional assessment of habitat quality, trust fund payment, on-site start-hole creation, and colony monitoring. Gopher tortoise permitting required population studies on both donor and recipient sites; upper respiratory tract disease testing; and off-site relocation of tortoises to the Lee County-owned Bowditch Point Regional Park.

** denotes projects completed with other firms*