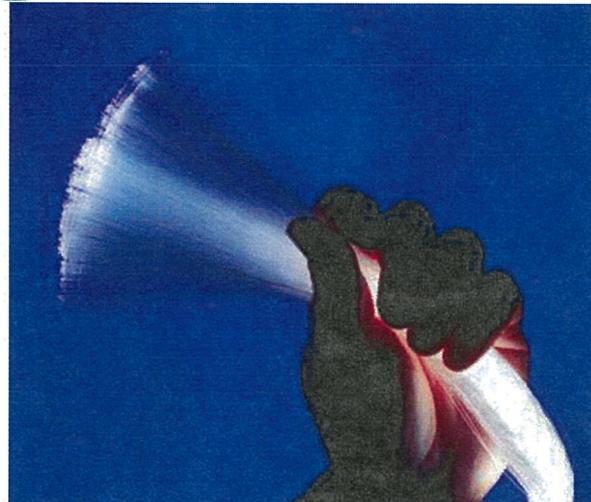
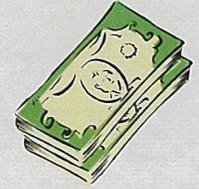


# BROADBAND REPORT New Mexico

**Economic & Rural Development  
Committee  
July 2014**



# BROADBAND PROGRAM



- NTIA Funds – Completion December 2014
  - Total Federal Award: \$4.8M (Jan 2010)
    - State Match: \$1.2M (20%)
- Grant Components
  - Mapping: \$3.1M (Five Years)
  - Planning: \$500K (Five Years)
  - Capacity Building \$600K (Four Years)
  - Technical Assistance \$560K (Four Years)
- Contracted Services
  - Twelve Contractors (One Out of State)
  - No Government Growth
  - Leverage GIT Build Out



NEW MEXICO  
DEPARTMENT OF  
INFORMATION TECHNOLOGY



BROADBANDUSA  
CONNECTING AMERICA'S COMMUNITIES

# MAPPING: NM BB MAP

- New Mexico Broadband Map (Availability)
  - Source – Internet Provider Data
    - Type of Technology
    - Provider Service Area and Contact
    - Search – Address, Community, Area, or Point
    - Speed Test



**New Mexico Broadband Map - V 4.0**  
Department of Information Technology (DoIT)  
Data update: 1 October 2012

The screenshot shows the main interface of the New Mexico Broadband Map. It features a central map of New Mexico with various broadband coverage layers overlaid. On the left, there is a 'Layers' panel with a 'Layer Visibility' section containing checkboxes for Broadband Coverage, DSL, Cable, Fiber, Copper Wire, Fixed Wireless, Mobile Wireless, and Satellite. Below this is a 'Legend' panel with color-coded boxes for New Mexico, DSL, Cable, Fiber, Copper Wire, Fixed Wireless, and Mobile Wireless. On the right, there is a 'Find Address' search box with a dropdown menu for 'Technology of Transmission' set to 'DSL'. Below the search box, a 'Locations found: 1' popup shows 'Mora, NM' with a 'Score: 100' and a 'Zoom to' button. Another 'Identify' popup is visible, showing 'Technology of Transmission: DSL' and a 'Clear' button. The top of the interface includes navigation tools like a compass, zoom in/out buttons, and map style options (Streets, Aerial, Topo).

# CAPACITY BUILDING: Framework

## ■ Coordination

### ■ Broadband Executive Committee

- BEC Members: [http://www.doit.state.nm.us/broadband/exec\\_committee.shtml](http://www.doit.state.nm.us/broadband/exec_committee.shtml)

### ■ Broadband Working Group

- Working Group Info: [http://www.doit.state.nm.us/broadband/bb\\_workgroup.shtml](http://www.doit.state.nm.us/broadband/bb_workgroup.shtml)

### ■ Health, Education, Economic Development

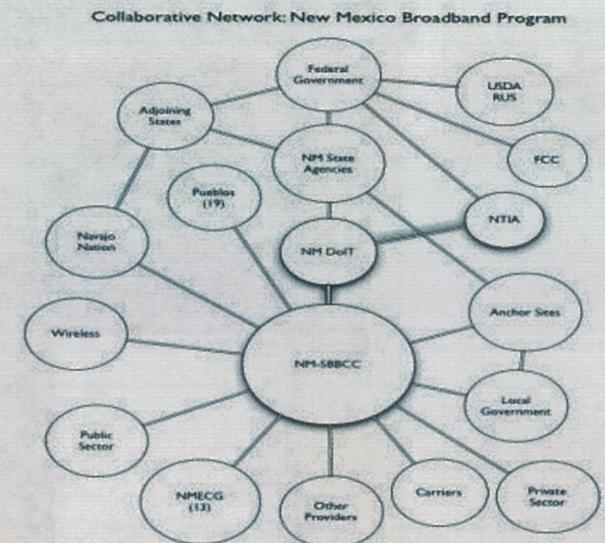
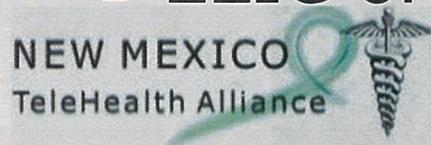
- Governance, Digital Literacy, Tribal

### ■ PSFA IT Advisory Group

### ■ NM TeleHealth Alliance

### ■ NM Technet

### ■ EEIC of New Mexico



# TECHNICAL ASSISTANCE

- New Mexico Broadband Videos
  - Overview, Education, and Health
- Public Internet Training & Access (PITA)
  - Statewide Inventory (275+)
  - Institutions, Content, Resources
- Train the Trainer Program
  - Locally Branded Content
  - Targeting Professional Sectors
  - Basic and Business Instruction
- Native Lands Broadband Pilot
  - Telecom Infrastructure Mapping
  - Pueblo Adult Care Centers
  - Navajo Chapter Houses



NM Broadband Videos: <http://www.youtube.com/NMBroadband>

Public Internet: <http://www.nmbbmapping.org/pita/>

Digital Literacy: <http://www.doit.state.nm.us/broadband/training/resources.shtml>

# PLANNING: Strategic Plans

## ■ Statewide Strategic Plan (October 2014)

### ■ Action Document

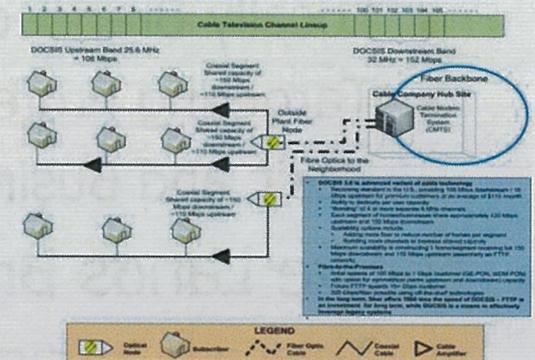
- Issues, Gaps, and Actions (Solutions)
- Administrative Structure, Governance, Industry, and Funding
- Major Sectors: Education, Health, Economic Development



## ■ Strategic Business Sector Plans (November 2013)

### ■ Business Sectors: **Health, Education, and Economic Development**

- Development of a Working Group
- Survey of Broadband Existing and Future Uses
- Broadband Gap Analysis
- Summary of Emerging Services
- Barriers to Service Adoption
- Broadband Applications
- Funding Sources
- Existing Initiatives
- Recommendations



Report:

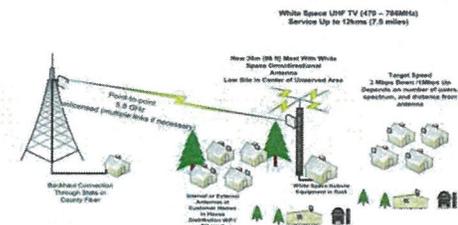
[http://www.doit.state.nm.us/broadband/reports/NMBBP\\_Report\\_Assess\\_Recommendations.pdf](http://www.doit.state.nm.us/broadband/reports/NMBBP_Report_Assess_Recommendations.pdf)

Health: <http://www.doit.state.nm.us/broadband/health.shtml>

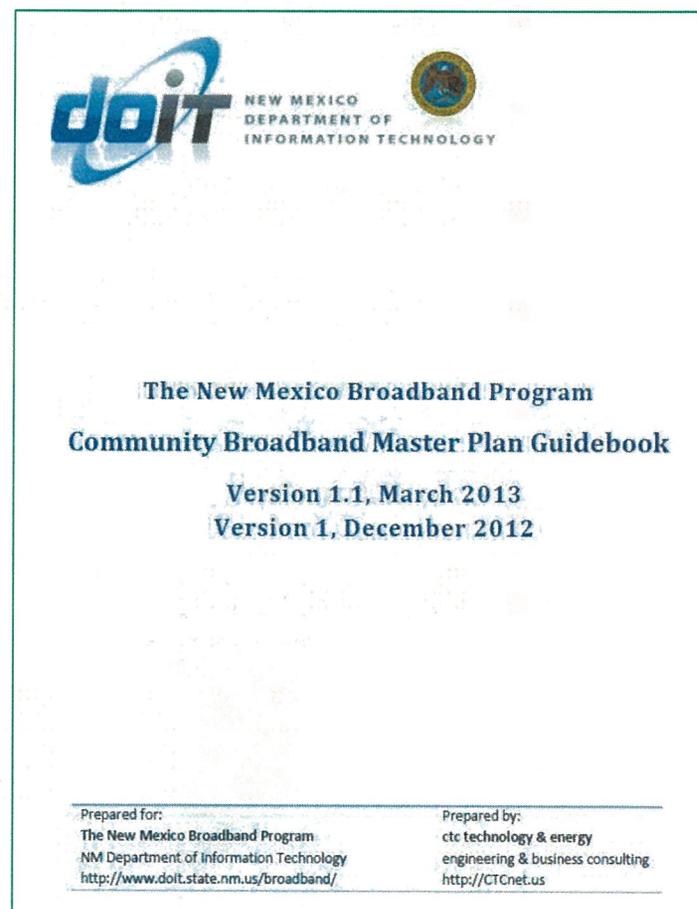
Education: <http://www.doit.state.nm.us/broadband/education.shtml>

Economic Development: <http://www.doit.state.nm.us/broadband/economic.shtml>

# PLANNING: Tools

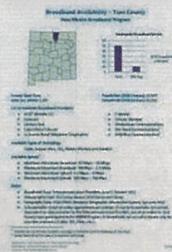
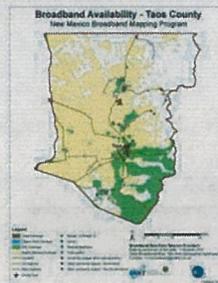


- Community BB Master Plan Guidebook
  - Requirements (supply and demand analysis)
  - Collaborative structure
  - Technology models
  - Business cases
  - Funding strategies
  - Benefits
  - Risks
  - Community engagement



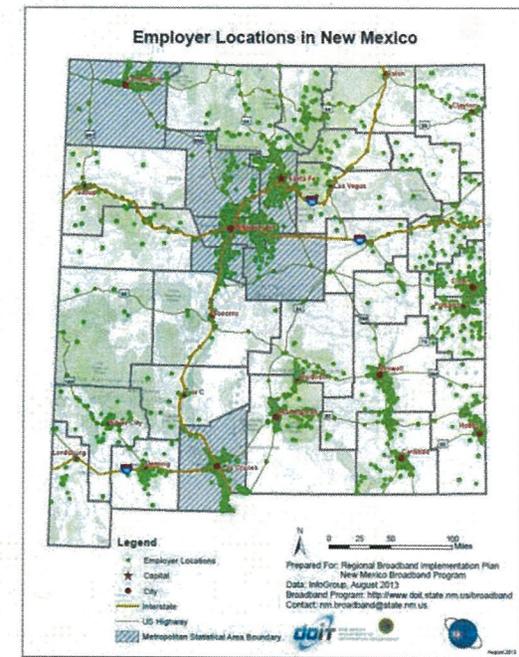
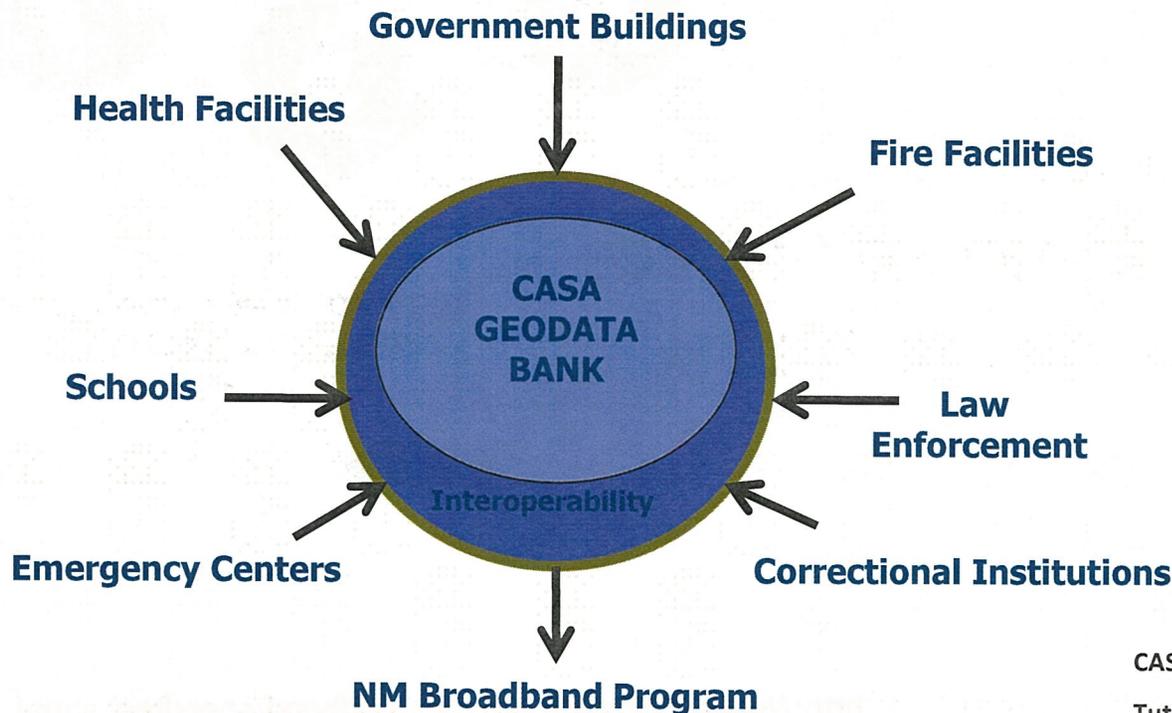
# PLANNING: Tools

- Broadband Map Gallery
  - Statewide, Regional, and County Maps
    - Native Lands
    - Telephone Exchange Boundaries
    - Census Blocks
    - Broadband Availability
    - Community Anchors
    - Statistics
    - Boundaries



# PLANNING: Tools

- NM Broadband Subscription and Use
  - Report: [http://www.doit.state.nm.us/broadband/reports/NMBBP\\_bb\\_use\\_0613.pdf](http://www.doit.state.nm.us/broadband/reports/NMBBP_bb_use_0613.pdf)
- Community Anchor Site Assessment (CASA)
  - Public and Private Facilities Requiring BB
  - First in New Mexico within one Database
  - Crowd Sourcing Update



CASA Crowd Sourcing: <http://nmbbmapping.org/bbcrowd/>

Tutorial Video: <http://www.youtube.com/NMBroadband>

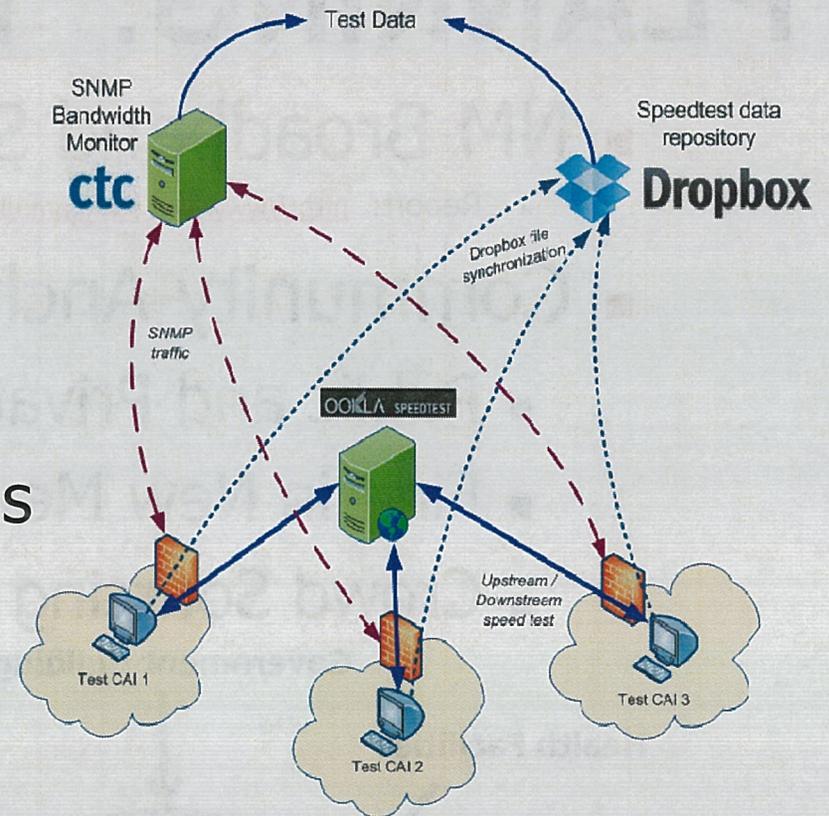
# PLANNING: Tools

- Performance Testing

- Public Institutions
- Identify Bumps
- Work with Industry for Solutions
- Schools Testing in Progress

- Speed Test Performance

- Implemented an Enhanced Upgrade
- Speed Test Blitz – August 2014



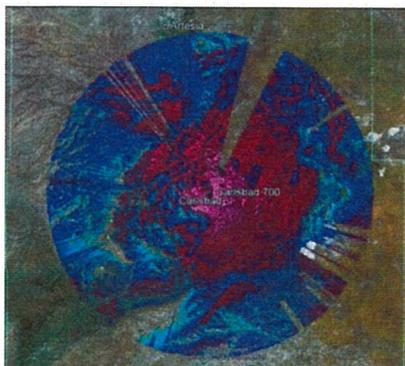
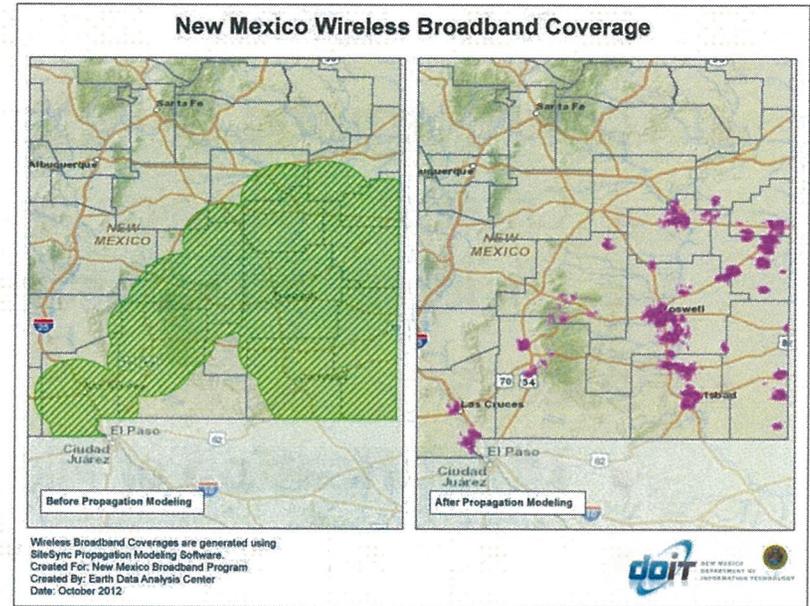
A screenshot of a web-based speed test form. The form includes a 'Connect' dropdown menu, a 'Family Name' field with the value 'Elias' Mobile Mechanic', a 'Street Address' field with '702 Paleokou Place', a 'City' field with 'Santa Fe', a 'ZIP' field with '87501', a 'Monthly Price (\$)' field with '\$29.99', a 'Internet Provider name' field, and a 'Type of Technology' dropdown menu with 'Fiber' selected. A 'Begin Test' button is at the bottom.



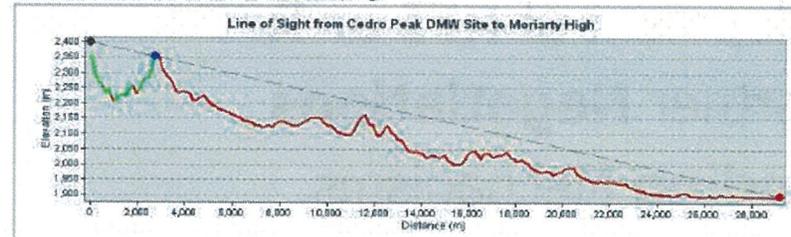
Speed Test: <http://www.doit.state.nm.us/broadband/speedtest.shtml>

# PLANNING: Tools

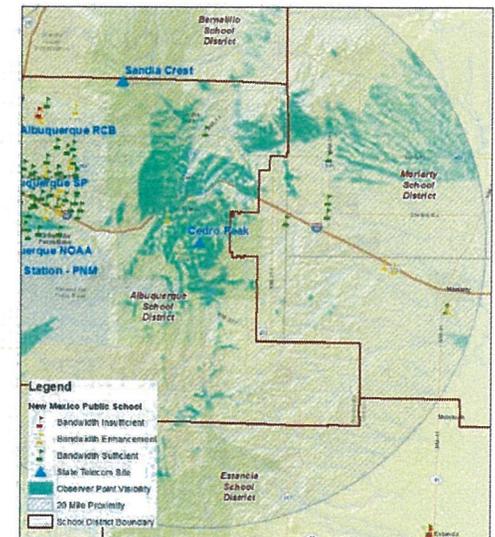
- Modeling
  - RF Propagation Modeling
    - Accurate Coverage
  - Viewshed Analyses
    - Twenty Mile Radius (WiFi)
  - Line of Site Assessment
    - Equipment Requirements



b. LOS from Cedro Peak DMW Site to Moriarty High

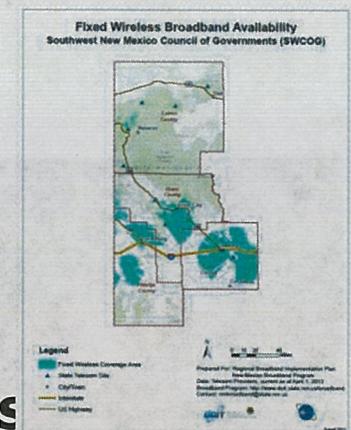


- Black point: Observer point (DMW Site)
- Blue point: Obstruction Point
- Red point: Target point (School), not visible from the Observer point
- Green line: Visible terrain
- Red line: Non-visible terrain



# ADOPTION: Regional

- Regional Broadband Implementation Plans (RBIP) Pilots
  - Three Regions Selected (NEEDO, SWNMCOG, NWNMCOG)
    - Criteria: champion, middle mile requirements, rural
    - Solution: infrastructure gaps, funding, RFI/RFP
  - Process
    - **Identification** of Pilot Regions
    - Develop a **Planning Model**
    - Create a Pilot Area **Supply and Demand** Assessments
    - Generate a Pilot Area **Technology Plan**
    - Compile a Strategic and **Business Plan**
    - Assist Development of **RFI or RFP**
    - Facilitate Partner **Negotiations**
    - Identify **Funding** Mechanisms
    - Prepare Implementation **Plans and Specifications**



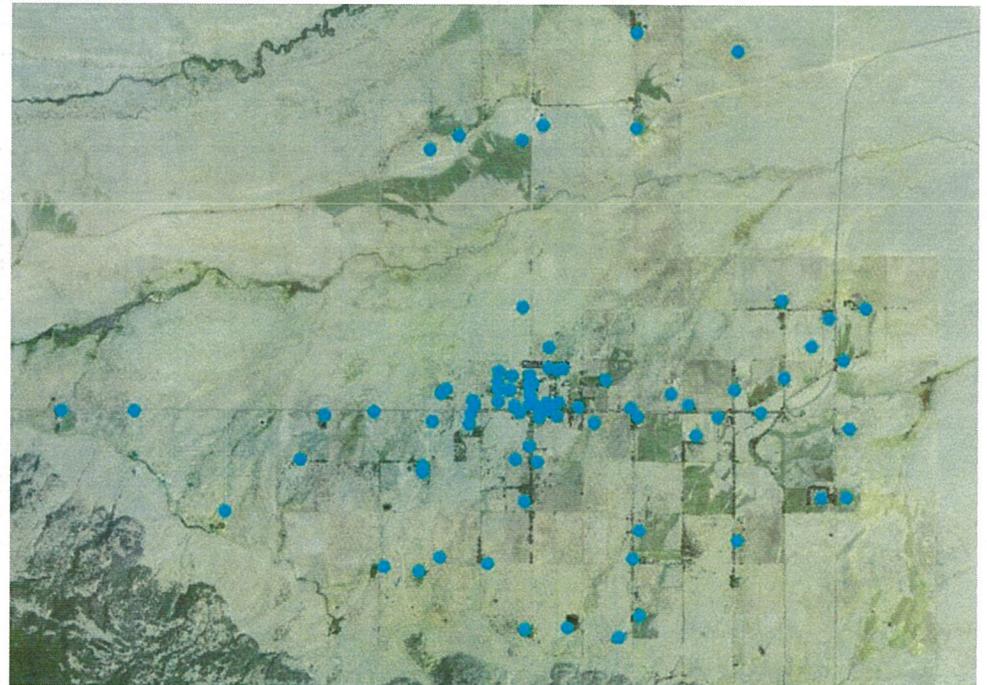
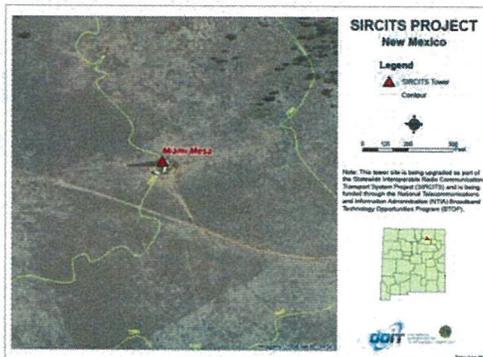
# ADOPTION: Example

## ■ Rural Regional Collaborative Focus

- Development of a community team
- Assessment of existing infrastructure/services
- Engagement of telecom industry into solution
- Mending of technologies into a solution fabric

## ■ Small Town, New Mexico

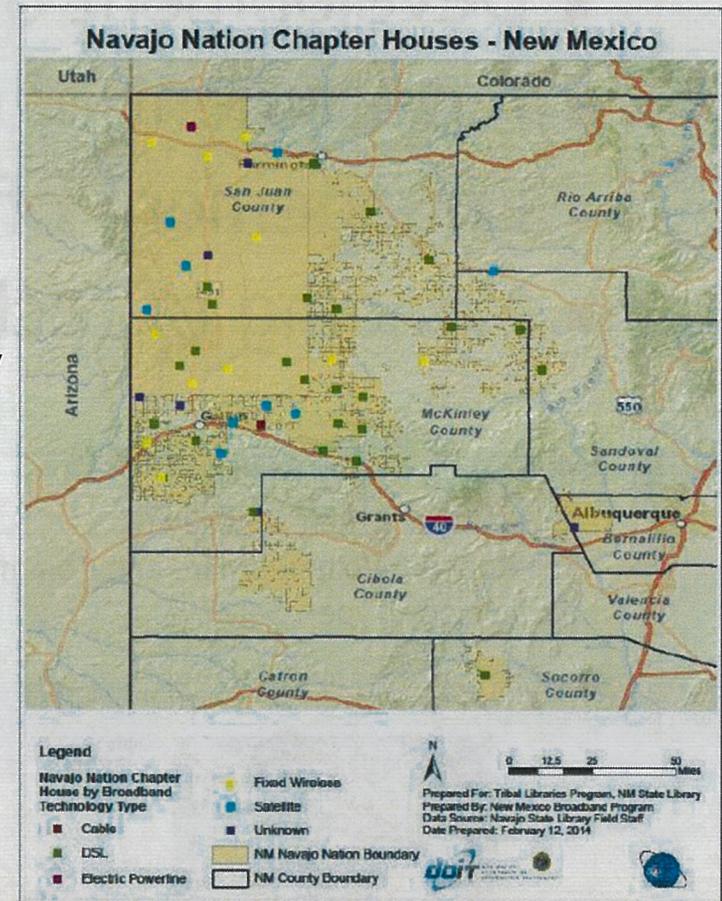
- Households: Approximately 65
- Institutions: Volunteer Fire and Community Center
- Technology Type: Satellite



# ADOPTION: Chapter Houses

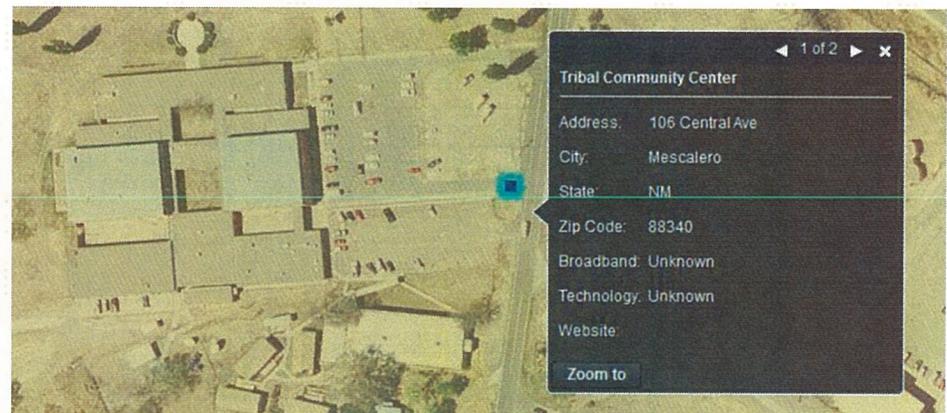
- Navajo Nation Chapter Houses
  - Collaborative
    - NN Community Development
    - NN Telcom Regulatory Commission
    - NM State Library
    - NM Dept. of Information Technology
  - Technology Gaps Identified
  - Recommendations Proposed
  - Navajo Council Funding Solutions

NOTE: Report not yet public



# ADOPTION: Senior Centers

- Senior Center Broadband Assessment (In Progress)
  - Access to computers
  - Hours available
  - WiFi
  - Internet Service Provider
  - Monthly costs
  - Purchased speeds
  - Type of technology
  - Service adequate
  - Educational content
  - Needs to enhance broadband

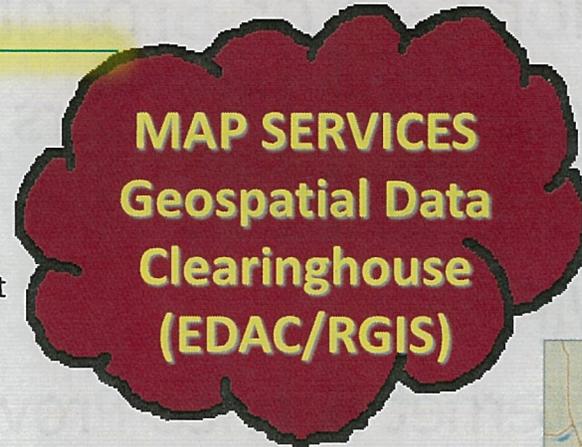


- Results: Standardize Equipment Funding

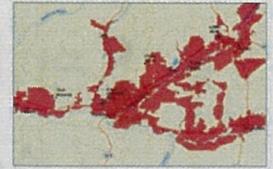
# GeoSERVICES: Broadband Map

## New Mexico Broadband Map (Availability)

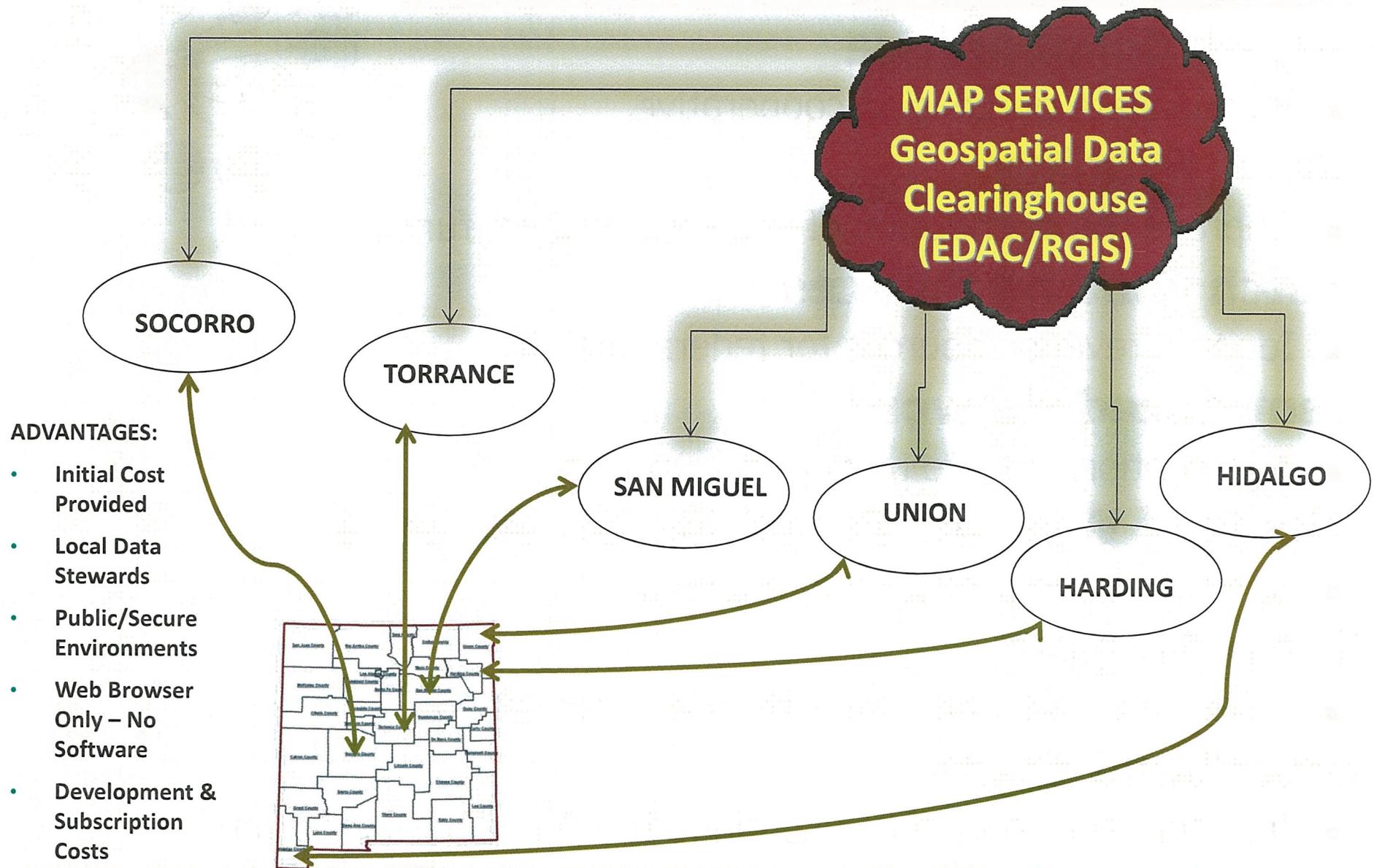
- Source – Provider Data
- Type of Technology
- Search – Address, Community, Area, or Point



BROADBAND



# GeoSERVICES: NM Counties



DEMO: <http://nmwatch.org/socorro/>

# Recommendations: Cross Cutting\*

## NM BROADBAND ASSESSMENT AND RECOMMENDATIONS:

### Healthcare, Education, and Economic Development

#### ■ **Buying Collaborative**

- Pursue state purchasing cooperative

#### ■ **Smart Funding**

- Improve the distribution of state and federal funds

#### ■ **Match Funding Sources**

- Identify revenue sources for federal match

#### ■ **Centralized Network**

- Aggregation of state managed networks

#### ■ **Rights of Way and Franchise Agreements**

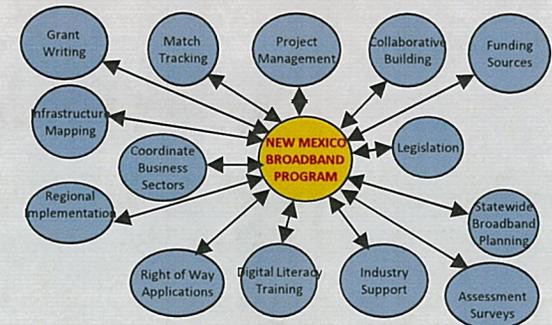
- Streamline the process and approval

#### ■ **Tribal Support**

- Advance broadband connectivity and education

#### ■ **Broadband Entity**

- Independent nonprofit to continue the Broadband Program



# Recommendations: Education\*

- **Connectivity Management**
  - Establish a statewide managed educational network
- **Internal Connectivity Support**
  - Provide a technical support group for smaller school districts
- **E-Rate (Schools, Libraries, and TeleHealth)**
  - Modernize the management of the NM E-Rate Program
- **Technical Educators**
  - Provide professional development to teachers and staff
- **Online Learning**
  - Ensure equipment and training are available
- **Software and/or Application Standards**
  - Create online digital content and enhance STEM



# Recommendations: Healthcare\*

## ■ Telehealth Coordination

- Designate the NM Telehealth Alliance as coordinating entity

## ■ Telehealth Data

- Develop a central online data warehouse



## ■ Telehealth Infrastructure Fund

- Create a fund to cover costs of equipment and training

## ■ Reimbursement Rates

- Continue development of fair reimbursement rates

## ■ Professional Development

- Provide education and training to stay current

## ■ Health Facility Infrastructure

- Meet technical and infrastructure facility requirements



# Recommendations: Economic\*

- **Education and Outreach**

- Establish a broadband publicity effort

- **Strategic Planning**

- Five year plan with annual updates that include broadband

- **Partnerships**

- Create local project task forces to support long term planning



# THANK YOU



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**Contact:**

Gar Clarke, NM Broadband Program Manager

Email: [george.clarke@state.nm.us](mailto:george.clarke@state.nm.us)

Broadband Portal: <http://www.doit.state.nm.us/broadband/index.shtml>



**National Telecommunications  
and Information Administration**