

Patrick McHugh

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Summary

Recent Bachelors of Science graduate with extensive education and design experience in surface/groundwater hydrology, drinking/wastewater treatment, and brownfield remediation.

Education

University at Buffalo, The State University of New York (May, 2020): Bachelors of Science, Environmental Engineering, Magna Cum Laude (3.53/4.00).

- Relevant Coursework: Engineering Design Capstone, Groundwater Engineering, Water Treatment Engineering, Hydrologic Engineering, Ecological Engineering, Brownfield Remediation, Soil Mechanics, Mechanics of Solids, GIS and Engineering Statistics.

Professional Experience

Sustainability Analyst – Gibraltar Industries, Buffalo, NY (May 2019 – Present)

- Conducted evaluation of Gibraltar Industries' forty worldwide business units (present valuation at one billion dollars) to determine cumulative environmental footprint.
- Created and managed internal sustainability metric reporting system by standardizing footprint reporting methodologies and centralizing data.
- Formulated targeted recommendations to reduce footprint by 20% with high reduction to cost ratios.
- Improved and edited Code of Ethics, Vendor Terms of Service and related widely referenced documents.

Engineering Projects

Remedial Design of The Former NuHart Plastics Manufacturing Site, Spring 2020

- Prepared a comprehensive conceptual site model for a forty-three thousand sq. ft. facility located on a heavily contaminated two-acre area using limited Phase II investigation data.
- Determined remedial action objectives (RAOs) and designed five remedial alternatives.
- Performed detailed calculations to determine water treatment, excavation, and other site requirements; present value cost expectations for each remedial alternative.
- Analyzed remedial alternative expectations, feasibility and compliance with Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) in a comprehensive feasibility study.

Design of Town of New Paltz Drinking Water Treatment Plant, Fall 2019

- Designed an entire drinking water treatment plant for a town of fourteen thousand residents rated for two million gallons per day while accounting for local socioeconomic status, composition of source water, industrial usage and other variables.
- Produced and presented a comprehensive proposal detailing plant design specifics and present cost estimations.

Professional Memberships

- Order of the Engineer
- New York Water Environment Association (NYWEA), student member of the Western chapter.

Additional Skill Sets

Design Programs: Autodesk Revit, Surfer, Visual AEM, MODFLOW, EPA SWMM, HEC-HMS, ArcGIS Pro

Computer skills: Proficiency in Microsoft Word, Excel, Power Point, Outlook

Programming Languages: MATLAB, Maple

Communication skills: **Excellent with** written, interpersonal presentations, Zoom/WebEx, Panopto