Lydia Madeleine Karlheim, M.S., E.I.T

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OBJECTIVE

To obtain a full-time position in the field of Civil and Environmental Engineering

EDUCATION

Master of Science in Civil Engineering (August, 2012) Cumulative GPA: 3.59
University of Minnesota (UMN), Twin Cities, MN
Specialization: Environmental & Water Resources Engineering
Selected Coursework: Environmental Mass Transport, Unit Operations Theory, Assessment & Diagnosis of Impaired Waters, Parameter Estimation, Fluid Dynamics, Hydrologic and Water Quality Field Methods, Principles of Waste Management, Ecological Engineering Design

Bachelor of Science in Civil Engineering (May, 2011) Major GPA: 3.78 Cumulative GPA: 3.57
The Pennsylvania State University (PSU), University Park, PA
Specialization: Water Resources Engineering
Selected Coursework: Open Channel Hydraulics, Water Resources Engineering, Environmental Engineering, Water & Wastewater Treatment, Fluid Mechanics, Soil Mechanics, Concrete Analysis

Minor: Engineering Leadership Development
Selected Coursework: Leadership Principles, Technology Based Entrepreneurship, Global Engineering, International Practicum, Global Resource Challenges

RESEARCH AND PROFESSIONAL EXPERIENCE

Graduate Student Research through the Minnesota Department of Agriculture (MDA) *(March – August 2012)*
- Designed a constructed wetland for the treatment of high nutrient concentrations in agricultural runoff water
- Interacted with local government officials, landowners, and University researchers to meet stakeholder needs
- Wrote a preliminary water quality monitoring plan to assess wetland treatment efficiency post-construction

Program Coordinator, Innovation Fellows Program, Medical Devices Center, UMN *(Part time: January - August 2012)*
- Responsible for planning and coordinating operational facets of the Innovation Fellows Program

Leadership Principles Teaching Assistant *(Spring 2011)*
- Assisted Professor with instructional responsibilities
- Graded papers and homework assignments

Penn State ELDM, Engineering Leadership Development Intern *(Summer 2010)*
- Researched and benchmarked existing liquid and solid-phase chlorinator designs
- Designed a venturi driven liquid chlorinator for attachment to existing pipelines in the developing world
- Completed a calculation to determine the pressure differential needed to draw chlorine into the water pipe
- Traveled to Morocco via a case study to determine pump specs, storage tank capacity for implementation

Exelon Nuclear, Mechanical/Structural Design Group Intern *(Summer 2009)*
- Completed a calculation merger to analyze the amount of usable volume in the diesel fuel oil storage tank
- Helped design supports for pressurized air tubes running throughout the plant

Dalian Fuyou Group Enterprises, Inc., Engineering Intern in China *(Summer 2008)*
- Interacted and worked with engineers in the office and during field visits to steam plants and project sites
- Taught English at a Middle School partnering with Outreach Division of Fuyou Group Enterprises, Inc.

Hammond Model Shop, Assistant *(January 2008- May 2011)*
- Oversaw use of machine shop tools to ensure the safety of students and equipment
- Assisted students working on engineering projects with concepts and issues of building

COMPUTER EXPERIENCE
- Microsoft Office, DRAINMOD, R, HEC-RAS, C++

PROFESSIONAL CERTIFICATIONS, AFFILIATIONS AND ACTIVITIES

Engineer-in-Training (EIT) Certificate, State of Pennsylvania, April 2010

CISV Village Leader in Norway (*Summer 2011)*
- Volunteered as a leader in a multicultural children's camp aimed at building communication and global friendship

American Society of Civil Engineers (ASCE) PSU Student Chapter Officer *(Fall 2009 – Spring 2011)*
- Planned ASCE events and career fairs to connect student members with each other and professionals in the field

Women in Engineering Program Girl Scout Saturdays, Group Leader
- Facilitated science projects and activities designed to expose young girls to future careers in science and engineering

References available upon request