

NNSA 2004b

---



---

**Transitioning from Regulating Storm Water  
Discharges From SWMUS  
Under the MSGP to an Individual Permit at LANL  
Through a Federal Facility Compliance Agreement  
(FFCA)**

**Steve Veenis  
CAB Briefing November 17, 2004  
LAUR-04-8215**



---

---

## Summary of SWMU Storm Water Permitting

---

---

- Applied for Group Permit 1991 (denied)
- Applied for General Permit coverage 1992 (approved)
- Re-applied for General Permit coverage 1997 (approved)
- Re-applied for General Permit coverage 2000 (approved)
- Current MSGP permit expires December 2005
- NMED Consent Order with language requiring monitoring storm water runoff from SWMUs (November 2002)
- LANL pursues Individual Permit coverage for SWMUs (July 2003)
- LANL submittal of Individual Permit Application for SWMUs (December 2004)
- LANL anticipates FFCA issuance (January 2005)



---

---

## Watershed Scale Monitoring

---

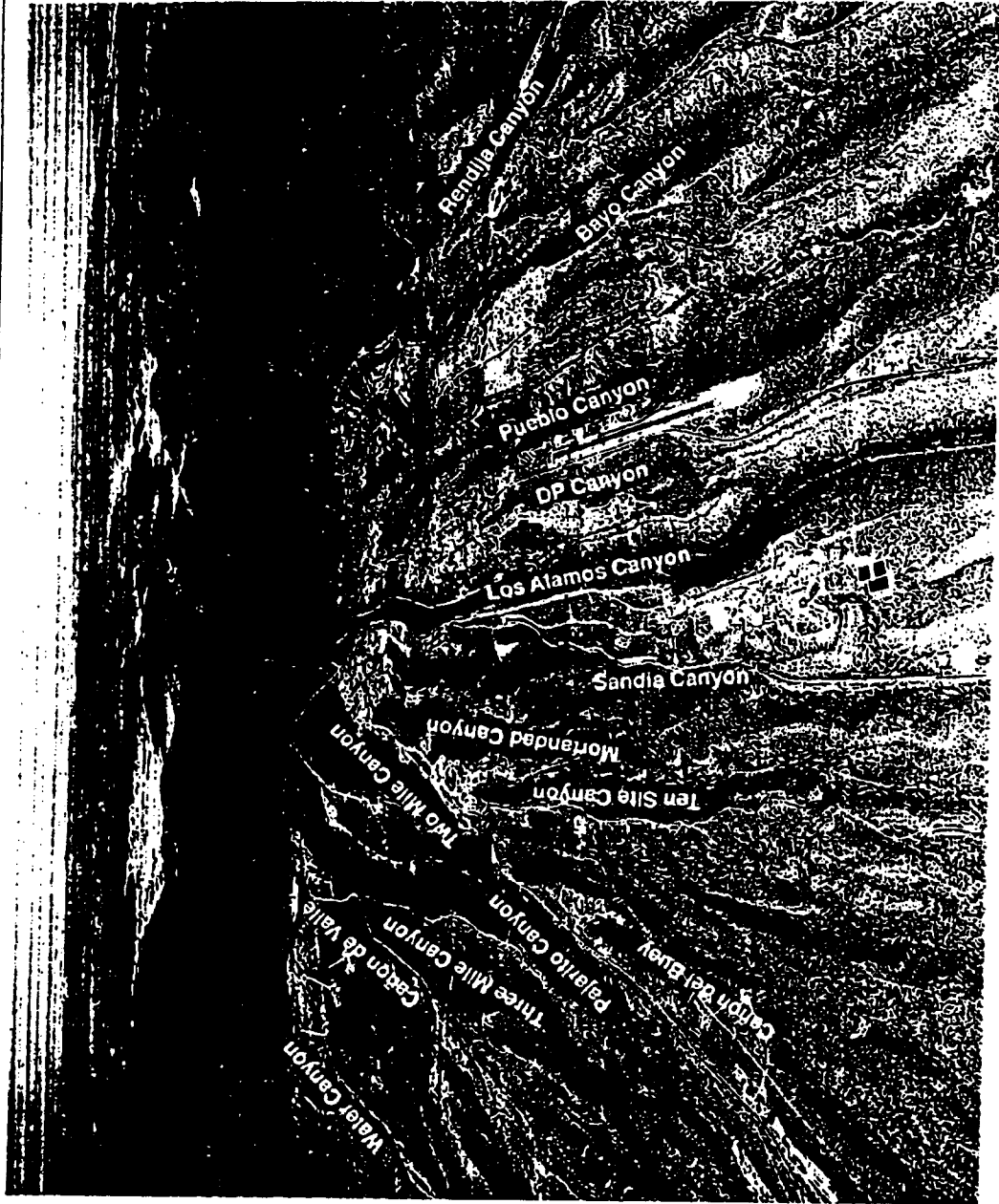
---

### Storm Water Monitoring Plan (SWMP)

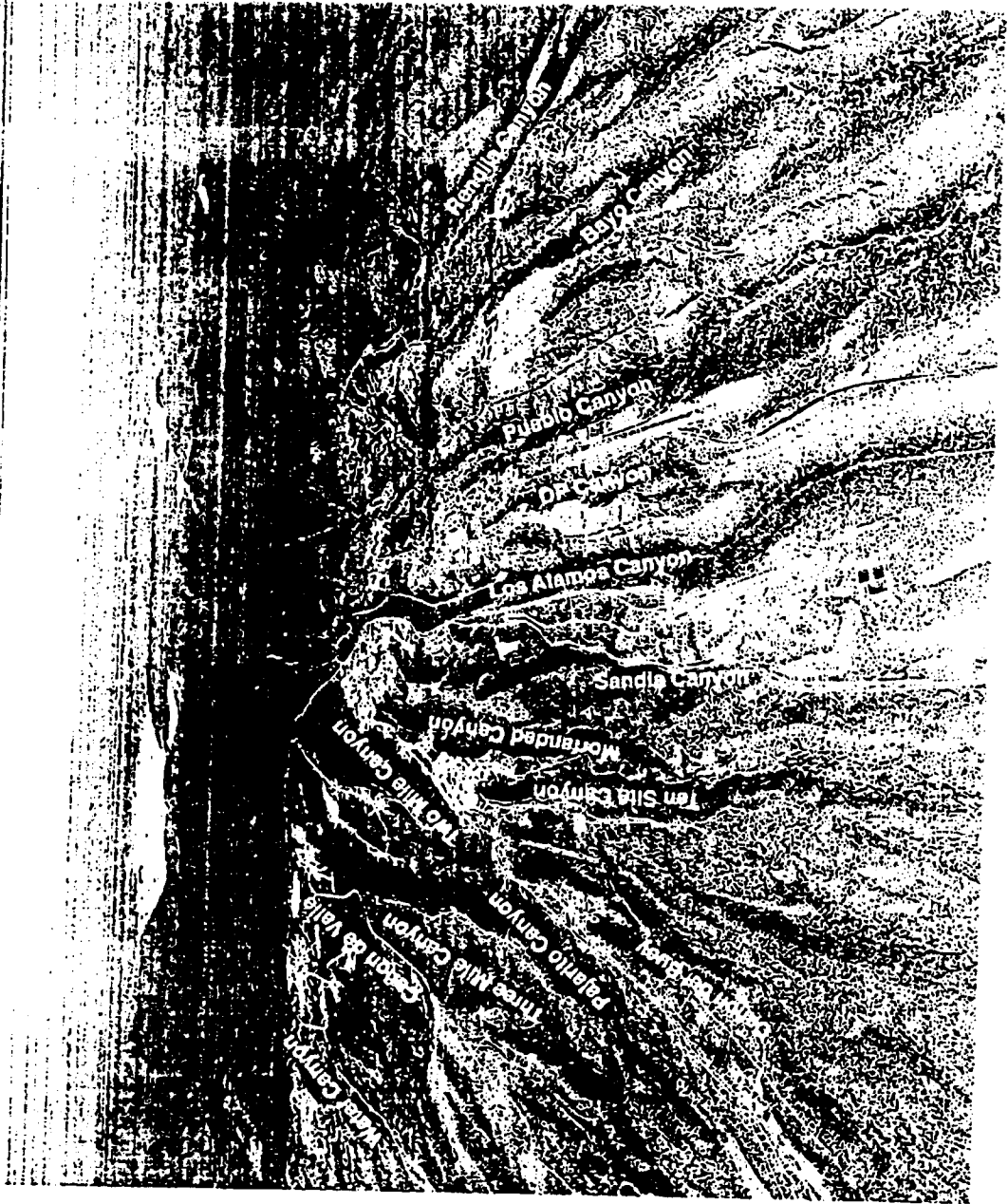
- Telemetry based, watershed scale monitoring
- Located at major confluences of ephemeral drainages
- Sixty-one (61) stations identified in FFCA
- Monitor at nearest downstream station below identified SWMUS
- Analyte list requested in NMED Order
- Reporting of data to EPA and NMED
- Draft Plan submitted to NMED & EPA April 2004
- Modify SWMP annually



# Watershed Scale Monitoring

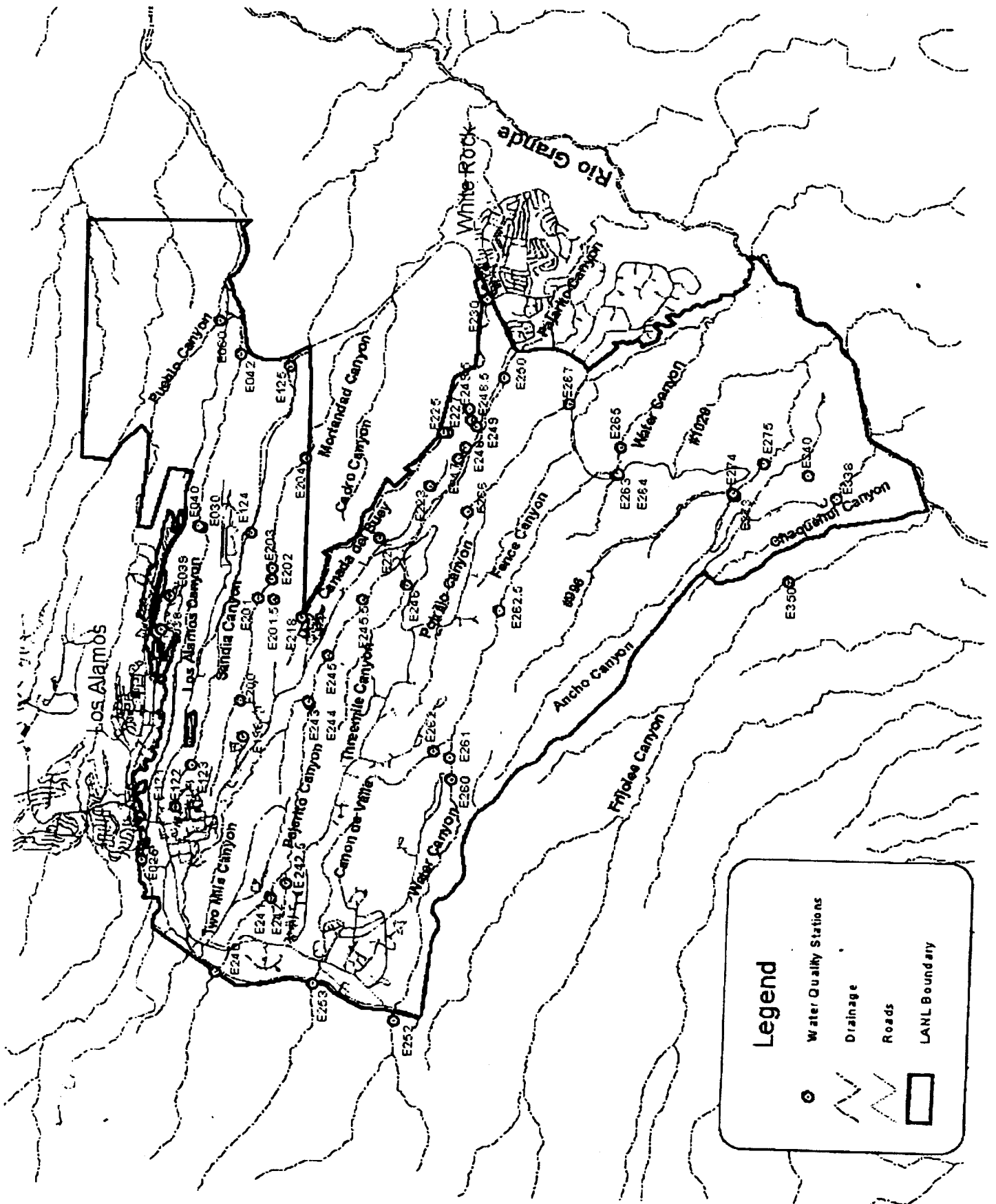


Watershed Scale Monitoring



AVISA

Los Alamos



## Goals and Objectives of SWMP





- Provide information to look at potential pollutants on watershed scale
- Track contaminant transport onto and off Laboratory property
- Identify problem areas associated with storm water discharges from SWMUs
- Compare data collected to wSALs (water screening action level)
- Support future TMDL development and evaluation of risk
- Report water quality data to EPA and NMED
- Share information with stakeholders
- Support implementation of the Individual Permit



## SWMU-Specific Requirements

### SWMU Storm Water Pollution Prevention Plan

- SWMU-specific scale monitoring
- Use Single Stage Samplers or Automated samplers
- Located in ephemeral drainages or at down slope collection points
- Analyte list selected from soil/sediment sampling results
- Three hundred twenty four (324) locations identified in FFCA 
- Implement erosion control program
- Reporting of data to EPA and NMED
- Draft Plan submitted to NMED & EPA July 2004 
- Modify SWMU/SWPPP annually (3/31/05)





# Los Alamos Canyon Hillside Aggregates

**SWMUs and AOCs located in Los Alamos Townsite on North Side of Canyon**

**Focus attention on high scoring (>40) sites and consolidated units for further analysis**



# Sites With Highest Erosion Potential

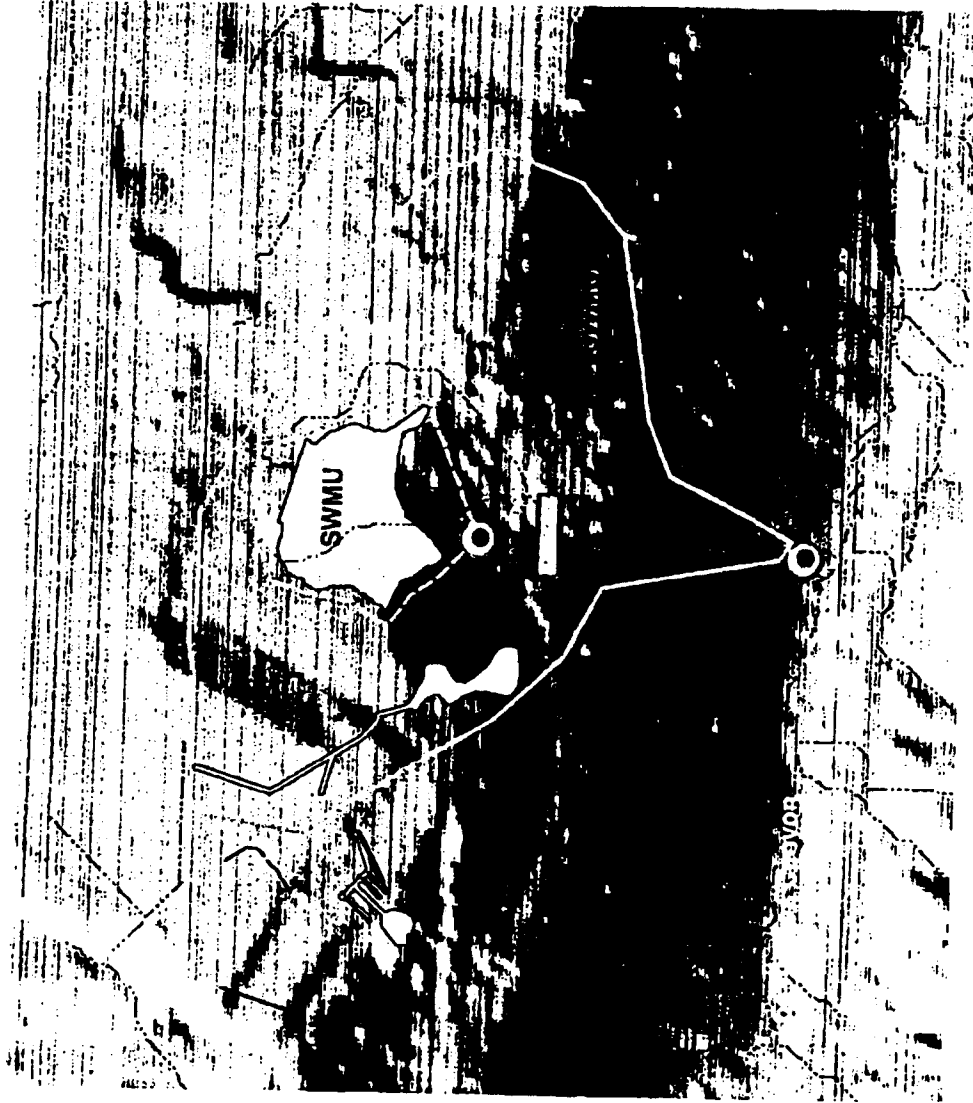
## Erosion Scores

- = 40-50
- = 50-60
- >60

Use Geographic Information System (GIS) to support field effort



# Create Storm Water Monitoring Areas (SMAs)

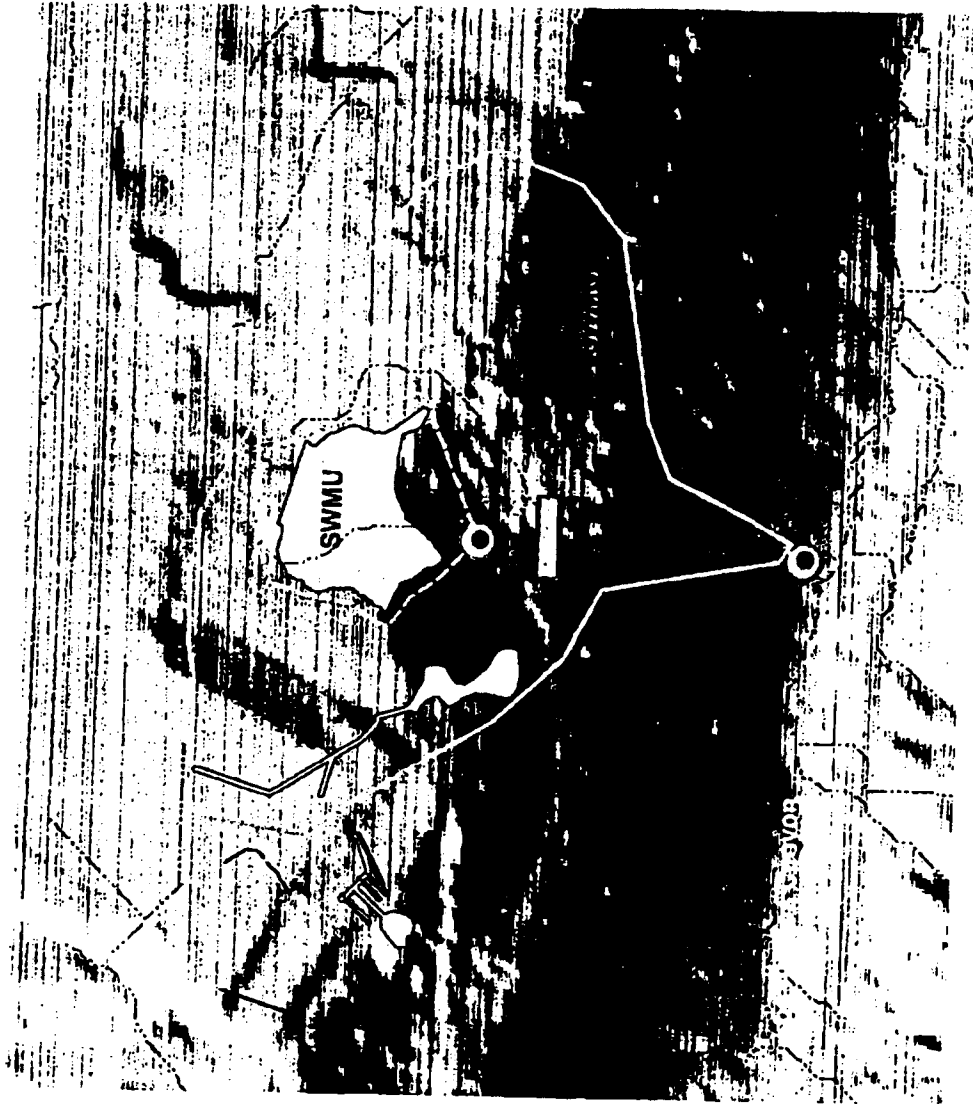


- Proposed Monitoring Location
- ▭ BMP Installation
- Site Hydrology

Use map conceptually only



# Create Storm Water Monitoring Areas (SMAs)



- Proposed Monitoring Location
- ▭ BMP Installation
- Site Hydrology

Use map conceptually only



## Post-Sampling Activities

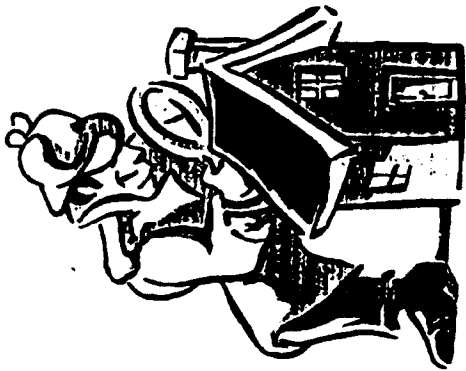


- Compare data to wSALs (Water Screening Action Levels)
- Assess BMP effectiveness (visually and chemically)
- Review and compare existing storm water data at gaging stations immediately downstream
- Interpret data collected for Laboratory impacts
- Track progress of sampling and corrective efforts and report progress to NMED/EPA
- Evaluate individual sites and make recommendations for next FY, including plan modifications

---

---

## Pre-Sampling Activities

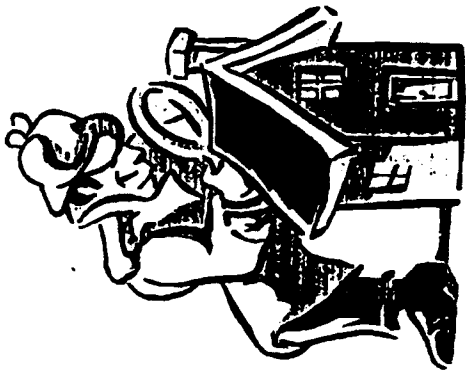


- Use SOP 2.01- Surface Water Site Assessment to identify Stormwater Monitoring Areas (SMAs) geographically
- Compile analytical soil/sediment data for priority sites
- Use GIS to provide maps to support field effort
- Define and calculate drainage areas (surface hydrology)
- Conduct field assessments to select appropriate sample locations
- Complete excavation review and utility locations
- Integrated Work Document (IWD), safety issues
- Install samplers

---

---

## Pre-Sampling Activities



- Use SOP 2.01- Surface Water Site Assessment to identify Stormwater Monitoring Areas (SMAs) geographically
- Compile analytical soil/sediment data for priority sites
- Use GIS to provide maps to support field effort
- Define and calculate drainage areas (surface hydrology)
- Conduct field assessments to select appropriate sample locations
- Complete excavation review and utility locations
- Integrated Work Document (IWD), safety issues
- Install samplers

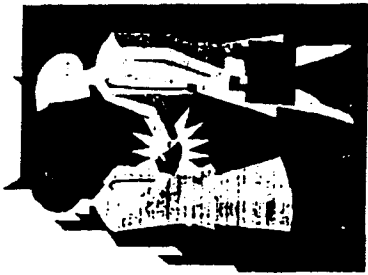
# Prioritized Locations for Site-Specific Monitoring

• FY04	Los Alamos/Pueblo Sandia/ Canada del Buey Mortandad/Ten/Site	71 Sites	(132 Samples)
• FY05	Los Alamos/Pueblo Potrillo/Fence Pajarito Water/Canon de Valle Ancho	81 Sites	
• FY06	Pajarito Mortandad/Ten Site Sandia/ Canada del Buey Water/Canon de Valle Ancho/Chaquehui Potrillo/Fence	111 Sites	
• FY07	Water/Canon de Valle Ancho/Chaquehui Potrillo/Fence	61 Sites	
		<hr/>	324 Sites





## Goals and Objectives of FFCA



- Collect representative samples closer to source and report water quality data to EPA and NMED
- Define and implement appropriate mitigation efforts for long term stabilization
- Rotate to new monitoring locations as sites are stabilized or cleaned up
- Annual modification of Storm Water Monitoring Plan and SWMU/SWPPP to reflect new information
- Support Environmental Restoration Program in removal of SWMUs from RCRA Corrective Action Permit
- Obtain funding for monitoring and BMP inspection and maintenance
- Complete application and Implement an Individual Permit for storm water discharges from SWMUs
- Share information with stakeholders



Public Information Available

[www.wqdbworld@lanl.gov](http://www.wqdbworld@lanl.gov)

[www.erproject@lanl.gov](http://www.erproject@lanl.gov)

“Cerro Grande Fire Impacts to Water Quality and Stream Flow near Los Alamos National Laboratory: Results of Four Years of Monitoring”, (LA-14177)





## **SWMU-Specific Requirements**

### Erosion Control/Monitoring

- Continue umbrella SWMU/SWPPP implementation as required under MSGP
- Inspect and maintain BMPs after .5" rain events and/or after sample collection
- Continue SOP 2.01 Surface Water Site Assessments to assure QA and to assess current site conditions
- Corrective Actions required when wSAL exceeded
- Continue with BMP effectiveness studies
- Continue proactive controls to reduce impact of storm water runoff

