



Session Themes and Topics

The goal of the National Conference on Ecosystem Restoration (NCER) is to facilitate interaction among practitioners of large-scale ecosystem restoration by bringing them together at a single venue. By their very nature, each practitioner brings unique perspectives based on the systems in which they work.

The goal of the NCER 2013 meeting is to develop conference sessions that are integrative, cross-system, and promote the transfer of regional-based knowledge to a broad audience. In this light, NCER 2013 will emphasize sessions that engage multiple perspectives, either across systems / regions or among multiple stakeholders (e.g. federal, state, provincial, non-profit, corporate, etc.).

The broader session “themes” are identified in **bold** below. The primary intent of each is described and followed by bulleted “topics”. The *italicized* bullets are intended to give examples of what types of presentation material may be covered by specific topics.

It is important to note that the examples are not exhaustive, but intended only to provide authors a guide when selecting Themes/Topics during the abstract submittal process.

Large-Scale/Regional Ecosystem Restoration– the primary focus of NCER is to share lessons-learned from the conduct of large-scale ecosystem restoration programs both in the U.S. and internationally. Technical sessions convened under this general theme will present information to convey the unique complexities associated with conducting restoration at the watershed or regional scale.

- Definition of Large-Scale Restoration
 - *What is large-scale restoration?*
 - *What constitutes healthy, resilient ecosystems?*
- Restoration Economics and Decision Making
 - *What is the size of the investment being made?*
 - *What does it take to make funding initiatives sustainable?*
 - *Creative financing for large-scale restoration*
- Commonalities Among Regional Approaches
 - *Between or Among the Federal Programs (Bay-Delta, Everglades, Chesapeake, Great Lakes, Upper Mississippi, Missouri River, etc.) or other watershed-scale programs such as efforts for West Coast Salmon*

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- Linking Ecosystem Projects into an Integrative Holistic Large-Scale Restoration Program
 - *Great Lakes Restoration Initiative – joining several small to have a large effect*
 - *Louisiana Coastal Restoration – integration through a common plan*
- Establishing Restoration Priorities
- Accomplishments in Regional/Large-Scale Restoration
 - *Examples of success; what has been accomplished, what needs remains?*
- Sustainability of Large-Scale Restoration
 - *Can large-scale restoration Programs be maintained in light of on-going perturbations and threats?*
- Governance of Large-Scale Ecosystem Restoration
 - *Multi-jurisdictional decision-making*
 - *Ecosystem restoration program management*
 - *Different examples of ecosystem restoration governance mechanisms*
- Integrative Approaches for Funding of Ecosystem Restoration at the Federal Level
 - *Creating synergies for funding of large-scale programs at a national level*
 - *How can large-scale ecosystem restoration programs work together rather than compete for federal funding?*
- Climate Change and Large-Scale Restoration
- Conservation Biology in Large-Scale Restoration

Fundamentals of Ecosystem Restoration – fundamental to achieving restoration success is gaining knowledge about the functionality of the ecosystem to be restored and incorporating this learning through an adaptive management framework. Sessions convened under this general theme will discuss how scientific and engineering knowledge can be used to: (1) define restoration success; (2) establish desired endpoints; (3) produce engineering design guidance; (4) measure ecological response; (5) make predictions about anticipated management actions; (6) link scientific information to management actions; (7) adjust implementation of restoration plan in order to achieve program goals and objectives.

- Adaptive Management
 - *“Learning By Doing”, what are some good examples?*
 - *Examples where science supports/does not support adaptive management*
 - *Pre- and Post-Restoration Assessment*
 - *Technology needs and barriers for advancement of adaptive management*
 - *Challenges with integrating monitoring and evaluation in a large-scale program*
- Endangered Species
- Invasive Species
 - *The impact of invasive species on restoration*
 - *The use of innovative control techniques.*
 - *How do we balance invasive species control with restoration objectives?*
 - *Tools for effective planning to check, control, or eliminate invasive species?*
 - *Consideration for funding of invasive species control efforts – are they sufficient and sustainable?*
 - *Linkages between invasive species and climate change*
- Examples of Linkages Between Physics, Chemistry and Biology
 - *Cross-disciplinary challenges and successes; implementing the PCAST Report*
- Coastal and Nearshore Habitat Restoration

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- Riverine Restoration
- Upland Restoration
- Fish and Wildlife Habitat
- Contaminants
 - *Restoration Strategies for Contaminated Sites*
 - *Remediation of Toxins in Marine Sits (e.g. Great Lakes tributaries and harbors)*
- Climate Change Impacts
- Resilience of Restored Habitat and Ecosystems
- Social and Cultural Aspects of Ecosystem Restoration
- Advancing Ecosystem Restoration through Evidence-Based Practice
- Thoughtful Restoration: Hubris vs. Humility

Current “Hot Topics” in Ecosystem Restoration – ecosystem restoration is currently moving forward in a number of areas that are hot button topics of interest. This theme will focus on these newly evolving topics and how they are fit within the context of large-scale ecosystem restoration.

- Wind Power/Alternative Energy in the Landscape
 - *When and how do we intervene in the “New Ecological World Order”?*
 - *What is the definition of “novel” ecosystems?*
 - *What are the implications on policy and management?*
- Novel Ecosystems
 - *When and how do we intervene in the “New Ecological World Order”?*
 - *What is the definition of “novel” ecosystems?*
- Ecosystem Restoration in the Light of Global Changes
 - *The problem of moving endpoints*
 - *Development of realistic system priorities for ecosystem restoration*
 - *The challenge of modeling intra-landscape parameters in the context of the changing extra-landscape drivers*
- Proactive Management of the Flow of Ecosystem Information and Disinformation
 - *How to best develop and deliver a science-based message for non-scientists*
 - *Using the logic model approach to message development and delivery*
 - *How to manage disinformation (whether intended or unintended)*
- Landscape Connectivity / Corridor Restoration
- Ecosystem Restoration in Connection with Private Lands
 - *i.e. the NRCS’ Mississippi River Basin Initiative*
- Certification of Practitioners of Ecological/Ecosystem Restoration

Large-Scale Restoration in an International Context– given the location of NCER in the Great Lakes area, it is important to consider the international aspects of ecosystem restoration, particularly within the context of restoration of the Great Lakes.

- Bi-national Cooperation on Great Lakes Issues
 - *Groundwater, aquatic invasive species, toxic reductions, etc.*
- Great Lakes Outflow Studies and Regulations
- Great Lakes Water Quality Agreement
- Implications of the Great Lakes Sustainability Fund

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- Impacts of the Global Climate and Clean Air Initiative
- US-Mexican Initiatives
- Columbia River Restoration
- Gulf of Maine Restoration
- Commonalities and Differences in International Approaches, Perspectives and Goals for Ecosystem Restoration
 - *Commonalities and Differences in National – Provincial – State Perspectives*
 - *Commonalities and Differences in National – Provincial – State Approaches*
 - *Commonalities and Differences in National – Provincial – State Goals*
- Examples of Cross-Border Collaboration in Ecosystem Restoration
 - *The Tri-lateral Commission*
 - *European Directives on Ecosystem Restoration*

Planning Approaches to Achieve Ecosystem Restoration – project planning approaches that address the uncertainty associated with implementing large-scale ecosystem restoration programs is essential to their overall success. This general theme will explore various tools and techniques planners can use to address the challenges associated with implementation of large-scale ecosystem restoration. This theme includes consideration of environmental justice on ecosystem restoration.

- Quantification of Benefits
- Evaluating Alternative Future Scenarios for Long-Term Planning
- Ecological Modeling and other Tools
- Incorporating Climate and other Future Changes
- Stakeholder Involvement: At What Stage and How?
- Contaminants
 - *Legacy Contaminants and Contaminants of Concern*
- Addressing Uncertainties and Risk
- How much longer will it take?
- How much will it cost?
- Environmental Justice in Urban and/or Rural Settings

Ecosystem Goods and Services – often times ecosystems provide their users with goods and services that are not valued in the traditional sense (i.e., no traditional market value). The concept of non-marketed ecosystem goods and services are a way to effectively make the link between ecosystem functions and human welfare. Ecosystem services arise from—and depend on—the broader sets of ecological components, processes, and functions but are different: they are the aspects of the ecosystem that society uses, consumes, or enjoys to experience those benefits. This theme will focus on how large scale ecosystem restoration programs are addressing and measuring ecosystem goods and service within the context of large-scale ecosystem restoration.

- Linking Environmental Benefits and Human Benefits
- Human Dimensions
- Capturing and Comparing Restoration Economics During Decision-making
- Climate Change Considerations
- Partnerships-cooperation: Added Value and Force Multipliers
- Sustainable Design and Integration of Ecosystem Restoration

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- Application of Market Ecosystem Services in Restoration Planning & Design

Linking Monitoring Results with Management Decision-Making – an emerging issue confronting each of the major ecosystem restoration programs is the linkage of ecological response monitoring to future decision-making. Presentations under this theme will explore how different restoration programs are addressing this issue and finding ways to include new learning into decision-making, both to adjust current management actions and also influence future projects.

- Adaptive Management; Making the Process Simple and Effective
- Challenges In Integrating Monitoring Results to Decision-Marking in a Large-Scale
- Partnerships-cooperation
- Restoration Economics and Decision Making
- Communicating Monitoring Results
- Evaluating Success in the Face of Climate Change
- Appropriate Scales for Monitoring Restoration Progress
- Cost-effective Monitoring Protocols

Urban Ecosystem Restoration – ecosystem restoration projects located within an urban setting are dramatically on the increase both in the U.S. and internationally. A series of case studies will present some of the challenges confronted by project managers of urban ecosystem restoration projects. Because of intense constraints from land use and issues of multiple stressors, opportunities for ecosystem restoration are severely limited in highly urbanized areas. Thus project goals and criteria for success may need to be modified compared to the restoration of other natural systems.

- Human Dimensions
- The Interface Between the Urban and Rural
- Adaptive Management
- Partnership-cooperation in a More Complex Policy Context
- Addressing the Carbon Footprint in Urban Ecosystem Restoration
- Establishing Restoration Goals in Highly Urbanized Ecosystem
- Nexus of Low Impact Development (LID) & Green Infrastructure in an Urban Setting