PUEBLO DE SAN ILDEFONSO

DEPARTMENT OF ENVIRONMENTAL AND CULTURAL PRESERVATION

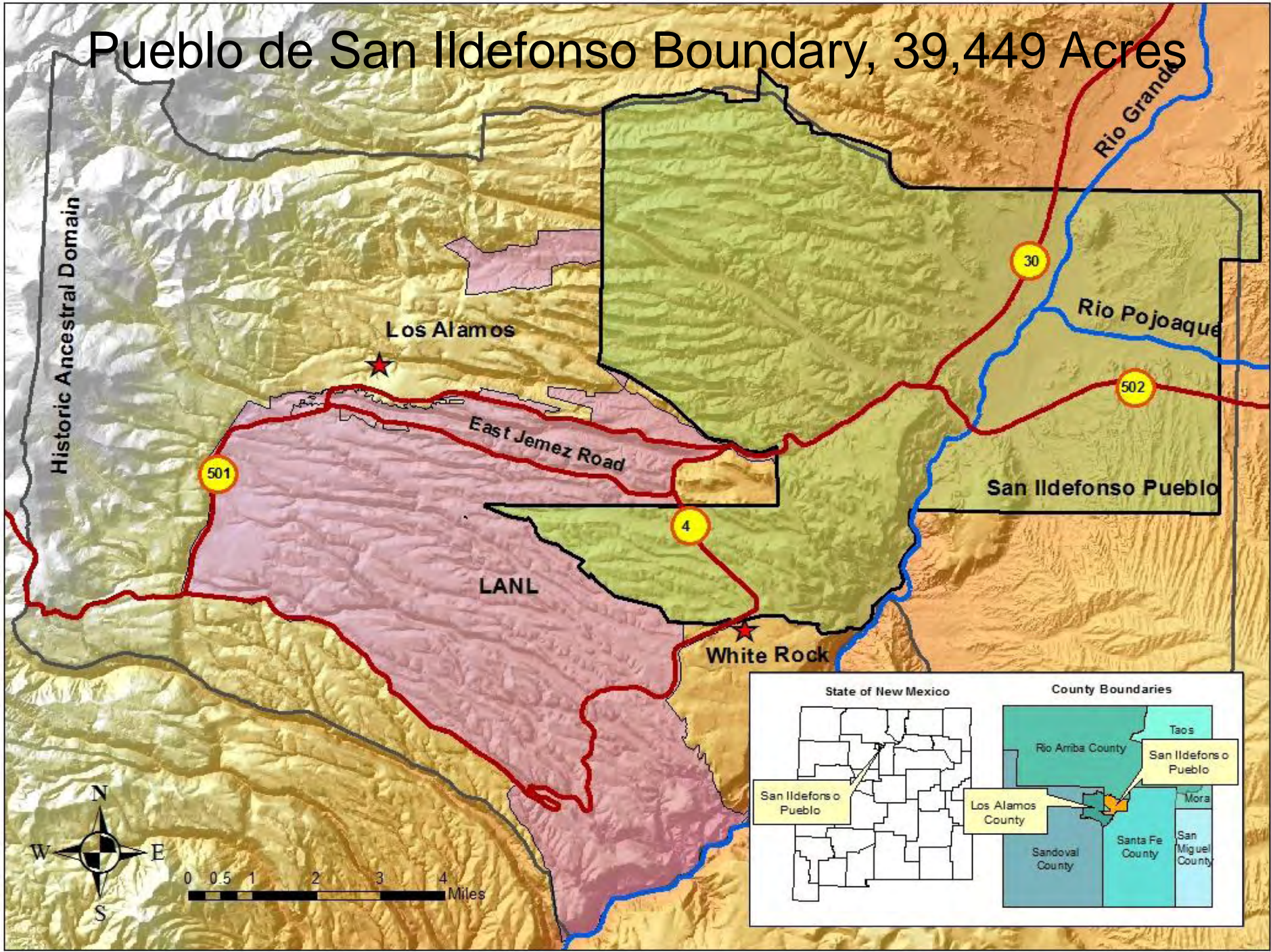## PROGRAM OVERVIEW

2015

Po-woh-ge Oweenge
"Where the Water Cuts Through"

Pueblo de San Ildefonso

- Ancestors migrated from Mesa Verde complex in southern Colorado by way of Pajarito Plateau

- Spanish conquistadors entered the native territory in 1598

- People of San Ildefonso participated in the Pueblo Revolt of 1680

- San Ildefonso People regained freedom of religion and other self governing rights including land recognition in 1856

- One of the eight pueblos of Northern New Mexico

- Rich in tradition, culture and art

- Followed an agricultural based economy with a recent resurgence of traditional arts

- Especially famous for black on black high polished pottery

Pueblo de San Ildefonso Boundary, 39,449 Acres

Historic Ancestral Domain

Rio Grande

Rio Pojoaque

30

502

Los Alamos

East Jemez Road

501

San Ildefonso Pueblo

4

LANL

White Rock

State of New Mexico

County Boundaries

Taos

Rio Arriba County

San Ildefonso Pueblo

San Ildefonso Pueblo

Mora

Los Alamos County

Sandoval County

Santa Fe County

San Miguel County

N
W   E
S

0 0.5 1   2   3   4
Miles

Department of Environmental and Cultural Preservation (DECP)

Mission Statement: "*Protect and preserve the natural environment and the cultural resources of the Pueblo, and quantitatively and qualitatively assess risks to the health and welfare of the Tribal Community.***"**

History of DECP

- The LAPP Accord, signed on 12/8/92, affirmed the government-to-government relationship between the Pueblo and DOE

- DOE begins funding the LAPP program, and first Director of DECP hired 12/9/96; surplus LANL trailer obtained for offices

- Other staff members gradually hired, and more grants are obtained (EPA GAP, EPA 106 WQ, EPA 103 AQ); DECP moves into new Natural Resources Building in March 2002

- DOE Technical Advisory Reviews conducted in July 2000 and July 2001 result **in a "directed planning process" using EPA Data Quality Objectives (DQO)** process to determine program objectives

History of DECP

- Quality Management Plan (QMP), and 1 and 5 Year Plans developed by DECP staff, updated each year

- The Tribal Risk Assessment (TRA) forms the foundation for the entire DECP program, since all sampling and analysis activities ultimately must be quantified into a realistic and scientifically defensible TRA

- The DECP program has developed into a highly professional, competent, and scientifically advanced environmental program and is making excellent use of the funding received from federal programs as demonstrated by the reports, maps, and tools developed and used by DECP team members

DECP Organizational Chart

DECP Administration

- Grant management—submit workplans, budgets, forms, narrative reports

- Financial management - "cuff accounts"
  - Track all expenditures
  - Reconcile with Accounting every month

- Maintain filing system

- Technical library

- Document database

- Google Calendar

- DECP 1 and 5 Year Plans

- Interface with Pueblo administration, follow all procedures and rules

- Interface with outside agencies/stakeholders

- Supervise and support staff, ensure deliverables are met each year

- Plan for future projects and needs

Natural Resources Damages Assessment (NRDA)

Define the amount of money or the type and scope of actions needed to restore, replace, or acquire the equivalent of injured natural resources

- Process must consider all lost natural resource services due to the presence of contaminants that impact the Pueblo

- The NRDA process considers injury determination and quantification

- Industrial Economics Corp. was contracted to manage and develop

- DOE is both funding the NRDA and is a Trustee

- The NRDA will be a multi-year project, and is a highly technical process

- The Pueblo must participate without violating confidentiality concerns

- Pueblo must determine what type of restoration actions it desires

DECP Funding Sources

Department of Energy (DOE) which owns Los Alamos National Laboratory (LANL)

- Cooperative Agreement and Accord—the Los Alamos Pueblos Project (LAPP)

  - Pueblo de **San Ildefonso**
  - **Jemez Pueblo**
  - Santa Clara Pueblo
  - Cochiti Pueblo

- Waste Isolation Pilot Plant (WIPP) emergency preparedness grant

- NRDA project participation stipend

Environmental Protection Agency (EPA)

- General Assistance Program (GAP) grant

- 106 Water Quality Program Grant

All awards/grants must be applied for each year, and continued funding is never guaranteed

Administrative Management

File System

- Incoming and outgoing correspondence

- Organization of grant forms
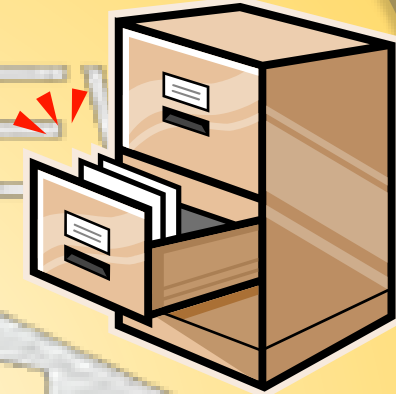
Travel

- Travel forms

- Reimbursements

- Mileage
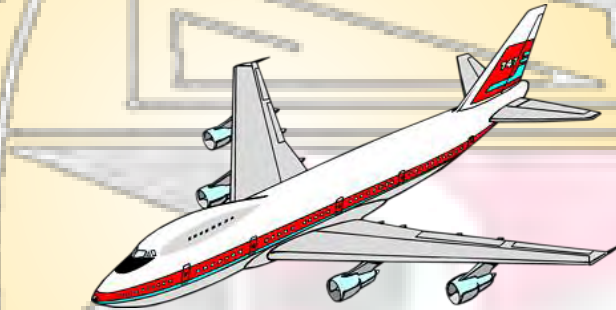
Purchasing

- Invoices

- Purchase Orders

- Receipts

Inventory

- Office Supplies

Administrative Management

DECP Newsletter

- Summarizes DECP accomplishments

- Educational articles

- Distributed quarterly to the community

Grant Budgets

- Keep Records of all Grant Budgets
  - DOE (LAPP, WIPP)
  - EPA (GAP, 106 WQ)
- Coordinate with the Tribal Accounting Department
  - Expenditure reports
  - Vendor checks
  - Expense validation
  - Annual budget approval

Cultural Resources Program

Nake Muu Ruins

Nake Muu Ruins

Tsire geh Ruins
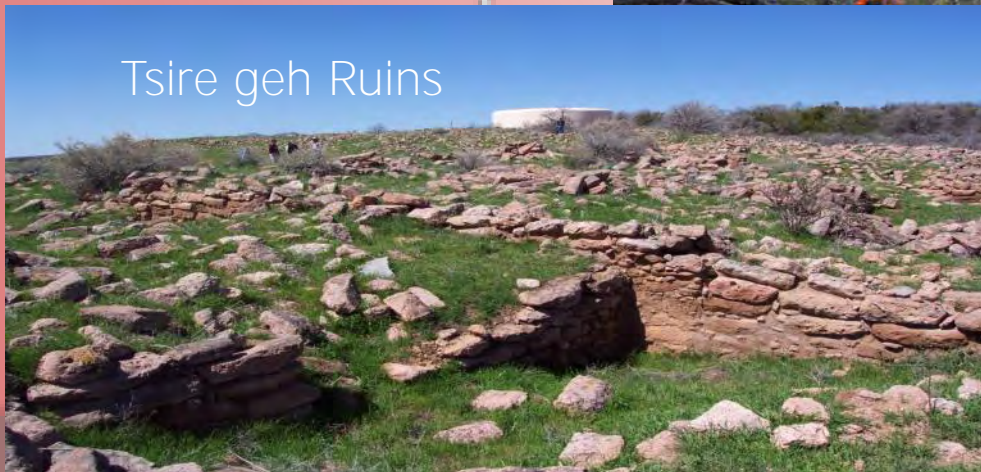
Responsibilities of Cultural Resources Program

- Cultural Resources Advisor

- Incorporates proprietary information regarding traditional practices for the Tribal Risk Assessment

- Ensures preservation of historic sites both on and off the Pueblo

- Emphasis on LANL activities that affect historic and cultural sites

- Monitor and assist DOE and LANL with new archaeological findings

- Identify discoveries of ancient remains or items of cultural sensitivity

- Categorize all Traditional Cultural Properties (TCP) within the DOE/LANL boundary

Tribal Risk Assessment

TYPICAL EXPOSURE PATHWAYS
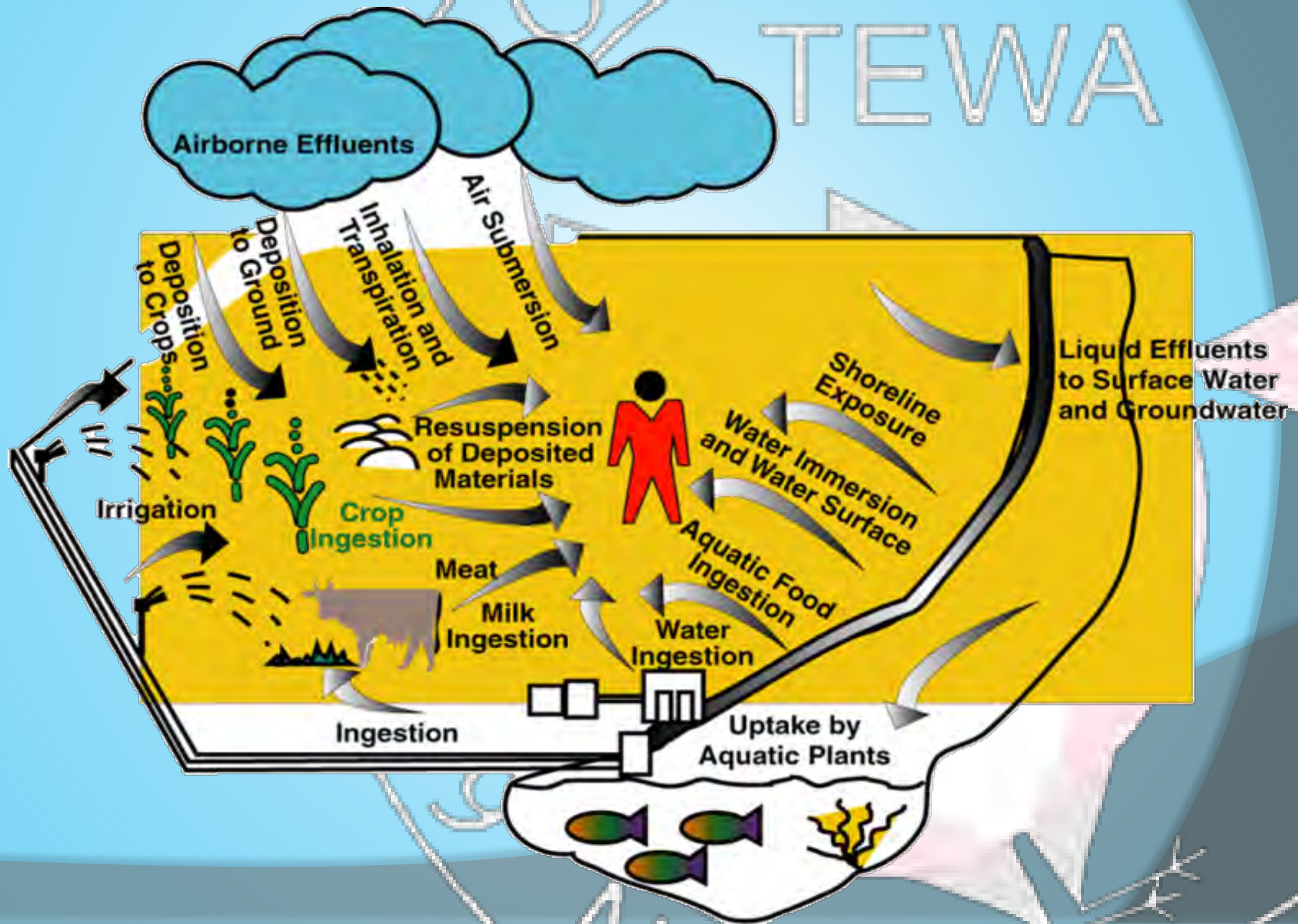
SPECIFIC EXPOSURE PATHWAYS

- Hunting
- Pottery making
- Farming
- Outdoor work

Traditional Pueblo lifestyle

- Home
- Office
- School

Quality Assurance

- Quality Management Plan

- Quality Assurance Project Plan – Water Quality

- Quality Assurance Project Plan – GIS

- Statement of Work for Analytical Services

- Electronic Data Deliverable Requirements Document

- Validation of DECP Data

- EPA requires all data collection to go through exhaustive data quality requirements

- DECP QA process is equivalent to state and federal requirements

Document Review

LANL

- Annual Environmental Surveillance Report
- Environmental Assessments
- Environmental Impact Statements
  - *DOE Surplus Plutonium*
  - *CMRRNF*
- Findings of No Significant Impact

Permitting

- Hazardous Waste
- Air
- National Pollutant Discharge Elimination System

DOE

- Risk Based End States
- Long Term Stewardship

Technical Review/Oversight

DECP

- Tribal Risk Assessment
- Water Quality
- Database
- Laboratory Analysis
- Grants

Data Review

- DECP
- LANL
- NMED

NRDA

Aamodt

Community Outreach

ITRC

- Metals and Radionuclides Team
- Stakeholders Team
- Petroleum Vapor Intrusion Team

DECP Database

DECP Database is a SQL Server data storage

warehouse

DECP Database is a logically designed, scalable

repository for public and in-house environmental data

The environmental data consists of soil, sediment, air, and water

sample information, sample location information and the

analytical results of chemicals found in those samples

Data Summary

- 4,013,177 analysis results

- 78,339 San Ildefonso analysis results

- 27,331 Total sample location records

- 200 San Ildefonso sample locations

- 1,959 Analyte records

DECP DB Web Application

The **DECP Database** is a web based software system that will retrieve environmental data from the SQL Server database and generate tables, reports and graphs

The application is written with a combination of PHP, HTML and JavaScript technologies

Typical Web Page for DECP Database Search

Geographical Information Systems

Program Guidance Documents

- GIS Management Plan

- GIS Quality Assurance Project Plan (EPA)

- Standard Operating Procedures
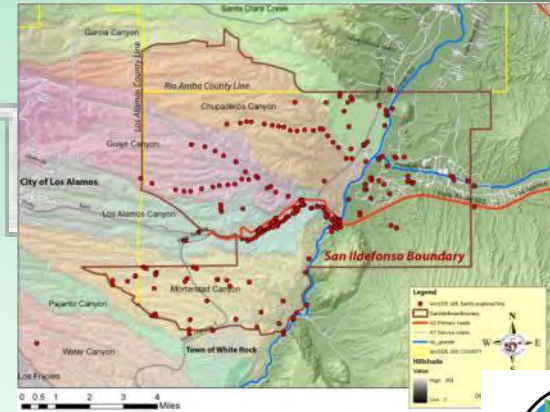
Environmental Studies and Research Institute (ESRI) software

- Dedicated server for repository for all raw geospatial data

- ArcGIS for server enterprise concurrent license as platform to network servers

- ArcGIS server manager – intra-departmental connection for functionality

- ArcInfo 10.0 desktop application for map production, data processing/sharing

Geospatial Data Inventory

- Raster, Vector, Maps, Aerial Imagery, LIDAR , Surface Terrain

- Data Layer Collection: BIA, County of Santa Fe, USGS, NMED, LANL
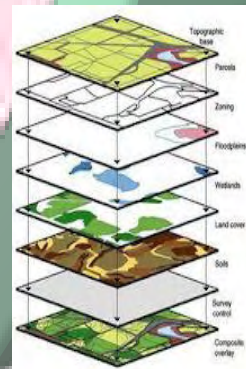
GIS Map Services

Layer Library

- Permission based user friendly data layers

- Linked with environmental tabular database

- Remains "Dynamic"

Map Catalog

- Open file server

- Production maps

- Remains "Static"

Environmental Monitoring and Map Production

- Provide layers and geospatial data for Environmental mapping tools

- Sample event planning

- Identify landmarks, hydrology, significant structures and restricted areas
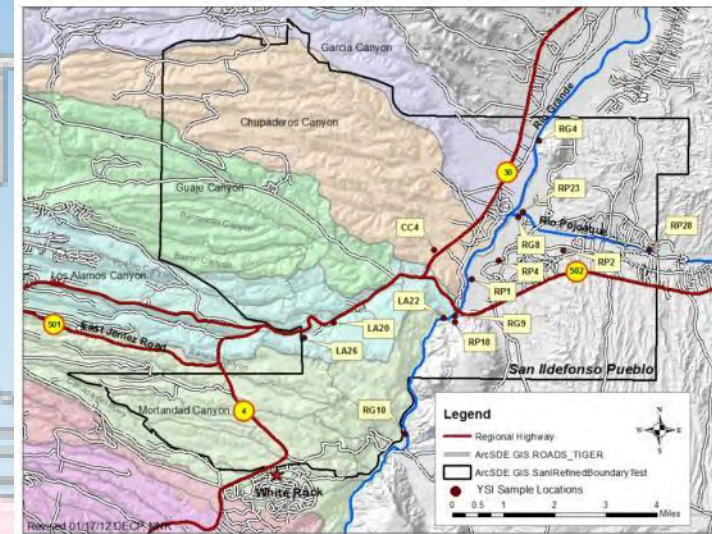
- Historical studies
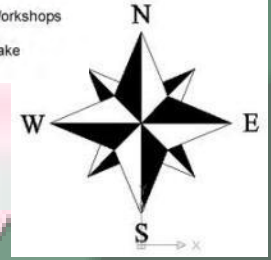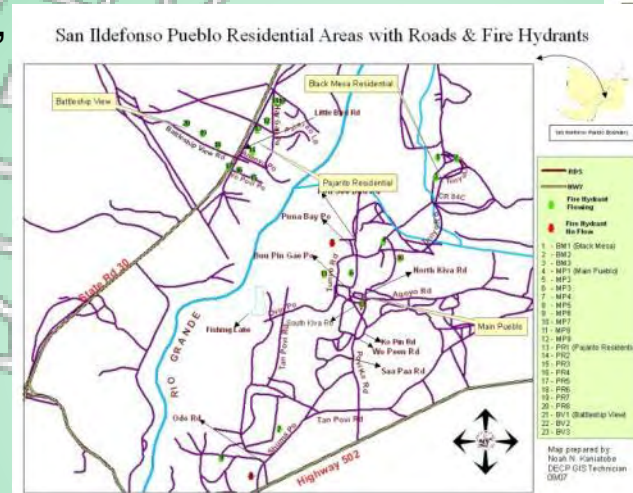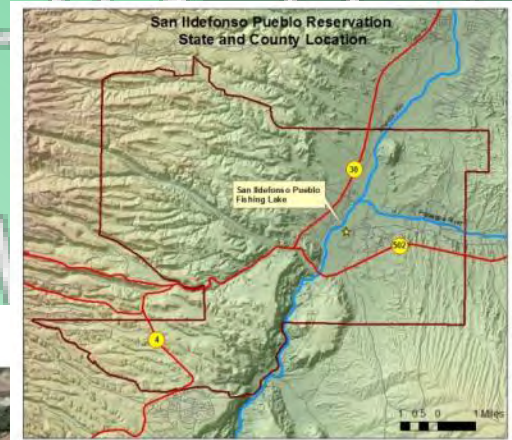
Water Quality Monitoring

Monthly Physiochemical Parameters

YSI Professional Plus / HACH 2100Q Turbidmeter

- *Dissolved Oxygen (mg/L / % sat.)*
- *Temperature*
- *Conductivity*
- *Oxidation/Reduction Potential (ORP)*
- *pH*
- *Turbidity*

Tribal Designated Uses

- Annual Use Attainability Analysis (UAA)
- *14 locations (perennial / ephemeral streams, ponds, springs)*
- *Compared to New Mexico Environment Department Standards*
- *Data uploaded to EPA STORET*

Table 1 - Selected Sites for Monitoring

PUEBLO DE SAN ILDEFONSO SAMPLE ID, LOCATION, AND DESIGNATED USES — Location	Domestic Water Supply	Irrigation	Primary Contact	Secondary Contact	Livestock Watering	Wildlife Habitat	Marginal Coldwater	Coolwater	Warmwater	Marginal Warmwater	Limited Aquatic Life
CC4			X			X					
LA20				X		X					X
LA22				X		X					X
LA26				X		X					
RG4	X	X	X		X	X	X				
RG8	X	X	X		X	X	X				
RG9	X	X	X		X	X	X				
RG10	X	X	X		X	X	X				
RP1			X			X				X	
RP2		X	X		X	X		X			
RP4			X			X		X			
RP18				X		X					
RP23		X		X	X	X				X	
RP28		X		X	X	X				X	

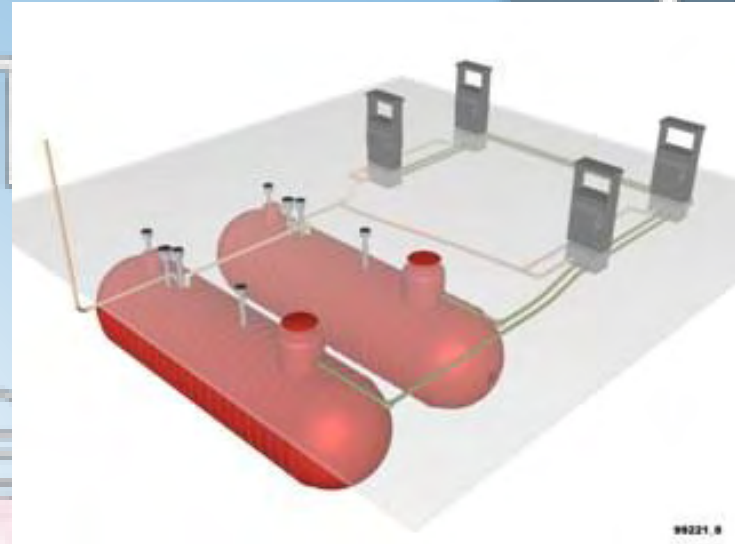X = Does not meet all requirements for designated uses

Water Quality Monitoring

Underground Storage Tanks

- Two Tribally-owned gas stations

- ENIPC OETA, EPA compliance inspections

- UST Summary

Solid Waste

- Transfer Station Certified Operator

- Recycling Facility Certified Operator

- Assist with mapping of illegal

  dumpsites

Environmental Sampling

- Samples collected / field data recorded (San I APP)
- Chain of Custody (COC) to LANL SMO
- Samples shipped to GEL analytical laboratory
- Electronic Data Deliverable (EDD) sent to DECP
- Quality assured through DECP staff and AQA
- Data is downloaded into DECP database available through a customized web application
- Used to determine future sampling
- Data Results

Air Quality

LANL Maintains:

- 2 AIRNET Stations

- 3 Thermo Luminescent Dosimeters (TLDs)

Radon

- Tribe provides radon testing

Monitors LANL onsite emissions

Conducted Emissions Inventory in 2008

Emergency Response "WIPP Program"

TA 54 (AREA G), south of San Ildefonso boundary

Domes at TA-54 that store Transuranic Waste

WIPP TRUPACT II Containers

TA-54 (Area G) from San Ildefonso Pueblo Sacred Area

Community Outreach

DECP newsletter

DECP internships

- Pueblo youth

- SFIS ITEST program

DECP program presentations

- Community open house

- EPA and DOE funding agencies

- Local schools

DECP participation in community outreach and engagement

- Guiding Eagles, Red Ribbon week, Santiago Day, Easter egg event

- Summer youth program

- Community health fairs

Tour of cultural sites on LANL Property

Professional Development

- LANL – GET, Environmental Surveillance, AIRNET, LANL SOPs

- Cultural Resources

- Database Management

- Tribal Risk Assessment

- Water Quality

- GIS/GPS

- QA/QS Management

- WIPP Coordination

Conclusion

- The Pueblo de San Ildefonso has existed far longer than the U.S. Government, and it seeks to use its collective wisdom to partner with local, state and federal agencies for mutual benefit

- Ultimately, DECP provides scientifically validated information to the Pueblo administration and community as guidance and basis for sound management practices in relation to the community's extensive cultural and natural resources

- DECP will continue to assist the Pueblo however necessary, including advising on solid waste matters, underground storage tank issues, and providing mapping and other forms of support to other departments and community members