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## **Executive Summary**

### **Introduction**

The assessment area of the Fox River restoration plan is the 39-mile stretch Lower Fox River, adjacent floodplains and ecologically associated uplands, all of Green Bay and adjacent coastal wetlands, and tributaries upstream to the first impoundment for both the River and the Bay, including the adjacent floodplains and ecologically associated uplands.

As a class, our purpose was to review the Joint Restoration Plan (§2.0), prepare recommendations regarding the future success of restoration projects, help to ensure the wise distribution of funding, initiate community involvement, and encourage a greater diversity of restoration project proposals. Specifically, this document assesses current restoration efforts and proposed projects (§3.0), develops criteria for project/proposal selection (§4.0), provides a methodology to monitor the success of restoration by use of indicators and internet-based data display (§5.0), and defines the role of land acquisition in restoration (§6.0), which is accompanied by a land acquisition proposal.

### **Summary of Joint Restoration Plan**

The Joint Restoration Plan and Environmental Assessment for the Lower Fox River and Green Bay Area (2003) was written under the Comprehensive Environmental Response, Compensation, and Liability Act and the Water Pollution Control Act. Both of which authorize certain parties to act as Trustees for the public to restore, rehabilitate, replace, and/or acquire natural resources equivalent to those harmed by hazardous substance release, in this case, polychlorinated biphenyls (PCBs). The Joint Restoration Plan outlines the assessment and restoration area (Figure 1.1), and provides lists of priorities for restoration projects.

### **Current Projects and Proposals**

A number of projects have been accepted and are currently in the implementation process. This section gives a brief history of the steps leading to the 2003 version of the

Joint Restoration Plan, and reviews the origins of the current projects. These projects are summarized by location and project category, followed by a comparison among categories for number and cost of projects. Several projects are described in detail to show the variety of projects that have been approved. Finally, proposals that have been submitted, but not yet accepted or denied, are listed and briefly summarized.

### **Criteria for Project Approval**

A number of criteria for selection of proposals for implementation are outlined in the Joint Restoration Plan. Using these criteria and examples of ranking systems from other agencies, a ranking form was created. The ranking form arranges the criteria in a straightforward manner to make the review of proposals a more simple, subjective, and documented process. It includes sections for minimum project requirements; environmental, economic, and cultural resource considerations; and project outcome criteria. Cost effectiveness, one important criterion for the Trustees, is often hard to determine because of due to the difficulty of valuing ecological benefits. This section also includes a brief list of possible benefits that could be considered, and Appendix 9.2 lists a number of websites in which monetary estimates can be found.

### **Ensuring Success of Restoration**

Because restoration is a difficult and expensive process, it is important to ensure that the projects are successful over time. Studies have shown that most restoration projects will fail if they are implemented and subsequently left alone, while projects that are monitored until they perform as a natural system have a higher success rate. This section outlines the need for monitoring, lists a number of indicators that could be used, gives possibilities for volunteer monitors in the area (based on case studies of the Student Watershed Research Project in Oregon and the Fox River Monitoring Project recently started in the Green Bay area), and describes an idea for a GIS-based website that would be ideal for storing and sharing information gathered by monitoring organizations, agencies, and the public.

## Land Acquisition

While restoration of degraded areas is important and necessary for the achievement of the objectives in the Joint Restoration Plan, land acquisition is an alternative that warrants attention in the restoration area. Information is presented from the literature to provide justification for land acquisition projects in relation to restoration, with special attention given to wetlands and riparian zones. A property on Long Lake in Forest County, Wisconsin, was selected as the basis for a land acquisition proposal to be submitted to the Trustees. The watershed connections of this property, as well as surrounding land use and diversity of habitats within the parcel, are explained in detail to show the benefits of protecting this particular property.

**Conclusions** By reviewing the Joint Restoration Plan and the current activities associated with it, we hope to improve the process and outcome of this important endeavor. Our suggestions include the following: 1) continue to fund and implement an appropriate mix of projects from all categories, 2) use a uniform ranking system to aid in the review of proposals, 3) encourage the expansion of a volunteer monitoring effort, and 4) thoroughly consider land acquisition as an alternative in the restoration effort. We also would like to see various agencies, non-profit organizations, and the communities submit a wide variety of proposals, so the Trustees will have many high-quality ideas from which to choose. Coordinating a restoration effort of this magnitude is a daunting task; hopefully our review of this project will be helpful to the Trustees and the community and will generate more discussion to make this restoration project a great success.

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