

Documenting and Protecting Biodiversity on Land Trust Projects


— *an introduction and practical guide* —



Written by

CHRISTOPHER R. WILSON

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Together, conserving the places you love

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 Sweet Water Trust

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Contents

List of Charts, Maps, Tables, v

List of Abbreviations, vii

Acknowledgments, ix

Introduction, 1

1. Land Trusts' Role in Protecting Biodiversity on Private Lands, 5

You Can't Protect What You Don't Know About, 6

It's the Professional Thing to Do, 7

Barriers to Biological Assessments, 9

2. Biodiversity: What Should We Protect and Why?, 11

What's Threatening Biodiversity?, 13

Why Is Biodiversity Important?, 13

What Is Biodiversity?, 14

Conserving Biodiversity, 18

3. Priority Biological Features, 20

Endangered Species Programs, 21

Bird Conservation Programs, 22

Clean Water Programs, 25

Natural Heritage Programs, 26

Ecological Communities • Natural Community Classification •

Conservation Status Ranks • Element Occurrence Quality Ranks

4. Priority Geographic Areas, 37

State Wildlife Action Plans, 38

The Nature Conservancy's Ecoregional Assessments, 42

Connectivity-Based Landscape Conservation Plans, 46

Additional Landscape-Scale Conservation Plans, 51

*National Plans • Local, State, and Regional Plans • Limitations of
Landscape-Scale Conservation Plans*

5. Conducting an Off-Site Review of Biological Information, 55

Start Early!, 55

Initial Landowner Interview, 56

Submit an Information Request to the Natural Heritage Program, 57

Review Mapping from Conservation Plans, 62

Assess Wetland and Stream Information, 65

Assess the Conservation Context, 69

Assess Land Cover Types, 72

Preparing for Fieldwork, 75

6. On-site Biological Features Inventories, 98

Is a Biological Inventory Necessary?, 98

What Do Biological Inventories for Land Trust Projects Involve?, 99

Natural Community and Habitat Inventories, 101

Natural Community Inventories • Habitat Inventories

Species Inventories, 105

Plants • Birds • Amphibians • Reptiles • Mammals • Fish •

Butterflies and Dragonflies • Other Species Groups

Finding the Right Person for the Job, 113

Getting the Most from a Biologist, 115

Communicate the Project Background • Communicate Your Needs to a Biologist • Potential Rare Species • Sensitive Areas, Special Management Zones, and Buffers • Natural Heritage Program Reporting • Final Report and Mapping

7. Using Biological Assessments to Protect Biodiversity, 123

Project Selection and Fundraising, 123

It Pays to Know: Biological Information Can Help Fundraising, 123

Drafting Conservation Easement Language for Biodiversity

Protection, 125

Preparing the Baseline Documentation Report, 130

Developing a Management Plan, 131

Conservation Easement Monitoring, 133

Conclusion, 134

References, 136

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Introduction

People value nature for different reasons and usually for a variety of reasons. I value the big, beautiful mystery of it. The more you search, the more you realize every species, natural community, or landform has a long, beautiful story behind it, and science and the human mind are only prepared to comprehend the first few pages.

An endangered salamander stares back at me from her rock crevice in the North Carolina mountains. I think about how she coevolved with the specific type of forest that surrounds us, which is one of the most diverse in the world. An early version of this forest type used to span the northern hemisphere of the Pangaea supercontinent hundreds of millions of years ago, and now the best remaining examples exist where I stand and in China. The salamander has probably existed as a species for more than 20 million years and might only be around a little while longer. Then I realize, at that moment, I'm probably the only person on the planet having face time with this species and on its terms.

I became a biologist because I crave these experiences, but they come at a cost. You become deeply aware of how tragic the biodiversity crisis really is. You feel compelled to do something about it, and you hope others can be convinced to find value in the information you provide and actually use it for the greater good.

In the United States alone, we have lost between 100 and 500 species since European settlement. The current global species extinction rate is 1,000 to 10,000 times the normal background rate throughout the earth's biological history. Such a spike hasn't happened since a large asteroid struck the earth 65 million years ago. Now we are the asteroid.

There are all sorts of perfectly practical and utilitarian reasons why the loss of species should concern everyone. But I like to think of it this way: Losing species and ecosystems in the name of growth and progress is like selling your organs. You can make a quick buck, but you have lost parts of yourself. You have to assume they have value, regardless of whether you understand them.

The biodiversity crisis is driven primarily by habitat loss, which is no surprise. In the United States, only 42 percent of the land remains covered with natural vegetation, more than half the wetlands have been filled since the



Jeff Corser

Introduction

American Revolution, and we continue to lose about 1.6 million acres of open space each year to development.

We have all witnessed the disappearance of these places. The woods around my house in south Florida, where I played as a child and went hunting with my dad, have become subdivisions and strip malls. The blissful wildflower meadows of the Colorado Front Range, where I learned botany, suffered the same fate. Fortunately, communities around the country have stepped up and taken action by forming land trusts to protect the natural lands they love. This movement has grown exponentially in recent years and focuses on working with willing landowners to protect private lands for the public good. This is particularly important for biodiversity conservation because private lands hold a disproportionate number of rare or at-risk species and ecosystems compared with public lands.

This handbook evolved from my experiences working as a consulting and staff biologist for land trusts across the country and from my involvement with biodiversity sessions at Rally, the Land Trust Alliance's National Land Conservation Conference. During this time, I have noticed that:

1. Land trust workers often wish to incorporate biological information and protections into their projects but, since they are usually not biologists, are not sure how to proceed.
2. Biologists and consultants, who wish to help land trusts, are not clear on what types of biological information the land trusts need, how the data will be used, and how land trusts operate.
3. Landowners are unsure of how their land protection project will benefit from such information.

This book is meant to help bridge these gaps between conservation science and its application to the protection of private lands. The goal is to help land trust practitioners and landowners understand what biodiversity is, how it's conserved, how the important biological attributes of a project are identified and documented, and how to translate this information into protection and management. It is also meant to help biologists, consultants, and landowners understand the role and responsibilities of land trusts, what types of biological information are most useful, and how this information is used in the land protection process.

In a rush to make a land protection deal happen, biological assessments and inventories are sometimes viewed as unnecessary, complicated, and expensive. To the contrary, they can bolster land protection projects and can be easier and less expensive than most people think. Besides identifying strategic, high-

Introduction

quality projects that maximize conservation benefits, an analysis of biological conservation values can facilitate the land protection process by enhancing grant applications and inspiring interest from funders. Biological reports can also help defend the project from future legal challenges, which can be of particular interest to landowners claiming tax deductions for the donation or bargain sale of a conservation easement.

Losing species and ecosystems in the name of growth and progress is like selling your organs. You can make a quick buck, but you have lost parts of yourself.

This book reviews free data sources that allow land trusts to assess a wide range of biological attributes easily, quickly, and inexpensively at the very beginning of the land protection process, when such information is most useful. The use of on-the-ground biological inventories is also discussed, including what type of biologist to use, when such studies are recommended, what they should entail, and how to gain the most useful information for the least amount of time and money.

Finally, the book discusses biological reports and how they inform land trust activities, such as project selection, fundraising, drafting conservation easement language, compiling baseline documentation, and writing management plans. The text emphasizes how the biological analysis process can help land trust projects conform to *Land Trust Standards and Practices*, the Internal Revenue Code (IRC), and Internal Revenue Service (IRS) Treasury Regulations, and ultimately contribute to conserving biodiversity.

“This book falls into that rare category of ‘necessary.’ For people concerned about preserving the fabric of this earth in a time of tempestuous change, Chris Wilson has provided a mandatory manual. It will do much good in the world.”

BILL MCKIBBEN, Author of *The End of Nature* and *Deep Economy*, Advisor to Northeast Wilderness Trust

“Everybody talks about saving nature. Here’s your operating manual for getting the job done. It clearly explains how to assess biodiversity on a property, what it takes to maintain or restore it, where to find expert help at each stage, and why this all matters. Add solid advice on subjects from fundraising for projects to complying with regulations, and you have a book that belongs in every land trust office. The sooner, the better.”

DOUGLAS H. CHADWICK, wildlife biologist, author of *The Wolverine Way*, and a founding board member of the conservation land trust Vital Ground.

“This book should serve as an important resource to land conservation practitioners hoping to maximize their conservation impact. It provides a concise introduction to many important facets of the rapidly changing world of biodiversity conservation; where information can be quite powerful, and bringing the right information to your decisions can make all the difference.”

PATRICK COMER, Chief Ecologist, NatureServe

THE LAND TRUST ALLIANCE promotes voluntary land conservation and strengthens the land trust movement by providing the leadership, information, skills and resources land trusts need to conserve land for the benefit of communities and natural systems. www.landtrustalliance.org.

SWEET WATER TRUST is a grant-making foundation whose mission is to support land conservation that safeguards wild lands and waters, native wild flora and fauna, and living soils. Since its establishment in 1991, Sweet Water Trust has been actively involved in conservation work in New England and upstate New York, focusing in recent years on the forests of the Northern Appalachians, including neighboring lands in Canada. www.sweetwatertrust.org.