BIODIVERSITY AND WILDLIFE CONSERVATION PLANNING REFERENCES

This reference list represents books, articles, websites, and experts that resource professionals might find helpful in developing comprehensive wildlife conservation strategies. The list was initially compiled by Defenders of Wildlife to assist states in developing large-scale biodiversity conservation plans. It was expanded and enhanced by members of a committee appointed by the International Association of Fish and Wildlife Agencies to assist states in developing comprehensive fish and wildlife conservation plans. Many experts have offered assistance in improving the list. Staff support was provided by Lisa Anderson, Arizona Game and Fish Department.

The list contains information on conservation planning in general, building partnerships, involving the public, and information on how to maximize political support. Whenever possible the references are annotated. Book prices are for new editions as found on http://www.amazon.com/ for convenience. Feedback on the references is welcome. Send e-mail to svickerman@defenders.org with comments.

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1. Overview of ecosystem management and broad-scale conservation planning

- Planning for species groups and habitats
- Integrating planning for terrestrial and aquatic systems
- Designing conservation networks
- Mapping and use of GIS technology in conservation planning

Beatley, Timothy. 2000. Preserving Biodiversity: Challenges for Planners. *American Planning Association Journal* 1, 5.

Benedict, M. 2000. Green infrastructure: a strategic approach to land conservation. Planning Advisory Service (PAS) Memo, October 2000:1-4.

This 4-page memo summarizes the green infrastructure approach to conservation planning. It lists eight guiding principles that address financing, timing relative to development, landscape linkages, building partnerships, crossing multiple landscapes and scales, engaging the public, and promoting the diverse benefits. Obtain from American Planning Association by sending e-mail to pasmemo@planning.org.

Cort, Cheryl A. 1996. A survey of the use of natural heritage data in local land-use planning. Conservation Biology. 10(2): 632-637.

Dale, V.H. et al. June 2000. *Ecological Principles and Guidelines for Managing the Use of Land*. Ecological Applications, 10(3). Ecological Society of America.

Dramstad, Wenche E. et. al. Harvard University Graduate School of Design. 1996. *Landscape Ecology Principles in Landscape Architecture and Land-Use Planning*. Island Press. Washington DC.

An 80-page primer on designing landscapes to address ecological issues, including fish and wildlife habitat. The book is clearly written and illustrated with drawings and photographs. A quick read, and excellent introduction to concepts relevant to the integration of conservation and land-use planning. Section I describes concepts regarding patch size, number, location; edge and boundaries; corridors; and mosaics. Section II includes case studies. \$25.00. Order from www.islandpress.org

Ecological Society of America's Committee on Land Use. 2000. *Ecological Principles for Managing Land Use*. Ecological Society of America, Washington DC.

This report discusses five principles of ecological science that have particular relevance for land use planning. They address time, species, place, disturbance, and landscape. The principles dictate several guidelines for land use: Managers should examine impacts of local decisions in regional context; plan for long-term change and unexpected events; preserve rare landscape elements and associated species; avoid land uses that deplete natural resources; retain large, contiguous or connected areas that contain critical habitats; minimize the introduction and spread of nonnative species; avoid or compensate for the effects of development on ecological processes; and implement land use and management practices that are compatible with the natural potential

of the area. A companion brochure, a video, and set of slides area available from the Ecological Society of America.

ESRI User Conference 98. Conservation Planning Priorities in the Southern Rocky Mountains. Selecting Conservation Sites: Ecoregional Planning with Ecoblocks.

Forman, Richard T. 1995. *Land Mosaics, The Ecology of Landscapes and Regions*. Cambridge University Press. New York.

This 600-page text synthesizes the ecology of heterogeneous land areas, where natural processes and human activities spatially interact to produce an ever-changing mosaic. It contains ideas, principles, and applications for planning, conservation, design, management, sustainability and policy. Readable and illustrated. \$52.00. Refer to the Cambridge University Press website: www.cup.org

Golley, Frank Benjamin. 1993. *A History of the Ecosystem Concept in Ecology*. Yale University Press. New Haven, Connecticut.

A 200-page book that tells the stories of pioneers in ecosystem management, by providing details of their experiences in science and management. It traces the history of the concept and its application through the eyes of a prominent ecologist, explaining how the concept has been shaped internationally by developments in other disciplines and by personalities and politics. An interesting read for anyone attempting a large-scale ecosystem conservation strategy. It gives the reader a compelling sense of the complexity of ecosystems and guidelines for future research. \$22.00. Refer to the Yale University Press website: www.yale.edu/yup.

Groves, C.R., D.B. Jensen, L.L. Valutis, K.H. Redford, M.L. Shaffer, J.M. Scott, J.V. Baumgartner, J.V. Higgins, M.W. Beck, and M.G. Anderson. 2002. Planning for biodiversity conservation: putting conservation science into practice. BioScience. Vol52, No 6 (499-512).

This article summarizes the seven-step conservation planning framework used by The Nature Conservancy in ecoregional planning. These steps include 1) identifying conservation targets; 2) collecting information and identifying gaps; 3) establishing conservation goals; 4) assessing conservation areas; 5) evaluating the ability of conservation targets to exist; 6) assembling a portfolio of conservation areas; and 7) identifying priorities. Excellent overview.

Groves, Craig R. et al. and The Nature Conservancy. 2003. *Drafting a Conservation Blueprint: A Practitioner's Guide to Planning for Biodiversity*. Island Press. Washington DC.

A 400-page book covering state-of-the-art conservation planning strategies. The book is designed to provide practical information for conservation biologists and planners. The focus is on landscape scale (especially ecoregional) planning, and contains some reference to the social and political realities associated with conservation planning across jurisdictional boundaries. The author offers experience-based guidance from biologists and planners that brings together relevant information from the fields of ecology, conservation biology, planning, and policy. Individual chapters outline and discuss the main steps of the planning process, including: the planning framework, conservation targets and setting goals, existing conservation areas and filling information gaps, population viability and ecological integrity, selecting and designing a portfolio of conservation areas and assessing threats and setting priorities. A concluding section offers advice on turning conservation plans into action, along with specific examples from around the world. \$35.00. Order from www.islandpress.org

Groves, C., L. Valutis, D. Vosick, B. Neely, K. Wheaton, J. Touval, and B. Runnels. 2000. *Designing a Geography of Hope: A practitioner's handbook to ecoregional conservation planning, volume I.* The Nature Conservancy, Arlington, VA.

This 100- page report with some color maps outlines the Nature Conservancy's approach to ecoregional planning, including setting targets and goals, collecting and managing information, selecting sites, and taking conservation actions. Order from The Nature Conservancy. Refer to the website: http://www.nature.org/

Grumbine, Ed. 1992. *Ghost Bears: Exploring the Biodiversity Crisis*. Island Press. Washington DC. This 250-page book describes the impact of humans on organisms and ecosystems, and explains why a species-centered approach may fail to address the problems. Using the grizzly bear as a metaphor, the author explains principles of conservation biology in understandable terms, and describes the connections between science, law, land management, and environmental values. \$19.95. Order from www.islandpress.org

Gunderson, Lance H. and C.S. Holling. 2002. *Panarchy: Understanding Transformations in Human and Natural Systems*. Island Press, Washington DC.

The 450-page book contains 16 chapters by different authors, who address a number of institutional and ecological issues commonly encountered by resource managers. It provides great insight into the reasons that some resource agencies are dysfunctional, and some examples in which managers have successfully implemented new strategies. An interesting, if challenging read that provides challenging new perspectives. The book is a fundamental new development in a widely acclaimed line of inquiry. It represents the first step in integrating disciplinary knowledge for the adaptive management of human-natural systems across widely divergent scales, and offers an important base of knowledge from which institutions for adaptive management can be developed. It will be an invaluable source of ideas and understanding for students, researchers, and professionals involved with ecology, conservation biology, ecological economics, environmental policy, or related fields. \$40.00. Order from www.islandpress.org

Hoctor, T.S., M.H. Carr, and P.D. Zwick. 2000. Identifying a linked reserve system using a regional landscape approach: the Florida ecological network. Conservation Biology 14:984-1000.

This article describes the process used in Florida to analyze potential ecological connectivity to identify areas with priority conservation significance and landscape linkages as part of a Florida program called Greenways. The proposed network includes habitats for target species, priority ecological communities, wetlands, roadless areas, floodplains, and important aquatic systems. The Florida Ecological Network includes half of the state's land area, with half of that land already in pubic ownership.

Hudson, Wendy, ed. 1991. *Landscape Linkages and Biodiversity*. Island Press. Washington D. C. This 180-page book is a compilation of articles on biodiversity with an emphasis on the need for connectivity in the design of conservation networks. The material was initially presented at a biodiversity workshop held in conjunction with the International Association of Fish and Wildlife Agencies. It addresses the development of a unified approach to conserving biodiversity, addressing habitat fragmentation using landscape linkages, and integrating biodiversity with human activities. Though a bit dated, the book contains some interesting and readable

information for conservation planners. Order from Island Press, www.islandpress.com for \$28.00, or send an e-mail to Svickerman@defenders.org and ask for a complimentary copy.

Johnson, Norman K. et. al. 1999. *Bioregional Assessments: Science at the Crossroads of Management and Policy*. Island Press. Washington DC.

This 375-page book is a compilation of case studies chapters describing bioregional assessments from around the country, including the Forest Ecosystem Management Assessment Team, Great Lakes-St. Lawrence River Basin Assessments, Everglades-South Florida Assessments, Northern Forest Lands Assessments, Southern California Natural Community Conservation Planning, Interior Columbia Basin Ecosystem Management Project, and Sierra Nevada Ecosystem Management Project. This book examines the challenges inherent in the assessment of complex regional systems, and the role of science in the assessment process. Known as bioregional assessment, the approach gives science and scientists a crucial role in the policymaking process to provide a base of knowledge from which to develop policy options and management decisions. The concluding chapter provides a synthesis and analysis of the assessment process. \$37.50. Order from www.islandpress.org

Kusler, J. and L. Larson. 1993. Beyond the ark: a new approach to U.S. floodplain management. Environment 35:6-16.

Land Trust of Santa Cruz County Today. Land Trusts and Conservation Planning with GIS. By Eric Schmidt. http://www.esri.com/news/arcnews/summer99articles/20-landtrusts.html

Noss, Reed and Allen Y. Cooperrider. 1994. *Saving Nature's Legacy: Protecting and Restoring Biodiversity*. Island Press. Washington DC.

This 340-page book Saving Nature's Legacy presents a broad, land-based approach to biodiversity conservation in the U.S. with the authors succinctly translating principles, techniques, and findings of the ecological sciences into an accessible and practical plan for action. The authors consider the strengths and limitations of past and current approaches to land management, and then present the framework for a bold new strategy, with explicit guidelines on inventorying biodiversity, selecting areas for protection, designing regional and continental reserve networks, establishing monitoring programs, setting priorities and an in-depth assessments of what must be done to protect and restore the full spectrum of native biodiversity to the North American continent. \$37.50. Order from www.islandpress.org

Rosenzweig, Michael. 2003. Win-win ecology: How the Earth's Species Can Survive in the Midst of Human Enterprise. Oxford University Press, New York.

This 180-page book devotes itself to human ecology, biological diversity and economic impacts. In this book, ecologist Michael Rosenzweig explores the debate concerning to which extent we can save the Earth's millions of different species without sacrificing human economic welfare. He finds that ecological science actually rejects such polarization and believes that conservation must discover how we can blend a rich natural world into the world of economic activity. This revolutionary, common ground between development and conservation is called reconciliation ecology: creating and maintaining species-friendly habitats in the very places where people live, work, or play. The book offers many inspiring examples of the good results already achieved. \$18.90. Refer to the Oxford University Press website: http://www.oxfordpress.com/

Schwab, Jim. May 1994. *Planning for Wildlife Mitigation Corridors*. Environment Development. American Planning Association.

Scott, J.M., F.W. Davis, R.G. McGhie, R.G. Wright, C. Groves, and J. Estes. 2001. Nature reserves: do they capture the full range of America's biological diversity? *Ecological Applications* 11:999-1007. Less than 6% of the US land area is in nature reserves, and most are found at high elevations with poor soils. Greater numbers of species are found at lower elevations that have been largely converted to agricultural and urban uses. Effective conservation strategies must engage the private sector. Request reprint from: mscott@udiaho.edu.

Stein, B.A., L.S. Kutner, and J.S. Adams, editors. 2000. *Precious Heritage: The Status of Biodiversity in the United States*. Oxford University Press, New York, New York, USA.

This 400-page book provides a comprehensive and beautifully illustrated overview of the nation's biodiversity. It represents a compilation of 25 years of information from the Natural Heritage Programs in each state. It highlights concentrations of species (hot spots) in the U.S. and offers information concerning conservation strategies. \$45.00. Refer to the Oxford University Press website: http://www.oxfordpress.com/

Weber, T. and J. Wolf. 2000. Maryland's Green Infrastructure: using landscape assessment tools to identify a regional conservation strategy. *Environmental Monitoring and Assessment* 63: 265-277.

2. Strategic and operational planning

- Collaborative planning
- Organizational management systems
- Moving from strategies to operations

Yaffee, Steven L., et al. 1996. "Ecosystem Management in the United States: An Assessment of Current Experience." The University of Michigan and The Wilderness Society. Island Press: Washington DC. Order from: www.islandpress.org

3. Performance measurement

- Developing goals and objectives
- Program evaluation

California Resources Agency. 2001. Draft Conservation Audit Methodology. Sacramento, CA.

California Resources Agency. 2001. First Draft Report on the Methodology to Identify State Conservation Priorities. Sacramento, CA. This report can be downloaded at http://legacy.ca.gov/documents.html

California Resources Agency. 2001. *Resource Assessment Methodology Case Studies*. Sacramento, CA. This report can be downloaded at http://legacy.ca.gov/documents.html

La Tourrette, J. and W. Luscombe. 2002. *Washington Biodiversity Initiative: A feasibility assessment*. Defenders of Wildlife, Lake Oswego, OR.

This 92-page report was prepared by contractors for Defenders of Wildlife, who were asked to investigate the political and technical feasibility of creating a biodiversity project in Washington State. The process resulted in the passage of SB 6400, state legislation that created a biodiversity program. The report highlights the challenges and opportunities associated with efforts to promote a more integrated and coordinated approach to conservation. SB 6400 is appended. The report is accessed at: http://www.biodiversitypartners.org/WA/Report/WBI.html

4. Strategies for different land uses

- Conserving habitat in developed and developing landscapes
- Conserving habitat in agricultural and forested landscapes

Alverson, William S. et. al. 1994. *Wild Forests: Conservation Biology and Public Policy*. Island Press, Washington DC.

This 300-page book addresses biodiversity management in forested landscapes, with an emphasis on public lands in the Midwestern U.S. Authors discuss fragmentation, edge effects, different management strategies, and policy implications. \$32.50. Order from www.islandpress.org

Beach, Dana. 2002. Coastal Sprawl: The Effects of Urban Design on Aquatic Ecosystems of the United States. Prepared for the Pew Oceans Commission by the South Carolina Coastal Conservation League. Pew Oceans Commission, Arlington, VA.

This 30-page report describes the threat of development to important coastal ecosystems, and some recommendations for addressing the problems. www.pewoceans.org (703) 516-0624.

Benedict, M.A. and E.T. McMahon. 2002. Green infrastructure: smart conservation for the 21st Century. Sprawl Watch Clearinghouse Monograph Series. Sprawl Watch Clearinghouse, Washington, DC. This is a 32-page monograph describing the development and implementation of "green infrastructure," defined as an interconnected network of green space that conserves natural ecosystem values and functions and provides associated benefits to human populations. Obtain from the web site. http://sprawlwatch.org/greeninfrastructure.pdf.

Best, Constance and Laurie Wayburn. Pacific Forest Trust. 2001. *America's Private Forests: Status and Stewardship*. Island Press, Washington DC.

This 250-page book provides a comprehensive overview of trends in the nation's private forest land ownership and use. Authors provide recommendations concerning conservation, restoration, and sustainable management of these lands. \$28.00. Order from www.islandpress.org

Bird, Elizabeth Ann., et. al. 1995. *Planting the Future: Developing an Agriculture that Sustains Land and Community.* Iowa State University Press, Ames, IA.

This 270-page book describes approaches to farming that hold the most promise for protecting the natural environment while maintaining opportunities for revitalizing rural communities. It also discusses public actions that are needed to enable and encourage farmers to use more sustainable farming methods. It is the final report of a multi-state cooperative research effort sponsored by the Northwest Area Foundation of St. Paul, Minnesota. \$17.99. Refer to the Iowa State Press website at: www.iowastatepress.com.

Butler, Kent S. May 1993. *Balancing Growth and Habitat Preservation*. Environment Development. American Planning Association.

Duerksen, Christopher J. et. al. 1997. *Habitat Protection Planning: Where the Wild Things Are.* American Planning Association, Planning Advisory Service, Report # 470/471. Chicago, Illinois.

This 80-page report addresses the need and potential strategies for addressing habitat protection through local land-use planning. It covers the reasons to protect habitat, a practical framework for making local habitat protection decisions, linking specific problems with appropriate tools, implementation strategies, legal issues, national policies and programs. Order from the American Planning Association. E-mail pasreports@planning.org.

Golley, Frank B. et al. 1999. Rural Planning from an Environmental Systems Perspective.

This 560-page book is directed toward graduate students and professionals, providing a source of information and concepts for those concerned with land and water policies and practice. This book synthesizes knowledge from several fields that are crucial to sustainable rural development: the physical environment, biological and agricultural production, rural sociology and economics. It takes a systems perspective incorporating systems analysis, landscape analysis and soil, water, and land planning. The book is based on almost twenty years of experience in teaching a course on rural planning and the environment at the International Centre for Advanced Mediterranean Agronomic Studies in Zaragoza, Spain. The authors are specialists from universities, research institutions and companies in Europe and North America. \$153.00 hardcover.

Honachefsky, William B. 2000. *Ecologically Based Municipal Land Use Planning*. Lewis Publishers, Boca Raton, Florida.

This 250-page book makes a compelling case for integrating ecological principles into land use planning more effectively. It covers municipal master planning, incorporating scientific and ecological research, the use of geographic information systems in municipal planning, and the designation of community ecological infrastructure as a priority. Contains many pictures and drawings illustrate text.

Imhoff, Daniel. 2003. Farming with the Wild: Enhancing Biodiversity on Farms and Ranches. Sierra Club Books. San Francisco, California.

This 175-page book contains many examples of farming that enhances biodiversity and wildlife habitat. It is beautifully illustrated with color photographs, and nicely written for lay audiences. Order from Watershed Media: www.watershedmedia.org, or call (707) 431-2936. \$29.95. Also available at bookstores.

Jackson, Dana and Laura. 2002. Farm as Natural Habitat: Reconnecting Food Systems with Ecosystems. Island Press, Washington DC.

This book 250-page book promotes the idea that agricultural landscapes can be restored to a healthy diversity, challenging the notion that habitat destruction and pollution are inevitable, and that ecological sacrifice zones are necessary to feed the world. Contributors bring together insights from conservation biology, sustainable agriculture, and environmental restoration to link agriculture and biodiversity, farming and nature. \$25.00. Order from www.islandpress.org

Leedy, Daniel and Robert Maestro, and Thomas Franklin. 1978. *Planning for Wildlife in Cities and Suburbs*. Planning Advisory Service Report No. 331. American Society of Planning Officials, Chicago, Illinois.

Nolon, John R. 2001. Well Grounded: Using Local Land Use Authority to Achieve Smart Growth. Environmental Law Institute.

Perry, David. 1994. *Forest Ecosystems*. Oregon State University Press. Corvallis, Oregon.

This 600-page book is an advanced text for students and professionals. It offers a comprehensive survey of the structure and functioning of forest ecosystems worldwide. Basic ecological concepts are covered from microscopic to global scale. \$56.00. Out of Print. Used books available for \$39.45 at: http://www.amazon.com/

Rodiek, Jon E. and Eric G. Bolen. 1991. *Wildlife and Habitats in Managed Landscapes*. Island Press, Washington DC.

This 200-page book offers a strategy for integrating habitat with other land uses across large landscapes. Essays by several experts show how planning, management and design can applied to meet the needs of people and wildlife. \$30.00. Order from www.islandpress.org

Wiley, P. 2001. No Place for Nature: The limits of Oregon's land use program in protecting fish and wildlife habitat in the Willamette Valley. Defenders of Wildlife, Lake Oswego, OR.

Oregon's land use planning system is widely recognized as one of the best for containing sprawl and conserving resource lands. Defenders of Wildlife contracted with Ms. Wiley to determine if the system also protects habitat, which it does not. This report explains Oregon's land use system relative to the conservation of ecologically significant lands in some detail, and explains why it is ineffective at protecting them. Defenders of Wildlife, Lake Oswego, Oregon. The report can be accessed at http://www.biodiversitypartners.org/Wiley/foreword.html)

White, Patricia and Michelle Ernst. 2003. Second Nature: Improving Transportation without Putting Nature Second. Defenders of Wildlife, Washington DC.

This 70-page report describes efforts around the country to integrate habitat protection with transportation planning. It can be obtained from Defenders of Wildlife (202) 682-9400 or from the web site: http://www.defenders.org/habitat/highways/

5. Assessment and monitoring of species, habitats, and threats

California Resources Agency. 2001. Key Data Needs, Evaluation of Existing Data Sets and Identification of Important Data Gaps. Sacramento, CA.

Cort, C. 1996. A survey of the use of natural heritage data in local land-use planning. Conservation Biology 10:632-637.

Forman, R.T.T. 2000. Estimate of the area affected ecologically by the road system in the United States. Conservation Biology 14:31-35.

Heinz Center for Science, Economics and the Environment. 2002. *The State of the Nation's Ecosystems: Measuring the Lands, Waters, and Living Resources of the United States*. Cambridge University Press. NewYork.

This 270-page report lays out a blueprint for periodic reporting on the condition and use of ecosystems throughout the United States. It proposes, for each major land use, a set of 18 indicators, including species and habitats. The report is a culmination of a multi-year, multi-stakeholder dialogue on relevant, informative, and scientifically valid measurements of ecological health. E-mail info@Heinzctr.org for more information, or view on-line at www.heinzctr.org/ecosystems.

LaRoe, Edward T., et al. 1995. "Our Living Resources: A Report to the Nation on the Distribution, Abundance, and Health of U.S. Plants, Animals, and Ecosystems." U.S. Department of the Interior – National Biological Service: Washington DC.

National Research Council. 2000. *Ecological Indicators for the Nation*. National Academy of Sciences. National Academy Press, Washington DC.

This 180-page report identifies national ecological indicators that can support policies an aid decision-making at several levels. A helpful overview of considerations relevant to the selection and use of indicators, including species and habitats. \$39.95. Order from National Academy Press: www.nap.edu.

Ricketts, Taylor H., Eric Dinerstein, David M. Olson, Colby J. Loucks, et al. 1999. "Terrestrial Ecoregions of North America: A Conservation Assessment." Island Press: Washington DC.

Using a rigorous ecoregion-based approach, rather than the more common state-by-state analysis, a team of scientists from World Wildlife Fund has produced a comprehensive assessment of the current status of biodiversity in North America north of Mexico. The book presents the rationale for the ecoregion approach, describes the biological distinctiveness of North American ecoregions, assesses the level of threats facing each, presents a conservation agenda for the next decade, and sets forth recommendations for preserving and restoring biodiversity. 508 p. \$75.00. Order from: www.islandpress.org

Scott, Michael J. et. al. 2002. *Predicting Species Occurrences: Issues of Accuracy and Scale*. Island Press, Washington DC.

This 900-page compilation of papers represents the definitive work on predicting species occurrence relative to habitat change. It synthesizes the scientific foundation for this work, and highlights for managers and researchers the strengths and weaknesses of current approaches, and the magnitude of research required to improve or test predictions of currently used models. \$95.00. Order from www.islandpress.org

6. Public involvement and building partnerships

- Stakeholder participation processes
- Integrating activities of local, state, and federal, tribal governments
- Human dimensions (i.e., public attitudes toward wildlife)
- Integrating public, private and nonprofit sector conservation strategies

Belden Russonello & Stewart Research and Communications. 2002. *Americans and Biodiversity: New perspectives in 2002*. Biodiversity Project, Madison, WI.

The Biodiversity Project in Madison, Wisconsin has commissioned extensive research on public attitudes toward biodiversity, and has several publications summarizing this work. www.biodiversityproject.org

Bleiker, Hans and Annemarie. 2000. Citizen Participation Handbook for Public Officials and Other Professionals Working in the Public Sector.

A five-pound manual addressing a range of public participation issues including overall effectiveness, citizen participation by objectives, systematic development of informed consent, principles of citizen participation, and a full range of different techniques and the circumstances under which they are appropriate. Despite its weight, the manual is a quick and entertaining read with blunt observations about ineffective efforts. The emphasis is on communicating effectively with project opponents and building agency credibility. Order from www.ipmp-bleiker.com or call (831) 373-4292. \$52.50.

Bleiker, Hans and Annemarie. Systematic Development of Informed Consent. Hans and Annemarie Bleiker's Approach for Public Officials to Complex Problem-Solving.

A 20- minute video illustrating an approach for dealing effectively with public opposition to agency projects. Order from www.ipmp-bleiker.com. No charge.

Chase, Lisa. Tania M. Schusler, and Daniel J. Decker. 2000. Innovations in stakeholder involvement: what's the next step? *Wildlife Society Bulletin*. 28 (1) 208-217.

This article explores a range of public participation techniques on a spectrum from authoritative to co-managerial, using examples from the New York suburbs and Alaska. Order from the Human Dimensions Unit at Cornell University, Ithaca, NY 14853 or e-mail Lisa.chase@uvm.edu.

Cortner, Hanna J, and M. Moote. *The Politics of Ecosystem Management*. 1999. Island Press, Washington DC.

This 190-page book addresses political issues surrounding ecosystem management by providing a social context in which natural resources decisions are made. It is as much about people and new forms of governance as it is about new science and conservation. \$28.00. Order from www.IslandPress.com

Defenders of Wildlife. 1999. Looking for the Big Picture; the Process Behind the Oregon Biodiversity Project. West Linn, Oregon.

This 50-page report summarizes the experience Defenders of Wildlife and its and partners had in developing a statewide biodiversity assessment and strategy, which was completed in 1998. It describes the process of recruiting and working with a diverse set of partners, including high and low points. Obtain from Defenders by calling (503) 697-3222 or e-mail kkelly@defenders.org. The publication can be downloaded from www.biodiversitypartners.org under publications. No charge.

Duda, Mark Damian, S. Bissell, and K. Young. 1998. *Wildlife and the American Mind; Public Opinion and Attitudes toward Fish and Wildlife Management*. Responsive Management National Office, 130 Franklin Street, PO Box 389, Harrisonburg, VA 22801.

This 800-page book was funded with a grant from Federal Aid, and represents a compilation of the most salient findings from hundreds of surveys, interviews, etc. conducted over a ten-year period between the mid-eighties and mid-nineties. The topics include value of wildlife, landowner assistance, information needs and, marketing and public outreach. It is an important reference that may provide useful information for planning purposes. The book is out of print, but copies should be available at all state fish and wildlife agencies. Copies may be borrowed from Responsive Management (540) 432-1888 or Fax (540) 432-1892. The Web address is www.responsivemnagement.com

Endicott, Eve, ed. 1993. Land Conservation through Public/Private Partnerships. Island Press, Washington DC.

This 350-page book presents a detailed inside look at the public/private partnerships that have become common practice in the last two decades of land conservation. It contains in-depth studies case studies written by participants in land-saving projects, including information about when and why partnerships are necessary, what they can accomplish, and how to arrange and manage them effectively. \$30.00. Order from www.IslandPress.com

Gobster, Paul R. Bruce Hull. 2000. *Restoring Nature: Perspectives from the Social Sciences and Humanities*. Island Press, Washington. D.C.

This 306-page book explores issues that arise during the planning and implementation of ecological restoration projects in urban and wildland settings. Different authors examine moral and ethical questions regarding the practice of restoration, conflicts over how nature is defined and who should be involved in the decision-making, and how mangers can make restoration projects succeed. This book provides some insight and information about different value systems and how they affect public attitudes toward ecological restoration. \$30.00 Order from www.IslandPress.com

Knight, Richard L. and Peter B. Landres. 1998. *Stewardship Across the Boundaries*. Island Press, Washington DC.

This 345-page book addresses the complex biological and socioeconomic impacts of public and private land boundaries. With contributions from natural resource managers, historians, environmentalists, political scientists, and legal scholars, the book develops a framework for understanding administrative boundaries and their effects on the land and on human behavior; examines issues related to different types of boundaries; presents a series of case studies; and offers an integrated strategy for achieving regional stewardship. An important book to help

resource managers reconcile ecological and administrative boundary issues. \$35.00 Order from www.Islandpress.com

Lee, Kai N. Compass and Gyroscope; Integrating Science and Politics for the Environment. 1993. Island Press, Washington DC.

This 225-page book draws upon different disciplines to present a new way to approach public involvement and resource management. One reviewer noted that it "articulates a compelling vision of 'civic science' as the best way to achieve sustainable use of the natural environment. Creatively drawing concepts from a variety of disciplines, Lee shows how by combining pluralistic political conflict with social and natural scientific experimentation civic science can foster learning and contribute to effective organizational action." \$22.00. Order from Island Press. www.islandpress.com

Massachusetts Executive Office of Environmental Affairs. 2001. *Community Preservation Tool Kit.* Boston, MA.

This 50-page report contains specific information about the tools used by the State of Massachusetts to provide assistance to local communities in protecting their natural and cultural resources. It contains copy of the legislation, questions and answers, and power point presentation. Order from the Executive Office of Environmental Affairs.. (617) 626-1000.

Myers, B., J. Wilkinson, and J. Balch. 2002. *Linking Biodiversity Information and Land Use Decision-making*. Environmental Law Institute, Washington DC.

Nash, R. 2001. Wilderness and the American Mind. Yale University Press, New Haven, CT.

Roderick Nash's classic study of America's changing attitudes toward wilderness has received wide acclaim since its initial publication in 1967. The Los Angeles Times has listed it among the one hundred most influential books published in the last quarter century, Outside Magazine has included it in a survey of "books that changed our world," and it has been called the "Book of Genesis for environmentalists." Now a fourth edition of this highly regarded work is available, with a new preface and epilogue in which Nash explores the future of wilderness and reflects on its ethical and biocentric relevance

Wiedman, Wilbur. 1992. *Involving Citizens: A Guide to Conducting Citizen Participation*. Wisconsin Department of Natural Resources.

This document is a 55-page cookbook for designing, managing, and evaluating public involvement processes. Obtain an electronic version by sending an e-mail to mary.hamel@dnr.state.wi.us

Wilkinson, J.B. 1999. The state role in biodiversity conservation. Issues in Science and Technology 15:71-77.

Wondolleck, Julia, and Steven L. Yaffee. 2000. *Making Collaboration Work: Lessons from Innovation in Natural Resource Management*. Island Press. Washington DC.

Book, 277 pages, with stories about agencies, community groups, businesses, and private individuals working together to solve common problems. The book explains why collaboration is an essential component of resource management; describes barriers that must be understood and overcome; presents eight themes that characterize successful efforts; and provides advice on how

to ensure accountability. The information is based on years of research, and is an important reference for anyone responsible for building and maintaining partnerships in resource management. \$30.00. Order from www.islandpress.org

Yaffee, Steven L. and Julia Wondolleck. Spring, 2000. Making collaboration work: lessons from a comprehensive assessment of over 200 wide-ranging cases of collaboration in environmental management. *Conservation Biology in Practice*. P. 17-25.

This article is based on the Island Press book described above. Order copy from www.conbio.org/inpractice.

7. Economic benefits of wildlife and habitat conservation

Boyle, K.J., and R.C. Bishop. 1999. Valuing Wildlife in Benefit-Cost Analysis: A Case Study Involving Endangered Species. *Water Resources Research*. 23 (5) 943-950.

This article provides information on the value of nonconsumptive benefits associated with resources and indicates that these may represent a significant past of the total value of these natural resources.

EcoNorthwest. 2002. Economic Benefits of Protecting Natural Resources in the Sonoran Desert. Prepared for the Coalition for Sonoran Desert Protection, Eugene, Oregon.

This 50-page report and literature review was prepared in conjunction with the Sonoran Desert Conservation plan, and addresses a range of issues relevant to the economic value of implementing the plan. The report contends that environment vs. economy is a false choice, and that Arizona's economy depends on a healthy environment. The findings are relevant to many Western communities. Request a copy by e-mailing lhummon@defenders.org

Shafer, E.S. R. Carline, R.W. Guldin, and H.K. Cordell. 1999. Economic Amenity Values of Wildlife: Six Case Studies of Pennsylvania. *Environmental Management*. 17 (2) 669-682.

This article describes an analysis of the economic value of six wilderness sites in Pennsylvania. Two sites offer catch and release trout fishing, while the others offer a variety of wildlife viewing.

Southwick Associates, Inc., Economic Impact Analysis of Nonconsumptive Wildlife-Related Recreation in Arizona.

This project expands on *The 2001 Economic Benefits of Watchable Wildlife Recreation in Arizona*, conducted for the Arizona Game and Fish Department. The 2001 economic contributions of watchable wildlife recreation are assessed statewide, by county and by activity types. This report measures the impact of watchable wildlife expenditures on Arizona industries and individuals to produce estimates of total dollar benefits created in 2001.

U.S. Department of the Interior, Fish and Wildlife Service and U.S. Department of Commerce, Census Bureau. 2001 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation.

This tenth in a series report results from interviews with U.S. residents about their fishing, hunting, and "wildlife watching." Wildlife watching includes observing, photographing, and

feeding fish and wildlife (formerly nonconsumptive wildlife-related recreation). This report focuses primarily on age 16 and older, with information on 6-15 year olds provided in Appendix C. The U.S. Fish and Wildlife Service has conducted the National Survey at approximately 5-year intervals since 1955. Listed Tables include: 35 Fishing and Hunting, 14 Wildlife Watching, and 20 State Wildlife-Related Recreation. This report is a useful tool that quantifies the economic impact of wildlife-based recreation.

Woodward, Richard T., and Yong-Suhk Wui. 2001. The Economic Value of Wetland Services: A Meta-Analysis. *Ecological Economics*. 37 (May) 257-270.

This article describes the results of a meta – analysis of the value of ecosystem services provided by wetlands. A meta-analysis is a statistical model that compares the values of services reported in economic studies with the unique characteristics of each study. In this study, the estimated values of wetland services from 39 different studies were used to conduct the meta-analysis.

8. Outreach, education, and communications

Massachusetts Executive Office of Environmental Affairs. 2000. *Exploring Biodiversity: A workbook*. Boston, MA.

This 30-page workbook was published by the State of Massachusetts in conjunction with an extensive public outreach campaign to get the public involved in learning about and conserving biodiversity. It is a useful guide for parents and teachers taking children out to conduct field observations. Order from Executive Office of Environmental Affairs (617) 626-1000.

9. Implementation tools

- Conservation laws, policies, regulations
- Land acquisition
- Incentives for private landowners

California Resources Agency. 2001. *Legal Mandates Related to the Conservation of Land and Natural Resources*. Sacramento, CA. (This report can be downloaded at http://legacy.ca.gov/documents.html)

Center for Wildlife Law and Defenders of Wildlife. 1996. Saving Biodiversity: A status report on state laws, policies and programs. Defenders of Wildlife, Washington, DC.

This report contains a summary of the status of each state's programs to protect biodiversity, Though a bit dated, the report contains a useful overview. he report can be accessed at http://www.defenders.org/pb-bst00.html)

Center for Wildlife Law, Defenders of Wildlife, and Environmental Law Institute. 1999. *New Mexico's Natural Heritage: A handbook of law and policy*. Albuquerque, NM.

This report summarizes the biodiversity of New Mexico. (The report is accessed at http://www.eli.org/store/rr99nmbiodiversity.html)

Defenders of Wildlife. 2001. Protecting New Mexico's Natural Heritage: Recommendations on steps toward a comprehensive biodiversity conservation strategy for New Mexico. Washington DC.

This report provides recommendations concerning a comprehensive biodiversity strategy for New Mexico. It is available from Defenders of Wildlife (202) 682-9400.

Environmental Law Institute. 1995. *Indiana's Biological Diversity: Strategies and tools for conservation*. Washington DC.

The report can be accessed at http://www.eli.org/store/rr95indiana.html

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A report overview is accessed at http://www.eli.org/store/rr98ohio.html

Environmental Law Institute. 2001. New York State Biodiversity Project Needs Assessment. American Museum of Natural History. New York, NY.

The report is accessed at http://www.eli.org/store/rr01biodiversityNY.html

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George, S. 2001. State Biodiversity Strategies: A status report. Defenders of Wildlife, Albuquerque, NM.

Meck, S., editor. 2002. *Growing Smart Legislative Guidebook: Model statutes for planning and the management of change*. American Planning Association, Washington DC.

National Research Council. 1993. *Setting Priorities for Land Conservation*. National Academy of Sciences, Washington DC.

This 250-page report is a decade-old, yet still valuable assessment of land acquisition efforts in the United States. The recommendations are still relevant: Most deal with "making connections," and improving integration. Authors suggest broadening the acquisition analysis from the single parcel to the landscape context, link piece-meal purchases to longer-term acquisition plans, widen the scope of the acquisition techniques, think of connections between properties, coordinate among agencies, and sharpen tools to address unexpected opportunities.

Wilkinson, J.B., S.L. Hsu, B. Rohan, D. Schorr, and J. McElfish. 1999. *Protecting Delaware's Natural Heritage: Tools for biodiversity conservation*. Environmental Law Institute, Washington DC.

The report is accessed at:

http://www.dnrec.state.de.us/dnrec2000/Admin/Biodiversity/ELIReport.htm or http://www.eli.org/store/rr99delaware.html

Vickerman, S. 1998. *National Stewardship Incentives: Conservation strategies for U.S. landowners*. Defenders of Wildlife, Lake Oswego, OR.

The report can be accessed at http://www.defenders.org/pubs/nsi01.html

Vickerman, S. 1998. Stewardship Incentives: Conservation strategies for Oregon's working landscape. Lake Oswego, OR.

The report can be accessed at http://www.biodiversitypartners.org/SI/si es.htm

10. Conservation funding strategies

Land Trust Alliance. 2001. LandVote 2001: American investment in parks and open space. Washington, DC.

11. Examples of comprehensive wildlife conservation plans and strategies

• Local, regional, statewide, national, international

Barbour, H. T. Simmons, P. Swain, and H. Woolsey. 1998. *Protecting Biodiversity in Massachusetts: Our irreplaceable heritage*. Natural Heritage and Endangered Species Program, Massachusetts Division of Fisheries & Wildlife, and the Massachusetts Chapter of The Nature Conservancy. Westborough, MA.

An 80-page, full color report on the plants and animals of Massachusetts. Available by calling: (617) 626-1000.

Bilda, E., J.S. Ellis, T. Johnson, Y. Hung, E. Katz, P. Meijerink, A.W. Shearer, H.R. Smith, A. Sternberg, D. Olson, and C. Steinitz. 1994. Alternative futures for Monroe County, Pennsylvania. Harvard University Graduate School of Design, Cambridge, MA.

This 90-page report describes landscape planning alternatives for a Pennsylvania county, including information about wildlife and habitat. Extensive color maps and photographs. California Resources Agency. 2002. *First Annual Conservation Priorities Report*. Sacramento, CA. (This report can be downloaded at http://legacy.ca.gov/documents.html) (same one noted earlier)

Conservation Commission of Missouri. 1997. Missouri's Web of Life. Jefferson City, MO.

Chicago Region Biodiversity Council. 1999. Biodiversity Recovery Plan. Chicago, IL.

Cox, J.A. and R.S. Kautz. 2000. *Habitat and Conservation Needs of Rare and Imperiled Wildlife in Florida*. Technical Report. Florida Fish and Wildlife Conservation Commission, Tallahassee, FL.

Cox, J.A., R.S. Kautz, M. MacLaughlin, and T. Gilbert. 1994. *Closing the Gaps in Florida's Wildlife Habitat Conservation System: Recommendations to meet minimum conservation goals for declining wildlife species and rare plant and animal communities*. Florida Fish and Wildlife Conservation Commission, Tallahassee, FL.

A 240-page report on Florida effort to identify the habitat needed to support wildlife species at risk. Book contains maps of important habitats and describes in detail the methodology used to

select the areas. Obtain copies from Office of Environmental Services, Florida Fish and Wildlife Commission.

Defenders of Wildlife. 1998. *Oregon's Living Landscape: Strategies and opportunities to conserve biodiversity*. Lake Oswego, OR. (Atlas, map, & CD-ROM) (Overview can be accessed at: http://www.biodiversitypartners.org/obp.html)

This 218-lage book contains a biodiversity assessment and strategy developed by a public/private partnership in Oregon. It contains both ecoregional and statewide assessments, and is illustrated with many color maps and plates. Order from Defenders of Wildlife by calling (503) 697-3222.

Delaware Department of Natural Resources and Environmental Control. 2001. *Our Natural Legacy: Delaware's Biodiversity Conservation Partnership.* Dover, DE.

Florida Greenways Commission. 1995. Creating a Statewide Greenways System for People... for Wildlife for Florida: Summary of the Florida Greenways Commission report to the Governor. Tallahassee, FL.

Gawler, S.C., J.J. Albright, P.D. Vickery, and F.C. Smith. 1996. *Biological Diversity in Maine*. Maine Natural Areas Program, Augusta, ME.

Jue, S., C. Kindell, and J. Wojcik. 2001. *Florida Conservation Lands 2001*. Florida Natural Areas Inventory, Tallahassee, FL.

Huckleberry, C.H. 2001. Pima County Board of Supervisors memorandum: Sonoran Desert conservation plan, March 19, 2001. Pima County, Tucson, AZ.

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Hulse D., L. Goorjian, D. Richey, M. Flaxman, C. Hummon, D. White, K. Freemark, J. Eilers, J. Bernert, K. Vache, J. Kaytes, and D. Diethelm. 1997. *Possible futures for the Muddy Creek Watershed, Benton County, Oregon*. Institute for a Sustainable Environment, University of Oregon, Eugene, OR.

This publication represents an alternative futures exercise for a small watershed in the Willamette Basin, Oregon.

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National Marine Fisheries Service. 1991. Recovery Plan for the Northern Right Whale (*Eubalaena glacialis*). Prepared by the Right Whale Recovery Team for the National Marine Fisheries Service, Silver Spring, Maryland. 86 pp.

National Marine Fisheries Service. 1992. Recovery Plan for the Steller Sea Lion (*Eumetopias jubatus*). Prepared by the Steller Sea Lion Recovery Team for the National Marine Fisheries Service, Silver Spring, Maryland. 92 pp.

Nigh, T.A. 2001. Biodiversity conservation in Missouri. Missouri Department of Conservation. Jefferson City, MO.

Nigh, T.A., W.L. Pflieger, P.L. Redrearn, Jr., W.A. Schroeder, A.R. Templeton, and F.R. Thompson III. 1992. *The Biodiversity of Missouri: Definition, status, and recommendations for its conservation*. Biodiversity Task Force, Jefferson City, MO.

Niles, L.N., J. Tash, M. Valent, and J. Myers. 2001. *New Jersey's Landscape Project: Wildlife habitat mapping for community land-use planning and endangered species conservation*. New Jersey Division of Fish and Wildlife, Trenton, NJ. (report, atlas, & CD-ROM) (The report can be accessed at http://www.njfishandwildlife.com/ensp/landscape/lp_report.pdf)

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Pima County. 2002. *Priority Biological Resources of the Sonoran Desert Conservation Plan*. Pima County Board of Supervisors, Tucson, AZ. (map)

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Wisconsin Department of Natural Resources. 1995. Wisconsin's Biodiversity as a Management Issue: A report to Department of Natural Resources managers. Madison, WI. Pima County. 2002. Project Overview: Sonoran Desert conservation and comprehensive plan. Pima County Board of Supervisors, Tucson, AZ.

Willamette Restoration Initiative. 2001. *Restoring a River of Life: The Willamette restoration strategy overview*. Salem, OR. (The overview and full report can be accessed at http://www.oregonwri.org/basin_strat.html)

12. Websites

http://www.apec.umn.edu/faculty/spolasky/Biobib.html

This bibliography contains approximately 4000 references on various aspects of biodiversity and conservation without claiming to provide complete coverage of all the relevant literature. The bibliography uses Procite bibliographic software, which allows web-users to conduct searches using a general word search in all indexed fields (such as author and year) on the initial search page. Users can also search all non-indexed fields (such as title and abstracts) using the advanced search feature. Recent articles have abstracts included. Many older articles do not. All articles either have abstracts or are keyed to a set of categories, which can be accessed using keywords.