

Field Name	Field Value
Name	Heath Garris
Organization	University of Akron Department of Biology
Phone	864-313-2366
email	hwg3@zips.uakron.edu
Web_Address	
Renewal	No
Permit_Number	2010-004
Activity	Research
Project	Wetland Flora in a Changing Climate : Implications for Community Ecology and Restoration
Dates	April, 2010 - October 2012
Group_Size	3
Research_Area	Yes
Beefys_Woods	Yes
Sensitive_Area	No
Other_Areas	No
Building	Yes
Prep_Work	
Sampling_Collecting	Yes
Sampling_Methods	Above and below-ground vegetative biomass will be sampled periodically within these field sites. In plots where only above-ground biomass is sampled, vegetation will be cut to the ground surface, collected in paper bags and removed to the lab. Care will be taken to prevent seeds/propagules from being transported to new sites through this process. In plots where below-ground biomass is collected, individual plants will be uprooted manually with the aid of hand shovels. Sediment/soil will not be removed with these collections. Voucher specimens will be collected for future verification of species identified in the field and to contribute to the University of Akron Herbarium collection documenting the plant communities of the Bath Nature Preserve. Vouchers will be collected of species that are in high local abundance (>5 individuals present).
Description	A sample grid (~40mX40m) will be established near Bath Creek where 81 plots will be sampled over the course of 3 years to assess the impacts of anticipated climate change on plant communities and carbon balance on a newly restored floodplain. Plots will be 2.25m ² and designated using reflective stakes, some of which will be instrumented with inconspicuous temperature and moisture data-loggers. Seeding treatments performed by Bath Parks will be occluded for 27 of these plots using 5'X5' tarps which

will be staked down for the seed treatment and removed immediately after. Open Top Chambers (OTCs) and control structures will be constructed within 36 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. Destructive sampling (removal/trimming of vegetation) will be performed within these plots a maximum of once annually. The aforementioned sampling is anticipated to have little to no impact on locally established species. No more than 10 piezometers will be established within the sample grid to monitor water-table 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. 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.

Agreement

Accept