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8th Annual CDOT Winter Environmental Conference
Best Environmental Management Practices

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Date: February 27th – 28th, 2008

Location: Denver PPA <http://www.dppa.com/EventCenter/Default.htm>

Day 1: February 26				
(SEPARATE REGISTRATION REQUIRED FOR COURSES. SEE BELOW)				
Time	Aspen	Blue Spruce	Evergreen 1	Evergreen 2
7:00 – 8:00	Registration			
8:00 – 12:00	Course 1 CSS	Course 2 Permits	Course 3 Stormwater Design and Permit Rationale	ECS Class Part I
12:00 – 1:00	Lunch			
1:00 – 5:00	Course 4 Review of APL Process and Form 595 (Vendors only)	Course 5 NEPA (this course is full)	Course 6 Stream Restoration	ECS Class Part II

Day 2: February 27				
Time	Aspen	Blue Spruce	Evergreen 1	Evergreen 2
7:00 -8:45	Vendor Set-up	Registration/Breakfast		
8:50 – 10:20		Opening Address: Jennifer Finch Keynote Address: Jeanne Erickson (Transportation Commissioner) Plenary Session: Governors Climate Change Action Plan		
10:20 – 10:30		Break		
10:30 – 12:00		Session 1 NEPA Streamlining	Session 2 Section 106 BMPs	Session 3 (By invitation only)

		Initiatives	
12:00 – 1:00	Vendors	Lunch	
1:00 – 2:30		Session 4 NEPA Streamlining Initiatives	Session 5 Drainage BMPs
2:30 – 2:40		Break	
2:40 – 4:10		Session 7 Illicit Discharges and Mag. Chloride and the Environment	Session 8 BMPs for Sustainable Infrastructure
		Session 6 (By invitation only)	Session 9 Water Quality Ponds and Vaults
4:10 – 5:30		Day 2 Closeout, Set-up for Day 3	

Day 3: February 28					
Time	Aspen	Blue Spruce	Evergreen 1	Evergreen 2	
7:00 -8:45	Vendors	Registration/Breakfast			
8:50 – 10:20		Session 10 High Performance Erosion Control BMPs	Session 11 Wildlife Mitigation Practices	ECS Class Part I	
10:20 – 10:30		Break			
10:30 – 12:00		Session 12 Landscape BMPs	Session 13 AQ BMPs		
12:00 – 1:00		Lunch			
1:00 – 2:30		Session 14 Types and Maintenance of WQ BMPs	Session 15 CDOT Research BMPs	ECS Class Part II	
2:30 – 2:40		Break			
2:40 – 4:10		Session 16 4(f) BMPs	Session 17 Noise BMPs		
4:10 – 5:30		Vendor Take-down	Clean-up and Close-out		

DAY 1: FEBRUARY 26, 2008 COURSES

Course 1: Context Sensitive Solutions

CDOT Staff, please register through SAP. All others, please contact Yates Oppermann at (303) 757-9497 to register.

This course is an introduction to the basic elements and principles of Context Sensitive Solutions. This course provides participants with the tools to apply Context Sensitive Solutions to daily work functions. Course objectives include the following:

- Identify the balanced components of Context Sensitive Solutions.

- List the primary elements of Context Sensitive Solutions.
- Identify project stakeholders and their roles.
- Explain how to put together a multi-disciplinary team and identify its role.
- Identify individual roles in the successful implementation of Context Sensitive Solutions.

Course 2: Permits

CDOT Staff, please register through SAP. All others, please contact Becky Sturgeon at (303) 757 -9788 to register.

Discuss common permits needed by CDOT projects including: Construction Stormwater, Construction Dewatering, Infiltration, 404, 401, Wildlife take, and SB-40 requirements.

Course 3: Stormwater Design and Permit Rationale

Please contact Mike Banovich at (303)757-9542 to register.

Presenters: Matt Czahor, CDPHE; Mike Banovich, CDOT Landscape Architect Program; Joe Crea, URS Corp. WQ Specialist; and Paul Nikoli, Parsons RLA

This class will focus on the Construction Permit Rationale and objectives of the permit. Previous emphasis has been related to how CDOT maintains compliance. The permit rationale provides definitions and the intent of the SCP. Learning objectives will provide project managers, RECAT mentors and managers with a better understanding of the CDPS General Permit: Stormwater Discharges Associated with Construction Activity and how to review SWMPs.

Course 4: Review of APL Process and Form 595 (Vendors only)

Please contact Mike Banovich at (303)757-9542 to register

Vendor open house to review and or submit form 595. Experts available to review forms and products and present overview of APL process.

Course 5: NEPA

THIS COURSE IS FULL.

Presenter: Lee Dong, NEPA Specialist, CDOT EPB

Overview of the National Environmental Policy Act—a broad-brush look at NEPA requirements and how those requirements affect transportation projects from design through to maintenance and operations, as well as how they affect engineers through contractors. The presentation will also include an introduction to CDOT's Environmental Stewardship Guide.

Course 6: Stream Restoration

Please contact Jeff Peterson at (303)512-4959 to register.

Matt Kondratieff is an Aquatic Wildlife Researcher for the Colorado Division of Wildlife. Recently he and CDOT have been discussing the possibility of working together to provide each other with mutually beneficial assistance. This system would involve the use of CDOT "spoil" including large rocks and trees in CDOW stream restoration projects. This would decrease cost to CDOT in transportation savings as the spoil would not have to be carried large distances. It would also provide valuable material to CDOW to assist in creating varied and effective fisheries in Colorado streams. Matt's presentation will show what materials he uses when restoring a stream, how that material is used, the effects his restoration efforts have on fish and wildlife and suggest ways CDOT could be a proactive partner in the development of these stream habitats.

The first hour and a half of the stream restoration session will include a demonstration and a presentation by Carl Chambers, a hydrologist with the USFS Arapaho and Roosevelt National Forest. The demonstration will take place behind the PPA in the north parking lot. Mr. Chambers will demonstrate using a riparian trailer how flows within different stream configurations are affected by erosion and sediment deposition. The trailer will offer participants an interactive visual. At approximately 1:30 Mr. Chambers will present information regarding stream classification while touching upon many aspects of stream conditions and how they relate to restoration efforts.

DAY 2: FEBRUARY 27, 2008 SESSIONS

Session 1: NEPA Streamlining Initiatives Part I

- Lessons Learned in Implementing SAFETEA-LU 6002 - Gina McAfee, Principal, Jacobs Carter Burgess, and Jim Clarke, Senior Project Manager, Jacobs Carter Burgess
- Good Project Management Practices - Carol Parr, CDOT Region 4 Environmental Manager, and Joanna Morsicato, Stantec
- Streamlining Pilot Project - Skip Spensley, Spensley & Associates

Session 2: Section 106 BMPs

CDOT's HQ senior historian and the Section 106 compliance officer from the SHPO will discuss best practices for the 106 clearance processes and emerging issues in historic clearances including historic districts and linear resources.

Session 3: By invitation only.

Session 4: NEPA Streamlining Initiatives Part II

- CDOT EPB NEPA Program Update - Tracey MacDonald, CDOT EPB NEPA Program Manager
- SCAN Tour Panel discussion – Kerrie Neet, CDOT Region 5 Planning and Environmental Manager, Sandi Kohrs, CDOT Intermodal Planning Branch Manager, Dave Watt, CDOT Region 2 Engineer, and Bill Scheuerman, CDOT Region 1 Project Engineer

Session 5: Drainage BMPs

Mr Mommandi, CDOT Senior Hydraulic Engineer will present project development from scope to operation of permanent BMPs. He will also discuss academic, design, construction and development of permanent settlement basins.

Session 6: By invitation only.**Session 7: Illicit Discharges - an MS4 Issue**

An illicit discharge is a release of non-stormwater material into a stormsewer via a pipe or other direct connection. This presentation will discuss the basics of illicit discharges. Including, types of discharges, what to look for in the field, how to report an illicit discharge and the steps CDOT takes in elimination. By educating CDOT employees about illicit discharges, CDOT will not only fulfill permit requirements, but the frequency and severity of illicit discharges may be reduced.

Magnesium Chloride (MgCl) and the Environment

This presentation will provide information about how MgCl and other deicers use affects water quality, wildlife and vegetation. Proper application rates, improper application and inappropriate use can severely affect deicer effectiveness. This discussion will be useful for those that deal with deicers or for those with questions about their use.

Session 8: BMPs for Sustainable Infrastructure

This session will review current and emerging practices for the use of recycled and sustainable products in highway and urban project construction. Topics will include use of high-performance concrete using recycled materials, a life-cycle analysis method for computing greenhouse gas footprints incorporating transportation fuels and materials, and recycling and reuse opportunities on CDOT highway projects.

Session 9: WQ Ponds and Vaults

Presenters: Successful WQ Pond Design by Andrew Earles of Wright Water Engineers, Inc.; Water Quality Vaults by Duane Herring of Contech: Types of Vaults and Performance.

These presentations will focus on establishing performance criteria based on particle size or effluent concentration and choosing the best technology for specific project applications.

DAY 3: FEBRARY 28, 2008 SESSIONS**Session 10: High Performance Erosion Control BMPs**

Part I -Recent Advances in Hydraulically Applied Erosion Control Technologies by Frank J. Lauro, PE, CPESC

A new class of hydraulic mulches has been accepted by manufactures, specifiers, and contractors. This new class is referred to as a fiber reinforced matrix (FRB) by the Erosion Control Technology

Council (ECTC) and is recognized as the highest level of performance in hydraulic mulches. Many State Departments of Transportation (DOT) have recognized the cost, safety, production, and feasibility benefits of using this technology to control erosion and promote vegetative establishment. The purpose of this presentation is to discuss and quantify what those benefits are in relation to erosion control technologies commonly used in the State of Colorado. Multiple Colorado DOT projects will be used to illustrate these benefits, along with what other state DOT's have done.

Part II -Turf Reinforcement Mats by Todd Croke, Nilex.

Erosion Control Blankets and Turf Reinforcement Mats as a Wildlife-Friendly Means of Controlling Soil Erosion

High performance erosion control blankets and turf reinforcement mats offer high performance, cost effective, vegetated solutions for controlling soil erosion in disturbed areas. Fully biodegradable erosion control blankets with natural fiber nets reduce the risk of wildlife entanglement while controlling erosion and allowing for vegetation establishment. Turf reinforcement mats offer a replacement for hard armored channels and will remain permanently to reinforce vegetation.

Part III -PAMs Polyacrylamides by Andy Iturriria

Terra Novo Inc will be discussed as used in fiber matrix products and as soil treatment/erosion control.

Session 11: Wildlife Mitigation Practices

Presenters: Jessica Myklebust, Laura Archerd, and Keith Hidalgo from Felsburg Holt & Ullevig

As the Colorado population continues to grow, the need for new and improved transportation facilities increases. In turn, the requirement for best management practices (BMPs) to mitigate for or offset adverse impacts to wildlife species and their habitat continues to expand. BMPs for wildlife and habitat impacts from transportation facilities require innovative, yet cost-effective and practical ideas.

This presentation describes three cases in which unique BMPs were implemented to attempt to offset wildlife and habitat impacts from transportation in rural and urban areas. Each case required evaluation both for cost and effectiveness to assure that the best BMP was selected. Each case study will be supplemented with photos. The audience will learn about ways to identify the need for, evaluate, and implement cost effective wildlife BMPs, based on the three case studies.

Case #1 – US 550 Mile Post 2.75 to County Road 220 – The US 550 project offers insight to how NEPA can be utilized early in project conception to include BMPs for wildlife movement across major highways. Preliminary crossing locations for small and medium-sized mammals have now been identified throughout the corridor and have been incorporated into preliminary design plans. The presentation will discuss the process utilized to identify preliminary locations and the required collaboration between engineers, water scientists, GIS users, and environmental scientists.

Case #2 – State Highway 2/ 104th Avenue – The SH 2/104th Avenue project limits extend over the top of a concrete box culvert covering an irrigation canal. Numerous migratory swallow nests located within the CBC had to be removed prior to construction activities. The presentation will discuss methodologies used to remove existing nests and permanent mitigation measures installed

to keep swallows from migrating back and reestablishing nests within the CBC.

Case #3 – Migratory birds, reptiles (snakes), and prairie dogs present in other project areas have required special consideration and BMPs to mitigate or offset impacts from transportation projects. Other BMP cases of nest replacement and passive prairie dog location will be presented. The impact to wildlife from BMPs will also be discussed.

Session 12: Landscaping BMPs

Landscaping BMPs Kevin Shanks THK Senior Landscape Architect will present aesthetic master corridor guidelines and contextual analysis for environmental studies. I-25 Corridor in Pueblo will be the case study.

Session 13: Air Quality BMPs

Jeff Houk (FHWA) will discuss the level and type of data need to analyze mobile source air toxics (MSATs), particulate matter, and energy usage. He'll also likely touch on greenhouse gas emissions.

Jill Schlaefer (Jacobs C&B) will discuss how the EMIT (Easy Mobile Inventory Tool) model was used in the I-25 EIS -- Jeff will likely chime in, too.

Lisa Silva (CDPHE APCD) - will discuss the programmatic agreement on unregulated emissions (e.g., MSATs, CO2, etc.) that CDOT, CDPHE, EPA, and FHWA are developing.

Session 14: Types and Maintenance of Water Quality BMPs

Bowman Construction Supplies will present on maintenance strategies and erosion control benefits of stabilization.

Session 15: CDOT Research BMPs

This session is intended for organizations interested in working on CDOT research projects. It will provide an overview of CDOT's research program, how to apply for CDOT research projects, requirements for reporting and invoicing during the research project, and expectations of final research deliverables. A summary of on-going environmental research projects will be given as well.

Session 16: Section 4(f) BMPs

This class will involve a hands-on walk through of a 4(f) case study looking at how to identify 4(f) resources, definition of use, evaluate alternatives under the prudent and feasible standard, least harm and measures to minimize harm.

Session 17: Noise BMPs

This session will review current noise requirements and new developments in noise mitigation at CDOT.

Erosion Control for Supervisors:

CDOT Staff, please register through SAP. All others, please contact Becky Sturgeon at (303) 757-9788 to register.

The course covers legal requirements, permitting requirements, MS4 requirements, 107.25 and 208 specifications, inspection requirements, best management practices (BMPs) selection, application, and maintenance, materials handling, temporary and permanent stabilization, and compliance ensuring strategies such as the 208 disincentive. The goal of the interactive class is to support and assist the Project Engineer with ensuring contractor compliance.

