

MS Thesis Defense

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Title: Implementation Of Meaningful Watershed Education Experiences (Mwee's) By Middle School Life Science Teachers

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ABSTRACT

As anthropogenic stressors impact local ecosystems, fostering environmentally responsible behaviors in our students continues to be relevant and important. This study examined the impact of teachers' education, training and environmental attitudes, as well as school-specific factors, on their implementation of meaningful watershed educational experiences (MWEE's). In this study, implementation of the MWEE was used as a proxy for environmentally responsible behavior. This study also garnered teacher feedback to inform recommended improvements to the current MWEE curriculum and training opportunities with the goal of increasing MWEE implementation. These improvements focused on ways to increase implementation of each of the three components of the MWEE: the preparation, action and reflection phases. The target population included all seventh grade life science teachers in a large, affluent suburban school district on the East Coast of the United States of America. After the teachers had implemented the MWEE, 51 out of approximately 150 teachers responded to an online questionnaire for this study. Data was analyzed using chi-square analysis and a logistic regression model to determine relationships between teacher and school specific factors and

implementation of each of the three components of the MWEE. Overall, teacher-specific variables did not have significant relationships with completion of the MWEE components. One teacher characteristic did show a relationship with MWEE completion. Surprisingly, being the MWEE coordinator was negatively correlated with completion of the reflection phase of the MWEE. School-site specific variables, including perceived administrative support, concurrent stewardship projects at the school and perceived funding support were the only variables to show significant relationships to MWEE completion. Administrative and funding support, coupled with current stewardship projects, increased likelihood of completion of the stewardship project and MWEE field study. Clustering of significance related to school-specific variables, and specifically, the importance of administrative support suggests that school-site factors dramatically impact MWEE completion regardless of teacher characteristics. These school-specific variables should be the focus of any county-wide initiative focused on increased MWEE implementation. Additional recommendations to increase MWEE completion include facilitating MWEE training for administrators and further county-based support to help schools begin stewardship projects. These improvements to the MWEE curriculum and training would increase implementation of the final phase of the MWEE, the environmental stewardship project to provide a culminating experience for this school-mediated ERB.