

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
Sharon Scott, P.Ge., Eng. L.

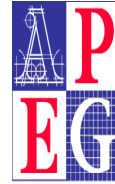
Have you registered for the APEGBC AGM (October 15-17, 2009) yet? This year it is being held in beautiful Victoria with theme being “Charting the Year Ahead”. The Engineering and Geoscience in the Resource Sector Professional Development stream has a full slate of speakers again this year. The theme for this professional development stream is “Resource Roads and Bridges”. The DEGIRS AGM will be held October 15, 2009 at 3:30 pm, following the professional development session. Don’t forget the pre-conference DEGIRS field trip led by Domenico Iannidinardo. See you there!

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 DEGIFS members.

Check out the new guideline at the APEGBC website:

<http://www.apeg.bc.ca/pppractice/documents/ppguidelines/BudgetGuidelines.pdf>

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



DEGIRS Mission Statement Taskforce Update

In September 2008, a letter ballot was mailed to all DEGIRS members with proposed changes to the Division's Terms of Reference, relating to the expansion of the Division's mandate into non-forestry resource sectors. The proposed changes were overwhelmingly accepted. At the Division's AGM held in Kelowna in October 2008, discussion from the floor suggested that the Terms of Reference were too vague and that it would be helpful to develop a Mission Statement to better define the role, purpose of the Division and areas of expertise of Division members. In response to the motion, the Division executive struck a task force, consisting of four engineers and four geoscientists, who had expressed an interest to participate in such a task force. The group has developed the following draft mission statement –

The purpose of DEGIRS is to foster professional excellence in the provision of Professional Engineering and Geoscience services to promote the responsible, safe and sustainable development of natural resources, specifically in support of land-based resource-development activities [as distinct from exploration, manufacturing and processing activities].

Division members possess geomorphic and geotechnical expertise that includes, but is not limited to: mapping and site assessments of terrain and geohazards; hazard and risk analysis; hydrological analysis; and planning and design for specific purposes such as resource roads and bridges.

The main objectives of DEGIRS, as summarized from the Terms of Reference of the Division, include: providing a forum for the exchange of technical information; promoting education, professional development, and high standards of practice; and responding to issues pertinent to the public interest and to APEGBC council.

We would ask that you review the statement and provide comments back to the taskforce via e-mail to iweiland@telus.net by October 9, 2009. The taskforce intends to present a final mission statement at the upcoming AGM in Victoria to be adopted by the membership at that time.

2009 DEGIRS AGM

The AGM for DEGIRS members begins at 3:30 p.m. on Thursday, October 15, 2009 at the Victoria Conference Center in Victoria, B.C.

The DEGIRS executive invite all members who plan to attend the APEGBC conference in Victoria to note the time of our AGM and to make an effort to attend. You will get a chance to meet the new members of your executive.

Executive members whom were elected last year and are continuing include:

Joe Kenny, P. Eng.

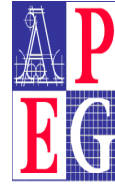
Sharon Scott, P. Geo. Eng L.

Shawn Vokey, P.Eng.

Executive members completing their terms this year include Julien Henley, P. Eng., Mike Noseworthy, P. Geo., Eng. L., Jack Whittles, P. Geo., Eng. L. and Irena Weiland P. Geo, Eng. L.. As out-going chair, Jeremy Araki, P. Eng., will continue with the executive for an additional year as Past Chair.

This will be a great opportunity to meet with your peers, enjoy stimulating conversations and learn new things.

So come on out and help this division grow.



2009 DEGIRS – Field Trip Wednesday, October 14, 2009

DEGIRS PACIFIC MARINE: FISH, FORESTS, ENGINEERS & GEOSCIENTISTS FIELD TRIP

Jeremy Araki PEng,
Alan Chatterton P.Geo. Eng.L. R.P.F.,
Domenico Iannidinardo P.Eng. R.P.Bio. R.P.F.,
Craig Sutherland P.Eng.

Southern Vancouver Island has a unique history of private land development dating back to pioneering railway land assignments in the 1880s. The result of this is a large and relatively resource dominated private landscape adjacent to the edge of increasing human population pressures. Issues of how resource managers address these opposing forces will be reviewed on site and there will be various stops of interest in a working forest.

The Stolz Bluff restoration site, the 2008 APEGBC Sustainability Award winner, which is located on the Cowichan River, will also be visited.

As the tour will include walking in forested areas, please bring a jacket and wear appropriate footwear.

2009 DEGIRS Professional Development Stream

Thursday October 15

RESOURCE ROADS IN STEEP TERRAIN

Michael Cullen P.Eng. PhD

9:00 -10:15 am

Many of B.C.'s resources such as timber, minerals, and water are located in mountainous areas. As the easily accessible low elevation resources are exhausted we are needing to gain access to the more challenging mountainous terrain. Access to these resources is often very difficult due to the presence of steep slopes, incised gullies and increased risk from various geohazards. The roads often require creation of very high cut slopes, rockbolt support, retained fills, tunnels, and landslide/rockfall protection. Optimizing the road route is critical to control the high construction costs associated with these construction techniques. Several case studies of recent projects will be presented that illustrate planning, engineering assessment, and construction for resource roads in B.C.'s mountainous terrain.

ROADS TASK FORCE GUIDEBOOK

Gino Fournier PEng RPF

10:45 - 11:15 am

This presentation will discuss the Guidelines for Professional Practice in the Forest Sector - Forest Roads, which describe the professional practice that should be followed related to the planning/design, construction/modification, operation, maintenance and deactivation of forest roads.



MINERAL EXPLORATION ACCESS AND MINING ROADS

Ian Webster P.Geo.

11:15 am - 12:00 pm

Learn about the proposed Resource Roads Act and how changes may affect exploration and mining. Topics discussed will include proposed on-tenure (mineral) roads, exiting on-tenure roads, proposed and existing off-tenure roads as well as regulation/permitting differences.

DESIGN CONCEPTS FOR MITIGATING ENVIRONMENTAL IMPACTS FROM COASTAL LOG DUMPS

Glen Beaton P.Eng., Lee Deslauriers P.Eng. RPF

1:45 - 2:15 pm

Log dumps are the foremost infrastructure in most coastal BC forest operations and are vital in transporting timber by water from isolated areas to mills and markets. Historically, log dumps and booming grounds have been a major source of woody debris and sediment input into BC's waterways, causing blanketing of aquatic habitat on a larger scale than previously thought. The presenters will discuss their experience with innovative log dump design concepts which try to mitigate the environmental impacts caused by the construction and operation of coastal log dumps. These designs must balance higher environmental standards with the reality of tight economics in the forest industry.

ROADS SKILL SET

Glynnis Horel P.Eng.

2:15 - 3:00 pm

This presentation will discuss the skill set professionals are needing when performing work on resources roads.

Friday October 16

ROADS AND BRIDGES

Gino Fournier P.Eng. R.P.F.

9:00 -10:15 am

This presentation will explore road and bridge construction as well as maintenance primarily on the southern Vancouver Island area. Also included will be a summary of do's and don'ts along with good practices to ensure roads are safe for use.

PRIVATE LAND RESOURCE ROADS

Gordon Butt P.Geo. P.Ag.

10:45 - 11:15 am

Through this presentation, you will learn about the trends and limitations in private land resource roads. In addition will be a discussion of risk assessment, construction methods, failure rates, planning and design, deactivation and policy.

SAFE CERTIFICATION

Roger Harris

11:15 am - 12:00 pm

This presentation will discuss the historical and current state of safety statistics within the Forest Harvest sector with specific reference to the role of Safe Companies Certification Program. Also covered will be challenges the forest sector will face from a safety perspective as it emerges from the current economic climate with an emphasis on recruitment, retention and certification within the forest sector and the role of the Forest Safety Ombudsman.



EVALUATING THE POTENTIAL IMPACT OF FORESTRY AND RANGE USE ON WATER QUALITY: A ROUTINE EFFECTIVENESS EVALUATION

Dave Maloney P.Ag.

1:45 - 2:30 pm

The evaluation procedure was developed to assess the effectiveness of the government's policy of maintaining water quality. The procedure assumes most forestry related sediment generation comes from easily identified point sources. Such sources occur where roads or livestock disturbed terrain come in close hydrological proximity to natural drainages. The evaluation can be completed quickly by non-specialists and estimates sediment generation within an order of magnitude. The procedure allows sediment generating sites to be prioritized for management and remediation.

COWICHAN RIVER RESTORATION PROJECT

Craig Sutherland P.Eng.

2:30 - 3:00 pm

This presentation will explore the Cowichan River restoration project as well as some of the other on-going sediment management planning that is currently underway in the Cowichan area.

NORTH BEACH ROCK SLIDE: A CASE STUDY

Stephen Bean P.Eng.

3:30 - 4:15 pm

Learn more about the October 2008 occurrence of large cracks observed extending up the slope during rock cut removal for road widening in the area of Bentley Road, north of Summerland, BC. About 150,000 cubic meters of rock began sliding towards the highway at a rate of about 25 mm per day. The highway was closed for public safety concerns and unloading of the slide mass was implemented. Detailed rock slope stability analyses were conducted to calculate the amount of unloading required to stabilize the rock mass and to develop recommendations for the new

revised four lane highway alignment.

RESOURCE ROADS: GEOMETRIC DESIGN

Jeremy Araki P.Eng.

4:15 - 4:45 pm

Geometric road design is completed on a regular basis in the resource sector. In the forest sector, these designs are often incomplete and design parameters are misunderstood. This presentation will clarify the design process and describe how design considerations such as TSA prescriptions are integrated into the design.

CONTINUING PROFESSIONAL DEVELOPMENT OPPORTUNITIES

From APEGBC website

Design & Construction of Rock Protection in Stream Channels

October 1, 2009 - Kamloops, BC

October 30, 2009 - Burnaby, BC

The seminar will focus on these topics:

- Provincial Standards and Regulatory Controls for the Design and Construction of Rock Protection
- Rock Protection Design for Streambanks, Shorelines and Stream Channels
- Construction Monitoring and Construction Quality Inspection
- Failures, Repair and Routine Inspection
- Special topics: Grouted Rock Protection; Unique Applications (energy dissipators, splash pads etc.)

http://www.apeg.bc.ca/prodev/events/design_rock_protection_kamloops.html



http://www.apeg.bc.ca/prodev/events/design_rock_protection_oct09.html

Flood Management in British Columbia

October 23, 2009 - Nanaimo, BC

OBJECTIVE:

Summarize status of past and present flood management in BC and provide ideas for future approaches. Provide a forum for discussion, to ask questions and describe concerns.

SEMINAR OUTLINE:

1. Management situations: Multiple municipalities along one water course (Lower Mainland); Areas with available (but possibly out-dated) floodplain maps; Small communities with no floodplain maps but known potential flood hazards.
2. Regulatory background; History of flood management in BC; Present situation and legislation; Status of MOE & EMBC; Advantages/disadvantages of present frame work; Outlook for the future; Setting new standards.
3. History of floodplain mapping in BC; Methods used to prepare mapping; Why maps may now be out-of-date and what it takes to update them (Procedures, limitations, costs, financing); Case studies including real-time forecasting; Present "shovel ready" approach to flood protection; Flood protection and environmental considerations.
4. Small watersheds and small communities; What can be done to assess risks; Flooding, erosion, avulsion and debris flow hazards; "Safe for intended use" letters and legal implications.
5. Flood management in other jurisdictions; Case studies - BC and

overseas; Innovative approaches and future directions.

http://www.apeg.bc.ca/prodev/events/flood_mnmt_nanaimo.html

Erosion & Sediment Control - Fundamentals, Best Management Practices & Innovations

October 29, 2009 - Richmond, BC

This seminar is a comprehensive one day classroom-based session. It will detail the current state of the industry as well as recent innovations and advances. The session will overview the theory, fundamentals and causes of erosion and sedimentation, but focus on the reasons for poor ESC practices and performances that are so prevalent today and how to achieve the results we need. We will explore some of the more common practices and review their most appropriate uses and most applicable characteristics. We will demonstrate the processes and procedures all practitioners should employ in the preparation, implementation, and execution of erosion and sediment control plans and contracts.

This session is appropriate for civil and environmental engineers, designers, field staff, project managers, regulatory managers, and all those active in the ESC industry. Find out how to consistently meet the governing guidelines, regulations, and bylaws, using fundamental concepts and approaches, and save yourselves and your clients the time, money, and frustration. Learn how to do ESC right!

http://www.apeg.bc.ca/prodev/events/erosion_sediment_oct09.html



Geosynthetic Reinforced Soil

October 30, 2009 - Fort St. John, BC
November 6, 2009 - Vancouver, BC

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_FS_J_09.html

http://www.apeg.bc.ca/prodev/events/GRS_Va_n_Nov_09.html

Advanced Slope Characterization, Analysis & Risk Assessment

November 4 & Thursday, November 5, 2009-
Vancouver, BC

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_analysisnov09.html

ANNOUNCEMENTS

Volunteer Opportunities:

We are still looking for volunteers to help. A Co-editor from the interior would be a nice addition to ASPECT in order to provide us with a balanced view between interior and the coast issues. If you have some time to spare please contact one of the executive or the current editor.

Got something pressing to say? Be a guest editor for an issue!

All you GIT/EIT types have an opportunity to get some great experience down in your logbooks by volunteering your time to ASPECT. Your input is welcomed!



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Do Not Forget!!!

ASPECT SUBMISSIONS

LAST DATE FOR SUBMISSIONS TO ASPECT	NEWSLETTER RELEASE DATE
December 1, 2009	December 15, 2009

Electronic submissions in **Word format (only)** should be made to Sharon Scott (sharonkscott@shaw.ca) by the date listed above.

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