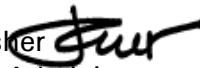# MEMORANDUM

Date: June 2, 2025

To:     Melissa Manriquez                          From: Jan Lesher
        Clerk of the Board of Supervisors                County Administrator

Re:     **Agenda Item Request for the June 17, 2025 Board of Supervisors Meeting**

As a continued item from the March 4, 2025 Board of Supervisors Meeting; please place the following item on the agenda for the June 17, 2025 Board of Supervisors meeting – Discussion/Presentation:

*Public Safety in Remote Areas of Pima County*

JKL/dym

 c:     Carmine DeBonis, Jr., Deputy County Administrator
        Steve Holmes, Deputy County Administrator
        Monica Perez, Chief of Staff, County Administrator's Office
        John Stuckey, , Facilities Safety & Security Manager, County Administrator's Office

# MEMORANDUM

Date: June 2, 2025

To: The Honorable Chair and Members
Pima County Board of Supervisors

From: Jan Lesher
County Administrator

Re: **Public Safety in Remote Areas of Pima County**

During the March 4, 2025 Board of Supervisors meeting, you directed a project to explore "additional tools and options to enhance public safety in underserved, remote areas of Pima County." Utilizing input from the Pima County Sheriff's Department (PCSD) and the Office of Emergency Management, this Memorandum provides information regarding several possible programs to help improve public safety, communication and response strategies to remote communities.

It is important to define what constitutes "remote" in the context of access to public safety services. For the purpose of this document, the following parameters have been applied:

- **Population density**- In order to be considered, an area must be at least minimally populated so as to differentiate from unpopulated open space such as U.S. Forest Service lands, State Trust lands, Bureau of Land Management lands, etc.

- **Communication / connectivity challenges**- In order to be considered, an area must have limited access to cellular communication and/or internet services. The ability for residents to call for assistance is crucial for any public safety response.

- **Extended response times / lack of regular patrols** - In order to be considered, an area must generally have extended response times from public safety entities and lack regular patrolling activity or proactive presence.

Using these parameters, the following areas have been identified as "remote."

- **Reddington** - Unincorporated Pima County east of MP14 on Reddington Road to San Pedro River Road. Includes San Pedro River Road from the Cochise County line to the Pinal County line and surrounding residential and ranch areas.

- **Arivaca** - Arivaca Road west of MP16. Arivaca-Sasabe Road to SR286. Includes surrounding residential and ranch areas.

- **Sasabe** - SR286 from Arivaca-Sasabe Road to the Point of Entry. Includes surrounding residential and ranch areas.

The Honorable Chair and Members, Pima County Board of Supervisors
Re: **Public Safety in Remote Areas of Pima County**
June 2, 2025
Page 2

- **Sonoita** / **Vail** - SR83 south of MP43 to the Santa Cruz County line. Includes surrounding residential and ranch areas.

Many areas in rural Pima County meet some of the parameters to be considered "remote" but were not included in this study for various reasons. For example, Ajo and Mount Lemmon were not considered, as both areas have resident deputies. Regular patrols are common, and response times are generally not extreme. Other areas such as New Tucson, Rincon Valley, Three Points and Avra Valley were also not included due to relative proximity to Sheriff's Department resources and more consistent cellular service. It is important to note that some of following strategies could be applied to any community to improve public safety, regardless of location.

Several community members were contacted, as well as public safety partners from both law enforcement and fire service. The primary concerns include challenges with calling 9-1-1 and the extended response times and/or lack of public safety presence. A related communication challenge exists between public safety partners. For example, when a call for service in a remote area is received, what process exists to ensure the closest resource is contacted and dispatched? Although jurisdictional responsibility remains consistent, during emergencies where lives are at risk, it makes sense to send the nearest available resources.

Any conversation regarding public safety should include both law enforcement and fire/EMS resources, and some of the subsequent topics will apply broadly. However, the core of this Memorandum is focused on law enforcement response and the current capabilities of the Pima County Sheriff's Department as the law enforcement authority in these areas. The challenges facing fire/EMS organizations in rural and remote areas have been discussed both in a Memorandum to you on December 16, 2024, ([December 16, 2024 - Fire and Emergency Medical Service Response Times in Pima County](#)) and during the February 18, 2025 Board of Supervisors meeting. Therefore, restating that conversation within this document would be superfluous.

It is also important to note the frequency which the Sheriff's Department responds to these remote areas. As shown in the following chart, PCSD responses to remote areas represent a small fraction of the overall calls for service. This is not to suggest that any of these calls for service is insignificant, but rather to provide context when considering any resource allocation. Source documentation from PCSD is available in Attachment I.

| Location | CY2022 | CY2023 | CY2024 | YTD2025* |
|---|---|---|---|---|
| Reddington** | 13 | 14 | 6 | 8 |
| Arivaca | 367 | 237 | 219 | 92 |
| Sasabe | 49 | 41 | 32 | 5 |
| SR83 South of MP43 | 88 | 59 | 67 | 21 |
| All PCSD Responses | 109,106 | 118,064 | 110,587 | 40,135 |

*Data for YTD2025 is January 1 to May 19, 2025
**Reddington data is derived by zip code and district/beat

The Honorable Chair and Members, Pima County Board of Supervisors
Re: **Public Safety in Remote Areas of Pima County**
June 2, 2025
Page 3

Through conversation with stakeholders, and research regarding possible improvements to public safety responses in remote areas, the following topics have been identified:

**"Ranch" or "Range" Deputy Program**

Pinal, Cochise and Santa Cruz Counties currently have, or have in the past, deployed a "Range" or "Ranch" deputy in remote areas. These deputies are assigned specifically to remote areas, or as a liaison for ranches in remote areas. This can foster improved communication regarding community concerns and, in some cases, result in improved response times depending on deployment practices. Familiarity with geography, routing, and points of contact can also facilitate an effective law enforcement response.

The greatest challenge to this approach is the frequency of visits or proactive patrols to any given area. Depending on the number of remote areas and the number of deputies assigned to the program, proactive patrolling can be infrequent. The Santa Cruz County Sheriff's Office sporadically visits ranchers in their area. The Cochise County Sheriff's Office (CCSO) assigned a deputy specifically to the Portal area but sometimes struggled to keep this position filled. The Pinal County Sheriff's Office currently has two range deputies and is looking to increase to four. Public response to this program in Pinal County has been very positive.

Regarding the Reddington community specifically, PCSD has modified patrol patterns to include a proactive patrol at least once per week. In addition, PCSD has implemented a strategy for high priority calls that ensures the deputies that are most likely to arrive the soonest are dispatched.

Should PCSD wish to implement a "Range" Deputy program, the approximate salary cost for a single Deputy Sheriff position is $89,113 per year (mid-point for Deputy Sheriff II plus 31% ERE). Equipment such as uniforms, body armor, duty gear, communications equipment and a patrol vehicle are in addition to this cost.

**Improved Connectivity**

PCSD reports that deputies do not have any problems with either PCWIN radio or issued (AT&T FirstNet) cellphone communication. Midvale Telephone Company (MTC) has offered a Wi-Fi node in the Reddington area for use by first responders. This would allow public safety to better utilize mobile data computers and other devices to send and receive information. Contact information for the MTC representative as well as the location and access code for the Wi-Fi node has been provided to PCSD.

A common complaint from those living in remote areas is challenges with communication to 9-1-1 and first responder entities. Cellphone service can be spotty or non-existent. Improved cellular reception is largely dependent on cellular service vendors investing in infrastructure to increase coverage, however high-speed internet can be an alternative to cellular service.

Several vendors such as Ooma, AX Voice, or Vonage provide Voice Over Internet Protocol (VOIP) services, which includes connectivity to 9-1-1. The cost for this service is in addition

The Honorable Chair and Members, Pima County Board of Supervisors
Re: **Public Safety in Remote Areas of Pima County**
June 2, 2025
Page 4

to internet service fees and can vary depending on equipment and monthly services charges. As an example, Ooma Telo costs $100 for equipment with no monthly fees, although state and federal taxes and fees apply. AX Voice has several service plans, at approximately $15 per month, without any equipment fees.

It is important to note that internet service is required for VOIP. According to the Federal Communication Commission, there can be challenges connecting to the proper Public Safety Answering Point (PSAP) and users may need to identify their location, as the normal 9-1-1 location function may not be accurate. Lastly, VOIP will not work during a power or internet outage.

Director Michelle Simon of the Office for Digital Inclusion produced the attached report (Attachment 2) regarding Internet Connectivity in Rural Pima County. In summary, the remote areas under consideration are largely "served", meaning internet is available, or could be available, through vendors that have been awarded funding from the Rural Digital Opportunity Fund (RDOF). Even in served areas, internet service is not guaranteed. For example, Resound Networks has been awarded RDOF funds to provide broadband infrastructure in Arivaca and unincorporated Pima County near Sonoita. US Cellular has been awarded funding through Enhanced Alternative Connect America Cost Model (A-CAM). Neither vendor has built wireless infrastructure in any of these areas.

Resound Networks has until December 2030 to complete broadband deployments in Arizona. US Cellular has until December 2028 to complete broadband deployment in Sasabe. Unfortunately, either of these companies could default on their grant award and return federal funds, resulting in no infrastructure improvements.

Commercial options are available in Arivaca (arivaca.com) and Reddington (Midvale Telephone Company). Costs vary from $50 per month to $100 per month, not including equipment, taxes or fees. Satellite internet providers such as Starlink and Viasat Inc. can provide high-speed internet to any of these areas, but costs can be significantly higher. Monthly services fees range from $75 per month for the first year and $100 per month thereafter for Viasat, and $120 per month for Starlink. This does not include equipment costs, which can be as much as $500 with $15 monthly leasing fees.

Lobbying efforts with vendors such as Resound Networks and US Cellular may help encourage those companies to move forward with broadband infrastructure projects. Furthermore, an educational campaign to ensure remote residents are aware of available options, including VOIP technology, may improve connectivity and the ability to communicate with public safety entities. Although need-based subsidies for internet and/or VOIP services could be offered to help make these services more affordable, further study is necessary to determine initial and ongoing costs.

**Community Organization**

The Sheriff's Department coordinates hundreds of Neighborhood Watch organizations, which help connect neighbors with each other, and better prepare residents for crime prevention.

The Honorable Chair and Members, Pima County Board of Supervisors
Re:  **Public Safety in Remote Areas of Pima County**
June 2, 2025
Page 5

Sheriff's Auxiliary Volunteers (SAVs) can help organize new Neighborhood Watch groups, as well as provide home security training and safety classes.  Home security inspections are also offered by the SAVs.  These are excellent educational opportunities to help improve safety for remote residents.

Another advantage of community organization is information sharing that happens between residents.   Residents can better recognize suspicious or concerning behaviors, people, vehicles, etc. and shared information about these observations helps better understand potential problems.  Community organizations may help share other safety related information particular to the area.  For example, due to the proximity to the international border, residents in Sasabe may unintentionally connect with Mexican authorities when dialing 9-1-1.  Therefore, it may be best for Sasabe residents to dial the non-emergency number to PCSD (520-351-4900) in order to avoid confusion.  The Reddington area has what some residents refer to as "phone booths," or pockets of good cellular service.  Widespread understanding of these areas may help with connectivity during an emergency.

Many neighborhood organizations utilize the "Nextdoor" app, which is a social media platform that allows users to report and receive information about concerning issues, suspicious activity, etc.  Participation in any given neighborhood group can be password protected and limited by address verification to help reduce unrelated or nefarious messaging or marketing.  Internet connectivity, as noted in the previous section, is required for this strategy to be effective.

An educational campaign to ensure remote residents are aware of Neighborhood Watch programs and services offered by Sheriff's Auxiliary Volunteers may help residents organize better and improve safety and home security. The SAVs can be contacted at 520-351-4972.  Residents of Arivaca should call the Green Valley SAVs at 520-351-6744.  Neighborhood Watch formation documents, Neighborhood Resource Guide, and a Start Up Guide can be found at www.pimasheriff.org/services/neighborhood-watch.

The "Nextdoor" app is available on iOS and Android devices, as well as in a desktop version.  The cost of creating Neighborhood Watch programs is minimal and is already part of what PCSD volunteers do.  While the financial cost is low, most of the startup and maintenance effort for a Neighborhood Watch group is borne by the residents themselves.

**Public Safety Partnerships**

The Sheriff's Department maintains a solid working relationship with all the various state, local and federal law enforcement agencies in the area.   While no inter-governmental agreements currently exist, PCSD does not believe this is a necessary step to ensure effective law enforcement response to remote areas.

As noted above, PCSD has implemented a strategy to improve patrols and responses to the Reddington community.  As part of a broader remote area response strategy, PCSD could also consider a formalized communications plan for remote area responses that involves communication with other law enforcement partners.  For example, the Pinal County Sheriff's

The Honorable Chair and Members, Pima County Board of Supervisors
Re: **Public Safety in Remote Areas of Pima County**
June 2, 2025
Page 6

Office may have deputies in the San Manuel area.  If a call is received in Reddington, PCSD dispatch could contact Pinal County to determine if a deputy is able to respond.  Similarly, if a call is received near Sonoita in Pima County, dispatchers could communicate with the Santa Cruz County Sheriff's Office in the same way.  A formalized Standard Operating Procedure (SOP) will help memorialize this plan to ensure consistency and longevity.

**Leveraging Technology**

The Sheriff's Department has an unmanned aerial vehicle (UAV) or "drone" program but does not utilize this resource in remote areas due to battery life and range limitations.  In addition, PCSD has agreements with other services providers such as Flock and Vigilant to utilize cameras, including license plate readers, to capture information for criminal investigations.  Unless consistently monitored, any camera system should be considered investigatory only, not preventative.  Images captured through any surveillance system can be used to identify, investigate and prosecute criminal actors, but do not generally provide improved response times.  The Cochise County Sheriff's Office manages a Buckeye camera system, which is similar to game cameras with long range wireless connectivity.  CCSO monitors this system 24/7 and primarily uses it for border related enforcement efforts.

PCSD is evaluating the creation of a Real Time Crime Center, (RTCC) which could serve as a clearing house for surveillance camera data.  RTCCs, such as Tucson Police's Community Safety Awareness and Response Center (CSARC), can be a force multiplier that allows observation of multiple areas, but requires connectivity to opt-in camera systems and consistent monitoring.  However, access to surveillance camera footage in remote areas is limited due to the number of available cameras as well as the connectivity issues mentioned above.

Should PCSD decide to stand up an RTCC, consideration should be given to how remote areas could be incorporated.  For those areas that have good connectivity, residents and business owners should be provided information on how to opt-in to the RTCC.  Government buildings with surveillance systems are uncommon in these areas but should also be incorporated into an RTCC plan.  In those areas without connectivity, Buckeye cameras, or similar systems, could be considered to help fill the gap when deputies cannot proactively patrol remote areas.

Costs associated with a Real Time Crime Center are difficult to calculate as location, workstations, and equipment could vary greatly.  Further study is needed to determine startup costs.  Long term, the greatest cost for an RTCC is likely to be staff related, since active monitoring is a core concept.  Deputy Sheriff's could serve in this role, but civilian employees can be equally suited to perform these tasks, generally at a lower cost.  For example, an Investigative Support Specialist is ideally suited for this role with an approximate salary cost of $70,953 (mid-point plus 31% ERE), which is $18,160 less annually than a similarly experienced Deputy Sheriff.  An RTCC would need several FTEs, depending on how many daily or weekly hours the RTCC is operational.

The Honorable Chair and Members, Pima County Board of Supervisors
Re: **Public Safety in Remote Areas of Pima County**
June 2, 2025
Page 7

**Roadway Improvement**

After attending a community meeting regarding public safety, Sheriff Nanos referenced improved or paved roadways into Reddington in order to facilitate expedited responses into the area. The pavement on Reddington Road ends approximately 1/3rd of a mile east of MP3 and remains this way through the Reddington community until reaching the Pinal County line. Similar unimproved roadways are found after exiting SR83 near Sonoita, or in some areas on the outskirts of Arivaca.

While road conditions remain a challenge in remote areas, there is no way to reduce the overall distance deputies must travel to remote areas. Estimated costs to improve these roadways is challenging to calculate as there are several factors that must be considered, including ownership of the roadway, numerous technical factors, and ongoing maintenance costs. Improved roadways may reduce travel time, but improvement of any given remote roadway is cost prohibitive at this time.

**Summary**

The vast size and rugged beauty of Pima County is what attracts some residents, particularly those that enjoy the tranquility of the most remote parts of the County. Unfortunately, these same features make providing public safety more challenging, particularly considering the limited resources available. The most cost-effective way to improve public safety in these communities centers around community organization. Neighborhood Watch groups, with the assistance of PCSD volunteers and resources, can help improve communication, preparedness and prevention.

Improved internet services may also help overcome communication challenges and more can be done to improve accessibility. Resident deputies, or ongoing regular patrols of remote areas may not be feasible, but specific deputies assigned to remote areas may help improve law enforcement presence and communication with remote area residents. Improved communication and response strategies with law enforcement partners will likely also help improve public safety responses. Technologies such as UAVs or surveillance camera systems may also improve visibility, but have some limitations, as well as increased costs.

JKL/dym

Attachment

c:     The Honorable Chris Nanos, Pima County Sheriff
       Carmine DeBonis, Jr., Deputy County Administrator
       Steve Holmes, Deputy County Administrator
       Michelle Simon, Director, Digital Inclusion
       Monica Perez, Chief of Staff, County Administrator's Office
       John Stuckey, Facilities Safety & Security Manager, County Administrator's Office

ATTACHMENT 1

# Pima County Sheriff's Department (PCSD) Response Information
# 2022 - May 19, 2025

**Requested Data on Calls for Service (Responses)**

Total PCSD responses for the following areas for CY2022, 2023 and 2024 and YTD2025:

- Redington
- Arivaca
- Sasabe
- SR83 south of MP43 to the county line
- Total PCSD responses

*Prepared by: PCSD Central Intelligence Group*

Chris Nanos, Sheriff

**Pima County Sheriff's Department** - Keeping the Peace Since 1865

# Specific Requested Area(s)

| Location | 2022 | 2023 | 2024 | 2025* |
|---|---|---|---|---|
| Redington** | 13 | 14 | 6 | 8 |
| Arivaca | 367 | 237 | 219 | 92 |
| Sasabe | 49 | 41 | 32 | 5 |
| SR 83 South of MP43 | 88 | 59 | 67 | 21 |
| ALL PCSD Total Responses | 109,106 | 118,064 | 110,587 | 40,135 |

*Data for 2025 is from January 1 to May 19, 2025
**Reddington data is derived by zip code and district/beat

*Chris Nanos, Sheriff*
**Pima County Sheriff's Department -** Keeping the Peace Since 1865

# Specific Request Area(s) by Percentage

| Location | 2022 | 2023 | 2024 | 2025* |
|---|---|---|---|---|
| Redington** | 0.0119% | 0.0119% | 0.0054% | 0.0199% |
| Arivaca | 0.3364% | 0.2007% | 0.1980% | 0.2292% |
| Sasabe | 0.0449% | 0.0347% | 0.0289% | 0.0125% |
| SR 83 South of MP43 | 0.0807% | 0.0500% | 0.0606% | 0.0523% |

*Data for 2025 is from January 1 to May 19, 2025
**Reddington data is derived by zip code and district/beat

*Chris Nanos, Sheriff*
**Pima County Sheriff's Department** - Keeping the Peace Since 1865

# Specific Request Area(s)

**Calls for Service by Year/Area**
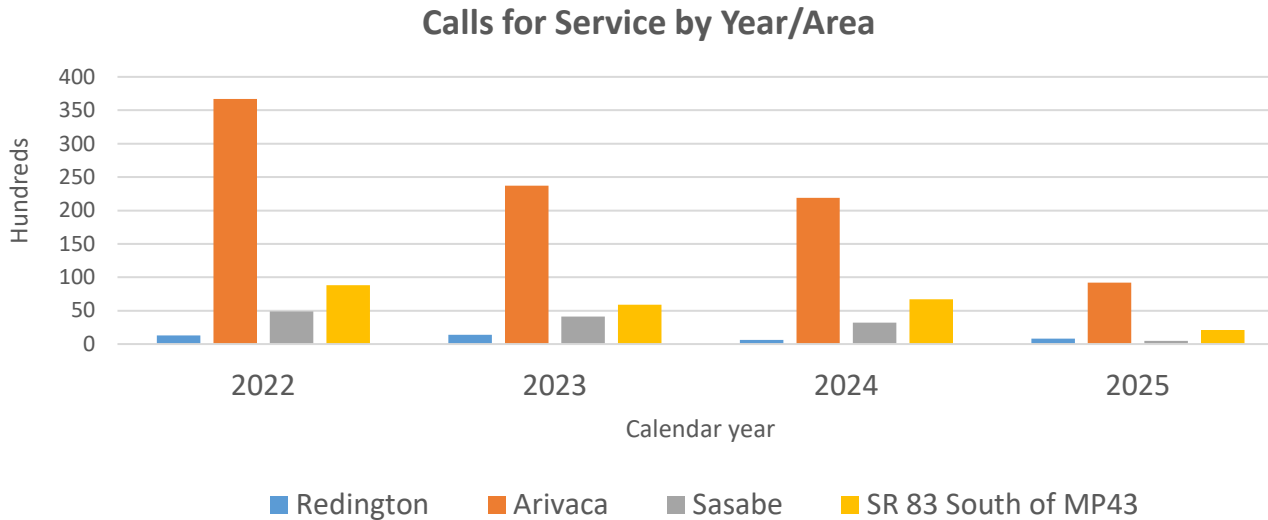


*Data for 2025 is from January 1 to May 19, 2025
**Data for all PCSD calls has been moved to a separate graph to avoid skewing of the data*

# Total PCSD Responses 2022 - 2025

### 2022 - 2025 Total PCSD Responses
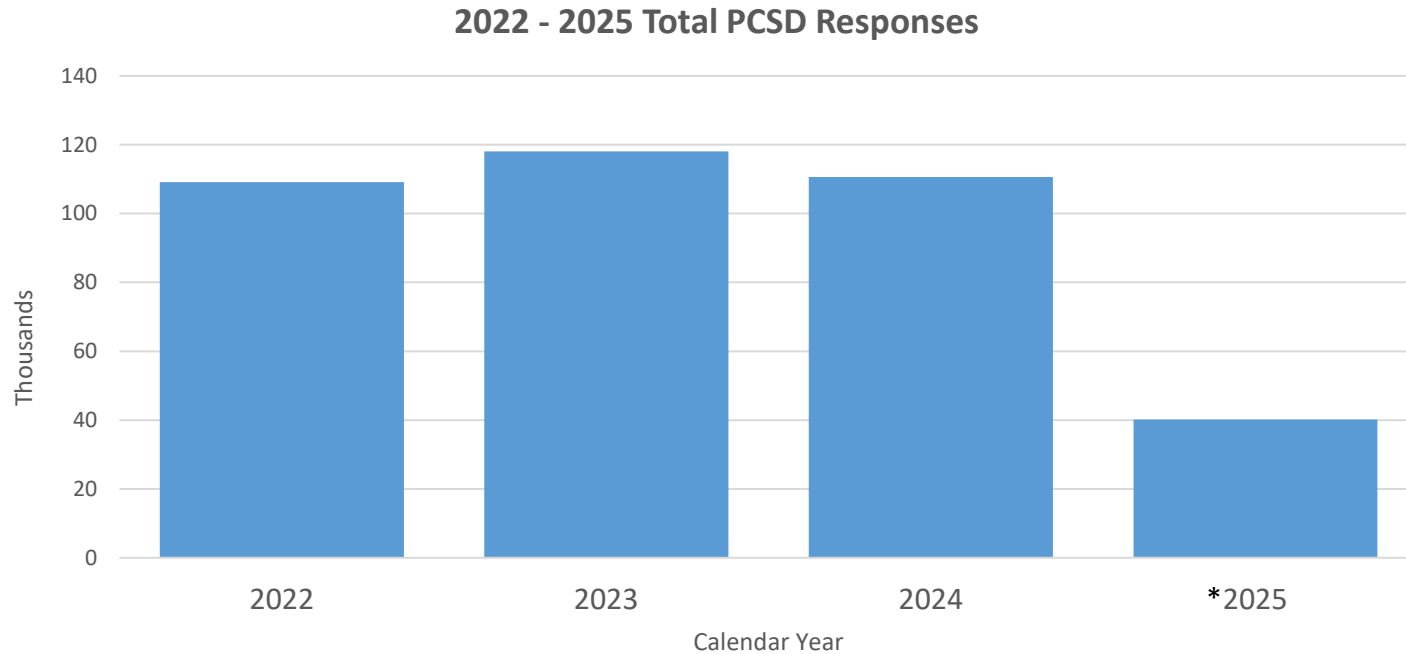


*2025 data is from January 1, 2025 to May 19, 2025

Chris Nanos, Sheriff
**Pima County Sheriff's Department** - Keeping the Peace Since 1865

ATTACHMENT 2

# Analysis of Internet Connectivity in Rural Pima County

## Overview of Data

High-speed internet is essential for fast, reliable, real-time communication across multiple platforms. Emergency alerts, safety instructions and updates, and two-way communication with authorities require a strong internet connection. In critical situations, delays caused by poor internet quality and speed could mean the difference between safety and danger. This is particularly true for community members living in remote areas of Pima County.

The Federal Communications Commission (FCC) definition of high-speed broadband internet connectivity includes download speeds of at least 100 megabits per second and upload speeds of at least 20 megabits per second. Typical online activities require minimum download speeds for adequate performance. Additional speed may be required when multiple people live in a household, using multiple devices simultaneously. Education Superhighway's ([EducationSuperHighway](EducationSuperHighway)) easy to read chart (*Table 1*) identifies the download and upload speeds a household might need based on the number of people and types of activities taking place online.
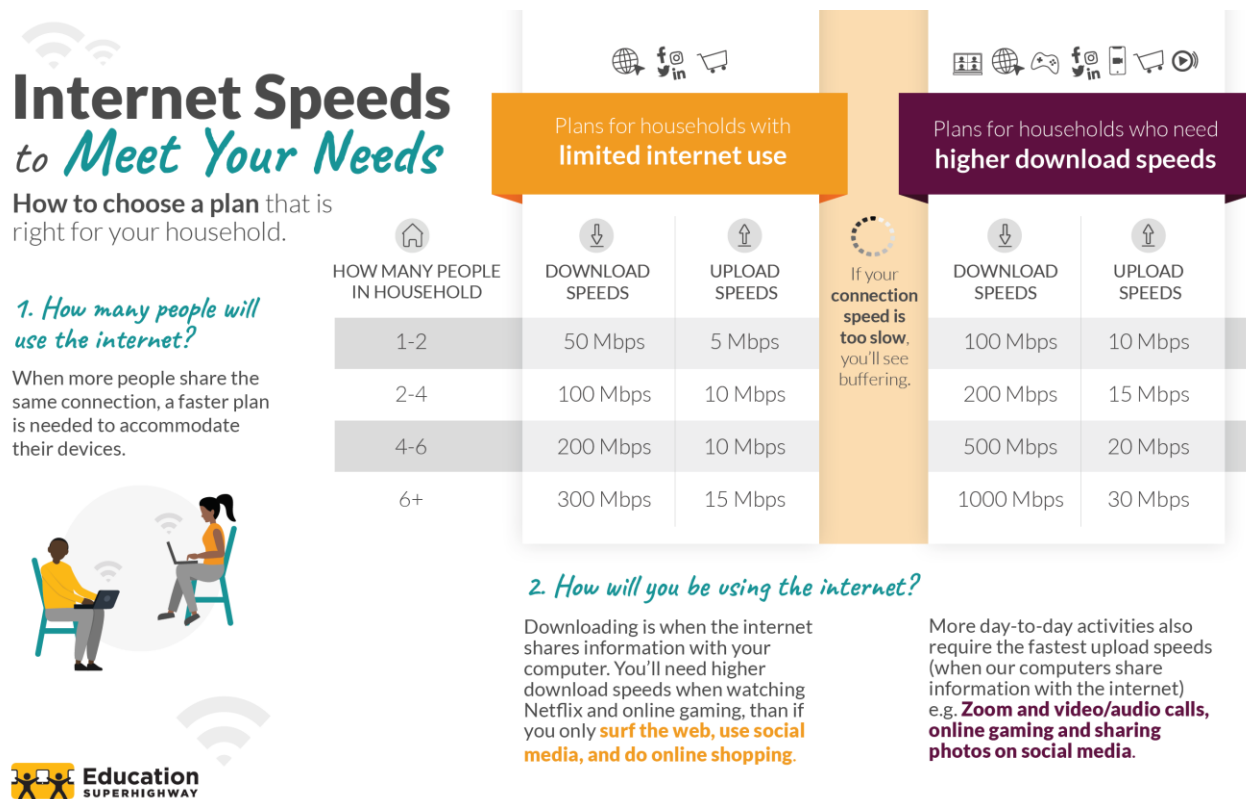


**Internet Speeds to Meet Your Needs**

**How to choose a plan** that is right for your household.

**1. How many people will use the internet?**

When more people share the same connection, a faster plan is needed to accommodate their devices.

| HOW MANY PEOPLE IN HOUSEHOLD | Plans for households with **limited internet use** | | Plans for households who need **higher download speeds** | |
| --- | --- | --- | --- | --- |
| | DOWNLOAD SPEEDS | UPLOAD SPEEDS | DOWNLOAD SPEEDS | UPLOAD SPEEDS |
| 1-2 | 50 Mbps | 5 Mbps | 100 Mbps | 10 Mbps |
| 2-4 | 100 Mbps | 10 Mbps | 200 Mbps | 15 Mbps |
| 4-6 | 200 Mbps | 10 Mbps | 500 Mbps | 20 Mbps |
| 6+ | 300 Mbps | 15 Mbps | 1000 Mbps | 30 Mbps |

If your connection speed is **too slow**, you'll see buffering.

**2. How will you be using the internet?**

Downloading is when the internet shares information with your computer. You'll need higher download speeds when watching Netflix and online gaming, than if you only **surf the web, use social media, and do online shopping**.

More day-to-day activities also require the fastest upload speeds (when our computers share information with the internet) e.g. **Zoom and video/audio calls, online gaming and sharing photos on social media**.

**Education SUPERHIGHWAY**

***Table 1***

This analysis will review the number of broadband serviceable locations (BSLs) in the identified communities, inclusive of their identification as served (>100/20 Mbps), underserved (<100/20 Mbps)

or unserved (<25/3 Mpbs). Additionally, the analysis will include service availability, current speeds, and socioeconomic and internet-related demographics from the correlated census tracts for the identified communities. The data used to create the maps comes from the Arizona Commerce Authority (ACA) website.[1]

It is important to detail the discrepancies between served and unserved locations when viewing various maps. The ACA map identifies serviceable locations considering internet speeds and current federal funding to build out broadband. An area identified as having federal funding does not mean broadband projects are being deployed currently. The FCC National Broadband Map[2] identifies current available technologies to broadband serviceable locations.

The descriptions provided for each remote area provide details about current technologies as identified on the FCC maps. The image of each remote area provides broadband serviceable locations, and their corresponding categories, as identified by the ACA. The variance in color shades in the map images indicates a difference in percentage of the locations within each hexagon. *Example:* A solid green hexagon indicates 100% of BSLs are served. A light green hexagon indicates less than 100%, but more than 50%, of BSLs are served.

The ACA uses their map information to determine eligibility for Broadband Equity Access Deployment (BEAD) funding. BEAD is part of the Infrastructure Investment and Jobs Act funding allocated to states by Congress. Monies are managed by the National Telecommunications and Information Administration (NTIA). Arizona received an allocation of just over $994M to build fiber-to-the-home networks across the state.

Note-An Excel spreadsheet with information about the exact census tracts, categories of BSLs, and exact addresses will be provided separately from this report.

## Evaluation of Communities in Remote Areas

The initial request was for an analysis of five rural areas – Arivaca, J6 Ranch, Redington, Sasabe, and Sonoita. Upon review of the data and maps, it was important to include two additional areas – New Tucson/Empire Mountains and Pantano/Rincon Valley. The following analysis will include a high-level overview and recommendations for improving the internet connectivity in each area.

---

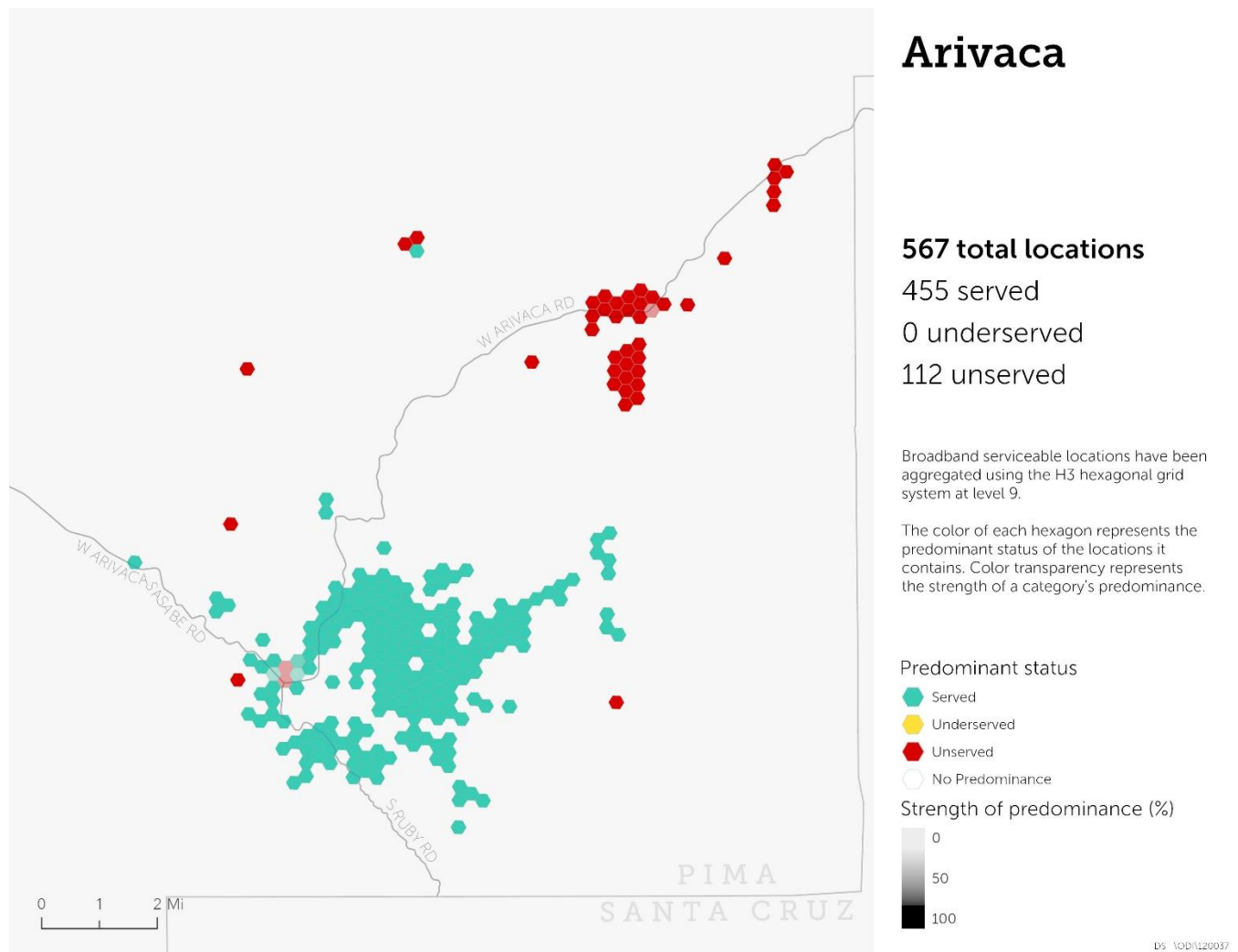[1] Arizona Commerce Authority, BEAD Challenge Process, https://www.azcommerce.com/broadband/initiatives/bead/
[2] FCC National Broadband Map, https://broadbandmap.fcc.gov/

## Arivaca

### *Data*

The evaluation of Arivaca is inclusive of unincorporated Pima County west of milepost 16, including the town of Arivaca, Ruby Road south to Penny Lane, and Sasabe Road to SR286. The area represented on the map may be slightly larger than the initial area described to include BSLs identified as unserved located nearby.

Arivaca (*Exhibit A*) includes 567 total locations with 455 identified as served, 0 underserved, and 112 as unserved. The unserved locations are found predominantly along Arivaca Road northeast of the town center.



**Arivaca**

**567 total locations**
455 served
0 underserved
112 unserved

Broadband serviceable locations have been aggregated using the H3 hexagonal grid system at level 9.

The color of each hexagon represents the predominant status of the locations it contains. Color transparency represents the strength of a category's predominance.

Predominant status
- Served
- Underserved
- Unserved
- No Predominance

Strength of predominance (%)
0
50
100

(*Exhibit A*)

This community does not have access to wired or licensed fixed wireless services. Resound Networks has been awarded funding from the Rural Digital Opportunity Fund (RDOF) to build out wireless service in the Arivaca area. The proposed capacity is 100/500 Mbps. The green hexagons are representative of the coverage area. This award makes the area ineligible for BEAD funding through the

State of Arizona award from NTIA. Resound Networks has yet to deploy broadband infrastructure anywhere in Pima County.

Current commercial availability is through satellite internet providers, Starlink (220/25 Mbps) and Viasat Inc. (150/3 Mbps). Satellite internet can be cost-prohibitive. Equipment prices for Starlink are $349 (self-installed) or up to $500 installation and $15/mo leasing fees for Viasat. Monthly service fees are $75/mo for Viasat for the first year, then $100 thereafter, and Starlink charges $120/mo. The Starlink low-cost ($80) plan is not available in Arizona.
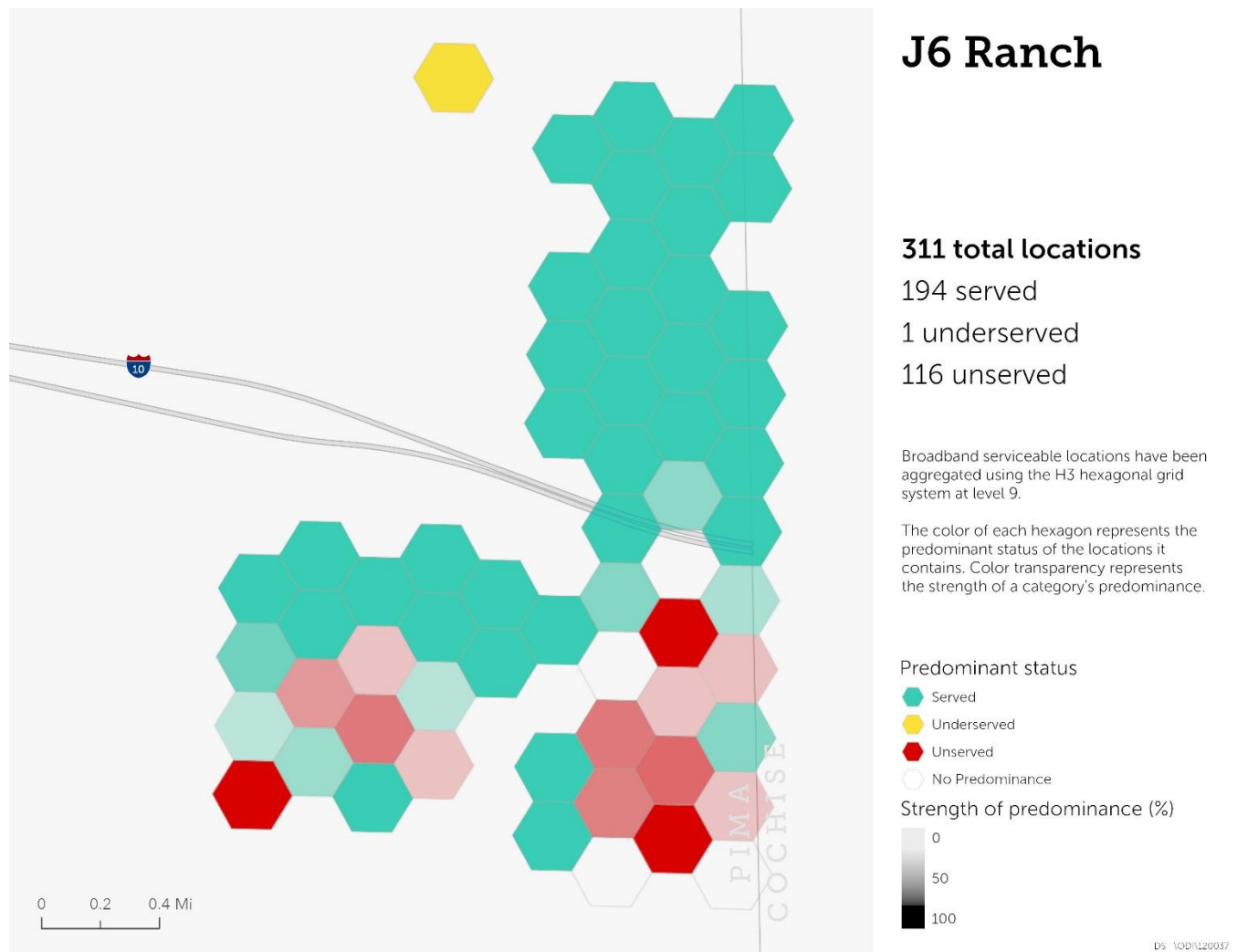
A small internet service cooperative, [Arivaca.com](Arivaca.com), provides unlicensed wireless connectivity to the Arivaca community. They charge between $50 (4 Mbps download) and $75 (8 Mbps download) monthly. This charge includes a $5 per month member fee for the cooperative. Equipment and installation fees are extra, but the amount is not identified on their website.

## J6 Ranch

*Data*

The evaluation of J6 Ranch is inclusive of the unincorporated areas north and south of I-10 at the eastern Pima County border spanning from East Castle Rock Kennel Drive (north) to East Tomahawk Street (south) and East Chiskasha Trail/East Tonopah Trail (west). The area represented on the map may be slightly larger than the initial area described to include BSLs identified as unserved located nearby.

J6 Ranch (*Exhibit B*) includes 311 total locations with 194 identified as served, 1 as underserved, and 116 as unserved. The unserved locations are found in the J6 Ranchettes area south of I-10.



## J6 Ranch

**311 total locations**
194 served
1 underserved
116 unserved

Broadband serviceable locations have been aggregated using the H3 hexagonal grid system at level 9.

The color of each hexagon represents the predominant status of the locations it contains. Color transparency represents the strength of a category's predominance.

Predominant status
- Served
- Underserved
- Unserved
- No Predominance

Strength of predominance (%)
0
50
100

(*Exhibit B*)

Currently, this community does not have access to wired internet services. Resound Networks has been awarded funding through RDOF to build out wireless service in the J6 area. The proposed capacity is 100/500 Mbps. The green hexagons are representative of the coverage area. This award

makes the area ineligible for BEAD funding through the State of Arizona award from NTIA. Resound Networks has yet to deploy broadband infrastructure anywhere in Pima County.

A small cluster of BSLs located in the northern portion of the identified area, closest to the county line, have internet service available from Verizon (300/20 Mbps). Verizon appears to be improving infrastructure at the Pima/Cochise County border. The Verizon website indicates service is not available currently though the FCC map indicates coverage from the company.
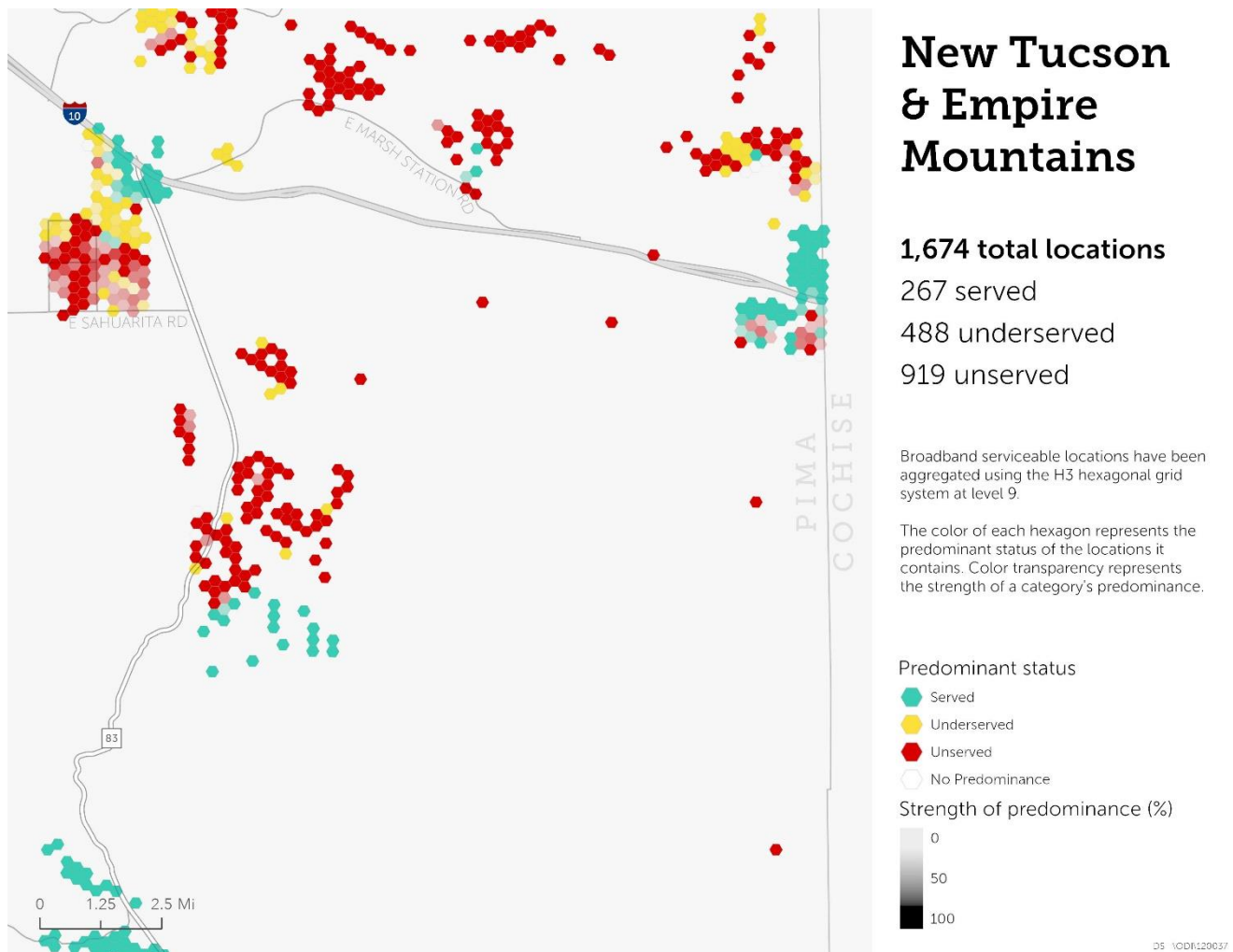
Current commercial availability is through satellite internet providers, Starlink (220/25 Mbps), HughesNet (100/5 Mbps), and Viasat Inc. (150/3 Mbps). Satellite internet can be cost-prohibitive. Equipment prices for Starlink are $349 (self-installed), HughesNet $300 with a $200 installation fee, and up to $500 installation and $15/mo leasing fees for Viasat. Monthly service fees are $75/mo for Viasat for the first year, then $100 thereafter, Starlink charges $120/mo, and HughesNet charges $65/mo for the first year, then $90 thereafter. The Starlink low-cost ($80) plan is not available in Arizona.

## New Tucson & Empire Mountains

*Data*

The evaluation of New Tucson and Empire Mountains is inclusive of the areas in unincorporated Pima County east of the I-10/SR83 interchange to the border with Cochise County. The New Tucson area follows south along SR83 to approximately the intersection of Old South Sonoita Highway. The Empire Mountains area is north of I-10 following along East Marsh Station Road inclusive of the Empire Acres community.

New Tucson and Empire Mountains (*Exhibit C*) have 1,674 total locations with 267 identified as served, 488 as underserved, and 919 as unserved. The unserved locations run throughout the described area.



# New Tucson & Empire Mountains

**1,674 total locations**
267 served
488 underserved
919 unserved

Broadband serviceable locations have been aggregated using the H3 hexagonal grid system at level 9.

The color of each hexagon represents the predominant status of the locations it contains. Color transparency represents the strength of a category's predominance.

Predominant status
- Served
- Underserved
- Unserved
- No Predominance

Strength of predominance (%)
0
50
100

(*Exhibit C*)

Currently, this community does not have access to wired internet services. This area is eligible for BEAD funding due to the lack of wired and licensed fixed wireless technologies in the area. No other federal funding has been designated for the area.

Current commercial availability is through satellite internet providers, Starlink (220/25 Mbps), HughesNet (100/5 Mbps), and Viasat Inc. (150/3 Mbps). Satellite internet can be cost-prohibitive. Equipment prices for Starlink are $349 (self-installed), HughesNet $300 with a $200 installation fee or up to $500 installation and $15/mo leasing fees for Viasat. Monthly service fees are $75/mo for Viasat for the first year, then $100 thereafter, HughesNet charges $65/mo for the first year, then $90 thereafter, and Starlink charges $120/mo. The Starlink low-cost ($80) plan is not available in Arizona.

New Tucson and Empire Mountains areas have available services from Rincon Wireless, an unlicensed fixed wireless service provider, at speeds of 300/300 Mbps and Bluespan Wireless, a licensed fixed wireless service provider, at speeds of 500/50 Mpbs. The highest level of speed through Rincon Wireless has limited availability. Plans start at $67 per month for 25/10 Mbps plus the cost of equipment and installation. Bluespan Wireless does not provide plans, equipment, or installation costs on their website.

## Pantano & Rincon Valley

*Data*

The evaluation of Pantano and Rincon Valley is inclusive of the areas in unincorporated Pima County north of I-10 and the Empire mountains and east of the I-10/SR83 interchange to the border with Cochise County. The Rincon Valley area follows Colossal Cave Road around the loop and runs northeast of Old Spanish Trail. The Pantano area is inclusive of all BSLs north of the Empire Mountains along E. Marsh Station Road and J6 Ranch to the Cochise County border.

Pantano and Rincon Valley (*Exhibit D*) have 634 total locations with 10 identified as served, 206 as underserved, and 418 as unserved. The unserved locations run throughout the described area.
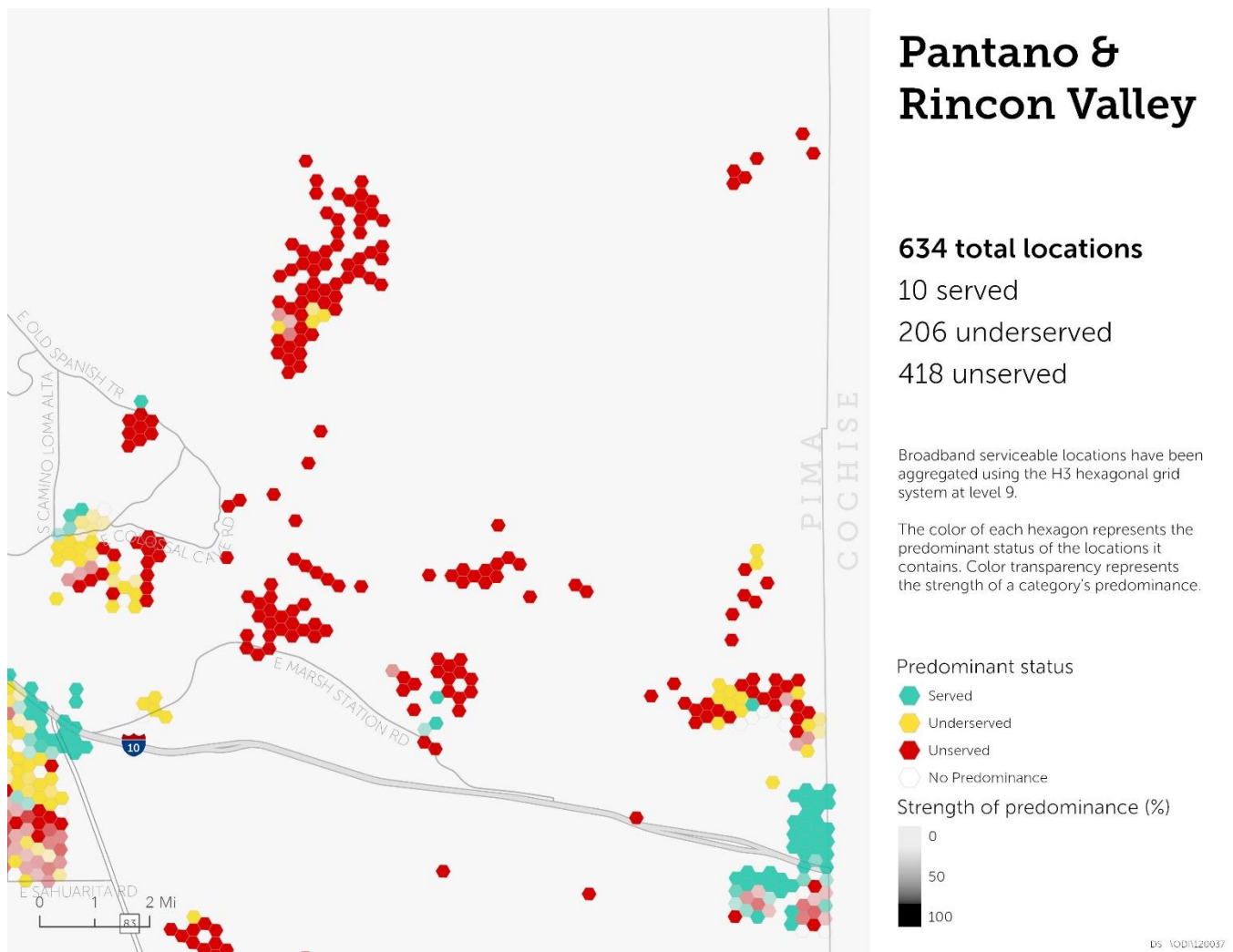


(*Exhibit D*)

Currently, this community does not have access to wired internet services. This area is eligible for BEAD funding due to the lack of wired and licensed fixed wireless technologies in the area. No other federal funding has been designated for the area.

Current commercial availability is through satellite internet providers, Starlink (220/25 Mbps), HughesNet (100/5 Mbps), and Viasat Inc. (150/3 Mbps). Satellite internet can be cost-prohibitive. Equipment prices for Starlink are $349 (self-installed), HughesNet $300 with a $200 installation fee or up to $500 installation and $15/mo leasing fees for Viasat. Monthly service fees are $75/mo for Viasat for the first year, then $100 thereafter, HughesNet charges $65/mo for the first year, then $90 thereafter, and Starlink charges $120/mo. The Starlink low-cost ($80) plan is not available in Arizona.
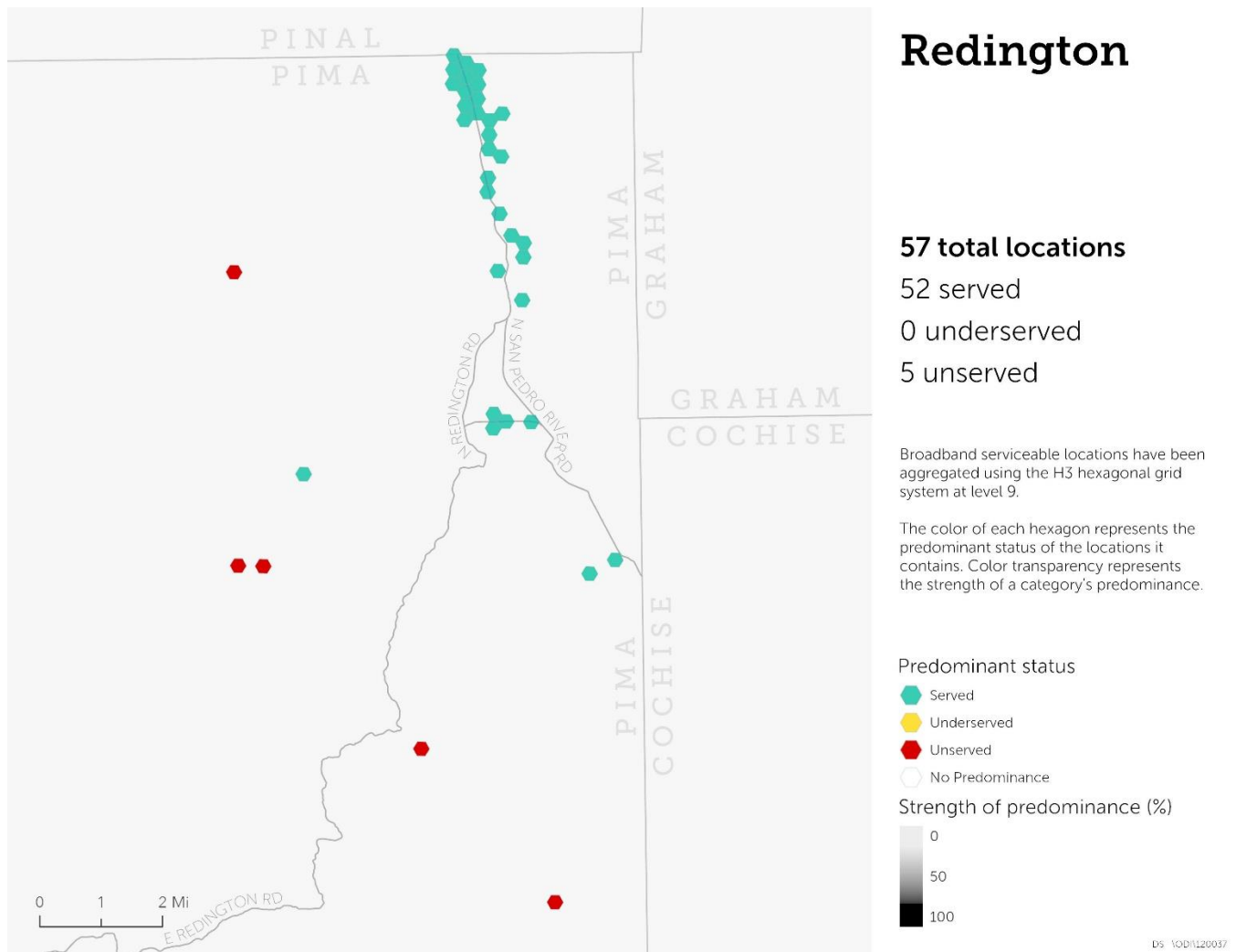
The Rincon Valley area has available service from Rincon Wireless, an unlicensed fixed wireless service provider, at speeds of 300/300 Mbps. This level of speed is limited in availability. Plans start at $67 per month for 25/10 Mbps plus the cost of equipment and installation.

## Redington

*Data*

The evaluation of Redington is inclusive of the areas in unincorporated Pima County east of milepost 14 on Redington Road, continuing along San Pedro River Road and Redfield Canyon Road extending to the Pinal County and Cochise County lines. The area represented on the map may be slightly larger than the initial area described to include BSLs identified as unserved located nearby.

Redington (*Exhibit E)* includes 57 total locations with 52 identified as served, 0 underserved, and 5 as unserved. The unserved locations are found northwest and southeast of E. Redington Rd.



# Redington

**57 total locations**

52 served

0 underserved

5 unserved

Broadband serviceable locations have been aggregated using the H3 hexagonal grid system at level 9.

The color of each hexagon represents the predominant status of the locations it contains. Color transparency represents the strength of a category's predominance.

Predominant status
- Served
- Underserved
- Unserved
- No Predominance

Strength of predominance (%)

0
50
100

(*Exhibit E*)

Currently, this community does not have access to wired internet services. Federal funding through the Rural E-Connectivity Program has been awarded to Midvale Telephone Company. The proposed capacity is 1000/1000 Mbps. The green hexagons are representative of the coverage area. This award makes the area ineligible for BEAD funding through the State of Arizona award from NTIA. Midvale Telephone Company currently provides internet over copper lines at 25/3 Mbps speeds. Their website

indicates broadband is available at 10 Mbps download speeds for $75 per month, 20 Mbps download speeds for $85 per month, and $30 Mbps download speeds for $100 per month. This does not include the cost of equipment and installation.
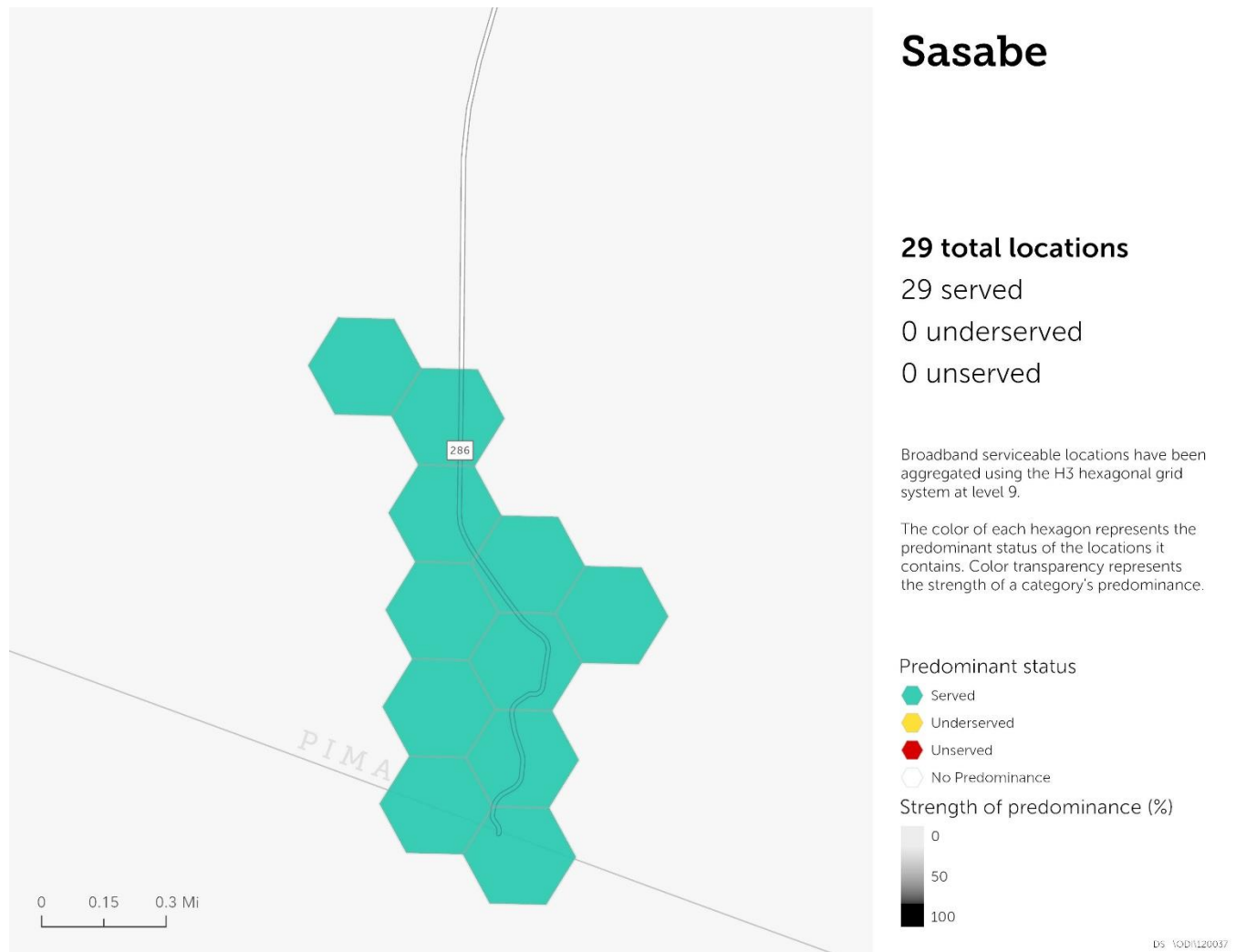
Other commercial availability is through satellite internet providers, Starlink (220/25 Mbps), HughesNet (100/5 Mbps), and Viasat Inc. (150/3 Mbps). Satellite internet can be cost-prohibitive. Equipment prices for Starlink are $349 (self-installed), HughesNet $300 with a $200 installation fee or up to $500 installation and $15/mo leasing fees for Viasat. Monthly service fees are $75/mo for Viasat for the first year, then $100 thereafter, HughesNet charges $65/mo for the first year, then $90 thereafter, and Starlink charges $120/mo. The Starlink low-cost ($80) plan is not available in Arizona.

## Sasabe

### *Data*

The evaluation of Sasabe is inclusive of unincorporated Pima County on SR286 south to milepost 2 to the United States/Mexico border. The area represented on the map may be slightly larger than the initial area described to include BSLs identified as unserved located nearby.

Sasabe (*Exhibit F*) includes 29 total locations with 29 identified as served, 0 underserved, and 0 unserved.



# Sasabe

**29 total locations**
29 served
0 underserved
0 unserved

Broadband serviceable locations have been aggregated using the H3 hexagonal grid system at level 9.

The color of each hexagon represents the predominant status of the locations it contains. Color transparency represents the strength of a category's predominance.

Predominant status
- Served
- Underserved
- Unserved
- No Predominance

Strength of predominance (%)
0
50
100

(*Exhibit F*)

Currently, this community does not have access to wired internet services. US Cellular has received funding through the Enhanced Alternative Connect America Cost Model (A-CAM) to provide wireless internet service to the area. The proposed speeds are 100/20 Mbps. This award makes the area ineligible for BEAD funding through the State of Arizona award from NTIA. US Cellular has yet to build out to the area.
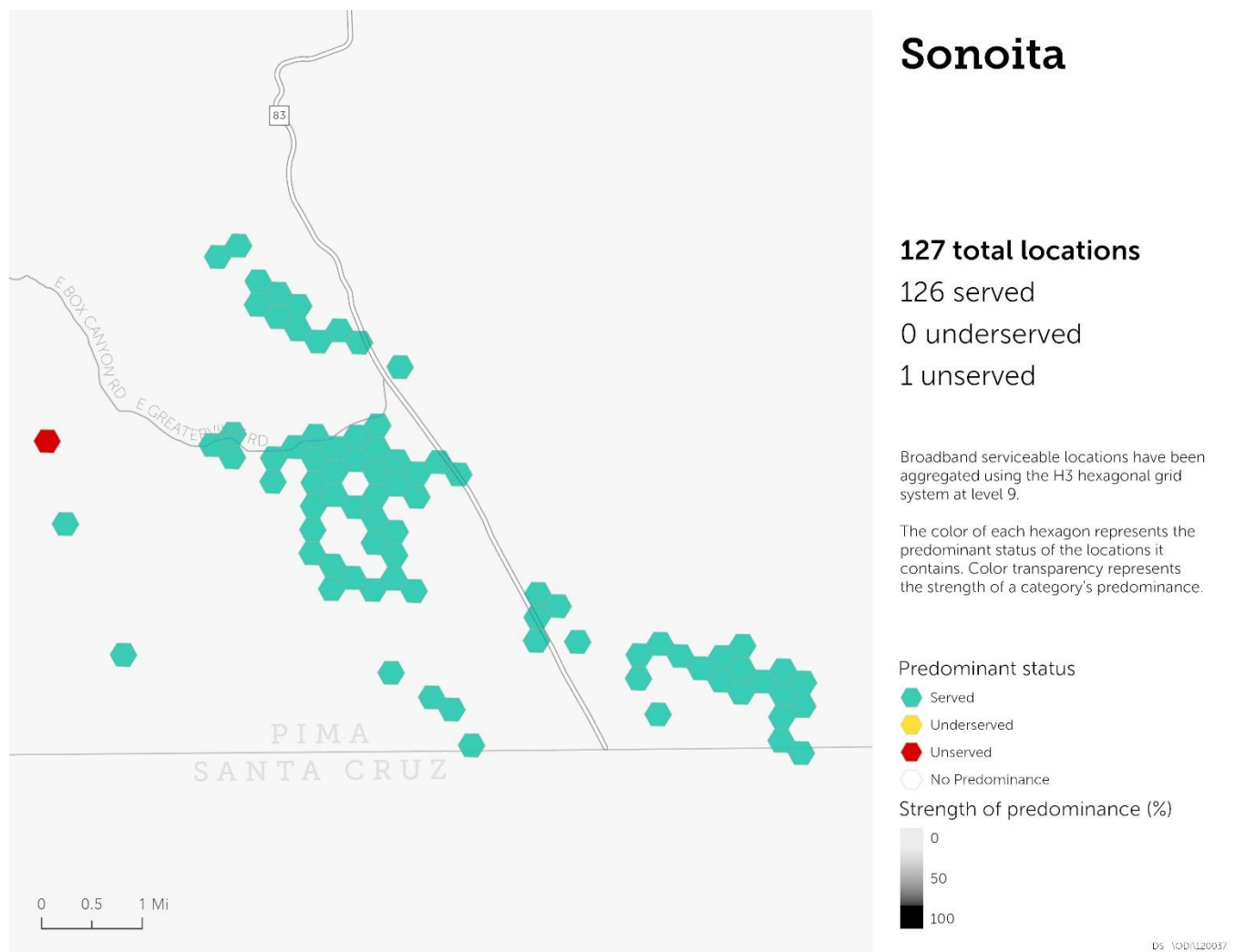
Current commercial availability is through satellite internet providers, Starlink (220/25 Mbps), HughesNet (100/5 Mbps), and Viasat Inc. (150/3 Mbps). Satellite internet can be cost-prohibitive. Equipment prices for Starlink are $349 (self-installed), HughesNet $300 with a $200 installation fee or up to $500 installation and $15/mo leasing fees for Viasat. Monthly service fees are $75/mo for Viasat for the first year, then $100 thereafter, HughesNet charges $65/mo for the first year, then $90 thereafter, and Starlink charges $120/mo. The Starlink low-cost ($80) plan is not available in Arizona.

## Sonoita

### Data

The evaluation of Sonoita is of unincorporated Pima County near SR83, south of milepost 43 inclusive of Singing Valley Road, Greaterville Road, Empire Ranch Road, Singing Hills Road, Garder Canyon Road, and Fish Canyon Road. The original request included Old Sonoita Highway in the description, but this road is in Santa Cruz County. The area represented on the map may be slightly larger than the initial area described to include BSLs identified as unserved located nearby.

Sonoita (*Exhibit G*) includes 127 total locations with 126 identified as served, 0 underserved, and 1 as unserved.



# Sonoita

**127 total locations**
126 served
0 underserved
1 unserved

Broadband serviceable locations have been aggregated using the H3 hexagonal grid system at level 9.

The color of each hexagon represents the predominant status of the locations it contains. Color transparency represents the strength of a category's predominance.

Predominant status
- Served
- Underserved
- Unserved
- No Predominance

Strength of predominance (%)
0
50
100

(*Exhibit G*)

Currently, this community does not have access to wired internet services. Resound Networks has been awarded funding through RDOF to build out wireless service in the Sonoita area. The proposed capacity is 100/500 Mbps. The green hexagons are representative of the coverage area. This award

makes the area ineligible for BEAD funding through the State of Arizona award from NTIA. Resound Networks has yet to deploy broadband infrastructure anywhere in Pima County.

Current commercial availability is through satellite internet providers, Starlink (220/25 Mbps), HughesNet (100/5 Mbps), and Viasat Inc. (150/3 Mbps). Satellite internet can be cost-prohibitive. Equipment prices for Starlink are $349 (self-installed), HughesNet $300 with a $200 installation fee or up to $500 installation and $15/mo leasing fees for Viasat. Monthly service fees are $75/mo for Viasat for the first year, then $100 thereafter, HughesNet charges $65/mo for the first year, then $90 thereafter, and Starlink charges $120/mo. The Starlink low-cost ($80) plan is not available in Arizona.

# Recommendations

## Review of Demographic Information

The [Connect Pima Data Explorer](#) provides demographic information by census tract for the identified communities. The areas east of the I-10/SR83 interchange overlap in multiple census tracts. *Table 2* provides the census tracts used in the evaluation of the communities.

| Area | Census Tracts |
|---|---|
| Arivaca | 43.16 |
| J6 Ranch | 40.61, 41.09 |
| New Tucson & Empire Mountains | 41.09, 41.27 |
| Pantano & Rincon Valley | 40.61 |
| Redington | 40.52, 40.61 |
| Sasabe | 43.16 |
| Sonoita | 41.09, 41.27 |

(*Table 2*)

Important data includes a digital divide index to use in determining the community priorities for broadband infrastructure or digital literacy. Each census tract includes a digital distress rating (level of access to computing devices and the internet), and US Census data for household poverty level, unemployment rates, percentage of population over 65-years of age, and percentage of covered populations per the Digital Equity Act definitions. [3]

Additionally, the Connect Pima Data Explorer highlights the social vulnerability index (SVI)[4] for each census tract. The SVI identifies the economic need of a community by considering household poverty, number of children in poverty, number of families with children in poverty, median income, most unserved locations per square mile, and the rurality of the census tract.

The Sasabe, New Tucson, and Sonoita areas are rated as moderate to high on the digital distress index with a needed focus on broadband infrastructure. These areas have the lowest percentage of households with broadband, 70.1% and 86.6% respectively. Only Sasabe is rated high on the social vulnerability index at 77.67%.

---

[3] Digital Equity Act At-a-Glance, [https://www.ntia.gov/other-publication/2024/digital-equity-act-at-a-glance](https://www.ntia.gov/other-publication/2024/digital-equity-act-at-a-glance)
[4] Evaluation Criteria Datasets, [https://www.usda.gov/sustainability/infrastructure/broadband/reconnect-loan-and-grant-program/service-area-map-datasets](https://www.usda.gov/sustainability/infrastructure/broadband/reconnect-loan-and-grant-program/service-area-map-datasets)

All communities have a high percentage of the population over the age of 65 years old, indicative of a higher number of retirees and/or those on a fixed income.  Two of the smallest communities, Sasabe and Sonoita, have an unemployment rate higher than the state average and a higher percentage of households at 150% of the poverty level or greater. The higher rate of poverty, unemployment, and lower number of households with broadband may indicate low internet adoption rates due to unaffordability.

## Review of Affordable, High-Speed Internet Plans

The National Digital Inclusion Alliance (NDIA) recommends a low-cost broadband price point of $30 per month or less with no additional non-recurring costs or fees.[5] Rural communities typically pay more for home broadband than urban areas as evidenced by the available plans in the identified communities. Internet service providers face unique challenges in rural areas and may not be able to offer low-cost plans without a subsidy.

Households in the identified communities can be connected to high-speed internet service through satellite providers – Starlink, HughesNet, and Viasat. These plans are not low-cost, starting at $65 per month for the first year and increasing to $90 for each subsequent year. This is 3 times higher than the NDIA recommended cost for a low-cost internet plan.

## Review of Federal Broadband Programs

Internet Service Providers have a varying amount of time to complete broadband deployments as part of Federal Broadband Programs. **RDOF** gives an ISP eight years from the date of the award to complete deployments. Resound Networks was awarded RDOF funding in December 2022 giving them until December 2030 to complete their broadband deployments in Arizona.  **A-CAM** gives an ISP four years from the date of the award to complete deployments. US Cellular was awarded A-CAM funding in October 2024 giving them until December 2028 to complete their broadband deployment in Sasabe. The **Rural E-Connectivity Program** gives an ISP 4 years from the date of the award to complete deployments. Plans were due to USDA at the end of 2023 with an expected rollout of 2026. This means Midvale Telephone Company has until 2030 to complete their broadband deployment in Redington.

These communities will wait 3-5 years to get wired broadband infrastructure as part of these federal programs. Historically, if an ISP does not deploy broadband within the first two years of the grant program, they end up defaulting on the grant award and returning the money to the federal government. This means the identified communities might wait 3-5 years only to not have high-speed internet at the end of the period.

## Options for Connectivity

Affordability and poor quality of connection are the main reasons community members do not have internet access in their homes. The high-speed internet options in these communities are well above the low-cost price point identified by NDIA. Most services have sufficient download speeds but very

---

[5] NDIA GIG, https://www.digitalinclusion.org/ndia-gig/

slow upload speeds and higher signal latency. Research needs to be done to determine how many individuals lack internet access at home and the reasons why.

### Educating Community Members on Available Services

Some of the identified communities may realize they have multiple options for internet access. Implementing a communication strategy that includes educational materials in multiple languages and on multiple platforms may improve the internet adoption rate in the identified areas. Analog educational methods should be used as well – newspapers, door hangers, radio, television.

### Verify and Test Alternative Technologies

T-Mobile and Verizon are bolstering their wireless infrastructure throughout Pima County. Mobile hotspots may work in these rural locations. Their sales teams will have the most up-to-date information about availability of service and feasibility of using mobile hotspots. Making sure to test the devices to determine quality of service is necessary before promoting this option to community members.

### Subsidies for Low-Income Households

Subsidizing the equipment and installation costs of satellite internet for low-income households may be worth the investment. The cost would be anywhere from $150-$500 depending upon available discounts. Additionally, Starlink has provided municipalities with deeper discounts on equipment and installation than is currently advertised on their website.

### Subsidize an ISP to Deploy Broadband Infrastructure

Providing a monetary incentive to an internet service provider may be a viable option for connectivity. This can be an expensive undertaking, costing millions of dollars for varying technologies.