CPESC ALBERTA  
And  
University of Alberta, Faculty of Extension  
Present  
Erosion and Sediment Control  
Professional Development Training  
COURSE CALENDER FALL 2006

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$275 /day; discounts available for multiple days and early registration

Classes at  
U of A Extension Centre  
8303 112 Street 2nd Floor  
Edmonton, Alberta  
8:30 - 4:30

http://www.extension.ualberta.ca/appliedsciences/seminars.aspx  
UA Extension Program Coordinator, Suzanne Roy 780 492 4057

The Certified Professional in Erosion and Sediment Control Program

The CPESC program is an international system of identifying professionals qualified for educational, scientific, and service activities with public and private agencies responsible for erosion and sediment control. Two international, non-profit, scientific, and educational organizations, the International Erosion Control Association and the Soil and Water Conservation Society, are founding partners of the CPESC program. CPESC registration is based upon scholarly preparation, knowledge, and experience. Certified professionals listed on the registry meet the educational and practical experience standards, pass a qualifying examination, subscribe to the code of ethics, and satisfy continuing education requirements. CPESC Alberta is an association of Alberta CPESC members who organize continuing education opportunities and promote professionalism.
Course Summary

Wind Erosion Control and Dust Control on Construction Sites Using WEPS

Date: Monday, Nov 20 – 8:30 am to 4:30 pm
Cost: $275 + GST, maximum registration 20
Course: TBA
Instructors: Dr David G. Walker, PAg, PBiol, CPESC, CPRM and Dwayne Stenlund, CPESC, CPRM

Target Audience: This course is ideal for engineers, hydrologists, landscape architects, agrologists, biologists, ecologists, and planners involved with surface mines, pipelines, urban development, recreation development, and restoration of natural landscapes. The course content is approved by CPESC, Inc. as suitable material for preparation for the CPESC application exam.

Description: This full-day course provides just enough basic theory on wind erosion to understand how to select practical methods for erosion control. The course covers the problem of controlling airborne soil particles generated by both wind (saltation) and mechanical (road traffic) detachment. Case studies of methods and materials that have proven effective over time demonstrate the theory into practice. The instruction emphasizes the use of a systematic approach for selecting and combining methods and products. WEPS (the Wind Erosion Prediction System computer model, USDA Wind Erosion Research Unit, Manhattan, Kansas) demonstrates the relative effectiveness of alternative control methods and predicts the relative risk of soil loss in various climatic conditions.

Participants interested in using the WEPS software are invited to bring a laptop computer and work along with the instructors (Because of limited time, participants should have good basic skills with their computer operating systems: WIN 2000, WIN XP). Course material covers temporary and permanent wind erosion control methods including surface modification, selection of the best types of vegetation (but not local variety), establishment of vegetation, chemical dust suppressants (generic, no product endorsements), mechanical products, and combinations. The fee includes the WEPS software (modified for single-day scenario runs, SWEEP) and user manual on CD-ROM.

Learning Objectives:
- increase understanding of wind erosion processes;
- provide a scientific basis to demonstrate due diligence in BMP selection;
- learn how to reduce soil erodibility and to reduce wind speed at ground level;
- learn how to use WEPS (wind erosion software) to choose BMPs;
- learn when and how chemical dust suppressant products can be used;
- learn what temporary methods work best until an effective vegetation cover develops;
- what plant density and how much cover are needed for effective erosion control; and,
- what methods work best for both plant establishment AND erosion control.

What Previous Participants Said:
- I was amazed at the impacts of wind erosion on a global scale, and how much stormwater controls can work in conjunction with air quality measures to prevent pollution from construction sites. Rich Jackson, Engle Homes. (IECA Feb 2006).
- This course gave me tools to work on my projects and further my knowledge. Pierre Raymond, Terra Erosion Control Ltd. (IECA Feb 2006).
- It is a subject we all need to know more about. Too much has been placed on erosion and sediment control caused by water. Chris Amarr, Erosion Solutions Inc. (IECA Feb 2006)
- It was well organized and well run. David put a lot of informative information into one class in a smooth and interesting format. (IECA Feb 2006)
- Dwayne was a very entertaining speaker! (IECA Feb 2006)
- This was a very interesting course with good content (IECA Feb 2006).
Course Summary

Best Management Practices and Regulations Workshop

Date:  Tuesday, Nov 21 – 8:30 am to 4:30 pm
Cost:  $275 + GST
Course#:  4753SP1

Target Audience: This full day workshop is a review of "What's New" and "What's Working" in the practice of erosion and sediment control, especially relevant to Western Canada. The format is informal and designed to encourage discussion and debate. The advanced content is intended primarily as a continuing education opportunity for CPESC members but is also suitable for anyone to upgrade their skills.

Topic 1: Stormwater Basics for Construction Sites- How Minnesota Follows the Rules

Presenter: Dwayne Stenlund, CPESC, Minnesota Department of Transportation

Description: Dwayne will show you innovative and simple alternatives for treating construction site runoff. Learn about integrating sediment pond treatments with other alternatives on construction projects; learn how to protect BMPs and keep them functioning during construction, learn the design of bio-detention cells, learn what should be included in the Storm Water Prevention and Protection Plan (SWPPP) that is required for all major US construction projects including both active and post-construction monitoring. Dwayne's presentation is the full morning. Topics include:

- Minnesota Training Program Development and Implementation Strategies
- Case Example of a Storm Water Prevention and Protection Plan
- Minnesota Erosion Control Practices
- Minnesota Sediment Control Practices
- Inspections and Maintenance

Topic 2: Regulations Review: Federal Fisheries Act Update on Recent Actions

Presenter: Dave Evans, Impact Assessment Officer, Fisheries and Oceans Canada

Description: Dave gave an excellent presentation at our workshop last year and we have asked him back again for an update on recent legal actions taken under the Federal Fisheries Act. Following, we have scheduled a panel discussion with representatives of federal, provincial, and municipal (Edmonton, Calgary) jurisdictions.

Topic 3: Dewatering Technologies for Sediment Control on Construction Sites

Presenter: Dave Travis, CPESC, TR Clearwater Consulting, Calgary

Description: Dave will describe the latest technology to clarify sediment-laden water on construction sites. Learn how to treat stormwater runoff and groundwater to meet water quality standards necessary for discharge into the stormwater system.
Course Summary

Soil Loss Estimation for Construction Sites Using RUSLE 2

Date: Wed, Nov 22 – 8:30 am to 4:30 pm
Cost: $275 + GST
Course#: 4753SP1

Instructors: Geri DeLaMare, PE, CPESC and Dr David G. Walker, PAg, PBiol, CPESC, CPRM

Target Audience: This course is ideal for engineers, hydrologists, landscape architects, agrologists, biologists, ecologists, and planners involved with watershed management, surface mines, pipelines, urban development, recreation development, and restoration of natural landscapes.

Description: Soil-loss estimation is the foundation for design of most erosion-control projects. The best, practical method for estimating soil loss is Version 2 of the Revised Universal Soil Loss Equation (RUSLE 2). This descendent of the Universal Soil Loss Equation is now a MS Windows based computer program that allows the user to quickly and easily simulate the effectiveness of erosion control methods both alone and in combination under various soil, topographic, and climatic conditions. RUSLE 2 is an indispensable tool for designing cost-effective, erosion control systems and demonstrating due diligence to regulators with respect to water quality protection.

RUSLE 2 is an outstanding instructional tool for demonstrating fundamentals of erosion processes and solutions for effective control. Even if you do not use a computer, you will benefit from this course. Ask the instructors to try out your solutions to specific erosion control problems. Planners and regulators will acquire an essential insight into the capabilities of common erosion control methods. RUSLE 2.0 puts the consultant, contractor, and regulator on the same page.

RUSLE 2 Computer Exercise Lab

Date: Thu, Nov 23 – 8:30 am to 4:30 pm
Cost: $275 + GST
Course#: 4753SP1

Instructors: Geri DeLaMare, PE, CPESC and Joe Buchner, CPESC

Description: This second-day follow-up course provides hand-on erosion control design exercises using RUSLE 2. Computers will be provided in a computer lab or bring your own laptop (Because of limited time, participants should have good basic skills with their computer operating systems: WIN 2000, WIN XP) and installing software.

You will receive a copy of the RUSLE 2.0 User’s Manual and program software on a CD-ROM. You will learn how to use RUSLE 2.0 for project design, where to obtain free updates, where to find free government databases, and where to find RUSLE 2.0 support. You will gain valuable experience with RUSLE 2.0 by working through several common erosion-control scenarios under the guidance of the instructors. Then work through your own case studies with help from the instructors.
Course Summary

CPESC Exam Preparation Course, Canadian Metric Version

Cost: $275 + GST (includes on-site cost of exam the following day)
Course#: 4754SP1
Instructor: Dr. David Walker, CPESC

Description: This one-day course is a review of the information and concepts covered in the examinations for the designation of Certified Professional in Erosion and Sediment Control. It has been modified for Canadian conditions and metric units and provides an overview of basic rules and regulations, discusses common erosion and sediment control practices, and reviews typical exam problems. The exam is offered the next day. You must be pre-approved to write the exam. See www.cpesc.org for an application form and guidance.

Without prior experience and/or training in erosion and sediment control, this one-day preparation course DOES NOT provide enough training for most individuals to pass the exam. The course does provide an excellent study guide for those beginning the process of becoming certified and provides an excellent, quick review for those individuals who feel ready to write.

- Regulations: Canadian erosion and sediment control regulations; ethics; code of practice;
- Site Planning: Low Impact Designs, ESC Construction Plan, ESC Plan Implementation
- Erosion Prediction: Soil Loss Factors, Revised Universal Soil Loss Equation
- Runoff Prediction: Hydrologic Cycle; SCS Runoff Equation; Runoff Control Methods
- Erosion Control: Vegetation; Ground Covers; Buffers and Infiltration Methods
- Sediment Control: Management Practices; Sediment Capture Practices; Treatment Practices

CPESC Exam

Cost: no charge with course #4754SP1, Exam Preparation, otherwise $50 + GST
Candidates must be pre-approved by CPESC Inc. to write; see www.cpesc.net
Course#: 4755SP1
Proctor: Dr. David Walker, CPESC

Description: The exam typically takes 4-6 hours. Exam rules, recently modified, are as follows:

- Exams will only be proctored at sponsored exam sites. For an exception due to hardship or extenuating circumstances, send a request in writing to the CPESC, Inc. Executive Director.
- The following are eligible to proctor the exam: Approved Instructors, Area Representatives, Regional Representatives, CPESC Council Members, and CPESC Staff Members approved by the Chair of the Council Executive Committee.
- The following are required for the exam: letter of exam authorization, photo identification, clear straight edge ruler, pencils, eraser, and if desired, a non-alcoholic drink refreshment.
- Only approved calculators are allowed: see the National Council of Examiners for Engineering and Surveying (NCEES) at http://www.ncees.org/exams/calculators/
  - Hewlett Packard– HP 30S, HP 33s, HP 9s; Casio– FX 115 ES, FX 115 MS, FX 115 MS Plus (same models with -SR); Texas Instruments– TI 30XA, TI 30X IIS, TI 30X IIB, TI 36X Solar
- The following are NOT allowed in the exam room: cell phones, Personal Digital Assistants (PDAs), portable computers, cameras, audio recording and audio listening devices, other similar electronic devices, books and paper of any kind.
- The following are provided to each person and must be returned to the proctor whether or not you finish the exam: book of exam questions, resource book with equations, conversion factors, constant values (do not mark in these items), and an answer sheet.
- Ample scrap paper will be provided for drafting answers; ALL paper must be returned to the proctor whether or not you finish the exam.
- Health breaks are allowed, one examinee at a time. ALL exam material must be left with the proctor during the break.
Instructor Biographies

**Dr. David G. Walker, PAg, PBiol, CPESC, CPRM**
Dr. David G. Walker specializes in land reclamation as a researcher, instructor, consultant, and Adjunct Associate Professor, Faculty of Environmental Design, University of Calgary. He is a Professional Agrologist (PAg), Professional Biologist (PBiol), Certified Professional in Erosion and Sediment Control (CPESC), and Certified Professional in Rangeland Management (CPRM). With more than 25 years experience in western and northern Canada and parts of the USA, he has consulted to all levels of government, national and provincial parks, oil and gas industry, electrical power industry, ski industry, and non-governmental environmental organizations. Dr. Walker has over 30 years teaching experience at the university level in graduate and undergraduate programs and at the technical level in professional development programs.

**Dwayne Stenlund, MSc, CPESC, CPRM**
Dwayne Stenlund works in the Erosion Control Engineering Unit of Minnesota Department of Transportation. Dwayne is a certified professional in erosion and sediment control and certified professional in rangeland management. He has worked for the Minnesota Department of Transportation for nine years and is responsible for design, construction and maintenance of erosion control measures using old and new eco-technologies to solve difficult problems. He has a graduate degree in plant biology from the University of Minnesota and has extensive experience in bioremediation of poor quality soils and in naturalizing plant community systems. He is active with the Minnesota Erosion Control Association (MECA) and the Northern Plains Chapter of the International Erosion Control Association (IECA).

**Dave Travis, RET, CPESC**
Dave Travis is a Registered Engineering Technologist and Certified Professional in Erosion and Sediment Control. He has 30 years experience in Civil Engineering, Land Development, Environmental, and Erosion and Sediment Control. He brings a broad experience as a regulator, educator, and consultant. Dave is retired from the City of Calgary after 25 years service and is now consulting to industrial clients as TR Clearwater Consulting out of Calgary.

**Geri De La Mare, PE, CPESC**
Geri is a Development Engineer with the City of Calgary specializing in stormwater management, ponds and wetlands. She is involved with Calgary’s initiative towards improving erosion and sediment control including education and inspection. Geri holds a B.Sc. in civil engineering and holds professional registrations with APEGGA and CPESC.

**Joe Buchner, CPESC**
Joe Buchner is a Certified Professional in Erosion and Sediment Control. Joe has over 25 years experience in the urban construction industry in Calgary. For the past 5 years, he has consulted to urban developers through his company, Alberta Erosion Control Ltd. The company provides a full spectrum of erosion and sediment control professional services that include pre-construction site assessments, plan designs, risk analysis, BMP inspection, and solving compliance issues with sub-trades.