

A. **Applicant Name: WEEB Research Subcommittee**

**Project Title:** Web Access for the Wisconsin Environmental Education Research Database (WEERD)

B. **Statement of Need:**

1. **Target Audience:** Environmental educators within the State of Wisconsin, the Wisconsin Environmental Education Board (WEEB), and graduate students completing EE research.
2. **Needs:** Previously funded WEEB grant log number 2008-0016, "An Inventory of Environmental Education (EE) Research in, about, for Wisconsin," developed a database that inventoried research in Wisconsin. This database was developed to help WEEB reach its 2010 goal of ensuring "EE practices and programs will be more efficient and effective if grounded in findings from both educational and scientific research and evaluation." This research database, called The Wisconsin EE Research Database (WEERD), provides baseline data to enhance research efforts across the State, and, in particular, ensure that WEEB grant activities target documented areas of need and avoid duplication. WEERD is currently a one table Access database, designed to facilitate data entry and updating. To make WEERD available on the Internet and to model a search engine such as the one that exists on the WEEB grant site requires additional funding. While the original proposal indicated the committee would post the database on the Internet, we have since learned the cost for this task exceeded the anticipated budget. Therefore, this proposal requests the funds to pay a technician to create a search engine that will allow the data to be easily accessed by researchers and educators. Furthermore, given the importance of this information to valid EE research in Wisconsin, we request that the Board approve these funds outside of the grant cycle. This project requests the funds to pay a technician to create a search engine that will allow the data to be easily accessed by researchers and educators.
3. **Goals Addressed:** This project directly applies to WEEB 2010 Goal VI: Develop a research and evaluation agenda for environmental education (EE). Subgoal VI.2 states that WEEB should assure that all EE programs and curricula are based on research findings. This searchable database will support this assurance.
4. **Evidence of Need(s):** The WEEB directed creation of a Research Committee and convened this committee in May 2007. Its purpose is to examine EE 2010's Goal VI. Committee members examined research literature and concluded that there was no systematic review or database of EE research available in Wisconsin. The committee concluded that such a review and synthesis of research would provide a necessary and valuable baseline for environmental educators across Wisconsin, and, in particular, those applying for WEEB grants. An analysis of WEERD has already revealed several areas where EE research is greatly needed. Out of the approximately 185 studies currently in the database only six of those studies dealt with the program study area of leadership while program development/implementation was mentioned in 120 and curriculum was covered in 74 studies. Another interesting finding is that there are several of the EE goals that have not been looked at in much research. Issue identification, issue investigation and value education have not been addressed in much, if any, EE research. There is a definite gap between the first two EE goals and the ultimate goal of citizen action. The database has also shown that there has been a large amount of research done in the formal K-12 sector while not as much has been done with school forests, environmental centers or other EE community resources. The database of EE research has been created and revealed many insights about what research has and has not been done in the last 18 years, but now WEERD needs to be put into a format that can be used to help accomplish the WEEB goals.
5. **Previous Efforts:** Starting in July 2008 the review of EE resources began. Searches were done using many different search engines looking for peer-reviewed EE research specific to programs or populations in Wisconsin. Over 185 resources have been entered into the Access database. The resources date back to 1990 and continue through 2007. The review and entering of resources is an ongoing process as new studies are finished and published.

C. **Project Goals, Objectives, and Activities**

**Primary Goal:** To create a tool that enables all EE programs and curricula to be based on research findings.

**Objective:** To publish WEERD to the WEEB Web site; designing a searchable, user-friendly interface between the database and the Web site.

NOTE: The timeline for these activities is based on receiving funds outside of the WEEB grant cycle and therefore can begin in February 2009.

**Activities:**

*The Committee*

- Hires a Web technician (February).

- Work with WEEB grant committee to make research citation a criterion for grant application review for the 2010 WEEB grant cycle.
- Use literature synthesis conducted by research assistant to identify a research agenda for EE in Wisconsin.

*Web Technician*

- Builds a web site that has an interface to search through research data and provide detailed results based on visitor queries (February)
  - The proposed site would be comprised of 3 pages - a Search Page, a Results Page, and a Result Detail page. The search page would allow visitors to query the research database using most of the field in the database. Most of the approximately 150 fields are yes/no data fields. This page would be similar in look to the WEEB category search page at <http://cnrapps.uwsp.edu/weeb/Search.aspx#results>. The proposed page may also have multiple tabs to better display the large number of potential search fields. The results page would list each item, one row for each matching research document (with some identifying information about the matching research article). Clicking on one of the listed results would bring up the Result Detail Page. The Result Detail page would display all relevant data for one selected research document.

*The Research Assistant*

- Provides consulting services to the Web technician in creation of the WEERD search engine (February).
- Works with committee and graduate faculty at UWSP to develop plan for long-term, continual maintenance of and updates to WEERD database (February).

*Committee and Web Technician*

- Works to pilot test the search engine (March); Research Committee involved in the WEEB Merit Review Process will ask reviewers if they would be willing to test the Web –based version of WEERD. The Research Assistant will set up survey and timeline.
- After the pilot, participants are surveyed, and the database is revised as needed to facilitate ease of use (March)
- WEERD is made live on the WEEB website

*Committee and Research Assistant:*

- Writes a brief press release for the search engine to be publicized to environmental educators throughout the state
- Develops a plan for the continued update and maintenance of WEERD, using graduate students in a research class to monitor the database and upload new additions
- Prepares a report of the synthesis to present to WEEB (January).

- D. **Dissemination** In addition to housing WEERD on the WEEB Web site, it will be linked to other Web sites such as the Wisconsin Center for Environmental Education’s or the “EE in Wisconsin” clearinghouse. The Research Committee and Research assistant will create press releases to let educators know when the search engine is available. This press release could be sent out through the Wisconsin Association for Environmental Education’s monthly E-Newsletter, posted on their website and posted on the “EE in Wisconsin” website.
- E. **Project Evaluation** The selection of resources to be included in the database was overseen by the research committee. The search engine is being designed similar to the WEEB grant search engine. The use of the search engine will be piloted during the 2010 WEEB grant cycle. Applicants will be surveyed to determine the use of, and experience with, the database. The committee and the Web technician will revise the database as needed.
- F. **Staff Qualifications** Scott Ashmann, Jennie Lane, and Dan Sivek serve on WEEB’s Research Committee. Scott Ashmann Assistant Professor of Science Education at the University of Wisconsin–Green Bay. Jennie Lane is the director of the Wisconsin K-12 Energy Education Program (KEEP). Dan Sivek (Project Director). Professor of Environmental Education at the University of Wisconsin–Stevens Point. Abigail Enlund (Research Assistant) is the administrative assistant for the Wisconsin Association for Environmental Education. She earned her master’s in environmental education from the University of Wisconsin – Stevens Point in 2006. She has both database experience and environmental education research experience.
- G. **Continuation** The committee will recommend to WEEB that future grant applicants use the database to ensure their proposals are based on research findings (Subgoal VI.2). Moreover, a review criterion for proposals would include referencing established research to support project need. For the 2010 grant cycle, the literature review

can be strongly encouraged since the database will be a new addition; citing reviewed literature can be a stated review criteria for the 2011 grant cycle once the database has been online for over a year.

An Environmental Education Research Class at UWSP (NR 750) currently has a literature review as part of their course syllabus. In addition to the students of this class finding the database useful to their research, the class will be enlisted to locate any additional research that is conducted in the state and to complete an abstracting form. Workstudy students associated with the WCEE will be available to enter the information into the database. Thus, the work begun through this grant can be maintained and updated for years to come.