



Los Alamos National Laboratory

Fire Impact Update

Pete Maggiore
Deputy Assistant Manager
Environmental Projects Office
NNSA – Los Alamos Site Office
November 16, 2011



UNCLASSIFIED

Presentation Outline

- Highlights of July 18, 2011 Presentation
- LANL Priorities
- Post-Las Conchas Monitoring

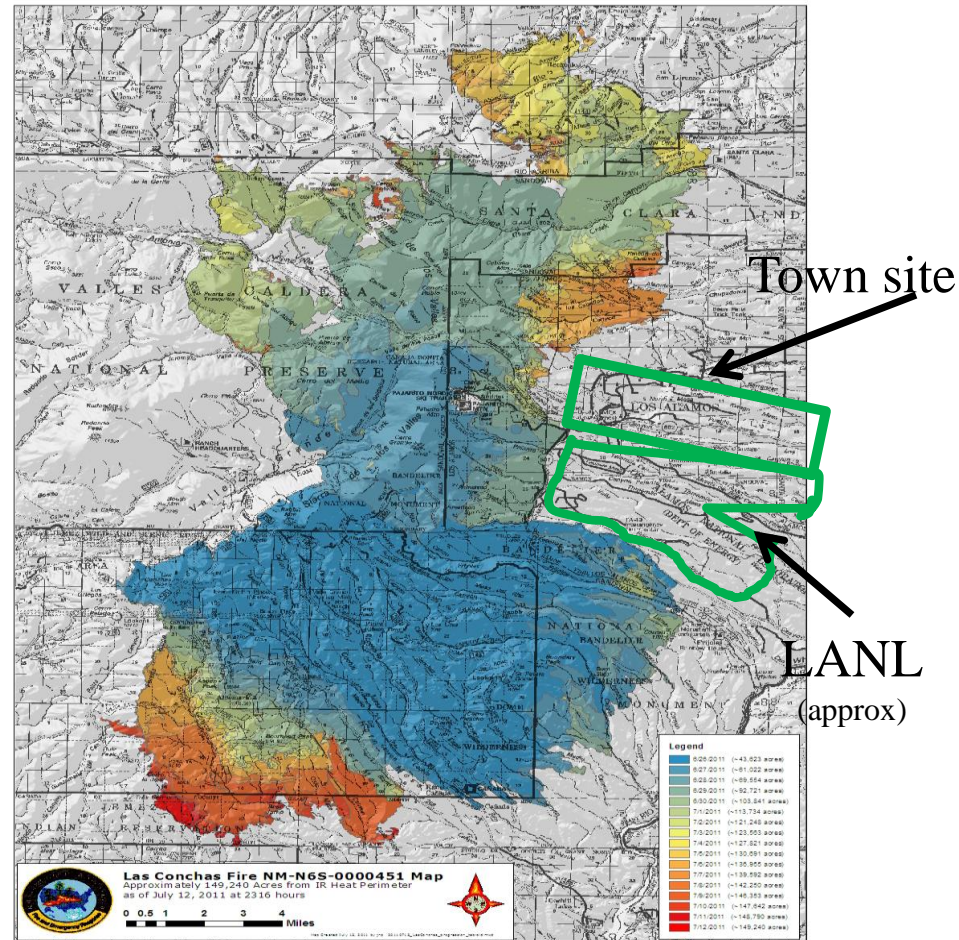
Growing from 4,000 to 40,000+ Acres Overnight

Total Burn Area Approximately 156,000 Acres



Las Conchas Fire

- Much of the burned areas are in the watersheds upstream from Los Alamos National Laboratory
- One of the Las Conchas BAER Team's concerns was flooding in Los Alamos Canyon
- The Las Conchas BAER Team report can be found at :
<http://inciweb.org/incident/article/2406/12597/>



Thanks to Emergency Responders, the Laboratory Remained Protected

Summary of Laboratory Impacts

- Overall, little or no fire or smoke damage
- Utilities and infrastructure remained functional
- With a few exceptions, facilities escaped damage
 - one-acre fire at TA-49 at southern boundary was extinguished within an hour
- Lab declared return to normal operations on July 15



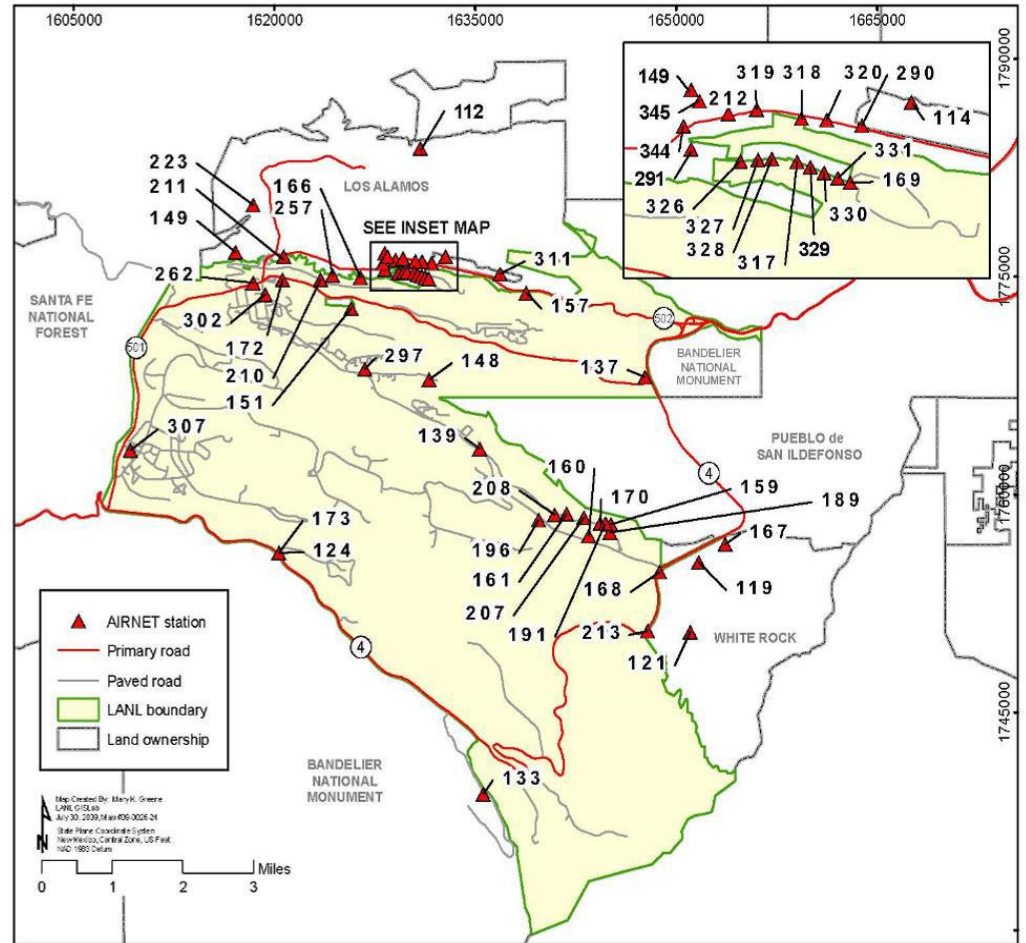
Interagency Cooperation

Federal, state and local interaction was stellar

- State activated its Emergency Operations Center (EOC) in Santa Fe five hours after the fire began
- Early involvement by all agencies/parties
- Decision makers were at State of New Mexico EOC – decisions were made quickly
- Special thanks to New Mexico Environment Department, Department of Homeland Security, and United States Environmental Protection Agency

Air Sampling During the Fire Showed No LANL Contaminants

- Samples taken by Lab, EPA, NMED
- LANL produced quick-turnaround results
- Constituents found were typical for any New Mexico wild land fire
- Results now posted to RACER



UNCLASSIFIED

LANL Post Fire Initiatives

- **Safety**
 - Protection of field personnel
 - Installation of rain activated warning system
- **Removal of material at risk from flooding in canyon bottoms**
 - Investigation and remediation waste – soils and purge water
 - Debris , Equipment, and Construction Material
- **Protection of infrastructure**
 - Buildings and utilities armored
 - Monitoring wells sealed
 - Sedimentation basins cleaned to maximize capacity
 - Cultural and biological resources



LANL Post Fire Initiatives (cont)

- **Monitoring**
 - Air Sampling
 - Water Sampling
 - Biota Sampling
- **Helping our Neighbors**
 - Early and Continuous Engagement with Buckman
 - Coordination with Los Alamos County and State Engineer's Office on Los Alamos Reservoir Impacts
 - Employees fill sandbags at Santa Clara
- **Communication with the Public**



Execution of Priorities



Well Heads Sealed



Water Catchment Systems Cleaned Out



Los Alamos Canyon Weir Sediment Excavated



Baseline Sampling – Before and After Effects



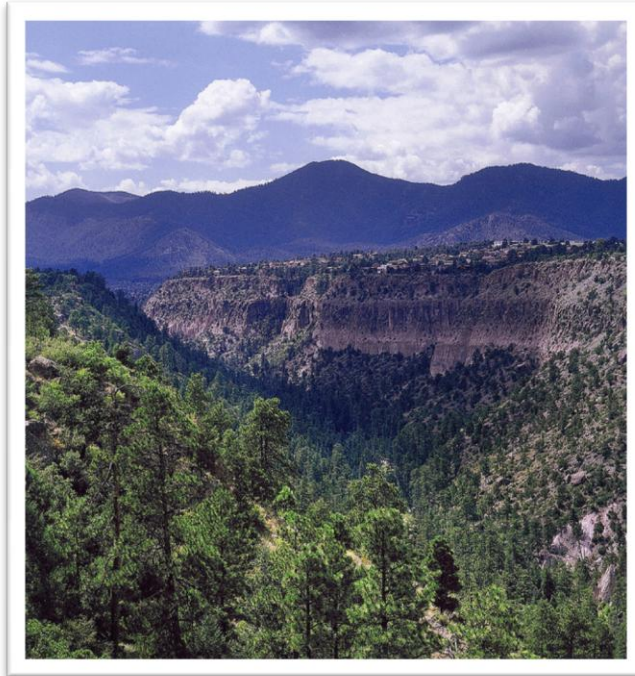
**LANS biologists collecting biota
samples on Cochiti Lake**



Fish from Cochiti Lake

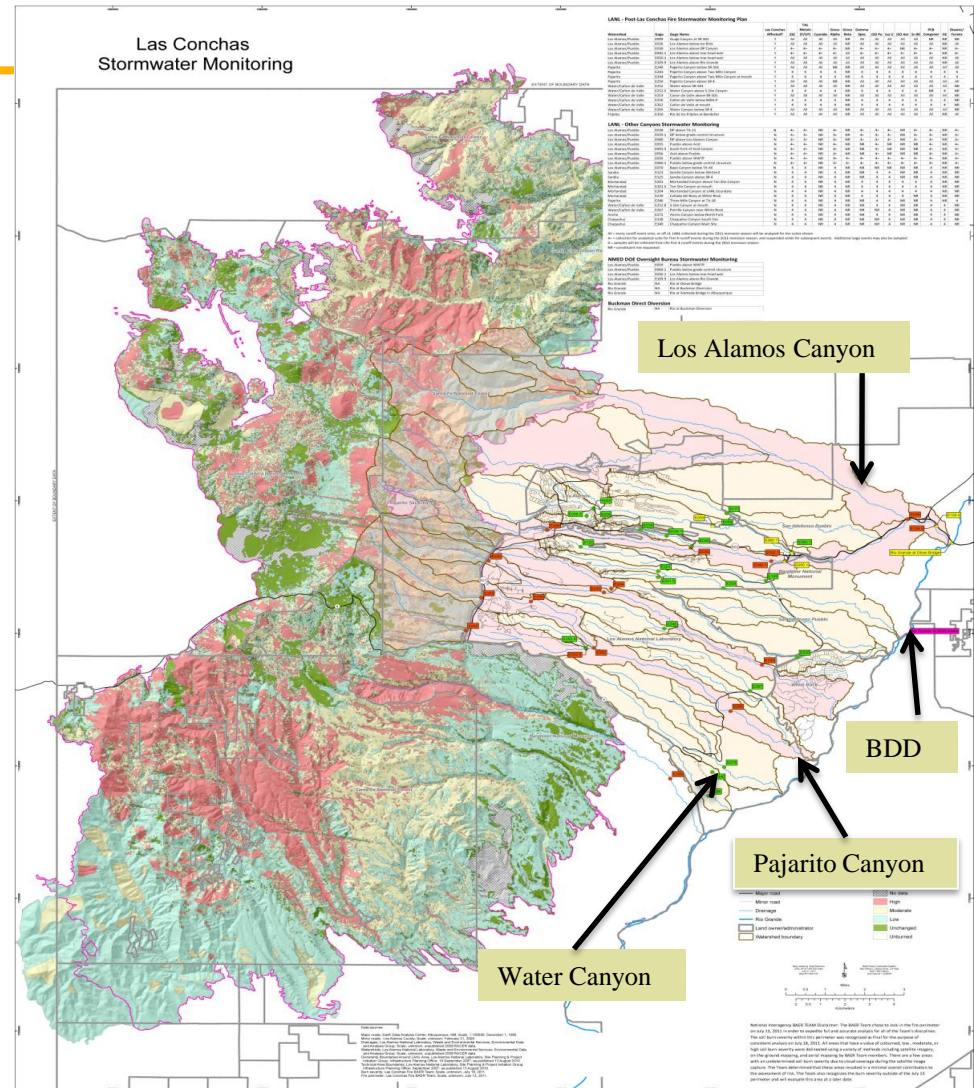
Integration of Regional Monitoring Efforts

- **Integrated Monitoring Effort Goals**
 - Inter-Agency Flood Risk Assessment Team (IFRAT)
 - Led by NM Department of Health
 - Members: NMED, DOE, Buckman DDB, & Albuquerque Water Utility
 - Establish a data set that enables assessment of risks and guides actions to protect water resources, and human and ecological health
- **LANL Specific Goals**
 - Evaluate potential LANL contributions to contamination observed in storm water and sediment
 - Take actions necessary to mitigate risks and repair damage associated with post-fire runoff

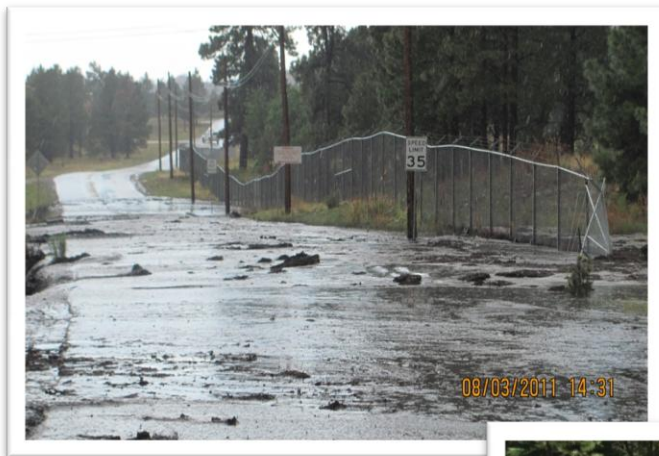


Integrated Post-Las Conchas Storm Water Monitoring – LANL Sampling Plan

- LANL sampled from areas upgradient (unaffected) by LANL operations to characterize “natural” constituents in ash and soils
- Expedited analytical sample turnaround time
- Some interior sampling stations were damaged by August floods
- Boundary stations all remain operational



Flash Flooding: Rain Events After Las Conchas



**TA-16 (looking south)
August 3, 2011**



**State Road 501 (east)
August 3, 2011**



**Cañon de Valle Structure
August 21, 2011**

UNCLASSIFIED

Integrated Post-Las Conchas Storm Water Monitoring – Sample Results Overview

- **Constituents observed at locations unaffected by LANL are consistent with observations from similar locations after fires (i.e. Cerro Grande)**
 - Cyanide, Dioxins/Furans – source is combustion of organic material in burn area
 - Metals – source is plant uptake of constituents found in soils
 - Radionuclides, PCBs – concentrated from global fallout deposited on forest floor
- **Observations at lower LANL boundary locations, including E109.9**
 - Cyanide and PCB concentrations are generally lower in ash bearing stormwater than in samples collected near a burn area - some still exceed standards
 - Metals, Radionuclides, Dioxins/Furans – similar concentrations as samples above LANL
- **Sample results received to date are in RACER <http://racernm.com/>**

Buckman Direct Diversion Project

- Inspected and repaired gage stations immediately following flow events (stations E050.1, E060.1 and E109.9)
- Actively participated in board meetings, as well as numerous technical meetings with Buckman staff
- Installed camera at E109.9



Elected Officials Tour

- LANL employees lead tour on August 12th
- Attended by members of the Radioactive Materials Committee and other regional elected officials
- Tour highlighted measures put in place to protect against potential floods due to the Las Conchas Fire



Summary

- LANL responded immediately to the Las Conchas Fire to mitigate potential impacts
- LANL worked closely with neighbors and state/federal agencies to coordinate data collection and analysis
- IFRAT is up and running and will continue to analyze data and potential risks