A Guide to Bottomland Hardwood Restoration

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Preface

The primary focus of this guide is to provide information for land managers and landowners who want to reestablish bottomland hardwood forest vegetation, particularly the trees, on lands where they formerly occurred. Restoration and reforestation are approached with the realization that hydrology, as the driving force of wetland ecosystems, must be explicitly considered in all projects. Without the proper hydrologic regime for the site conditions and tree species selected for planting, it is unlikely that a project will be a success. It is assumed that the goal of the audience using this guide is at least the reestablishment of bottomland hardwood forest systems and hopefully the restoration of all functions and values associated with these forests (e.g., storage of floodwaters, water quality improvement, provision of wildlife habitat, etc.).

It is unlikely that a publication will ever be produced that contains all the information needed for an untrained person to plan and implement a completely successful restoration project. Certainly, this guide has no such pretensions. We have tried to make the guide as comprehensive as possible but concise, realizing there is probably much that we have missed. In addition, there are currently information needs expressed by practitioners that have not been adequately addressed by researchers.

This guide will provide the reader with a reasonably comprehensive introduction to the wide range of activities and techniques which, taken together, make up the process of bottomland hardwood restoration as it is now understood. Hopefully, this guide will also provide valuable information to experienced, professional ecosystem ecologists, especially those who have worked mainly with other types of wetland systems.

Whenever possible, the novice restorationist should seek opportunities to work with experienced professionals during every phase of their projects, from initial planning, through implementation, to monitoring and reporting. Opportunities to visit ongoing or completed restoration projects should also be sought.

First and foremost, though, understanding the ecology of bottomland hardwood systems is vitally important. Without a fundamental understanding of factors such as the seasonal patterns of flooding and groundwater dynamics, species-site relationships, seed dispersal mechanisms, plant establishment requirements, and plant-animal interactions, a restoration project is unlikely to be fully successful. In many ways, ongoing efforts to reestablish bottomland forest systems is a continuing experiment. As new information is gained, it should be cycled back into the decision-making process and subsequent forest reestablishment efforts.