



## Applied Research Grant

### Social Science and Humanities Applied Research Proposal Examples

#### **Example 1**

This project, funded in 2017-18, aims to conduct a comparative study of refugee resettlement in local communities and economies. Focusing on the Fox Valley region, the applicants seek to assess how residents of refugee background (RRBs) came to settle in the region, how they have fared following resettlement, what factors help to predict their success, what services are most important to enable such success and what gaps exist, as well as what innovations can empower RRBs and help them to not only thrive but also become assets to the local workforce and community. While the initial study will focus on the Oshkosh area, the team intends to expand and scale the study to both Milwaukee and Madison in the years to come.

#### **Example 2**

The goal of this project, funded in 2017-18, is to design and build season-ahead climate forecast tools for Wisconsin's Central Sands and evaluate their potential economic impact. Forecasts, if skillful, could help to guide decisions across agencies and landowners, related to allowable groundwater extraction, timing, and conjunctive use planning. Forecasts may be informative for 'early warnings', farmer planning (e.g. expected irrigation needs, pumping costs, crop variety options, etc.) and recreational and touristic planning through identification of likelihood and severity of impacted sites, or by triggering voluntary conservation measures. The team anticipates that these forecasts and user tools will benefit farmers and recreationalists by fostering proactive decision-making and reducing economic losses.

#### **Example 3**

This project, funded in 2016-17, aimed to create an online platform to allow students to do real science using multi-dimensional arrays of interactive videos. The platform is envisioned to serve as a new educational resource for students studying science, in particular physics and is intended to provide teachers with a better way to engage students in authentic science investigations. The videos will improve the efficiency of science education by allowing students to directly analyze real life events depicted in the video using built-in tools. In addition, it is thought that such a tool will help to better prepare students for the open-ended, non-linear problem-solving environment they will likely face as they move forward in their career.

#### **Example 4**

This project, funded in 2015-16, facilitated collaboration with local First Nation communities/tribes and small growers to establish and expand experimental plots and food stations as well as satellite outlets at food markets, restaurants, and cafes. Its goal was to preserve the food and medicinal use of native plants in the region and the traditional Ojibwe knowledge for their cultivation and use. A key objective was to host a series of workshops affiliated with each experimental site that indicates to participants the properties of the natural food plants and their suitability for cultivation in individual garden plots and for small organic farmers interested in expanding their product line and markets. This multi-year project has a wide range of stakeholders from tribal organizations to indigenous schools, food farms, alternative food markets, and restaurants.

The multi-phase project illustrated the vast impact of previously uncultivated plants on the state of Wisconsin; these plants have an important place in the sustainable food markets and commercial restaurant industries. Economic benefits to the state of Wisconsin in growing native plants not previously cultivated include future commercialization of new products for nutrition, medicinal purposes, and fresh food markets.

#### **Example 5**

This project aimed to propagate four novel hazelnut genotypes for evaluation in field-scale trials. It was anticipated that such trials would provide for improved hazelnut genotypes available to Upper Midwest growers, allowing for the first perennial oilseed and grain crops to be grown there. The proposal, funded in 2015-16, planned to test expected yields and performance of four specific hazelnut genotypes prior to commercial release of the seeds, so that agronomic and management recommendations could be made to growers.

Improved hazelnut genetics will provide for rapid expansion of the hazelnut industry in Wisconsin and allow growers and processors to expand their operations, sparking an important impact on the state and its economy.

#### **Example 6**

This proposal outlined a project to further develop and produce a web app that allows high school and college students to engage in scientifically authentic investigations online. Researchers developed and prototyped multidimensional arrays of videos that students can explore on their own, allowing the students to go test the process of real science with all of the advantages that an online resource provides. The high-clarity videos offer integrated analysis tools, including rulers, stopwatches, and protractors to help students learn important laboratory skills. The project also aimed to improve the software to support the new interactive videos and improve interface design, as well as develop a comprehensive marketing plan for the videos.

The project, funded in 2016-17, presented three different forms of direct impact to the state of Wisconsin: creating jobs directly, improving the efficiency of science education at high school and university levels, and better preparing students for the open-ended, non-linear problem solving environment that they will likely face in their careers.

#### **Example 7**

This proposal aimed to create a dosimeter attachment with the ability to collect sound level measurements in the ear canal of public safety workers while on duty. The proposed dosimeter attachment combines the best features of both the commercially available personal noise dosimeter and the real ear measurement systems. The dosimeter attachment measures levels of occupational noise in the ear canal when an ear piece is present and evaluates signal to noise ratios during work tasks of public service employees. The proposal involved the creation of the attachment, laboratory testing, and field testing of the platform technology to show proof of concept for the next stages of development.

The proposed technology had the potential to improve occupational noise monitoring technology in every sector of the Wisconsin workforce: health, public safety, construction, food service, retail, and manufacturing. This project, funded in 2015-16, could provide a means to evaluate appropriate signal to noise ratios for effective on the job communication to improve efficiency and safety of

Wisconsin employees, potentially decreasing Wisconsin healthcare costs and disability claims resulting from noise induced hearing loss or injury on the job.