

Joan White's Student Research Conference Proposal
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Title: *Where Should We Put Wind Turbines in Chittenden County? Ecosystem Services in Renewable Energy Siting.*

Climate change creates an imperative to develop renewable energy (RE) infrastructure, including wind power. However, that infrastructure poses significant threats to natural systems because of the dramatic changes to ecosystems that occur with development. Wind development in Vermont has encountered significant local opposition because of its impact to bird and bat populations, views, and carbon storage. This project uses spatial data to create maps that policy makers can use to evaluate the tradeoffs between wind development and preservation of three key ecosystem services: biodiversity, carbon storage, and view sheds. It identifies prime areas for wind development in Chittenden County and areas where development would be unwise for ecological or social reasons. Finally, it suggests a new siting process that is based on stakeholder engagement and proactive spatial planning.