



## AT THE CENTER

News and Notes from the  
Center for Earth and Environmental Science

Fall / Winter 2005

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### **Director's Note**

2005 has been a great year for CEES. We have continued our work evaluating water resources, completed a major watershed management plan for Eagle Creek Watershed, continued wetland restoration work and welcomed back a CEES staff member. We continue to deliver quality education programs and are in the process of developing new education programs with additional partners. The environmental service learning program completed a successful semester with new project sites and community partnerships. We also hosted middle school and high school classes at our research sites for experiential programs and hosted a regional water quality conference.

With the warm weather months winding down, we are now regrouping and planning for our 2006 endeavors. A major focus for next year will be expanding and enhancing our education and outreach programs. We will also implement many new research initiatives within Eagle Creek Watershed and look forward to collaborations with Goosepond and Beehunter Marsh. Our next newsletter will be sent in the spring with updates on current events as well as Friends of CEES tours and programs. Enjoy the holiday season and the winter months ahead. We will see you in the New Year.

Regards,

Lenore P. Tedesco, Director

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### **Friends of CEES**

Thank you for supporting CEES this past year through the Friends of CEES Program. We appreciate the continued support and dedication. CEES has developed the Friends program as a way to engage supporters in our research and education outreach initiatives. Through Friends of CEES, we provide opportunities to participate in activities such as tours of research sites, environmental stewardship projects, and workshops. We would like to invite you to renew or join as a member of Friends of CEES with a tax-deductible gift. Your gift contributes to CEES' ongoing research and education programs to support environmental stewardship.

Enclosed in this mailing is a Friends of CEES reply card and an addressed return envelope. Membership benefits at each donation level are outlined on the reverse side of the card. You can also visit [http://www.cees.iupui.edu/Community\\_Info/friends.htm](http://www.cees.iupui.edu/Community_Info/friends.htm) or email [cees@iupui.edu](mailto:cees@iupui.edu) to learn more about the program. Thank you for considering a tax-deductible gift to the Center for Earth and Environmental Science and for being a friend, partner, steward and champion of environmental research and education in Central Indiana.

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## **Eagle Creek Watershed Alliance Awarded Eagle Creek Watershed 319 Grant**

CEES and our partners in the Eagle Creek Watershed Alliance (ECWA) recently completed a Watershed Management Plan for Eagle Creek Watershed, which received approval from the Indiana Department of Environmental Management in September 2005. As a result of the approved Management Plan, the ECWA was awarded funds for an Environmental Protection Agency Section 319 Implementation grant. The Implementation Project will focus on watershed restoration projects and alleviating nonpoint source pollution in the Eagle Creek Watershed. This collaborative program provides a great opportunity for CEES to work with several new, and some familiar, partners including Veolia Water Indianapolis, Eagle Creek Watershed Task Force, Boone County Soil and Water Conservation District, Hoosier Heartland Resource Conservation and Development, Eagle Creek Park, the Department of Natural Resources, the Indiana Department of Environmental Management, and great citizen volunteers, among others.



Eagle Creek Watershed is the catchment basin draining into Eagle Creek Reservoir. Pressures from agriculture, urban development, and increasing population demands threaten the sustainability of Eagle Creek Watershed for recreational use and aquatic life. The watershed is negatively impacted by sedimentation from stream banks, cropland, construction sites, and ditches. Excessive nutrients from agricultural production, inadequate septic systems, animal waste and residential area runoff, point source discharges and uncontrolled storm water also degrade water quality in tributary streams and in the reservoir.

The 319 Implementation Project will address the impairments of Eagle Creek Watershed and work towards improving and restoring the natural structure and function of the stream ecosystem. Project initiatives will include implementation of Best Management Practices (BMPs), such as woody riparian buffers, grassy buffer strips, fencing; demonstrations of BMPs; water quality monitoring; watershed education; and public information and outreach. A watershed coordinator and farm promoter will be funded through the EPA Section 319 Implementation Grant to ensure coordination, progress and success of the Implementation Project. We will need involvement of interested citizens to work with us on projects and to serve on planning committees. Please contact us to join the alliance and help improve water quality in a watershed that affects our drinking water.



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## **State Makes an Incredible Purchase for Nature, for Us and for Future Generations: Goosepond and Beehunter Marsh**

**By Barbara Simpson, CEES Board Member and Volunteer**

This month Governor Mitch Daniels announced the purchase of 8000 acres of land in Greene County by the state of Indiana known as Goosepond and Beehunter Marsh. The land was originally a shallow glacial basin that formed an extensive wetland complex called Blackwater Marsh. The wetland was home to a broad range of wildlife, including resident waterfowl as well as numerous migratory birds. In the late 1800's the wetland was drained, extensively tilled and ditched for farming, which continued until the turn of this century. In 2000 the Natural Resources Conservation Service, a division of the USDA, purchased a perpetual easement from the private

landowner and the land was placed in the Wetland Reserve Program, which focuses on restoring marginal farmland as much as possible to its natural wetland state. Although the land was being restored to its former state it was still in private ownership limited to no public access.

Through the efforts of many generous people, many organizations including Ducks Unlimited and the Nature Conservancy, and leadership from the Indiana Department of Natural Resources, Goosepond and Beehunter Marsh are now in the public domain. With public access come unlimited benefits and opportunities for scientific research, science education, and economic development. CEES and IUPUI School of Science are very interested in the research opportunities to study a wetland complex of this scale right in our own backyard. There may



never be another opportunity to purchase a tract of land this large for wetland restoration in the temperate zone of North America. We want to make the most of the opportunity to study and demonstrate the value of wetland restorations on this scale. We are partnering with the DNR, the NRCS, and other interested parties to develop integrated scientific research and science education strategies to study this unique property as it develops. To learn about how restorations of this scale proceed and what impacts they have on resident wildlife and migratory birds is a rare opportunity.

We urge everyone to learn more about Goosepond and Beehunter Marsh, to visit this incredible property and follow how it develops. The migratory birds have already found it, so for all you birders and hunters, you don't have to wait until the restoration is finished. Mother Nature seems to already be pretty satisfied with what's there even now. Watch the DNR Fish and Wildlife website and the CEES website for more information as the restoration progresses.

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### **CEES Staff Announcement**

#### **A Note from Bob Barr** [rbarr@iupui.edu](mailto:rbarr@iupui.edu)

Three years ago, after much soul-searching I left the Center to work in the private sector. It was a difficult decision, I loved working at the Center and felt that we were making progress in our efforts to improve Indiana's environment; but I also felt that professionally I needed to spend some time in the for-profit restoration world. I joined the ecological restoration firm of JFNew and was promptly assigned to the Indianapolis Clean Stream Team. I spent the next two plus years working with senior staff from two of the largest engineering firms: MWH and CDM, as well as staff from over a dozen regional and local engineering and consulting firms and Indianapolis DPW staff; it was an enormously valuable experience, and an education that would be impossible to replicate. I left the Team in January 2004 when Program oversight shifted to a new firm and went back to the JFNew office in Indianapolis.



Some of my final work at the Clean Stream Team focused on how highly disturbed urban streams might be restored. At JFNew similar questions were being asked about more rural streams. Both sets of questions were being driven by a new U.S. Army Corps of Engineers Mitigation Guideline document that requires "natural channel design" and analysis of primary headwater streams. It was clear to me soon after I went back to JFNew that to successfully address the stream mitigation problems in Indiana I needed to go back to the Center where I could more easily work with Regulators. Lenore graciously welcomed me back to the Center, and interestingly, had no problem finding a few things for me to do.

Since my return to the Center I have continued to develop the stream restoration program, worked on the Eagle Creek Watershed Management Plan, a Hydrologic Study of the Southwestway Fen Complex, and a draft Management Plan for a Portion of the Starling Nature Sanctuary. It is good to be back!

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## Upcoming Event

Indiana Water Resources Association Fall Meeting: Regional Water Quality Research and Advanced Information Technologies to Assess and Enhance Indiana's Water Resources

CEES and the Pervasive Technology Laboratories of Indiana University are hosting the Indiana Water Resources Association (IWRA) fall meeting at IUPUI on Friday, December 9, 2005. CEES faculty and staff are presenting water resources research within central Indiana with the Pervasive Technology Labs highlighting advanced visualization technologies for environmental monitoring through tours within their facility.

IWRA is a state affiliate of the American Water Resources Association to promote water resources research, education, and communication in Indiana. The IWRA is an organization of several hundred professionals and students working in all aspects of water resources. Its members include scientists, engineers, regulators, educators, policy-makers, and students from government agencies, universities, industry, consulting firms, and other water related groups. One of the main goals of IWRA is to facilitate communication and the exchange of information within the water-resources community of Indiana. The conferences are opportunities to present regional water resources work to Indiana professionals. To learn more about IWRA, please visit: <http://www.valpo.edu/organization/xiwra/>

The IWRA fall conference will build on information presented at the CEES-sponsored conference, *Use of Long-Term Research for Enhancing Water Quality in the Great Lakes Region* during September 8 and 9, 2005 at IUPUI. Information, presentations, and the in-progress white paper from the September conference are posted on the CEES Professional Workshop Website: <http://www.cees.iupui.edu/Education/Workshops/index.htm>

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CEES research staff and IUPUI Geology graduate student Dustin Graves discussing fen wetland research with scientists from the Louisville US Army Corps of Engineers at Southwestway Park.

