



NewEarth Ecological Consulting

Education

B.S., Wildlife Management, Concentration in Remote Sensing and Geographic Information Systems, University of Maine, Orono, Maine

Professional Certifications

Certified Wildlife Biologist
Professional Wetland Scientist

Professional Affiliations

United States Army Veteran
Maine Association of Wetland Scientists
The Wildlife Society
Society of Wetland Scientists

Training

FERC, Environmental Compliance & Inspection
ME DOT, Erosion Control Practices
OSHA, HAZWOPER Safety
Red Cross, First Aid & CPR
USACE, Wetland Delineator Certification Program
US DOI, NEPA Concepts
USDA, Conservation Planning & Environmental Compliance
USDA, Technical Service Provider
USFWS, Right-of-Way Habitat Management

Stacie L. Grove, CWB, PWS

Principal Environmental Biologist

Professional Experience

Ms. Grove is the Principal Environmental Biologist and co-owner of NewEarth Ecological Consulting. Ms. Grove's expertise encompasses many aspects of environmental consulting from project management through performing environmental studies, including floral and faunal surveys, wetland delineations, habitat analysis and assessment procedures, and state and Federal permitting. Demonstrated skills include study design and sampling methodology; threatened and endangered species surveys and permitting; baseline and post-construction monitoring of terrestrial and wetland communities, plants, passerines, wading birds, bats, small mammals, and amphibians; impact assessments, alternatives analysis and mitigation planning; restoration design and monitoring; preparing and reviewing documents relating to NEPA and ESA compliance; developing Natural Resource Management (NRMP) and monitoring plans; 3rd party environmental compliance inspections; pre and post-construction environmental monitoring; and, aerial photo-interpretation and cover type mapping.

Ms. Grove's project management background includes over 56 projects with contract values totaling over 2.3 million dollars. Of these, 87% were repeat clients. Ms. Grove's background also includes extensive experience while serving as the lead biologist or lead wetland scientist on dozens of environmental projects nationwide. Project scopes have ranged from small biological investigations for local non-profit organizations, to large-scale environmental studies and impact analysis for the US Army Corps of Engineers, as well as long-term nationwide assignments conducting environmental surveys and inspections on private natural gas distribution projects.

Project Experience

Federal, State and Municipal Clients

Biological Assessment, Wells Hydropower Project, Douglas Public Utility Division: Columbia River, WA Assisted in preparing a Biological Assessment (BA) to document the potential affects of renewal of a FERC license for an existing 774.3 megawatt hydropower project encompassing 29.5 miles of the Columbia River in Washington state. Sixteen (16) Federally-listed species were covered in the BA including northern spotted owl, yellow billed cuckoo, greater sage grouse, marbled murrelet, grizzly bear, pygmy rabbit, fisher, gray wolf, Canada lynx, Washington ground squirrel, bull trout, upper Columbia River spring-run Chinook salmon, upper Columbia River summer-run steelhead salmon, showy stickseed, Ute ladies tresses, Wenatchee Mountains checkermallow.

Biological Assessment, Long Beach NY Flood Control and Storm Damage Reduction Project, U.S. Army Corps of Engineers, NY District: Long Beach Island, NY. Served as Project Manager for the preparation of a Biological Assessment to document the potential affects of implementation of a coastal flood protection project on three Federally-listed endangered and threatened species; sea beach amaranth, piping plover, and least tern.

Federal, State, Municipal Client Experience

City of Waterville
Douglas, WA Public Utilities Division
Federal Energy Regulatory Commission
Maine Army National Guard
Maine Dept. of Inland Fisheries and Wildlife
Massachusetts Div. of Fish and Wildlife
New Hampshire Dept. of Transportation
New York Power Authority
Town of Scarborough
US Army Corps of Engineers
US Fish and Wildlife Service
US Naval Facilities Command

Private, Public, Non-Profit Client Experience

APD Engineering & Architecture
Casco Bay Estuary Program
Competitive Power Ventures
Dominion Resources Services
El Paso Energy
HDR | DTA
Horizon Wind Energy
I-minerals
Kinder Morgan
Kleinschmidt Associates
Manomet Ctr for Conservation Sciences
NiSource/Granite State Gas
Northern Utilities
Ocean Park Conservation Society
Ocean Renewable Power Corporation
Patriot Renewables
Petal Gas
Tennessee Natural Gas
Tetra Tech
Transcontinental Pipeline Company
TRC
URS Insurance Claims Specialists

Biological Monitoring, Upland Habitat Management Program, Massachusetts Division of Fish and Wildlife: Newbury, MA. Project Manager responsible for coordination of field survey activities to document avian species and vegetation use in reclaimed early-succession and mature forest habitats. Surveys were conducted over a two year period with three wildlife management areas (covering approximately 2,100 acres) targeted in the first year and two areas (covering approximately 1,500 acres) targeted in the second annual survey. Coordinated project tasks and personnel, conducted avian point count surveys and vegetation sampling, and prepared project reports.

Biological Surveys, Ecosystem Restoration Report (ERR), and Environmental Assessment (EA), Rahway Section 1135 Flood Protection and Ecosystem Restoration Project, U.S. Army Corps of Engineers, NY District: Rahway, NJ. Served as Project Manager responsible for design and implementation of surveys of vegetation, water quality, avian and nekton species, and vegetation cover type mapping in support of a 5-acre tidal wetland restoration and shoreline stabilization project. Tasks includes a wetland functional assessment, development of restoration alternatives, and restoration and cost-benefit alternatives analysis. Managed subcontractors involved in geotechnical, topographic, and hydrological surveys and the preparation of engineering design plans and cost estimates.

Biological Surveys, Fire Island Reformulation Project, U.S. Army Corps of Engineers, NY District: Long Island, NY. Project Manager responsible for biological baseline surveys of barrier island communities along an 82-mile section of coastal barrier island. Developed field sampling protocols, coordinated the collection of biological data for birds, small mammals, fish, and submergent aquatic vegetation. Surveys included the use of belt-transects, observation station counts, playback tapes, sein nets, snap and live trapping, and 1m quadrats. Avian surveys were conducted monthly, over a 1-year period, to document seasonal use of coastal habitats, with special attention paid to documenting use by federal and state listed species. Data was used in shoreline flood protection project impact analysis and restoration/mitigation planning.

Botanical Studies, Coles Creek, Wilson Hill, and Little Sucker Brook Wildlife Habitat Improvement Projects, NY, Kleinschmidt Associates/New York Power Authority (NYPA): Vicinity of Massena, NY. Project Manager responsible for air photo-interpretation, habitat mapping, wetland delineations, and vegetation characterizations of 7,100 acres. Developed multiple habitat restoration alternatives and invasive species management action plans in accordance with NYPA Federal dam relicensing requirements.

Environmental Assessment Report, Maine Army National Guard: Auburn, ME. Project Manager responsible for agency consultation and the preparation of an Environmental Assessment (EA) to evaluate potential impacts from INRMP implementation on two military training facilities; the 415 acre Hollis training facility and the 186 acre Auburn training facility.

Environmental Site Assessment, Town of Waterville/Airport Solutions Group; Waterville, ME. Performed wetland delineation and onsite environmental assessment to evaluate site for potential presence of, and impacts to, natural resources of significance. Performed in depth background data review and evaluation of habitat potential to support state or federally-listed RTE species.

FERC Relicensing, Yuba County Water District, Yuba County Development Project, CA. Assisted in preparing a FERC preliminary application document (PAD) for relicensing a 395 megawatt (MW) hydro-power facility on the Yuba River, near Yuba City. Conducted agency consultation per section 7 of ESA, documented baseline environmental conditions for wildlife and aquatic resources and evaluated environmental effects.

FERC Relicensing, Douglas County Public Utilities Division, Wells Hydropower Project, WA. Assisted in preparing FERC relicensing application for a 774.3 megawatt (MW) hydro-power facility on 29.5 miles of the Columbia River. Documented baseline environmental conditions for terrestrial and RTE resources and evaluated environmental effects.

FERC Nationwide Wetland Assessment Study, Federal Energy Regulatory Commission (FERC): Several Locations Nationwide. Conducted post-construction assessments of vegetation and hydrology in restored wetlands within natural gas pipeline corridors in support of a FERC-sponsored nationwide study of wetland revegetation success. Conducted studies in AL, CA, CO, GA, FL, MA, ME, NH, NV and WY.

FERC Third-party Environmental Inspections (3PI), Annual Report Compliance Inspection Program, Federal Energy Regulatory Commission (FERC): Several Locations Nationwide. Served as FERC Environmental Inspector performing 3rd party compliance inspections of natural gas pipelines in GA, TN and NV. Duties involved interfacing with pipeline company representatives, performing inspections to confirm compliance with Plan and Procedures, and preparing formal FERC compliance reports.

FERC Third-party Environmental Inspections (3PI), Federal Energy Regulatory Commission (FERC). Served as the on-site FERC Environmental Inspector, performing 3rd party compliance inspections during active construction of a 270-mile natural gas pipeline located in LA and MS.

Habitat Evaluation Procedures (HEP) Study and Alternatives Analysis, South River Flood Control and Ecosystem Restoration Project, United States Army Corps of Engineers, NY District: South River, NJ. Task Manager, conducted Habitat Evaluation Procedures (HEP) analysis, wetland delineations, cover type mapping, and collected GPS data in support of mapping within an 800-acre proposed flood protection site; developed HEP sampling protocols and managed and conducted HEP field sampling for six avian species, assisted in analysis of proposed alternatives and the development of mitigation plans, and, assisted in the development of a biological monitoring plan and Impact Assessment and Mitigation Analysis report.

Habitat Evaluation Procedures (HEP) Study, Alternatives Analysis, and Restoration Site Identification, and Fire Island, NY, Reformulation Project, U.S. Army Corps of Engineers, NY District: Long Island, NY. Project Manager, developed Habitat Evaluation Procedures (HEP) sampling protocols, managed and conducted HEP field sampling for six coastal communities within a 45-mile stretch of barrier island, developed restoration site matrix to facilitate restoration site prioritization, used HEP data, information from site assessments, and results of incremental cost analysis to evaluate and select sites for habitat restoration. Analyzed proposed alternatives, developed restoration plans, and facilitated interagency meetings.

Habitat Evaluation Procedures (HEP) Study and Alternatives Analysis, Muddy River Flood Control and Ecosystem Restoration Project, U.S. Army Corps of Engineers, NE District: Brookline, MA. Task Manager, Habitat Evaluation Procedures (HEP) and alternatives analysis for an urban river restoration project. Developed HEP sampling protocols and conducted HEP data collection within a 425-acre area for four avian species, coordinated interagency meetings, and provided GIS support.

Integrated Natural Resource Management Plans, Maine Army National Guard: Several Locations, ME. Project Manager responsible for agency consultation and the preparation of Integrated Natural Resource Management Plans (INRMP) in accordance with regulatory requirements under the Sikes Act for four separate Army National Guard contracts/training facilities; the 1,091 acre Caswell-Loring training facility, the

220 acre Bog Brook training facility, the 415 acre Hollis training facility, and the 186 acre Auburn training facility.

RTE Species Monitoring, Department of Defense Nationwide Biological Services Program, Naval Facilities Command (NAVFAC): CA. NewEarth was subcontracted by Tetra Tech DIV, Inc. to provide for California Gnatcatcher (CAGN) endangered species surveys for the NAVFAC Environmental Branch within the 125,000 acre Camp Pendleton Marine Base, CA. NewEarth served as the on site Field Coordinator for survey efforts of 12 surveyors. NewEarth staff also performed on-site reconnaissance surveys for CAGN habitat, conducted CAGN surveys and nest monitoring (under Scientific Collection Permit TE117947-1.1), and coordinated base communications/access, survey personnel and scheduling, and data management.

RTE Species Monitoring, Bound Brook Segment R2, Green Brook Flood Damage Reduction Project, U.S. Army Corps of Engineers, NY District: Bound Brook, New Jersey. Project Manager, assisted certified Indiana bat specialists in developing an Indiana bat survey work plan, and in conducting mist netting surveys and radio-tracking of bats on a 10 acre US Army Corps Flood Protection Project site.

RTE Species Monitoring, Fire Island Reformulation Project, U.S. Army Corps of Engineers, NY District: Long Island, NY. Project Manager responsible for monitoring, data collection, protection, and documentation of endangered species (piping plover, least, common and roseate tern, and sea beach amaranth) along six miles of coastal habitat in Long Island, NY.

Salt Marsh Restoration Monitoring, U.S. Fish and Wildlife Service - Gulf of Maine Program: Chauncey Creek, Kittery, ME, and Seavey Landing, Scarborough, ME. Project Manager responsible for salt marsh restoration monitoring protocol development and field data collection activities. Tasks included cover type mapping, water quality sampling, water level monitoring, and pore water salinity sampling.

Wetland Delineation, Flood Control and Storm Damage Reduction Projects, United States Army Corps of Engineers, NY District: Numerous Locations including Cliffwood Beach, Keansburg, Lincoln Park, Port Monmouth, and Union Beach, NJ. Served as Task Manager responsible for photo-interpretation, cover type mapping, wetland delineations, and RTE habitat assessments within numerous proposed flood protection sites. Tasks at some sites also included beach seining activities. Prepared Data Documentation and Wetland Delineation Reports in accordance with COE guidelines.

Wetland Delineation, Grasse River Diversion Habitat Improvement Project, New York Power Authority: Vicinity of Massena, NY. Project Manager, delineated and mapped wetlands and vegetative cover types and collected GPS data, along a 5-mile stream corridor in support of permitting activities for a proposed waterfowl habitat improvement project.

Wetland Delineation, Dike Restoration Wetland Permitting and Mitigation Project, New York Power Authority: Louisville, NY. Project Manager responsible for conducting wetland delineation surveys and wetland functions and values assessments within a 125-acre site, permit submittal, design of mitigation options and alternatives analysis, preparation of wetland mitigation plan and grading and planting specs, preparation of a wetland monitoring plan, and follow up inspections. Designed mitigation wetlands, provided project oversight for mitigation construction, and conducted annual mitigation monitoring and permit reporting.

Wetland Mitigation Site Inspections, New Hampshire Department of Transportation: Multiple Locations, NH. Project Manager, conducted post-construction site inspections and wetland functional assessments at five wetland mitigations sites collectively covering 36 acres. Inspections were conducted to evaluate and document compliance with USACE and state permit conditions.

Private, Public and Non-Profit Clients

Avian Mist Netting, Landbird Monitoring Program, Manomet Center for Conservation Sciences: Manomet, MA. Assisted with annual spring and fall avian mist netting and banding over a 3-year period at 50 mist net locations in coastal Massachusetts.

Bird and Vegetation Research Project, Forest Conservation Program, Manomet Center for Conservation Sciences: Northern Forest Region of Maine. Task Manager and Field Coordinator on a 5-year study to assess impacts of timber harvesting on birds and vegetation. Surveys were conducted across over 250,000 acres of remote managed forests in Maine. Responsible for GIS support, field-based research design, supervision of field research teams of up to 12 personnel, and flora and faunal sampling. Summer surveys were conducted annually and included point counts, spot mapping, and line transect avian surveys. Assisted in the development of forestry best management practices and prepared forest management plans.

Ecological Surveys, Essex-Middlesex Natural Gas Pipeline Project, Tennessee Gas Pipeline Company: Essex and Middlesex Counties, MA. Project Manager responsible for wetland delineations, vernal pools surveys, characterization of habitats for state and federally-listed species (glaucous sedge, pine barrens itame, box turtle, sharp-shinned hawk, common moorhen, king rail, American bittern) and conducted surveys for state-listed amphibians (blue spotted and four-toed salamanders) along 7.81 miles of proposed natural gas pipeline. Acquired scientific permits, conducted surveys, prepared summary reports, filed rare species and habitat documentation to agencies.

Environmental Inspection/Monitoring, Kinder Morgan, Inc: AL, L, MS. NewEarth was subcontracted by Tetra Tech EC, Inc. to provide on-site post-construction environmental inspection and monitoring services along 250 miles of a restored 500-mile natural gas pipeline. NewEarth also performed monthly follow-up monitoring in several locations with highly erodible soil types.

Environmental Inspection/Monitoring, Natural Gas Transmission Joint Facilities Project, Portland Natural Gas Transmission Systems/ Maritimes & Northeast Pipeline: Several Locations, ME, NH, and MA. Field Team Leader responsible for post-construction monitoring of wetlands along a 292-mile pipeline right of way. Assisted in the identification of T&E species and habitats.

Environmental Restoration and Enhancement, Ocean Park Conservation Society: Ocean Park/Ocean Beach, ME. Pro bono effort to assist town planners and conservation organizations in the assessment of town properties for restoration/enhancement potential and in preparing grant applications for project funding.

FERC Licensing Support, Alaska Tidal Energy Pilot Study, Ocean Renewable Power Company (ORPC): Cook Inlet, AK. Assisted in preparing a FERC pilot license application for a 5 megawatt tidal energy pilot study comprised of 5 turbine generating units in Cooks Inlet, west of Anchorage. Conducted agency consultation per section 7 of ESA, documented baseline environmental conditions for terrestrial resources and RTE species, and evaluated environmental effects.

FERC Licensing Support, Maine Tidal Energy Pilot Study, Ocean Renewable Power Company (ORPC): Eastport, ME. Assisted in preparing a FERC pilot license application for a 5 megawatt tidal energy pilot study comprised of 5 turbine generating units, distributed in two locations to the east and west of the City of Eastport. Conducted agency consultation per section 7 of ESA, documented baseline conditions for terrestrial resources and RTE species, evaluated environmental effects.

Habitat Restoration Inventory, Casco Bay Estuary Program: Presumpscot Watershed, ME. Project Manager, conducted on-site inventories of potential wetland/stream habitat restoration opportunities within 25 miles of tidal and freshwater systems. Created restoration evaluation forms, conducted site assessments, and created an interactive database to allow users to identify and rank sites based on user-defined criteria.

Permitting Support, Natural Gas Distribution Project, Northern Utilities: Lewiston, ME. Task Manager, provided environmental and permitting support for a proposed 2-mile long 12-inch diameter pipeline. Conducted agency consultation and prepared and submitted required state and Federal permits. Provided construction inspection monitoring.

Permitting Support, Smart Pig North Integrity Management Project, NiSource/Granite State Gas Transmission: Southern, ME. Field Team Leader responsible for permitting support and environmental compliance inspections along 45-miles of natural gas pipeline. Conducted agency consultation and prepared and submitted required state and Federal permits.

RTE Species Survey, Oklahoma Wind Energy Project, Competitive Power Ventures: Woodward, OK Field Team Leader responsible for conducting diurnal surveys for the lesser prairie chicken, a candidate species for listing under the Endangered Species Act. Surveys were conducted within a 140 sq mi proposed wind farm site and also included randomized surveys for passerines, raptors, and owls.

RTE Species Survey, Retail Development Site, APD Engineering & Architecture: Lowville, NY. Task Manager responsible for conducting field surveys for loggerhead shrike, a New York state endangered species. Modified belt transect and playback tape surveys for loggerhead shrike were conducted on a 20-acre proposed retail development site. Efforts included cover type mapping and habitat characterizations.

RTE Species Study, Rare, Threatened, and Endangered Species Program, Manomet Center for Conservation Sciences: Manomet, MA. Task Manager, provided GIS support to document gnatcatcher nest locations on Camp Pendleton Marine Base CA. Performed spatial analysis and assisted with technical reporting of study results.

RTE Species Study, Rare, Threatened, and Endangered Species Program, Manomet Center for Conservation Sciences: Plymouth Beach, MA. Task Manager, assisted with identification and protection of plover, tern, and black skimmer nesting habitats. Established protective perimeter around nesting areas, mapped nest site locations, banded chicks, monitored and documented adult and fledgling activities, and assisted with public outreach and education.

RTE Species Study, Rare, Threatened, and Endangered Species Program, Manomet Center for Conservation Sciences: Manomet, MA. Task Manager responsible for field surveys and radio-tracking of spotted turtles to investigate the potential impacts of pesticide applications on turtles in SE Massachusetts cranberry bogs. Used radio-telemetry to monitor and evaluate turtle activity and habitat use, mapped turtle locations in GIS and conducted spatial analysis of turtle movements.

RTE Species Monitoring, Gopher Tortoise Monitoring Program, ENSR/Petal Gas: Vicinity of Petal, MS. Served as Task Manager for pipeline right of way surveys for the presence of gopher tortoises during construction. Surveyed areas along 60 miles of natural gas pipeline right-of-way (ROW) for gopher tortoise burrows, documented findings, installed protective measures, and monitored the construction area for gopher tortoise during construction activities. Assisted veterinarians in collecting physical data from tortoise and provided oversight during the excavation and relocation of tortoise from burrows found within the construction ROW.

Vernal Pool Survey, Freeport Retail Development Project, Anonymous Client: Freeport, ME. Project Manager responsible for conducting a vernal pool investigation and species/habitat assessment within a 28-acre development site, and presenting results to various working groups.

Vernal Pool Surveys, Statewide Volunteer Community Vernal Pool Mapping Project: Scarborough, ME. Pro-bono effort, to assist the Town of Scarborough in assessing, documenting and mapping vernal pools.

Vernal Pool Survey and Wetland Delineation, Maine Power Reliability Project, TRC/Central Maine Power Company: Several Locations, Southern ME. Field Team Leader responsible for conducting vernal pool investigations and wetland delineations along 23 miles of existing rights-of-way corridors for a proposed project utility line upgrade project. Surveys were conducted in accordance with definitions and procedures outlined the USACE General Permit and MDEP Statutes Chapter 335.

Vernal Pool Survey and Wetland Delineation, Number Nine Wind Energy Project (Phase I), Horizon Wind Energy: Aroostook County, ME. Field Team Leader responsible for conducting vernal pools surveys, wetland delineations, and wetland functions and values assessments along 119 miles of new and proposed roads and 225 wind turbine site locations within a study area encompassing 62,000 acres of managed forestland. Assisted with GIS data processing and spatial analysis.

Vernal Pool Survey and Wetland Delineation, Number Nine Wind Energy Project (Phase II), Horizon Wind Energy: Aroostook County, ME. Field Team Leader responsible for conducting vernal pool surveys along 12 miles of new and proposed roads and 80 turbine site locations within a 62,000 acre study area. Assisted with GIS data processing and spatial analysis.

Wetland Delineation, L-30/L-550 Pipe Replacement Project, Dominion, Inc: Several Locations in NY. NewEarth was subcontracted by Tetra Tech DIV, Inc. to provide wetland delineation and ecological services for evaluation of several areas of proposed natural gas pipeline replacement. NewEarth performed wetland delineations and plant community classifications and mapping. Surveys were conducted along approximately 7 miles of existing right-of-way and access roads.

Wetland Delineation, HVdc Transmission Line Upgrade Project, Transmission Developers, Inc: NY. NewEarth was subcontracted by HDR | DTA, Inc. to provide wetland delineation and ecological services for evaluation of a proposed HVdc project route. NewEarth performed wetland delineations, plant community classifications and mapping, and documentation of amphibian breeding habitat/vernal pools. Surveys were conducted along approximately 5 miles of proposed transmission line corridor located along an existing rail road.

Wetland Delineation, Spruce Mountain Wind Energy Project, Patriot Renewable Energy, Inc: ME. NewEarth was subcontracted by Tetra Tech EC, Inc. to provide wetland delineation services to support evaluation of a proposed wind energy project for Patriot Renewable Energy, Inc. NewEarth performed wetland delineations and documentation of amphibian breeding habitat/vernal pools within approximately 150

acres of the proposed project corridor.

Wetland Delineation, Londonderry 20-Inch Replacement Project, Tennessee Gas Pipeline Company: Several Locations, NH and MA. Monitored post-construction wetland revegetation for a 19.3-mile pipeline expansion/replacement project in NH and MA. Assisted in the identification of T&E species and habitats.

Wetland Delineation, Natural Gas Transmission Loop Project, Transcontinental Pipe Line Corporation: Several Locations, PA and NJ. Field Team Leader responsible for delineating and mapping wetlands and vegetative cover types along a 5-mile section of proposed natural gas pipeline loops. Performed environmental field surveys and prepared reports for permitting.

Wetland Delineation, Mississippi 500 Line Expansion Project, Tennessee Natural Gas: Vicinity of Laurel, MS. Field Team Leader responsible for delineating and mapping wetlands and vegetative cover types along a 29-mile section of a proposed natural gas line expansion loop. Performed environmental field surveys and prepared reports for permitting.

Wetland Delineation, Natural Gas Transmission Lateral Project, El Paso Energy: Augusta, MI. Field Team Leader responsible for delineating and mapping wetlands and vegetative cover types along a 2.5-mile section of a proposed natural gas pipeline lateral. Prepared reports necessary for permitting.

Wetland Remediation and Permitting, Insurance Restoration Specialists: West Caldwell, NJ. Project Manager, conducted wetland delineation and functions and values assessment, designed mitigation options, conducted an alternatives analysis, and prepared a detailed wetland mitigation plan on a 35 acre retail development site