

THE ILLINOIS RIVER BASIN HYDROLOGIC OBSERVATORY

A Center for Understanding the Hydrologic Cycle of Intensively Managed Landscapes

A Proposal for Submission to the National Science Foundation

Goal

To establish the Illinois River Basin as a Hydrologic Observatory for the study of critical water related issues associated with atmosphere, land, and water bodies in intensively managed landscapes.

Partners

This effort is being proposed through the collaboration of representatives from a group of universities in the region (see figure) in partnership with a growing cast of state and federal agencies and stakeholders who value hydrologic science and the Illinois River Basin.

Timetable

The proposal awaits an NSF call for proposals, now scheduled for 2006.

Objectives

1. Enable interdisciplinary research by providing infrastructure that will attract scientists and water resource professionals to pursue research in the basin.
2. Answer interdisciplinary questions of high societal relevance around the broad themes of (i) hydrologic variability and extremes, (ii) biogeochemistry, (iii) ecology, (iv) contaminant transport, and (v) water resources management.
3. Develop stakeholder partnerships, and education and outreach programs for rapid dissemination of knowledge to derive immediate societal benefits for sustainable development.

Benefits

We envision the Observatory as a center of excellence that will provide improved scientific understanding of the hydrologic cycle and predictive capability to support better management and decision-making by stakeholders. The Observatory will provide an unparalleled environmental science resource to support the integrated study of rivers and lakes, water cycle, agriculture, ecosystems, and climate. Regional communities will benefit directly as critical environmental issues are studied and groundbreaking applications are developed in a local watershed. We are engaging interested community leaders, institutions and organizations in the design and implementation of the observatory by helping identify knowledge gaps regarding the most critical issues. We are developing alliances with parties who will benefit directly from the data resources and scientific investigations. The Observatory will be more than another specialized scientific institution in the basin; we aim to pull together the data resources and perspectives of existing partners, to form a much more complete and comprehensive picture of water dependent processes and functions in the basin. Therefore, the strength of the Observatory depends on the involvement of basin stakeholders and science partners.

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