

Maartje L. Melchiors, MSc.

2149 Shy Bear Way NW, Issaquah, WA 98027 Tel. (802)399-9002 mmelchiors@gmavt.net

Geologist/GIS Analyst with excellent data management and analytical skills. Applies academic knowledge and field experience to complete high quality projects. Recognized for rigorous experimental design, critical thinking processes and professional integrity. Currently seeking an employment opportunity in geotechnical or environmental consulting.

“Maartje is an outstanding contributor to the organization. She is exceptionally intelligent, highly organized, and results oriented. In addition to her high learning agility and impeccable attention to detail, her professional attitude and personable nature make her a delight to work with”.
- *Manager Global Compliance, Alcon Laboratories, Fort Worth, TX*

RESEARCH HIGHLIGHTS

Texas Christian University, Fort Worth, TX

July 2010 – May 2013 (2 years, 10 months)

Department of Geology

Geomorphology study of the Brazos River, TX

Sediment transport evaluation

Assessment of sediment transport rates through sampling of bedload and suspended sediment. Completed turbidity studies to show suspended load over a range of flow conditions.

ArcGIS analysis

Imagery analysis to understand changes in channel bar morphology pre- and post-dam construction. Established volume and area comparisons for primary channel bar structures.

Field surveying

Mapped short term changes in river channel and bar morphology.

TCU-NextEra Wind Research Initiative, Fort Worth, TX

Wind energy development research

Statistical analysis

Determined population sentiment on new wind farm construction in Texas, Kansas and Iowa through analysis of perception surveys.

ArcGIS analysis

Mapped distribution of survey data across the study areas. Determined if proximity or social demographics influenced support for new construction.

Database management

Responsible for managing all concurrent studies.

University of Vermont, Burlington, VT

August 2006 – May 2009 (2 years, 9 months)

Department of Geology

Climate study for eastern regions of the Canadian High Arctic

Dendrochronology research

Developed a modified technique for dwarf shrub samples, *Cassiope tetragona*. Analyzed growth patterns of >200 individual samples.

Stable isotope analysis

Determined carbon ($\delta^{18}C$) ratios for >200 study samples.

TECHNOLOGY & SOFTWARE APPLICATIONS

Field equipment: Leica TS02 Flexline Total Station, Leica Scan Station c10, Trimble GeoXH, AllegroCX
ArcGIS 10, Kingdom, RockWorks, Adobe Photoshop, Illustrator, MS Word, Excel, Outlook, PowerPoint.

EMPLOYMENT

TCU-NextEra Wind Energy Research Initiative, Fort Worth, TX GIS Analyst and Data Coordinator	05/2011 – 05/2013
Alcon Laboratories, Fort Worth, TX Trade Compliance Intern	04/2012 – 12/2012
Texas Christian University, Department of Geology, Fort Worth, TX Geology Teaching Assistant	07/2010 – 05/2012
University of Vermont, Department of Geology, Burlington, VT Research Assistant	01/2007 - 05/2009
Stauff Corporation, Waldwick, NJ Marketing and Administrative Coordinator	08/2004 – 08/2006

LANGUAGES

Dutch, German, English - fluent

PRESENTATIONS

AAG Annual Meeting, New York City, NY, 2012

Title: Assessing sediment dynamics and channel bar response in the Brazos River near Glen Rose, TX.

Texas Christian University Research Symposium, 2011

Title: The impact of impoundment on sediment transport and channel bar migration.

University of Vermont Research Conference, 2008

Title: Redox chemistry and internal nutrient loading mechanisms across the sediment-water interface in Lake Champlain.

ADDITIONAL RESEARCH EXPERIENCE

Texas Commission on Environmental Quality (TCEQ)

Geological Assistant

Detailed analysis of the local geology and aquifer extent in Barksdale, TX.

American Institute of Archaeology

Archaeological Field Assistant

Mapped and excavated early Woodland sites at Lenape Meadow, New Jersey.

New Jersey Archaeological Society

Archaeological Field Assistant

Excavated 18th century barn foundations at the Abraham Staats House, New Jersey

EDUCATION

MSc. Geology, Texas Christian University (GPA 3.94), 2012

B.A. Geology, University of Vermont, 2008

AWARDS

TCEQ EnviroMentor Award, environmental research 2012

Charles Doll Award, outstanding graduating senior in Geology 2008

Hawle Mudge Research Award, research excellence in Geology 2007

George Bunker History Scholarship, academic achievement 2004