

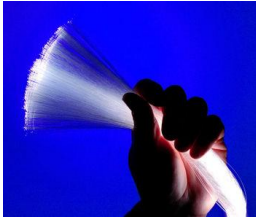
# CASA: PUBLIC FACILITIES New Mexico Broadband Program

**Office of Broadband and Geospatial Initiatives**  
**Department of Information Technology**  
**August 2018**

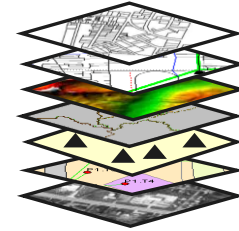


**Building a Statewide Solution**

# OFFICE OF BROADBAND AND GEOSPATIAL INITIATIVES



(OBGI)



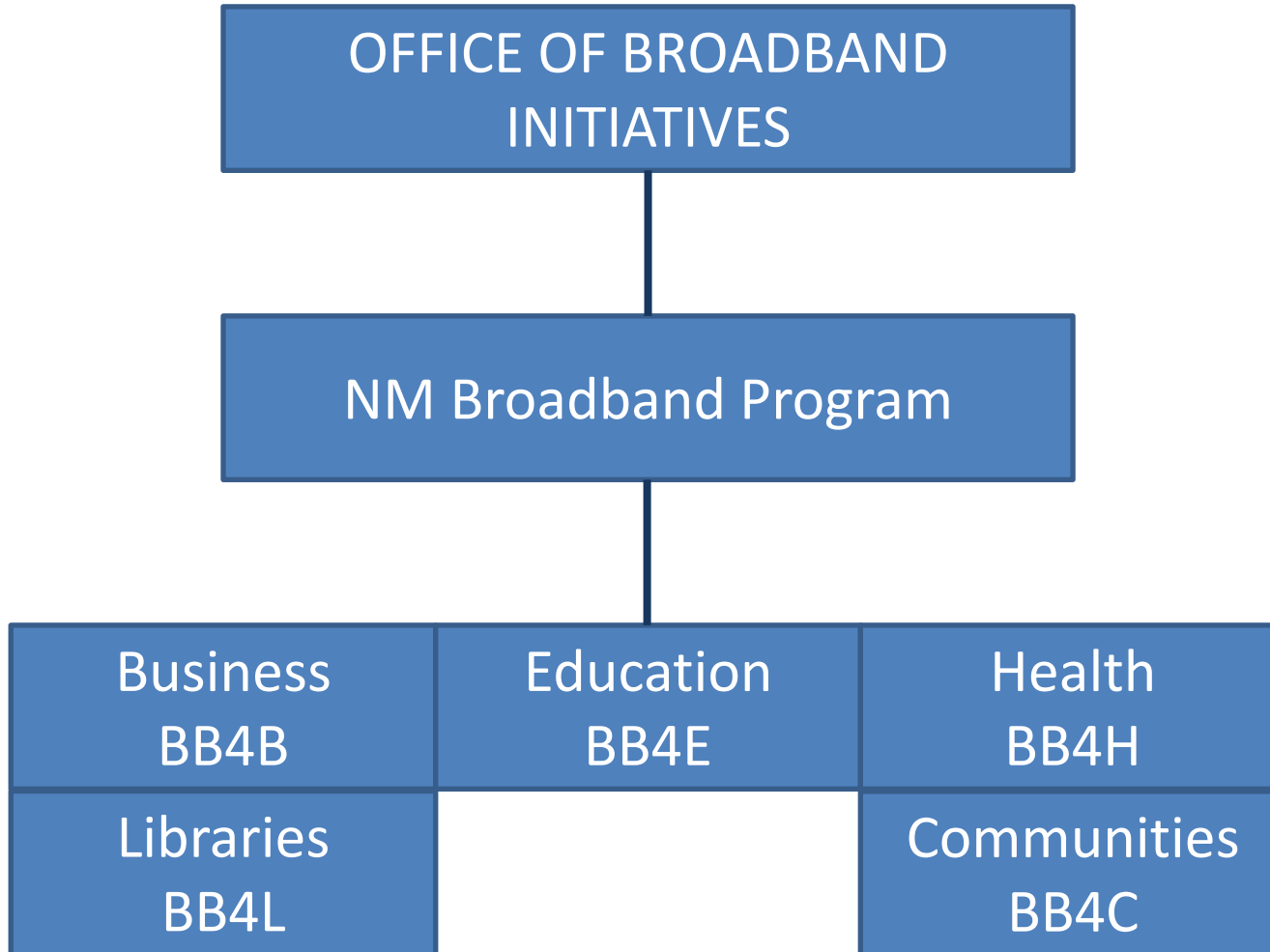
## PURPOSE:

- **Coordinate** Broadband and Geospatial activities in New Mexico
- **Collaborate** with State, Local, Federal, and Private entities
- **Leverage** returns on investments, economies of scale, and sustainability

## OUTCOME:

- An integrated and statewide implementation of Broadband Infrastructure/Digital Literacy and Geospatial Technology that consolidates resources into actionable solutions.

# OBGI: Broadband Initiatives - Structure

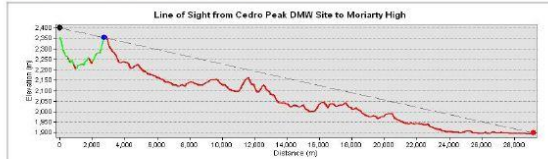


# OBGI: Services - Resources

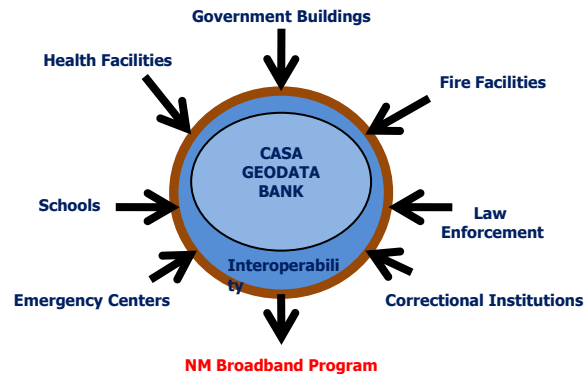
**Coordination:** Government, Industry, and Tribal  
**Reports:** Strategic Plans, Sector Solutions, Educational  
**Engineering:** Network Design and Equipment  
**Testing:** Network Performance and Speed Testing  
**Analytics:** Propagation, Viewshed, Line of Sight, Co-Locate  
**Data:** Infrastructure, Anchors, Business, and Residential  
**Mapping:** Online and Map Products



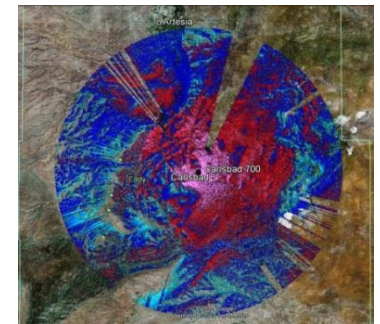
b. LOS from Cedro Peak DMW Site to Moriarty High



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

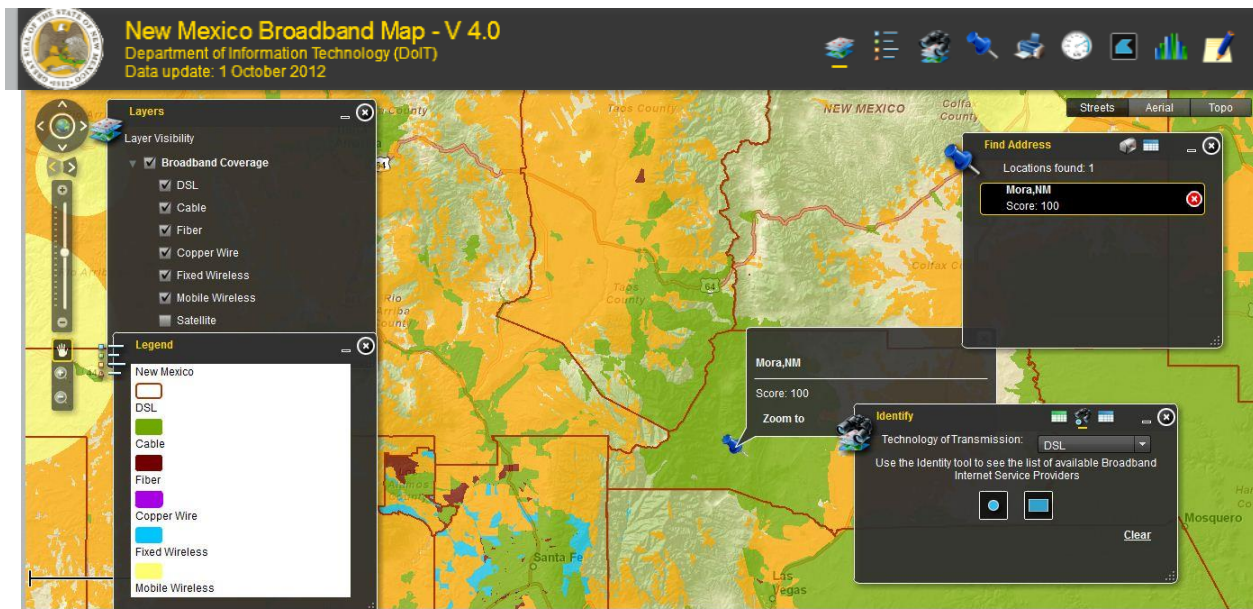
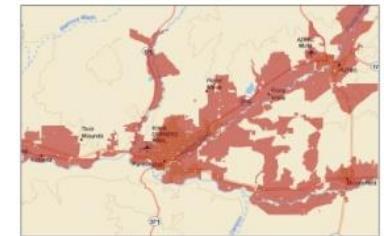


NM Broadband Program



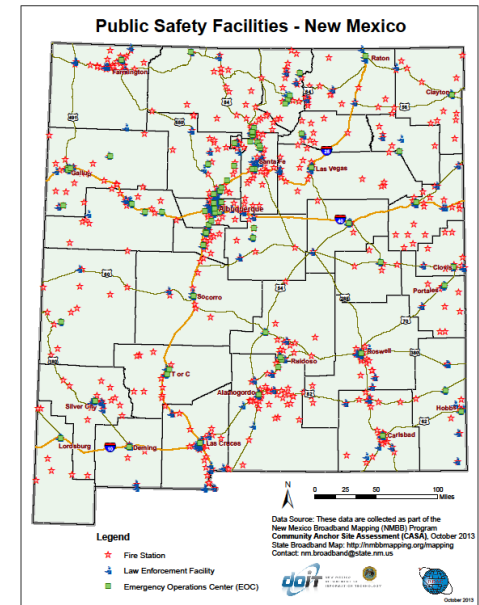
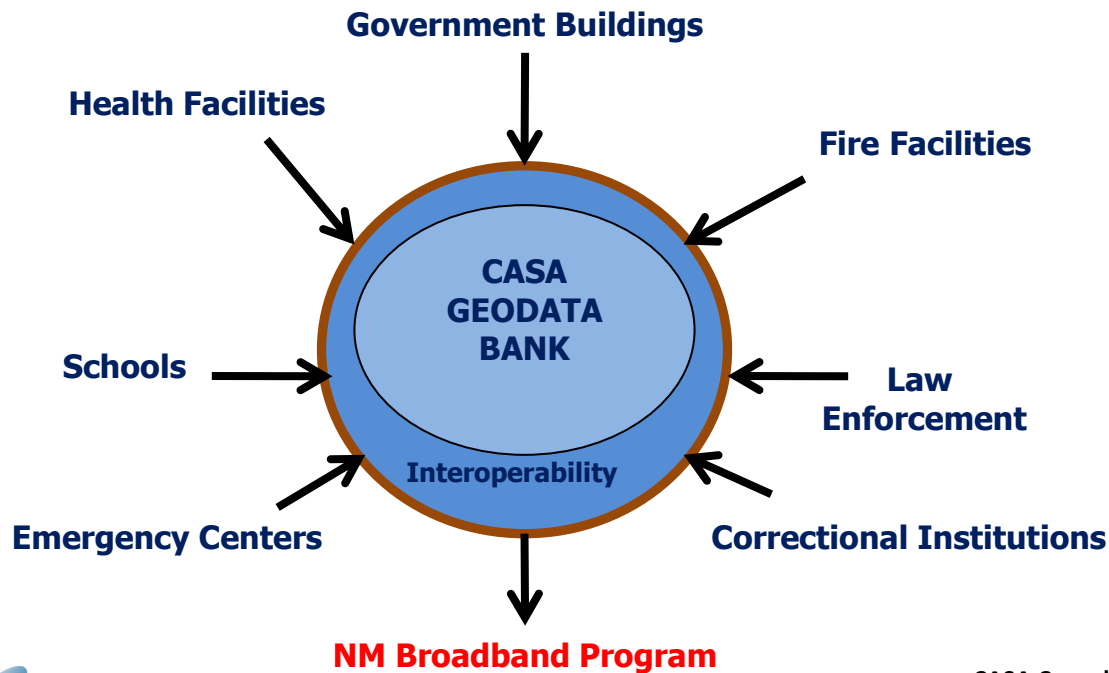
# SERVICES: Mapping

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



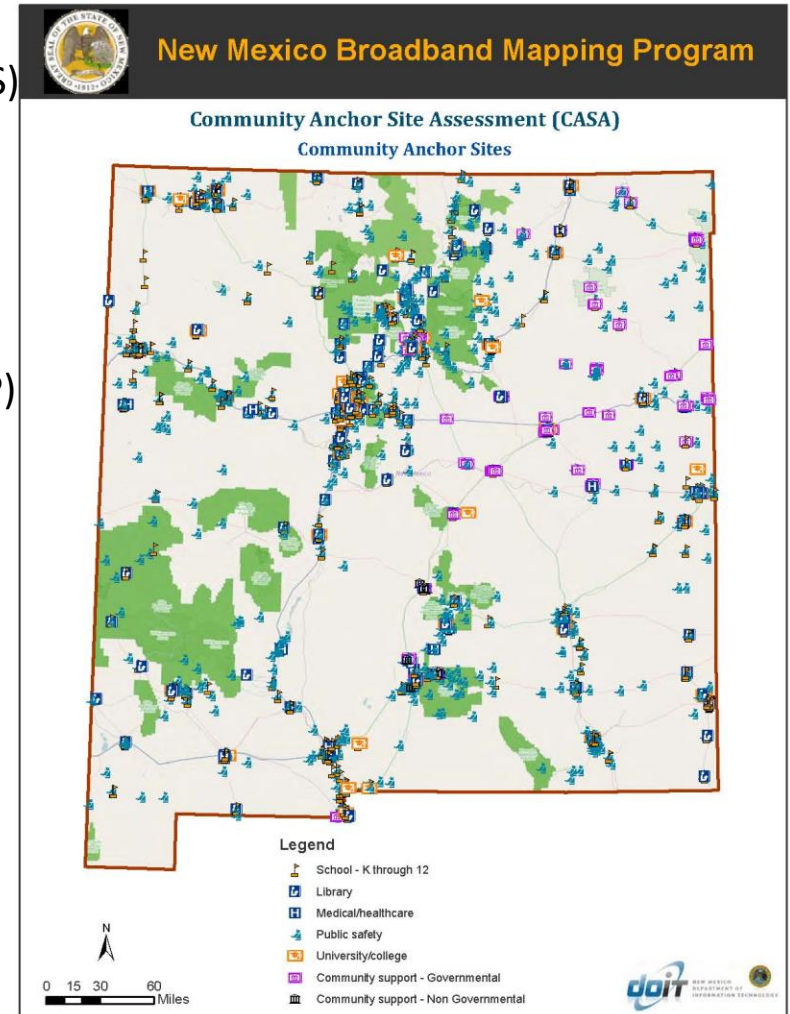
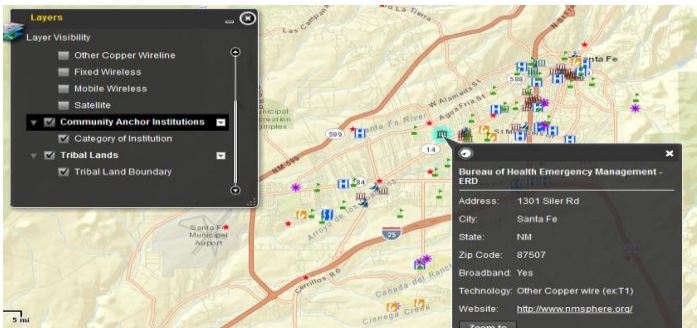
# SERVICES: Data - CASA

- Community Anchor Site Assessment (CASA)
  - Public Facilities Requiring Broadband Services
  - First in New Mexico within one Database
  - Crowd Sourcing Update Application



# CASA: Data Sources

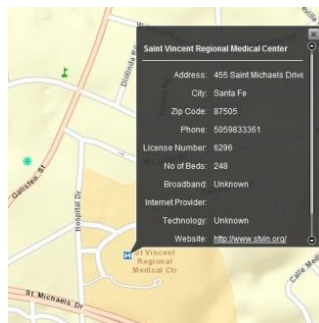
- Integrated Database of Public Facilities
  - Fire Stations (Fire Marshal)
  - Government Buildings (General Services/LCS)
  - Health Facilities (Dept. of Health)
  - Libraries (State Library)
  - Schools (NM Public Education Department)
  - Readiness Centers (National Guard)
  - Emergency Operations Center (US DHS/HSIP)
  - Miscellaneous (USGS/GNIS)
  - County Assessors
  - Municipalities/Towns
- Update Strategy – CrowdSourcing





# CASA: Data Classification

- Medical/Healthcare
  - Hospitals
  - Nursing Homes
  - Urgent Care
  - School-Based HC
  - Federally Qualified HC
  - Emergency Medical Services
- Public Safety
  - EOC
  - Fire Stations
  - Law Enforcement
  - Correctional Facilities
- Education
  - Public Schools – K12
    - District Offices
    - Traditional
    - Alternative
    - State/District Charter
    - Grant/BIE Tribal
  - Higher Education
- Government
  - State Government
  - Local Government
- Library
  - Regional
  - Branch
  - Bookmobile Stop
- Non-Governmental





# CASA: Geo Types

- Complex (Point)
  - Name
  - Total Number of Buildings
- Building (Point)
  - Square Footage
  - Number of Floors
  - Lease Agreements
- Building Footprint (Polygon)
  - Broadband Service Provider
  - Type of Technology
  - Download/Upload Speed
- Parcel (Polygon)
  - Uniform Property Code (UPC)
  - Exempt Status



Capitol Complex



# CASA: Co-location Analyses

## OBJECTIVE/PROCESS:

- Identify Community Anchor Institutions (CAI)
  - Share cost of broadband construction
  - Provides less risk for the provider
  - Lower cost for the customer

## RESOURCES:

- DoIT NM Broadband Program CASA Database
- DoIT NM 911 Address Database

## COLLABORATIVE

- Department of Information Technology
  - NM Broadband Program
  - NM 911 Program
- Earth Data Analysis Center/UNM

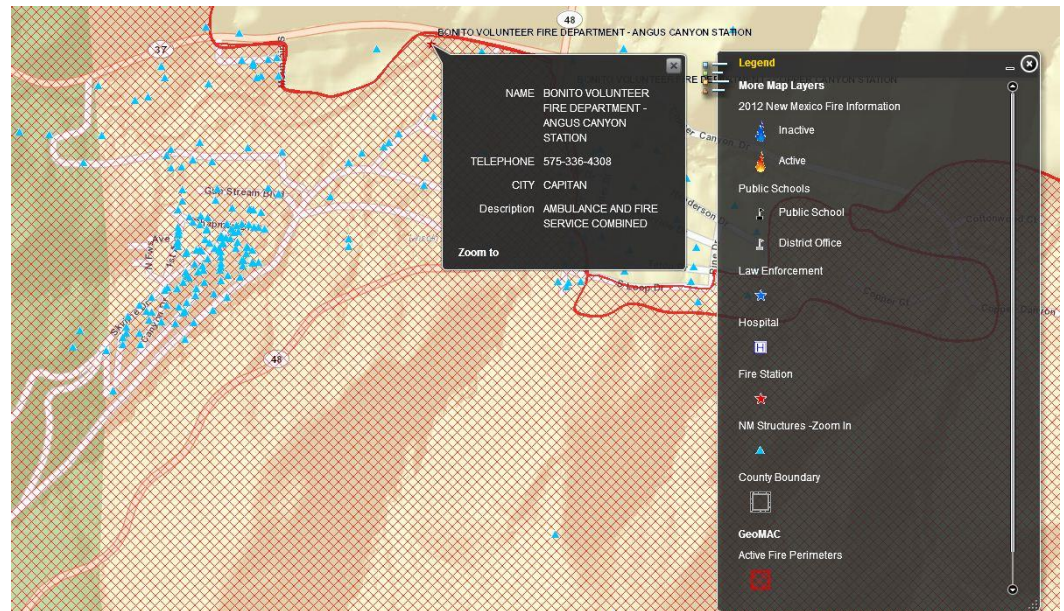
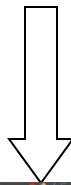


School District	Name of School/Building	Half-Mile Radius	One Mile Radius
Jal	Jal High	Library: Woolworth Community Library Annex Woolworth Community Library Health Center: None Medical: None Senior Centers: Jal Senior Center Government Offices: NM MVD - Jal	Library: None Health Center: None Medical: None Senior Centers: None Government Offices: None

# CASA: Wildfire Watch

## DATA SOURCES:

- County Structures
- Broadband CASA
- NM DOH Health Facilities
- NM Fire Marshal Stations
- NM National Guard Centers
- HSIP Facilities
- NHD/NRCS HUC
- GeoMAC Fire Data
- NWS Rain and Smoke
- BAER Team Soil Burn Severity
- USGS Stream Gages/Flow
- USGS Earthquake Hazards
- BLM Federal Lands



# CASA: Flood Mitigation

## OBJECTIVE/PROCESS:

- Assess essential public facilities for potential flood risk
- Calculate damage estimates based on intensity of flood and valuation of facility
- Create Emergency Action Plans (EAP) to mitigate damage
- Establish “resiliency” procedures following an event

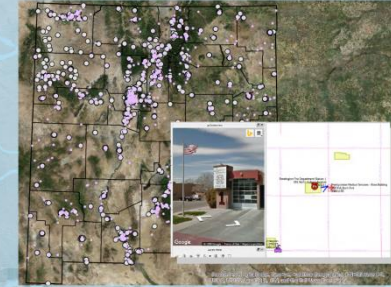
## RESOURCES:

- DoIT NM Broadband Program CASA Database
- DoIT NM 911 Address Database
- DoIT/GAC Elevation Databases
- County Assessor Databases
- County/City/Town Building Roofline Databases

## COLLABORATIVE

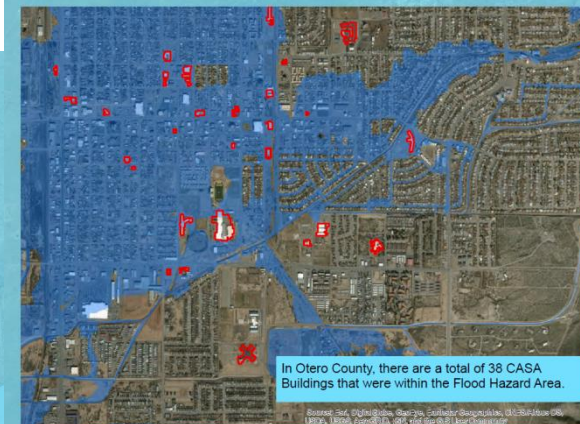
- Department of Information Technology
  - NM Broadband Program
  - NM 911 Program
  - NM Geospatial Advisory Committee
- U.S. Army Corp of Engineers/FEMA/USGS
- Earth Data Analysis Center/UNM

### Building Footprint Delineation



Integrity analysis of the 3,774 CASA features was conducted by reviewing the feature points along with available reference data such as E911 road centerline datasets, independent geolocations produced using Google Maps API, 2016 NAIP imagery, CGIS 2.18, and go2streetview (a plugin) to confirm or update the location for each critical infrastructure point feature.

### Floodplain Proximity Analysis



Spatial queries were run to identify CASA building footprints that were directly in the flood zones as well as within 25 feet of a flood zone. Additionally, the buildings within the flood zones were counted according to building type, county, and state preparedness zones.



Access to community facilities represented in the CASA database is critical during natural disasters. Identifying which of these integral buildings are at risk to flood hazards allows for planning and potential mitigation actions or relocation of critical facilities to less risky locations. Pictured above: Flooding in Hatch, NM, 2006.

# THANK YOU



NEW MEXICO  
DEPARTMENT OF  
INFORMATION TECHNOLOGY



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Gar Clarke, NM Broadband Program Manager

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