

2020

Ecological Reserves Management Issues Summary



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Friends of Ecological Reserves

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About the Friends of Ecological Reserves (FER) This volunteer-based, not-for-profit charitable organization raises awareness and promotes the interests of ecological reserves in British Columbia (B.C.). FER works to promote and support scientific research, monitoring and reporting in and around ecological reserves, volunteer wardens and the stewardship function within existing ecological reserves, and the nomination, assessment and establishment of worthy new ecological reserves. FER educates the public and government agencies regarding the significance of ecological reserves, the values they contain, and the threats they face. FER welcomes new members. Find more information at the [FER website](https://ecoreserves.bc.ca/about-friends/) (see <https://ecoreserves.bc.ca/about-friends/>) and in issues of the FER newsletter, *the Log* (see <https://ecoreserves.bc.ca/news/newsletter-archive/>).

The Friends of Ecological Reserves recognizes and respects the First Nations within whose traditional territories ecological reserves exist. FER acknowledges that much of British Columbia remains unceded land and appreciates the graciousness of the Indigenous hosts in areas containing ecological reserves. Even though the B.C. *Ecological Reserves Act* does not explicitly address traditional Indigenous use of ecological reserves, FER supports it as long as it does not destroy the values for which the reserve was established. Reconciliation may provide opportunities for additional ecological reserves identified by traditional Indigenous knowledge keepers for their Traditional Ecological Knowledge (TEK) values.

On May 4, 1971, the Government of British Columbia became the first jurisdiction in Canada to pass legislation to protect ecological reserves. May 2021 marks the 50th anniversary of the *Ecological Reserves Act* and regulations and the establishment of B.C.'s first ecological reserves. The BC government has not established any new ecological reserves since 2009.

Photo on Front Cover: A view of part of the extensive Garry oak ecosystem in the Mount Maxwell Ecological Reserve on Saltspring Island, South Coast Region, April 2019 (Photo by Jenny Feick)

Ecological Reserves Management Issues Summary

Table of Contents

1.0 Introduction	3
2.0 Methodology.....	3
3.0 Establishment Date and Location of Existing ERs in B.C.	3
4.0 ER Management Planning Direction Gap Analysis (n=154)	5
4.1 ERs with No Management Planning Direction	5
4.2 ERs with Management Plans or Management Direction Statements	5
4.3 ERs with Purpose Statements	5
5.0 Monitoring and Research Reports	6
5.1 Monitoring Reports.....	6
5.2 Research Reports	6
6.0 ER Wardens.....	6
7.0 Management/Conservation/Stewardship Issues in Existing ERs in B.C.....	7
7.1 Management/Conservation/Stewardship Issues in Management Planning Documents.....	7
7.2 Current Management/Conservation/Stewardship Issues Identified by ER Wardens	9
7.3 Prioritized List of Management, Conservation and Stewardship Issues.....	9

Ecological Reserves Management Issues Summary

1.0 Introduction

On May 4, 1971, the Government of British Columbia became the first jurisdiction in Canada to pass legislation to protect ecological reserves. May 2021 marks the 50th anniversary of the *Ecological Reserves Act* and regulations and the establishment of B.C.'s first ecological reserves. No new reserves have been established since 2009 and the 2005 assessment of the condition of existing reserves raised "concerns that the ecological values of many individual reserves are at significant risk and a more proactive approach to managing the reserves is required to reverse this trend." (FER, 2006)

Despite FER's periodic communications with BC government agencies about worthy candidates, no new ecological reserves have been added as of 2020 and from the reports of volunteer wardens, the state of existing reserves continues to deteriorate. At their November 2019 meeting, the Board of the Friends of Ecological Reserves (FER) decided to make a renewed and concerted effort to encourage BC government officials to establish several new ecological reserves and to address management, conservation and stewardship issues in existing ecological reserves in time for the 50th anniversary of the *Ecological Reserves Act*. FER developed this report (and the spreadsheet containing the data used to inform it) to provide background information for a meeting on June 3, 2020 with BC Parks focused on improving the management, conservation and stewardship of existing ecological reserves.

2.0 Methodology

Six Board members researched specific information on the BC Parks and FER websites to inform development of an Excel spreadsheet¹. Information sought included the presence of approved management planning direction documents, the dates of each, and management issues identified in them; the existence, dates and topics of scientific research papers and monitoring reports on the FER website; the existence of ER warden reports on the FER website, which ERs currently have wardens, and whether FER has contact information for them. Ecological reserve wardens described current issues in emails, phone calls or in person². FER members Louise and Fred Beinhauer provided additional information, as did Dian Moran, a member of the public. Ian Hatter led the quality control and analysis of the spreadsheet data. Jenny Feick wrote the report based on the data analysis.

3.0 Establishment Date and Location of Existing ERs in B.C.

The Government of British Columbia established most (66%) of its 154 ecological reserves between 1971, the year it enacted the *Ecological Reserves Act*, and 1981. Ninety-seven percent of the ERs were established by the year 2000. Since 2001, five ERs were

¹ Garry Fletcher, ERs#1-25, Mike Fenger ERs#26-50, Jenny Feick, ERs#51-75, Steve Ruttan, ERs#76-100, Rick Page, ERs#101-125, and Marilyn Lambert, ERs#126-154.

² Gary Backlund & Katharine Banman, Jim Borrowman, H & J Calson, John Field, Paul Linton, Rosamund Pojar, Bev & Bill Ramey, Harold Sellers, Amanda Vaughan, Gerry Van der Wolf, and Ken Willies.

Ecological Reserves Management Issues Summary

transferred to other agencies and four new ERs were established. Det San is the most recently established ER (2009). No ERs have been established in eleven years since then.

Table 1: Ecological Reserves Established by Decade

Decade	# Established	Cumulative Percentage	# Transferred to Other Agencies
1971-80	101	66%	
1981-90	29	84%	
1991-00	20	97%	
2001-10	4	100%	5
2011-20	0	97%	
TOTAL	154		

Nearly one-third of the ERs have been established in the West Coast administrative region of the BC government. The Skeena Region has seventeen percent of the ERs. The South Coast has 11%. The Omineca and Thompson-Okanagan each have ten percent, and the Kootenay-Boundary and Northeast regions each have seven percent. The Cariboo Region has six percent of the ERs in B.C. Small in size, the 148 ERs still under provincial jurisdiction comprise 0.008% of the BC Parks Protected Area System (Fenger and Feick 2020).

Table 2: Distribution of Ecological Reserves in BC Government Administrative Regions

Admin Region	# ERs	% of ERs	Size of ERs (km ²)
Cariboo	9	6%	51.0
Kootenay-Boundary	11	7%	63.5
Northeast	11	7%	71.6
Omineca	15	10%	50.3
Skeena	26	17%	678.2
South Coast	17	11%	36.2
Thompson-Okanagan	16	10%	42.7
West Coast	49	32%	132.1
BC	154	100%	1,125.54

Ecological Reserves Management Issues Summary

4.0 ER Management Planning Direction Gap Analysis (n=154)

4.1 ERs with No Management Planning Direction

Out of 154 ERs, 22 (14%) have no management planning direction listed on the BC Parks website. Of these, six ERs have been transferred to other jurisdictions, five to Parks Canada (three to Gwaii Hannas and two to Gulf Islands national park reserves) and one to Metro Vancouver Regional Parks. Fourteen (9%) of these ERs have an old overview statement on the FER website.

The following ERs in each region have no management planning direction listed on the BC Parks website:

Thompson-Okanagan Region: #3 (Soap Lake), #5 (Lily Pad Lake), #6 (Buck Hills Road), #29 (Tranquille), #77 (Campbell Brown)

North East Region: #8 (Clayhurst), #47 (Parker Lake), #147 (Grayling River Hotsprings), #150 (Rolla Canyon)

Skeena Region: #44 (East Copper/Jeffrey/Rankine Islands), #95 (Anthony Island) and #96 Kerouard Islands (all now in GHNPR), #133 (Gamble Creek), #154 (Det San)

Omineca Region: #78 (Meridian Road), #87 (Heather Lake)

Cariboo Region: #64 (Ilgachuz Range), #65 (Chasm)

South Coast Region: #74 (UBC Endowment Lands/Pacific Spirit now with Metro Vancouver Regional Parks), #131 (Stoyoma Creek)

Kootenay Boundary Region: #61 (Upper Shuswap River)

West Coast Region: #121 (Brackman Island) and #15 Saturna Island (both now in GINPR)

4.2 ERs with Management Plans or Management Direction Statements

Fifty (32%) ERs have approved management plans (30) or approved management direction statements (20) posted on the BC Parks website. The range in dates for when these management plans or management direction statements were approved is 1990-2017, with a lot in the period 2002-2004 (when Nancy Wilkin was ADM of MoE).

4.3 ERs with Purpose Statements

Ninety-five ERs have approved purpose statements on the BC Parks website. The range in dates for when these purpose statements were approved is 1972-2013, with several in the 1980s, 1990s and early 2000s.

Ecological Reserves Management Issues Summary

5.0 Monitoring and Research Reports

5.1 Monitoring Reports

Out of 154 ERs, 52 (34%) have some type of monitoring report listed on the FER website. Sixty-six percent of the ERs (102/154) have no monitoring reports listed on the FER website. The date range for the most recent monitoring report for a particular ER is 1972-2020 (with 1 from 1969). The median date is 2000. The average is 1996. The most common topics of these most recent monitoring reports are the results of surveys of: vertebrate fauna, especially birds, vegetation (vascular, non-vascular plant species), management issues/state of the ER, ecology/general natural history, invasive plants, hydrology, invertebrates, marine environment and wildfire impact.

5.2 Research Reports

Out of 154 ERs, 48 (31%) have research reports listed on the FER website. Sixty-nine percent of the ERs (106/154) have no research reports listed on the FER website. The date range for the most recently posted research report for an ER is 1975-2015 (IBA research extends back to 1951, and a study of Yellow Pine to 1961). The median date is 2001. The average is 1996. Numerous Masters theses and PhDs are listed as well as articles in peer-reviewed journals, textbooks, and unpublished research reports.

6.0 ER Wardens

Seventy-three percent of the ERs (113/154) have ER wardens identified on the FER website. Of those listed, FER has contact information for ER wardens at 55 (36%) of the ERs. Some wardens look after more than one ER. Forty-one of the ERs (27%) have vacancies in ER warden positions. See Figure 3 for the regional distribution of ER wardens. The Thompson Okanagan is the only region with no vacancies. Two-thirds of the ERs in the Caribou Region have vacancies and over half of the ERs in the Kootenay Boundary Region have vacancies. Skeena and the Northeast regions, which have smaller overall human populations, less road access, and vaster distances, have the majority of the other vacancies.

Table 3: Distribution of ER Wardens by BC Government Administrative Region

Region	# ERs	# Wardens	# Vacant	% Vacant
Cariboo	9	3	6	67%
Kootenay-Boundary	11	5	6	55%
Northeast	11	6	5	45%
Omineca	15	11	4	27%
Skeena	26	14	12	46%
South Coast	17	16	1	6%
Thompson-Okanagan	16	16	0	0%
West Coast	49	36	13	27%

Ecological Reserves Management Issues Summary

Totals	154	113	41	26%
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Out of 154 ERs, 40 (26%) have ER warden reports listed on the FER website. Thus, 114 ERs (74%) lack any posted warden reports. Of these warden reports, the date range of the most recent report breaks down as follows: 1981-90: 8, 1991-00: 4, 2001-10: 5, 2011-20: 23.

7.0 Management/Conservation/Stewardship Issues in Existing ERs in B.C.

7.1 Management/Conservation/Stewardship Issues in Management Planning Documents

In most cases, management planning documents listed on the BC Parks website contain a section that identifies management issues for the ecological reserve. In some cases, the ER is included with an adjacent protected area with no issues identified for the ER. FER Board members reviewed the list of issues and identified the top five.

ER #1-25 (Garry Fletcher)

Garry Fletcher reviewed all of the management issues listed in the management planning documents for ERs #1-25. The top issues mentioned were climate change, lack of oil spill protection (in the marine reserves), and lack of public knowledge and awareness about why the reserve exists. The other issues that were often mentioned included no warden for the ER, recreational use in land reserves and boat disturbance of bird colonies.

ER #26-50 (Mike Fenger)

Mike Fenger reviewed the management documents for ERs #26-50. The top five issues were:

1. Internal and External Threats Causing Degradation of the integrity of the ER through activities such as inappropriate activities, i.e. cattle grazing (due to no fence maintenance), recreational use such as illegal camping (due to no signage), hunting in the ER, physical trespass or incompatible adjacent land use changes (roads and harvesting) that threaten the ERs by industrial activities oil and gas and forestry.
2. Limited environmental data on each ER and then a lack of monitoring data (aka no flora and fauna baselines) and no or few updates on what was in an ER, the government asset.
3. Climate change and lack of management direction to protect rare plants undergoing impacts from climate change.
4. No plans to fix the issues.
5. Gaps (vacancies) in the ER warden system.

ER #51-75 (Jenny Feick)

Jenny Feick reviewed the management documents and analyzed and coded the text on issues for ERs #51-75. The top five most frequently mentioned issues are as follows:

1. **Limited Information** (about ER for BC Parks, FER, public, limited monitoring, incorrect or no info) - mentioned 30 times;
2. **Internal Threats Causing Damage inside ER** (due to access, linear developments like roads, transmission lines, and pipelines; incompatible use, illegal use, e.g., recreation, hunting, trapping, fishing, etc.) - mentioned 29 times

Ecological Reserves Management Issues Summary

3. **External Threats** from land-use outside ER causing damage inside the ER (logging, urban development, cattle grazing, expansion of water treatment plant, pipeline, etc.) - mentioned 23 times

4. **Boundary Issue** (boundary not signed, marked, delineated, known to public or gov't, not promoted, inadequate, expansion, disputed) - mentioned 12 times

5. **First Nations Use** – assertions from individual First Nations (e.g. for the exclusive use of land, control of Indigenous archaeological resources, research permit process, and land-use), decisions made by First Nations adjacent to an ER, co-management proposals, need to document First Nations values and use – mentioned 8 times

The other six issues mentioned included Forest Health (mountain pine beetle and forest fires) - mentioned 7 times; Policy Problem (esp the effect of the Initial Attack policy) - mentioned 5 times; No ER Warden - mentioned 4 times; Alien Invasive Species - mentioned 4 times; Climate Change - mentioned twice; and Limited BC Parks resources - mentioned once.

ER #76-100 (Stephen Ruttan)

Stephen Ruttan reviewed all of the management issues listed in the management planning documents for ERs #76-100. He reported the following observations. Climate change is certainly the biggest issue. A second major issue was invasive species (animals, such as raccoons, as well as plants). Just as much of an issue was illegal human use of various kinds: camping, harvesting of various species, firewood collection, and even vandalism. Marine reserves reported problems from oil spills and boat noise disturbing wildlife. Also mentioned as issues were excessive build-up of fuel (causing a threat from fires), and pine beetles.

ER #101-125 (Rick Page)

Rick Page reviewed the management planning documents for ERs #101-125. He noted that the top two were global warming and trespass. The other three were versions of external threats from surrounding development (logging, homes, roads).

ER #126-154 (Marilyn Lambert)

Marilyn Lambert reviewed all of the management issues listed in the management planning documents for ERs #76-100. The top five issues mentioned are:

1. **External Threats** (Adjacent development including forestry, recreation, subdivision, etc.) mentioned 27 times

2. **Internal Threats** (Recreation conflicts, high visitor use, garbage dumping, wild harvesting, etc.) mentioned 23 times

3. **Limited Information** (Limited knowledge on natural values, plant and animal communities, incomplete inventory, etc.) mentioned 10 times

4. **First Nations Issues** (Interest in ensuring Aboriginal rights are respected, lack of knowledge of cultural values and first nations interest in the area, etc.) mentioned 8 times

5. **Boundary Issues** (Lack of public awareness of reserves and boundaries due to lack of signage, etc.) mentioned 7 times

Ecological Reserves Management Issues Summary

Other issues mentioned are: Invasive species (6 times); Climate Change (6 times); Forest Health, including Fire, Encroachment of Douglas-fir on rare Garry Oak Stands, tree removal, etc. (4 times); Lack of Warden (once)

7.2 Current Management/Conservation/Stewardship Issues Identified by ER Wardens

From time to time, ER wardens contact FER to highlight important issues they face in the management, conservation and stewardship of the ecological reserve(s) they voluntarily care for. FER informed wardens with known contact information about the upcoming meeting with BC Parks and asked if they could identify their top 3-5 issues.

The issues most mentioned in the communications (email, phone call, in person) received by FER between December 2019 and May 2020 include:

1. Boundary Issues (lack of defined boundaries, shifting boundaries, unmaintained fence and lack of signage, need for boundary adjustments or buffers to protect ERs from shifting boundaries due to natural processes and adjacent land use) – mentioned eight times
2. Invasive Plants threatening natural vegetation – mentioned six times
3. Issues with BC Parks – mentioned five times (lack of knowledge of the purpose of ERs, of natural and cultural resources in existing ERs), the need for better compliance and enforcement, specifically addressing the inability of rangers to issue tickets for violation of the Ecological Reserve Regulations, the need for more resources for BC Parks to support ERs; and improved transmission of monitoring information from BC Parks to volunteer ER wardens.)
4. Internal Threats – mentioned four times (garbage dumping, tree cutting and other; vandalism, illegal camping; helicopter training landings and recreational fixed winged planes landings, shore use by Indigenous peoples and the public)
5. External Threats: – mentioned three times (e.g., boat traffic, build-up of debris washing down from the upper road; feral domestic animals)
6. Forest Health – mentioned three times (fire and pine beetle damage)

Other issues mentioned once include: Climate change effect on rare plants; the need for updated monitoring (e.g. an updated review of rubbing beach use by orcas)

7.3 Prioritized List of Management, Conservation and Stewardship Issues

FER recommends that priority be given to addressing the following issues in existing ERs:

1. Solving Boundary Issues, including signs, fences removing alien species
2. Addressing Internal Threats, including trespass and removing alien species
3. Negotiating with FLNRORD on Mechanisms to Address External Threats
4. Filling information gaps
5. Addressing First Nations Interests
6. Enhancing BC Parks Stewardship Actions (partnerships, monitoring & reporting, communications, information sharing, compliance & enforcement)