



November 3, 2003

Dr. Elizabeth Blood
Program Director
Division of Biological Infrastructure
National Science Foundation
4201 Wilson Blvd., Room 615
Arlington, VA 22230

Dear Dr. Blood:

The Infrastructure for Biology at Regional to Continental Scales (IBRCS) Working Group¹ supports the findings and recommendations of the National Research Council's Committee on the National Ecological Observatory Network as articulated in the report, *NEON: Addressing the Nation's Environmental Challenges*. We welcome the committee's unequivocal endorsement of the NEON concept and the need to develop integrated biological research infrastructure to confront the nation's environmental challenges. With this report, the NRC has added its voice to numerous calls for support of the next-generation environmental research.

We believe that the six environmental challenges identified in the report provide a strong intellectual and scientific framework to guide the development of NEON infrastructure. We also support the conclusion of the committee that the plan to select individual regionally-based observatories through responses to proposal requests runs some risk that observatories will develop in an uncoordinated manner because each successful proposal may differ in its guiding approach. We agree that staging the construction of observatories sequentially (e.g., two per year over nearly a decade) would delay national coverage until all the observatories are built, although we recognize that the construction of any scientific facility of the scope of NEON would take many years to complete and become fully operational.

Like the NRC committee, we believe that the six environmental challenges identified should help guide the selection of NEON infrastructure. Furthermore, we believe that staging the implementation of NEON based on these themes could reduce some of the risk described above and could help to focus the design of NEON. Additionally, we feel that such an approach is entirely compatible with one that preserves a regional arrangement of observatories.

Whatever approach is ultimately adopted, the following criteria should be met. (1) Network structure should promote and facilitate cross-theme integration because none of the themes identified by the NRC committee can be fully understood without significant knowledge of the other themes. (2) Coordinated nationwide coverage should exist from the earliest stages of NEON implementation. (3) Sites should be selected to ensure spatial arrangement appropriate for

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the scientific themes identified. (4) Research infrastructure should be linked explicitly with the scientific issues it will support. (5) The same data should be collected at a diverse set of sites, thereby facilitating integration and synthesis across themes. (6) The infrastructure also should facilitate study of important regional issues.

The IBRCS Working Group feels that identifying a process to resolve outstanding issues such as the final arrangement of NEON is the most pressing matter facing the NEON community. The immediate formation of an interim NEON office, topical task forces, and a professional scientific staff—as recommended in the draft report on the coordination and implementation of NEON now being circulated for public comment—is an appropriate mechanism for resolving such issues. Critical to the success of an interim NEON office is that it be empowered to resolve remaining details (in consultation with NSF). Without such authority, various groups in the community will continue to make recommendations about NEON without any mechanism in place for making progress.

As an interim NEON office works with the members of the biological community to refine the details of design and implementation of NEON, work on the information technology infrastructure that will bind NEON together should begin. The IBRCS working group recommends that the information technology backbone and data management structure for NEON be designed now. This will enable the incorporation of essential components in a logical and sequential manner. If MREFC funding becomes available, it should be used to support that effort. If not, we recommend that the NEON funding requested in R&RA be used instead.

Sincerely,

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¹ This letter reflects the unanimous view of the IBRCS Working Group with the exception of Rebecca Gast, Woods Hole Oceanographic Institution, who was unreachable while this letter was discussed and drafted and thus was not consulted in regard to its content.