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*Title:* **Individual Permit Baseline Control Measures at Los Alamos National Laboratory, Poster, Individual Permit for Storm Water, NPDES Permit No. NM0030759**

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*Intended for:* Public

*Purpose:* This poster was prepared for the June 2013 Individual Permit for Storm Water (IP) public meeting. The purpose of the meeting was to update the public on implementation of the permit as required under Part 1.I (7) of the IP (National Pollutant Discharge Elimination System Permit No. NM0030759). The poster will be available on Los Alamos National Laboratory's (LANL's) public website.



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# Individual Permit Baseline Control Measures at Los Alamos National Laboratory

## Erosion Controls



Selective juniper thinning promotes native grass growth, improves soil health, and minimizes erosion.



Wood mulch is an engineered erosion control material used to prevent wind erosion, rill formation, and promote revegetation.

Juniper thinning and gravel mulch are stabilization techniques used to increase cover, minimize erosion, and reduce runoff. Rock berms function to spread flow, prevent erosion, and trap sediment.



Willow planting is a bioengineering erosion control practice which provides mechanical streambank stabilization.

## Sediment Controls



Rock check dams are used in small channels to dissipate flow velocity and reduce sediment migration.

Rock berms installed on relatively flat ground help manage sheet flow, prevent erosion, and guard against sediment migration.

IP Requirement – Install and certify completion of baseline control measures (BCMs) at all 250 SMAs (405 Sites) by May 1, 2011.

### Summary of Completed and Certified Baseline Control Measures

Watershed	Number of Site Monitoring Areas	Number of Sites	Number of BCMs Completed & Certified
Los Alamos / Pueblo	64	101	400
Sandia	19	23	113
Mortandad	45	96	332
Pajarito	51	60	332
Water / Cañon de Valle	50	89	438
Ancho	9	15	69
Chaquehui	12	24	130
<b>Total:</b>	<b>250</b>	<b>405*</b>	<b>1814</b>

(\*): Three Sites discharge to two different watersheds: 54-017, 54-018, and 54-020 are mesa-top Sites that discharge to the Mortandad watershed on the north side of the mesa; and to the Pajarito watershed on the south side of the mesa.



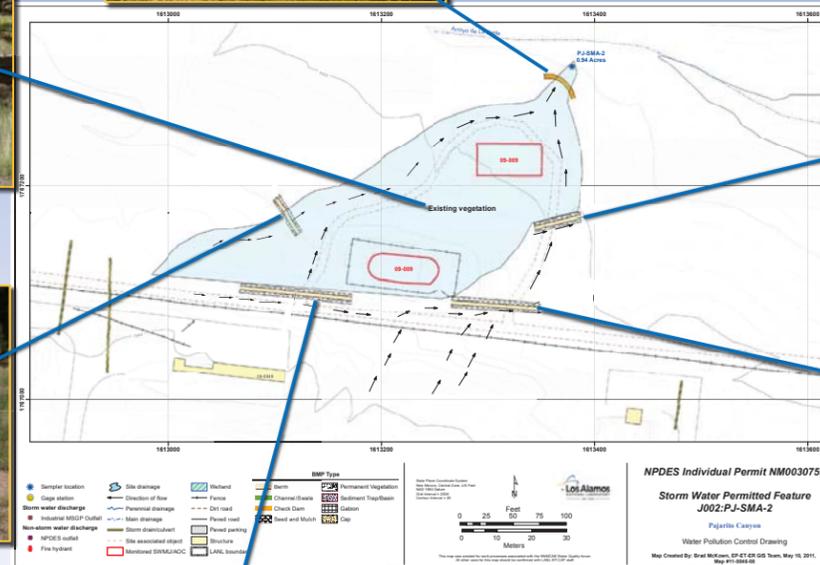
Runoff Check Dam



Existing Vegetation



Run-On Retention Berm



Run-On Diversion Berm



Run-On Diversion Berm

## Run-On Controls



Lined channels can convey run-on across a site while minimizing the potential for erosion.



Earthen diversion berms can reduce or control run-on generated from decommissioned roads.



Rock Check Dam

Vegetated Swale

Vegetated swales in combination with rock check dams help to reduce erosion and sediment migration associated with road run-on.

## Runoff Controls



Earthen Berm

Earthen Berm

Earthen berms capture sediment, intercept flow, and manage runoff.

### Control Measures Selection Process

- Identify Potential Pollutant Sources
  - Historical Industrial Activities
  - Urban Influences
  - Public Influences
- Assess Site Characteristics (Slope, Cover, etc.)
- Evaluate Run-On and Runoff
- Select Site Specific Controls



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