The Lilly ARBOR Project: Answers for Restoring the Bank of the River
Annual Report to the Lilly Foundation
Mr. Tom King
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Introduction

During the past year, there has been great achievement and the promise of expanded programming and community involvement in the ecological restoration project at IUPUI. The Lilly ARBOR Project accomplished its initial goals of establishing the restoration experiment through the planting of 1330 native trees along the encompassing the project site in downtown Indianapolis. Importantly, our work at the site has been well received throughout the local community and is receiving increasingly more positive recognition and attention as an outstanding model of corporate/University/community collaboration at both the local and national level. To date, CEES has hosted over 550 volunteers at the ARBOR site and we expect that number will continue to rise. I will briefly outline the projects accomplishments in the past year and highlight ongoing and future programmatic developments.

Experiment in Ecological Restoration

A fundamental cornerstone of the Lilly ARBOR Project has been the scientific validity of an experiment in experiment in ecological restoration that is designed to provide critically needed scientific research about the best strategies for river-margin restoration. The City of Indianapolis alone estimates that they will need to restore over 300 miles of stream corridors in the coming years. is This scientific research and the design plan that actively involves researchers, students, educators, and corporate and community volunteers in the data collection and stewardship of the site of the site is a model collaboration that is breaking new ground in both scientific and philanthropic circles. While our inclusive approach to project design, implementation, and management has required significant investments in capital and staff resources, the success the project now enjoys is directly related to this vision.

Initial research data is in GIS showing significant differences in forest growth and development relative to the planting strategy employed and has already allowed us to make initial determination and recommendation to the environmental community about project design. New experiments are being continually proposed and added to the overall experimental plan as results of initial strategies become evident.

A valuable asset of the project is that the research underpinnings of the project have dynamic, long-term implications that continually evolve as the ecosystem evolves through time.

Education and Community Outreach

The site location on the western margin of the IUPUI campus makes it an ideal field classroom for the school. Location, combined with the rich opportunities for education within the framework of research has led to dramatic increases in site usage by formal class groups at IUPUI. The site gives IUPUI professors the ability to demonstrate science to students in large lecture classes that typically suffer from the inability to provide problem-based, experiential opportunities for students. To date, at least fifteen courses utilize the restoration site and the underlying experiment as an important component of the formal course curriculum. These courses are distributed throughout the

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campus and represent the Schools of Science (Chemistry, Biology, and Geology), Public and Environmental Affairs, Liberal Arts (Geography, Political Science), and Education.

A significant community outreach component is service learning. Partnering with Indy Parks and the Indiana Department of Natural Resources, CEES serves as a coordinator for environmental service learning throughout Marion County. The ARBOR site is one of our marquee projects. Twice each year, CEES partners IUPUI faculty, staff, and students with corporate and community volunteers in a day of community service that is founded in understanding the long term challenges the urban environment faces. Eli Lilly volunteers have participated in each of these events.

K-12 Educational Program Development

Of fundamental importance to the Center for Earth and Environmental Science's mission is the provision of meaningful and relevant science education outreach opportunities to K-12 students and educators. The ARBOR project site and the overall experiment have been designed to invite participation of both formal and informal education groups. We have assembled an extensive database of measurements and observations that are freely distributed via the World Wide Web. These data are readily usable by educators as a resource of real science data that can be incorporated into their exercises. We are in the process of developing science, math and technology activity modules for use by elementary, middle and high school audiences that builds off of this data. This summer, CEES will teach a PROJECT SEAM professional development workshop for high school teachers that will teach them the science content that will facilitate both their use of on-line ARBOR resources as well as participation in on-site research.

We are actively expanding the K-12 educational outreach component of the Lilly ARBOR project. Over the coming months, the center expects to submit a series of grants and funding requests for further development and delivery of educational programming to local science students.

The Expanding Role of Lilly Volunteers

Eli Lilly and Co. volunteers have been an important aspect of the ARBOR project since its inception. Lilly volunteers were instrumental in planting all of the trees on site through a series of three planting work days. Since the initial plantings, Lilly volunteers have participated in monitoring the survival and growth of the trees, collected bird census data, and done doing natural areas clean up work.

An exciting new development that has just been initiated has been that has just been initiated has been the creation of an ARBOR volunteer corp. The idea is to recruit and train a group of Eli Lilly employees in the fundamentals of the research experiment and educational activities that are on going on site. This group of volunteers could then be utilized to help facilitate the expanding educational outreach programs that are planned for the ARBOR site. This concept was well received by a group of potential volunteers when the This concept has been well received by a group of potential volunteers when idea was presented at a Lunch and Learn seminar arranged by Christy Jacobi from the Educational Strategy group at Eli Lilly and Company. We anticipate

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beginning training of these volunteers in the coming months for of these volunteers in the coming months for program implementation that is currently scheduled for implementation that is currently scheduled for fall.

Project Recognition and Visibility

The Lilly ARBOR Project has enjoyed has enjoyed high visibility and a very positive project image throughout its development and implementation through out its development and implementation. Accordingly, the site is gaining continual attention as a model for marrying research, education, public service and environmental stewardship.

CEES researchers have made presentation at national and international scientific meetings about the design, implementation and initial results of the research experiment being undertaken at the ARBOR site being undertaken at the ARBOR site. In the past year, the site has hosted than over 550 volunteers that included students and staff from IUPUI, Eli Lilly volunteers, K-12 educators, and Rotarians from the downtown Rotary club. The project and the ecological restoration results have been the subject of three environmental professional workshops and field trips in the past year. This summer and fall, we will host two additional workshops field trip for national and international audiences.

Finally, the Director of the Center has been invited to make a presentation about the Lilly ARBOR Project at the Governor's Conference on the Environment, which will be held in Indianapolis on September 27 & 28, 2002. The conference is a coordinated effort between the Indiana Department of Environmental Management and the Department of Natural Resources. CEES will make a presentation in the wetlands restoration workshop to an audience that will include a variety of elected officials, business representatives, environmentalists and citizens.

Conclusion

The Lilly ARBOR Project is enjoying great success and developing as an outstanding centerpiece of the potential for University/corporate/community cooperation in urban environmental restoration. The generous gift provided by the Eli Lilly Foundation has been the cornerstone of the project and is directly responsible for the positive results the project enjoys.

The researchers, staff, and educators at the Center for Earth and Environmental Science would welcome the opportunity to host a site tour with representatives of the Lilly Foundation to share first hand the results of the efforts that have gone into helping refurbish the Indianapolis downtown waterfront.

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