BDCP
BROADBAND DEFICIENCIES
CORRECTION PROGRAM

PSCOOTF Status Update

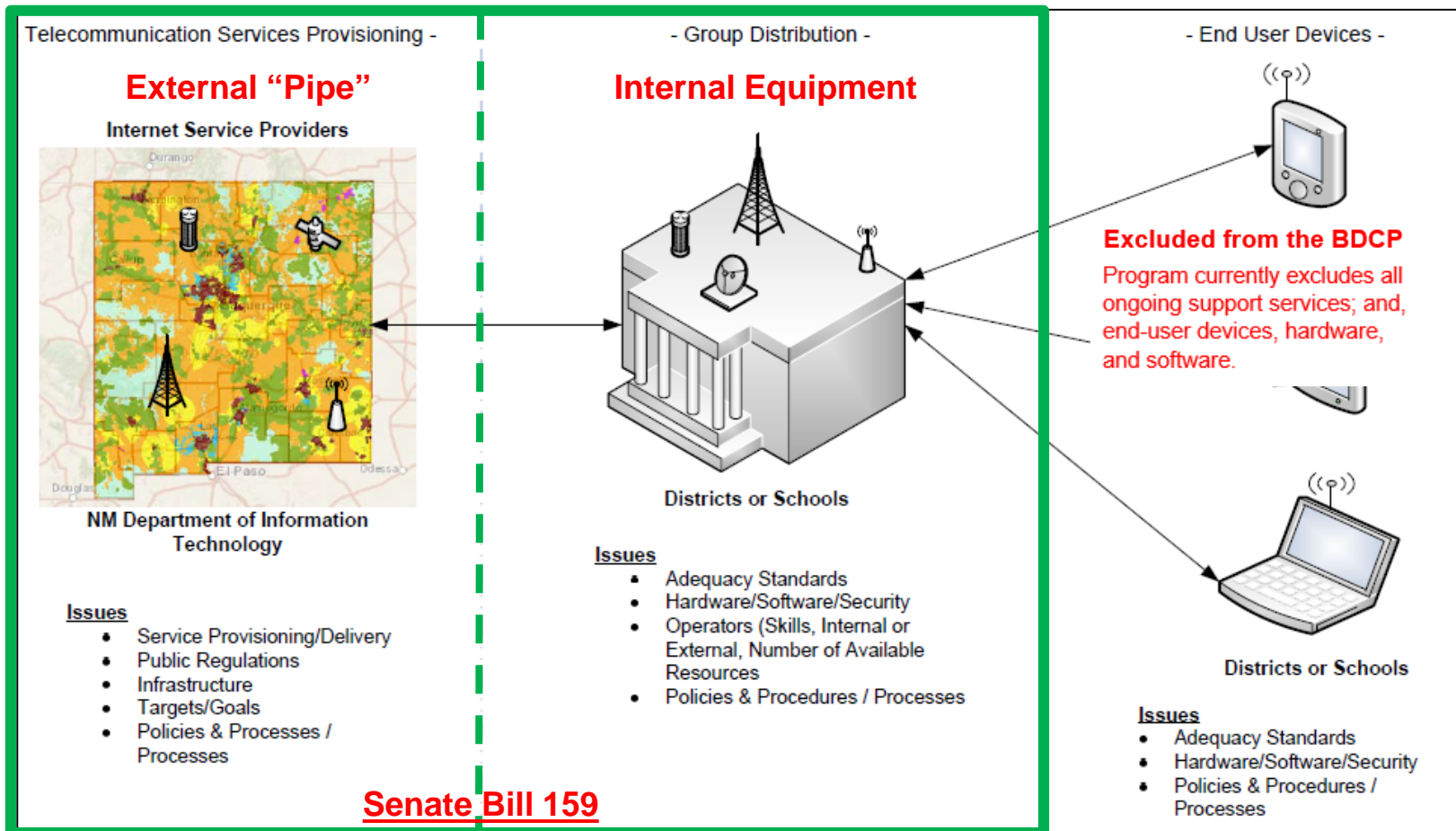**June 10, 2016**

PSFA Presenters:

Ovidiu Viorica, Broadband Program Manager

Partnering with New Mexico's communities to provide quality, sustainable school facilities for our students and educators.

High-Level View

As displayed below, broadband originates from Internet Service Providers (ISP), is distributed to districts/schools and then reaches students via end-user devices. The green area is covered by the BDCP.

Telecommunication Services Provisioning -

External "Pipe"

Internet Service Providers

NM Department of Information Technology

Issues
- Service Provisioning/Delivery
- Public Regulations
- Infrastructure
- Targets/Goals
- Policies & Processes / Processes

Senate Bill 159

- Group Distribution -

Internal Equipment

Districts or Schools

Issues
- Adequacy Standards
- Hardware/Software/Security
- Operators (Skills, Internal or External, Number of Available Resources
- Policies & Procedures / Processes

- End User Devices -

Excluded from the BDCP
Program currently excludes all ongoing support services; and, end-user devices, hardware, and software.

Districts or Schools

Issues
- Adequacy Standards
- Hardware/Software/Security
- Policies & Procedures / Processes

Partnering with New Mexico's communities to provide quality, sustainable school facilities for our students and educators.

FCC goals

GOALS

The FCC has adopted goals for K-12 connectivity. In this report we used the goals as a benchmark for where students are today

Purpose	2014	2018
Internet access	100 kbps per student/staff	1 Mbps per student/staff
District transport (WAN)	*1 Gbps per school	Scalable to 10 Gbps per school

More information: https://www.fcc.gov/page/summary-e-rate-modernization-order
*2014 WAN targets were recommended by SETDA, but the FCC did not adopt any short term WAN goals

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Education

Strength of broadband infrastructure

Operational

INTERNET ACCESS
1 Mbps per student*

Do districts buy enough
Internet access to support
their students?

31% of districts < 100 Kbps

100% of districts < 1 Mbps

External "Pipe"

WAN
1 Gbps per school

Do schools have fast enough
connections to their district
hub?

72% of schools < 1 Gbps

Internal Equipment

Wi-Fi / LAN
1:1 in every classroom

Do schools have
infrastructure for Wi-Fi?

92% of schools need
upgrades (per HP report)

Internet | District office | Schools | Classroom

Sources: 2015 FCC Form 471 E-rate applications

Titles Added by PSFA

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Education SUPERHIGHWAY

Fall 2015 - Program activities

1. HP Assessment of 841 school locations

2. CTC review of the school broadband circuits in the state and Gap Analysis report

3. Total amount encumbered or expended: ~$2.9M

4. Not to exceed awards: ~10.6M (Based on estimates, actual amounts are being finalized, dependent on E-rate funding)

Spring 2016 - Program results

1. Fiber upgrades (PSFA):
   - Developed process and timelines for project development
   - RFP & E-rate assistance: 30% increase in E-rate funding requests this year
   - PSCOC Awards to 17 Districts and 5 Charters (~60 schools) – see Progress table

2. Network equipment and WiFi upgrades (PSFA):
   - Master agreements
   - Online Portal for equipment purchase (PED)
   - Reported Discounts: 40-50% off list prices
   - Requests for BDCP funding: Around 100 schools (to date)

Spring 2016 - Program results

3. Internet Affordability – DoIT & PED
    - Procurement Aggregation Model
    - Timeline follows E-rate Funding cycle

4. Ongoing sustainability of district equipment and Statewide Education Network – DoIT & PED
    - Consortium application
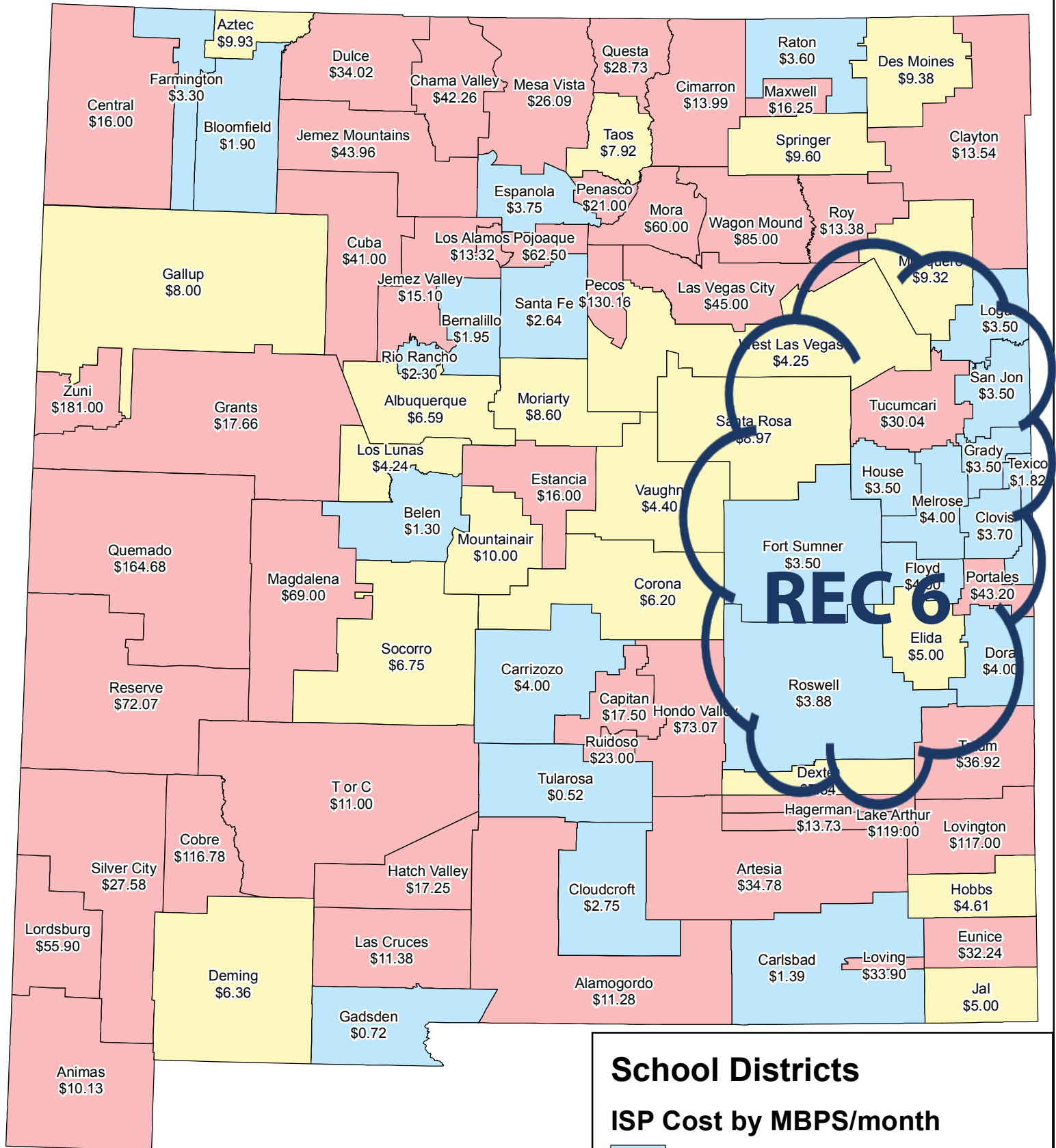   - Procurement and contracting assistance

Attachment A

Estimated Connection Speed/Cost Progress After Fiber Projects

	District	School	Award Language	Bandwidth Increase	Kilobit per Student Before	Kilobit per Student After	Cost per Megabit Change	Notes
1	Anthony Charter School	Anthony Charter School to Internet	NM State match eligible for additional E-Rate Federal funding to upgrade infrastructure that allows the schools to reach the 2018 NM and FCC connectivity goals.	9,900%	15k	1,481k	-82%	
2	Bernalillo	Connect to Bernalillo HS: Bernalillo ES Bernalillo MS WD Carroll ES Placitas ES Santo Domingo ES/MS Algodones ES Cochiti ES/MS	NM State match eligible for additional E-Rate Federal funding to upgrade infrastructure that allows the schools to reach the 2018 NM and FCC connectivity goals.	9,900% 4,900% 4,900% 4,900% 16,567% 22,122% 16,567%	20k 37k 34k 136k 14k 18k 20k	1,996k 1,835k 1,734k 6,803k 2,392k 4,000k 3,356k	-98% -97% -97% -97% -97% -91% -96%	
3	Bloomfield	Connect Blanco ES to Admin Hub Admin Hub to Internet	NM State match eligible for additional E-Rate Federal funding to upgrade infrastructure that allows the schools to reach the 2018 NM and FCC connectivity goals.	39,900% 1,400%	81k 65k	3,2362k 968k	-100% -90%	Blanco ES fiber will be District owned. No monthly fees.
4	Central	Connect to Kirtland Data Center: Mesa ES Nashitti ES Newcomb HS Ojo Amarillo ES Shiprock HS	NM State match eligible for additional E-Rate Federal funding to upgrade infrastructure that allows the schools to reach the 2018 NM and FCC connectivity goals.	19,900% 99,900% 6,567% 9,900% 6,567%	20k 37k 34k 136k 14k	1,996k 1,835k 1,734k 6,803k 2,392k	-100% -100% -100% -100% -100%	Migration from Wireless connections to District owned fiber. No monthly fees.
5	Cimarron	Connect Cimarron ES/MS and Cimarron HS to Internet	NM State match eligible for additional E-Rate Federal funding to upgrade infrastructure that allows the schools to reach the 2018 NM and FCC connectivity goals.	122%	227k	505k	-82%	Shared campus
6	Clovis	Connect Barry ES to Gattis MS	NM State match eligible for additional E-Rate Federal funding to upgrade infrastructure that allows the schools to reach the 2018 NM and FCC connectivity goals.	9,900%	164k	16,367k	0%	Migration from Wifi connection to self-provisioned fiber.
7	Cobre	Connect San Lorenzo ES to Cobre Admin	NM State match eligible for additional E-Rate Federal funding to upgrade infrastructure that allows the schools to reach the 2018 NM and FCC connectivity goals.	1,567%	73k	1,220k	-97%	
8	Deming	Columbus Elem to Central Office	NM State match eligible for additional E-Rate Federal funding to upgrade infrastructure that allows the schools to reach the 2018 NM and FCC connectivity goals.	1,011%	72k	796k	-92%	
9	Farmington	Connect to Farmington HS: Animas ES Apache ES Bluffview ES CATE Country Club ES Heights MS Hermosa MS Juvenile Services Center McCormick ES Mesa View MS Piedra Vista HS Tibbetts MS	NM State match eligible for additional E-Rate Federal funding to upgrade infrastructure that allows the schools to reach the 2018 NM and FCC connectivity goals.	900% 900% 900% 2,757% 900% 2,757% 2,757% 2,757% 2,757% 2,757 900% 2,757%	2,193k 1,923k 2,252k 1,862k 1,832k 504k 621k 12,963k 681k 571k 705k 603k	21,930k 19,231k 22,523k 53,191k 18,315k 14,388k 17,730k 370,370k 19,455k 16,313k 7,052k 617,241k	-100% -100% -100% -100% -100% -100% -100% -100% -100% -100% -100% -100%	Migration from Wireless connections to District owned fiber. No monthly fees.
10	Gallup	Connect to Gallup-McKinley School Office: David Skeet ES Ramah ES Ramah MS/HS Tse Yi Gai HS	NM State match eligible for additional E-Rate Federal funding to upgrade infrastructure that allows the schools to reach the 2018 NM and FCC connectivity goals.	900% 900% 900%	417k 251k 422k	4,167k 2,531k 4,219k	-96% -96% -96%	Tse Yi Gai HS did not receive any bids.
11	Grants	Connect to Grants Data Center: Internet Laguna-Acoms MS/HS Milan ES San Rafael ES Seboyeta ES Bluewater ES	NM State match eligible for additional E-Rate Federal funding to upgrade infrastructure that allows the schools to reach the 2018 NM and FCC connectivity goals.	233% 100% 100% 100% 100% 733% 100%	83k 154k 134k 110k 735k 154k 431k	275k 309k 268k 220k 1,474k 1,282k 862	-93% -82% -82% -82% -82% -97% -82%	
12	Hondo	Hondo Schools to Internet	NM State match eligible for additional E-Rate Federal funding to upgrade infrastructure that allows the schools to reach the 2018 NM and FCC connectivity goals.	300%	152k*	606k	266%	* Speedtests measured speeds of 27k per student through current wireless solution
13	Jal	Jal Schools to Internet	NM State match eligible for additional E-Rate Federal funding to upgrade infrastructure that allows the schools to reach the 2018 NM and FCC connectivity goals.	1,900%	28k	556k	-97%	

Note: The values listed are preliminary. Final circuit capacities and costs are subject to agreement negotiation and E-rate final approval.

ISP Cost by MBPS Per Month Change
2015 - 2016

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Created 6/9/16
By AM PSFA
Sources: PSFA & BDCP

**School Districts
ISP Cost by MBPS/Month**

Decreased

Increase or Same cost

2016 **ISP Cost by MBPS Per Month**

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Map of New Mexico school districts with ISP cost by MBPS per month:

District	Cost
Aztec	$9.93
Farmington	$3.30
Central	$16.00
Bloomfield	$1.90
Dulce	$34.02
Chama Valley	$42.26
Mesa Vista	$26.09
Questa	$28.73
Cimarron	$13.99
Maxwell	$16.25
Raton	$3.60
Des Moines	$9.38
Jemez Mountains	$43.96
Taos	$7.92
Springer	$9.60
Clayton	$13.54
Gallup	$8.00
Cuba	$41.00
Los Alamos	$13.32
Pojoaque	$62.50
Espanola	$3.75
Penasco	$21.00
Mora	$60.00
Wagon Mound	$85.00
Roy	$13.38
Mosquero	$9.32
Jemez Valley	$15.10
Pecos	$130.16
Santa Fe	$2.64
Las Vegas City	$45.00
Logan	$3.50
Bernalillo	$1.95
West Las Vegas	$4.25
San Jon	$3.50
Zuni	$181.00
Rio Rancho	$2.30
Tucumcari	$30.04
Grady	$3.50
Texico	$1.82
Grants	$17.66
Albuquerque	$6.59
Moriarty	$8.60
Santa Rosa	$6.97
House	$3.50
Melrose	$4.00
Clovis	$3.70
Los Lunas	$4.24
Estancia	$16.00
Vaughn	$4.40
Fort Sumner	$3.50
Floyd	$4.00
Portales	$43.20
Quemado	$164.68
Belen	$1.30
Mountainair	$10.00
Corona	$6.20
Elida	$5.00
Dora	$4.00
Magdalena	$69.00
Socorro	$6.75
Carrizozo	$4.00
Roswell	$3.88
Reserve	$72.07
Capitan	$17.50
Hondo Valley	$73.07
Tatum	$36.92
Ruidoso	$23.00
Dexter	$7.04
T or C	$11.00
Tularosa	$0.52
Hagerman	$13.73
Lake Arthur	$119.00
Lovington	$117.00
Cobre	$116.78
Silver City	$27.58
Hatch Valley	$17.25
Cloudcroft	$2.75
Artesia	$34.78
Hobbs	$4.61
Lordsburg	$55.90
Las Cruces	$11.38
Eunice	$32.24
Deming	$6.36
Alamogordo	$11.28
Carlsbad	$1.39
Loving	$33.90
Jal	$5.00
Gadsden	$0.72
Animas	$10.13

REC 6

School Districts

ISP Cost by MBPS/month

- $0.00 - $4.00 - Goal
- $4.01 - $10.00 - Acceptable
- $10.01 - $181.00 - Unacceptable
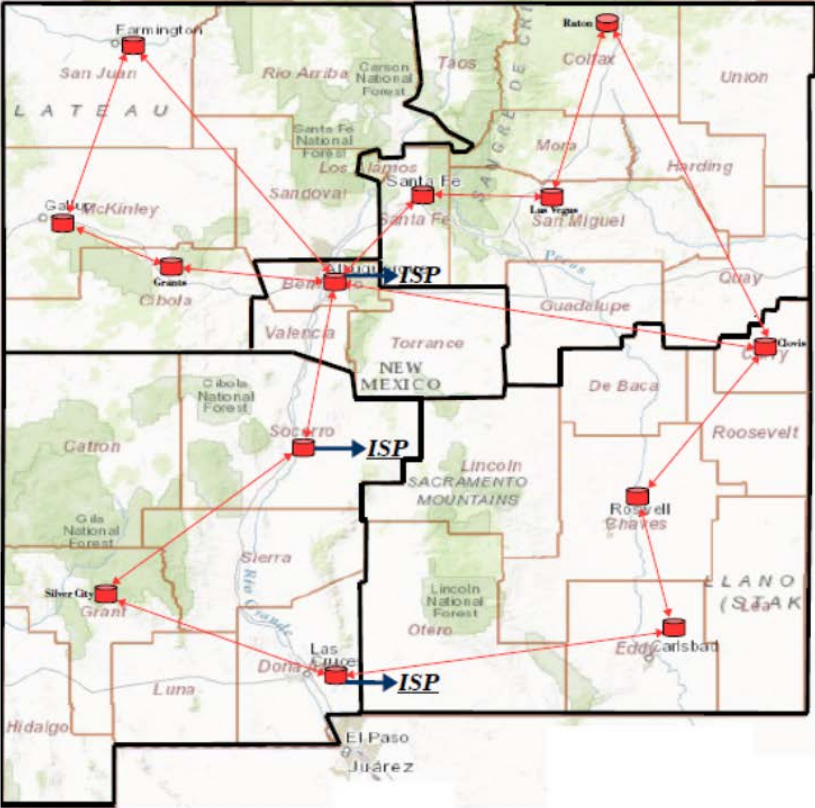
DRAFT

Created 6/6/16
By AM PSFA
Sources: PSFA & BDCP

Spring 2016 - Program results: Network Equipment for Distribution to Users (Cat2)

1. 100+ Vendor Master Agreements in the seven E-rate eligible categories

2. 13 Districts (Belen, Bernalillo, Bloomfield, Deming, Farmington, Gallup McKinley, Grants-Cibola, Los Alamos, Mountainair, Penasco, Portales, Taos, West Las Vegas…)

3. 7 Charter Schools in Albuquerque, Aztec, Carlsbad, Deming, Espanola, Santa Fe and Taos

4. Additional funding requests pending

Spring 2016 - Program results: DoIT Draft / Conceptual Aggregation Points

Summer & Fall 2016 - Program goals

1. Fiber upgrades:
   - Refine program processes, including RFP templates
   - RFP & E-rate assistance to all schools interested
   - Fiber upgrades to remaining schools without scalable infrastructure
2. Network (WiFi) upgrades:
   - Increase program participation
   - Maximize cost savings through Master Agreements
   - Refine Online Portal for equipment purchases (PED)
   - Leverage remaining Cat2 E-rate budgets for NM schools
3. Internet Affordability & Sustainability – DoIT & PED
   - July 2017 – Statewide/Regional Aggregation
   - August 2018 – Reach goal of 1 Mbps / student
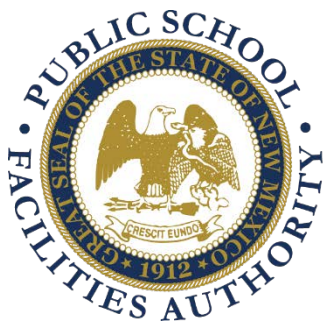
Questions or Comments?

Public School Facilities Authority (PSFA)

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visit: http://www.nmpsfa.org/it/bdcp.htm

or phone: 505-843-6272