

# ASPECT

**Definition: 'as - pekt / 1. a position facing a particular direction  
2. appearance to the eye and mind**

## THE DEGIRS NEWSLETTER

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### **The Editorial**

by  
David Campbell, P.Geo.

So here is a crack at pulling together my first ASPECT Newsletter. The past few months on the DEGIRS Executive has, as Jeremy Araki warned, been a whirlwind, and has prompted me to think a few times whether "I am in over my head?" It certainly has re-enforced though what a great group DEGIRS is, and how beneficial it is to our professional practice to belong to this Division.

So with the impending deadline for producing the newsletter, it is at the last minute that I realize that writing an editorial is part of job. Pulling together the newsletter content seems like the easy part, but providing some words of wisdom or waxing philosophic requires a little more time for thought, and we all know time is of a premium.

I guess I could pontificate on the "Cherry Blossom" Olympics, and the need to better understand climate variability and climate change, and how to incorporate them into professional practice. Or I could discuss the recent avalanche tragedy near Revelstoke, or earthquakes in Haiti and Chile, which are devastating reminders of the impacts of natural hazards on human lives.

The economy continues to be a hot-button topic. Just today Wood Markets announced that lumber production is down nearly 50% from its 2004 high. With the Canadian dollar reaching parity, export markets will continue to be challenged. And the Ministry of Forests, whose revenue pains have slowly caught up with what industry has been feeling for over a year, has announced that significant cuts are on the horizon. In fact, the Forest Service is looking to emulate the direction that our Division has already taken - diversification - and is seeking to expand its service delivery mandate into other natural resource activities.

Another goal of the Ministry of Forests and Range is to ensure forest resources are well managed and ensure public and consumer trust in BC's forest management. To this end, Peter Bradford's article below discusses how the Forest and Range Evaluation Program is achieving these goals. Also in this issue, the DEGIRS Bursary, upcoming professional development, recent resources that have become available, the Water Act Modernization, and for interest sake, the Extreme Ice Survey.

*Please note: DEGIRS Executive does not necessarily support or agree with the opinions and conclusions indicated in the editorial.*



## How the Forest and Range Evaluation Program (FREP) Can Help You Meet Your Professional Obligations

By Peter Bradford, RPF

*Adapted from an article published in the January edition, BC Forest Professional Magazine*

The ability to manage and harvest crown forests into the future depends on maintaining public acceptance or social licence. Sustainable management of British Columbia's forests is both a key marketing niche for our forest products and an obligation to future generations. From this perspective, monitoring and evaluating the sustainability of forest resource values is of fundamental importance for government, resource professionals and licensees in a society and marketplace increasingly concerned with conservation, sustainability and accountability.

The Forest and Range Evaluation Program (FREP) is the science-based foundation of the *Forest and Range Practices Act* (FRPA) that measures, validates and provides for continued improvement of legislation, policy and practices to ensure sustainable management. This information is critical in helping policy makers, resource professionals and decision makers effectively balance social, environmental and economic values in the interest of all British Columbians.

FREP can help resource professionals meet their obligations and contribute to building sustainable and vibrant forest-based resource industries. While the focus of this article is on forest professionals and the Association of British Columbia Forest Professionals (ABC FP) Code of Ethics, parallels may be found for other resource professionals operating under similar codes.

In order to fulfill professional obligations, forest resource professionals must know the results of their plans, prescriptions and on the ground practices. They must be able to adapt their practices, where appropriate, based on objective,

scientifically credible assessments of the outcomes and effectiveness of their plans and practices.

The five areas where the Forest and Range Evaluation Program (FREP) can help forest resource professionals meet their professional obligations while helping to build a sustainable and vibrant forest industry are:

1. *Advocate and practise good stewardship of forest land based on sound ecological principles in order to sustain its ability to provide the values assigned by society (Bylaw 11.3.1: ABCFP Code of Ethics), and*
2. *Keep informed in your field of practice...maintain sufficient knowledge in your field of practice (Bylaws 11.4.6 and 12.2.1)*

FREP indicators, protocols, data, reports, extension notes and recommendations can be a key part of resource professionals enhancing their ecological understanding of the 11 FRPA resource values<sup>1</sup>. These products also provide a powerful tool for communicating that information to others. FREP monitoring can provide resource professionals with critical data on the status and trend of resource value sustainability based on the current science related to the 11 FRPA values.

3. *Ensuring professional opinions or judgements satisfy a balance between environmental, social and economic values, (Applying Professional Reliance Under FRPA, ABCFP April 2008) and*
4. *Guide principled decisions that consider the medium- and long-term implications on*

<sup>1</sup> The 11 FRPA values are: Biodiversity, riparian/fish, water, forage/ associated plant communities, wildlife, visual quality, cultural heritage resources, soils, resource features (i.e. Karst), timber, recreation.



*the values assigned by society. (ABC FP April 2008)*

Understanding the resource value trends associated with various practices will enable professionals to base their considerations of medium and long-term implications on science-based data collection, analysis and reporting. FREP is primarily focused on the environmental value side of the balance, but also provides social value information through visual quality and cultural heritage monitoring. Resource professionals can use this information, along with information from other sources to help inform balanced decision-making.

5. *Use FREP to help build vibrant and sustainable forest-based industries*

- Sustainable Forest Management (SFM) certification monitoring – FREP indicators, protocols and data could save licensees money when developing and implementing their SFM monitoring requirements. FREP protocols are available for biodiversity, water quality, fish/riparian, range/forage, visual quality, cultural heritage, karst, soils and other resource values. The FREP water quality indicators are eligible for FIA funding.
- Communication, trust and relationship building – FREP has potential to develop or enhance relationships among First Nations, industry and government through evaluating cultural or other resource values important to First Nations. This in turn has potential to help with tenure approvals, enhance certainty of tenure, and possibly avoid litigation and remediation.
- Enhance social licence – FREP monitoring results provide continuous improvement opportunities to build public trust and maintain long-term social licence and secure market access.
- FREP can help validate and improve the FRPA model thereby saving costs

associated with developing and implementing a new forest management model in the future.

- Early detection of opportunities to improve practices can help avoid environmental damage and/or costly remediation.
- Protocols and indicators – Identification of the resource value monitoring indicators can help provide clarity on what government considers most sensitive to harvesting with respect to the 11 resource values.

A credible, results-based resource management framework founded on professional reliance requires a process of monitoring and evaluation designed to keep practices aligned with current knowledge and status of natural resources, and for the continuous improvement of the policy and legislative framework under which resources are managed.

FREP products can help resource professionals remain current and informed on resource health and environmental sustainability, which is key to practising good stewardship of forest-land based on sound ecological principles and ensuring long-term economic sustainability.



**Peter Bradford** is the Resource Stewardship Evaluation Officer for Forest Practices Branch of the Ministry of Forest and Range. Peter is the provincial lead for the Forest and Range Evaluation Program.



For more information on FREP, contact the Peter Bradford, RPF, at [Peter.Bradford.gov.bc.ca](http://Peter.Bradford.gov.bc.ca) or (250) 356-2134, or see: <http://www.for.gov.bc.ca/hfp/frep/index.htm>.

## DEGIRS Bursary Announcement

The Division of Engineers and Geoscientists in the Resource Sector (DEGIRS) is pleased to offer a \$2000 bursary aimed at advancing engineering and geosciences education and practices in BC. The bursary is intended to provide financial assistance to students in an accredited post-secondary or post-graduate program at a degree-granting institute in BC. Studies should relate directly to professional engineering and/or geoscience/geotechnique in the resource sector.

In keeping with DEGIRS's mission statement, the bursary is a means to:

- promote education, professional development and high standards of practice of Engineering and Geoscience related to resource sector activities,
- promote awareness of specialized knowledge and training required by Professional Engineers and Professional Geoscientists working in the resource sector, and
- promote public awareness of the role of Professional Engineers and Professional Geoscientists in the resource sector.

### Eligibility Criteria

Applicants must be enrolled in at least the third year of an undergraduate program or any year of a post-graduate program directly related to the practice of engineering and/or geoscience/geotechnique in the resource sector, and lead to membership in the Association of Professional Engineers and Geoscientists of British Columbia. Applicants shall demonstrate above average grades.

### Submission Process

All applicants shall submit by the end of June 2010 the following:

1. A covering letter describing the applicant's area of study and their career goals. The letter should include a permanent contact address, phone number (s), and e-mail address.
2. An official copy of their transcripts showing grades and an accompanying list of current courses and/or program of study.
3. An essay, no more than 5 pages, including figures and diagrams, on any topic related to engineering and/or geoscience/geotechnique in the resource sector. Any submitted papers or essays may be published in ASPECT, the newsletter, at the discretion of the DEGIRS Executive. Applicants must provide an electronic copy of the paper, preferably in MS Word, with the submission.

Applications must be **received by the end of June 2010** for consideration for this year's award. Digital applications should be submitted to:

Bursary Co-ordinator: [david\\_ac@hotmail.com](mailto:david_ac@hotmail.com)

Transcripts can be forwarded to:

DEGIRS	Bursary	Sub-Committee,
c/o		APEGBC
200	- 4010	Regent Street
Burnaby, BC V5C 6N2		

### Evaluation of Applications

The DEGIRS Bursary Sub-committee will evaluate submissions based on the following criteria:



- The relevancy of the applicant's field as study to engineering and/or geoscience/geotechnique in the resource sector.
- The applicant's career goals
- The applicant's grades
- The submitted paper which shall be reviewed for content, relevance to engineering of geoscience in the resource sector, organization, clarity and references.

### **Award of Bursary**

The bursary, in the amount of \$2000, shall be awarded to the successful student by approximately mid-August. DEGIRS reserves the right not to award the bursary if a suitable candidate is not found. A successful applicant from the immediately preceding year will not be considered.

Prior to award, the selected candidate shall provide confirmation of current registration to the DEGIRS Bursary Sub-Committee.

### **CONTINUING PROFESSIONAL DEVELOPMENT OPPORTUNITIES**

*From APEGBC website*

#### **Design and Construction of Rock Protection in Stream Channels**

**April 16, 2010 – Nanaimo**

Topics discussed will include:

- Design Considerations
- Dimensioning and Detailing Rock Protection
- Preparation of Drawings
- Construction of Rock Protection
- Case Study Review

[http://www.apeg.bc.ca/prodev/events/design\\_rock\\_protection\\_apr10.html](http://www.apeg.bc.ca/prodev/events/design_rock_protection_apr10.html)

#### **Advanced Slope Characterization, Analysis and Risk Assessment**

**April 29 & 30, 2010 - Vancouver**

This two day workshop builds on the previous introduction to slope stability course presented by APEGBC and led by Erik Eberhardt, Doug Stead and Scott McDougall will be of interest to geotechnical engineers and geoscientists interested in new developments in slope characterization, monitoring and analysis, as they apply to highways, mining, forestry and hazard assessment. The course is open to everyone, including those who did not participate in the introductory workshop.

The first part of the course will discuss new developments in slope characterization and monitoring using photogrammetry, terrestrial and airborne laser scanning (LiDAR), and terrestrial and satellite radar interferometry (InSAR). This will be followed by an introduction to advanced slope stability analysis using continuum and discontinuum numerical methods (e.g. finite-element, distinct-element), together with instruction on the best use of these advanced tools. Accompanying these lectures will be a series of tutorials that will provide hands-on experience in the use of several numerical modelling codes and concepts like shear strength reduction (SSR).

The third part of the workshop will explore the subjects of advanced landslide runout analysis using empirical and analytical techniques and the essentials of quantitative risk analysis (QRA). These will be followed by lectures and hands-on exercises looking at the design of protective structures.

[http://www.apeg.bc.ca/prodev/events/advanced\\_slope\\_analysisapr10.html](http://www.apeg.bc.ca/prodev/events/advanced_slope_analysisapr10.html)

#### **Geosynthetic Reinforced Soil**

**May 7, 2010 - Castlegar**

**June 10, 2010 - Vancouver**



This course encourages participants to develop an understanding of fundamental concepts as they govern the behavior of geosynthetic reinforced soil structures. Material properties are examined that govern performance, including mobilized tensile strength, soil-geosynthetic bond and strain compatibility.

The course objective is to assist participants in building a framework of basic ideas which are sufficiently adaptable to accommodate the more complex problems encountered in engineering practice. It is also to illustrate, with reference to case studies, that the sensible application of simple methods can give perfectly acceptable engineering solutions.

[http://www.apeg.bc.ca/prodev/events/GRS\\_Castlegar10.html](http://www.apeg.bc.ca/prodev/events/GRS_Castlegar10.html)

[http://www.apeg.bc.ca/prodev/events/GRS\\_Vancouver10.html](http://www.apeg.bc.ca/prodev/events/GRS_Vancouver10.html)

## OTHER PROFESSIONAL DEVELOPMENT OPPORTUNITIES

### **ExpoFor 2010**

April 8-9, 2010 – Kelowna

ExpoFor is the annual forestry conference and AGM of the Association of BC Forest Professionals

<http://www.expofor.ca/index.htm>

### **Canadian Water Resources Association 63<sup>rd</sup> National Conference “Information, Infrastructure and Environment: What is our Water Legacy?”**

June 15-18, 2010 – Vancouver

The BC Branch of the CWRA is planning this exciting national event and invites you to Vancouver to share your thoughts on how to build

our water legacy and sustain a healthy natural environment.

Investments in Science, Monitoring, Projects and Watershed Management can create a legacy of understanding healthy ecosystems and robust economies in a watershed. The following sessions will examine the progress and innovation being made towards this objective:

- Watershed Management
- Aquatic Habitat
- Modelling/Analysis
- Projects/Infrastructure
- Monitoring
- Policy/Geovernence

[http://www.cwra.org/News\\_Events/Assets/CWRA\\_National\\_Conference\\_2010\\_En.pdf](http://www.cwra.org/News_Events/Assets/CWRA_National_Conference_2010_En.pdf)

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## **ANNOUNCEMENTS**

### **Water Act Modernization**

The Ministry of Environment is hosting Water Act Modernization multi-sector workshops in March and April 2010 in the following communities:

- Smithers – April 13
- Nelson – April 16
- Fort St. John – April 20
- Vancouver – April 21

These workshops are designed to share information, discuss principles for the Water Act and explore proposals for change. The main focus of the workshops is to explore options and solutions for change proposed in a public discussion paper, to be released in February.

When released, the discussion paper will be available on the Living Water Smart website with a notice posted to this blog and an email sent to stakeholders on our register.

If you would like to be on our register or are interested in attending one of the workshops please email [livingwatersmart@gov.bc.ca](mailto:livingwatersmart@gov.bc.ca) with



details of which workshop you would like to attend, the organization you represent, and your contact information including phone and email address.

Seating at the workshops is limited and it is possible that not all requests can be accommodated. Participant selection will ensure that the widest range of interests and issues are represented and explored at each session.

Sector representatives that we anticipate participating include:

- Water licensees
- Water supply organizations
- Industry sectors
- Professional associations and unions
- First Nations • Environmental NGOs
- Recreation groups
- Riparian landowners
- Academic institutions
- Local and senior governments

The way we manage water is everyone's business and we are invited you to share our views on the ideas and possible solutions presented in the [Discussion Paper](#). Submissions may be completed online, emailed to [livingwatersmart@gov.bc.ca](mailto:livingwatersmart@gov.bc.ca) or sent to: Water Act Modernization; Ministry of Environment, Water Stewardship Division, PO Box 9362 Stn, Prov Govt, Victoria, BC, V8W 9M2. The closing date for submissions is April 30, 2010.

For more details see the Living Water Smart website:

<http://blog.gov.bc.ca/livingwatersmart/>

## New Publications

BC Ministry of Environment. 2009. [Manual of British Columbia Hydrometric Standards. Resources Information Standards Committee.](#) Victoria, Government of British Columbia. 222 p.

Hogan, D.L. and D.S. Luzi, 2009. **Chapter 10: Channel Geomorphology: Fluvial Forms, Processes, and Forest Management Effects.** *In* Compendium of Forest Hydrology and Geomorphology in British Columbia. R.G. Pike et al. (Editors). BC Ministry of Forests and Range and FORREX Forum for Research and Extension in Natural Resources, Land Management Handbook.

Winkler, R.D., R.D. Moore, T.E. Redding, D.L. Spittlehouse, B.D. Smerdon and D.E. Carlyle-Moses, 2009. **Chapter 7: The Effects of Forest Disturbance on Hydrologic Processes and Watershed Response.** *In* Compendium of Forest Hydrology and Geomorphology in British Columbia. R.G. Pike et al. (Editors). BC Ministry of Forests and Range and FORREX Forum for Research and Extension in Natural Resources, Land Management Handbook.

Forest Practices Board, 2009. [Landslide Occurrence Following Major Rain Storms on Vancouver Island.](#) Special Investigation Report SIR-27. 18pp.



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Dan Graham, Director, Compliance and Enforcement (C&E) Branch, MFR, has forwarded a C&E Bulletin to APEGBC for information.

The document was developed to provide guidance to ministry C&E program staff and delegated decision makers on interpreting the words “material adverse effect” and “material adverse impact”.

The document is available on the [DEGIRS Website](#).

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*Karst formations in Clayoquot Plateau Provincial Park, Vancouver Island (photo courtesy of David Campbell)*

### Extreme Ice Survey

With support from the National Geographic Society, the Extreme Ice Survey is undertaking a fascinating project which utilizes time-lapse photography to examine glacier ice dynamics and monitor glacial recession around the world. Plans

are in the works to set up cameras on the Bridge Glacier near Pemberton this summer.

A number of videos have been made from time-lapse photos over the past few years on glaciers in Alaska, Greenland, and Iceland. These are available on [their website](#), and from purely a “Geo-geek” point-of-view are certainly worth a look.



*Wedgemount Glacier, in Garibaldi Park, has undergone significant recession in recent years. The glacier reached into Wedgemount Lake a little over a decade ago. (photo courtesy of David Campbell)*

**To all members, you make ASPECT what it is, so take the time to contribute your thoughts and ideas in articles and letters. ASPECT welcomes announcements, technical articles, letters to the Ed, project profiles, photos, tips, jokes, etc.....basically anything that would benefit or interest DEGIRS members.**



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## Do Not Forget!!!

### ASPECT SUBMISSIONS

LAST DATE FOR SUBMISSIONS TO ASPECT	NEWSLETTER RELEASE DATE
June 15, 2010	June 30, 2010
September 15, 2010	September 30, 2010
December 1, 2010	December 15, 2010

Electronic submissions in **Word format (only)** should be made to Sharon Scott ([sharonkscott@shaw.ca](mailto:sharonkscott@shaw.ca)) or David Campbell ([David.Campbell@gov.bc.ca](mailto:David.Campbell@gov.bc.ca)) by the date listed above.

(Refer to Guidelines for Submission on the website <http://www.degirs.com/guidelines.doc> for submission requirements).