



Lessons from the Field: Effective BMP Installation and Maintenance

Guam Stormwater Workshop
July 29, 2011



Session Objectives

- Discuss proven practices for temporary BMP design, implementation, and maintenance
- Provide examples of adequate and inadequate structural and non-structural BMPs

Effective BMP Installation and Maintenance

What Does an Effective BMP Do?

- Contain Potential Pollutants on Your Project Site
- Minimize Soil Erosion to Prevent Degradation of Water Quality
- Effective BMPs Minimize the Need for Corrective Actions During Maintenance Operations

Effective BMP Installation and Maintenance

Structural BMPs

- Typical Structural BMPs may include:
 - Check Dam
 - Diversion Dike/Swale
 - Level Spreader
 - Perimeter Dike/Swale
 - Sediment Basin
 - Sediment Trap
 - Silt Fence
 - Stabilized Construction Entrance/Exit
 - Storm Drainage Inlet Protection
 - Turbidity Curtain

Non-Structural BMPs

- Typical Non-Structural BMPs may include:
 - Stabilization with Vegetation
 - Mulch
 - Topsoil
 - Use of Procedural Practices to Minimize Exposure of Potential Pollutant Materials
 - Education

Effective BMP Installation and Maintenance

Typical Problem Areas:

- Improper Selection of BMPs
- Improper Installation of BMPs
- BMPs Not Adequately Maintained
- BMPs No Longer Necessary Should Be Removed

Effective BMP Installation and Maintenance

Structural BMPs



Ineffective BMP Installation and Maintenance



Effective BMP Installation and Maintenance



Ineffective BMP Installation and Maintenance



Effective BMP Installation and Maintenance



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Ineffective BMP Installation and Maintenance



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Effective BMP Installation and Maintenance

Non-Structural BMPs

- Typical Non-Structural BMPs may include:

- Stabilization with Vegetation
- Preserve Existing Vegetation
- Mulch
- Topsoil
- Use of Procedural Practices to Minimize Exposure of Potential Pollutant Materials



Commonly Overlooked Stormwater Management Considerations Secondary Containment



Commonly Overlooked Stormwater Management Considerations Overhead Coverage and Exposure to Precipitation



Commonly Overlooked Stormwater Management Considerations
Stockpile Management



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Stockpile Management



Commonly Overlooked Stormwater Management Considerations

Concrete Waste Management



Commonly Overlooked Stormwater Management Considerations

Sanitary Waste Facilities



Effective BMP Installation and Maintenance

Vehicle Washing



Commonly Overlooked Stormwater Management Considerations

Vehicle Maintenance and Fueling



Commonly Overlooked Stormwater Management Considerations
Spill Prevention, Response, and Cleanup



Commonly Overlooked Stormwater Management Considerations
Good Housekeeping



Summary Points

- Proper **Selection, Installation, and Maintenance** of BMPs will Prevent and Minimize the Discharge of Pollutants from Construction Sites; and
- Minimize or Prevent Violations and Enforcement Actions
- Remember, the Primary Purpose of Erosion and Sediment Controls is to Protect Surface Waters
- Preservation of Natural Areas, Waterbodies, and Open Space has Numerous Economic, Aesthetic, Community, and Environmental Benefits

Resources

- **CNMI and Guam Storm Water Manual Volumes I and II**
<http://www.deq.gov.mp/article.aspx?secID=6&artID=55>
- **DPW Storm Water Program and TSDM Manual**
<http://www.guamtransportationprogram.com/about-the-program/supportive-initiatives>



