

# An Overview of Los Alamos National Laboratory



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**Deputy Laboratory Director Operations** 

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#### **The Laboratory Organization**

Laboratory Director's Office Communications & Public Affairs Laboratory Director Director, Laboratory Staff Matthew Nerzig **Thomas Mason Frances Chadwick** Ethics & Audit Division John Schroeder Office of Counterintelligence Daniel Cloyd Deputy Director, Science, Deputy Director, Deputy Director, Office of General Counsel Technology, & Engineering David Sosinski Weapons Operations John Sarrao **Kelly Beierschmitt Bob Webster** Office of Government Affairs & Protocol Patrick Woehrle Mission & Enabling ST&E Weapons Mission **Mission Operations** Office of National Security ALD, Chemical, & International Studies ALD, Global ALD, Weapons ALD, Weapons ALD, Business Kory Sylvester Earth, & Life Production Security Physics ALD, ESHQSS Management Sciences Nancy Jo **Dave Eyler** Michael Michael Hazen LeAnne J. Patrick Nicholas Bernardin Stribley Fitch Director. Actinide Operations ALD, Physical ALD, ALD, Weapons Frank Gibbs ALD, Capital ALD, Facilities Sciences Simulation & Engineering Projects & Operations Computation Antoinette James Owen Kathye Segala **Bret Simpkins** Taylor Irene Qualters

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NATIONAL LABORATORY

## A complex, dynamic system of people, facilities, materials, and services

**Director's Office**  Institutional Management Weapons Programs • Weapons Physics Design and Computation Weapons Engineering High Explosives Plutonium Tritium/GTS **Global Security** • Uranium, Beryllium, Salts, Metals Nuclear Nonproliferation Detonators Nuclear Counter-Proliferation Component Fabrication and Assembly Emerging Threats Intelligence Community National Defense and Homeland Security Science, Technology and Engineering Chemistry, Earth and Life Sciences Accelerator Science Engineering Sciences Materials and Physical Sciences Institutional Operations Theoretical and Computational Sciences Business Services · Environmental, Safety, and Health Nuclear & High Hazard Operations **Capital Projects**  Security and Mission Assurance Project Management Services 36 square miles 47 technical areas 1,280 buildings/ 9M sq ft 11 nuclear facilities 268 miles of roads 8,765 career employees/~12,000 workers on site 2,133 R&D scientists 1,100 veterans 390 postdocs 1,300 students at peak \$2.7B budget 4,700 projects 600 B&R codes 11 Directorates 60 Divisions 12/21/2018 | (3)

#### The Lab has a steady budget and a growing staff



Significant Growth Projected over the next five years

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#### A Strong Workforce: 12,094 Employees

R&D, 2364 . Science & Engineering Support 1336 Project/Program Mgt 753 Staff Aug 515 Lab Assoc 54 Operations 1530 Post Doc 394 Student IT... 1518 Executive **Protective Force** 53 262 Craft **Business Services** 1042 1528

#### Our student and postdoc pipeline is crucial for recruiting the workforce of the future

- 1,880 students and 400 postdocs were part of our workforce in FY18
- Conversion of postdocs to technical staff is our most highly utilized early career pipeline



NM Students at LANL: College Distribution

41% of Los Alamos employees are native New Mexicans

## Percentage of total LANL population who were former students or postdocs

36%	61%	33%
All LANL employees (Reg, TRMA)	All R&D scientists & engineers	Managers



**Summer Physics Camp** 

Supercomputing Challenge

26.3% of regular/term employees have at least 1 degree from NM college/univ.

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#### **75 Years of Serving the Nation**

In 1943 Los Alamos Laboratory was founded with a single and urgent purpose: build an atomic bomb.

**National Security** 



As we look to the future, we see no shortage of threats to our nation's security—but we also know there is no shortage of innovative ways to combat those threats.

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# Eight R&D 100 awards in 2018 reflect innovation and collaboration in support of our national security mission





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#### **Analysis of Alternatives Decision:** Vote of Confidence in Los Alamos









## The Augusta Chronicle

SRS, Los Alamos recommended for pit production; MOX facility would be repurposed

#### **NNSA Statement**

WASHINGTON – An evolving and uncertain geopolitical landscape calls for the United States to recapitalize its defense plutonium capabilities. The Nuclear Weapons Council (NWC) has certified that the National Nuclear Security Administration's (NNSA) recommended alternative for recapitalization of these capabilities is acceptable and represents a resilient and responsive option to meet Department of Defense (DoD) requirements.

To achieve DoD's 80 pits per year requirement by 2030, NNSA's recommended alternative repurposes the Mixed Oxide Fuel Fabrication Facility at the Savannah River Site in South Carolina to produce plutonium pits while also maximizing pit production activities at Los Alamos National Laboratory in New Mexico. This two-prong approach – with at least 50 pits per year produced at Savannah River and at least 30 pits per year at Los Alamos – is the best way to manage the cost, schedule, and risk of such a vital undertaking. Furthermore, by maintaining Los Alamos as the Nation's Plutonium Center of Excellence for Research and Development, the recommended alternative improves the resiliency, flexibility, and redundancy of our Nuclear Security Enterprise by not relying on a single production site.

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#### LANL Future Workload Supports a New Strategy



#### **Construction Projects 5 Year Outlook**

TEC of all projects = \$11.2B thru FY30 \$5.5B performed in FY20 to FY24 window