

SARA REVIEW – GARRY OAK ECOSYSTEMS CASE STUDY

Multi-species Recovery Strategies

Introduction

This case study examines Garry oak ecosystems as an example of a protection and recovery initiative that focuses on a suite of interrelated ecosystems that are home to multiple species listed under the *Species at Risk Act* (SARA). This case study looks at how ecosystem-level protection and recovery initiatives can be achieved under SARA requirements and how the ecosystem approach to protect and recover multiple SARA-listed species can be undertaken in a cost-effective and timely manner.

Garry Oak Ecosystems

Garry oak ecosystems are complex and consist of closely related coastal bluff, maritime meadow, vernal pool, grassland, rock outcrop, and transitional forest ecosystems that occur in southwest British Columbia.

Garry oak ecosystems are home to more plant species than any other terrestrial community in coastal British Columbia. Many of these species occur nowhere else in Canada. Within the Garry oak ecosystems, almost 700 plant species, 7 amphibian species, 7 reptile species, more than 100 bird species, 33 mammal species and more than 800 insect and mite species have been identified.

Thirty-seven individual species within the Garry oak ecosystems are listed in Schedule 1 of SARA and are therefore protected under the Act when occurring on federal lands.

Parks Canada manages significant areas of Garry oak ecosystems in the Fort Rodd Hill and Fisgard Lighthouse National Historic Site and the Gulf Islands National Park Reserve. Parks Canada is the federal lead on recovery planning (recovery strategies and action planning) for all of the SARA-listed Garry oak ecosystems species, including those species that are not found on lands managed by Parks Canada (except for migratory birds, for which the Canadian Wildlife Service is the lead).

SARA and the Ecosystem Approach

Most of the protection and recovery initiatives addressed through SARA have been focused on single species. In particular, recovery planning and implementation

approaches under SARA have occurred primarily at the individual species, subspecies, populations, or habitat levels.

However, broader-level approaches to recovery planning are explicitly permitted in SARA. Subsection 41(3) of SARA provides the competent minister with the discretion to adopt a multi-species or ecosystem approach when preparing a recovery strategy if the competent minister considers it appropriate to do so.

Recovery Planning for the Garry Oak Ecosystems

Efforts to protect Garry oak ecosystems pre-date the implementation of SARA.

The Garry Oak Ecosystems Recovery Team (GOERT) was formed in 1999 as a partnership-based effort to coordinate activities designed to save endangered Garry oak and associated ecosystems and the species at risk that inhabit them. GOERT quickly evolved into a comprehensive multi-stakeholder recovery team which is now composed of a mix of 25 experts affiliated with federal, provincial and regional governments, non-governmental organizations, First Nations, and community members. GOERT is led by Parks Canada and coordinated by the GOERT Secretariat with support from other federal agencies and the Province of British Columbia.

Prior to SARA, GOERT developed and wrote a recovery plan entitled *Recovery Strategy for Garry Oak and Associated Ecosystems and their Associated Species at Risk in Canada: 2001-2006* (hereafter referred to as the Umbrella Recovery Plan) using the model proposed by the national Recovery of Nationally Endangered Wildlife (RENEW) program.

When to use an Ecosystem Approach?

Multi-species, ecosystem and landscape approaches are recognized by recovery planners as appropriate in circumstances where

- multiple species at risk occupy a limited geographical area;
- species may have conflicting needs which can be addressed effectively with a broad approach;
- threats, such as invasive species, operate on a large scale and must be tackled accordingly; and
- species face the same suite of threats.

However, species should not be lumped together in recovery strategies simply for the sake of expediency.

The recovery approach for Garry oak ecosystems addresses all of these considerations. It provides an excellent example of the merits and the cautions of an ecosystem approach to recovery planning and the value of coordinated effort across a broad range of stakeholder and partner interests in protecting and recovering the ecosystems.

“Coarse” and “Fine” Filters to Ecosystem Recovery

The Umbrella Recovery Plan takes a two-tier approach to recovery planning by using a combination of coarse and fine filter approaches for recovering the species at risk in the Garry oak ecosystems:

- First, the strategy develops an ecosystem-level approach by addressing recovery of the entire Garry oak and associated ecosystems, and the essential ecosystem characteristics that sustain them.
- Second, the strategy directly addresses individual species.

Coarse-filter Approach

The recovery team considers the only viable approach to protecting the vast majority of species at risk in Garry oak ecosystems to include protection of representative areas of the full range of constituent ecosystems in conjunction with restoration and management activities necessary to sustain essential ecosystem characteristics. Many of the species at risk in the Garry oak ecosystems are endemic (only found in those ecosystems) and thus have similar and highly specialised habitat requirements. This broad approach should address the conservation requirements of most of the species within the ecosystems, including those species known to be present in the ecosystems as well as those species belonging to lesser-known taxonomic groups (e.g., many insect groups) that have not yet been identified or inventoried. This is known as the “coarse-filter” approach to biodiversity conservation.

Ecosystem-level planning may be the most effective way to address the needs of the numerous varieties of species at risk in Garry oak and associated ecosystems. Individual species at risk are seen to benefit from this ecosystem approach in the following ways:

- Conserving and sustaining ecosystems provides habitat and resources for existing populations of these species, as well as potential habitat and resources to accommodate population expansion, range shifts, and possible re-introductions.
- Strategies developed for dealing with ecosystem-level risk factors, can help address many site-specific threats to populations of species at risk.
- Ecosystem-wide inventories and analyses can provide critical insights into factors influencing distribution and abundance of species at risk. Such factors may not come to light from a species-specific focus.

Fine-filter Approach

GOERT recognizes that although ecosystem-level planning is necessary for recovery of species at risk, it is generally insufficient. Species at risk often have extremely specialized habitat or resource needs, intrinsic or extrinsic risk factors that may not be addressed by an ecosystem approach, or other characteristics that may require more focussed attention. Furthermore, many species at risk currently occupy only a few sites or have extremely restricted ranges. Even if the habitat, resource requirements, and threats to the species are congruent with those addressed at the level of the ecosystem, recovery

actions must be taken at specific localities. For all of these reasons, a “fine-filter” approach of directly addressing individual species is also part of the recovery strategy for many of the species at risk residing in the Garry Oak ecosystems.

In August 2006, three final multi-species, habitat-based recovery strategies were published on the Species at Risk Public Registry, addressing a total of 20 SARA-listed species associated with Garry Oak woodlands,¹ maritime meadows,² and vernal pools.³ These strategies are nested in the larger, ecosystem-level, Umbrella Recovery Plan.

While the recovery strategies were posted late for 3 of those species, they were posted in advance of future deadlines for the remaining 17 species. This approach allowed Parks Canada to fast-track the recovery implementation for all of these species, not just the ones whose recovery strategies are due.

Species-specific proposed recovery strategies (e.g., Rigid Apple Moss, Island Blue Butterfly) are also being prepared under the auspices of GOERT for Garry oak ecosystem species that do not occur exclusively in one of the three component ecosystems. It is anticipated that any additional species listed under SARA that occur in the Garry oak ecosystems will also be addressed at least in part through the multi-species strategies.

Conclusion

The Garry oak ecosystems experience has provided lessons about the potential value of an ecosystem approach. However, the task of developing and implementing the integrated program for the Garry oak ecosystems has been complex and challenging. Among other things, it has necessitated balancing effort between ecosystem-level (“coarse-filter”) and species-level (“fine-filter”) planning. A particular challenge has been to design strategies that, at the least, do not compromise one scale of recovery in the interest of the other and, optimally, complement both levels of recovery, while ensuring compliance with SARA requirements.

¹ Recovery Strategy for Multi-Species at Risk in Garry Oak Woodlands in Canada

² Recovery Strategy for Multi-Species at Risk in Maritime Meadows associated with Garry Oak Ecosystems in Canada

³ Recovery Strategy for Multi-Species at Risk in Vernal Pools and other Ephemeral Wet Areas Associated with Garry Oak Ecosystems in Canada