15501 OLD US 41 CPUD
Rezoning Environmental Information
(August 2017)

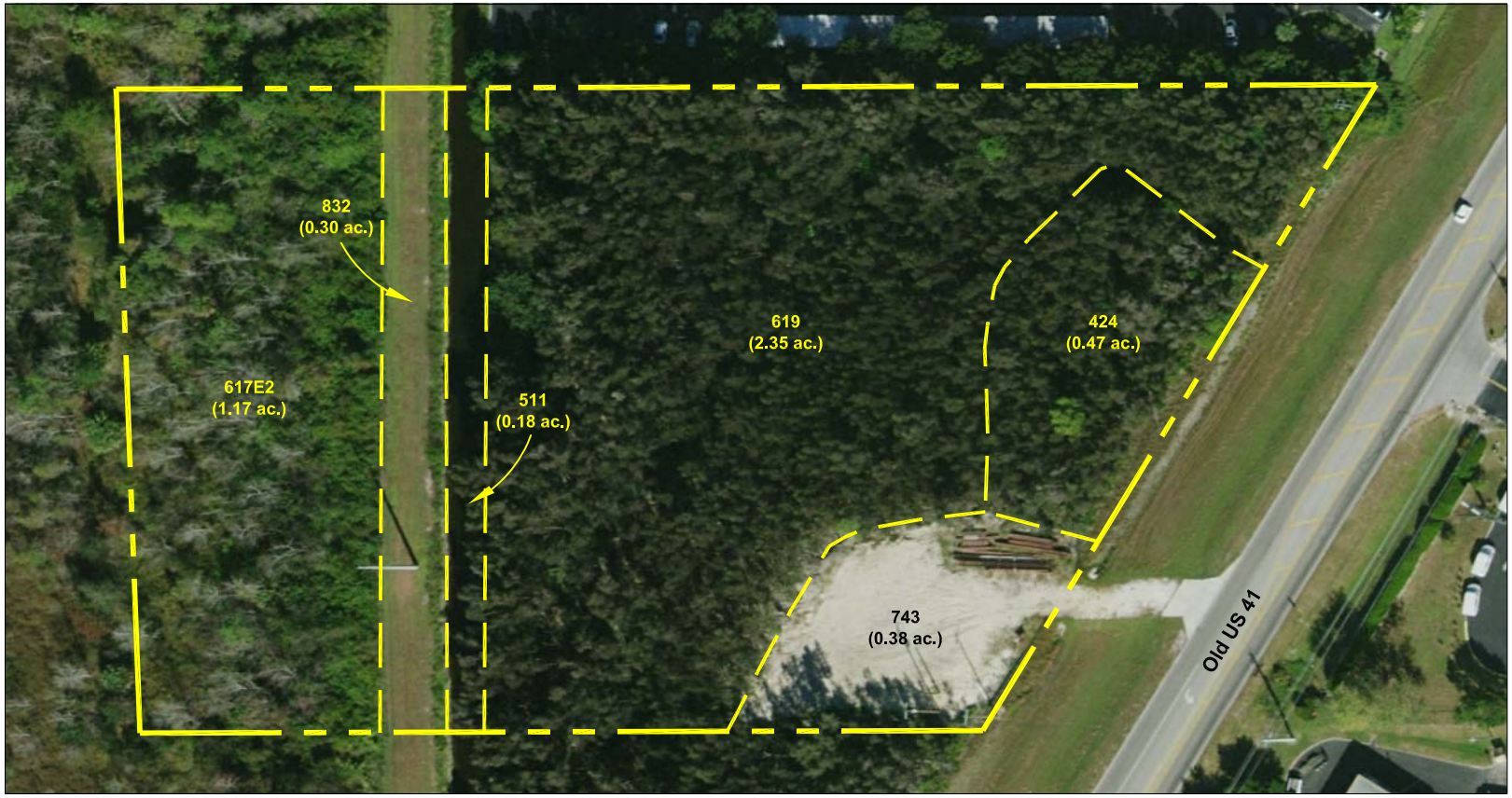
The 15501 Old US 41 CPUD project is 4.85± acres in size. The majority of this site is dominated by exotics in both the canopy and midstory. A portion of the southeastern corner of the site has been recently filled. The western portion of the site is bisected by a canal and powerline. The forested wetlands west of the powerline are adjacent to existing off-site wetland preservation areas.

There is currently 1.17± acres of native vegetation (as defined by Collier County LDC Section 3.05.07.A.1) on the property. This consists of Florida Land Use, Cover and Forms Classification System (FLUCCS) Code 617E2 as shown on the attached Vegetation Map. Based on a review of historic aerials and information contained in an April 2014 Florida Department of Environmental Protection Wetland Determination (partial copy attached), the 0.38 acre area mapped as FLUCCS Code 743 was not native vegetation (i.e. melaleuca dominated canopy/midstory with saw palmetto ground cover) prior to being cleared. The Please see the attached Protected Species Assessment for a discussion of the current site conditions.

Craig M. Smith of W. Dexter Bender & Associates, Inc. prepared the Protected Species Assessment. Mr. Smith has been employed as a full time environmental consultant in southwest Florida since 1987. A copy of his credentials is attached.

SECTION: 10
TOWNSHIP: 48 S
RANGE: 25 E

15501 Old US 41 CPUD



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SCALE FEET

FLUCCS	Description	Acreage
424	Melaleuca	0.47 ac.
511	Canal	0.18 ac.
617E2*	Mixed Wetland Hardwoods Invaded by Exotics (26-50%)	1.17 ac.
619	Exotic Wetland Hardwoods	2.35 ac.
743	Spoil Areas	0.38 ac.
832	Electrical Power Transmission Lines	0.30 ac.
	Total	4.85 ac.

*** Native Vegetation per Collier County LDC Section 3.05.07.A.1**

Notes:

1. *Property boundary provided by Benchmark Land Services, Inc.*
2. *Mapping based on photointerpretation of 2017 aerial photography and ground truthing in May 2017.*
3. *Delineation of jurisdictional wetlands is preliminary and subject to field review/approval by applicable regulatory agencies.*

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May 18, 2017 4:06:05 p.m.
Drawing: DRIFT1PLAN.DWG

Vegetation Map

W. DEXTER BENDER & ASSOCIATES, INC.
ENVIRONMENTAL & MARINE CONSULTING
FORT MYERS 239-334-3680

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
SUBMERGED LANDS AND ENVIRONMENTAL RESOURCES PROGRAM
SITE SURVEY REPORT

FILE NUMBER: 11-0325441-001
APPLICANT: Uzupes, Vanessa

SITE ADDRESS: No site address
FOLIO NUMBER: 00144960006

DETERMINATION: Wetlands

PROJECT/ ACTIVITY DESCRIPTION: The subject property is currently undeveloped.

DESCRIPTION OF GENERAL PROJECT/ACTIVITY AREA: The subject property is a 0.92 acre parcel in North Naples. The site is bordered by Old US 41 to the west, undeveloped parcels to the north and south, and Sterling Oaks Community Association and Club to the west. A ditch and upland utility easement transect the property from north to south.

BIOPHYSICAL CHARACTERISTICS OF THE SPECIFIC PROJECT/ACTIVITY SITE:
The site is wetlands and uplands east of the utility easement. The uplands portion historically most closely resembles a historical FLUCCS 411 Pine Flatwoods community. Invasive exotic infestation began between 1985 and 1995. The site east of the utility right-of-way is 99% Melaleuca. The wetlands portion west of the utility right-of-way historically resembles a 617 Mixed Wetland Hardwood community. The portion east of the utility easement most closely resembles a 625 Hydric Pine Flatwoods community.

Uplands, East of the right-of-way:
The canopy consists of Melaleuca (*Melaleuca quinquenerivia,* EXOTIC). The subcanopy consists of Melaleuca (*Melaleuca quinquenerivia,* EXOTIC). The ground cover consists of Saw Palmetto (*Serenoa repens,* UP) and Melaleuca (*Melaleuca quinquenerivia,* EXOTIC).

The Natural Resources Conservation Service (NRCS) lists the soils on this portion of the parcel as Immokalee Fine Sand which typically do not support wetlands.

Pursuant to the definition set forth in Chapter 62-340.200(19), F.A.C., particularly as it relates to the prevalence of vegetation adapted to saturated soils, and Chapter 62-340.300, F.A.C. this portion of the subject parcel was determined to be uplands.

Wetlands, East of the right-of-way:
The canopy consists of Melaleuca (*Melaleuca quinquenerivia,* EXOTIC) and a couple of Cabbage Palms (*Sabal palmetto,* FAC). The subcanopy consists of Melaleuca (*Melaleuca quinquenerivia,* EXOTIC). The ground cover consists of Melaleuca (*Melaleuca quinquenerivia,* EXOTIC).

The hydrological indicators of hummocking and water marks were observed.

Two soil plugs were taken at the lower elevations of the property. The first one revealed no stripping within the first 6” of the soil profile. The second revealed mild stripping at 5” below the surface.

The Natural Resources Conservation Service (NRCS) lists the soils on this portion of the parcel as Immokalee Fine Sand which typically do not support wetlands.

This portion of the parcel meets the B-Test requirements for wetlands under the guidelines provided by Chapter 62-340, F.A.C

15501 OLD US 41 CPUD

Section 10, Township 48 South, Range 25 East
Collier County, Florida

Protected Species Assessment

August 2017

Prepared by:

W. Dexter Bender & Associates, Inc.
4470 Camino Real Way, Suite 101
Fort Myers, FL 33966
(239) 334-3680

INTRODUCTION

The 4.85± acre project is located within a portion of Section 10, Township 48 South, Range 25 East, Collier County, Florida. The parcel is bordered to the north by residential development, to the east by Old 41, to the south by undeveloped lands, to the west by an existing wetland conservation area.

SITE CONDITIONS

The majority of this site is dominated by exotics. A portion of the southeastern corner of the site has been recently filled. The western portion of the site is bisected by a canal and powerline.

VEGETATIVE CLASSIFICATIONS

The predominant vegetation associations were mapped in the field on 2017 digital 1" =100' scale aerial photography. The approximate property boundary was obtained from Benchmark Land Services, Inc. and inserted into the digital aerial. Six vegetation associations were identified using the Florida Land Use, Cover and Forms Classification System (FLUCCS). Figure 1 depicts the approximate location and configuration of these vegetation associations and Table 1 summarizes the acreages by FLUCCS Code. A brief description of each FLUCCS Code is also provided below.

Table 1. Acreage Summary by FLUCCS Code

FLUCCS CODE	DESCRIPTION	ACREAGE
424	Melaleuca	0.47
511	Canal	0.18
617E2	Mixed Wetland Hardwoods Invaded by Exotics (26 – 50%)	1.17
619	Exotic Wetland Hardwoods	2.35
743	Spoil Areas	0.38
832	Electrical Power Transmission Lines	0.30
	Total	**4.85**

FLUCCS Code 424, Melaleuca

The portion of the property located adjacent to Old 41 is dominated by melaleuca (*Melaleuca quinquenervia*). Scattered Brazilian pepper (*Schinus terebinthifolius*) and wax myrtle (*Myrica cerifera*) are also present in the midstory. The ground cover consists primarily of saw palmetto (*Serenoa repens*).

FLUCCS Code 511, Canal

A regularly maintained canal is present in the western portion of the site. At the time of the site inspection the canal was vegetated by scattered marsh pennywort (*Hydrocotyle*

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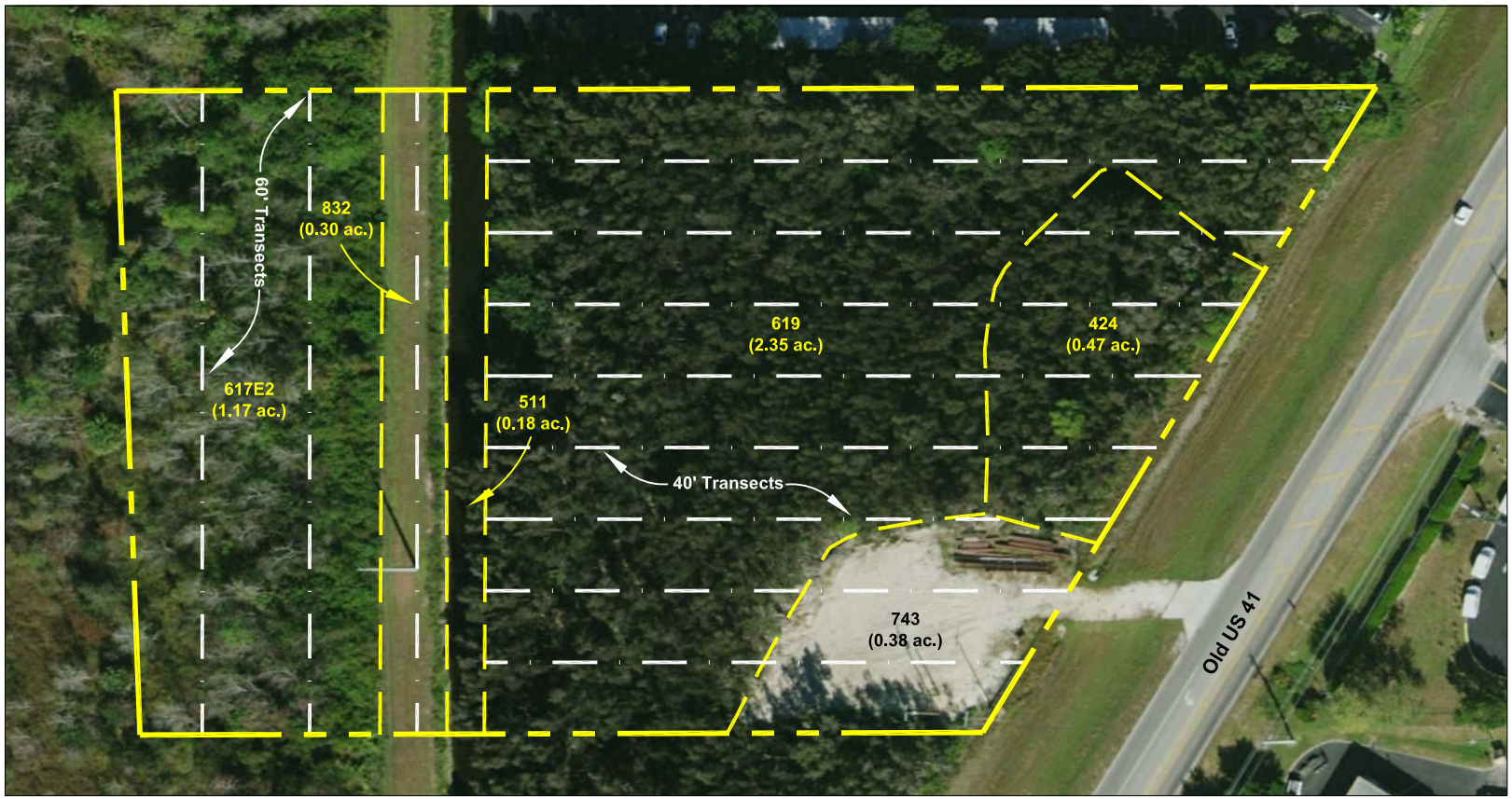

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Figure 1. Protected Species Assessment Map

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umbellata), torpedo grass (*Panicum repens*), spikerush (*Eleocharis* sp.), flatsedges (*Cyperus* spp.). No standing water was present.

FLUCCS Code 617, Mixed Wetland Hardwoods Invaded by Exotics (26 – 50%)
The property west of the powerline is a forested wetland dominated by red maple (*Acer rubrum*), willow (*Salix caroliniana*), and cypress (*Taxodium* sp.). Buttonbush (*Cephalanthus occidentalis*), wax myrtle, and primrose willow (*Ludwigia peruviana*) are common shrubs. Ground cover consists of species such as swamp fern (*Blechnum serrulatum*), climbing hemp weed (*Mikania scandens*), frog fruit (*Phyla nodiflora*), arrowhead (*Sagittaria* sp.), and cattail (*Typha* sp.). Exotics, such as melaleuca, Brazilian pepper, and java plum (*Syzygium cumini*), are also common.

FLUCCS Code 619, Exotic Wetland Hardwoods
The majority of the property east of the powerline is a wetland dominated by melaleuca. Scattered wax myrtle, cocoplum (*Chrysobalanus icaco*), and cabbage palm (*Sabal palmetto*) are present in the midstory. Ground cover consists primarily of bare ground and patches of swamp fern, coinwort (*Centella asiatica*), saw palmetto, and leather fern (*Acrostichum* sp.). It appears that a portion of this area was burned by a severe wildfire in the past.

FLUCCS Code 743, Spoil Areas
A small area in the southeast corner of the property has been cleared and filled within the past two years. The area contains spoil piles as well are metal beams. Scattered weedy upland species such as smutgrass (*Sporobolus indicus*), ragweed (*Ambrosia artemisiifolia*), rustweed (*Polypremum procumbens*), and Bermuda grass (*Cynodon dactylon*) are also present. This area was dominated by melaleuca prior to clearing.

FLUCCS Code 832, Electrical Power Transmission Lines
A powerline is present along the west side of the canal. The filled road is also used to maintain the canal. This area is regularly mowed and is vegetated by ragweed, grape vine (*Vitis* sp.), and pusley (*Richardia* sp.).

SURVEY METHOD

Based on the general habitat types (FLUCCS Codes) identified on-site there is a very low potential for a limited number of species listed as endangered, threatened, or species of special concern by the Florida Fish and Wildlife Conservation Commission (FWC) or the United States Fish and Wildlife Service (FWS) to potentially occur on the subject parcel. These species include gopher tortoise (*Gopherus polyphemus*), American alligator (*Alligator mississippiensis*), eastern indigo snake (*Drymarchon corais couperi*), a variety of wading birds, Big Cypress fox squirrel (*Sciurus niger avicennia*), and the Florida bonneted-bat (*Eumops floridanus*). The bald eagle (*Haliaeetus leucocephalus*), which has been delisted by the FWC and FWS, is still protected by other regulations and was therefore included in the survey. The Florida black bear (*Ursus americanus floridanus*), delisted in 2012, is still protected by the Florida Black Bear Management Plan and was therefore included in the survey. Please see Table 2 for additional listed species included

in the survey. In addition, per Collier County regulations three species of orchids (*Cyrtopodium punctatum*, *Encyclia cochleata*, and *E. tampensis*) and four species of wild pine (*Tillandsia fasciculata*, *T. utriculata*, *T. balbisiana*, and *T. flexuosa*) which could potentially occur on-site were included in the survey.

In order to comply with FWC/FWS survey methodology guidelines, each habitat type was surveyed for the occurrence of the species listed above using meandering pedestrian belt transects. The meandering pedestrian belt transects were spaced approximately 40 feet apart. The approximate location of direct sighting or sign (such as tracks, nests, and droppings) of a listed species, when observed, was denoted on the aerial photography. The 1" = 100' scale aerial Protected Species Assessment map (Figure 1) depicts the approximate location of the survey transects and the results of the survey. The listed species survey was conducted during the mid-day hours of May 17, 2017. The weather at the time of the survey was warm and sunny with a light breeze.

Prior to conducting the protected species survey, a search of the FWC listed species database (updated in June 2016) was conducted to determine the known occurrence of listed species in the project area. This search revealed no known protected species occurring on or immediately adjacent to the site. The database indicated that Florida black bear have not been recorded within 2,500± feet of the property. The property is within a wood stork core foraging area but not within the panther Priority 1 or 2 zones.

Table 2. Listed Species That Could Potentially Occur On-site

FLUCCS CODE	Percent Survey Coverage	Species Name	Present	Absent
424	80	Eastern indigo snake (*Drymarchon corais couperi*)		√
		Gopher Tortoise (*Gopherus polyphemus*)		√
		Big Cypress Fox Squirrel (*Sciurus niger avicennia*)		√
511	80	American Alligator (*Alligator mississippiensis*)		√
		Little Blue Heron (*Egretta caerulea*)		√
		Reddish Egret (*Egretta rufescens*)		√
		Roseate Spoonbill (*Ajaia ajaja*)		√
		Tricolored Heron (*Egretta tricolor*)		√
617E2	80	Little Blue Heron (*Egretta caerulea*)		√
		Tricolored Heron (*Egretta tricolor*)		√
619	80	Big Cypress Fox Squirrel (*Sciurus niger avicennia*)		√
743	80	Gopher Tortoise (*Gopherus polyphemus*)		√
832	80	Gopher Tortoise (*Gopherus polyphemus*)		√

SURVEY RESULTS

No species listed by either the FWS or the FWC were observed on the site during the protected species survey. No potential cavities that could be utilized by the Florida bonneted-bat were observed. None of the orchids or wild-pines listed by Collier County were observed. In addition to the site inspection, a search of the FWC species database (updated in June 2016) revealed no known protected species within or immediately adjacent to the project limits. This is consistent with the poor overall quality of the habitats on-site.

Craig M. Smith, Senior Ecologist

Current Responsibilities

Project Manager providing an array of environmental studies and services related to land development and property evaluation in south Florida. These activities, performed for private landowners and public entities, include vegetation mapping, binding and informal state and federal wetland jurisdictional determinations, wetland functional assessments using UMAM, WRAP, and MWRAP, habitat evaluations, establishing seasonal high water elevations for wetlands using biological indicators, threatened and endangered species surveys, and wetland (COE, DEP, and WMD) permit applications. Additional services include threatened and endangered species relocation and management plans, wetland mitigation (creation, restoration, enhancement, and preservation) plans, and the design and implementation of wetland monitoring plans.

Experience

Joined the firm in 2003 bringing over 16 years of experience as an environmental consultant in South Florida. More than 274,000 acres of land has been mapped and evaluated since 1987. Individual properties ranged in size from less than one acre to more than 5,000 acres located in Collier, Lee, Charlotte, Sarasota, Polk, Hardee, Brevard, Martin, and Dade Counties. Projects have included agricultural, residential, commercial, and industrial land uses, new and expanding roadways, and wetland restoration (wetland mitigation banking). Wetland permitting experience includes wetland delineation, preparation of state and federal permit applications and supporting documents, responding to agency questions and third party concerns, and negotiating mutually acceptable wetland mitigation plans. Surveys and management plans have been conducted and prepared for gopher tortoises, eastern indigo snake, bald eagle, red-cockaded woodpecker, Florida bonneted bat, and Big Cypress fox squirrel. Has authorization from the Florida Fish and Wildlife Conservation Commission to conduct surveys, prepare permit applications, and relocate gopher tortoises as an Authorized Gopher Tortoise Agent. Is qualified as an expert witness by the Lee County Hearing Examiner, Collier County Environmental Advisory Council, Collier County Planning Commission, and City of Bonita Springs Zoning Board on environmental issues.

Recently completed and ongoing projects for the public and private sectors include monitoring of the Lely Area Stormwater Improvement Project's (LASIP) Serenity Park,

wetland enhancement plan development, implementation, and monitoring for projects such as Barrington Cove, Marsilea, and Verona Pointe Estates, gopher tortoise permitting and relocation for several projects in Collier and Lee Counties, wetland permitting for Naples Heritage Golf and Country Club and Estero Crossing, and bald eagle management plan preparation for the Calusa Cay CPD on Pine Island.

Education and Certification

Master of Science, University of North Carolina at Wilmington, 1987.
Bachelor of Science, Clarion University of Pennsylvania, 1984.
Senior Ecologist, Ecological Society of America
Professional Wetland Scientist (No. 238), Society of Wetland Scientists
Certified Arborist (No. FL-6255A), International Society of Arboriculture
Authorized Gopher Tortoise Agent (Permit No. GTA-09-00011E), Florida Fish and Wildlife Conservation Commission
Qualified Bald Eagle Monitor, City of Cape Coral
Provisionally Certified Wetland Delineator, U.S. Army Corps of Engineers Wetland Certification Program, 1993.

Continuing Education

Florida Master Naturalist Program – Freshwater Wetlands. University of Florida IFAS, 2012.
Native Trees, Shrubs, and wildflowers for Central and South Florida: Zones 9-11. Florida Association of Native Nurseries. 2011.
Unified Mitigation Assessment Method 201 Training. South Florida Water Management District. 2010.
Florida Statewide (62-340 FAC) Wetland Delineation Training Program. Richard Chinn Environmental Training, Inc. 2007.
Wetland Plant Identification Training Program. Richard Chinn Environmental Training, Inc. 2007.
Unified Mitigation Assessment Method Training. U.S. Army Corps of Engineers. 2005.
The Florida Master Wildlifer. University of Florida. Institute of Food and Agricultural Sciences. 2003.
Basic Prescribed Fire Training. Hillsborough Community College. 1992.
Florida Wetlands Successful Creation, Restoration, and Enhancement Training Course #1. Natural Resources Training and Certification, Inc. 1991.
Florida Hydric Soils Workshop. Florida Association of Professional Soil Classifiers. 1991.

Affiliations

Ecological Society of America
Society of Wetland Scientists