William Behm (he/him)

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Education

B.A. in Conservation Biology May 2022
Middlebury College, Middlebury, VT GPA: 3.72/4.0 *(Magna cum Laude)*

Professional Experience

GIS & Field Science Technician 11/2023 – Present
LandWEB, Burlington, VT Full-time

- Coordinated technical and scientific resources to deploy LandWEB's biomass modeling system for a partner cooperative of 13 organic farms throughout Vermont.
- Served as GIS lead for LandWEB and their partner cooperative – managing all digital products and addressing mapping needs of farmers and land managers.
- Wrote abstract, flexible python modules for geospatial data management and analysis across projects.
- Operationalized a non-functioning digital soil mapping system consisting of a hydraulic soil corer, sled mounted electromagnetic sensor, and digital penetrometer - including hardware updates and software for data post-processing and visualization.
- Mapped over 200 acres of soil, then created and delivered results to farms in a condensed time frame.
- Automated post-processing and developed visualization workflows for field data.
- Assisted grant writing and project management.

Field Science Crew Member 11/2022 – 11/2023
LandWEB, Burlington, VT Full-time

- Processed 400+ *in situ* samples of biomass in the field and laboratory to develop and train biomass models.
- Completed 400+ samplings of a complex suite of biophysical variables, including Leaf Area Index, Green Chlorophyll Index, photosynthetically active radiation, saturated hydraulic conductivity, volumetric water content, soil texture, and soil compaction.
- Resolved hardware/software issues in the field, and maintained a set of advanced environmental sensors in a resource-constrained environment.
- Analyzed biomass data to identify inefficiencies and sources of error in field protocols.
- Analyzed leaf area index data to understand how measurements are affected by heterogeneous forage canopies.
- Scripted complex GIS workflows with python to scale production of data products for 13 organic farms.

Resilient Waters Intern 06/2022 – 09/2022
The Nature Conservancy, Minneapolis, MN Full-time

- Coordinated and completed field data collection for plant community assessments and stream surveys at restoration sites.
- Compiled a report detailing existing assessments and proposed restoration strategy for a stream reach in one of the chapter's priority conservation areas.
- Performed field data entry and analysis using RStudio, standardized data collection, and wrote a corresponding R script to improve efficiency of basic plant community surveys.
- Assisted carbon flux data collection for ecohydrological modelling and carbon storage research in restored peatlands.
- Completed field data collection, restoration monitoring, and seed collection at prairie preserves and restoration sites.
- Performed GIS analysis in ArcGIS Pro and Google Earth Engine to assess stream morphology and riparian buffer condition.
- Restructured and managed spatial data in TNC's GeoCloud.
- Produced high quality cartographic products for reports and outreach events.
- Participated in indigenous-led field training on assessment and harvesting of wild rice.

GIS Intern 06/2021 – 09/2021

NOAA/Oregon Department of State Lands, Charleston, OR Full-time

- Quantified land cover change from 1939 to 2016 in an estuarine salt marsh by performing georeferencing, image classification, and change detection on 7 historic aerial images.
- Interpreted and visualized results to determine historic drivers of land cover change within the marsh.
- Formally documented and presented methods and findings for application to the rest of South Slough's archive of historic imagery.
- Completed biological, geographic, and geologic fieldwork, including leveling elevation surveys, Real Time Kinematic data collection, GPS static surveys, biomonitoring for endangered species, sediment coring, invasive species management, as well as eelgrass and sea level rise monitoring.

Field Monitoring Intern Summers 2019, 2020

Center for Coalfield Justice, Washington, PA Full-time

- Organized and initiated implementation of a regional water quality monitoring program.
- Performed qualitative monitoring of two streams for coal mining subsidence in Ryerson Station State Park.
- Assisted on an as-needed basis with economic and social justice campaigns.
- Published weekly updates on coal mining/hydraulic fracturing permit activity.
- Analyzed Greene County's Comprehensive Plan Draft, (specifically its language for future industry buildout/environmental concerns) and prepared educational materials for outreach events and public comment.

Bluegrass Musician & Band Manager 01/2021– Present

Otter Creek Bluegrass, Burlington, VT Part-time

- Started a Burlington-based bluegrass band, growing a creative passion into a formal entity recognized by the community .
- Coordinated and played paid shows across five states.
- Developed the band's digital strategy by establishing and maintaining the band's website, Soundcloud, and social media presence.

Leadership Experience

Volunteer Pole Vault Coach Fall 2022 – Present

Middlebury College, Middlebury, VT Part-time

- Oversees development of 10 collegiate athletes
- Communicates complex techniques in concrete, creative ways to athletes with varying experience levels

Pole Vaulter & Track & Field Captain Fall 2018 – Spring 2022

Middlebury College, Middlebury, VT

- Men's Track and Field NESCAC Champions 2019.
- Committed ~17 hours per week to training and administration.
- Regularly qualified and competed as an individual for regional competition.
- Served as a team captain during Winter and Spring 2022 seasons, collaborated with other team captains to organize a training trip to San Diego for over 100 team members, in addition to communicating logistics for all events throughout the year.

Skills

Technical

Python | R | JavaScript | Object-Oriented Programming | Data Management | GeoPandas | Rasterio | Numpy | SciKit-Learn |xml | JSON | ArcPy

Geospatial

ArcGIS Pro | QGIS |Remote Sensing | Vector Processing and Analysis |GDAL |WhiteboxTools | Google Earth Engine

Field Research

RTK Data Collection and Processing | Near-Surface Remote Sensing |Plant Canopy Analysis | Stream Geomorphology Assessment |Hydraulic Soil Coring | Soil texture mapping | Hydrological mapping

Relevant Coursework

Environmental Science
Plant Community Ecology | Plant Biology | Aquatic Ecology | Advanced Evolutionary Ecology

Geospatial
Human Geography with GIS | Mapping Global Environmental Change | Cartography | Conservation Planning

Statistics and Modeling
Biostatistics | Science of Climate Change (Climate modeling)

Public Scholarship

Behm, W.E and K. Howley. (2021). Understanding Changes in the Extent of Metcalf Marsh through Analysis of Historic Aerial Imagery. South Slough National Estuarine Research Reserve, Charleston, Oregon.

Kottkamp-Hoard, A and **W.E. Behm**. (2022). Monitoring and Assessment Summary, Priority Conservation Strategy Report - Mud Creek HUC 070200050401. The Nature Conservancy, Tri-State Chapter, Minneapolis, Minnesota.

Honors, Awards, and Scholarships

Michael Ames Memorial Scholarship– Recipient Fall 2018
NESCAC All-Academic Honors 2019, 2020, 2021