

Field Name	Field Value
Name	Heath Garris
Organization	Biology
Phone	864-313-2366
email	hwg3@zips.uakron.edu
Web_Address	
Renewal	No
Permit_Number	2010-009
Activity	Research
Project	A wet meadow community response to an altered climate
Dates	2010-2013
Group_Size	2
Research_Area	No
Sensitive_Area	Yes
Garden_Bowl	Yes
Other_Areas	No
Building	Yes
Prep_Work	
Sampling_Collecting	Yes
Sampling_Methods	Vouchers will be collected of species that are in high local abundance (>5 individuals present) for inclusion in the University of Akron Field Station Herbarium. Soil cores (~30cm deep) will be removed from field plots periodically using a hand auger.
Description	A sample grid (~30mX30m) will be established within Garden Bowl where 18 plots will be sampled over the course of 3 years to assess the impacts of anticipated climate change on plant communities and carbon balance in this wet meadow. Plots will be 2.25m ² and designated using reflective stakes, some of which will be instrumented with inconspicuous temperature and moisture data-loggers. Open Top Chambers (OTCs) and control structures will be constructed within 12 of these plots, each consisting of 4 wooden corner stakes angled toward the plot center, and enclosed with clear greenhouse plastic (or a plastic mesh). These will be monitored throughout each growing season (March-October) non-destructively to assess species composition, biomass, and gaseous carbon flux. No more than 10 piezometers will be established within the sample grid to monitor watertable depth. Soil cores will be removed periodically (no more than 4X per year) for analysis. Stakes, plot center markers and instrumentation will remain for the duration of the three year study, but plastic/mesh will be removed in the fall and replaced each spring.

	<p>Following the three year experiment a subsequent permit will be submitted for approval if continued monitoring of these field plots is desired. At the conclusion of the study all stakes, markers, instrumentation, and piezometers will be removed from the field site. Open Top Chambers are anticipated to elevate air and soil temperatures ~1-3°C above ambient, potentially impacting species compositions and the rates of soil metabolic processes within these plots. Differences induced by this manipulation are considered transient and anticipated to equilibrate to the surrounding landscape following OTC removal. Care will be taken to ensure all plots are placed at least 5m from the mowed gas-line right-of-way.</p>
Agreement	Accept