

# Cooley

Henry H. Wendel  
T: +1 202 776 2943  
hwendel@cooley.com

## ORIGINAL

REDACTED  
FOR PUBLIC INSPECTION

### EX PARTE OR LATE FILED

September 5, 2018

Accepted / Filed

SEP 5 2018

**VIA HAND DELIVERY**

Marlene H. Dortch, Secretary  
Federal Communications Commission  
Office of the Secretary  
445 12th Street, SW  
Washington, DC 20554

Federal Communications Commission  
Office of the Secretary

DOCKET FILE COPY ORIGINAL

Re: *Ex Parte* Notice dated September 5, 2018  
Microsoft Corporation  
Request For Confidential Treatment – Confidential Attachment

Dear Ms. Dortch:

Microsoft Corporation ("Microsoft"), by its attorneys and pursuant to Sections 0.457, 0.459, and 1.1206 of the Commission's rules,<sup>1</sup> hereby requests confidential treatment of the attached *ex parte* notice which contains trade secrets relating to Microsoft's deployment of rural broadband networks. More specifically, representatives from Microsoft and its partner Connect Americans Now met with Mr. Nathan Leamer, Policy Advisor to Chairman Ajit Pai and Microsoft representatives presented confidential information concerning its deployment of its rural broadband Airband projects. For the reasons described below, the Commission should grant confidential treatment for this data.

Microsoft requests confidential treatment for this information, because it includes highly sensitive commercial information concerning specific information related to its Airband deployments. Microsoft has not made this information public at this time, because it treats the information as non-public strategic corporate information. As a consequence, this information qualifies for exemption from disclosure under Section 0.457(d) of the Commission's rules, which provides that trade secrets and other similarly sensitive commercial information will not be made available for public inspection.<sup>2</sup> Given its sensitive nature, this information falls squarely within Section 0.457(d) and should be exempt from disclosure and afforded confidential treatment under Exemption 4 of the Freedom of Information Act.

No. of Copies to be  
List ABODE

0

<sup>1</sup> 47 C.F.R §§ 0.457, 0.459, and 1.1206.

<sup>2</sup> 47 C.F.R. § 0.457(d).

# Cooley

**REDACTED**  
**FOR PUBLIC INSPECTION**

In the event that you have any questions, please contact me.

Very truly yours,

A handwritten signature in black ink, appearing to read "H. Wendel", written in a cursive style.

Henry H. Wendel  
Counsel for Microsoft Corporation

Enclosure



Robert M. McDowell  
+1 202 842 7862  
rmcdowell@cooley.com

September 5, 2018

Accepted / Filed  
SEP -5 2018  
Federal Communications Commission  
Office of the Secretary

**Notice of Ex Parte Communication**

Marlene H. Dortch  
Secretary  
Federal Communications Commission  
445 12<sup>th</sup> Street, S.W.  
Washington, DC 20554

Re: ET Docket No. 16-56, ET Docket No. 14-165, ET Docket No. 04-186, RM-11745

Dear Ms. Dortch:

On August 31, 2018, Paula Boyd, Mike McMahon, Vickie Robinson, and Suhail Kahn of Microsoft Corporation ("Microsoft"), Richard Cullen of Connect Americans Now ("CAN"), and I met with Mr. Nathan Leamer, Policy Advisor to Chairman Ajit Pai. We discussed the need for the Commission to conclude the above referenced proceedings. Concluding the proceedings will provide the certainty needed to sustain investments in the television white spaces ecosystem including the investments by chip manufacturers to incorporate white spaces spectrum into a broad range of chips. This in turn will assist in lowering prices for consumer premises equipment. Furthermore, we discussed the attached slides that detail how Microsoft's partnership with broadband providers on existing projects across the country which through the use of television white spaces and other technology solutions, are providing broadband in rural areas in a number of states. Additionally, CAN showed the video available at [https://www.youtube.com/watch?time\\_continue=7&v=nM2yre0CkM4](https://www.youtube.com/watch?time_continue=7&v=nM2yre0CkM4) and provided an update on its recent efforts and the positive feedback it has received from rural residents who have been able to use this innovative broadband technology.

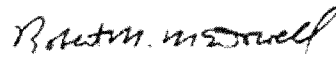
Microsoft's presentation included Highly Confidential Information. A redacted version of the presentation is enclosed with this letter, which has been filed electronically in the above-referenced dockets. A highly confidential version is also being filed with the Commission in accordance with 47 C.F.R. §§ 0.457, 0.459, and 1.1206. In accordance with the Commission's rules, Microsoft respectfully requests that unredacted copies of this presentation not be made publicly available.

# Cooley

Marlene H. Dortch  
Page Two

If you require any additional information, please contact the undersigned.

Sincerely,



Robert M. McDowell  
*Counsel to Microsoft Corporation*

Enclosure

cc: Mr. Nathan Leamer

REDACTED - FOR PUBLIC INSPECTION

REDACTED

# State of Broadband in Maryland – Airband Partners

Population without  
Broadband Access

2.5%

151,268 6,001,382

Pop. in Urban Areas  
without Broadband

1.9%

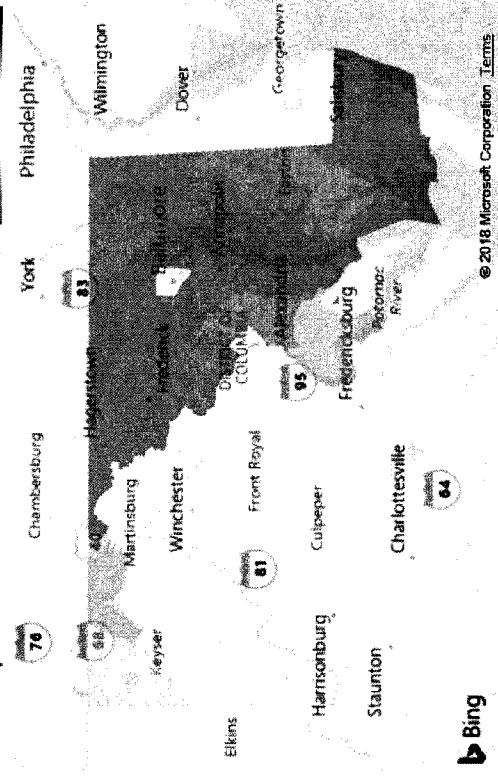
101,121 5,211,224

Pop. in Rural Areas  
without Broadband  
Access

6.3%

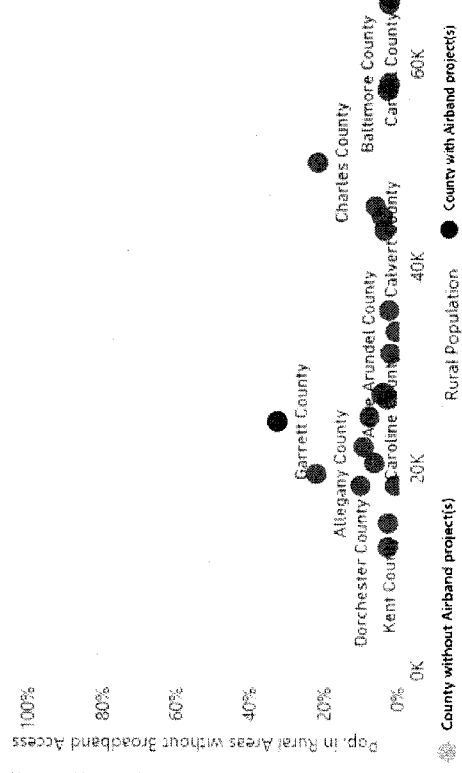
50,147 790,158

Percent Pop. in Rural Areas without Broadband Access



© 2018 Microsoft Corporation Terms

Rural Areas by Population and Percent without Broadband Access



## Airband Projections

Projected Population Under Coverage	Projected Unserved Population Under Coverage
30,000	30,000

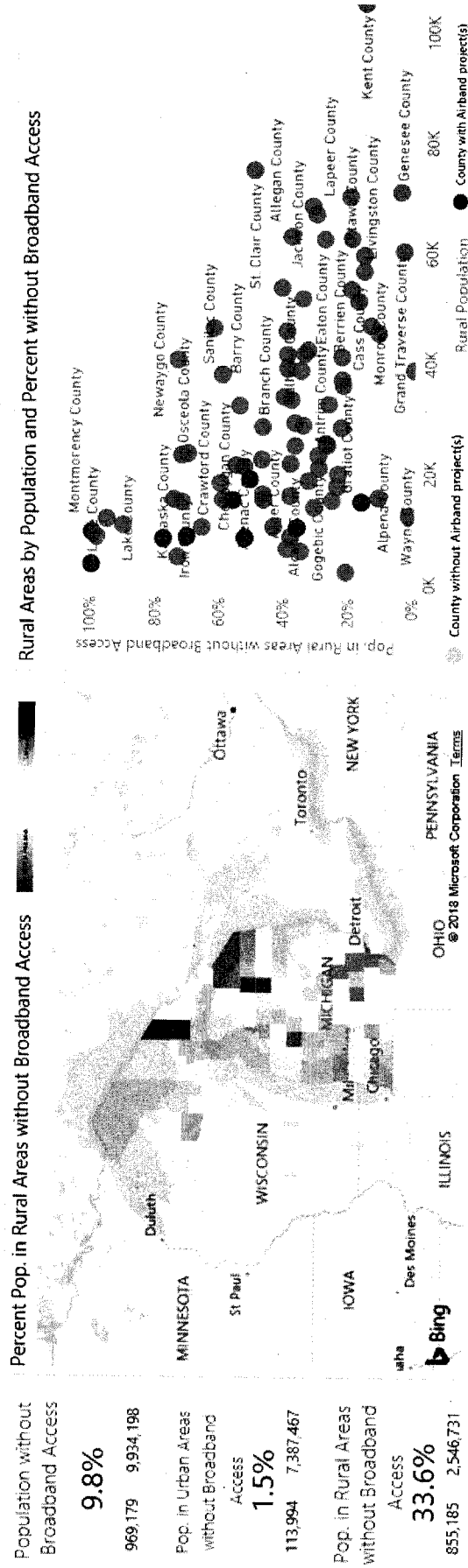


## Airband Partner & Project Summary

Declaration Networks Group- Declaration Networks is an alternative broadband access provider leveraging disruptive technology to deliver high capacity access services with significant cost and performance advantages. In partnership with Microsoft, Declaration Networks Group is delivering broadband access to customers using TV white spaces, other fixed wireless technologies and Wi-Fi networks across two US states: Virginia and Maryland.

# State of Broadband in Michigan – Airband Partners

**REDACTED - FOR PUBLIC INSPECTION**



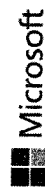
## Airband Projections

Projected Population Under Coverage	20,558	Projected Unserved Population Under Coverage	10,000
---	--------	--	--------

## Airband Partner & Project Summary

Allband- With an experimental license from the FCC, Allband is using TV white spaces to establish broadband connections and Wi-Fi hotspots on public school buses in rural Montgomery and Alpena Counties. Allband is connecting video cameras in state parks to better enable deer and elk tracking and improve public safety, as well as providing residential broadband access.

Packerland Broadband– Packerland Broadband is an internet service provider (ISP) servicing 85,000 customers in rural Wisconsin and Michigan's Upper Peninsula. Packerland will leverage their fiber, hybrid fiber/coax (HFC), and wireless technologies to deliver low-cost, high speed broadband access to some of the most rural of areas.

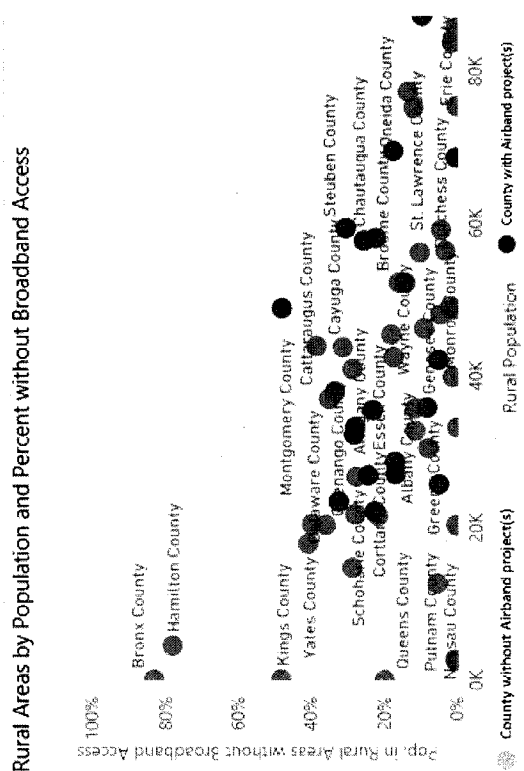
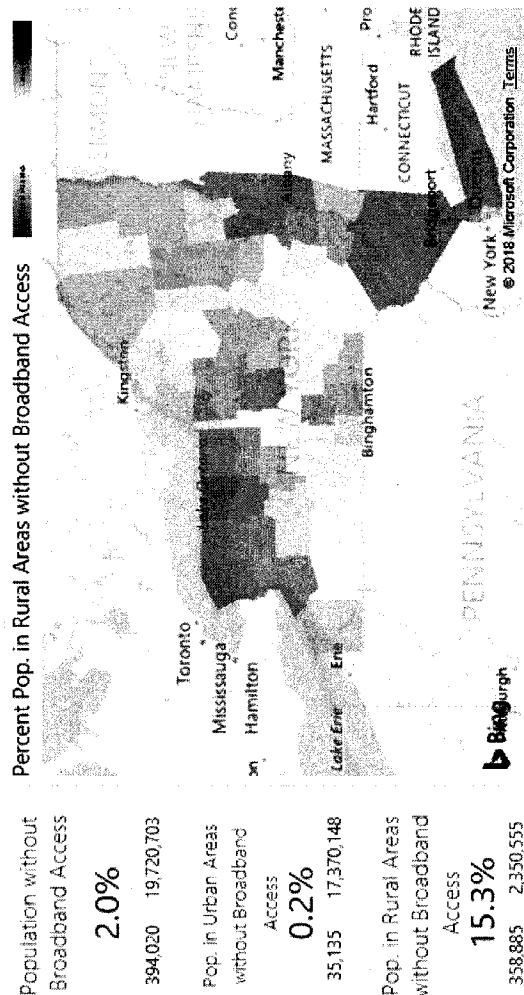






State of Broadband in New York – Airband Partners

**REDACTED - FOR PUBLIC INSPECTION**



## Airband Projections

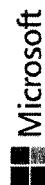
Projected Population Under Coverage	Projected Unserved Population Under Coverage
1,204,148	165,611

## Airband Partner & Project Summary

CV Wireless- CV Wireless provides its community with internet access by purchasing fiber service and distributing the signal using fixed wireless microwaves, point to multiple point and point to point connections, including TV white spaces, into customer locations in New York State.

RTO Wireless- Microsoft is collaborating with RTO Wireless to construct and deploy wireless internet access networks to provide affordable hybrid fixed wireless broadband internet access in rural markets within Maine and New York.

Essex Farm- Using the power of the cloud, Microsoft has introduced TV white space and Wi-Fi connectivity, moisture and temperature sensors, cameras, and drone mapping to help Essex Farm increase its yields, reduce losses, and control costs.



# State of Broadband in Ohio – Airband Partners

Population without  
Broadband Access

**7.6%**

885,504 11,609,735

Pop. in Urban Areas  
without Broadband  
Access

**1.6%**

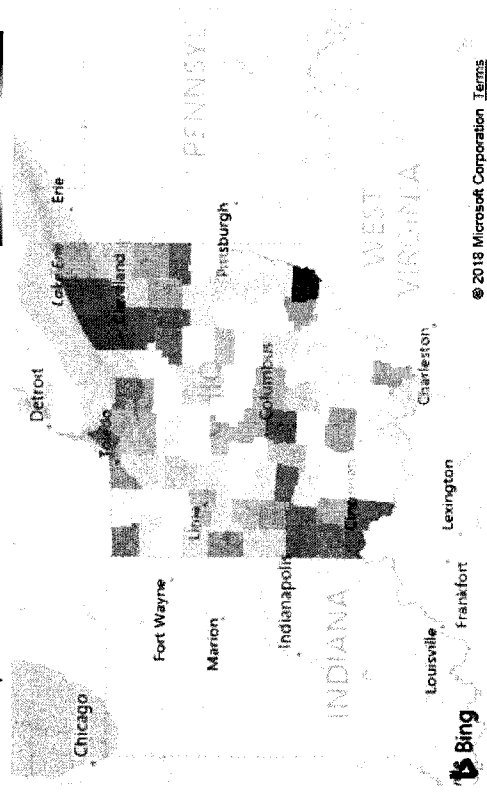
142,194 9,039,317

Pop. in Rural Areas  
without Broadband  
Access

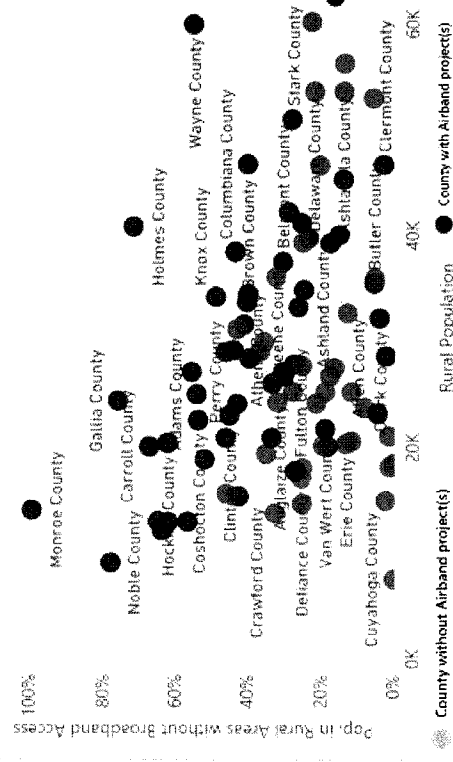
**28.9%**

743,309 2,570,418

Percent Pop. in Rural Areas without Broadband Access



Rural Areas by Population and Percent without Broadband Access



## Airband Projections

Projected  
Population Under  
Coverage

**932,758**

Projected Unserved  
Population Under  
Coverage

**111,931**



## Airband Partner & Project Summary

Agile Networks- Agile Networks (Agile) owns and operates an established data network composed of fiber and fixed wireless connectivity throughout the state of Ohio. Agile's network consists of nearly 300 points of presence (tower), offering a backhaul network capable of 1 Gigabit speed, 1/3 of which will be leveraged for TVWS connectivity, and the network continues to grow and expand both deeper into existing markets and further to new markets. Agile is currently piloting TV white spaces technology with its employees.

# State of Broadband in Virginia – Airband Partners

REDACTED - FOR PUBLIC INSPECTION

Population without  
Broadband Access

**9.2%**

769,902 8,386,602

Pop. in Urban Areas  
without Broadband  
Access

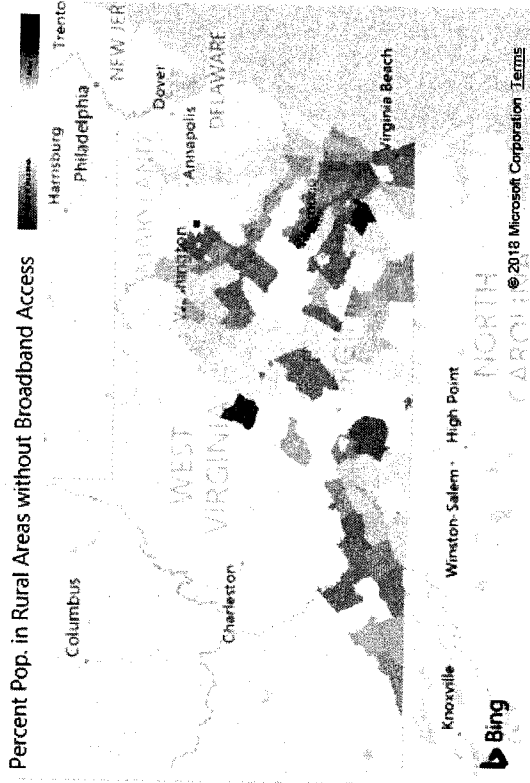
**2.8%**

175,721 6,333,710

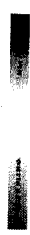
Pop. in Rural Areas  
without Broadband  
Access

**28.9%**

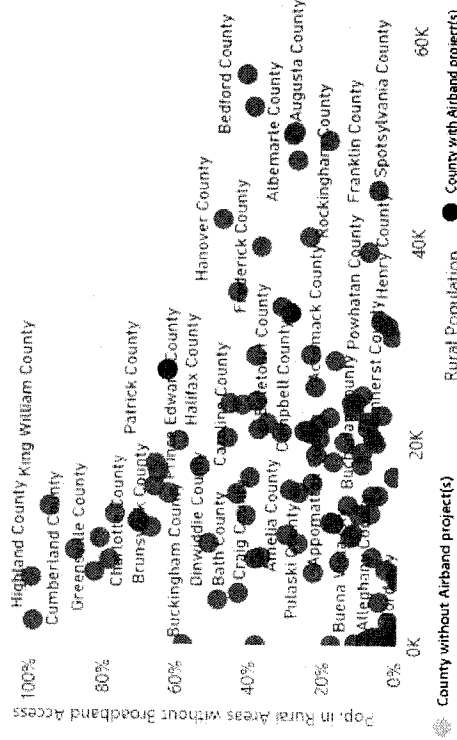
594,180 2,052,892



Percent Pop. in Rural Areas without Broadband Access



Rural Areas by Population and Percent without Broadband Access



## Airband Projections

Projected Population Under Coverage	67,812
Projected Unserved Population Under Coverage	50,000



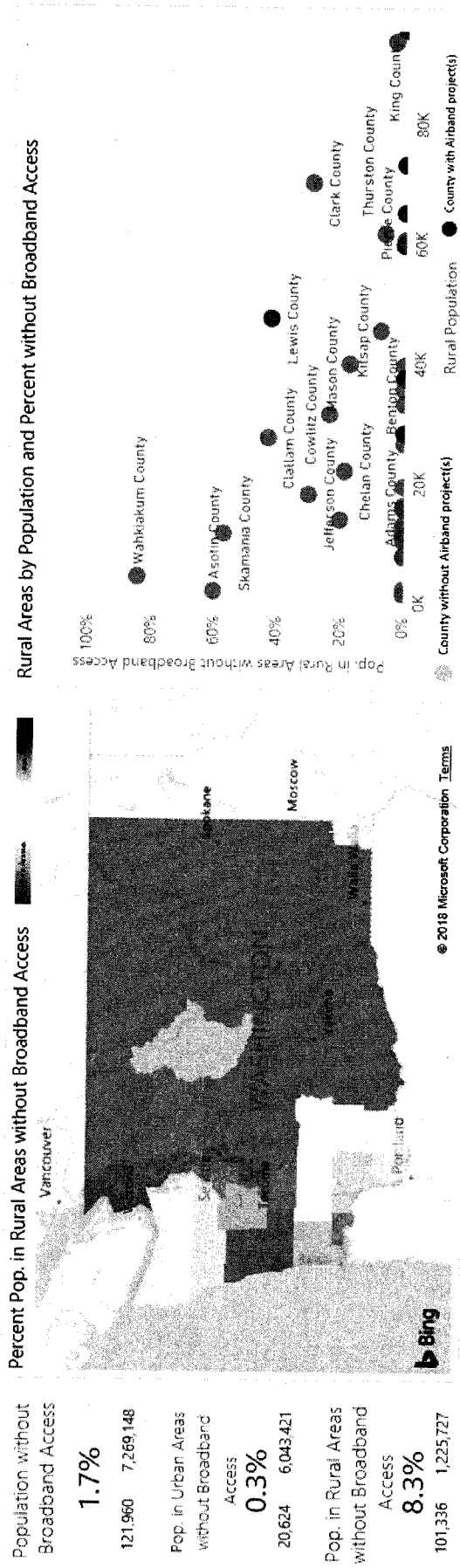
## Airband Partner & Project Summary

Declaration Networks Group- Declaration Networks is an alternative broadband access provider leveraging disruptive technology to deliver high capacity access services with significant cost and performance advantages. In partnership with Microsoft, Declaration Networks Group is delivering broadband access to customers using TV white spaces, other fixed wireless technologies and Wi-Fi networks across two US states: Virginia and Maryland.

Mid-Atlantic Broadband Communities- With support from the Virginia Tobacco Region Revitalization Commission, we are using TV white space technology to bring residential broadband access and cloud services to students in Charlotte and Halifax Counties that otherwise lack access to broadband at home. This project leverages fiber connectivity already present at public schools and wirelessly extends that last-mile connectivity using TV white space technologies.

# State of Broadband in Washington – Airband Partners

REDACTED - FOR PUBLIC INSPECTION



## Airband Projections

Projected Population Under Coverage	294,690
Projected Unserved Population Under Coverage	25,481

## Airband Partner & Project Summary

**Dancing Crow Farm**- Using the power of the cloud, Microsoft has introduced TV white space and Wi-Fi connectivity, moisture and temperature sensors, cameras, and drone mapping to help small farmers increase their yields, reduce losses, and control costs. This end-to-end FarmBeats system deployment, leveraging TVWS technology, has been in place on the farm for 3 seasons.

**Native Network**- Native Network constructs and deploys wireless internet access networks to provide affordable hybrid and fixed wireless broadband internet access to the tribes within Flathead Reservation in Montana as well as Lummi Nation and Swinomish Tribe in Washington. Native Network is dedicated to supporting Native American Tribes and their Lands by providing broadband connectivity to these communities.

**Nelson Wheat**- Using the power of the cloud, Microsoft has introduced TV white space and Wi-Fi connectivity, moisture and temperature sensors, cameras, and drone mapping to help Nelson Wheat increase its yields, reduce losses, and control costs.



# State of Broadband in Wisconsin - Airband Partners

REDACTED - FOR PUBLIC INSPECTION

Population without  
Broadband Access

13.6%

783,196 5,775,322

Pop. in Urban Areas  
without Broadband  
Access

0.9%

35,015 4,039,180

Pop. in Rural Areas  
without Broadband  
Access

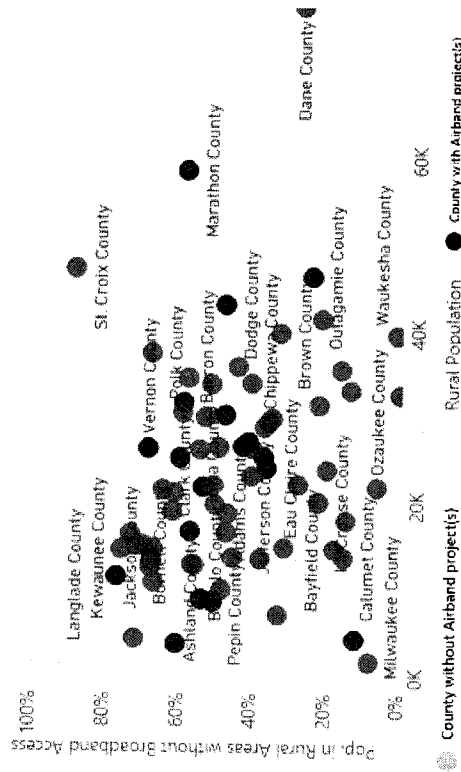
43.1%

748,181 1,736,142

Percent Pop. in Rural Areas without Broadband Access

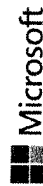


Rural Areas by Population and Percent without Broadband Access



## Airband Projections

Projected Population Under Coverage	Projected Unserved Population Under Coverage
65,800	40,000



## Airband Partners & Project Summary

**Packerland Broadband** - Packerland Broadband is an internet service provider (ISP) servicing 85,000 customers in rural Wisconsin and Michigan's Upper Peninsula. Packerland will leverage their fiber, hybrid fiber/coax (HFC), and wireless technologies to deliver low-cost, high speed broadband access to some of the most rural of areas.

**Riverview Gardens** - Riverview Gardens in Appleton, WI is employing next-generation sensors, drones, and machine learning algorithms using FarmBeats to increase efficiency in their operation and better utilize their resources. Through the FarmBeats system, they will begin to gain insights about their farming practices, crop health, resource utilization and much more, allowing them to operate an increasingly sustainable farming program that can be replicated by other programs and farmers around the country.