



Capt. Alek Modjeski

American Littoral Society
Habitat Restoration Program Director, Certified
Professional Ecologist (2012)
Certified Restoration Practitioner (Application
submitted 2020)
Recipient of 2014 EPA Region 2 Environmental
Quality Award, 2014 Monmouth County
Planning Board Merit Award, ASBPA 2018/2020
Best Restored Shoreline in US, 2018 Blue Peter
Award, and 2015/2018 New Jersey's Governor's
Environmental Excellence Award

Work History

American Littoral Society – Habitat Restoration
Program Director – 1/2014 to Present
AECOM –Water Natural Resources Director and
Senior Marine Ecologist/Project Manager -
1/2002-1/2014
Louis Berger Group – Ecologist - 5/1998 -
1/2002
NJDEP – Biologist - 4/1994 - 5/1998

Education

MS in Environmental Planning and Policy,
American Public University
BS, Marine Biology, Richard Stockton College of
New Jersey
Continuing Education – Rutgers University -
Relevant Coursework, Licensures and
Certifications: Southern NJ Threatened and
Endangered Species, Lake Management,
Stream Assessment, Wetlands Delineation and
Soil Sampling, Stormwater, Eco-risk, Rain
Gardens, CAFRA Permitting

Professional Registration

OUPV USCG Captain's License
Certified Professional Ecologist, ESA (2012)
Transportation Worker's Identification Credential
(TWIC)
OSHA 40 Hr Hazwoper
USEPA Watershed Academy Living Shorelines
Threatened and Endangered Species of
Southern NJ
Stream Restoration and Bioengineering
Certificate
CAFRA/CZM Certification
FERC Environmental Compliance Certification
NJ Calling Amphibians Training
Freshwater Fisheries of the Northeast - Habitat
and Identification Training
Eco-Risk Certification
Rain Garden Specialist and Trainer
Univ. of Ohio Larval Fish Identification
Certificate
CPR certified/ First Aid
GPS Mapping Trimble Pro

On and Over Water Health and Safety Trainer

Affiliations

Member Restore America's Estuaries Shorelines
Tech Transfer Workshop Steering Committee
2021
Co-Chair – NJ Ecological Restoration and
Science Advisory Group
Member New Jersey Coastal Resilience
Collaborative
Member NJ Coastal Ecological Project
Committee – Chair of Implementation Sub-
Committee
Member NJ Coastal Resilience Collaborative –
Co-Chair Subcommittee Ecological Restoration
and Science
Member of NJ FRAMES Constituency Advisory
Group Two Rivers Steering Committee – Chair
of Ecology and Habitat Committee
Member of RAE National Restoration Toolkit
Steering Committee - Northeast Region Liaison
Member RAE National Living Shorelines
Community of Practice Group
Member of Restore America's Estuaries and the
Coastal States Organization Program
Committee (PC) for the 9th National Summit on
Coastal and Estuarine Restoration and
Management
Member Atlantic Coast Fish Habitat Partnership
Science and Data Committee
Member Bradley Beach Environmental
Commission
Ecological Society of America
USCG Homeport NY/NJ member
NJ Corporate Wetlands Restoration Partnership
NJ Coastal Lakes Summit Planning Committee
Wreck Pond Stormwater Commission and
Technical Advisory Committee

Capt. Modjeski is the American Littoral Society's
Habitat Restoration Program Director, Senior
Coastal Ecologist, and Senior Marine Ecologist
with over 25 years of experience in project
management, freshwater and marine fisheries,
essential fish habitat (EFH), coastal restoration
and living shorelines creation, state and Federal
permitting, and the design and implementation
of herpetological, avian, fish, benthic, wetland,
sediment, water quality, and mammalian
surveys. Much of the focus of his work relates to
science-based restoration and mitigation, green
infrastructure and living shorelines, permitting,
regulatory coordination, assessing
environmental impacts from proposed
government and private projects, and
investigating alternatives that minimize or avoid

environmental impact. Additionally, he has been able to develop comprehensive educational outreach programs for each of his grants that target, youth, veterans, and adults. He has also developed multi-disciplined Technical Advisory Committees through public/private partnerships.

Project Experience

NFWF Mouth of the Maurice Restoration Resiliency Implementation Project, Heislerville, NJ. Project Director that worked closely with project team and partners to on a \$12M project to restore Basket Flats and Northwest Reach located at the Mouth of the Maurice River using hybrid breakwaters and a living revetment designed to improve ecology and community resiliency. Future projects could be beneficial use of sediment to restore over 400 acres of salt marsh.

NJDEP Sylvan Lake Restoration, Avon-by-the Sea and Bradley Beach, NJ. Project co-lead involved in the planning and future implementation of a DOD REPI pass-through project to restore a coastal lake using treatment wetlands, wetland benches, bio-swales, and daylighting. Project will set precedence for future restoration of 13 other coastal lakes in NJ.

NFWF 2020 Delaware Bay Restoration and Stewardship Projects. Program Director who led and continues to lead a multi-disciplinary team dedicated to restoring Fortescue and Pierces Point Beaches using living shorelines and beach restoration to improve resiliency and provide sustainable habitat for horseshoe crabs and shorebirds. Also directing a stewardship program to expand outreach about the ecological importance of Delaware Bay and shorebird needs using volunteers and US military veterans.

NFWF Six Beach Restoration, Delaware Bay, NJ. Program Director responsible for restoration maintenance at 6 beaches in Cumberland and Cape May counties. Involves sand placement and vegetated berm creation.

NJDEP Forked River Beach Living Shoreline Restoration Project, Lacey Township, NJ. Project Director and overall project manager to restore, enhance, and protect approximately 2,600 linear feet of shoreline at Forked River Beach by creating over 1,600 lf of oyster reefs set with up to 70M oyster larvae, that will

increase resiliency to adjacent communities and the Bay Front, reduce shoreline erosion through wave attenuation, improve local water quality and decrease turbidity, and improve the ecological health of the Bay and its designated use for aquatic life.

USFWS, Barnegat Bay Restoration Projects 2021.2021. Project Director that worked with USFWS and staff to conduct and install a pilot project using several oyster reef restoration techniques to identify best preferred methods needed in Barnegat Bay and also used funding to adaptively manage Slade Dale living shoreline along Beaverdam Creek.

FEMA Seaside Park Resiliency Restoration Project, Seaside Park, NJ. Project co-lead designing living shoreline oyster reefs to be used in connection with shoreline stabilization and flood control measures along Bay Avenue in Seaside Park, NJ. Involves innovative ways to attenuate waves and minimize shoreline erosion.

NFWF Mouth of the Maurice River Resiliency Planning Project, Heislerville, NJ. Project Director that worked closely with the team to organize several TAC and stakeholder meetings and provide comment on design to create hybrid breakwaters, oyster reefs, mussel beds, and planting at the edge of Basket Flats and Northwest reach that would improve community resiliency and ecological uplift.

NFWF Cooks Beach Restoration and Oyster Reef Creation, Delaware Bay. Project Director that led a team to place 5,000 tons of sand and build 1,200 lf of intertidal oyster reef. Project was awarded ASBPA 2020 Best Restored Shoreline in US.

NFWF Cumberland Insurance Floodplain Restoration, Hopewell, NJ. Project Director that led a team to restore a blown-out riparian area adjacent to Barrett's Run from farm field runoff. Project involved the use of check dams, plantings, and the construction of a 4,000 square foot rain garden.

USFWS Old Mill Pond Dam Fish Passage Project, Wall Township, NJ. Project Director and project manager that installed a 60-foot-long Alaska Steeppass fish ladder to open up an additional mile of spawning habitat for alewife.

Project was installed during COVID -19 pandemic.

NFWF Creating Resilient Habitats and Communities on Delaware Bay. Project Director, overall project manager, and senior ecologist that restored 8 Delaware Bay beaches for spawning horseshoe crab and foraging habitat federally-listed red knot post-Hurricane Sandy (75+ acres and over 211,000 cy of sand), created 5 intertidal oyster bars/living shorelines, removed over 2,000 tons of rubble, managed a US Military Veterans program, tagged over 25,000 horseshoe crabs, and created various videos and outreach materials. He also assisted with development of the Delaware Bay Sand Transport Analysis Tool (DBSTAT). Work can be viewed at www.restorenjbayshore.org. He and his team were able to secure a USACE 10-year regional permit to perform beach, berm, and reef restoration in Cape May and Cumberland counties.

Barnegat Bay Partnership – Barnegat Bay oyster reefs: biological and cost benefit analyses for scale up efforts, NJ. Project manager and co-principal investigator (PI) working with Stockton University to compare two subtidal oyster reef restoration sites in Barnegat Bay (Ocean and Atlantic counties, New Jersey) to better identify cost-effectiveness and survivorship of oysters on reefs using spat on shell grown at a land-based facility or natural seed. Also created an outreach program that involved numerous volunteers and oyster growing.

NFWF DRRF Barrett's Run Afforestation and Grassland Restoration, Cumberland County, NJ. Project Director and Principal Restoration Ecologist that guided a team to restore 7.5 acres of farmland in Delaware Bayshore along Barrett's Run, a tributary of the Cohansey River, through afforestation, creation of a wider riparian buffer, and planting of native grasses, shrubs, and trees to improve habitat connectivity.

Slade Dale Living Shoreline, Beaverdam Creek, Point Pleasant, NJ. Project Director, Project Manager, and Principal Ecologist that pieced together a number of funding streams to restore failing low marsh along Beaverdam Creek in Point Pleasant, NJ. Worked with and advised engineers to create a branch-box breakwater made of Christmas trees and Christmas tree vanes installed perpendicular to

shore to expedite accretion and stimulate regrowth of sloughing *Spartina* low marsh. This was the first living shoreline of this type introduced in NJ.

Fair Haven DeNormandie Ave. Living Shoreline, NJ. Project Director, Project Manager, and Principal Ecologist that pieced together a number of funding streams and created an innovative partnership to restore a small pocket beach and coastal bluff along the Navesink River Post-Hurricane Sandy.

Sylvan Lake Living Shoreline, Bradley Beach, NJ. Project Director and Principal Restoration Ecologist that supported engineers on the design of a 600-linear foot living shoreline in lieu of a bulkhead along Sylvan lake, a coastal lake located in Bradley Beach, New Jersey. He also coordinated with volunteers for plantings and organized various outreach events that included local schools and organizations.

DOI/USFWS Horseshoe Crab Beach Restoration Project. Delaware Bay. Project Manager of 1st USFWS/DOI Coastal Resiliency Grant awarded in 2014 in which he coordinated with USFWS and project partners to ensure the restoration of five critical horseshoe crab spawning beaches/shorebird foraging areas located in Delaware Bay (emphasis on Federally-listed red knot). Project also included first year cooperative horseshoe crab tagging and re-sighting program in which 3,000 crabs were tagged and preliminary design of an oyster reef pilot project for wave attenuation and sand accretion.

USFWS/NFWF Wreck Pond Aquatic Connectivity Project. Spring Lake, NJ. Project Director, Project Manager and Principal Fisheries Biologist for a USFWS funded project to improve fish passage (river herring and American eel) between the Wreck Pond Watershed (Monmouth County, NJ) and the Atlantic Ocean. Project included the construction of a 600-foot bypass culvert designed to provide optimum conditions for the movement of diadromous species during spawning and emigration as well to improve water quality and reduce risk of flooding. Also working to design metrics for pre- and post-construction habitat assessments within the watershed and assist with design and construction of dunes. Created a long-term monitoring and adaptive monitoring plan and also a large citizen science and

volunteer monitoring program. Monitoring is funded through 2021.

NJDEP/Monmouth County Herring Survey and Fish Inventory Project, Wreck Pond, Spring Lake, NJ. Project Manager and Primary fish biologist that designed and performed baseline anadromous fish surveys in Wreck Pond to identify species diversity and determine anadromous/catadromous use by herring and American eels. Spring surveys were designed using passive gear deployed during full and new moon cycles. Fall surveys were designed to actively search for YOY herring to show active spawning was occurring.

The Nature Conservancy/NOAA New Jersey Coastal Resiliency Network. Member of the TNC/NOAA Coastal Resiliency Steering Committee that provided guidance on improving the resiliency of New Jersey's coastal habitats to coastal hazards, including sea level rise and other impacts of climate change. Responsibilities included support with the development of the Restoration Explorer application; developing a common set of metrics to measure the success and benefits of coastal restoration/enhancement projects throughout the state; and working with local communities in Monmouth County to identify coastal habitat restoration/enhancement projects. He also served on the Measures and Monitoring Working Group.

NOAA/RAE Oyster Reef Restoration, Barnegat Bay, NJ. Project Manager and supporting scientist for an oyster reef restoration and enhancement grant located off Good Luck Point in Barnegat Bay, New Jersey. Project responsibilities included the acquisition and construction of a spat tank, tankless setting pilot, and monitoring using ROV, side scan sonar, and conventional methodologies. He also created a 1-acre subtidal oyster reef where he placed over 120 cubic yards of whelk shell.

NOAA/RAE NJ Living Shorelines, various locations, NJ. Project manager and primary contact for the design of three potential living shoreline locations in Monmouth County, New Jersey. Responsibilities included site feasibility visits, working with state regulators with permitting, design support, and assessments. The main objective of each was to get these project shovel ready.

NOAA/RAE Project PORTS, Delaware Bay, NJ. ALS Project Manager and supporting partner for the Rutgers's Project P.O.R.T.S. - Promoting Restoration Through Schools (a community-based oyster restoration and education program focusing on involving local communities in the restoration of oyster reef habitat in Delaware Bay). Helped restore 5 acres of habitat through the program. In addition, monitoring was also implemented.

NOAA Jamaica Bay Data Driven Marine Debris Program, Jamaica Bay, New York. Project Director and Project Manager for continued Jamaica Bay Marine Debris Program. Removed over 63 metric tons of marine debris within 3 years all by volunteers. Continued a robust outreach program with support from team leads and partners.

NOAA/RAE Jamaica Bay Marine Debris Removal, Jamaica Bay New York. Project Director and Project Manager for Jamaica Bay Clean Sweep in New York. Program involved the removing and disposing of large marine debris (LMD), such as derelict boats, floating docks, and large timbers as well as other, smaller marine debris. Boat removal component of the program is augmented with strong community participation in the form of cleanups of areas surrounding the LMD. Approximately 8.84 metric tons of debris was removed.

Coastal America, Fletcher Lake Maritime Forest Creation, New Jersey. Project manager and lead scientist that initiated design and creation from a 0.4 acre hard-pan parking lot into a back-dune scrub-shrub maritime forest to promote biodiversity, storm protection, and improve water quality. Obtained funding, created state, federal, and private partnerships, prepared permits, and provided on-the-ground services to enhance existing oceanfront tract. Also involved coastal lake bank stabilization, invasives removal, and replanting with indigenous species. Initial planting was September 2013 with a small replant in 2014. Project received congressional recognition. Since inception, he has been able to cobble together funding for Phase 2 and 3 of that project.

Sylvan Lake Coastal Lake Maritime Forest, New Jersey. Supporting biologist that established partnerships and assisted in design support and grant funding to plant eastern toe-

edge of Sylvan Lake in Bradley Beach, NJ. Local elementary schools provided initial design based on Fletcher Lake final design to promote individual stewardship. Avakian Engineering provided design.

Bradley Beach Dune Revegetation, Bradley Beach, New Jersey. As team leader, Capt. Modjeski co-authored and was awarded a grant from the New Jersey Department of Environmental Protection (NJDEP) for stabilizing the back dune system in Bradley Beach, New Jersey and creating educational signage for the “How You Dune” outreach program. Originally, the sand dune system was constructed by first positioning snow fences in a zig/zag pattern approximately 25 feet from the bulkhead along the one-mile length of the town’s beach. The snow fences were then filled with discarded Christmas trees collected from Bradley Beach residents by the Public Works Department and sand was then placed over the area through man-made methods and through natural processes. To better stabilize the dune system, approximately 50,000 plugs of American dune grass were planted with the placement of the aforementioned trees. In an effort to further stabilize the dunes, Capt. Modjeski organized and recruited numerous volunteers to plant the back dunes, assisted in deciding on plant species, and coordinated with planting teams to ensure delivery and proper planting of thousands of plugs in a one-day effort. Signage created with assistance from the New Jersey Marine Science Consortium described various facets of beach life to include dune importance, avian life, jetty life, shells, and seaside curiosities.

Corporate Wetlands Restoration Partnership, Raritan Bay Boom Anchor Project, Middlesex, NJ. The south shore of Raritan Bay, where the project is proposed, consisted of a narrow band of salt marshes, tidal creeks, sand beaches, dunes, remnant forests, pile fields, and extensive intertidal and shallow subtidal flats. These unique bayshore habitats not only provide important stopping and feeding grounds for a variety of avian species but also provide spawning habitat for a number of demersal, pelagic, and anadromous fish species. As project manager and on-site senior scientist, Capt. Modjeski is currently coordinating the permitting, placement, and installation of seven (7) wooden telephone poles (approximately 35 feet in length) above the Mean High-Water Line

(MHW) at or in the vicinity of the mouths of Cheesequake, Matawan, Chingagora, and Flat Creek(s). The poles are needed to improve oil response time and better protect bayshore environs. Poles will be driven to a depth of twenty (20) feet and a nesting box will be attached at the pole’s apex. In addition, predator protection and a 12-inch eye bolt needed to ensure rapid connection of the oil spill protection boom will be affixed to each pole within 3-4 feet of the pole’s base.

Corporate Wetlands Restoration Partnership, New Jersey Rain Garden Initiative, New Jersey. Program Manager providing pro bono project oversight for the construction of 15 to 20 rain gardens in New Jersey. Initiated contact with various entities, created partnerships, obtained funding, and implemented the New Jersey Rain Garden Initiative on behalf of the New Jersey Corporate Wetlands Restoration Partnership. Hosted 1-day Rain Garden Workshop with Rutgers and CWRP for municipal leaders.

NYCEDC, East Midtown Waterfront Esplanade, Manhattan, NY. Lead Marine Ecologist and task manager for permitting, on-site mitigation, and threatened and endangered species. Prepared the Essential Fish Habitat (EFH) Assessment, section 7 ESA Biological Assessment for shortnose and six distinct population segments (DPS) of Atlantic sturgeon as well as four (4) species of sea turtle. Coordinated with NYDEC and NMFS and assisted with USACE nationwide permit.

Emergia, SAm-1 Artificial Reef Design/Construction, Fajardo, Puerto Rico. Project manager for the turnkey design/construction of an artificial reef providing 1,033 square feet of habitat surface area offshore Fajardo, Puerto Rico. Managed all aspects of the design/build operations for the artificial reef, provided on-site coordination and divers during deployment operations, successfully prepared and obtained all necessary permits/approvals, and conducted the baseline/post-deployment monitoring utilizing underwater photography and videography.

Shark River Horseshoe Crab and Tagging Survey, Neptune, Wall, and Belmar New Jersey. As Program Coordinator and Primary Scientist, Capt. Modjeski developed and initiated the first horseshoe crab spawning and egg

density survey in 2005 to determine horseshoe crab abundance and confirm spawning activity and preferred spawning locations within the Shark River Bay. He also used the program to mentor two (2) boy scouts from a local Monmouth County chapter. As part of their Eagle Scout Project, each of the two scouts attended survey training, led survey teams consisting of troop members and other volunteers, and prepared draft reports. In addition, the data collected assisted in the further protection of the species along municipal beaches during spawning season. In 2007, with the support and guidance of the US Fish and Wildlife Service, Capt. Modjeski initiated a tagging program. Study is in its 7th year.

New Jersey Department of Environmental Protection, Wreck Pond River Herring Survey, Spring Lake, New Jersey. 2006-2008.

Project Manager and Senior Fisheries Scientist that developed, implemented, and performed a three-year presence/absence field monitoring assessment for blueback herring (*Alosa aestivalis*) and alewife (*Alosa pseudoharengus*) within Wreck Pond, Monmouth County, New Jersey. Data collected was used to determine if the seaward, 300-foot extension of the pond's outfall pipe interrupted or deterred migratory activity of natal spawning river herring. Duties included development of a state-wide "herring hotline" used to track herring movement; public outreach; fish collection with a 15' fyke net and seines; fish enumeration and identification; water quality, and report compilation.

Bureau of Ocean Energy Management, Regulation and Enforcement (formerly Minerals Management Service), Environmental Report for Use of Federal Offshore Sand for Beach Nourishment, New Jersey, Delaware, Maryland, and Virginia.

As project fisheries biologist, prepared various sections for an Environmental Report (ER) by identifying and synthesizing all available information and identifying and analyzing environmental issues and possible mitigation for the use of Federal Outer Continental Shelf (OCS) sand, primarily to offset severe coastal storm damage in the States of New Jersey, Delaware, Maryland and Virginia. The compiled information will be used during the preparation of required National Environmental Policy Act (NEPA) documents to support the issuance of noncompetitive leases for planned and emergency nourishment projects. The

information and analyses could also be used to support possible competitive lease sales for offshore aggregate resources.

Gloucester County Improvement Authority, Paulsboro Marine Terminal SAV Survey and Mapping, Delaware River, NJ. As Project Manager and Senior Scientist, coordinated aerial and dive survey of 167-acre parcel to determine SAV presence and absence, impact area from port development, and mitigation strategies. Designed and implemented an in-water dive survey to confirm to verify SAV presence/absence; composition; SAV acreage; coverage; and general vegetative health. Results were mapped and overlayed in GIS on proposed wharf development alternatives, dredge footprints, and aerials to calculate amount of impacted SAV acreage and develop a mitigation strategy.

Cooperating Parties Group, Lower Passaic River Low Resolution Coring Program, East Rutherford, New Jersey. On-site Field Coordinator, Facilities Manager, and On-site Safety Officer that oversaw sediment sampling program along 17.5 miles of the Passaic River. Program included vibracoring, grab sampling, modified box coring of 118 sample sites. Responsibilities included sample scheduling; homeland security and USCG coordination; daily operations and logistical planning of multiple vessels and survey crews; and health & safety, QA/QC, plan modification and deviation preparation. Project maintained zero accidents.

Conectiv Power Delivery, Environmental Assessment, Cedar to Ship Bottom, New Jersey. Senior Environmental Scientist and co-author of an EA for the proposed upgrading of two transmission lines originating in Stafford Township, New Jersey with terminus in Ship Bottom, New Jersey. Primary environmental issues included impacts to Submerged Aquatic Vegetation habitat, Essential Fish Habitat, Habitat Area of Particular Concern, Threatened & Endangered species, navigation, recreational and commercial fisheries, benthic communities, and shore birds. Duties included identifying and synthesizing all existing information, identifying and analyzing environmental issues of concern associated with the installation of the proposed cables, analyzing the possibility of installation alternatives, attending agency and project meetings, and recommending mitigating

measures for cable installation. Also addressed NJAC 7:7E special areas.

Brightwood Pond Association, Watershed and Lake Management Program, Westfield, New Jersey. Project Manager performing watershed and lake studies for a small pond in Westfield, New Jersey. Tasks include physical lake assessment, bathymetric survey, sediment characterization, water quality, and the preparation of a Dredge Management Plan and Lake Management Plan.

Lake Kitchawan Conservation Committee, Lake Study and Watershed Management Plan, Pound Ridge, New York. Project Manager and Field Coordinator/Senior Scientist for water-related studies at Lake Kitchawan in Westchester County, New York. Studies included identifying and mapping numerous species of freshwater Submerged Aquatic Vegetation, determining water quality to better understand non-point source nutrient loading, identifying point sources, preparing a diagnostic feasibility report, authoring a lake and watershed management plan, and providing management options for the vegetation management.

National Grid, Sag Harbor Submerged Aquatic Vegetation Biological Assessment, Sag Harbor, New York. Task Manager and chief scientist that conducted SAV surveys and biological inventory in Sag Harbor Long Island to determine impact from proposed pipeline. Created accepted protocol and provided documentation that indicated the pipeline would have minimal impact.

Gulf of Mexico Oil Spill Monitoring – Restoration Pilot Project – Lower Suwannee River. Primary scientist and lead author. Aerial hyperspectral data was collected from approximately 2000 square kilometers of coastline bordering the Gulf of Mexico post Deepwater Horizon. Data collected for the Lower Suwannee River was used to create a conceptual technical approach that incorporated the use of aerial hyperspectral pre- and post-monitoring in coordination with focused restoration efforts similar to those of the Damage Assessment, Remediation, and Restoration Program (DARRP) and showed the benefits of using remote sensing in prioritizing restoration as well as accessing remote locations.

New Jersey Highway Authority, Pine Creek Mitigation, Essential Fish Habitat (EFH) Assessment, Middlesex County, New Jersey. As marine scientist, conducted an Essential Fish Habitat (EFH) Assessment of a proposed mitigation site along the Raritan River. Mitigation was proposed to compensate for various rehabilitations and improvements to the Driscoll Bridge located along the Garden State Parkway. The assessment determined that the proposed project would not adversely affect any of the EFH managed species. The USACE and NMFS concurred with these findings.

NJARNG INRMP, Seagirt, NJ. Project director that supervised updates and review to the existing Integrated Natural Resources Management Plan with current survey results (rare species, cultural, plant survey, pest management, etc.), new agreements (WPWA), the NGTC Mission/Tenants as necessary, and GIS mapping.

National Oceanic and Atmospheric Administration, Water Quality Monitoring and Hyperspectral Ground Verification, Patuxent River, Maryland. Project Manager and Senior Marine Scientist that conducted hyperspectral imaging field verification along the entire stretch of the Patuxent River. The project was part of NOAA pilot project to determine the accuracy and limitations of various types of remote sensing to include satellite imagery and hyperspectral imagery. Duties included field coordination, the deployment and retrieval of moored in-situ monitors, physical water quality sampling at 10 locations, chlorophyll/Total Suspended Solids sampling, and vessel pilotage. Initial data received from YSI water quality monitors was transferred to NOAA Coastal Service Center within 24 hours. A final report was written and supplied to NOAA within 30 days of field completion.

United States Coast Guard, Dredging Feasibility and Impact Evaluation, Ft. Pierce, St. Lucie County, Florida. Responsibilities included assessment of Johnson's Sea grass (*Halophila johnsonii*) T&E survey, a critical habitat evaluation, analysis of government policy and protocol, identification of various dredge types to minimize benthic impact, and authorship of a technical brief to be used in determining environmental impact to benthos, Submerged Aquatic Vegetation, fisheries, and critical habitat from dredging operations.

GSA, Belle Mead Environmental Assessment (EA), Hillsborough, New Jersey. Task Manager and Senior Environmental Scientist for preparation of a NEPA-guided Environmental Assessment (EA) for the General Services Administration. Primary issues addressed were highest and best use of the property, hazardous substances and remediation, socioeconomics, land use, cultural resources, transportation, and impacts to the terrestrial environment. Duties included close coordination with client, identifying and synthesizing all existing information, identifying and analyzing environmental issues of concern associated with the final disposal and transfer of the GSA-owned Belle Mead property, public meeting attendance, analyzing the possibility of disposal alternatives, remediation, and determining no mitigating measures for the disposal process were needed.

GSA, Belle Meade, Baseline Ecological Evaluation (BEE) for Outlying Parcels, Hillsborough, NJ. Principal Biologist and BEE author that coordinated with field teams to confirm environmentally sensitive areas (ESAs), potential pathways for contaminants of concern (COC), and next steps.

Waterways Experiment Station U.S. Army Corps, Encrusting Bryozoans Pilot Study, Florida. As marine scientist, sorted and provided Quality Assurance/Quality Control for 21 samples of sediment collected from Capron Shoal located off the eastern coast of Florida in order to determine the presence of several species of microscopic, sand-encrusting bryozoans prior to beach replenishment operations. Data was further analyzed to estimate species density and substrate preference.

New Jersey South Transportation Authority, Atlantic City Expressway Widening, New Jersey. Senior reviewer and fisheries biologist that authored various sections of the Flood Hazard Permit and compliance statement for the proposed widening of 30+ miles of roadway. Key issues involved warm water fisheries, timing restrictions, and impact analysis to over 60 water bodies.

Basilone Memorial Bridge, Raritan River, Essential Fish Habitat (EFH) Assessment. As primary aquatic scientist, conducted an Essential Fish Habitat (EFH) Assessment for proposed modifications to the fender system of

the Basilone Memorial Bridge located 10.2 miles from the mouth of the Raritan River. Water quality surveys were conducted to determine the extent of saltwater intrusion in order to determine the possible seasonal presence of juvenile federally managed species.

Conectiv Power Delivery, Cardiff to Oyster Creek 230 Kv Transmission Line Construction Oversight, Pine Barrens, Burlington and Atlantic Counties, New Jersey. Supervisory field biologist that was contracted to ensure that environmental conditions of USACE and New Jersey Department of Environmental Protection Permits as well as requirements of the New Jersey Pinelands Commission and U.S. Fish and Wildlife Service were followed during Right-of-Way clearing operations and pole installation. Of particular importance was to ensure and oversee that known Threatened & Endangered habitat for swamp pink, Pine Barrens and southern gray tree frog, pine snake, corn snake, timber rattlesnake, and other flora were not impacted. Additional responsibilities included oversight of storm water/soil erosion mitigation, relocation of herpetological species within ROW, and coordination between crews, foreman, and government agencies.

Conectiv Power Delivery, Cedar to Ship Bottom Feasibility and Redesign, Manahawkin Bay, New Jersey. Project Manager that performed feasibility of a proposed bridge attachment of two transmission lines across Manahawkin Bay. Responsibilities included plan revisions, site visits, client and agency coordination, impact analysis, Essential Fish Habitat (EFH) Assessment, State and Federal permit revisions, wetland delineations, and habitat assessments for suitability for submerged aquatic vegetation (SAV) and anadromous fish species.

Genpower, Hudson Energy Submarine Power Cable Siting and Feasibility Study. As marine scientist, collected, analyzed, and prepared relevant data and studies in reference to the feasibility of routing a submarine power cable from Nova Scotia to Manhattan. Assessment of each siting included commercial and recreational fisheries, benthic/demersal/pelagic environments, essential fish habitat (EFH), threatened and endangered species, impacts to marine sanctuaries, marine ecology, lithology, sedimentology, bathymetry, identification of

sensitive habitat areas, shoreline and submarine infrastructure, sedimentology, dredge placement sites, borrow pits, firing fans, and Federal channels. Data collected was used to identify the practicability of preferred routes and plot the most cost-effective and environmentally sound cable routes.

El Paso Corporation, Blue Atlantic Transmission System, Blue Atlantic Transmission System, Nova Scotia to New Jersey. As Senior Marine Ecologist, conducted background research for determining feasibility of a proposed gas pipeline project consisting of approximately 750 miles (1,200 km) of 36-inch pipe originating from the southern coast of Nova Scotia and continuing subsea to landing points in the New York and New Jersey metropolitan areas. Duties including regular agency meetings; coordination with the Army Corps, National Marine Fisheries Service, U.S. Fish and Wildlife Service, U.S. Coast Guard, N.J. Department of Environmental Protection, New York State Department of Environmental Conservation, and the Port Authority of New York\New Jersey; and desktop research. Data collected was used to identify the practicability of preferred routes, the practicability of landing sites, and to determine the most cost-effective and environmentally sound pipeline route.

Tyco Submarine Systems Limited, Sea Turtle Protocol/ Monitoring Plan, Sea Turtle Beach Monitoring Survey for the SAm-1 Submarine Cable System Landing, Isla Verde Beach, Puerto Rico. As Project Manager, developed a Sea Turtle Protocol/Monitoring Plan and implemented the survey in Puerto Rico. Coordinated with the Department of Natural Resources, Army Corps, and U.S. Fish and Wildlife Service to obtain proper research permits, coordinated with on-site turtle monitor to ensure agency guidelines were met, and was key point of contact for all data and contingency decision-making.

Tyco Submarine Systems Limited, Environmental Assessment and Joint Permit Application, Isla Verde, Puerto Rico. Environmental Assessment and Joint Permit Application for the SAm-1 Fiber Optic Submarine Cable Landing, Isla Verde, Puerto Rico. Project Manager for preparation of an Environmental Assessment (EA) and a Joint Permit Application. Duties included identifying and synthesizing all existing information,

identifying and analyzing environmental issues of concern associated with the landing of the fiber optic submarine cable system, analyzing the possibility of alternative landing sites in the San Juan area, and recommending mitigating measures for cable placement. Presented the EA and Joint Permit Application in Puerto Rico to the appropriate Federal and Commonwealth Agencies.

Tyco Submarine Systems Limited, Environmental Impact Assessment, Puerto Barrios and Puerto Quetzal, Guatemala Environmental Impact Assessment for the SAm-1 Fiber Optic Submarine Cable Landing, Puerto Barrios and Puerto Quetzal, Guatemala. Project Manager for preparation of an Environmental Impact Statement (EIA). Primary issues addressed were impacts to the terrestrial corridor between Puerto Barrios and Puerto Quetzal and impacts to the marine environment. Duties included coordination with on-site biologists, identifying and synthesizing all existing information, identifying and analyzing environmental issues of concern associated with the landing of the fiber optic submarine cable system, analyzing the possibility of alternative landing sites in Guatemala, weekly updates, permitting, and recommending mitigation measures for cable placement.

Reliant Energy, Update to New Jersey Pollution Discharge Elimination System (NJDPES) Compliance Requirements, Compliance Manual, and Training Modules. Assisted in the senior review of past and current NJDPES permitting requirements at Gilbert Station to ensure environmental compliance. Worked with project team to develop training modules, interactive activity tables, and also reviewed updates to the current compliance manual.

Columbia TransCom Fiber Optic Cable Project: Surveys for Threatened Bog Turtle, Southeastern Pennsylvania. Environmental field scientist that conducted habitat assessments and presence/absence surveys for the federally-threatened bog turtle *Clemmys muhlenbergii* for a fiber-optic cable installation project in southeastern Pennsylvania. Survey methodology followed guidelines prescribed for Pennsylvania by the U.S. Fish and Wildlife Service (USFWS) Pennsylvania Field Office and the Pennsylvania Fish and Boat Commission (FBC). Surveys were conducted to provide

information regarding the presence or absence of bog turtles in resource crossings (areas where the project crosses a natural resource).

Reliant, 316(b) Impingement and Entrainment Studies Portland Station, Pennsylvania. Field Operations Manager for Impingement and Entrainment Studies performed along Delaware River for 1 year. Designed and implemented sampling protocol, scheduled staff, and performed studies. Trained staff on species identification and sampling protocol. Safety manager for project.

US PowerGen, 316(b) Impingement and Entrainment Studies, Astoria Queens, New York. Field Operations Manager for large-scale Impingement and Entrainment Studies performed along East River for 1 year. Designed and implemented sampling protocol and gear, scheduled staff, performed studies, and authored IMECS. Trained staff on species identification (larval, juvenile, and adult) and sampling protocol. Acting Safety Manager for the duration project.

Con Edison, Peter Cooper Village East River Sediment Sampling Program, New York, New York. Logistics Coordinator that provided USCAE permitting, homeland security, USCG coordination, sub-contractor coordination, bathymetry mapping coordination and Hypack, and subsequent marine needs for project to ensure proper collection and processing of samples with roto-sonic drilling techniques.

New York Container Terminal Sediment Project, Staten Island, New York. Field sedimentologist that assisted with the processing, coring, photography, and logging of cores. Vibracoring consisted of 20–40-foot core lengths at numerous stations.

CITGO, Mussel Bioaccumulation Study, Arthur Kill, Staten Island, New York. Chief scientist and field coordinator for bioaccumulation survey. Worked with Woods Hole personnel to determine toxicity of mussel tissue by placing caged organisms at various sites in Arthur Kill. Performed Water quality and coordinated with dive teams, USCG, and client.

Long Island Offshore Wind Park, Navigation Study, Long Island, New York. Senior marine traffic analyst and researcher that performed a navigational risk assessment relative to the proposed construction of a 40-turbine Wind Park

offshore southern Long Island. Duties included coordination with the Long Island and New York City District United States Coast Guard Marine Safety Offices, National Marine Fisheries Service, State entities, commercial fishing consortiums, and recreational facility managers; evaluation of existing recreational and commercial shipping conditions; use/frequency determination of New York/New Jersey shipping lanes by tankers, container ships, and barges; determination of vessel types and classes that transited within and adjacent to the project area; analysis of potential security/safety measures associated with pre-and post-construction activities; frequency determination and targeted species sought inshore and offshore by commercial fishermen, and impact assessment from the proposed construction to commercial shipping, recreational and seasonal vessel traffic, commercial fishing, barge movement, and USCG Search and Rescue (SAR) missions.

Williams, Sentinel Pipeline Essential Fish Habitat Assessment, New Jersey. Performed EFH Assessment for various loops of the Sentinel Pipeline project. Wrote a brief memorandum stating that EFH did not exist at the project location and received concurrence from National Marine Fisheries Service.

Williams/Transco Pipeline, Leidy to Long Island Essential Fish Habitat Assessment, New Jersey. Performed EFH Assessment along proposed pipeline crossing and at test site near Raritan Bay. NMFS concurred with findings.

Williams/Transco, EPA Macroinvertebrate Rapid Bio-assessment III Survey Ludwig's Run, Pennsylvania. Senior biologist and Project manager for macro invertebrate and fisheries surveys performed on Ludwig's Run, a small tributary of the Brandywine. Prepared the protocol, performed the field study, and submitted a final report. Survey and habitat assessment was performed in accordance with EPA Rapid Bio assessment III Protocol for Wadeable, streams, lakes, and rivers.

Iroquois Pipeline, Hand-Jetting and Thundermold Water Quality Monitoring, East River, New York. As a supervisory field biologist, performed environmental monitoring during hand-jetting operations and Thundermold testing to determine extent of benthic turbidity plume during peak ebb/flood currents. Monitoring included doing Yellow Springs Incorporated casts at various depths within the

water column and physical sampling for Total Suspended Solids. Coordinated with the pipeline field engineers and Dynamic Positioning Vessel crew in order to obtain hand-jetting position, status, and best sampling sites.

Long Island Power Authority, Long Island Offshore Wind Park, Marine Safety 3rd Party Review, Southern Long Island. Senior Marine Analyst that provided review and comments on marine safety relevant to the proposed construction of a 40-turbine Wind Park offshore southern Long Island. In addition, assisted with the preparation of an oil response plan for the Wind Park.

Conoco-Phillips, Beacon Port Clean Energy Baseline Marine/ Water Quality Survey, Gulf of Mexico, Galveston, Texas. On-site supervisory field biologist responsible for a suite of water quality sampling within the Gulf of Mexico at High Island Area 27 and West Cameron 354. Project also included ichthyoplankton surveys, otter trawls, and benthic sampling. Vertical water quality parameters were recorded with a YSI 6600 and included temperature, specific conductivity, conductivity, salinity, dissolved oxygen percentage and concentration, depth, pH, and turbidity from bottom of water column to the surface at five (5) foot intervals. "Clean hands" sampling protocol for collection of Dissolved metals (ICP/MS), Cu (II), Hg (II), Dissolved Hg, TSS/TDS, and Chloride was also performed. In addition, samples were collected for total chlorine, free chlorine, total nitrogen/phosphorous, dissolved phosphate, and chlorophyll and processed on-site. Other responsibilities included rapid mobilization coordination and field logistics, multi-departmental coordination, laboratory distribution, data analysis, and multi-departmental field coordination.

Independent Research, Natural Resource Inventory, Costa Rica. Research associate with Dr. Rudolph Arndt. Identified, observed, and logged aquatic, botanical, herpetological, avian, mammalian, and various invertebrate species throughout central and western Costa Rica. Habitats included riparian environments; dry, wet, and cloud rainforests; and coastal tide pools.

Earth Tech, Yuhas Macroinvertebrate and Water Quality Survey, Scroton,

Pennsylvania. Project Manager and Senior Technical Advisor/Reviewer that designed a Pennsylvania Department of Environmental Protection approved sampling plan based on Environmental Protection Agency Rapid Bioassessment Protocol III Procedures, implemented the program and habitat assessment, and authored the report to determine health of an 1800 foot stretch of Dry Sawmill Run. Metrics calculated included Total Taxa Richness, Mayfly (Ephemeroptera), stonefly orders (Plecoptera), caddisfly (Trichoptera) Richness, % Pollution Intolerants, Shannon Diversity, Beck's Index, and Hilsenhoff biotic index.

Sadat Consulting, Frank's Creek Benthic Survey and Habitat Assessment, Kearny, New Jersey. Program Manager and lead scientist that performed a benthic survey and habitat assessment for a stretch of tidal creek located in Kearny Marsh, New Jersey.

Conectiv Power Delivery, Threatened and Endangered Plant Survey, Pine Barrens, New Jersey. Supervisory field biologist that conducted comprehensive field survey of an existing transmission line Right-of-Way corridor and a proposed new corridor for over 110 rare, threatened and endangered plant species. Federal and State species included swamp pink (*Helonias bullata*), New Jersey rush (*Juncus caesariensis*), bog asphodel (*Narthecium americanum*), Knieskern's beaked rush (*Rhynchospora knieskernii*), fringed yellow-eyed grass (*Xyris fimbriata*), pine barren reedgrass (*Calamovilfa brevipilis*), pine barren gentian (*Gentiana autumnalis*), pine barren smoke grass (*Muhlenbergia torreyana*), curly grass fern (*Schizaea pusilla*), and red milkweed (*Asclepias rubra*).

Paramount Homes Development, State Threatened Northern Pine Snake Survey, Pine Barrens, New Jersey. Supervisory field biologist that helped construct various pipe and funnel traps set along field constructed drift fences at three (3) locations within the Pine Barrens of NEW JERSEY. Monitored traps daily for presence of northern pine snake (*Pituophis melanoleucus melanoleucus*) and recorded and identified mammalian, amphibian, and reptilian species trapped.

Griffin LLC, Hydrilla and Sediment Characterization Study, Lake Rosalie, Polk

County, Florida. Project Manager and Senior Aquatic Scientist, conducted a sediment characterization survey at 25 sites in Lake Rosalie, provided support for hydrographic survey, conducted emergent vegetative composition surveys and SAV field verification and groundtruthing for hyperspectral imaging confirmation, performed volumetric calculations based on bathymetry data and collected surface area data, and created electronic maps with GIS software (ArcView, 3-D Analyst, etc.) for bathymetry and lake profiles.

Independent Research, Southeastern Freshwater Fish Distribution Study, North and South Carolina. Research associate with Dr. Rudolph Arndt. Collected, identified, and logged aquatic and herpetological specimens for ongoing research dealing with freshwater fish distribution in South Carolina. Fish species of interest included three species of madtoms, banded pygmy sunfish, and brook silverside. Used electro-shocker and varied sampling techniques. Assisted in identifying and documenting extensions to known ranges for brook silversides.

Kinder Morgan Buckeye Pipeline, Buckeye Pipeline Essential Fish Habitat (EFH) Assessment, Rahway River, New Jersey. As Task Manager and Senior Marine Ecologist, conducted an Essential Fish Habitat (EFH) Assessment for the proposed installation of a 2.14-mile, 16-inch diameter pipeline across the Rahway River and three tidally influenced tributaries (Ralph's Creek, Marshes Creek, and Cross Creek). Conducted a field habitat assessment at each proposed crossing to determine habitat type and general habitat quality, substrate type, locations of fish passage impediments and obstructions, water quality, and extent and variance of salinity. Other duties included coordination with NMFS and USACE, desktop research, and the quick-turn, completion of EFH Assessment report.

Great Spring Waters of America, Hoffman Springs Aquatic Habitat Assessment, Lehigh County, Pennsylvania. Aquatic Biologist for Hoffman Springs habitat evaluation including fish, macroinvertebrates and water chemistry. Targeted species included brook and brown trout. Sampling equipment included D-net and electrofisher.

Conectiv Power Delivery, Barred Owl Habitat Assessment, Cedar to Ship Bottom, New Jersey. As Task Manager and Senior Environmental Scientist, conducted a habitat assessment along a transmission cable ROW within the Manahawkin Wildlife Management Area (MWMA), Manahawkin, New Jersey for the State-threatened barred Owl (*Strix varia*). Duties included the development of survey methodology modified from NJDEP and U.S. Fish and Wildlife Service guidelines, coordination with NJDEP, USFWS, and the Manahawkin Wildlife Management Area refuge manager, survey scheduling, authoring the final assessment report, and obtaining special survey permits. Surveys were conducted to provide information regarding the presence or absence of barred owl nesting habitat adjacent to proposed work.

Reliant Energy, Inc., 316(b) Proposal for Information Collection (PIC), Pennsylvania, Ohio, New York. Senior Aquatic Scientist and major contributor to the development of PICSS for three Generating Plants. To meet impingement mortality & entrainment performance goals under the Section 316(b) Phase II Rule for each station, responsibilities included development of impingement and entrainment mortality sampling plans for individual stations, historical background research and ambient data collection, and determination of site-specific Best Technology Available (BTA).

Conectiv Power Delivery, Essential Fish Habitat (EFH) Assessment, Ocean County, Manahawkin Bay, New Jersey. As Task Manager and Senior Marine Ecologist, conducted an Essential Fish Habitat (EFH) Assessment for proposed upgrades to existing transmission lines traversing Manahawkin Bay, New Jersey. Cables were proposed to be submerged underneath the substrate for 1.7 miles in EFH for 22 species and HAPC (Habitat Area of Particular Concern) for juvenile summer flounder (*Paralichthys dentatus*). Duties included coordination with NMFS, NEW JERSEYDEP, and USACE, desktop research, meeting attendance, completion of EFH Assessment report, and determination of possible seasonal presence of federally managed fish species.

Conectiv Power Delivery, Bald Eagle Monitoring, Bordentown, New Jersey. As Senior Environmental Scientist, conducted land

and boat-based monitoring of a pair of Federally-threatened bald eagles *Haliaeetus leucocephalus* nesting on Newbold Island, Bordentown Township, Burlington County, New Jersey. Monitoring was conducted from January 28 through June 28, 2002, three days a week at five stations located along the Delaware River.

Conectiv Power Delivery, Yellow Lampmussel Desktop Analysis, Bordentown, New Jersey. As Senior Aquatic Ecologist, conducted background research to determine presence and/or absence of the State-threatened yellow lampmussel *Lampsilis cariosa* near proposed 660-megawatt (MW) combined cycle, gas turbine power plant at a site along the Delaware River in New Jersey. Determined that live presence within proposed location of intake/discharge structures along the Delaware River had not been observed in past decade. In addition, evaluation of presence for State-threatened eastern pondmussel (*Ligumia nasuta*) and tidewater mucket (*Leptodea ochracea*) was also conducted. Other federally and/or State Endangered unionid species investigated included the dwarf wedgemussel (*Alasmodonta heterodon*), brook floater (*Alasmodonta varicosa*), triangle floater (*Alasmodonta undulata*), green floater (*Lasmigona subviridis*) and the eastern lampmussel (*Lampsilis radiata*).

Metropolitan Transit Authority, MTA Benthic Inventory, Manhattan to New Jersey and Brooklyn, New York.

Project marine ecologist that prepared various sections inventorying and describing benthic and nektonic biota inhabiting the lower Hudson and East Rivers, parts of Upper Bay, and Mills Basin in Jamaica Bay. He identified and assessed environmental stresses, impacts, and mitigation measures to various aquatic communities in reference to the construction of axis tunnels connecting lower Manhattan to New Jersey and Brooklyn. Screening methodology was developed and anadromous and benthic biota was stressed and discussed in detail.

Conectiv Power Delivery, Sediment Sampling, Cambridge Creek, Maryland. On-site field supervisor and senior marine ecologist that performed “clean hands” sediment sampling near an abandoned MPG site located along Cambridge Creek, a tributary located within the Chesapeake Bay Watershed. Samples were collected with an electric vibracorer to a depth of

approximately 8 feet. Samples were screened on-shore for percent recovery, soil lithology, apparent moisture content, visual and olfactory evidence of contamination and a photoionization detector (PID) was used to screen for volatile emissions.

Conectiv Power Delivery, Remote Sensing Submerged Aquatic Vegetation (SAV) Survey, Ocean County, Manahawkin Bay, New Jersey. As Project Manager and Senior Marine Ecologist, coordinated and performed SAV survey in Manahawkin Bay, New Jersey. Utilized hyperspectral imaging, groundtruthing of 20 stations, and GIS mapping to determine impacts to SAV habitat from the proposed upgrade of existing submerged transmission lines. Duties included SAV survey protocol development; field survey and groundtruthing; data analysis; coordination with National Marine Fisheries Service, Army Corps, U.S. Coast Guard, and the NJDEP; technical report completion; and the presenting of results at a regulatory project meeting.

Tyco Submarine Systems Limited, Dive Survey and Macro invertebrate Study for the SAM-I, Isla Verde, Puerto Rico.

Marine scientist that conducted a desktop baseline biological study for the SAM-1 Submarine Fiber-Optic Cable System (Sam-1) landing at Isla Verde Beach, Puerto Rico. Duties included the compilation of a comprehensive macro invertebrate species list including soft and hard corals, sponges, gorgonians, etc., the compilation of completed daily data sheets for a dive report, and coordination with the dive survey team to ensure data integrity.

Harbison-Walker Landfill, Benthic Analysis, Cape May County, New Jersey. Conducted extensive benthic field sampling on a semi-enclosed tidal creek in Cape May, New Jersey. Extensive lab research and species identification was utilized in determining the presence of freshwater organisms and the impacts of making the creek an open system. Determined that tidal inundation of the system due to anthropogenic barriers was minimal and that the creek was predominantly freshwater and supported a healthy community of freshwater organisms.

Marsh Resources, Inc., Meadowlands Mitigation Bank, Lyndhurst, New Jersey. As fisheries biologist, conducted benthic analyses on a 206-acre wetland mitigation bank in the

Hackensack Meadowlands. Responsibilities included biological inventory preparation and assessment, water quality analyses incorporating data from the YSI 6820/610DM EMS, tidal data analysis, and on-site biological resource assessments dealing with population densities of intertidal organisms. All data was combined and interpreted to illustrate the recovery rate of benthic invertebrates within a mitigation site.

Hoffman Springs, Litigation Support/Fisheries Survey Oversight, Lynn Township, Pennsylvania. Ongoing fisheries studies conducted by Hoffman Springs for brook and brown trout along Ontelaunee Creek indicated that the stream classification for this particular stretch was not of “exceptional value”. In an attempt to reclassify the stream for “exceptional value”, the Pennsylvania Fish and Boat Commission (FBC) conducted Mark/Recapture Surveys for brook and brown trout along Ontelaunee Creek located in Lynn Township, Pennsylvania. Capt. Al Modjeski of AECOM Corporation was present at each sampling event to observe/record collection and fish processing methodology to ensure that data was correct and to relay information on variations in methodology and sampling duration to that of previous studies. Based on the data collected, variations in methodology, and his oversight of sampling, it was determined that the stream was not of “exceptional value” and current plant operations could remain unchanged.

Reliant Energy, Update to New Jersey Pollution Discharge Elimination System (NJDPES) Compliance Requirements, Compliance Manual, and Training Modules. Assisted in the senior review of past and current NJDPES permitting requirements at Gilbert Station to ensure environmental compliance. Worked with project team to develop training modules, interactive activity tables, and also reviewed updates to the current compliance manual.

Athens Generating Plant, 316 (b) Compliance and Ichthyoplankton Entrainment Study, Athens, New York. Senior Aquatic Scientist that performed ichthyoplankton entrainment sampling as part of 316(b) compliance for the newly constructed Athens Generating Plant located along the Hudson River. Sampling was conducted on a 24-hour basis. A pump system

was constructed to allow for a 2-hour sampling event in which intake water was filtered through a plankton net to determine entrainment percentage. In addition, water quality was also determined.

Conoco Phillips, Water Quality Monitoring, Gulf of Mexico. On-site supervisory field biologist that conducted a suite of water quality sampling within the Gulf of Mexico, Mobile Bay Block 910. Recorded temperature, specific conductivity, conductivity, salinity, dissolved oxygen percentage and concentration, depth, pH, and turbidity from bottom of water column to the surface at five (5) foot intervals. Also used “clean hands” sampling protocol for collection of Dissolved metals (ICP/MS), Cu (II), Hg (II), Dissolved Hg, TSS/TDS, and Chloride. In addition, samples were collected for total chlorine, free chlorine, total nitrogen/phosphorous, dissolved phosphate, and chlorophyll. Other responsibilities included rapid mobilization coordination, multi-departmental coordination, laboratory distribution, data analysis, and multi-departmental field coordination. Equipment used included YSI 6920 and 650 MDS data logger, Colorimeter, Kemmerer 2.2L sampler, Peristaltic pump and “clean” ½” tubing, and a Chlorophyll filtration kit.

Meadowlands Environmental Research Institute (MERI), Meadowlands Sediment Triad Sampling and Water Quality Monitoring, Meadowlands, New Jersey. Supervisory field biologist that conducted “clean hands” sediment sampling, benthic sampling, and water quality monitoring at five (5) freshwater and estuarine marsh sites for sediment triad analysis and Ecological Risk Assessment of Meadowlands, New Jersey. Responsibilities included field coordination, sample collection and laboratory distribution, data analysis, GPS and GIS mapping, and report assistance for the first phase of the MERI Quality Assurance Project Plan (QAPP).

Iroquois Gas Pipeline, Scow Decanting and Water Quality Monitoring, Hunts Point, NY. As a supervisory, on-call field biologist, performed environmental monitoring during the decanting of 6 scows at Hunts Point, New York. Monitoring program included physical sampling for Total Suspended Solids at each scow, on-site monitoring of decanting procedures, and ensuring proper use of a water filtration system during decanting process.

Iroquois Pipeline, Turbidity Plume and Water Quality Survey, Long Island Sound, New York. As a supervisory field biologist, performed environmental monitoring during the installation of a natural gas pipeline in Long Island Sound (Northport, Long Island to Hunts Point, New York) as part of the 401 Water Quality Certificate issued by the New York State Department of Environmental Conservation. Monitoring program included defining the spatial extent of water column turbidity related to construction activities in varying sediments using an Acoustic Doppler and CTD/OBS sensors in conjunction with physical sampling for TSS. Coordinated with the pipeline field engineers and vessel captain in order to obtain barge position, status, and determine best sampling sites.

Mad River Relocation Study - Fisheries Analysis, Waterbury, Connecticut. As primary aquatic scientist, conducted a desktop analysis of the potential impacts of rerouting a segment of the Mad River located in Waterbury, Connecticut. Impacts to cold water fisheries, recreational fisheries, anadromous fish migration and spawning, macro invertebrate communities, and varied microhabitats associated with riverine ecosystems were identified and analyzed to determine the feasibility for relocation and determine minimal impacts. Possible mitigation and restoration plans for the relocated segment were proposed for the site to help promote a stable environment suitable to anadromous spawning for the Atlantic salmon upon relocation approval.

HMDC, Oritani Marsh Baseline Studies, Lyndhurst, New Jersey. As project benthic ecologist, conducted and coordinated benthic research methodology, data collection, species identification, and data analysis for a tidal wetlands mitigation site on the Hackensack River. The project is an ongoing monitoring study to determine existing site conditions and potential contamination influences.

Conectiv Power Delivery, Cardiff to Oyster Creek 230 Kv Transmission Line Construction Oversight, Pine Barrens, Burlington and Atlantic Counties, New Jersey. Supervisory field biologist that was contracted to ensure that environmental conditions of USACE and New Jersey Department of Environmental Protection Permits as well as requirements of the New Jersey

Pinelands Commission and U.S. Fish and Wildlife Service were followed during Right-of-Way clearing operations and pole installation. Of particular importance was to ensure and oversee that known Threatened & Endangered habitat for swamp pink, Pine Barrens and southern gray tree frog, pine snake, corn snake, timber rattlesnake, and other flora were not impacted. Additional responsibilities included oversight of storm water/soil erosion mitigation, relocation of herpetological species within ROW, and coordination between crews, foreman, and government agencies.

Kinder Morgan, Wetlands Delineation, Carteret, New Jersey. As senior environmental scientist, conducted wetland delineation and performed GPS duties in regards to the proposed installation of gas pipelines and tank installation within a ROW at a distribution facility.

Conectiv Power Delivery, Wetlands Delineation, Bordentown, New Jersey. As environmental scientist, conducted wetland delineation and performed GPS duties in regards to the proposed construction of power generating plant along the Delaware River.

Bell Bend Nuclear Power Plant Dredge Management Support, Susquehanna River, Pennsylvania. Project Manager and Chief Scientist that designed and implemented a sediment sampling program to determine reuse and/or placement of 17,000 – 25,000 cubic yards of sediment from a proposed cooling water intake structure. Tasks included sampling plan (SAP) preparation in accordance with Pennsylvania Clean Fill Policy, agency coordination, logistical planning, field collection and processing, data validation, and the preparation of a sediment characterization report that identified possible options for dredge material placement.

Pivotal Utility Holdings Sediment and GeoProbe Investigation, Rahway River, New Jersey. Chief Scientist and Task Manager that designed and implemented a sediment characterization and toxicity sampling program along Robinson Reach in the Rahway River. Program was designed to identify potential remediation and spatial extent of contaminants of concern (COCs). In addition, he coordinated the drilling and placement of new wells as well as used a GeoProbe in more inaccessible locations.

Reliant Energy's Inc., 3rd Party Dredging Inspection and Oversight, East River, Queens, NY. Task Manager and Senior Dredging Inspector for the dredging of Unit #1 Intake Channel at the Astoria Generating Station prior to the installation of wedge wire screens and an aquatic filter barrier for 316(b) compliance. Inspection was performed pursuant to Section 401 of the Clean Water Act and Article 15, Item 5 of the ECL. Duties included inspection of pump connections, pipes, and pumps; decant/dredge oversight; video and photographic documentation of operations; and documenting daily operations.

Liberty Natural Gas Deepwater Port (DWP) License Application, Liberty Natural Gas LLC. Senior commercial/recreational fishery economist and navigation/security assessor that co-authored Topic Reports 6 (Socioeconomics) and 10 (Safety, Security, and Navigation) as part of DWP License Application. He analyzed current fisheries, landings, and commercial/recreation vessel movement at the proposed offshore Port site. In addition, he coordinated with the NY USCG MSO, NOAA, homeland security, and various other entities to determine impacts associated with the construction of and the delivery of liquefied natural gas (LNG) to the deepwater port offshore NY/NJ Harbor.

Delaware River Shoreline Sediment Survey, Griffin Pipe. Florence, New Jersey. Senior scientist that developed and implemented a sediment survey along the Delaware River at various capped outfalls to determine extent or potential of contamination from the pipeyard.

Offshore Wind Farm Commercial Fisheries Impact Analysis, Deepwater Wind. Monmouth and Middlesex counties, NJ. Senior Scientist that provided preliminary assessment of impacts to commercial fisheries associated with the proposed construction of wind farm located offshore New Jersey. Used various data sources to identify types of fisheries present at both the preferred and alternate locations, determined gear types and number of trips to each affected statistical area, and assessed the overall impact construction would have on each identified fishery.

Tennessee Gas Pipeline, Northeast Upgrade Loops 323 and 325, NJ Permitting, No Net

Loss Plans, Highlands Application, and Threatened and Endangered Species. New Jersey Task Manager and author/co-author of No Net Loss Reforestation Plans for 5 state Parks in northern New Jersey, bald eagle report preparation and review, vernal pools, and NJDEP Letters of Interpretation and Permits. Oversaw and provided senior review for the Highlands Applicability Determination. LOIs were deemed complete within 3 days and NNL Plans were approved by NJ Parks and Forestry.

National Marine Debris Monitoring Program, Bradley Beach, NJ. Capt. Al Modjeski was an active participant and event coordinator for the Ocean Conservancy's National Marine Debris Monitoring Program (NMDMP), a five-year monitoring program funded by the U.S. Environmental Protection Agency. For five years, Capt. Modjeski and the Bradley Beach Environmental Commission, monitored a 500-meter area of beach for the study, organized monthly "beach sweeps", maintained a volunteer base consisting of local organizations such as the fishing club and school environmental club, recorded types and number of indicator items removed from each sweep, and coordinated results with the Ocean Conservancy on a regular basis. The five-year study revealed that there was an annual increase in debris of 22.5% and the leading source of debris was land-based. Leading general indicator items consisted of plastic bottles and plastic bags. The leading land-based debris item was plastic straws.

United Technologies Eco-Risk Assessment and Remedial Investigation, Windsor Locks, CT. Field Manager and supervisory biologist that led three sampling teams at various locations within and near to the United Technologies site and Bradley International Airport. In addition, he oversaw vessel movement for on-water sampling, coordinated survey with staff and sub-contractors, and performed frog and fish collection for tissue analysis and a sediment/hydric soil/and water quality survey to determine general risk to species at and adjacent to the site. Incorporated a variety of sampling techniques acceptable by the EPA.

New Jersey Calling Amphibians Monitoring Program, Monmouth County, New Jersey. Voluntary field biologist that conducted surveys for the New Jersey Department of Environmental Protection (NJDEP) inventorying

various frog species along a 10-mile route using vocalizations for over two (2) years within Monmouth County, New Jersey.

Duck Island Groundwater Monitoring, Trenton, New Jersey. Provided groundwater sampling support at various sites within Duck Island to assist in the identification of contaminant transport.

Lower Passaic River Creel Survey, CPG. Task manager and senior scientist that provided logistical support for a two-month creel survey performed from Newark Bay to River Mile 17.5 below Dundee Dam. Survey was performed to identify frequently fished areas and assess preliminary risk to anglers.

Hill Wallack Attorneys at Law, Expert Fish Testimony and Litigation Support, Hamilton Township, New Jersey. Senior Fisheries Scientist, expert witness, and co-author of a Technical Review and Assessment Report addressing permitting issues and fish passage to anadromous and warm water fisheries from the completed construction of single span bridge versus the proposed construction of a dual cell box culvert over Watering Race Branch located at the US Route 322 and US Route 50 interchange in Hamilton Township, New Jersey. Reviewed numerous documents and depositions, construction plans, and historic data to determine if client's low flow crossing design was feasible versus the permitted structure. Provided expertise in benthic communities, warm water and anadromous fish passage, regulatory compliance, construction feasibility, fish migration, essential fish habitat (EFH), and stream morphology. In addition, a habitat assessment upstream and downstream of the water crossing was conducted to determine spawning suitability for clupeid species, current speed, existing natural and anthropogenic fish impediments, water quality, and availability of forage habitat.

Hoagland Longo, Kettle Creek Habitat Assessment, Brick, New Jersey. Task manager and Senior Marine Biologist that conducted a stream characterization and habitat assessment upstream and downstream of the Brick Boulevard Kettle Creek dual culvert crossing in Brick Township, Ocean County, New Jersey. The purpose of the assessment was to determine if Kettle Creek possessed similar morphological and physical characteristics comparable to Watering Race Branch, located in

Hamilton Township, Atlantic County, New Jersey, and therefore could have similar roadway crossing culvert structures installed. In addition, analysis of results was conducted to characterize upstream/downstream habitat suitability within the stream corridor relative to warm water and anadromous fish passage and utilization for spawning.

Tioga Marine Terminal, Philadelphia, PA. Provided water quality sampling and assessment at the Tioga Marine Terminal to determine cause of sheet pile deterioration.

USPowerGen SPDES Compliance, Astoria Generating Station, Queens, New York. Senior task manager that performed in-situ water quality sampling of effluent and influent at wharf and within intakes along the East River to ensure compliance. Sampling was conducted using an Iseco autosampler over a period of 24 hours.