

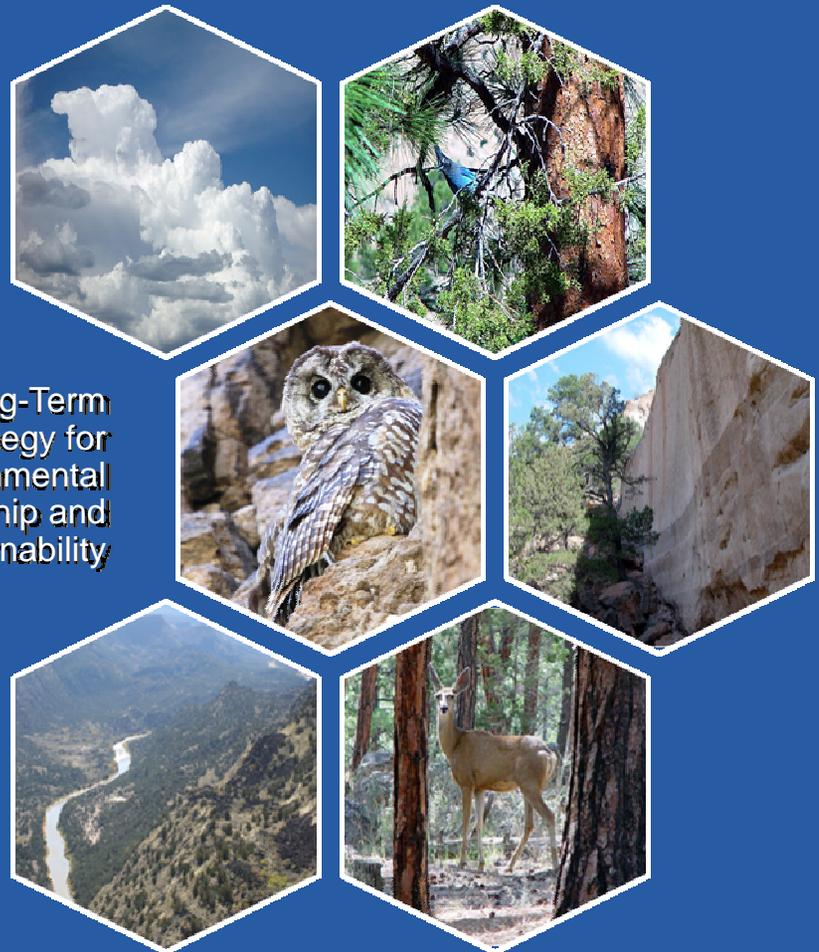
Logic Order

- Purpose
- Vision/Mission
- Strategy
- Implementation
- Framework
- Grand Challenges
- Examples of implementation
- Public Involvement
- Intellus
- Contact info

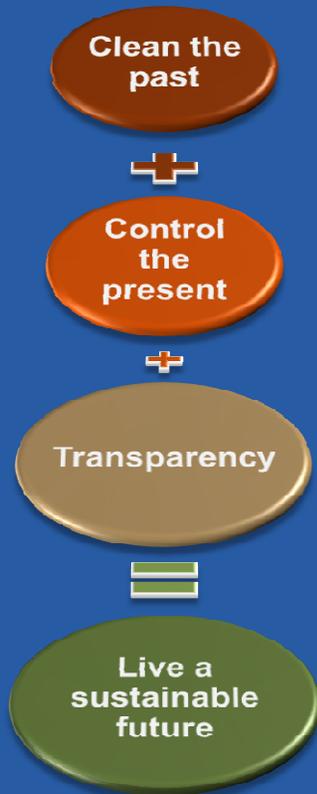
Long-Term Strategy for Environmental Stewardship & Sustainability

Michael Brandt
January 2013

Long-Term
Strategy for
Environmental
Stewardship and
Sustainability



Purpose of a Long-Term Horizon



- **Demonstrates commitment**
 - Protecting human health
 - Protecting the environment
 - Using a long-term strategy
- **Implementing with a certified Environmental Management System**
 - Defines environmental policy
 - Spells out risk priorities
 - Implements strategies, goals, and performance expectations
 - Provides yard stick to measure progress
- **Supports mission achievement**

Collaborating On One Mission

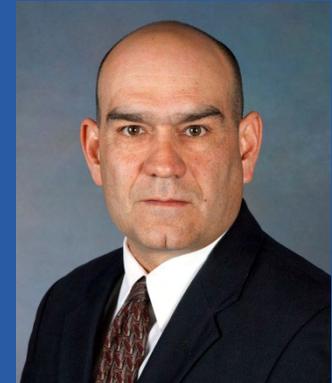
Vision and Mission

Field Office Vision

“The intent of this effort is to take control of LANL’s future and set the standard for environmental stewardship for all of New Mexico.”

— **Juan Griego**

Acting Los Alamos Site Manager



Laboratory Director’s Mission

“This Plan provides a framework for us to ask the right questions now, so that when new issues arise, we will be prepared. The Plan integrates various environmental protection activities into a comprehensive environmental stewardship *strategy*.”

— **Charlie McMillan**

Laboratory Director



What exactly is LANL's long-term strategy for the environment?

LANL's Long-Term Strategy for Environmental Stewardship and Sustainability is to be the sound environmental stewards required for accomplishing our national security mission. The strategy is to protect human and environmental health by

1. Cleaning up or stabilizing historical releases to the environment
2. Controlling current programs to ensure an impact to the environment which is as low as reasonably achievable and
3. Creating a sustainable future through pollution prevention, waste elimination, energy and water conservation, and fostering resilient ecosystems.

The strategy looks from two linked perspectives

1. A broad-reaching vision to set long-term environmental goals.
2. A day-to-day examination of decisions to choose those actions that are most protective.

Implementation

We implement the strategy through

- Open communication and consultation with our stakeholders resulting in
- Overarching strategies to guide decisions over the long-term.
- We then deploy programs and software applications which support protective, proactive decision making
- To create a sustainable future beyond ordinary compliance requirements.



Framework for Long-Term Environmental Stewardship



Environmental Grand Challenges



Consult with tribal governments and collaborate with our stakeholders to ensure that LANL's impact on the environment is as low as reasonably achievable.



Remove or stabilize pollutants from the Manhattan Project and Cold War eras.



Protect water resource quality and reduce water use.



Eliminate industrial emissions, discharges, and releases to the environment.



Protect human and environmental health by managing and restoring lands.

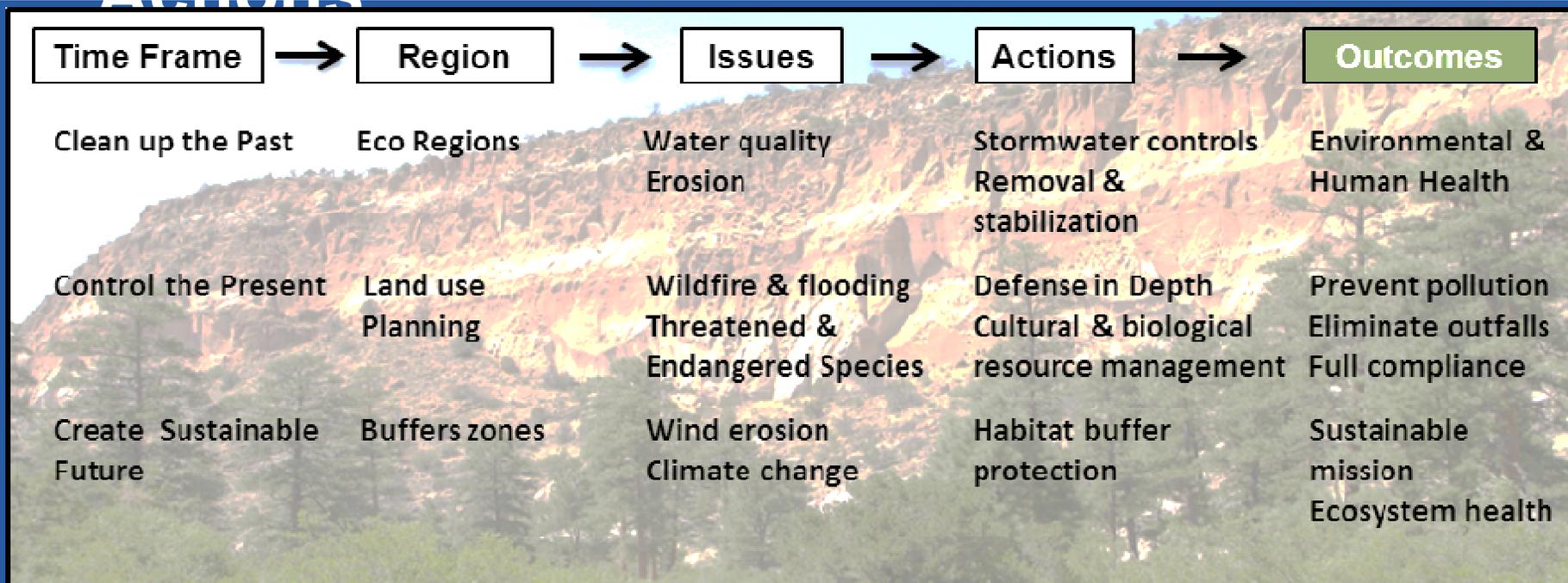


Produce zero radioactive, hazardous, liquid, or solid wastes.



Use energy efficiently while creating sustainable energy sources.

Time Frames Dictate Stewardship Actions



- **Clean up past contamination:** focus on eliminating the source of contamination or on blocking or removing the pathways to receptors
- **Current operations:** practice pollution prevention, waste minimization, outfall reduction and compliance with regulations
- **New projects:** make sound land-use considering over 50 different environmental constraints.
- **For a sustainable future:** implement projects to have the lowest possible environmental impacts

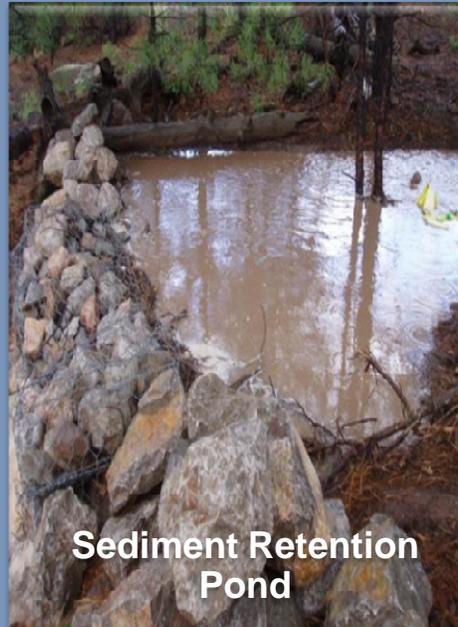
Protections = Defenses in Depth for Protecting Human and Environmental Health



D&D at Technical Area 21 on DP Road

Protection #1

Remove the Source



Sediment Retention Pond

Protection #2

Stabilize or remove sediments



Groundwater Sampling in Mortandad Canyon

Protection #3

Measure for known and unexpected contaminants

Anticipate, recognize, evaluate, control and mitigate emerging environmental challenges

Example of Defenses in Depth



Trust but Verify



Stormwater



Foodstuffs & Biota

Environmental Sampling

- Relevant and appropriate data
- Answer questions about the protection of human and environmental health
- Satisfy regulatory requirements
- Technically justified and of sufficient quality
- Transparent and readily available to the regulators and the public
- Ensures a holistic, adaptable, and cost-effective approach



Clean Air



Soils



Groundwater

How many times does LANL reuse water?

1 Use: Municipal water in kitchens, labs & bathrooms

- Treated as sanitary waste water
- Pumped to SERF



2, 3, 4, 5 Uses:

- Sanitary Effluent Reclamation Facility (SERF)
- Super purifies water
- Circulates up to 4 times to cool super computers



6, 7 Uses: Released to maintain the Sandia Canyon to promote healthy wetlands.



Future Stewardship Integrated Today



Public Involvement

- Address pressing public interests
 - Clean water
 - Air Quality
 - Recreational use
- Focus on facts
- Diverse approaches designed for engagement and participation
- Government to government consultation with tribes
- NEPA
- Educational outreach
- Tours



**Water studies
on the Rio
Grande**

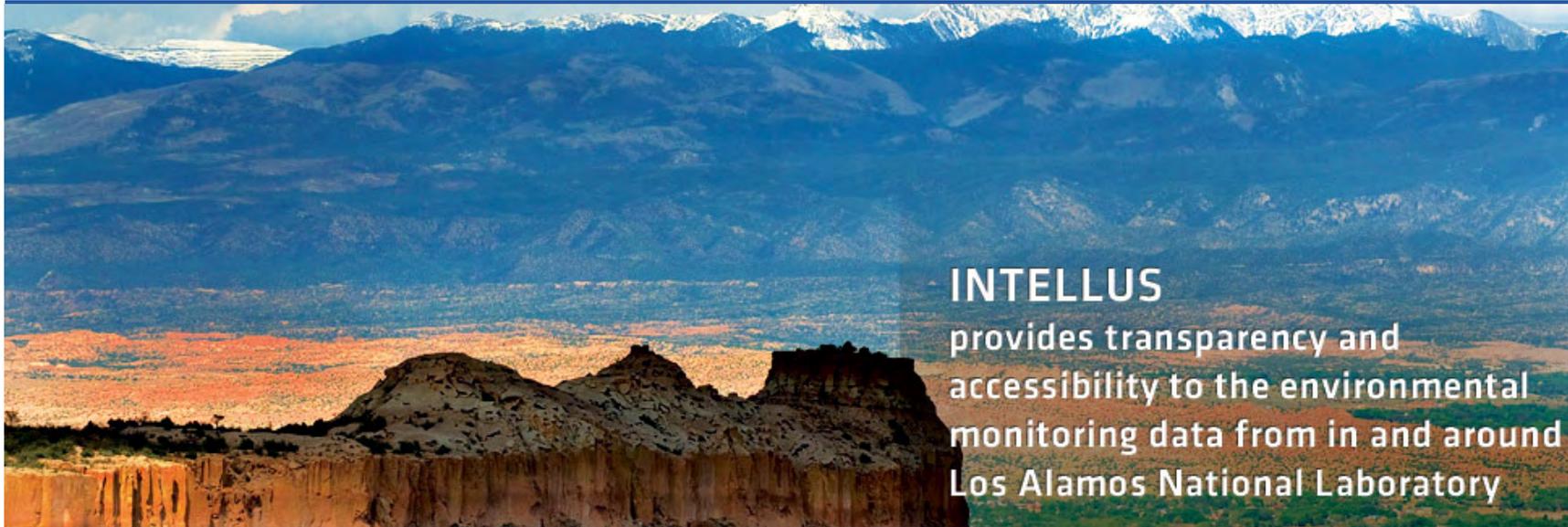


**Public tour of
TRU waste
storage at
Area G**



**Public tour of
open burning
waste disposal**

Intellus Contains 11 Million Environmental Sampling Records Open to the Public



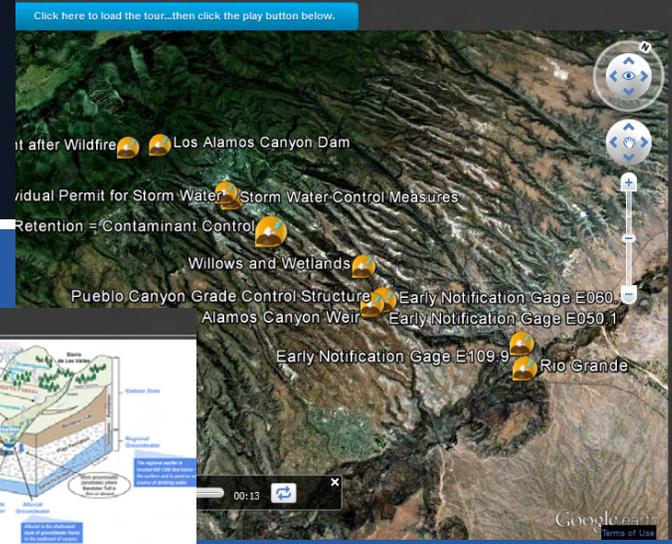
INTELLUS
provides transparency and
accessibility to the environmental
monitoring data from in and around
Los Alamos National Laboratory

Intellus is a publicly accessible database that provides access to over 11 million records collected by the Laboratory as part of environmental surveillance and compliance sampling activities.

www.intellusNMdata.com

On the web

Google Earth Tours



Groundwater in the Regional Aquifer

Monitoring Well

Typical structure of a monitoring well.

Models and Educational Information

Enduring Environmental Stewardship

From today for years to come

Over the next several decades, we anticipate significant changes to the mission and operations at Los Alamos National Laboratory (LANL) and are committed to operating a sustainable site. In 2012, LANL undertook development of a long-term environmental stewardship strategy to manage the Laboratory in the coming years.

This undertaking requires three fold planning:

- Integrate compliance efforts across organizations and programs to form a prevention-based laboratory-wide environmental stewardship strategy,
- Measure our environmental performance through support of the annual Environmental Report, and
- Provide transparency and enhanced communication to surrounding neighbors, regulators, and the public.

Long-Term Strategy for Environmental Stewardship and Sustainability (pdf)

Projects and Accomplishments

Click the thumbnails below to browse...

From Rubble to Riches

Who
American Recovery and Reinvestment Act
Decontamination and Demolition (D&D) Project

What
Removed 24 contaminated, Manhattan Project-era buildings at Technical Area 2

Pollution Prevented
A portion of it was recycled or salvaged for beneficial reuse

- Recycled hundreds of tons of metal
- Salvaged several large pieces of equipment
- Reused clean demolition debris for use as onsite fill and site stabilization

LANL has a rich history defined by news, myths and beliefs.

[Fact Check »](#)



Interactive information

www.lanl.gov/projects/envplan



We request your feedback

This strategy is dynamic. We expect to improve it as we go and we request your input...

- Visit the Long-Term Strategy website: www.lanl.gov/projects/envplan
- Visit LANL's environmental website: www.lanl.gov/environment and sign up for e-mail notification
- Visit the electronic Public Reading Room: <http://epr.lanl.gov>
- Visit the print Public Reading Room:
97 Cities of Gold Road, Pojoaque, NM
- Call the Environmental Outreach Office: 505-667-0216
- E-mail the Environmental Outreach Office: envoutreach@lanl.gov
- Write us at:
Environmental Outreach
Los Alamos National Laboratory
P.O. Box 1663, MS M996,
Los Alamos, NM 87545
- Visit www.intellusNMdata.com for all sampling data from LANL