



Aleza Lake Research Forest Policy and Guidelines

1 Background

The Aleza Lake Research Forest (ALRF) was originally established in 1924 by the British Columbia Forest Service Research Branch (then called Aleza Lake Experimental Station). Over the past 80 years, implementation of a variety of silvicultural practices resulted in a range of forest research trials and permanent plots, some of which represent the oldest continuously measured sites in western Canada. In 2000, the non-profit Aleza Lake Research Forest Society was formed and is co-managed by the University of Northern British Columbia (Prince George) and the University of British Columbia (Vancouver). The Research Forest is self supporting through log sales. ALRF is 9 252 ha in size and is located 60 kms northwest of Prince George, BC.

The broad goals of the ALRF are to:

- Maintain and facilitate long and short-term forest research
- Maintain and facilitate forest education and training opportunities
- Demonstrate forest research, and historical, current and innovative forest practices
- Provide regionally-significant comparative examples of stand and landscape level management practices
- Generate sufficient revenue to achieve the above goals

2 ALRF Support and Services

ALRF staff provide both in-kind support and fee for service assistance to facilitate field research.

2.1 In-kind Support

Support provided free of charge includes:

- 1) Project Establishment
 - Reviewing proposed studies to assist with:
 - Scheduling, budgeting, identifying conflicts and hazards etc.
 - Preliminary site selection
 - Field and administrative logistics to integrate study with forest operations and ensure compliance with provincial legislation and standards (referrals, experimental exemptions, permits).
- 2) Project Implementation
 - Visit appropriate research locations
 - Advice on access, and logistics of implementing project activities and treatments
 - Integrating research needs into forest operational plans and activities
 - Liaise with local resources (local experts, contractors, equipment, and accommodation)
 - Assistance with project extension

3) Facilities and Resources

- Loan of air photos, management and development plans
- Access to GIS digital map data (Arcview, PDF)
- Road maps of the research forest
- Silvicultural records database
- Optional field safety checkin/checkout
- ALRF database, library and archives
- Field and office equipment may also be available on a case by case basis

2.2 Fee for Service

2.2.1 Unrecoverable merchantable timber from destructive sampling

Destructive sampling of merchantable timber volumes will be assessed by ALRF staff, and the costs determined using current mill prices at the time of logging. Unrecoverable timber will be billed to the researcher and/or institution.

2.2.2 Staff Time (\$300/day)

Additional assistance with project implementation and monitoring can be provided upon request depending on staff availability. Such activities may include:

- Supervision of project operations or contracts
- Preparation of operational plans required to comply with legislation
 - Silvicultural prescriptions
 - Stand management prescriptions
 - Pesticide use permits
 - Fire plans
 - Advertising and public information sessions
- Data gathering
- GPS
- Project-specific map production

2.2.3 Long-term Research Plots – Management Fee

Development plans and forest operations will need to be modified to accommodate and protect new (2003 and after) long-term permanent research plots. Plots to be protected for 5 years or longer will undergo review by ALRF every year after the 5 year term. Plots that are deemed to be inactive (i.e., are not under an implemented remeasurement schedule) in harvestable forest, and must continue to be protected from forest operations will be subject to a management fee of \$100/year/plot (starting in year 5).

2.2.4 Map Printing

Printing costs for poster sized maps (> 11" x 17"), colour maps, and/or laminating will be billed to the researcher.

3 Researcher Responsibilities

****PLEASE READ** this section carefully. Many of these requirements represent university policy and/or are provincially or federally legislated. All principle investigators should note that it is YOUR responsibility to ensure that all staff and students working under your supervision have read, understood, and agreed to comply with these requirements. Principle investigators are also responsible for ensuring their staff and students are appropriately equipped and trained for the work they are doing, and that records are kept of their training. For further information please contact: Aleza Lake Research Forest (250)960-6338, the UNBC Safety Manager (250)960-5535, or the UBC Department of Health, Safety and Environment (604)392-2207.

3.1 Project Initiation

3.1.1 Project Feasibility Assessment

Researchers wishing to conduct a study on the ALRF must begin by consulting with ALRF staff. An informal project familiarization will allow Research Forest staff to quickly evaluate the operational feasibility of the project by identifying potential study sites, user conflicts, hazards, and other assessments related to project coordination. This often includes arranging a site visit to the Research Forest and acquiring an online project database account. Researchers should begin communications with ALRF at least 4 weeks before the expected field work start date.

3.1.2 Project Database Form

After the feasibility assessment, please complete the online project summary form (<http://www.rpd.forestry.ubc.ca/>) to open your project file on the ALRF. Provide as full and accurate information as possible to assist with the identification of potential hazards, safety precautions, and administrative requirements (permits, exemptions, contracts etc.). Provide accurate location information of study site(s) and, if applicable, the layout of the installation(s), how they are to be marked in the field as well as UTM coordinates and/or bearing and distance information from an obvious tie point.

*****All copies of permits, licenses, and training certificates must be submitted and the online form completed before project work can begin*****

3.1.3 Project Number and File

Upon completion of the online project form, you will be assigned a project number to reference all information concerned with your study. Please remember to cite the project number on all future correspondence and field sites and keep your ALRF file up to date by sending copies of reports, abstracts, publications etc.

3.1.4 Workplan

Please provide a schedule of planned research activities and where they will take place. Notify ALRF immediately of changes to the workplan (such as site relocation, scheduling, project duration, activities, research method etc.). This is to ensure that your research site remains secure, and to minimize conflict with other forest users (e.g., hunters, hikers, guide outfitters), researchers, and forest operations. It will also allow research forest staff to schedule time to assist with your project if required.

3.2 Project Implementation

3.2.1 Notification of Activities

It is mandatory to notify ALRF staff of the dates you will carry out work on the forest as appropriate (e.g., weekly, monthly, or seasonally). This allows staff to inform you of any operations near your site(s) and to bring any safety concerns to your attention, and to notify other researchers of other research activities.

3.2.2 Field Sites and Installations

3.2.2.1 Sensitive Sites

The ALRF has a number of sites such as, long-term permanent research plots, a provincially legislated ecological reserve, and other designated reserves outlined in the ALFR management plan, that require particular attention. Should your study site(s) fall within or close to these sensitive areas, please refer to Appendix 1: *Aleza Lake Research Forest Sensitive Areas Policy and Guidelines for Researchers* at the end of this document for additional details.

3.2.2.2 Installation Set up

Your research project number should be indicated on plot ribbons and/or plot tags. Permanent or semi-permanent research installations should be identified with marked posts (e.g., metal, PVC, or wooden stakes), and should be maintained for the length of the project. Paint may be used on plot posts but not directly on trees. Ribbon colours used for Research Forest operations trails and plots (see guidelines below) should be avoided unless the ribbon is striped or printed with, for example, “research trial”.

Field Markings in Use on the ALRF				
Activity	Field Feature	Ribbon	Paint	Stakes
Operational	Block boundary	orange	Blue (double line)	-
	Cruise plots	blue & white	orange blaze	Blazed and tagged tree or stake
	Reconnaissance	blue & yellow	-	-
	Silviculture surveys	blue & orange	-	-
	GPS	blue & green	-	-
	Roads	pink	-	-
	Wildlife Tree Patch	orange printed		
	Machine Free Zone	yellow printed		
	Special Management Zone	orange or yellow printed		
Demonstration	Trails	blue ribbon green & white hiker signs		-
	Proposed trails	purple poly	-	-
ALRF Research	Permanent Plots	pink & red	Red /orange	Metal (painted)

		“growth and yield”	blaze; dark blue (double line) and light blue (dots)	orange); tagged trees
	Trails to permanent plots	pink, blue, orange or red	-	-
	Monitoring Sites	Red and Yellow		

Please note that because of the long history of research and operational activity on the ALRF old ribbon and paint markings in the field may not necessarily comply with the guidelines outlined here.

3.2.2.3 Hazardous Materials

Chemicals and other hazardous materials are not to be used, transported or stored on the Research Forest without prior approval from Research Forest staff. If your study requires handling hazardous materials, a written contingency for the containment and clean-up of spills must be kept on site and read by all employees who are to handle the material. The Research Forest requires a copy of the contingency plan before project work commences. Hazardous materials must be disposed of properly at the cost of the researcher.

3.2.2.4 Transportation of Dangerous Goods (TDG)

Provincial legislation requires that anyone who ships, transports, or receives substances designated as “dangerous goods” must be certified in TDG (*Transportation of Dangerous Goods Act, 1992*). If you are transporting or receiving dangerous goods within the Research Forest, we require written confirmation that you have been certified in TDG.

3.2.2.5 Waste Disposal

Please do not leave any refuse in the research forest. If you pack it in, pack it out. An outhouse facility is available at the North Ridge Trail head (1km Aleza Lake Road). In other areas, human waste, toilet paper, etc. must be buried away from trails, roads, and cutblocks. Please demonstrate respect for other forest users.

3.3 Project Closure

In order to close and archive your ALRF project file, researchers must complete field clean up and provide the Research Forest with copies of extension materials relating to their research.

3.3.1 Field Installation Clean up

Please remember to budget time and funds for clean-up upon project completion. Researchers must remove all materials used in research project installations (i.e., all flagging ribbon, stakes, tags, and other markings) that are no longer needed. Please notify Research Forest staff when your project is complete or if your site will remain inactive for an extended period of time.

Field installation clean-up by the ALRF will be subject to a \$500/day charge.

3.3.2 Information Sharing

In order to maintain a continuous record of research on the ALRF, researchers are asked to provide copies (digital and hard copies) of maps and publication material resulting from data collected from the Forest. These include theses, reports, scholarly publications, websites, conference/workshop abstracts, etc. In cases where data is collected from permanent plots, the raw data is also required (please see *ALRF Sensitive Areas Policy and Guidelines for Researchers*).

3.4 Personal Safety

3.4.1 Travel on Forest Roads

Traffic on ALRF roads will vary depending on the time of year, and forestry activities occurring on neighbouring lands. Drive cautiously at all times and be prepared to encounter other forest user's vehicles, logging trucks, road graders and other heavy equipment, and wildlife on the roads. Research trucks should be equipped with a mobile radio where local road channels can be monitored. Researchers must ensure that their employees are familiar with communication protocols on forest roads. Contact ALRF staff for information on which road channels to use.

Park research vehicles well off the road, allowing enough room for large vehicles to pass. Research vehicles should be equipped to handle emergency situations (e.g., spare tire, shovel, fire defense devices, first aid and survival gear) since other people may not be on the forest to assist you. Access to the Research Forest is limited in winter months and requires a four-wheel drive vehicle in most areas. Please contact ALRF staff to identify accessibility in winter.

3.4.2 Emergency Communication

Researchers are responsible for arranging emergency protocols for field crews on the research forest. A daily field checkin/and checkout service is provided free of charge by UNBC security. Please contact ALRF staff if you wish to use this service. Other modes of communication include radio, cellular and satellite telephone at cost to the researcher. Analog and Digital cellular phone coverage is available en route to the research forest and is variable within the research forest.

3.4.3 Workers Compensation

Research field crews must be covered by WCB while working on the research forest and must comply with WCB safety standards during all activities conducted on the Research Forest. Researchers with no university affiliation should provide a WCB number on their Project Summary Form. If you are not covered by WCB please contact us to discuss alternative insurance options.

3.4.4 Indemnity

Users are required to indemnify and hold harmless the Aleza Lake Research Forest Society, the University of Northern British Columbia, and the University of British Columbia in respect of any claims, costs or other damages that arise from the users' activities on the ALRF.

3.4.5 Insurance

All forest researchers are expected to have comprehensive general liability insurance coverage.

3.5 Environmental and Safety Standards

Research forest staff will monitor research project activities and have the right to stop work if conditions are unsafe, or are in non-compliance with WCB standards, UNBC policies and regulations, Research Forest use policies, research project work plan, operating permits or any other legislation related to forestry and the environment. The Research Forest reserves the right to conduct environmental/safety audits at any time. A third party may carry out an audit if ALRF staff are unable to assess the potential impact of research project activities.

Please refer to the UNBC safety policies and regulations available at <http://www.unbc.ca/safety>

3.6 Reporting Incidents

Please report any accidents, observed incidents of wildfire, timber trespass, poaching, or injured wildlife to ALRF staff immediately.

For the protection of everyone working on the ALRF, any knowledge or observations of environmental damage or contamination (e.g., spills, hazardous waste, etc.) must be reported immediately to research forest staff. Current environmental legislation implies personal liability if knowledge of environmental pollution is not reported, regardless of whether or not it is a result of your activities.

Appendix 1:

ALRF Sensitive Areas Policy and Guidelines for Researchers

Introduction

One of the central goals of the Aleza Lake Research Forest (ALRF) is to facilitate forest research and education. The Research Forest is an outdoor laboratory and classroom to enhance understanding of past and current forest practices. While most areas of the Forest are open to a wide variety of research endeavours, there are specific areas that require special consideration in the process of planning and conducting field studies. These sensitive areas on the ALRF include Ecological Reserves, designated Natural Area Reserves and permanent research plots.

ALRF Reserves

Ecological Reserve no. 84

The Ecological Reserve, located within the ALRF, was established in 1978 under the *Ecological Reserves Act*. BC Parks defines ecological reserves as,

... areas selected to preserve representative and special natural ecosystems, plant and animal species, features and phenomena. Scientific research and educational purposes are the principal uses of ecological reserves. Ecological reserves are established for the:

- *preservation of representative examples of British Columbia's ecosystems;*
- *protection of rare and endangered plants and animals in their natural habitat;*
- *preservation of unique, rare or outstanding botanical, zoological or geological phenomena;*
- *perpetuation of important genetic resources; and*
- *scientific research and educational uses associated with the natural environment.*

Consumptive resource uses (e.g. tree cutting, hunting, fishing, camping, removal of plants and animals, motorized vehicles) are prohibited in ecological reserves. They are open to the public for non-destructive observational uses such as nature appreciation, wildlife viewing, bird watching and photography. Although research activity is encouraged, the *Ecological Reserve Act* stipulates that any research activity within the reserve meets the conditions of the legislation and requires a permit. If your research site(s) include areas within Ecological Reserve no.84, please contact ALRF staff for assistance with submitting permit applications.

More information on BC's ecological reserve legislation is available on the web:

http://wlapwww.gov.bc.ca/bcparks/eco_reserve/ecoresrv/ecoresrv.htm

Principle Investigator's Initials _____

Other Sensitive Areas

The ALRF management plan designates Research Natural Areas RNA within the Research Forest. These are:

- Central Ravine RNA
- Bowron Floodplain RNA
- Rockpiles RNA

The purpose of these area is to preserve representative samples of ecosystems and processes that occur naturally in the Research Forest. Extractive activities such as timber harvesting, road building and other forest management activities are limited and occur in extreme circumstances. Other anthropogenic disturbances (including extractive or destructive research activities) are also limited or excluded. Researchers who wish to establish study sites within RNAs must consult with research forest staff.

ALRF Permanent Plots

Permanent sample plots were established on the Research Forest between 1926 and 1963 to monitor growth, regeneration, and mortality of partially cut and unmanaged stands. The plots are maintained and measured every 5 years and represent a rare and valuable source of scientific data for stand management in BC's Northern Interior. Careful management of these areas is required to ensure the continued supply of accurate data from the plots.

Use of Existing Data

Researchers should use existing data whenever possible to minimize the need for foot travel, work, field sampling or other disturbances within the permanent plots. Information on existing data can be obtained from ALRF staff.

Plot Locations and Field Visits

Researchers who wish to carry out new data collection from the plots must consult ALRF staff and obtain approval before conducting field work. Maps and UTM coordinates can be obtained from ALRF staff upon project approval. Researchers must outline which plots they intend to measure on the ALRF Project Summary Form before beginning field work. A mandatory field visit with a Research Forest staff member will allow researchers to become familiar with plot layout and appropriate field protocols and to consult with ALRF staff on specific data gathering activities.

Gathering New Data

Research Within Plots

Activities that may alter the ecological function or disturbance processes of the plots must be avoided. These include removal or excessive trampling of vegetation and other materials, pushing over snags (standing dead trees), walking on or tearing of coarse woody debris etc. It is expected that data gathering is conducted by trained field researchers. No more than two field researchers should be inside a plot at any given time.

Permanent marking of trees within plots is prohibited. Summer ribbon may be used to temporarily identify sample trees. All temporary ribbon should indicate the assigned ALRF project # and must be removed from the plots immediately after sampling is completed.

Destructive sampling (e.g., increment cores, soil pits) within the plots may affect the long-term scientific integrity of the plots and must be avoided. Please consult with Research Forest staff on sampling and data collection methods before field work begins. Any approved removal of material samples from the plots are to be returned to the ALRF for archiving upon project completion.

Research Within Plot Buffers

Permanent plots are protected from disruptive activities by an 80m unmanaged forested buffer (measured from the plot boundaries). This buffer aims to preserve the ecological function of the plots by minimizing the influence of adjacent disturbances. Research activity that involves considerable site manipulation (e.g., falling live trees) is prohibited. Ribbon used to mark sample sites must indicate the assigned project number and must be removed when sampling is completed.

Information Sharing

The ALRF maintains the permanent research plots, research plot buffers and Natural Area Reserves as part of the long-term operations on the Research Forest. In exchange for access to historical data and field sites, researchers are asked to contribute any new field data to the ALRF database. This serves to enrich the existing body of knowledge for these areas, and may avoid redundant sampling in future studies. An information sharing agreement may be signed between the researcher and the ALRF to address any intellectual property concerns.