Proposal: A Campus-Community Sustainability Region Partnership Program
For Ohio Wesleyan University, the City of Delaware, and Surrounding Areas
Draft – November, 2011

Project Overview: We seek funds to establish a *sustainability region* encompassing the urban, suburban, and rural landscapes of Delaware, Ohio. Ours is a unique project, integrating sustainability, environmental science, human health and welfare, and education with community engagement, assessment and accountability. We hope, through a partnership of Ohio Wesleyan, the City of Delaware, and the Delaware City Schools, to increase regional sustainability, develop collaborative partnerships, and contribute to disciplinary research on environmental issues. The ultimate goal of our project is to educate Ohio Wesleyan students in sustainability, to increase the scientific literacy of non-science students, and provide theory-into-practice research opportunities to all students, through immersion experiences that contribute to a long-term regional sustainability plan.

Possible Project Goals (Can be revised, reduced, or increased in number)

- Fund a *sustainability coordinator* to develop a *sustainability plan* for Ohio Wesleyan University, the city of Delaware, the Delaware City Schools and surrounding areas while providing oversight of the goals of a *Delaware & Ohio Wesleyan Sustainability Region*. Development of the regional sustainability plan would be aided by student and faculty research at Ohio Wesleyan, and be linked to the independent study requirement of the Environmental Studies major.

- Fund a network of *environmental monitoring sites* throughout the sustainability region, including sites with both human and natural focus, for assessment of current status, change, and impacts of sustainable initiatives. Link the monitoring data to the Delaware Area Land Information System (GIS) program (one of the leading county-level GIS programs in the US). See http://www.dalisproject.org.

- Fund the development of a marked *green trail* system throughout the sustainability region, connecting environmental monitoring and research sites, distinctive ecological areas, green buildings and projects, sites of ecological reconciliation, and environmental engagement. The green trail system will be used by OWU faculty and students, K-12 education, local citizens, and potentially "green" tourism (bike trails, bird watching, etc.). For initial work on this aspect of the project see M. Palmer & R. Bowes *Delaware and OWU Green Trail and Map* (2011) and Krygier et al *Green / Sustainable Map of Ohio Wesleyan University,* Delaware city and county (2011).

- Fund the developoment of a *sustainability region database* of data, research projects, and other information associated with the sustainability region. This database will be accessible via the web and developed as a crowdsourced resource. See M. Lee *Crowdsourced Environmental Database* (2010).

- *Fund research and applied sustainability projects* that are collaborations among Ohio Wesleyan University faculty and students, Delaware City, Delaware City Schools, businesses and area citizens. Such projects will engage Ohio Wesleyan University's theory-into-practice program to serve the long-term goals of the Delaware community, as well as educate students about local sustainability issues. Possible project focus areas are:

    - Delaware's Natural Heritage – Assessments of the status of natural areas in and around Delaware, focusing on vegetation health and composition, water quality, invasive species pressures, biodiversity, and threats to these ecosystems.
    - Delaware's Urban Ecosystem – Explorations of the urban environment as an ecosystem, examining hydrologic cycling, biodiversity, and exchanges with the atmosphere.
    - The Green Business Community – Explorations of local businesses with an environmental focus, research on the market for green products, the challenges of doing business in Delaware, and best practices elsewhere.
    - The Built Environment – Evaluations of Delaware in terms of land-use changes, urban sprawl issues, walkability and bikeability, transportation options, and Smart Growth practices.
    - Waste Streams – Evaluations of local recycling practices and challenges, waste stream volumes, sources, and processes, and best practices for waste reduction.
    - Food and Agriculture – Explorations of food issues in the community, farm-land preservation, organic and sustainable farming practices, and the local food movement.

- Fund the development of *new courses in Environmental Studies* to link campus and community sustainability efforts formally through coursework in the Ohio Wesleyan Environmental Studies Program. Some new course ideas include:

    - Introductory Seminar: Delaware, OH – A Sense of Place (0.5 credits) – This seminar would be focused on providing a grounding in environmental literacy as it pertains to Delaware, OH. A series of speakers from campus and the community would educate students on the local water supply, waste streams and waste management, food supply chains, carbon footprint of the town and campus, and the natural and cultural history of the community. This seminar would also discuss the environmental, economic and social challenges of sustainability for Delaware, OH. Students in this seminar should be getting ideas for projects they can do later in their OWU careers.
    - Capstone Seminar: Environmental Projects (0.5 credits) – This seminar would be focused on senior students working alone or in teams on environmental issues in the community. This could replace the current, individual independent study requirement for the ES major. The Sustainability Coordinator could be involved in working with the faculty teaching the seminar to direct the students toward projects that would be consistent with the sustainability region plan.
    - Environmental Studies Laboratory (0.25 credits) – The Environmental Studies program currently requires three introductory science classes, only one of which has a lab. This course would be a stand-alone, 0.25 credit laboratory class focused on using tools from many scientific disciplines to understand a local environmental problem. For example, pesticide contamination of ground-water could be approached using tools from chemistry, geology and biology. It would be taught by a team of science faculty who would rotate over time and select relevant projects based on the sustainability region plan or local interests and needs.
    - Travel Learning – Best Practices and Challenges Abroad – During the funding cycle, a team of faculty and the Sustainability Coordinator would offer a course that allowed comparison of

Delaware, OH with a "green city" abroad, and a group of faculty, staff, students, city government personnel, and community representatives would visit the city together to learn about environmental issues, challenges, and best practices in a different geographic and cultural context. Representatives from the foreign city would be brought to Delaware to provide an equivalent exchange of information.

- Fund a *sustainability institute* to be located on the Ohio Wesleyan campus and tied to the Environmental Studies program, that serves as a data repository, coordinating hub, contact point, and administrative center for the sustainability region partnership project. The institute would coordinate research activities, plan meetings and retreats as needed for project management, conduct outreach, and bring in national or international speakers of interest. A student sustainability fellowship program could be run by this institute. Potential name: *OWISE (Ohio Wesleyan Institute for Sustainability and the Environment)*.

- Apply the idea of *anthropogenic biomes* to the sustainability region: such biomes include humans and human landscapes in addition to animals, plants, climate, and landforms. Assess, develop and map the anthropogenic biomes, with associated characteristics, existing and potential research projects, and sustainability goals. Encompass issues related to food, waste, water, air, transportation, and development. See E. Ellis & N. Ramankutty *Putting People in the Map: Anthropogenic Biomes of the World* (*Frontiers in Ecology & the Environment* 6:8, 2008). For initial work on this aspect of the project see M. Palmer & R. Bowes *Delaware and OWU Green Trail and Map* (2011) and Krygier et al *Green / Sustainable Map of Ohio Wesleyan University,* Delaware city and county (2011).

- Apply the idea of *reconciliation ecology* to the sustainability region: reconciliation ecology seeks biodiversity in human-dominated environments. Assess and map key sites of ecological reconciliation in the sustainability area, with associated monitoring and sustainability goals. See Michael Rosenzweig, *Win-Win Ecology* (Oxford University Press, 2003).

Project History and Justification

Ohio Wesleyan University received a two-year grant to hire Sean Kinghorn as the campus's first Sustainability Coordinator. During his tenure, Sean will develop a ten-year sustainability plan for the campus, with priorities and costs defined. He has also helped the campus to take advantage of "low-hanging fruit" in terms of energy savings and waste reduction, resulting in monetary savings and carbon footprint/ecological footprint reductions. He has also served as an informal advisor to students on independent sustainability projects.

Now, as we contemplate implementing this sustainability plan, we recognize that meaningful, long-term changes in our environmental impacts must include the Delaware community, not just the campus. In addition, there are significant educational benefits to our students in training them in the context of developing sustainable communities and engaging them directly with the city government and local business people. This is consistent with Ohio Wesleyan's new Theory-Into-Practice curricular initiative. We propose to use the requested funds to improve the environmental sustainability of the Delaware, OH community by having the OWU Sustainability Coordinator expand the campus sustainability plan to include the township and/or county, implement sustainability changes in several key areas in town and on campus, and engage students directly in this transformational process through a number of possible avenues, including coursework, independent studies, internships with local businesses and city government, new introductory and capstone seminars and a multi-disciplinary laboratory within the Environmental Studies Program, and an innovative travel experience involving OWU students, faculty, staff, and community representatives. A sustainability institute could be established to coordinate these activities and a sustainability database could be constructed to preserve data and make it widely available.

Possible Timeline for a Five Year Grant

Years 1-2: Drafting the Sustainability Plan – Sean Kinghorn will research key needs, challenges, and best practices for community sustainability and draft a comprehensive plan for the City of Delaware, expanding on the campus plan already completed. He will be assisted in his research by students in courses taught within the OWU Environmental Studies program, and the research will be integrated as key assignments or projects into the courses.

Years 3 through 5: Making Changes – Based on the sustainability plan, changes will be implemented within the community. Students will assist in these changes through projects funded by a Theory-Into-Practice fund within the Campus-Community Sustainability Program. There will also be funds for internships with local businesses and the city government. Students will apply for awards through a competitive application process and be selected by a committee of OWU faculty, staff and community representatives.

Possible Budget Requests (Dream List)

- Full-time salary for OWU Sustainability Coordinator for 5 years: $250,000.
- Funds for research, data collection, GIS construction, and mapping of the anthropogenic biomes of the sustainability region: $50,000.
- Green Theory-Into-Practice fund for research in the sustainability region: $100,000.
- Funds for research on and implementation of reconciliation ecology projects within the sustainability region: $25,000.

- Funds for networkable equipment for environmental monitoring, and programming costs: $100,000.
- Funds for data collection, GIS construction, map design, and paper and web versions of the map: $5,000.
- Funds for programming costs of crowdsourced web page: $5,000.
- Full-time salary for Campus-Community Sustainability Partnership web master/social media expert.
- Part-time salary for student interns to Sustainability Coordinator and web master
- Part-time salary for student interns to the City of Delaware
- Part-time salary for five student internships with local green businesses
- Part-time salary for chair of Sustainable Delaware
- Workshop/retreat expenses for program development, building city-campus partnerships
- Release time for faculty teaching new courses, as needed
- Workshop/retreat expenses for new course development
- Supplies for green laboratory course
- Funds for one national/international sustainability speaker per year
- Funds for three local sustainability speakers per year
- Funds for travel learning course
- Infrastructure funds for physical improvements, materials, recycling bins, etc.