

GEOFFREY M. GOLL, P.E.

PRESIDENT / A FOUNDING PRINCIPAL



27

YEARS WITH
PRINCETON HYDRO

35

YEARS OF
EXPERIENCE

EDUCATION

M. Eng. Engineering Management

University of Wisconsin,
Madison
2013

B.S. Civil Engineering

Rutgers University
1990

PROFESSIONAL ORGANIZATIONS

- Continuing Education Instructor **Rutgers Office of Continuing Education**
- Member, **American Society of Civil Engineers**
- Member, **Association of State Dam Safety Officials**
- Member, **Society of Ecological Restoration**
- Member, **American Fisheries Society**
- Member, **Society of American Military Engineers**
- Member, **American Sustainable Business Council**

PROFESSIONAL CERTIFICATIONS

Professional Engineer (District of Columbia, Connecticut, Maryland, Massachusetts, Michigan, New Hampshire, New Jersey, New York, Pennsylvania, Vermont, Virginia)

EXPERIENCE

Mr. Goll is a founding Partner of Princeton Hydro and has extensive experience in geotechnical engineering, stormwater management, hydrology, floodplain hydraulics, environmental assessments, and environmental permitting; his professional background is specific to water resource and geotechnical engineering. The breadth of his experience ranges from stream restoration and modeling to the design of large retaining structures and building foundations; he has provided expert consultation, engineering design and support on a variety of projects including residential developments, solid waste transfer stations, correctional facilities, and wastewater treatment plants.

Mr. Goll has extensive experience in subsurface investigations, geotechnical design, and soils classification and engineering. He has designed and implemented over 100 subsurface investigation programs ranging from foundation investigations to septic system design, including test borings in soil, bedrock and in-lake and harbor sediment. He has designed engineered steep slopes (greater than 2:1) and retaining walls, performed slope stability analysis, and has provided on-site earthwork and compaction monitoring services. With regards to subsurface sewage disposal, Mr. Goll has progressed subsurface investigations for residential developments of up to 100 units. Mr. Goll has provided extensive subsurface investigations within the New Jersey coastline, the Coastal Plain, Piedmont, Highlands and Ridge and Valley geologic provinces. Mr. Goll has also provided forensic subsurface investigations to determine the origins of historic fills and determine original ground surface elevations to determine appropriate bearing locations for structure footings.

Mr. Goll has extensive experience in the quantification and analysis of accumulated sediment within freshwater lakes and rivers. He is also well versed in the processes of sediment transport and accumulation and has been in responsible charge for the design of over 500,000 cubic yards of dredging projects and over 1,000,000 cubic yards of sediment quantification in lakes and rivers throughout the Mid-Atlantic region. His experience also extends to harbor dredged materials where he was in responsible charge of the stabilization of dioxin-, PCB- and heavy metal-contaminated dredged materials for a Brownfield redevelopment. Mr. Goll's most important value to dredging projects is through his understanding of the spatial distribution of sediment types throughout a waterbody's environment and his ability to create technical and bidding specifications that ensures cost control of projects and eliminates the open interpretation of vertical and horizontal project excavation limits via strict survey control.

- Geotechnical Engineering and Subsurface Investigation
- Stream and River Restoration
- Stormwater Management
- Dredging
- Flood Hazard Area and Floodplain Modeling
- Dam Restoration and Removal
- Wetland Mitigation Design and Implementation
- Regulatory Permitting

- Construction Administration
- Expert Witness/Forensic Investigation for Water Resource-Related Litigation
- Assembling Project Partners for Water Resource Restoration Projects

PROFESSIONAL TRAINING

US SBA (NJ), Emerging Leaders Initiative, Class of 2017

Rosgen Level I

REPRESENTATIVE PROJECTS

US Army Corps of Engineers, NAN | Periodic Levee Inspections in North Atlantic District

Various Locations in VT, CT, NY, & NJ (2019)

Mr. Goll served as the Principal-in-Charge for the rigorous periodic inspections of levee systems at Oakwood Beach, Staten Island, NY; Holland Patent, Thompson Creek, NY; Pemberwick, Byram River, CT; Bound Brook, Bound Brook, NJ; and Bennington, Roaring Branch, VT. Combined, these systems consist of 3.4 miles of levee, 0.6 miles of floodwalls, 0.1 miles of channels, 3 pump stations, 29 drainage structures, and 1 tide gate. Mr. Goll was responsible for contract management and input on geotechnical issues as they arose on the project.

US Army Corps of Engineers, NAN | Periodic Levee Inspections on the Elizabeth River

Elizabeth, NJ (2018)

Princeton Hydro performed inspections of the Elizabeth River Levee System, which consists of over 17,000 linear feet of levee embankment, over 1,400 linear feet of floodwall, four pumping stations, 29 interior drainage structures, five closure gates, and various other facilities. Princeton Hydro identified, evaluated, and rated the state of each of these system elements. As part of this field inspection task, Princeton Hydro utilized state-of-the-art tablet and GIS technology in order to field locate inspection points and record item ratings. This digital collection of data helps expedite data processing and ensures higher levels of accuracy. As Principal-in-Charge, Mr. Goll was responsible for contract management, and input on geotechnical issues, as they arose on the project.

US Army Corps of Engineers, NAN | Green Brook Flood Control Project (Segments C3/C4)

Middlesex County, NJ (Ongoing)

Mr. Goll served as Principal-in-Charge for the design, permitting, and construction administration for Segments C3 & C4 of the Green Brook Flood Control Project located in the Raritan River Watershed. The project involved the design of floodwall, closure gate, and earthen embankment. This contract, conducted through the USACE, NY District, is in design. Mr. Goll provides overall contract management, reviewing schedules, deliverable milestones, and client management.

US Army Corps of Engineers, NAN | Levee Screening Tool for 25 Levee Systems

Various Locations in CT, MA, NJ, & NY (2016)

As Principal-in-Charge and Project Manager, Mr. Goll oversaw the screening of 25 levee systems in the NY District using the USACE Levee Screening Tool to assess the potential failure risk and assign a risk index to the systems. Mr. Goll was responsible for the reviewing the geotechnical related components, entered data into the proprietary software, and was the direct facilitator of 12 of the systems. He reviewed the results with the LSO and attended meetings with the National Cadre of experts and Sr. Oversight Group (SOG).

Westtown School | Westtown Lake Dam Restoration and Lake Dredging, Westtown Township

Chester County, PA (2015-2016)

Mr. Goll was in responsible charge of the design, permitting and construction inspection and administration for the restoration of this dam and sediment removal. The dam's outlet works were completely replaced with an emergency spillway added to the project. To increase flood storage the earthen embankment as also elevated three feet. To increase capacity of Westtown Road immediately downstream of the project, Mr. Goll worked with PennDOT and designed a 12.5 ft wide by 4.5 ft high culvert to replace the existing corrugated metal elliptical 42" wide by 36" high pipe. The lake was dredged of 56,000 cubic yards of sediment. Mr. Goll managed the day-to-day construction inspection program, overseeing field technicians for structural and geotechnical inspection, permit compliance, wetland mitigation implementation.

Buckingham Township | Stormwater Retrofit and Wetland Construction

Buckingham Township, Bucks County, PA (2010)

Princeton Hydro designed a comprehensive wetland restoration, creation, and water quality management project for Buckingham Township. Mr. Goll was the Engineer-of-Record and Principal-in-Charge for this stormwater management design and wetland mitigation project constructed concurrently with a plan to rebuild the existing stormwater management basin in a manner that better integrates the facility into the landscape and improves water quality management. The project has served as an example to the Township and other local Townships to illustrate how stormwater facilities can be integrated into the natural landscape.



NJM Insurance Group | NJM Regional Operations Facility Stormwater Management System
Hammonton, NJ (2010)

Mr. Goll was the Engineer-of-Record for the stormwater management design and geotechnical investigations for a 250,000 square foot corporate campus on a 55-acre site. Due to a number of site physical constraints, the site was designed to contain nearly all stormwater runoff on site, up to and including the 100-year frequency, 24-hour duration storm event. Site geotechnical investigations included investigations for building foundations, parking lot and drive subgrades, and stormwater infiltration with all laboratory testing completed in-house.

Municipality of Princeton | Mt. Lucas Road Improvements, Stormwater Management Design
Princeton, NJ (Ongoing)

Mr. Goll was the Principal-in-Charge for the stormwater management design project of 1.1 miles of Mt. Lucas Road for the Municipality of Princeton. The project includes the resurfacing and pedestrian path expansion/widening along the road. Princeton Hydro is designing the project in accordance with the recently updated Stormwater Management Rules (NJAC 7:8) Green Infrastructure criteria. The efforts include subsurface investigations and recharge testing, hydrologic modeling, design of the stormwater BMPs, and application for NJDEP Land Resource Protection permits.

USACE, NAN | USACE Spring Creek South Ecosystem Restoration & Coastal Risk Management
Burlington County, NJ (2007)

This FEMA-funded restoration project involved 243 acres of maritime habitat at Spring Creek South, a component of the Gateway National Recreation Area. In addition to providing ecological uplift via tidal marsh restoration, freshwater wetlands, and other maritime upland communities, this project aims to provide coastal storm risk management (CSRM) and coastal resiliency of the Howard Beach neighborhood of Queens using Natural and Nature-Based Features techniques. As Contract & Project Manager, Mr. Goll oversaw all engineering design aspects of this project and provided oversight of the subsurface investigation and geotechnical laboratory testing.

Musconetcong Watershed Association | 5 Musconetcong River Dam Removals
Morris, Warren, & Hunterdon Counties, NJ (2003-2019)

Mr. Goll served as the Principal-in-Charge for 5 dam removals (Gruendyke Mill Dam, Seber Dam, Finesville Dam, Riegelsville Dam, and Hughesville Dam) which included the investigation of sediment quality, composition and quantity, hydrologic and hydraulic modeling, the design of a hydraulic dredging component to manage sediment prior to removal, the design of fish passage structures to facilitate the passage of river herring, shad, and American eel. Mr. Goll oversaw sediment quantification and analysis, H&H modeling, demolition design, preparation of engineering plans, applications to NJDEP, Warren County (bridge and road opening approvals), Soil Conservation and plan approvals.

The Nature Conservancy | Columbia Lake Dam Removal and Stream Restoration
Knowlton Township, Warren County, NJ (2016-2019)

Mr. Goll was the Client Manager and Engineer-of-Record for this \$6 million dam removal and river restoration, including the removal of a 110-year-old hydroelectric dam on the Paulins Kill and the restoration of over 1.5 miles of river. Mr. Goll was in responsible charge of the initial sediment borings, documentation review, and hydrologic and hydraulic modeling. He oversaw and designed the project, prepared dewatering, adaptive management, and sediment management plans. Mr. Goll provided construction administration review to ensure the project was being constructed in accordance with the plans, specifications, and permit conditions.

Wildlands Conservancy, Inc. | Bushkill Creek, Little Lehigh, and Jordan Creek Dam Removals, Easton, PA (2018-Present)

Mr. Goll served as the Engineer-of-Record for eight consecutive sequential barrier removals for the Allentown-based environmental nonprofit Wildlands Conservancy. The removal of the dams reconnected miles of river, enhanced aquatic habitat, and improved adjacent parkland and recreational fishing in the economically stressed, urban communities of Allentown, PA.

Mercer County Park Commission | Dredging of Miry Run – Dam 21 Lake, Hamilton, NJ (2019-Present)

Mercer County sought to conduct maintenance dredging for a portion of the impoundment (Miry Run) behind Dam 21. The focus of the dredging is to remove sediment in the vicinity of the water trail. Princeton Hydro was contracted to author a sediment management plan, collect samples, conduct laboratory analysis, develop engineering plans, prepare and submit all NJDEP regulatory permitting material, prepare technical specifications, perform bid administration, and lead construction administration.



and observation services. Mr. Goll is serving as the Engineer-of-Record for this project and reviewed the final engineering plans, coordinated with the Project Manager and project team, and led client coordination meetings.

Princeton Walk Homeowners Association | Princeton Walk Dredging

Princeton, NJ (2017-2021)

Mr. Goll provided overall project management as the Engineer-of-Record for this project involving the dredging of 7,500 cubic yards of accumulated sediment from a 4-acre lake known as Promenade Boulevard Pond. Broken into three phases, the project involved data collection activities; preparation of the engineering design plans and permit materials; and bidding, construction administration, and oversight. As Engineer-of-Record, Mr. Goll provided technical review of the dredging specifications, coordinated with the Project Manager and project team, conducted construction administration, and performed inspection of the site.

Abington-Reldan Metals | Building Addition Geotechnical Investigation

Fairless Hills, PA (2016)

Mr. Goll was Principal-in-Charge of this project in which Princeton Hydro was contracted to conduct a geotechnical investigation and foundation design for a 45,000 square foot building addition for Abington Reldan Metals. The geotechnical investigation consisted of a review of USDA Soils, USGS Surficial Geology, and USGS Bedrock Geology; development of a Geotechnical Boring Plan Design; field investigation; soils testing; subsurface profile development; shallow foundation system analysis; bearing capacity and settlement analysis; footing design; and IBC Seismic Site Characterization. Mr. Goll was responsible for overseeing all aspects of this project and acted as the point of contact for the client.

Orleans Homebuilders | Earthwork Monitoring and Materials Testing for Multi-family Residential Development

Lambertville, NJ (2008)

Princeton Hydro was contracted to provide earthwork monitoring and materials testing for a 129-unit, multi-family residential development. The site required fills in excess of 20 feet and cuts through bedrock of 10 feet. Princeton Hydro's role was to complete laboratory testing of soils, in-field compaction rate testing, and observation of placement and excavation of fills.

Tredyffrin Township | Sinkhole Remediation in Right-of-Way

Tredyffrin, Chester County, PA (2007)

Mr. Goll was in responsible charge of the investigation and remediation of karst induced sinkhole activity within the right-of-way of residential development. The cause of the sinkhole was the migration of stormwater through overburden, residual soils into a solution cavity in the underlying carbonate rock formation. To find the "throat" of the cavity, he observed the progression of a test pit to expose the bedrock and cavity, and then made recommendations for placing concrete to close off the void in the rock and directed the backfilling of soil in controlled, compacted lifts.

Harbour Mansion HOA | Seawall Reconstruction for Collapsed Parking Lot on Oceanfront

Long Branch, NJ (2013)

Mr. Goll served as Engineer-of-Record and Project Manager for this post- Hurricane Sandy recovery project. As a result of the complete destruction of the timber seawall facing the Atlantic Ocean, Princeton Hydro was brought on as sub consultant to the Falcon Group, a civil engineering firm, to provide geotechnical engineering, regulatory permitting services, and construction observation service. Mr. Goll oversaw the subsurface investigation program, sheet pile design, and plan preparation. He also managed the regulatory permit application process and interacted with the firm's regulatory compliance specialists and biologists during the preparation of the applications and compliance statements. After the start of construction, Mr. Goll was the client contact and worked with field staff during inspections.

GreenTrust Alliance | Habitat Restoration through Thin-Layer Placement of Dredged Material

Borough of Avalon and Downe Township, NJ (2017)

For this project, Mr. Goll served as the Contract Manager for the projects involving the dredging of navigation channels and disposal of sediment via beneficial use. This project focused on the restoration and enhancement of interior high and low marsh, coastal dunes, and beach habitats to counteract subsidence and sea level rise. The projects were undertaken at the direction of the NJ Division of Fish and Wildlife as pilot demonstrations to determine the feasibility of beneficial reuse of thin layer dredged material placement to restore degraded wetlands. As the Contract Manager, as well the Principal-in-Charge, he provided engineering oversight, reviewing schedules, coordinating with subcontractors, and contract administration.



PRESENTATIONS AND PUBLICATIONS

Goll, Geoffrey (Adjunct Instructor), 2022-Present, Dam Removal Webinar, Rutgers University Office of Continuing Education, New Brunswick, NJ

Goll, Geoffrey, (Presenter), April 15, 2024, Dam Removal is Not Just about Dam Removal, Free Flow Conference, World Fish Migration Foundation, Groningen, Netherlands.

Goll, Geoffrey (Panelist), April 16, 2024, Prioritization of River Restoration and Dams Workshop, Free Flow Conference, World Fish Migration Foundation, Groningen, Netherlands.

Dam Removal and River Restoration in the Urban Environment (Presenter), October 2, 2023, Society or Ecological Restoration, Mid-Atlantic Conference, Lyndhurst, NJ.

Goll, Geoffrey (Plenary Speaker), Dam Removal & the Infrastructure Investment & Jobs Act (IIJA): an Opportunity to remove Flood Hazards and Restore Resiliency, National Dam Safety Program Technical Seminar, February 23, 2022, Emmitsburg, MD.

Goll, Geoffrey M. (Presenter), October 6, 2017, Case Study Reviews of Hughesville Dam (Musconetcong River) and Darby Creek Dam removal (Delaware County, PA), Dam Removal and Fisheries Restoration Workshop, Duke Farms, Hillsborough, NJ.

Goll, Geoffrey M. (Keynote Speaker), August 15, 2017, Getting from Technical Expert to Engineering Leader – a Transition, University of Wisconsin, Madison, Master of Engineering in Engineering Management, Cohort Summer Residency program, Madison, WI.

Goll, Geoffrey M. (Presenter), April 4, 2017, Water Management at NJM, Sustainable Business Initiative: Creating Sustainable Businesses in New Jersey, NJ Manufacturers Corporate Campus, Hammonton, NJ.

Goll, Geoffrey M. (Instructor), September 16, 2016, Dam Removal Technical Track Full Day Program, Association of State Dam Safety Officials, National Conference, Philadelphia, PA.

Goll, Geoffrey M. (Presenter), Green Infrastructure Stormwater Management Techniques (September 18, 2015), Montclair State University Continuing Education Program for Environmental Professionals, Montclair, NJ

Goll, Geoffrey M. (Presenter), Advanced Stormwater Management (2014 to present). Rutgers University, Office of Continuing Education, New Brunswick, NJ

Goll, Geoffrey M. (Presenter), Lake Management Course; Dredging and Dam Safety Compliance sessions (1996 to present). Rutgers University, Office of Continuing Education, New Brunswick, NJ.

Goll, Geoffrey M. (Presenter), Pond Management, Construction and Restoration; Dredging and Dam Safety Compliance sessions (2000 to present). Rutgers University, Office of Continuing Education, New Brunswick, NJ.

Goll, Geoffrey M. (Presenter and Panel Discussion), March 9, 2012, NJ Future Redevelopment Forum 2012, Treating Flooding as the "New Normal", New Brunswick, NJ.

Goll, Geoffrey M. (Instructor and Course Coordinator), September 29, 2011, Dam Removal Technical Track Half Day Program, Association of State Dam Safety Officials, National Conference, Washington, DC.

Goll, Geoffrey M. (Instructor), September 20-22, 2010, Dam Removal Case Studies, The University of Wisconsin, Madison, Succeeding with a Dam Removal Project, Philadelphia, PA.

Woodworth, Paul, Galster, Josh, Wyrick, Josh (Presenter), Goll, Geoffrey M. (Presenter), May 18, 2010. Dam Removal: Adaptive Management & Bed Sediment Monitoring Before and After, ASCE, Environment and Water Resource World Congress 2010, Providence, RI.

Goll, Geoffrey M. (Presenter), Paist-Goldman, Mary, May 18, 2010. Case Study: Preparing for Dam and Barrier Removals along the Darby Creek, ASCE, Environment and Water Resource World Congress 2010, Providence, RI.

Goll, Geoffrey M. (Author and Presenter), May 18, 2010. Sediment Management and Dredging for Dam Removal, ASCE, Environment and Water Resource World Congress 2010, Providence, RI.