



# Altitude Training Associates, LLC

[www.altitudeta.com](http://www.altitudeta.com)

## Stormwater & Water Quality Training Programs for Colorado

**WINTER/SPRING 2018**

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## CLASS LISTING

<b>#</b>	<b>Course</b>	<b>Length</b>
CETC 150	Stormwater Management & Erosion Control During Construction (SMEC)	1 day with and optional ½ day field trip
CETC 145	SWMP Administrator Certification Colorado <i>(prerequisite applies)</i>	2 Days
CETC 154	Construction Dewatering Operations	½ Day
CETC 157	BMPs for Working in Waterways	½ Day
NA	Grading & Erosion Control (GEC) (City of Colorado Springs)	1 Day
NA	Computer Based Techniques for SWMP Administrators <i>(prerequisite applies)</i>	1 Day

## CLASS SCHEDULE WINTER & SPRING 2018

<b>Date(s)</b>	<b>Course</b>	<b>Sponsor</b>
January 24, 2018	<b>Grand Junction</b> Stormwater Management & Erosion Control Construction	521 Drainage Authority (970) 263-7401
February 1 & 2, 2018	<b>Lakewood</b> Stormwater Management & Erosion Control During Construction	Red Rocks Community College Lakewood, CO (800) 933-8394
March 8 & 9, 2018	<b>Lakewood</b> Stormwater Management & Erosion Control During Construction	Red Rocks Community College Lakewood, CO (800) 933-8394
March 15 & 16, 2018	<b>Lakewood</b> Certified Stormwater Management Plan Administrator (SWMP Admin)	Red Rocks Community College Lakewood, CO (800) 933-8394
April 5 & 6, 2018	<b>Lakewood</b> Stormwater Management & Erosion Control (SMEC) During Construction	Red Rocks Community College Lakewood, CO (800) 933-8394

<i>Date(s)</i>	<i>Course</i>	<i>Sponsor</i>
April 3, 2018	<b>Colorado Springs</b> Grading & Erosion Control	City of Colorado Springs
April 4 & 5, 2018	<b>Colorado Springs</b> Stormwater Management Plans (SWMP)	City of Colorado Springs
April 24, 2018	<b>Durango</b> Stormwater Management & Erosion Control (SMEC) During Construction	City of Durango (970) 375-4810 Jaclyn.cox@durango.gov.org
April 25 & 26, 2018	<b>Durango</b> Stormwater Management & Erosion Control (SMEC) During Construction	City of Durango (970) 375-4810 Jaclyn.cox@durango.gov.org
May 10 & 11, 2018	<b>Lakewood</b> Stormwater Management & Erosion Control (SMEC) During Construction	Red Rocks Community College Lakewood, CO (800) 933-8394

## **COURSE INFORMATION**

### **COURSE DESCRIPTION – One Day Course for Stormwater Management & Erosion Control (SMEC) During Construction**

This one day course is an introductory course for the proper selection, installation, maintenance and inspection of Best Management Practices (BMPs) for the control of stormwater run-off, pollutants, erosion and sedimentation at construction sites. This class is known as CETC 150 at Red Rocks Community College.

*NOTE: Some sponsors like RRCC offer a second day, ½-day field trip to a construction site.*

The program covers:

- The Stormwater Program legal requirements including permitting and Stormwater Management Plans (SWMP).
- Erosion and Sedimentation at construction sites.
- Types of Best Management Practices (BMPs) for specific situations to control erosion and sedimentation.
- Installing construction site BMPs.
- Inspecting and maintaining construction site BMPs.

### **PREREQUISITE**

There is no prerequisite for this class. This course is an entry-level course and is the first class in a series (see the other programs). This class serves as the prerequisite for the Certified SWMP Administrator.

### **LEARNING OBJECTIVES**

Upon completion of this class, you will be able to:

- List the permit requirements under the stormwater program.
- Describe the impacts to water quality caused by erosion and sedimentation.
- Describe the installation and maintenance requirements for BMPs used during construction.
- Pass a 25 question test with a score of 72% or better.

### **INSTRUCTOR**

Scott Olson, Altitude Training Associates, LLC

## TOPICAL OUTLINE

*Note: 10 minute breaks will be hourly. All times are approximate.*

<i>Module</i>	<i>Time</i>	<i>Topic</i>
<b>Module 1 –</b> Introduction Regulatory Requirements	1.5 Hours	Participant and Course Introduction Learning Objectives Regulatory Program & Permit Requirements Stormwater Management Plans (SWMP)
<b>Module 2 –</b> The Erosion Process	.5 Hour	The Erosion Process & Objectives for Erosion Control
<b>Module 3 –</b> Best Management Practices for Erosion Control	1.5 Hour	Types of BMP's for <u>Erosion</u> Control including Planning, Scheduling, Phasing Administrative BMPs, Grading Techniques, and Vegetative Cover, Rolled Erosion Control Products
<b>LUNCH</b>	<b>One Hour</b>	
<b>Module 3 –</b> continued Best Management Practices for Erosion Control	.5 Hour	Diversions, Slope Drains Outlet Protection, Check Dams Site Controls: Vehicle Tracking Control,
<b>Module 4 –</b> Introduction Best Management Practices for Sediment Removal	One Hour	Types of BMPs for <u>Sediment</u> Removal and Sediment Barriers Silt Fence, Straw Bales & Wattles Inlet Protection
<b>Module 4 –</b> continued Best Management Practices for Sediment Barriers & Removal	One Hour	Sediment Traps, Sediment Basins and Permanent Ponds
<b>Module 5 –</b> Materials Handling	.5 Hour	BMPs for Materials Handling, Waste and Equipment Management
Test	.5 Hour	Course Test and wrap up of the program

## **COURSE DESCRIPTION – Half Day Course on Construction Dewatering**

This ½-day training course has been developed by Altitude Training Associates in conjunction with the Colorado Department of Public Health and Environment-Water Quality Control Division (CDPHE-WQCD) as guidance for personnel that may be involved in construction dewatering operations. These dewatering operations include the methods and practices implemented to remove groundwater accumulations from excavations and managing discharges so they will not have a negative impact on water quality. The focus of the course is on how to engage in these activities, and complete the required record-keeping, in a manner that is compliant with the CDPHE-WQCD Colorado Discharge Permitting System (CDPS) *General Permit for Construction Dewatering Activities* permitting conditions. This class is known as CETC 154 at Red Rocks Community College.

## **LEARNING OBJECTIVES**

Upon completion of this course, participants should be able to:

- List what activities require a CDPS *General Permit For Construction Dewatering Activities*
- List the Permitting requirements
- Describe the procedures for filing for Permit coverage
- Compare and contrast the differences between a permitted discharge and a non-permitted land application
- Detail the fundamentals of an adequate plan for conducting dewatering
- List a variety of compliant dewatering and treatment methods
- Implement inspection procedures for monitoring dewatering operation effectiveness and compliance
- Describe the procedures for taking samples of discharges
- Complete the Discharge Monitoring Report (DMR) form

## **PREREQUISITES**

There are no prerequisites for this course.

## **INSTRUCTORS**

Scott Olson, Altitude Training Associates, LLC  
Maura McGovern, Colorado Department of Public Health & Environment

## TOPICAL OUTLINE

*Note: 10 minute breaks will be hourly*

<i>Module</i>	<i>Time</i>	<i>Topic</i>
<b>Module 1</b> - Introduction - Regulatory Requirements	1½ Hours	Participant and Course Introduction Learning Objectives Regulatory Program and Permit Requirements
<b>Module 2</b> Dewatering Methods for Land Applications	½ Hour	Procedures for Avoiding Off-site Discharges During Dewatering
<b>Module 3</b> Dewatering Methods for Off-site Discharges	¾ Hour	Best Management Practices for Permit Compliance - Review of Various Pumping and Treatment Methods
<b>Module 4</b> - Dewatering Management Plans - Operations Monitoring - Sampling and Report Preparation	¾ Hour	Developing a Plan to Direct Operations and Procedures. Inspecting the Dewatering Operation and Activities. Taking Samples and Filling out the <i>Discharge Monitoring Report</i> for Submittal

## **COURSE DESCRIPTION – Half Day Course on BMPs for Working In Waterways**

This course addresses primarily work in and adjacent to waterways. It is designed to provide local inspectors, SWMP designers, consultants, state inspectors, and contractors with a common basis of how to achieve effective construction management for these projects. Because the class is designed to create consistency in the evaluation of Best Management Practices (BMPs), any party involved in the design, installation, maintenance or inspection of these BMPs will benefit by attending it.

### **COURSE DESCRIPTION**

Construction activities performed in waterways may impact water quality and therefore Best Management Practices (BMPs) are necessary to minimize these impacts. This course will provide detailed information about the design, installation, maintenance and inspection of BMPs that may be used to prevent or control erosion and sedimentation during construction activities in waterways.

### **LEARNING OBJECTIVES**

Upon completion of the program, participants will be able to:

- Evaluate waterway characteristics
- Evaluate design considerations for BMPs used in waterways.
- Select BMPs for construction activities performed in waterways.
- Describe the installation and maintenance requirements for erosion and sediment control BMPs.
- Describe the BMP inspection requirements.

### **PREREQUISITES**

There are no prerequisites for this course.

### **INSTRUCTOR**

Scott Olson, Altitude Training Associates, LLC



## TOPICAL OUTLINE

*Note: 10 minute breaks will be hourly*

<i>Module</i>	<i>Time</i>
Introduction to Course Course Outline Learning Objectives	0.5 Hour
<b>Module 1</b>	
Regulatory Review and Permitting Requirements (Army Corps and WQCD)	1 Hour
<b>Module 2</b>	
Planning (SWMPs) Design Considerations for BMPs Stream Health and Evolution	0.5 Hour
<b>Module 3</b>	
Selecting BMPs to Control Erosion & Sedimentation Grading Controls, Stabilization Diversions, Stream Crossings	2 Hours

## **COURSE DESCRIPTION – One day program**

***This is a computer based class. The tablets and software for the class will be provided for in class use.***

*There are powerful, time saving PDF editing software programs and other hardware and software tools you can use to simplify and improve your program to protect water quality!* For example, Bluebeam® software products are already commonly used for manipulating construction plans as the industry moves to computer stations on site for plan review. This course is designed for SWMP Administrators conducting inspections and updating the SWMP but if you are a preparer, you can use these techniques to prepare a dynamic plan with features to make it easier to implement and manipulate. Learn how you can integrate your ongoing inspection and maintenance program into your SWMP creating a dynamic, easy to access, complete program. This class will teach you how to create a map centric system, pollutant- based that easily connects your program elements while simplifying tasks such as updating the plan and documenting an inspection.

## **PREREQUISITES**

**You must be a certified SWMP Administrator.** It will be very helpful if you have some computer skills such as navigating through Windows 10. If you have some PDF editing experience such as Adobe Pro, that is even better. However, this is an entry level class so come prepared to use a tablet and software programs!

## **LEARNING OBJECTIVES**

- Identify hardware and software tools for storm water management and describe how they can be used to establish a map centric program.
- Navigate a tablet, a PDF document, PDF editing software program and Gantt chart.
- Create PDF documents that are structured and searchable.
- Develop a map centric SWPPP while producing hyperlinks and file attachments to produce a complete SWPPP.
- Use PDF editing software to update and revise a SWPPP.
- Update the SWPPP map and BMP installation details with custom built tools that are to scale.
- Using features in Bluebeam® Revu, create a single step inspection record and maintenance log using a tablet.

## **INSTRUCTOR**

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**TOPICAL OUTLINE**

*Note: 10 minute breaks will be hourly. All times are approximate.*

<i>Module</i>	<i>Time</i>	<i>Topic</i>
<b>Module 1</b> – Introduction	1.5 Hrs.	Participant and Course Introductions Course Learning Objectives Intro to Hardware & Software Orientation to the tablet
<b>Module 2</b> – Software Programs for SWPPP Administrators	1 Hr.	Software programs for Storm Water Management & Water Quality Protection Key functions of PDF editing (Bluebeam®) software, Gantt Charts, Project Management tools Establishing a Map Centric, Pollutant Based Storm Water Program
<b>Module 3</b> – Gantt Charts and Bluebeam® Revu	2 Hrs.	Demonstrating Phasing using Gantt Charts and Bluebeam® Revu. Using Bluebeam® Revu to prepare, update and revise your SWPPP and organize your documents supporting the map.
<b>LUNCH</b>	<b>One Hour</b>	
<b>Module 3</b> – Gantt Charts and Bluebeam® Revu <b>Continued</b>		<b>Continued</b> Using Bluebeam® Revu to prepare, update and revise your SWPPP and organize your documents supporting the map.
<b>Module 4</b> – Developing an Inspection & Maintenance Program	2 Hrs.	Using Bluebeam® Revu to establish an inspection and maintenance program.