

# Principles and Guidelines for Ecological Restoration in Canada's Protected Natural Areas

Parks Canada Agency  
on Behalf of the Canadian Parks Council



## Principles and Guidelines

- Why are we here?
- How did we get here?
- What's it all about?
- Where are we going?

DRAFT FOR MINISTERIAL APPROVAL

Principles and Guidelines for Ecological Restoration



in Canada's Protected Natural Areas

September, 2007



## Why Do We Restore? (1)

### Protected natural areas

- Play a critical role in the conservation of biodiversity and natural capital
- Are established to protect natural heritage for all Canadians to experience, learn , discover, and appreciate into the future
- Are threatened by a variety of stressors

### Ecological Restoration

- Offers a way of halting and reversing ecosystem degradation



## Why Do We Restore? (2)

### To Improve Ecological Integrity

- Restore ecosystem functions (e.g., fire, flood)
- Control harmful invasive species
- Replace lost or fragmented habitat
- Connect protected areas with surrounding landscapes
- Clean up chemical contamination



## Why Do We Restore? (3)

### To Connect Canadians to their Heritage Places

- Reflect the relevance of the place to Canadians through enhanced visitor experience and education
- Enhance understanding, appreciation, support, and engagement towards natural and cultural heritage
- Support long-term community-based engagement for the conservation of natural and cultural heritage



## Why Restoration Guidelines?

### National

- Canadian Parks Council Strategic Framework/Direction
- Consistent, credible, informed decision-making on issues of common concern
- May be adopted by jurisdictions on a case-by-case basis

### Parks Canada Agency

- First Priority Report Commitment
- Response to 2005 Recommendations of the CESD
- 2006/07 – 2010/11 Corporate Plan

### International

- US National Park Service
- Society for Ecological Restoration International



## Development Process

Consensus of a broad range of experts, managers, and jurisdictions

### Multi-functional/jurisdictional Working Group

- Provincial and Territorial Protected Areas Agencies
- Parks Canada and other Federal Departments
- US National Park Service
- Society for Ecological Restoration International and its Indigenous Peoples Restoration Network Working Group



## Review and Approval

- Drafts reviewed by Canadian and international experts in 2006 and 2007
- Presented at conferences in 2006 and 2007
- Reviewed by Canadian Parks Council jurisdictions in May 2007
- Approved for publication by Ministers responsible for Parks through the Canadian Parks Council in September 2007



## **Building Blocks**

- **Guidelines for Developing and Managing Ecological Restoration Projects – SER 2005**
- **Primer on Ecological Restoration – SER 2004**
- **Ecological Restoration and Protected Areas Literature**
- **Standards and Guidelines for the Conservation of Historic Places in Canada – Parks Canada 2003**



## **Table of Contents**

- 1. Principles...foundation for all restoration activities**
- 2. Guidelines...tools for practitioners**
- 3. Implementation Framework...process for consistent application**



## Principles of Good Ecological Restoration: "The 3 E's"

**Effective** in restoring and maintaining ecological integrity



## Principles: "The 3 E's"

**Efficient** in using practical and economic methods to achieve functional success





## Principles: “The 3 E’s”

**Engaging** through implementing inclusive processes and by recognizing and embracing interrelationships between culture and nature



## 125 Guidelines for Ecological Restoration

- Selected according to the degree and type of intervention required to meet goals and objectives
- Specific recommendations for intervening in a manner consistent with the 3 principles



## 125 Guidelines for Ecological Restoration

### Improvements in Management Strategies

- Restoration of natural disturbances and perturbations (20)
- Control of harmful invasive species (20)

### Improvements in Biotic Interactions

- Re-creation of native communities or habitat (9)
- Species-re-introductions for functional purposes (14)

### Improvements in Abiotic Limitations

- Landforms (12)
- Hydrology (18)
- Water and Soil Quality (10)

### Improvements in Landscapes and Seascapes (21)



## Examples of Guidelines (1)

### Improvements in Management Strategies

- Restoring natural frequency of fire, floods, insect outbreaks
- Promoting natural regeneration and nutrient cycling
- Removing invasive species
- Promoting responsible exploration and learning activities
- Advice of visitor, education and cultural resource specialists

### Improvements in Biotic Interactions

- Using native species and genetic material
- Considering interactions among species
- Working with neighbours
- Facilitating public engagement, understanding, appreciation



## Examples of Guidelines (2)

### Improvements in Abiotic Limitations

- Considering impacts on cultural resources and visitor experience before removing constructed features
- Using natural organic material to amend soils
- Restoring natural hydrologic flow regimes
- Protecting surface water quality

### Improvements in Landscapes and Seascapes

- Favouring ecosystem connectivity
- Identifying and considering local and global threats
- Increasing public understanding, appreciation, support



## Implementation Framework

7 step planning and implementation process: How to use the Principles and Guidelines in a protected areas context

- Engagement and communication with partners, stakeholders, public
- Site, regional data; scientific, traditional knowledge
- Clearly-defined goals and objectives
- Linkages between monitoring, reporting, and planning processes
- Adaptive Management



## Next Steps

- Continued broad-based collaboration
- Demonstration of best practices through case studies that illustrate real-world application
- Evolution of guidelines in response to new issues, information, knowledge, and understanding
- Development of additional tools and resources in response to needs and priorities of protected areas jurisdictions



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