

State of Hawaii Department of Transportation
Erosion and Sediment Control for Highways Workshop
COURSE OUTLINE

Module 1: Introduction

- a. Background
- b. Statewide Storm Water Management Program (SSWMP)
- c. Purpose and Expectations of the workshop
- d. Agenda

Module 2: Regulatory Requirements

- a. National Pollutant Discharge Elimination System (NPDES) permit
- b. Hawaii State Department of Health's water quality standards pertaining to the Islands of Oahu, Hawaii, Maui, and Kauai
- c. Special requirements for all projects that discharge, directly or indirectly, into Class I or Class AA waters
- d. Current City and County of Honolulu (CCH) requirements – Criteria based on project category 1 through 5
- e. Current Hawaii DOT requirements – slope criteria and checklist
- f. Revised Hawaii DOT requirements

Module 3: Erosion and Sediment Control (ESC)

Process

- a. Sediment Impacts
- b. Factors that influence soil erosion
- c. Basic principles of soil erosion and sediment control

Module 4: Overview and Development of ESC Plan

- a. Development of erosion control plans
- b. Requirements of erosion control plan:
- c. Planning procedures
- d. Soil erosion and sediment control plan content
- e. Sources of assistance
- f. Available information
- g. Standards and specifications

Module 5: Erosion Control and Stabilization Methods

- a. Plastic/geotextile covering, erosion control matting
- b. Dust control
- c. Vegetative stabilization: Top soils, seeding and mulching
- d. Stabilized construction entrance
- e. Gradient terraces or benches
- f. Earth dikes
- g. Tree protection
- h. Slope length shortening
- i. Track walking
- j. Run-on diversion

Module 6: Sediment Control and Containment

Methods

- a. Storm drain inlet protection
- b. Outfall protection
- c. Filter berm/compost filter berm
- d. Grassed swale
- e. Silt fence or filter fabric fence
- f. Check dams
- g. Sediment trap
- h. Sediment basin/modified risers and skimmers
- i. Level spreader
- j. Containment dike
- k. Interceptor dikes and swales
- l. Pipe slope drain
- m. Vegetated filter strips and buffers
- n. Rip-rap inflow and outlet protection

Module 7: Design/Construction Issues and

Considerations

- a. Phasing of site grading
- b. Construction sequence
- c. Water handling
- d. Proper installation and Maintenance

Module 8: Inspection and Monitoring Requirements

- a. Inspection checklist
- b. Correction
- c. Non-Compliance
- d. Evaluation of erosion and sediment control effectiveness

Module 9: Case Studies or Exercise

- a. Soil loss calculation
- b. Design calculations
- c. BMP sizing calculation