

Ecological Reserve



Warden Handbook

BC Parks and Protected Areas


May 2005



Ecological Reserve Warden Handbook

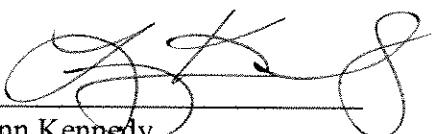
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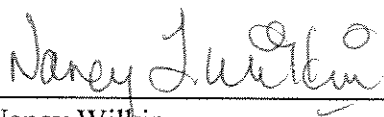
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Ecological Reserve Warden Handbook

BC Parks and Protected Areas

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The Ecological Reserve System

Ecological reserves are permanent lands designated for conservation and preservation, established for ecological purposes such as:

- protection of rare and endangered plants and animals in their natural habitat;
- preservation of representative natural ecosystems;
- preservation of unique or rare botanical, zoological or geological phenomena;
- scientific research on the areas' ecology, animal and plant life;
- perpetuation of important genetic resources; and
- scientific research and education.

In 1971, the provincial government passed the *Ecological Reserve Act*, which allowed for the establishment and protection of these unique and representative ecosystems throughout British Columbia. Further, the *Ecological Reserve Regulations* prohibit all consumptive resource uses in ecological reserves such as tree cutting, hunting, domestic grazing, camping, lighting of fires, removing materials, plants and animals, and the use of motor vehicles.

Ecological reserves can now be established by two means. First, they can continue to be established by order in council under the *Ecological Reserve Act*. Secondly, ecological reserves can now be continued or established through their inclusion in a schedule to the new *Protected Areas of British Columbia Act* passed in June 2000. The latter affords increased protection to ecological reserves since any deletion from or cancellation of an ecological reserve listed in a schedule requires an act of the Legislature.

The *Ecological Reserve Act* and associated regulations guide the management of all ecological reserves regardless of which Act they are established by. Amendments have also been made to the *Ecological Reserve Act* to provide for increased penalties for offences.

The role of ecological reserves is protection, research and education; they are not created for public recreation or consumptive or commercial activities. Most ecological reserves are freely accessible to the public for non-destructive observational use such as nature appreciation, wildlife viewing, bird watching or photography. Some sites, such as seabird nesting colonies, are so sensitive that access is only allowed under ministerial permit.

Environmental Stewardship Division (ESD), Ministry of Water, Land and Air Protection, is responsible for the management of the ecological reserves in British Columbia. It is the intent of ESD that all ecological reserves have a management planning document prepared with input from interested parties, including the wardens of the ecological reserves, to guide the protection and management of the reserve.

ESD policy stresses that all natural processes will continue undisturbed in ecological reserves. Measures such as controlled burns or control of insect or weed (introduced, invasive plant species) infestations will only be taken in ecological reserves when such

measures are required to protect the values for which the reserve was established. Biological or mechanical, rather than chemical, controls will be used whenever possible. Wild fires are part of the natural processes in ecological communities and will not be interfered with in ecological reserves unless there are human safety or property damage issues.

The Ecological Reserve Warden Program

Background

Because of the increasing number of ecological reserves, BC Parks initiated a volunteer warden program in 1980. Wardens contribute their knowledge and enthusiasm for conservation to assist government staff in managing the reserves in accordance with the *Ecological Reserve Act* and *Regulations*. These volunteers continue to serve an invaluable role in the long-term protection of the reserves.

ER volunteer wardens come from a wide spectrum of the public: naturalists and naturalists clubs, foresters, biologists, interested individuals, and others living near ecological reserves.

Main Roles of Ecological Reserve Wardens

- Assist government staff to protect and manage the reserves by acting as eyes and ears for staff
- Increase public understanding of the Ecological Reserves Program
- Provide liaison concerning the reserves between the general public and local and provincial government staff
- Provide input to management planning in the reserves
- Monitor the reserves for their capacity to continue to meet their stated purpose
- Report to government staff problems relating to reserves

Purpose of the Ecological Reserve Warden Handbook

The Handbook provides a concise description of the duties and responsibilities of Ecological Reserve Volunteer Wardens and their status and functions in managing the reserves.

Warden Qualifications

Volunteer ecological reserve wardens have an interest in and respect for the environment. They are willing to commit their time to carry out the required duties consistently and

over a number of years. Specific knowledge of natural history is an advantage, but not crucial.

Warden duties for individual ecological reserves are usually handled by individuals or couples. Naturalists clubs or similar groups may take on warden responsibilities in an ecological reserve under the leadership of one or two of their members. It may also be useful to have more than one warden for a reserve where those in question have different types of expertise.

A criminal records check may be required.

Warden Responsibilities

As a warden's work is carried out under the supervision and direction of government staff. ER Wardens are expected to maintain close contact with the Area Supervisor of their ER. Contact information is available at local WLAP offices.

A work plan for the volunteer warden will be developed with the Area Supervisor based on the warden's interests, expertise, and available time. Any proposed changes to this plan must be discussed with the Area Supervisor and approved before beginning. However, wardens must be prepared to work independently, with limited direction from the Area Supervisor. If a warden is unable to fulfil his/her agreed to volunteer responsibilities, he/she must notify the Area Supervisor.

Wardens' responsibilities can be divided into four primary areas:

- Becoming familiar with the reserve
- Protection and management
- Public liaison and education
- Record keeping

Under these categories, a warden should be prepared to carry out the following functions:

Being Familiar with the Reserve:

It is important for new wardens to attend an initial visit with the Area Supervisor to discuss the ER, management issues of concern, current research projects, and other topics that will help new wardens understand their reserve and conditions there from the outset. A new warden will be provided with a package containing background and other information on the reserve, a report form template, and personal identification to wear on reserve visits. Ideally they will visit the ER with the Area Supervisor or Area Ranger. From the discussion, the information material and exploring the ER on the ground, the warden should know:

- Why was the reserve established?
- What habitat types are present?
- What biogeoclimatic ecosystems or Broad Habitat Type classes are represented?

- What species at risk are present?
- Are there special features such as seeps, scree, etc. likely to harbour particular and perhaps rare or otherwise listed species of plants or animals?
- Is there a route to follow that ensures one seeing all habitat types in a convenient and consistent manner?
- What obvious problems, if any, are present such as weed infestations, damage from livestock, waste dumping, or other types of habitat degradation?
- What information or data are available such as air photos, forest cover maps, geological rock and soil maps, climatic data, or species lists? (some of this may be provided in the Orientation Package but the warden may need to gather some)

A warden's familiarity with a reserve is a valuable resource to other ER advocates. Information sharing and mentoring by the warden is extremely valuable to the ER warden program when a new Area Supervisor or new warden takes on responsibility for the ER.

Protection and Management:

- The warden's role is to observe, record and report on all topics and issues related to the conservation and protection of the natural or cultural values in the ER, including natural events and human-use impacts.
- Examples of observe, record and report activities:
 - Illegal camping
 - Wood cutting
 - Fence damage
 - Recreational use and/or overuse
 - Excessive day-use that compromises ecological values
 - Weed invasion or other ecological degradation
 - Unauthorized discharge of waste materials
- Report to Area Supervisor all activities or events in their ER that require management or enforcement actions. ***Volunteer Wardens are not empowered as peace officers and are restricted to observation, recording, and reporting activities and events in their reserve(s).*** Vandalism or other serious issues that threaten an ER should be reported to the Area Supervisor immediately. Specialized reporting forms ("Observe, Record and Report" cards) may be available to the warden from the Area Supervisor. Under no circumstances should wardens place themselves in a position of danger.
- Visit and patrol the reserve at least twice a year (more often if possible) to detect and report any activity contravening ER objectives.
- Bring to the Area Supervisor's attention any activities on adjoining lands that could affect the reserve; monitor effects of the activities.
- Document occurrences of natural disturbances such as windthrow, erosion, or insect and weed infestations, particularly new occurrences or major changes.
- Monitor condition of signs, boundary markers and fencing and report need for repairs, replacements or additions to Area Supervisor. A warden may be asked to take care of minor repairs or maintenance issues if he/she has the necessary skills, training and safety equipment, and the desire to do the work; a warden must have

detailed instructions from and prior approval of the Area Supervisor prior to conducting repairs or maintenance.

- Though wardens are not charged to make management decisions, they may be asked to conduct protection or management related activities on behalf of ESD; a warden must have full instructions from and prior approval by the Area Supervisor to conduct protection or management related activities.
- Keep apprised of local Official Community Plans or zoning alterations and land ownership changes that might affect the reserve.
- Provide input to management planning for the ER.

Public Education and Liaison:

- Wear or carry appropriate Volunteer Warden identification as provided by government when on the reserve or when requested and authorized to speak about the reserve.
- Greet visitors encountered in the reserve and provide information about the reserve (boundaries, natural or cultural values, past and current management and research activities) and appropriate behaviour or authorized activities in it (staying on trails and roadways, keeping dogs under control, preventing weed introductions by checking boots and clothing prior to leaving the site, safety hazards like rattlesnakes and ticks).
- Inform field trips leaders or research party leaders/organizers observed in (or planning to go into) an ecological reserve that permits from ESD are required for all research activities carried out in ecological reserves.
- Optional: make public and/or written presentations about the reserve and the ER program. This task is optional. Only wardens with an interest in doing so, and only wardens with the necessary writing or oral skills, qualifications and experience will be asked or approved by the Area Supervisor to make presentations to the public, service clubs or written media. All presentations must be approved by the Area Supervisor. The warden may initiate such events with permission of the Area Supervisor.

Record Keeping:

- Maintain a field notebook documenting each visit to the reserve and dates, locations and times of observations. Observations address topics like (but are not limited to) wildlife, visitors, condition of reserve, repairs and maintenance undertaken, expenses incurred (if any), management needs and regulatory infractions. BC Parks Wildlife Observation cards and “Observe, Record and Report” cards may be available to wardens in some regions.
- Submit an annual report (see Annual Report outline in Appendix A) on the condition of the reserve, problems, and activities that have occurred during the year. This report should also include a record of dates and hours spent on the reserve, including travel time, and of work performed on the reserve or elsewhere on its behalf to contribute to the government tally of volunteer hours and expenditures. The Area Supervisor will specify the date the annual report is due.

- By mutual agreement between warden and Area Supervisor, submit additional reports about visits to the ER or issues of ER management.
- Maintain a file of pertinent reports, letters, maps, photographs, inventory lists, and research data as a continuing body of information on the reserve to pass on to succeeding wardens. Original material should be housed in the regional office. All data gathered remains the property of the government.

A fifth function that wardens could carry out if they wish to, with the approval of the Area Supervisor is:

- Inventory, monitoring and research

Inventory, Monitoring and Research:

A volunteer warden is in an excellent position to make significant and valuable contributions to scientific knowledge of a reserve. The warden and Area Supervisor should discuss what the warden could do and how to best go about the work with regards to (a) complying with the standard field methods and data recording, (b) the appropriate timing for data gathering, and (c) assistance or cooperation from Ministry staff, other government agencies or academic institution (e.g., tools, training, funding).

Under the direction of the Area Supervisor, depending on the warden's interest and ability, wardens might:

- Keep records of wildlife and natural features of the reserve.
- Monitor special natural or cultural features that the reserve may have been created to preserve.
- Set up and monitor permanent research plots.
- Assist researchers holding a valid Park Use Permit to conduct projects in the reserve.
- Suggest candidate ecological reserve areas to Area Supervisor.
- Conduct independent research, provided the warden is properly qualified, the study and study design are approved by the Area Supervisor, and a research permit is issued.

To ensure the value and validity of the data, all inventory, monitoring and research must employ standard field methods, data tabulation and analytical procedures. Specific, detailed methodologies are required for species at risk and invasive species. The Area Supervisor may be able to arrange for the warden to be trained (perhaps by Ecosystem Stewardship section staff) to assist in inventory, monitoring and management activities. The Area Supervisor will be able to direct the warden to appropriate experts in the Ecosystem Stewardship section for instructions and data forms prior to project commencement.

Below are some examples of projects to consider if wardens have the time, qualifications, and interest. All projects must have prior approval from the responsible Area Supervisor.

Inventory:

- If inventory of plants, animals, etc. does not exist or if existing data have not been updated for a number of years, a systematic inventory could be of great value.
- Examples:
 - baseline inventory of what species are found in the reserve
 - relative or absolute abundance of individuals of a species
 - descriptions of biogeoclimatic subzone variant (vegetation inventory and soil profiles)
 - inventory of invasive plants in the reserve
 - reports of new red or blue-listed species found

Monitoring:

- Monitoring projects are those that focus on changes over time in wildlife populations, habitat conditions or effects of external factors, and should adhere to standard methods and data recording.
- Examples:
 - photographic record of present status and changes such as increase or decrease in vegetation cover or composition, weed increases or removals, erosion, or other natural disturbances
 - monitoring of simple vegetation plots for changes in species composition and numbers of individuals, especially red and blue-listed species
 - annual breeding success and additions to populations
 - changes in night-time wildlife activity in response to a disturbance
 - participation in Canada-wide programs such as Frog Watch
 - documentation of restoration of habitat or re-introduction of extirpated species
 - human use (e.g., visitors per day) at high use reserves
 - monitoring species at risk (rare, endangered, or threatened species – red and blue-listed) or invasive species
 - an annual count of species and individuals
 - monitoring of simple vegetation plots for changes in species composition and numbers of individuals, especially red and blue-listed ones
 - annual breeding success and additions to populations
 - status of detrimental factors such as predators, weeds, or disease

Research:

- Research opportunities may be available in some ER's. Wardens interested in conducting research should contact the Regional Ecosystem Stewardship Officer and/or the Area Supervisor.
- Research could document features such as geology, climate, flora and fauna, and/or cultural values, investigate ecology or behaviour, or contribute to a comprehensive assessment (Appendix B). Ecological Reserves can serve as control or benchmark sites in studies of ecological impacts outside the reserve.
- Enquiries regarding research opportunities from the public, or elsewhere, should also be directed to the regional staff.
- Permits are required to conduct research in ER's and researchers must adhere to scientific and reporting standards, and conditions of the permit.

Supplies and Expenses

Upon appointment, wardens receive a Volunteer Warden Orientation Package (Appendix C) from the Area Supervisor. The package includes administrative paperwork regarding the warden program and available technical information about the specific ecological reserve with which the warden is involved. These materials should be kept in good order and must be returned to BC Parks when the warden leaves the program. For projects in an ER initiated by the Area Supervisor or warden, the Area Supervisor may be able to make special materials or equipment available on a short-term use basis.

Travel expenses and out of pocket expenses related to the warden responsibilities are not usually reimbursed, but may be, if budgets allow, with prior, written approval of the appropriate spending authority. Specific repair or maintenance expenses incurred may be considered for reimbursement, only with prior approval of the Area Supervisor.

Responsibilities of Government Staff

Protected Areas Recreation and Conservation Section, Victoria, will:

- Collect and act as a central repository for contact information on the volunteer wardens and submit all current names and contact information of ER wardens to the Friends of Ecological Reserves for their mailing list.
- Provide guidance to regions on policy matters that affect ER wardens.
- Confer at appropriate times with relevant non-profit organizations (e.g., the Friends of Ecological Reserves and the Federation of BC Naturalists) on matters of mutual concern such as revisions to Ecological Reserve policy and wardens' meetings.

The responsible Area Supervisor will:

- Receive volunteer warden applications submitted by new wardens and send out information to prospective volunteers (The Friends of Ecological Reserves, Victoria, serves as an information provider to potential volunteers in a general way, but does not receive or evaluate applications for government volunteers).
- Authorise new volunteer warden appointments by signing/approving Volunteer Promissory Agreement (Appendix D).
- Ensure the warden (or every individual volunteering as part of a group taking on the warden responsibilities) signs the ministry Volunteer Promissory Agreement (see Appendix D), thereby ensuring the warden is covered under the government's third party liability and accident insurance (see next section). The Promissory Agreement will be filed in the regional office.
- Provide the Volunteer Warden Orientation Package (Appendix C) containing administrative and technical information and supplies necessary to carry out warden work safely and effectively, and review the material with new wardens.
- Ensure the warden activities comply with all requirements of the provincial government's "Safety Management and Accident Prevention Program" (SMAPP);

- for each volunteer, the Area Supervisor must complete the SMAPP form “Check List D – Volunteers”¹.
- Visit the ecological reserve with new warden appointees and provide an orientation to the program.
 - Provide limited direction to wardens through joint preparation of work plans, timely feedback on reports, approval, permitting, technical review and monitoring of research, inventory and monitoring projects. Area Supervisors must ensure wardens are prepared to work independently, without considerable direction from the Area Supervisor.
 - Answer questions and investigate reports submitted by the wardens concerning inappropriate or illegal situations or activities in the reserve.
 - Provide equipment or tools to wardens for approved and mutually agreed to activities, where needed and as budgets allow. Some tools may require training and protective equipment for safe use and operation.
 - Facilitate an annual meeting of area wardens to maintain communications with and among wardens, recognise them for their work, discuss matters of mutual interest and concern, provide opportunities for training and to meet other regional staff. Budget, workload and logistic constraints may determine if, when and where these meetings will occur.
 - Participate whenever possible with other Area Supervisors, wardens and relevant non-profit organizations (e.g., the Friends of Ecological Reserves and the Federation of BC Naturalists) in a provincial wardens’ gathering. Scheduling will depend on the availability of funding and resources. Budget and workload constraints may determine which Area Supervisors attend.
 - Submit names and contact information of current wardens to Conservation and Recreation Section, Victoria.

Safety and Security

Safety of our wardens and the public is of utmost concern. Wardens will receive information about personal safety and procedures for emergency and evacuations in the Orientation Package (Appendix C). Safety should be an on-going topic of discussion with the Area Supervisor.

The Area Supervisor is responsible for ensuring the warden’s activities comply with the policies and procedures of the provincial government’s “Safety Management & Accident Prevention Program” (SMAPP), as they apply to volunteers. The Area Supervisor and the warden should prepare a plan describing how the warden will deal with issues of personal safety and emergencies while visiting the ER, including a trip plan, emergency procedures, an emergency site map and emergency contact list.

¹ The SMAPP manual, policies, procedures, worksheets and forms are available to the Area Supervisor on the following government intranet site: http://srmgww.bcgov/csd/safety/safety_mgmt.html .

The warden must take reasonable responsibility for his/her own safety. Notifying family or friends of plans and expected time of return from a visit to an ER should become a habit. Wardens should use common sense and wear or carry adequate clothing for the weather and personal protective gear when using tools or other equipment. If special training is required to use equipment offered or suggested by the Area Supervisor for a particular activity, the warden has the right and responsibility to request training and the Area Supervisor must ensure the warden is sufficiently trained.

Volunteer Insurance

Individuals who volunteer as wardens are covered by provincial government insurance policies, so long as they have signed the ministry Volunteer Promissory Agreement (Appendix D) provided by their Area Supervisor as part of the Orientation Package (Appendix C). Groups and organizations are not covered by this insurance – all individuals who participate as volunteers on behalf of a group or organization must sign their own Volunteer Promissory Agreement to be covered by the government insurance policy.

BC Parks provides two kinds of insurance to protect our volunteers:

Comprehensive General Liability

This insurance policy insures volunteers against third party claims for bodily injury, personal injury (libel, slander, etc.) or property losses that the volunteer may accidentally cause. The policy also provides defence and pays related defence costs. The limit of liability under this policy is up to \$1 million per occurrence.

Accidental Death & Dismemberment & Weekly Indemnity

This insurance policy covers volunteers for accidental death, bodily injury and/or disability they might suffer while performing ministry duties. This policy provides for an initial settlement and a weekly payment to those insured. The amount depends on the extent of the injury, whether or not the volunteer had a regular income-producing job. The policy will also reimburse the volunteer for out-of-pocket expenses in connection with the accident or injury.

Eligibility

The above mentioned policies cover government volunteers provided that:

- the loss or injury is sustained while the volunteer is performing authorized duties on behalf of the Ministry; and
- the volunteer is under 80 years of age.

Appendix A:**Ecological Reserve Warden Annual Report****ER Name:** _____**Ecological Reserve #** _____ **Report Date:** _____**Warden Name:** _____**Possible Topics to Include:***i.e. when (state dates), where, why, how, who:*

- General Condition of the ER
- Species Observed
- New Species Observed
- Public Access Issues
- Signage Issues
- Maintenance Issues
- Visitor Activities
- Warden Activities
- Wardens' Proposals or Suggestions (ER management, research, public presentation, etc.)
- Total number of hours contributed and travel incurred by the Warden during the year.

Appendix B:

Suggested Research Topics for a Comprehensive Assessment of an Ecological Reserve

Research increases the level of knowledge about a reserve for both the BC Parks agency and the warden. Working with their Area Supervisor, wardens may select from a variety of valuable research topics, depending on their interest and expertise, that would contribute to a comprehensive assessment of their ecological reserve through systematic surveys and reporting. Some examples include:

- History - Local history of the reserve area, why it was selected, legal description.
- Geomorphology - Landscape and physical characteristics.
- Hydrology - Flowing and static water.
- Ecosystem classification – assessment of biological, geological and climatic characteristics.
- Geology - Mineral and soil surveys.
- Climate - Climatic normals for nearest recording station; systematic temperature and precipitation measurements at the site.
- Vegetation - Flowering plants and ferns, mosses, liverworts, lichens and fungi. Identification and taxonomy, species lists, community associations, phenology, productivity, ecosystem or habitat mapping, species or ecosystems at risk.
- Wildlife - Birds, mammals, fish, amphibians, reptiles, and invertebrates. Ecology, habitat use, seasons of use, reproductive status and productivity, food habits, link to special features, species at risk.
- Exotic species - Status of infestation, ecological impacts, effectiveness of control activities.
- Special Features - Condition and status of cultural, geological or biological values.

Appendix C:

Volunteer Ecological Reserve Warden Orientation Package

- Handbook for Ecological Reserve Wardens
- Provincial Government Promissory Agreement (Volunteer Agreement)
- see Appendix D
- Copies of the *Ecological Reserve Act and Regulations*
http://www.qp.gov.bc.ca/statreg/list_statreg.htm#tab_e
- Volunteer Warden Identification Card
- Applicable MWLAP Protected Areas Organization Chart
- Introductory section from “Guide to Ecological Reserves in British Columbia”, 1993
- Warden address list for local area
- A copy of *The Log* from Friends of Ecological Reserves
- information on personal safety and emergency procedures (trip planning, emergency contact information, procedural instructions) - the warden is required to comply with the provincial government’s Safety Management and Accident Prevention Program

Technical Information - materials for the reserve in question:

- maps
- biogeoclimatic zones map
- air photos
- other photographic records, as available
- inventory lists
- management plan, management direction statement or purpose statement /zoning plan
- any other materials available on that reserve that would help the Warden in monitoring it effectively (e.g., previous annual reports, study reports, relevant material from ER file)
- Checklist of flora and fauna of the particular reserve’s area, as available

Appendix D:

Promissory Agreement (Volunteer Agreement)

This agreement is intended to assure you of our deep appreciation of your services and to indicate our commitment to do the very best we can to make your volunteer experience a productive and rewarding one.

The current version of the Promissory Agreement (Volunteer Agreement) is available for staff at: http://csdgww.bcgov/fin/contract/cabinet/stewardship_volunteer_agree.doc
