**Appendix**

**REHABILITATION PLAN TEMPLATE**

**Scientific Terms**

**Restoration ecology** is the science of recovering degraded, damaged or destroyed ecosystems through active human intervention. **Conservation biology** is the science of analyzing and preserving existing biological diversity. Both disciplines are based on fundamental ecological and evolutionary principles. **Ecological restoration** is the practice of intervention in, and management of, degraded ecosystems undergoing unprecedented rapid changes to re-establish structure and function. Ecological restoration is to restoration ecology what **biological conservation** is to conservation biology. Projects that produce ecological benefits but cannot achieve the aims of ecological restoration are sometimes referred to as **rehabilitation or remediation**.

**Source**
Society for Ecological Restoration (SER) International Science and Policy Working Group. 2004. *The SER International Primer on*
*Ecological Restoration*. Society for Ecological Restoration
International, Tucson, Arizona, USA ([www.ser.org/pdf/primer3.pdf](http://www.ser.org/pdf/primer3.pdf)).

**Primary benefit**
Ecological restoration and rehabilitation projects restore and maintain biodiversity values and the health of restored ecosystems. They also enhance wildlife habitat values.

**Rehabilitation Methods and Limitations**
Planning, implementing and monitoring ecological restoration and remediation depends on the involvement of an ecologist with extensive knowledge of the ecosystems being restored. Restoration and remediation works need to be carried out by people with adequate knowledge and skills to avoid damage to the remnant vegetation and wildlife habitat values of the ecosystem. Certainly the aims of ecological restoration cannot always be achieved. This is often due to the severity of disturbance and degradation, or a lack of adequate resources.

**A Rehabilitation Management Plan** is essential for determining how feasible it is to carry out ecological restoration and remediation in a particular area. It also should define performance standards for assessing the project’s success. The goals for the plan should incorporate enough information to allow an informed decision to be made about the feasibility and resources required to successfully complete the project. It should identify:

1. The project site boundaries.
2. Ownership and zoning.
3. The need for ecological rehabilitation.
4. The type of ecosystem to be rehabilitated.
5. The goals of rehabilitatiion that relate to social and cultural values.
6. Physical site conditions (e.g. slope, soil type, depth to groundwater table).
7. The factors causing stress on the ecosystem (e.g. fires, weed invasion, poor water quality).
8. Biotic factors that need to be reintroduced (e.g. plants or animal species) or removed (e.g. weeds).
9. Landscape restrictions both present and future (e.g. adjoining land uses that are incompatible with restoration, or poor water quality that may be created by upstream land uses).
10. Funding sources.
11. Human and physical resources required.
12. Approvals and permits required.
13. Load restrictions on the land within the site.
14. Project duration and staging.
15. Long-term protection and management of the site.

**Site Analysis**
As a guide, the following preliminary tasks should be carried out before starting a rehabilitation project:

1. Involve a restoration ecologist with specific knowledge of the ecological system being restored.
2. Assemble a team that includes people with the necessary skills and experiences.
3. Prepare a budget that includes a series of stages.
4. Document the existing conditions and ecological values of the site.
5. Document the site history and factors that have led to the need for restoration.
6. Collect baseline data such as water quality and flow rates, over a period of time if required.
7. Identify a reference ecosystem nearby that will allow the success of the project to be evaluated.
8. Gather information about the recruitment (i.e. population reproduction cycle), maintenance and reproduction of key species, and if necessary carry out trials and tests before starting restoration.
9. Carry out trials to test the effectiveness of any untried restoration techniques that may be proposed for the project.
10. Determine if the proposed restoration goals are realistic, and modify them if necessary.
11. Prepare a list of objectives designed to achieve the restoration goals.
12. Secure all approvals and permits that may be required.
13. Establish liaison with relevant government authorities and other organizations.
14. Plan and implement a program of community awareness, consultation and involvement.
15. Install infrastructure, such as access tracks, storage areas, power and water supplies.
16. Engage staff to supervise and carry out the restoration works.

**Rehabilitation Follow-up tasks** should include:

1. Protecting the project from vandals, pests and inappropriate access and use of the site.
2. Maintenance works, including erosion repair, alien plant control and public access control.
3. Regular site inspections by the project ecologist to assess the effectiveness of the restoration and to identify any modifications that may be required.
4. Monitoring in accordance with the program as defined in the Implementation Plan.

**Evaluation** of the project should include:

1. Assessing the monitoring data in relation to the defined performance standards.
2. Describing the components of the restored ecosystem that are not covered by monitoring data.
3. Evaluating the level of success in achieving the restoration goals.
4. Sharing the results of the project to contribute to the body of ecological restoration knowledge and to assist others doing similar projects.

**Source**
Clewell, A., Rieger, J. and Munro, J. (2000). *Guidelines for Developing and Managing Ecological Restoration Projects*. Available on the Society for Ecological Restoration website, www.ser.org.

**Impervious Surfaces**
Capitol Region Watershed District and Great River Greening - [Impervious Surfaces and Alternatives](http://www.greatrivergreening.org/_downloads/impervious_surfaces.pdf) (.pdf 345k)

CSIR, 2000. Guidelines for indigenous vegetation restoration following invasion by alien plants. CSIR (Environmentek Report ENV-S-C 2000-144). 51 pp.