MONTANA BOARD OF REGENTS
NEW ACADEMIC PROGRAM PROPOSAL SUMMARY

Institution: Montana State University-Bozeman (Depts. of Mathematical Sciences, Ecology, and Land Resources & Environmental Sciences)

Program Title: Master of Science in Ecological & Environmental Statistics

1. **How does this program advance the campus' academic mission and fit priorities?**
   The MSU Campus Mission statement strongly echoes the Board of Regents' goals, but emphasizes a "richly diverse learning environment," the "dissemination of new knowledge," and the integration of discovery and learning. Thus, a new interdisciplinary program dedicated to helping students bridge gaps and to work and communicate across disciplinary boundaries in important fields also supports the campus mission.

2. **How does this program fit the Board of Regents' goals and objectives?**
   The Montana Board of Regents in their statement of goals and objectives actively encourages scientific development and technology transfer, interactive information systems, coordinated education and economic development. All of these are strongly supported by the interdisciplinary program proposed.

   The Board of Regents also seeks "*[t]o be responsive to market, employment, and economic development needs of the State and the nation.*" The ecological and environmental sciences are becoming increasingly quantitative. As a consequence, our graduates must become increasingly quantitative to fill this new need. Instituting an Ecological & Environmental Statistics program is a suitable response to these developments.

   Another Regents' goal is "*[t]o improve the support for and understanding of the Montana University System as a leading contributor to the State's economic success and social and political well-being.*" Quantitatively trained ecologists and environmental scientists are increasingly in demand by the State's agencies, Federal agencies with offices in Montana, and various non-governmental organizations. The program helps the Regents attain their goal to train these people locally rather than to import qualified practitioners from out of the State.

3. **How does this program support or advance Montana's needs and interest?**
   Yellowstone National Park is recognized and visited by people from around the globe, contributing substantially to the economy of Montana. Further, the Greater Yellowstone Ecosystem is recognized by scientists around the world as an outstanding natural laboratory for ecology and environmental science. A degree in Ecological & Environmental Statistics would be unique among United States Universities and would bring MSU to the vanguard of fundamental trends in science while helping to fulfill the University's mission of promoting the intellectual and economic development of Montana.

4. **How will this program contribute to economic development in Montana?**
   Montana's economy is dominated by agriculture, mining, timber harvest, outdoor recreation and environmental tourism. Thus there is a profound linkage between the health of our economy and ecological and environmental sciences.

5. **What is the program's planned capacity?**
    a. **Enrollments/ year?**   3
    b. **Graduates/ year?**   3
    c. **Standing Student Body**   6

    These numbers represent the capacity of the program in its demonstration phase.

6. **Resource Allocation:**
    a. **Total Budget:** Year 1 = 60467, Year 2 = 112202, Year 3 = 112202
    b. **Staff FTE:** 0.05

7. **Does this program require new resources?**
    Yes: Year 1 $3500, Year 2 $4500, Year 3 $4500

8. **How will the campus fund the program?**
    Reallocation of appropriated funds.

9. **If internal reallocation is necessary, name the sources.**
    TA stipends and tuition waivers represent a reallocation of existing TA support in the Departments of Mathematical Sciences and Ecology. Administrative support is a reallocation of Mathematical Sciences base funds. These reallocations have been agreed to by Ken Bowers (Department Head, Mathematical Sciences), David Roberts (Department Head, Ecology), and Sara Jayne Steen (Dean, College of Letters and Science).