Elsa S. Freeborn

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**Summary of Qualifications\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

* Adept with engineering drawings and principles, logical approach to problem solving and projects, and strong ability to present design concepts
* *Certifications:* OSHA HAZWOPER, SCUBA
* Sitting for the FE in Spring 2018
* Familiar with AutoCAD, Python, ArcGIS, Surveying Equipment; Proficient in Microsoft Office
* *Relevant coursework includes:* Surveying, Remote Sensing, Ecological Engineering, Coding, Fate and Transport, Fluid Mechanics, Hydrology and Hydraulics, Water and Wastewater Treatment

**Education\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**State University of New York College of Environmental Science and Forestry (ESF)**Syracuse, NY

Bachelor of Science: *Environmental Resources Engineering* | Minor in *Renewable Energy* *December 2022*

**School of International Training (SIT)**Iceland

*Iceland: Renewable Energy, Technology, and Resource Economics* *June-August 2022*

**Relevant Experience\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Nelson Swamp Recreation Trail**, ESF

*Senior Capstone Project: Project Manager September 2021-Present*

* Design and produce a recreational trail design for Town of Nelson
* Develop a Project Execution Plan, Basis of Design Report, and present the final design
* Collaborate with a team to create an ADA compliant trail and parking lot design
* Unitize AutoCAD, TR55, surveying equipment, and DEC and DOT contacts

**Economic Feasibility of Implementing a Hydropower Plant**, SIT

*Independent Student Researcher* *June-August 2022*

* Performed an economic analysis of implementing a hydropower plant on the pipeline from Hellisheidi Geothermal Power Plant to the city of Reykjavik. Used cost benefit analysis to evaluate feasibility
* Computed the benefits of the implementation of a hydropower plant based on various O&M costs, input costs, expected output, wrote a research paper, and presented the material in front of my peers
* Reverse engineered the economic parameters in which the hydropower plant should be implemented as well as feasible costs for the project

**SUNY Research Foundation**, Randolph, NY

*Research Aide May-September 2021*

* Collected data for Dr. Melissa Fierke in her Emerald Ash Borer (EAB) Study in Randolph, NY
* Monitored the spread of EAB parasitoids in woodlots as well as determined the rate at which EAB larvae bore into ash saplings

**Leadership, Volunteer Experience, and Campus Involvement\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Empire Forester (ESF Yearbook)**,*Editor* *August 2022-Present*

**New York Water and Environmental Assoc.**, *Secretary* *August 2022-Present*

**Environmental Resources Engineering** Club, *Active Member*  *August 2021-Present*

**Leadership Empowerment Retreat** , *Participant*  *September 2020*

**Additional Experience\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Carrier Dome**, Syracuse, NY, *Dome Operations November 2020-Present*