



Aleza Lake Research Forest
2008 ANNUAL REPORT

MANAGER'S MESSAGE



It seems an understatement to say that 2008 was a very challenging year. In 2008, and into 2009, the BC and Canadian forest sector has been seriously battered by the onset of a major global economic recession, corresponding impacts on markets, and widespread industry downsizing and restructuring. Forest researchers and educators also struggled with increasingly constrained funding. University and college programs still struggle with recruitment of undergraduate students into forest and natural resource programs, though encouraging progress is starting to be made and new forest educational curriculums have been developed and implemented.

The Aleza Lake Research Forest Society (ALRFS) and our staff are likewise working hard to adapt to challenging economic climates and educational realities. We are striving to find new and innovative ways to advance our research and education mandate and provide leadership in enhanced forest stewardship, despite sometimes daunting economic pressures. In British Columbia, we are undoubtedly undergoing historic changes in the forest sector and the way our forests will be managed.

In 2008, the ALRF sought to continue to diversify income sources, striving to balance timber revenues from the research forest itself, with external funding from provincial and federal funding sources for research and silvicultural projects. More restricted timber revenues in 2008 forced the ALRF to aggressively prioritize activities and curtail expenditures, and continue to improve efficiency at all levels of operations. More than that, however, we have been working to re-think the way we deliver our programs, and develop further relationships and partnerships within the educational community and forest sector.

In March 2008, the ALRF welcomed Ralph Hausot RPF as our new Operations Forester; Ralph brings a wealth of experience from the Central Interior forest industry.

The University of Northern BC and the Aleza Lake Research Forest Society continue to successfully implement a protocol agreement, started in 2007, that formalized this successful working partnership and its related administrative arrangements. The presence of ALRF offices on the UNBC campus since late 2007 have led to increased ongoing interaction with ALRF staff and UNBC faculty in teaching and research.

Therefore, despite the many thorny issues currently besetting the forest and educational sector, I see opportunities for growth and an enhanced profile for the ALRF within these communities. There are new challenges and emerging opportunities for forest management to help meet emerging demands for bio-energy, bio-fuels, and carbon sequestration. Undergraduate forest education is increasingly moving to a more field-oriented educational curriculum that will increasingly involve the Aleza Lake Research Forest. And the changed nature of the forest landbase in the Central Interior brought about by the mountain pine beetle over the last decade will increasingly focus active forest management on the green, growing non-pine forests typified by the ALRF's spruce-subalpine fir, hardwood, and Douglas-fir forests.



Challenges abound – but also the seeds of new solutions.

EDUCATION AND DEMONSTRATION PROGRAMS



Overview and Highlights

Field-based education and demonstration in 2008 marked a year of diversity for forest education and demonstration for the ALRF Society. Over 250 visitor-days were spent at the Research Forest which included hosting summer camps, senior high school students, undergraduate field courses, graduate field training, and professional development activities.

University Courses at ALRF

In the spring, Aleza Lake staff delivered two sessions of the annual Field Skills and Hazard Awareness for 13 field assistants, graduate students and post-docs. An 'Introduction to the BC Biogeoclimatic System' course for UNBC and Ministry of Forests field crews was also delivered and instructed by Bruce Rogers at ALRF in June.

ALRF hosted 3 modules of the 2008 UNBC Fall Natural Resources Field Camp (F333) in cooperation with UNBC faculty and instructors. ALRF teaching modules included:

- stand dynamics and silvicultural systems in wetbelt and drybelt forest types;
- stream and riparian ecology; and
- guide outfitting (including a riverboat trip and visit to a guide-outfitter camp with Bowron River Guiding).



In October, ALRF Manager Mike Jull taught field laboratory modules within the UNBC Forestry 305 class regeneration dynamics, and silvicultural systems. As part of their hands-on learning for this course, the students were challenged with preparing silviculture prescriptions for a mixed conifer stand.

Other Education and Demonstration Activities

With the snow barely gone, 30 high school students participating in the Council of Forest Industries (COFI) natural resources workshop explored the South Knolls Trail while learning about careers in natural resources in May. In June, Canadian Forest Products Ltd Woodlands foresters toured the forest including stops at the Block 3 partial cut and a visit to ALRF species trials. Children and camp counselors from the Exploration Place Science Camp spent one day on the East Loop Trail learning about forest plants and wildlife habitat. The Northern Amphibian Monitoring Outpost of BC led an amphibian habitat field workshop on the North Ridge Trail for the UNBC Fish and Wildlife Chapter of The Wildlife Society.



Demonstration Trails

In Summer 2008, ALRF staff relocated the North Ridge Trail to a more northerly route starting at the entrance of the forest, and re-established the harvested sections of the Link and South Knolls trails. A new parking area was built at the entrance of the forest on the North Ridge trailhead with an information kiosk. These infrastructure were improvements supported by funding from the Regional District of Fraser Fort George, BC Ministry of Forests, Central

Builders (Home Hardware), and the ALRF. Volunteer help for trail clearing was generously provided by the Caledonia Ramblers hiking club.

OUTREACH AND EXTENSION

ALRF staff contributed time to many initiatives and programs activities outside the Research Forest boundary to support our partners and stakeholders with similar mandates. In 2008, like most years, ALRF staff contributed time toward several guest lectures and field-based lab modules for undergraduate courses and related labs and tutorials. These included:

- UNBC Biology 201 (Karjala)
- UNBC Forestry 305 (Jull)
- NREM 400 (Karjala)
- NRES 333 - at John Prince Research Forest (Jull and Karjala)
- UBC Fall Field Camp at Alex Fraser Research Forest - In August 2008, ALRF Manager Mike Jull RPF taught 3 days of the Sub-boreal Spruce and Interior Cedar-Hemlock Modules of the Gavin Lake 2nd-year Forestry Field School at the UBC Alex Fraser Research Forest and assisted in conducting field examinations of the students

Research related extension activities include:

- Inland Rainforest Conference (June)
- LiDAR and Large Scale Digital Photography: Applications in Natural Resource Management Workshop (September)

Community oriented outreach activities included:

- Giscome School tree planting (June)
- ALRF open house Barbeque (Sept)



Committees and Boards:

- UNBC Lab and Field Safety Committee
- Northern Amphibian Outpost Board

ALRF Volunteers

ALRF worked with community volunteers on infrastructure and research initiatives for the first time in 2008, amounting to approximately 100 hours of donated labour. We thank The Caledonia Ramblers Hiking Club and Norton Dowd of Aleza Lake for their hard work clearing the new North Ridge trail in August. Midori Mitsutani, a UNBC Fish and Wildlife major, volunteered with data collection and data entry on ALRF timber sale operational trials.



Publications

John Revel's historical account of the Aleza Lake Experiment Station titled: *Devil's Club Blackflies and Snowshoes* was published by the ALRF Society and launched the first of what is hoped to be a series of ALRFS publications. This publication recounts memories of the Aleza Lake Experiment Station from several people (including John's colleagues Harry Coates and Hugh Turner) who worked and lived in the Aleza Lake areas during this period, 1945 to 1964. Two hundred and fifty copies were printed and copies are currently for sale at the UNBC Bookstore, Books and Company and through the ALRFS. John Revel has generously donated the proceeds from the sale of this book to the Aleza Lake Research Forest Society Research Endowment Fund.

Several reports and peer-reviewed publications were completed from ALRF research by researchers in 2008:

- Chewter, M. 2008. Extending the Ranges of Native Conifers: A study of western larch, Douglas-fir, ponderosa pine and western redcedar in central British Columbia. Unpublished undergraduate thesis, UBC Faculty of Forestry, Vancouver, BC.
- Janzen, D. T., C.H. Bois, R.D. Wheate, A.L. Fredeen, M. Karjala, and N. Coops. 2008. Spatial Modeling of Carbon Stocks using LiDAR Remote Sensing in a Sub-Boreal Forest: A comparison to Optical Remote Sensing. Unpublished progress report to the BC Forest Science Program.
- Jull, M.J., B. Rogers, and S. Grainger. 2008. A Study of Douglas-fir Leave-tree Population Demographics, Development, and Wildlife Habitat Attributes, 10-13 Years Following Timber Harvesting on Sub-Boreal Sites in Central Interior, BC. Unpublished progress report to the BC Forest Science Program.
- NAMOS BC. 2008. The Northern Amphibian Monitoring Outpost of BC Annual Report. http://www.namos.ca/Reports/NAMOS_BC_ANNUAL_REPORT_2009.pdf
- Sanborn, P. and T. Jull. 2008. The timing of peatland initiation in east-central British Columbia; A first look. NRESi Extension Note No. 2.
- Woodward, R. 2008. Impacts of Moose Browse on Juvenile Birch in Aleza Lake Research Forest. Unpublished undergraduate independent study report, University of Northern BC Natural Resource Management Program, Prince George, BC.

Presentations and Meetings

ALRF staff gave invited presentations to several groups over the year including the Eaglet Lake Farmers Institute and the Prince George LRMP monitoring group.

Extension Projects

The design and text for a set of high-quality brochures were completed in 2008 to compliment the brochures of the other UBC Research Forests. These are for distribution at the UBC and UNBC development offices. Newsletters were published in 2008 and distributed to UNBC and UBC departments. A blog was registered with short posts highlighting research and historical anecdotes about ALRF. One comment posted by Percy Barr's great granddaughter in reply to a story about him on the ALRFS blog. Her comment was:

"THANK YOU SO MUCH for writing this. This same Percy Barr is my Great Grandfather. I'm now completely amazed what you can learn about your family on the internet."

FOREST RESEARCH PROGRAM

Overview and Highlights

In 2008, there were 7 new research projects for a total of 42 active and ongoing projects. Of these there were one new and 2 ongoing Master's projects, one ongoing 1 PhD project, and 2 faculty seed grant projects. Travis Gerwing started his master's with field work at Aleza Lake studying beaver impacts on willow reproduction.

Since its inception in 2001, researchers have established 55 new research projects within the ALRF.

ALRF 2008 Funding Programs

In 2008, for the fifth consecutive year, the Society continued an ALRF funding program to encourage new and innovative research on the forest. Two projects were funded at \$1000 each. The grants were awarded to:

- Lisa Poirier and Jane Young (UNBC). *Survey of wetlands at the Aleza Lake Research Forest.* (ALRFS Seed Grant)
- Roy Rea (UNBC) Investigating Moose/Paper Birch interactions in a changing landscape. (ALRFS Seed Grant)

No applications for UBC travel grants were received in 2008.

Long-term Research Installation Activities

In 2008/09, support funding for maintenance of key research support infrastructure for the ALRF was accomplished through two main sources:

- The British Columbia Forest Science Program (FSP) Long-term Research Installation (LTRI) fund. And;
- In-kind contributions of staff time and resources from the ALRFS.

Online Databases

With LTRI funding, the second phase of developing the online climate database is ongoing. A webpage and a metadata template for archiving and managing climate data from the open-field station are finished. Funding in 2009 will complete this work with both open-field and old growth datasets.

Ongoing research-project database maintenance work is also supported by the BC Forest Science Program and delivered by the UBC Malcolm Knapp Research Forest on behalf of the 4 UNBC and UBC Research Forests.

Climate Stations

In 2008, the data and equipment for the two ALRF climate stations continued to be monitored and maintained by meteorologist Dr. Bob Sagar PhD, under contract to the ALRFS. Bob provides consolidated climate datasets annually. Bob has also been involved in designing and testing the new online climate database.



2008 maintenance on the open-field site completed by ALRF staff includes annual brushing and clearing around the tower to clear away vegetation growth that might adversely influence open-air weather measurements. A new precipitation gauge that monitors both snow and rain was installed this summer. The second permanent station is located in a mature “old-growth” stand in the Aleza Lake Ecological Reserve, and as an unmanaged forest ecosystem, has no maintenance activities other than downloading of climate station data.

Forest Growth Plots

In 2008, ALRF staff completed the re-measurement and removal of 23 remaining development and growth plots dating from 1954 (from old timber sale TSX 42765; ALRF project # 1954-05). Five remaining plots were also re-measured and removed from the unharvested areas within and adjacent to block 3 (formerly timber sale TSX 37258; ALRF project # 1954-04). Volunteer assistance with data entry and field re-measurements was provided by Midori Mitsutani.

2009 RESEARCH, EDUCATION AND OUTREACH GOALS AND OPPORTUNITIES

To address 2009, the research, education and outreach priorities, the ALRF will:

- Continue to expand outreach initiatives to diversify and engage a broad range of interests
- Enhance online presence with updates to the website
- Expand newsletter distribution by email.
- Design and install interpretive signs on the New North Ridge trail and produce trail brochures
- Develop an ALRF Research Strategy and an Education and Demonstration Strategy Maintain ongoing annual long-term research and education activities
- Co-host the BC Forest History Association AGM and Conference with the Northern BC Archives – *Exploring our Roots: Forest History in our Communities*

2008 Research and Education Goals and Opportunities	Status
Relocation the North Ridge Interpretive Trail to connect the public parking areas at the ALRF forest entrance with the ALRF trail system	Complete
Local community and public outreach activities to improve awareness and use of ALRF trails	Complete – ALRF BBQ and guided trail walks in Sept 2008
In-kind support to selected research projects	Complete
Re-establishment of historical stand development and growth plots in recently partial-cut harvest areas.	Ongoing
Hosting of a workshop on the use of LiDAR remote sensing technology and data in forested terrain.	Complete - LiDAR workshop held in Sept. 2008
Assistance to Giscome Elementary School in the implementation of a tree- and shrub-planting program on school grounds at Giscome, BC.	Complete – 3 ALRF volunteer days in June 2008
Promote opportunities for Forest History and community research, in collaboration with the UNBC Archives.	Completed publication of John Revel’s book
Promote the Aleza Lake endowment fund to augment fund balances.	<ul style="list-style-type: none"> • Proceeds of sales from John Revel’s books were placed in the Endowment fund; The book was made available at Books and Co., UNBC Book Store, and Forest Expo (at the Northern BC Archives table). • Endowment fund is highlighted on the website and blog

FOREST OPERATIONS



The Aleza Lake Research Forest’s mandate is to foster research, education, and applied knowledge in the management of northern Interior forest ecosystems, while at the same time, manage a working forest landbase on a cost-effective basis. The ALRFS is organized as a non-profit registered society, and must be financially self-sustaining based on forest operations and additional revenue sources.

The ALRF Society manages 9200 hectares of forest land, with a working forest of approximately 5500 hectares. Approximately 85 to 90% of the ALRF’s average annual net income is derived from sustainable timber management and sale of timber from its managed forest lands. The remaining 10 to 15% is “non-timber” revenue derived from other sources, including research provincial grants, youth employment programs (for temporary staff), cost recovery for ALRF services, and other minor sources.

Forest Harvesting

Goals for ALRF forest harvesting programs are several-fold, incorporating strategic, silvicultural, and financial goals. These interlocking goals are:

1. To harvest timber in a manner consistent with ALRF Management Plan # 2, and the Stand Harvesting Priorities identified in that plan.
2. To provide opportunities for the cost-effective silvicultural rehabilitation and improvement of productive forest sites occupied by stands of declining quality and vigour.
3. To provide opportunities for innovative (partial cutting) harvest practices, where appropriate, and research and demonstration on areas to be reforested.
4. To provide adequate operating revenue for ALRF research coordination, education programs, and forest land management operations;
5. To generate sufficient surplus revenues to (a) generate a positive cash flow and annual operating surplus for current and future operations. And
6. To generate adequate financial reserves to offset accrued silvicultural (reforestation) liability, and provide a modest cash reserve for financial contingencies (including capital expenditures and roads).



Timber revenue objectives in 2008 were constrained by limited volume availability due to cut control considerations.

Winter 2007/08 blocks (December 2007 to January 2008) were accessed by reactivating two kilometers of old winter roads in the north-central portion of the forest west of the Aleza Lake FSR and east of Hansard Creek. About 1 km of temporary new winter road was built to access Blocks 15, 16 and 17.



Winter 2007/08 logging was carried out by ground-based harvesting. Approximately 43 hectares and a total of 12,300 cubic metres of sawlogs was harvested and delivered from December 2007 to end of January 2008. An additional 1,500 m³ of pulp logs were shipped. Species composition of harvested timber was approximately 60-65% spruce and 30-35% subalpine fir (or “balsam”). Minor other species (Douglas-fir, paper birch, and some western hemlock) generally were not commercially utilized, and wherever feasible, were reserved as standing green trees in harvested blocks. Clearcut-with-reserves silvicultural

systems were used in cutblocks with extensive declining or overmature stand conditions (significant tree mortality, rots, and declining stand volumes). Clearcut with reserves systems include post-harvest retention of Douglas-fir and birch leaf trees.

84 % (11,600 m³) of the timber volume was sold as small to large sawlogs to markets near Prince George. An additional 17% by volume (1,900. m³) was marketed as pulp logs. Partial cut methods (small patch and selection cuttings) 2008 were not used due to the nature of stands targeted this year.

*Table 1: Summary of 2007 ALRF timber harvesting.
(sawlog volumes only, Jan. to March 2008)*

Method	Cutblocks completed in 2008	2008 Area (ha)	2008 Sawlog Volumes (m ³)
Clearcut with Reserves	Blk # 15 Blk # 16 Blk # 17	43 ha.	11,600 m ³

Operational Planning for Future Harvesting

In mid to late 2008, ALRF operations staff completed cutblock planning and consultations for three cutblocks (Blocks 18, 19, and 20, totaling approximately 70 hectares) in preparation for Winter 2008/09 harvesting operations. Road-building and pre-development in these blocks was completed in December 2008; however timber was processed or shipped from these blocks starting in January 2009.

In addition, staff carried out 2008 reconnaissance and preliminary mapping of other potential future harvest areas in the southeastern and south-central portions of the ALRF. These areas are accessed from the Beaver-Bear Road area.



2009 operational planning activities will be focused on medium-term total resource planning for harvesting (next 5 to 10 years) and updating and amendment of the Forest Stewardship Plan for the ALRF where required.

A continuing major priority for operations staff in 2009 will be to re-evaluate the overall forest road network at the ALRF in light of safety, engineering / geotechnical, and economic considerations. A key consideration will be the future viability of the existing Camp (Hansard) Creek road crossing and its related approaches.

Reforestation and Basic Silviculture

The ALRF reforests all of its harvested areas, and manages these basic reforestation obligations to standards set by Management Plan # 2 approved the BC Ministry of Forests and Range.

In June 2008, the ALRF planted over 136 thousand seedlings over 80 ha of basic reforestation. Tree species planted in 2008 were 91.9 % hybrid white spruce, and 8.1% Douglas-fir. Fir was planted in mixture with spruce, typically on warmer, drier sites.



2008 site preparation and fuel management (roadside slash piling and burning) were completed on 43 ha of current blocks (Blocks 15 through 17), and minor slashburning “clean-up” was undertaken on 2007 cutblocks..

Table 2 below summarizes the basic reforestation treatments and monitoring activities conducted on ALRF cutblocks in 2008.

Table 2: Summary of 2008 ALRF Basic Silviculture Activities (as of November 1st, 2008)

Block #	Year of Harvest	Yr Planted	2008 Silvicultural Treatment	Area Treated (ha)
3, 11, and 12	W 2006/07	2008	Planted	80.
15, 16, 17	W 2007/08	Pending 2009	Burning of slash piles	43.
Total			All Activities	123.

Silviculture Database

In 2008, the ALRF continued the development and modification of a dedicated silviculture database to track and manage these silviculture obligations. The original database programming was provided by Winton Global Ltd. of Prince George, and additional customization was undertaken by Spatial Mapping Ltd. of Prince George, BC. However, adjustments to temporary staff hiring levels in Spring 2008 forced the curtailment of silviculture database updating. The ALRF hopes to resume staff or contract support for this silviculture database in 2009.

Pre-1987 Plantations and Management Activities (Forests for Tomorrow Program)

Supported by Forests for Tomorrow program funding through the Northern Interior Region of the BC Ministry of Forests and Range, the ALRF successfully completed the following plantation survey and treatment programs on older plantations established before 1987 at the ALRF:

- vegetation competition and stocking surveys, on 70 hectares of plantations established in the early 1980’s along the Beaver-Bear Road;
- Conifer release through brushing and girdling treatments (with chainsaws, brushsaws, and girdling hand-tools) on 46.7 hectares.

For 2009, approximately 40 hectares of manual brushing treatments, and 60 hectares of silvicultural surveys have been proposed by ALRF staff to the Forests for Tomorrow Program, subject to availability of funding.

2008 Road Work and Issues (RALPH)



2008 Road Maintenance and Issues

In a teaching and research forest such as the ALRF, a network of reliable forest roads are essential for allowing researchers, students, and visitors to travel to and from teaching and demonstration sites as safely, comfortably, and conveniently as possible.

During summer and Fall 2008, approx. \$ 50 K were expended on the following road maintenance operations were completed at the ALRF:

- a) Grading of 11 kms of “mainline” all-weather road on the Aleza Lake FSR (0-6 km)

- and Aleza East Branch FSR (0 to 5 km);
- b) Sub-grade repairs on approximately 2 km of the Beaver-Bear FSR (Km 51.5 to 53.5) to facilitate access to Forests for Tomorrow conifer-release treatment areas.;
- c) Mechanized brush clearing on 2 kms of heavily-grown-over forest road (Aleza East / Ranger Road between the East Branch and Upper Fraser Road).
- d) Roadside brushing of 6 km of mainline road;
- e) Parking lot construction and surfacing at the North Ridge Trail demonstration trailhead (0 Km, Aleza Lake FSR).

Hansard Creek Crossing Options



In 2008, ALRF placed a very high priority on resolving the Hansard Creek crossing issue, to ensure reliable long-term access to the two-thirds of the ALRF area that lies south of the Hansard Creek. Hansard Creek is fair-sized stream (S2 to S3 classification) stream, and provides documented habitat for both rainbow trout juveniles and adults, and Chinook salmon juveniles.

Previous and current 2008 site assessments by ALRF staff and consultants have concluded that even full re-alignment of the road right of way and replacement the existing Hansard Creek crossing on Aleza Lake FSR will not remedy fundamental safety issues with this road location, and would also generate major environmental and sedimentation issues on unstable slopes close to a salmon-bearing stream.

Other older existing road clearances in the eastern portion of the ALRF similarly are not suitable for re-activation due to environmental constraints, cost, and sensitive riparian conditions.

ALRF staff have identified a preferred option which would bypass the existing Hansard Creek crossing on the Aleza Lake FSR, by building an approximately 2 km new Connector Road between the East Branch Road and approximately 56.5 Km on the Beaver-Bear FSR. ALRF staff consider this to be the most cost-effective option with the least environmental impact on adjacent stream systems, and follows a gentle and relatively safe road alignment. This option would require construction of a new road grade, two new bridges, and eventual all-weather surfacing of the road, but is considered to be the best long-term solution.

However, this is major capital infrastructure project and is currently beyond the financial capabilities of the ALRF Society. Therefore the ALRFS is currently examining options for external funding support of this preferred option.

Operational Planning and Development

In 2008, ALRF operations staff completed cutblock planning and consultations for three cutblocks (Blocks 18, 19, and 20, totaling 70 to 75 hectares) in preparation for Winter 2008/09 harvesting operations. Road-building and pre-development in these blocks was completed in December 2008; timber was processed or shipped from these blocks between January and March 2009.

ALRF staff carried out additional 2008 field reconnaissance and multi-phase layout of about 100 hectares of potential Winter 2009-10 harvest areas in the southeastern and south-central portions of the ALRF. These areas are currently accessed from the Beaver-Bear Road area.

As previously described, operations staff completed field location and key environmental assessments on a potential new road connector route with two major stream crossings (bridge locations).

In Fall 2009, two major land use permitting issues were resolved:

1. The ALRFS successfully amended the current Research Forest Stewardship Plan # 1 and established the entire timber-harvesting landbase as one single Forest Development Unit (or “FDU”) to simply and streamline forest operational planning, permitting, and consultation. And;
2. The BC Ministry of Forests and Range (Prince George Forest District) granted an application from the ALRFS to add a pre-existing Crown Land road right-of-way into ALRF, Special Use Permit (SUP) 23615. This SUP addition provided final administrative linkage between forest roads under permit to the ALRF in the northeastern corner of the research forest, the Upper Fraser Road (provincial highway system) directly to the north. This route complements the Aleza Lake FSR to the west, providing a second road connection to the provincial highway system.

2009 operational planning activities will be focused on medium-term total resource planning for harvesting (next 5 to 10 years) and updating and preparation for amendment of the Forest Stewardship Plan for the ALRF in 2010.

Forest Health



Due to the predominance of non-pine tree species in mature stands at the ALRF (including spruce, subalpine fir, Douglas-fir, three broadleaved species, and western hemlock), the ALRF has generally escaped the worst effects of the mountain pine beetle (MPB) infestation that has ravaged the pine forests of the BC Interior.

ALRF staff did not undertake systematic forest health monitoring of stands in 2008. Helicopter flights were curtailed in 2008 due to budget cuts. Future forest health surveys and walkthroughs in 2009 and 2010 will key on:

- red-band needle blight (*Dothistroma* spp.), in lodgepole pine plantations, especially on moist humid microsites,
- spruce beetle (*Dendroctonus rufipennis*) which continued to be at a low ebb in 2008. ALRF staff carried out helicopter surveys in May 2007 to map wind damage to these spruce stands in order to prioritize windthrow pockets that may create conditions for build-up of bark beetle populations.

STRATEGIC PLANNING

Timber Supply Analysis

The Timber supply data package was sent for board and peer review in December 2008 and base case results are expected in 2009

Staff Retreats

In December 2008 ALRF staff began a series of bi-monthly staff retreats to prioritize and brainstorm strategic organizational initiatives and refocus our human and financial capacity to the most important and effective initiatives. Some of the outcomes from these retreats include channeling staff work priorities to:

- ensure legal obligations are met;
- establish a short term timber inventory;
- promoting relationship-building with our education, research and business partners;
- documenting a strategic vision and a range of implementation strategies for the Society; and
- diversifying revenue and philanthropic funding sources.

Amendments to Management Plan # 2

In September 2008, the BC Ministry of Forests (Prince George Forest District) and the ALRF agreed to amend Special Use Permit S23615 to add a Crown road right of way northeast of the research forest to the permitted area. This road allowance extended the ALRF permit area to the Upper Fraser Road.

Biodiversity Order and Old Forest Planning

In Fall 2008, the ALRF Manager, Mike Jull continued discussions with the provincial Integrated Land Management Bureau (ILMB) regarding establishment of a separate old-forest biodiversity objectives for the Aleza Lake and John Prince Research Forests. At the time of writing, discussions with ILMB are still ongoing.

FINANCE AND ADMINISTRATION

2008 Financial Audits

At the request of the ALRF Board of Directors, the accounting firm DeLoitte Touche of Prince George, BC will conduct financial audits of 2008 finances, under the supervision of Mr. Ron Fichtner CGA. Copies of the audit reports will be available by Fall 2009 and will be available upon request from ALRF offices or the auditor, DeLoitte Touche.

Overview of 2008 Finances (Unaudited Statements)

The 2008 unaudited financial statement of the Aleza Lake Research Forest Society (for the year ending December 31st, 2008) indicates an operating deficit (deficit of expenditure over revenue) of \$102,241. on total *net* revenues of \$423,608, and gross revenues of \$ 1,023,074.

However, more importantly, the 2008 deficit caused the ALRFS to have a negative balance sheet (considering all assets and liabilities at the end of the 2008 fiscal year) with net equity of \$ - 70,089. compared to the previous year's year-end positive balance net liability of \$ 60,648 at the 2007 year end.

2009 Revenue and Expenditure Projections

In 2009, the ALRF plans harvest of approximately 20 to 25 thousand cubic metres.

The 2009 ALRFS financial forecast is for total net revenues of at approx. \$ 575 thousand more or less and estimated forest management, reforestation, and administrative expenditures of approximately \$ 545 thousand. A 2009 budget which projects an operating surplus of approximately \$ 30 thousand is proposed by ALRF staff.

The 2009 financial goal is to avoid undue erosion of financial reserves, and maintain contingency funds to address silvicultural liabilities and potential road infrastructure needs.

Financial Bookkeeping

Accutech Bookkeeping Ltd. (Grace Stevens) of Prince George provides bookkeeping and payroll services to the Aleza Lake Research Forest Society.

2009 MAJOR GOALS AND INITIATIVES (Operational & Strategic Planning)

The following is a summary and integration of the various individual goals and objectives for 2009 identified in previous sections.

I. Strategic Planning

- a) Completion of updated timber supply analyses and scenario planning for the ALRF, for review by the ALRFS Board of Directors (Fall 2009);
- b) Completion of the approximation of a strategic and business plan for the ALRF; Fall 2009.
- c) Resolution of Old Forest objectives for the ALRF, in cooperation with the Integrated Land Management Bureau (ILMB). Fall 2009.
- d) Undertake initial work on a replacement Management Plan (MP #3) in anticipation of October 2010 expiry of MP #2.

II. Worker Safety

- a) Continue to implement updated safety measures at the ALRF to promote safe work practices and ensure continued compliance with WorkSafe BC requirements.
- b) Continue to develop and/or upgrade a formal Safety Plan for the ALRF.

III. Forest Operations

Basic Silviculture

Address post-harvest basic silviculture obligations on the ALRF through the following operations:

- a) Plant approx. 75 thousand spruce and Douglas-fir seedlings on 43 hectares of harvested areas at the ALRF (May and June 2009);
- b) Conduct slash disposal (burning or chipping) on +/- 70 hectares
- c) Conduct regeneration surveys on approx. 60 hectares, and vegetation management as required (on an estimated 10ha) to meet basic silviculture requirements;
- d) Complete an integrated pest management plan for the ALRF.

Harvest Planning

- a) Complete operational planning and assessments for harvest of 18 to 20,000 cubic metres for Winter 2009/10.
- b) Substantially complete operational planning and assessments for an additional 3 years of harvest planning.
- c) Prepare for replacement of the Forest Stewardship Plan for the ALRF in 2010.
- d) Complete Phase II of a Total-Resource Harvest and Roads Plan for the ALRF, to guide future harvest operations.

Backlog Silviculture (Forests for Tomorrow)

Subject to availability of external funding,

- a) Complete stocking and vegetation competition surveys on approx. 60 hectares of pre-1987 (non-ALRF) cutblocks at the ALRF, and identify productive areas in need of backlog reforestation treatments.
- b) Develop silvicultural prescriptions (treatment plans) for potential future FFT backlog reforestation funding.
- c) Implement and complete contract supervision for approx. 40 hectares of manual brushing treatments for conifer release in approved pre-1987 plantations at the ALRF.

Roads

- a) Conduct regular road inspections (including Spring 2009 freshet) to identify road maintenance requirements and safety measures.
- b) Develop detailed plans for a new long-term road across Hansard Creek and identify potential funding opportunities (ALRFS and external). Implement new road construction subject to authorized funding.

Forest Health

- a) Assess ALRF timber for bark beetle incidence and threats.

V. Business Administration

- a) Finalize recommended changes and updates to the ALRFS Financial Policy and Procedures manual to identify needed updates and improvements.

BOARD OF DIRECTORS

Current ALRFS Directors In 2008 are as follows:

President,	Peter Forsythe RPF
Secretary/Treasurer	Ken Day RPF (UBC)
Director *(BCMoFR)	Wayne Martin
Director, UNBC	Bruce Larson
Director, UNBC	Staffan Lindgren,
Director, UNBC	Oscar Garcia
Director, MoE	Bob Brade

RESEARCH FOREST STAFF

Full-time staff through 2008 included permanent staff, Mike Jull RPF (Manager), Melanie Karjala (Research & Education Programs Co-ordinator, and ABCFP Limited Licensee), and Kathleen Olson (Office Administrator), and Ralph Hausot RPF (Operations Forester from March 2008 on).

We thank Judy Carlson RFT who served the ALRF as Forest Operations Technican for a one-year position from April 2007 to May 2008.

ALRF hired one summer students for a 4-month term in 2008, first time ALRF summer student Kirsten Campbell.

ACKNOWLEDGEMENTS

The Aleza Lake Research Forest Society thanks the many individuals and companies who contribute to, and work with the ALRF on a regular basis.

Thanks to UNBC for providing both office space and local institutional support for the ALRF as it grows and develops, and to UBC for expert advice and experience in the management of university research forests. ALRF staff look

forward to the coming year to continue building on strong linkages and establishing more opportunities to work closely with programs from both universities.

Thank you to all the ALRFS Board Members and parent organizations (UNBC, UBC, the BC Ministries of Forest and Range, and Environment) for their dedicated support and continued availability at a moments' notice. We particularly acknowledge our Board Chair, Peter Forsythe of Winton Global Ltd... for his guidance and sage advice.

Thank you to our ALRF vendors and contractors in Prince George and beyond, who have worked with and assisted us in operations and research on the forest.

And last, but certainly not least, thank you to all of our ALRF staff throughout 2008.