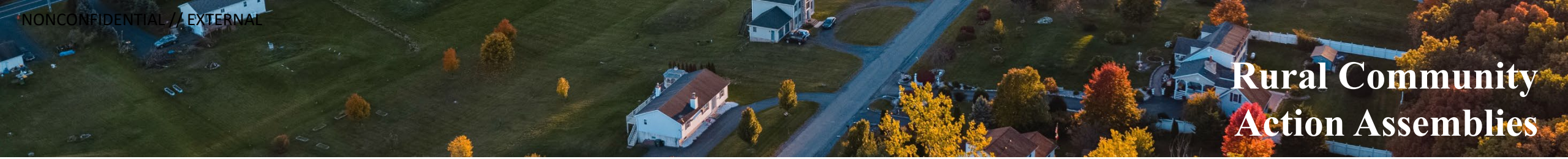

Rural Community Action Assemblies

Broadband Deployment and Community Readiness

July 19, 2023

FEDERAL RESERVE BANK PHILADELPHIA

PennState College of Agricultural Sciences

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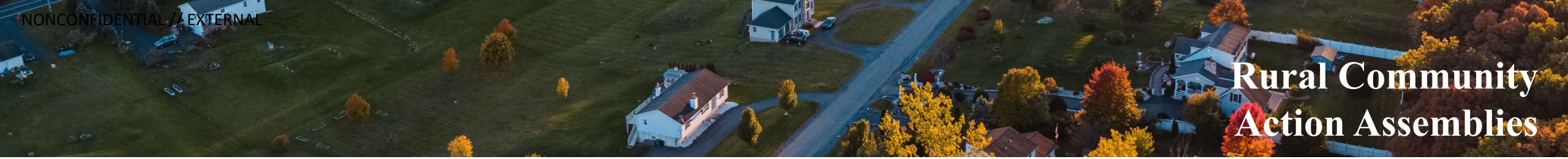

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- **Please share your name and organization** so that speakers and audience members can see who is participating.
- Please, if possible, **log in with your video enabled and be prepared to ask questions to the panelists and discuss your feedback with other attendees**. Use the chat box to ask questions and offer comments, and we will call on you to elaborate and add context.

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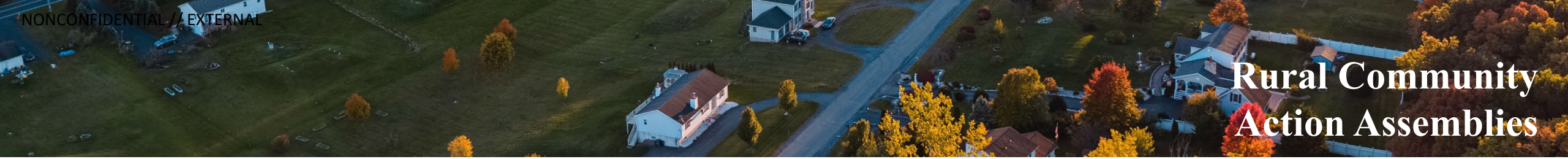

Guidelines

- Be sure to **mute yourself when you are not speaking**. If there is background noise while you are not speaking, the host may mute you.
- **Today's assembly will be recorded.** The recording of today's presentations will be shared with slides after the assembly.
- A **survey evaluation** will be available after the assembly. Your input and feedback is important for informing future programming.

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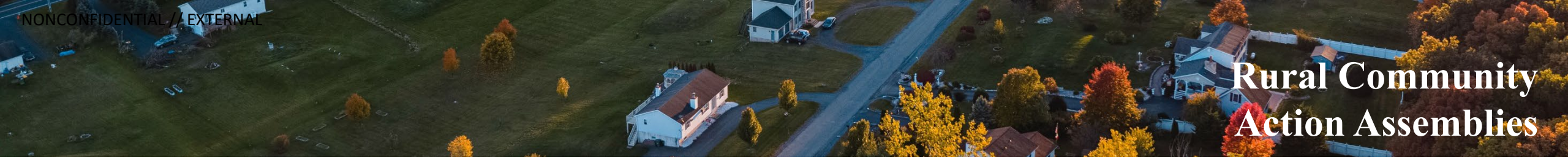


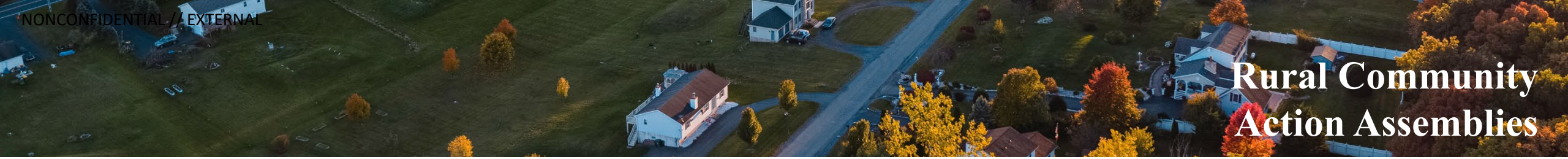
Agenda

10:00 a.m. Broadband Deployment and Community Readiness

- Roberto Gallardo, Director, Purdue Center for Regional Development
- Marty Qually, Adams (PA) County Commissioner
- LaShawn Williamson, Founder & CEO at Wave 7 Communications, LLC
- *Moderator*: Christopher Ali, Pioneers Chair in Telecommunications, Penn State University

11:05 a.m. Panel Q&A

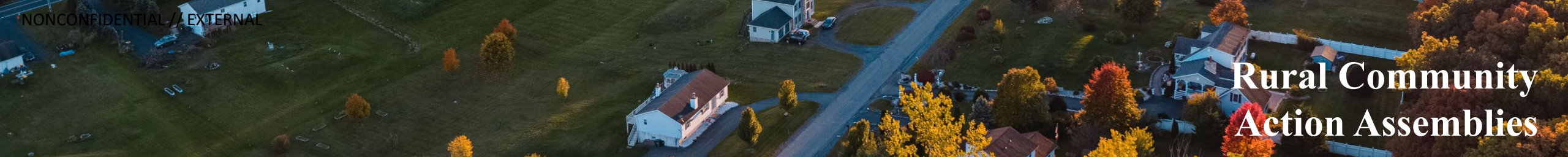
11:25 a.m. Closing Remarks



Christopher Ali

Pioneers Chair in Telecommunications

The Pennsylvania State University



Rural Community Action Assemblies

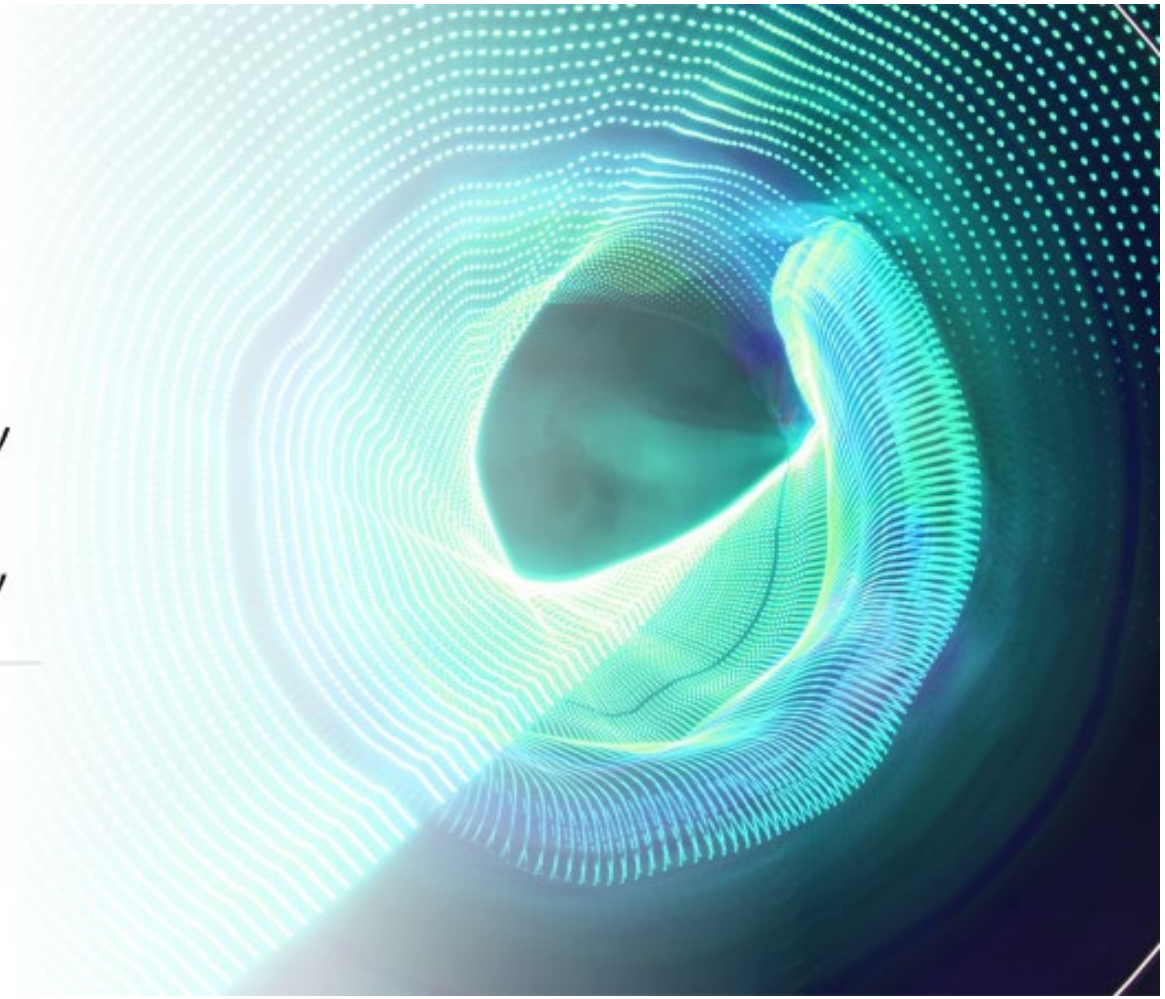
How did we get here?
A very brief history of broadband funding and policy

Dr. Christopher Ali

Pioneers Chair & Professor of Telecommunications

Donald P. Bellisario College of Communications

Penn State University



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Key terms

Broadband: *An always on internet connection of 25 Megabits per Second (MBPS) download and 3 Megabits per second upload (often depicted as "25/3")*

- *Served: 100/20*
- *Underserved: Between 25/3 and 100/20*
- *Unserved: Under 25/2*

Digital Divide: *Once thought of as the "haves" and "have nots" of connectivity, the term is now thought of in phases: connectivity/access, skills, and externalities/benefits.*

Digital Equity: ""the condition in which individuals and communities have the information technology capacity that is needed for full participation in the society and economy of the United States" (from IIJA).

- I like to think of it in terms of pillars: connectivity/access, affordability, skill sets/education

BEAD: *Broadband Equity Access and Deployment Program, a $42.5 billion program created within the trillion-dollar 2021 Infrastructure Act*

PBDA: *Pennsylvania Broadband Development Authority – responsible for broadband funding programs in the Commonwealth. Will be responsible for creating the parameters for the BEAD program and selecting winners. Every state has their own Broadband Office/Authority*

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Key takeaway points

Broadband policy has been somewhat erratic, especially the mismatch between priorities and speeds

Broadband policy has largely left out communities, privileging large, national providers

The country was late to the broadband game

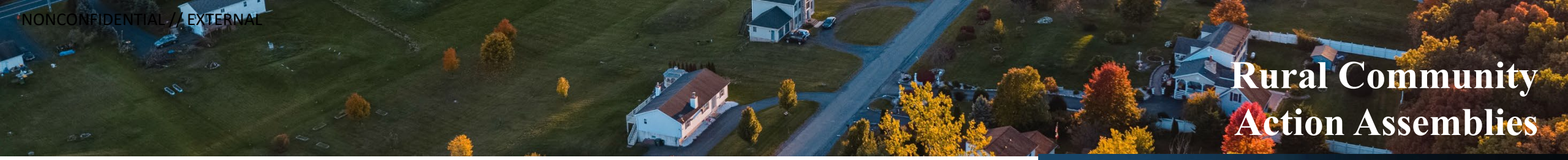
- National Broadband Plan in 2010
- Funding only in 2015

Mapping has been a constant and consistent policy problem

Three agencies are largely responsible for broadband policy and funding: The FCC, USDA, NTIA

The broadband programs of the Infrastructure Act are considered to be “once in a generation” opportunities

Connectivity is more than just infrastructure!



The Digital Equity Divide

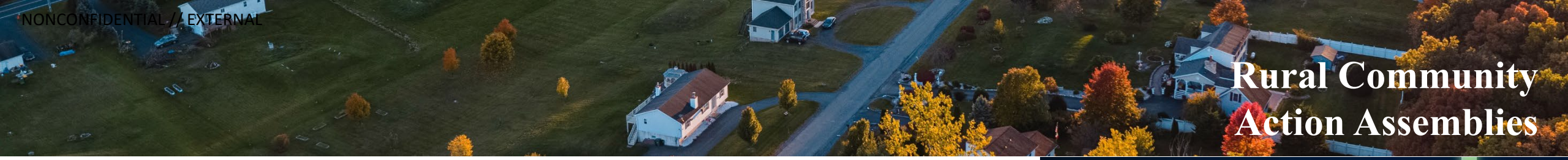
8.3 million unconnected people according to FCC (2023)

- Receiving less than 25/3

3.5 million underserved people

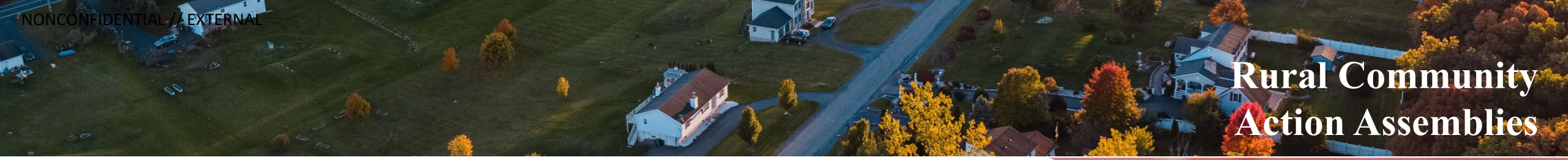
- Receiving between 25/3 and 100/20

19 million households participate in ACP (about 48 million households or 40% of all US households are eligible)



Federal Funds: $47 billion (2009-2017)

FCC



Broadband and COVID

COVID-19 has made the importance of broadband to contemporary life painfully clear

- UN: “a matter of life and death” (Guterres, 2021)
- Those with high-speed, affordable broadband are more likely to social distance than those without (Chiou & Tucker, 2020)
- Students with broadband will likely have a GPA that is at least half a letter grade higher than students without (Hampton, et al 2020)
- Those without broadband have been forced to use the Wi-Fi signals in the parking lots of McDonald’s and/or a library (Kang, 2020)

https://www.openglobalrights.org/covid-19-exposes-why-access-to-internet-is-human-right/

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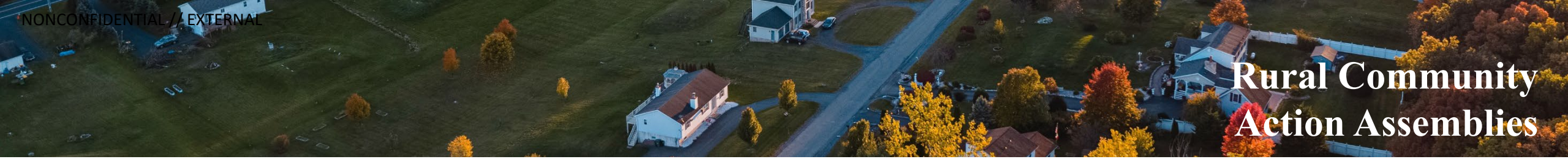
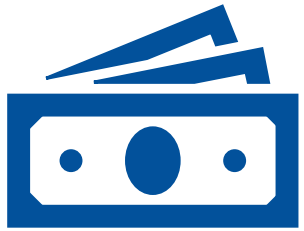


Emergency COVID-era Funding



ARPA (2021)

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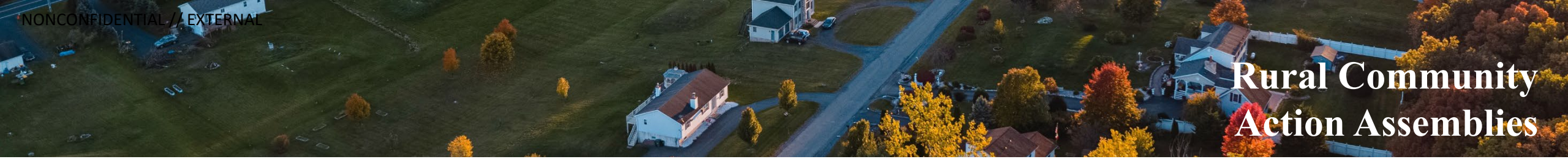

The Infrastructure Investment and Jobs Act (IIJA)

$65 billion for broadband

- $42.45 billion for deployment
- $14 billion for affordability
- $2.75 billion for digital equity & Inclusion
- $2 billion for Tribal Connectivity
- $2 billion for USDA/ReConnect
- $1 billion for Middle Mile
- $600 million for tax exempt bonds

Report on revising the Universal Service Fund

Broadband Pricing Label Mandate

AUTHENTICATED U.S. GOVERNMENT INFORMATION GPO

PUBLIC LAW 117–58—NOV. 15, 2021 135 STAT. 429

Public Law 117–58
117th Congress

An Act

To authorize funds for Federal-aid highways, highway safety programs, and transit programs, and for other purposes.

Nov. 15, 2021
[H.R. 3684]

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE; TABLE OF CONTENTS.

Infrastructure Investment and Jobs Act.

(a) SHORT TITLE.—This Act may be cited as the "Infrastructure Investment and Jobs Act". 23 USC 101 note.

(b) TABLE OF CONTENTS.—The table of contents for this Act is as follows:

Sec. 1. Short title; table of contents.
Sec. 2. References.

DIVISION A—SURFACE TRANSPORTATION

Sec. 10001. Short title.
Sec. 10002. Definitions.
Sec. 10003. Effective date.

TITLE I—FEDERAL-AID HIGHWAYS

Subtitle A—Authorizations and Programs

Sec. 11101. Authorization of appropriations.
Sec. 11102. Obligation ceiling.
Sec. 11103. Definitions.
Sec. 11104. Apportionment.
Sec. 11105. National highway performance program.
Sec. 11106. Emergency relief.
Sec. 11107. Federal share payable.
Sec. 11108. Railway-highway grade crossings.
Sec. 11109. Surface transportation block grant program.
Sec. 11110. Nationally significant freight and highway projects.
Sec. 11111. Highway safety improvement program.
Sec. 11112. Federal lands transportation program.
Sec. 11113. Federal lands access program.
Sec. 11114. National highway freight program.
Sec. 11115. Congestion mitigation and air quality improvement program.
Sec. 11116. Alaska Highway.
Sec. 11117. Toll roads, bridges, tunnels, and ferries.
Sec. 11118. Bridge investment program.
Sec. 11119. Safe routes to school.
Sec. 11120. Highway use tax evasion projects.
Sec. 11121. Construction of ferry boats and ferry terminal facilities.
Sec. 11122. Vulnerable road user research.
Sec. 11123. Wildlife crossing safety.
Sec. 11124. Consolidation of programs.
Sec. 11125. GAO report.
Sec. 11126. Territorial and Puerto Rico highway program.
Sec. 11127. Nationally significant Federal lands and Tribal projects program.
Sec. 11128. Tribal high priority projects program.
Sec. 11129. Standards.
Sec. 11130. Public transportation.

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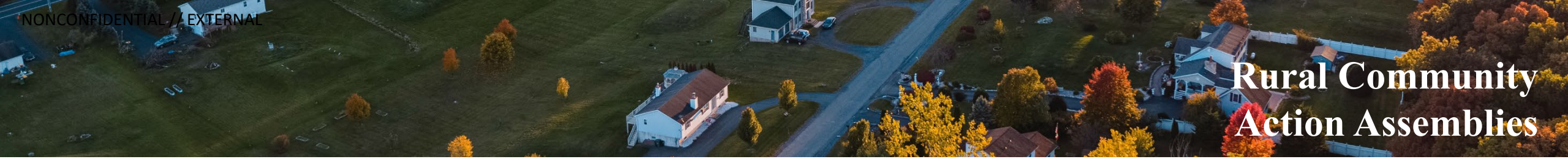

Broadband Equity Access and Deployment Program (BEAD)

$42.45 billion

Every state and territory guaranteed $100 million

NTIA awards funding to states based on the FCC's broadband map

- Unserved locations are prioritized

Top winners:

- Texas: $3.3 billion
- California: $1.8 billion
- Missouri: $1.7 billion
- Michigan: $1.5 billion
- North Carolina: $1.53 billion

Each state will develop its own award program

Each state must produce a 5-year Broadband Plan (most will be published this summer)

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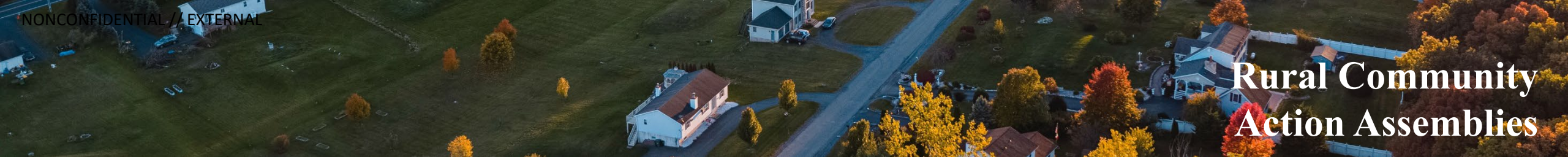

BEAD Timeline

Summer 2023

5-year broadband plans

Initial proposal

Dec. 2023

Early 2024

Final Proposal

Allocation of funding

Late 2024

Five years later money must be spent

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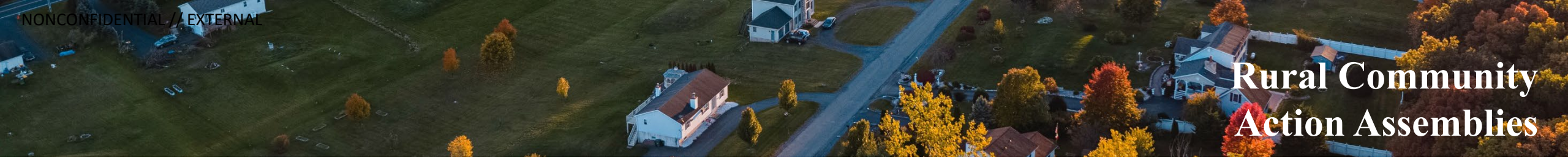
Pennsylvania and BEAD

$1.15 billion

5-year broadband plan released July 26

- Two weeks of public comment to follow

Image credit: https://www.senatorstefano.com/enews/120222-2/



Roberto Gallardo

Director

Purdue Center for Regional Development

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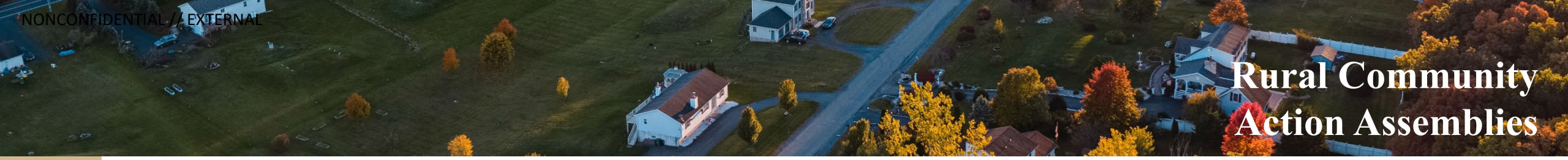


Adams, Pennsylvania

2021 DIGITAL DIVIDE PROFILE

The digital divide index score (DDI) ranges between 0 and 100, where a lower score indicates a lower divide. The infrastructure adoption score and the socioeconomic (see scores and indicators below) contribute to the overall DDI. State averages are shown in parenthesis.

DIGITAL DIVIDE INDEX SCORE | 44.21

INFRASTRUCTURE/ADOPTION SCORE | 49.91

If this score is much higher than the socioeconomic score, efforts should be made to upgrade the broadband infrastructure.

9.5 (9.1)	11.2 (11.7)	83.8 (43.6)	184 (181)	14 (50)
percent households without a computing device	percent households with no internet access (not subscribing)	percent people without access to 100/20 Mbps based on Ookla speed tests	average download speed based on Ookla speed tests in Mbps	average upload speed based on Ookla speed tests in Mbps

SOCIOECONOMIC SCORE | 40.84

If this score is much higher than the infrastructure/adoption score, efforts should be made to focus on digital literacy and exposing residents to the benefits of the technology

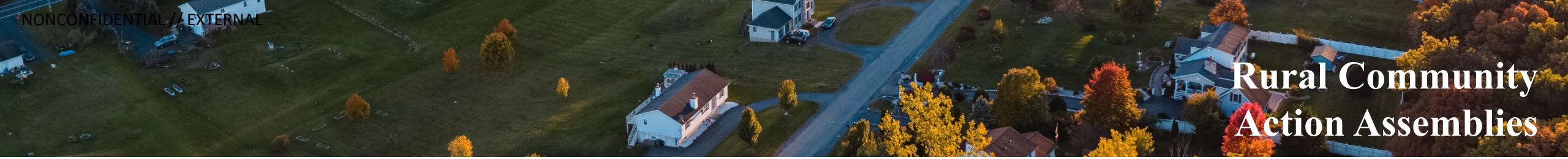
20.6 (18.3)	10.2 (8.7)	14.1 (13.9)	7.8 (11.8)	8.1 (7.3)
percent population age 65 and older	percent age 25 and older with less than a high school degree	percent noninstitutionalized civilian population with a disability	percent of individuals in poverty	internet income ratio - a higher number denotes higher inequality

PURDUE UNIVERSITY | Center for Regional Development

For more information visit: pcrd.purdue.edu/ddi/

Source: Census 5-year ACS 2017-2021
Q1-Q4 2021 Speedtest® by Ookla® Global Fixed Network Performance Maps

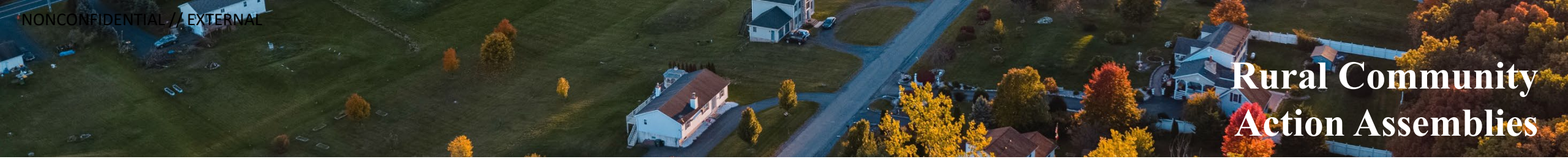
Digital Divide Index (DDI): Adams County, PA



Marty Qually

Commissioner

Adams County, PA

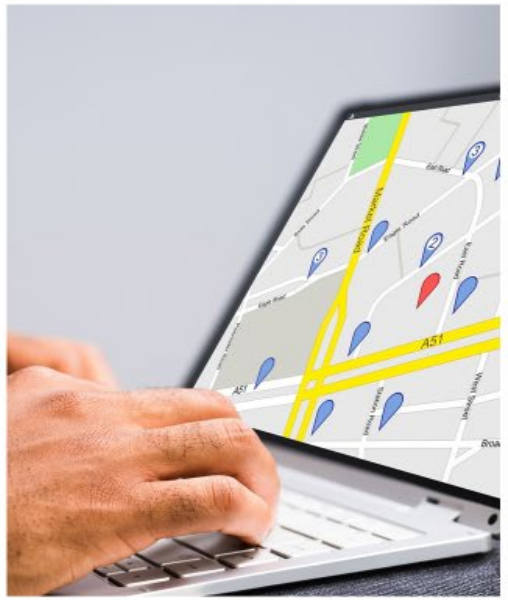


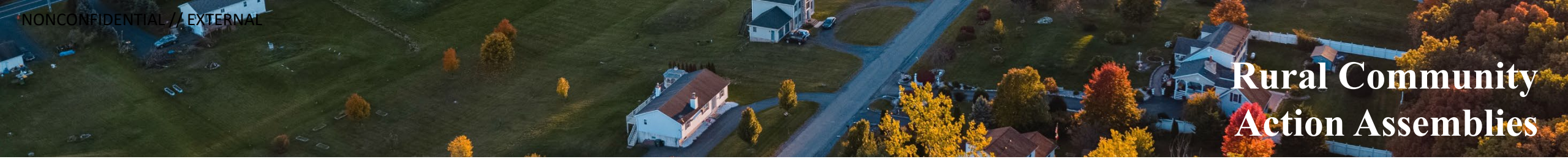
Our Past Broadband Efforts

01 We previously attempted to create a similar initiative

02 Several important lessons were learned

03 The main lesson - Partnerships over technical expertise





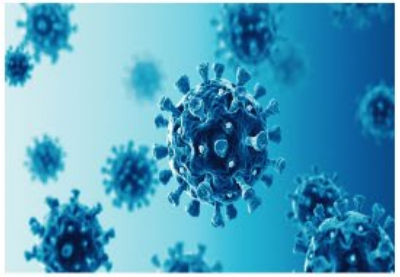
Rural Community Action Assemblies

2012 Task Force
Right Idea
Wrong People Wrong Time

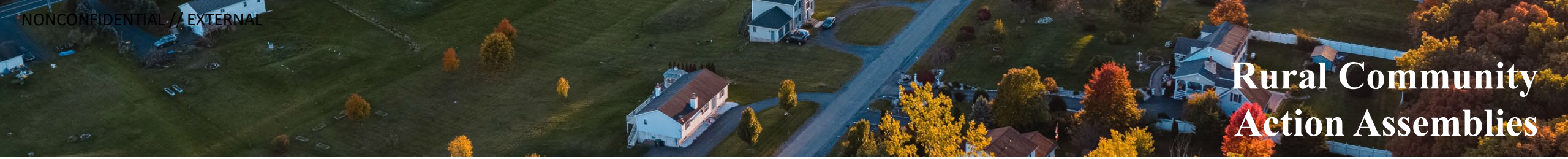
Taskforce Members : Herding Techies

Provider Participation: Is this thing on?

Public Interest: Zzzzzzzz



Staff Resources : Where's the Beef?



Rural Community Action Assemblies

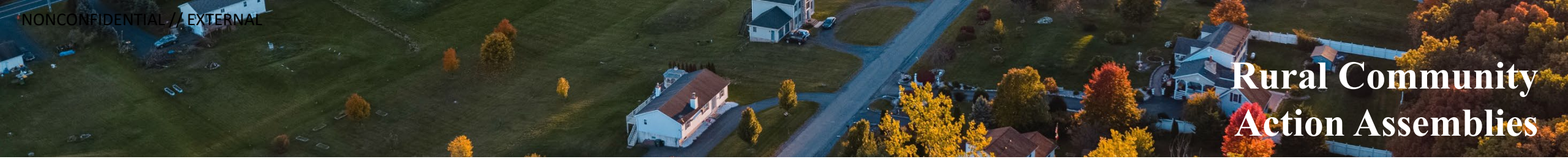
2023 Task Force 2.0
Still Right Idea
Right People Right Time

Taskforce Members : Public Facing

Provider Participation: Show us the money

Public Interest: I want my MTV

Staff Resources : All hands on Deck!



Rural Community Action Assemblies

The Broadband Taskforce

The County and AEA worked together to establish a taskforce representative of our community

Council of Governments	Small Business
Education	Healthcare
Underserved Populations	Tourism Industry
Major Employer/ Agricultural Industry	County Commissioner in ex officio role

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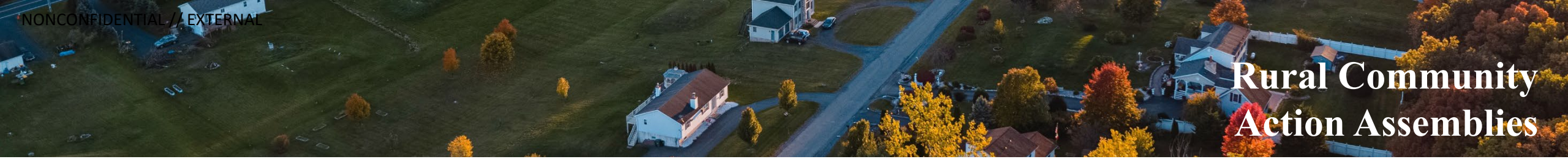


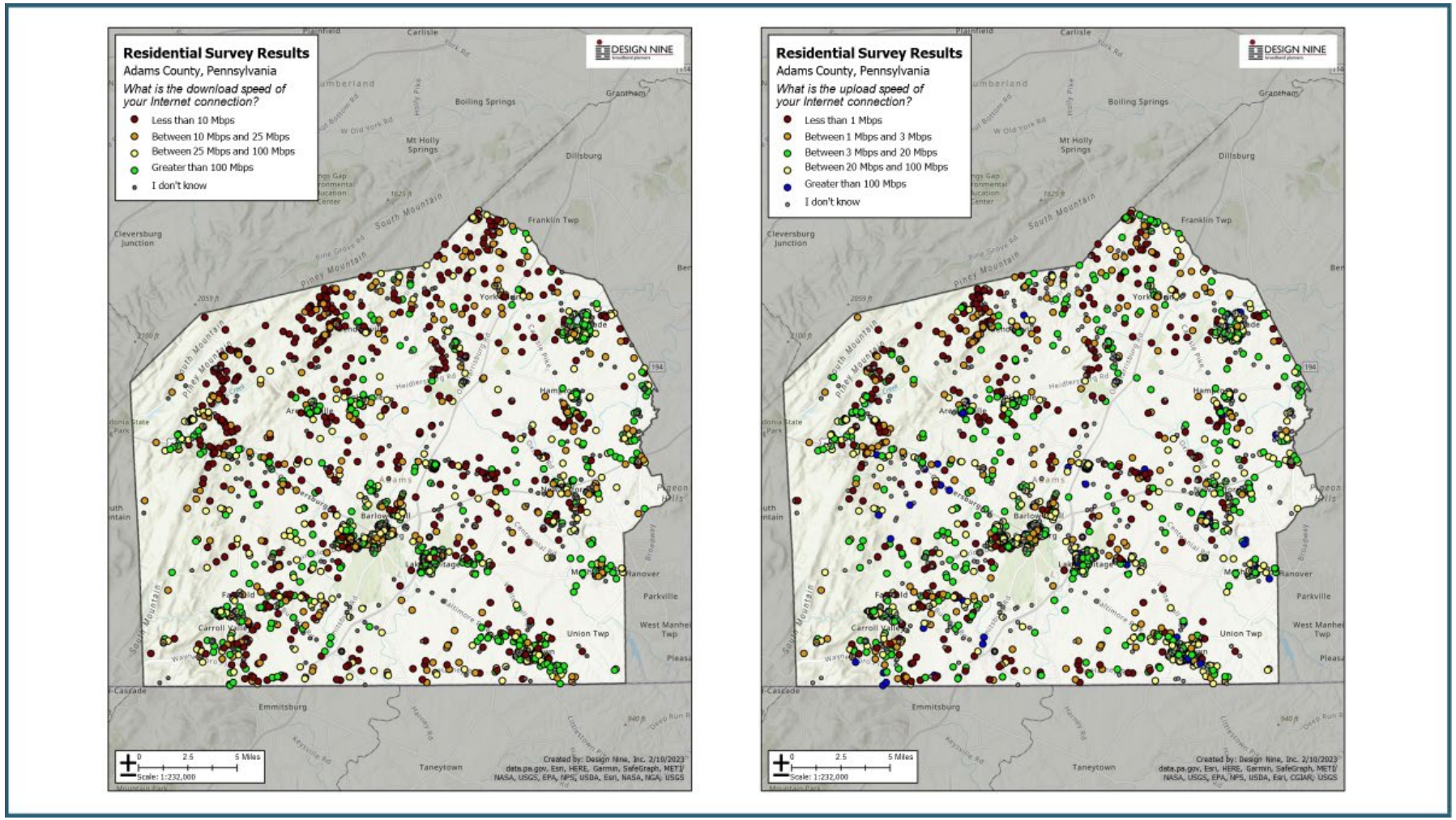
Current Status

Survey complete and finalizing our Broadband Feasibility Study in partnership with Franklin County

This study will tell us where we need stronger internet and strategies for each County to get there.

The taskforce was instrumental in us conducting a successful survey of our residents and businesses.

Rural Community Action Assemblies



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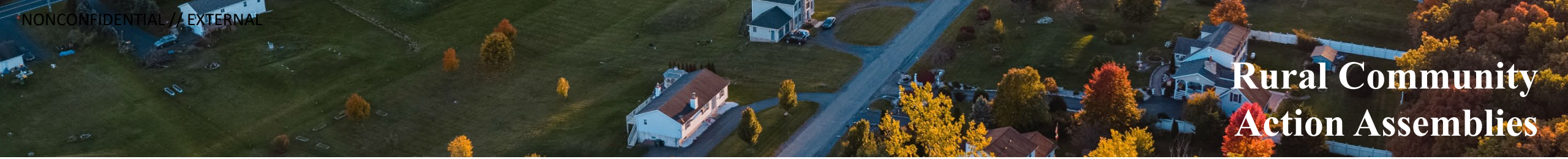

Residential Survey

Main Takeaways

74% interested in faster and more reliable Internet service

42% are "dissatisfied" or "very dissatisfied" with current Internet speeds

38% have no other options for their internet services

94% feel the County government should help facilitate better broadband

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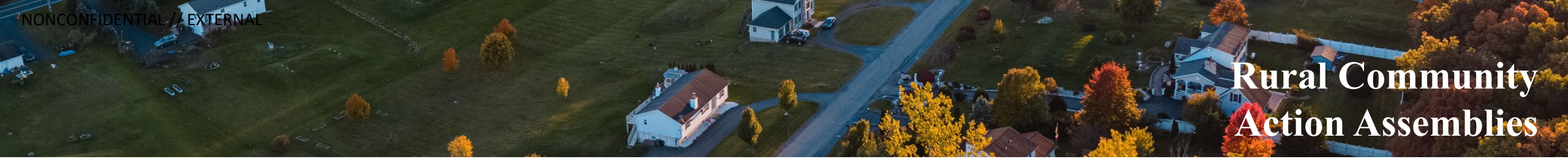

Business Survey

Main Takeaways

- 75% interested in faster and more reliable Internet service
- 30% are "dissatisfied" or "very dissatisfied" with current Internet speeds
- 77% need employees to be able to work from home
- 93% feel the County government should help facilitate better broadband

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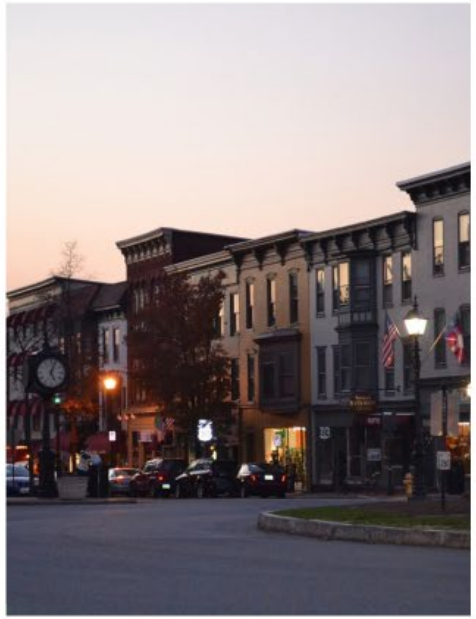
Final Thoughts

01 Don't assume everyone has bought in!

02 Form a Task Force unique to your area

03 The timing has never been better

04 Stay involved with the BDA!



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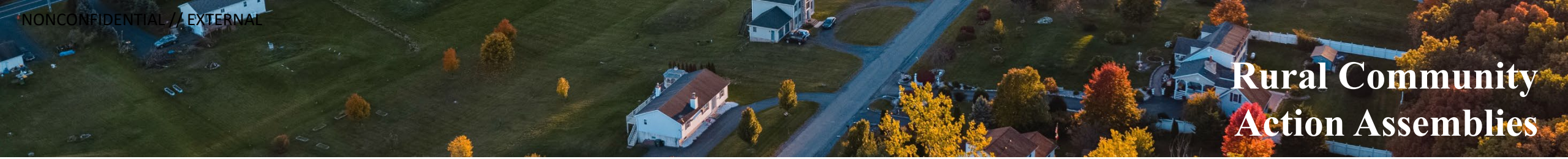
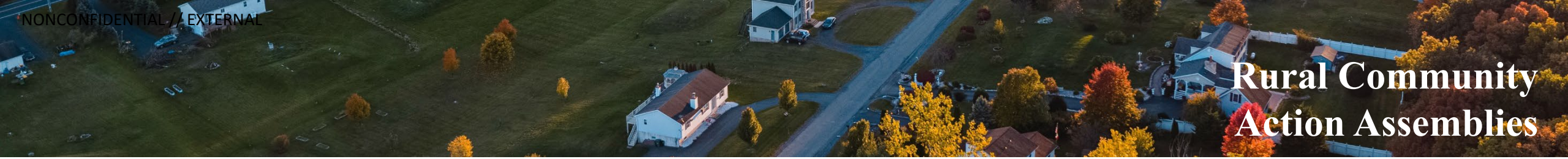


LaShawn Williamson

Founder & CEO

Wave 7 Communications, LLC



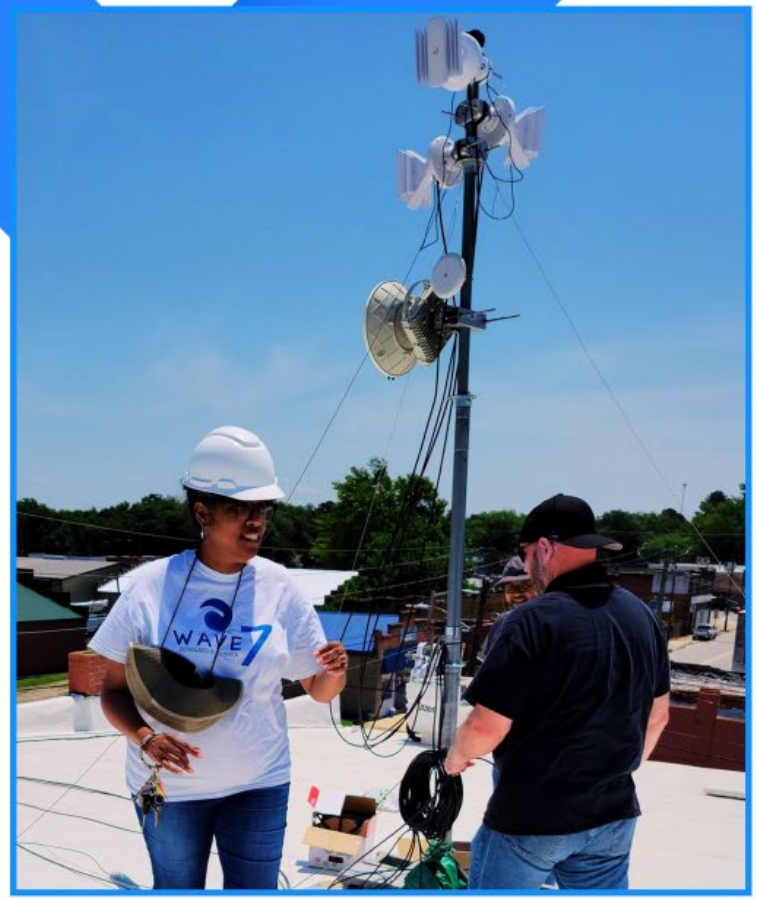
Rural Community Action Assemblies

*Experiencing **weeks without internet opened my eyes** to the disparities **underserved and unserved communities face without** having access to **reliable internet**.*

B. LaShawn Williamson

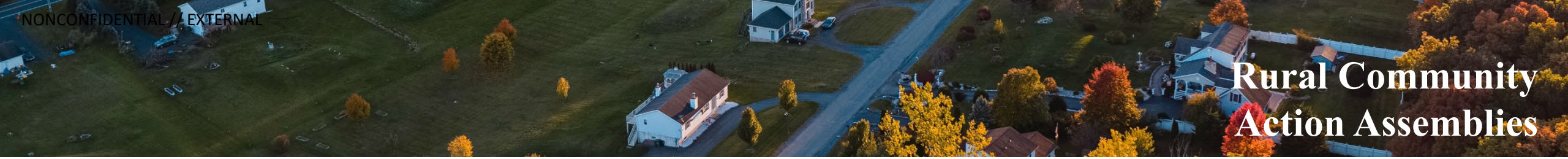
CEO & Founder
Solutions Strategist

Rural Community Action Assemblies



"Having reliable access to internet is not a luxury, it is a necessity for every home and business!"

B. LaShawn Williamson



Rural Community Action Assemblies

WAVE 7 COMMUNICATIONS

Fast Internet
Average 50-100 MBPS

Affordable Prices
Average $40-$60 - No Contracts
Affordable Connectivity Program Provider

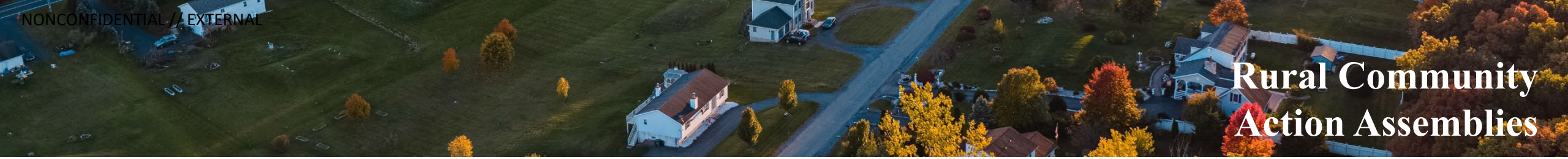
Reliable Service
Local Tech Support

Rural Community Action Assemblies

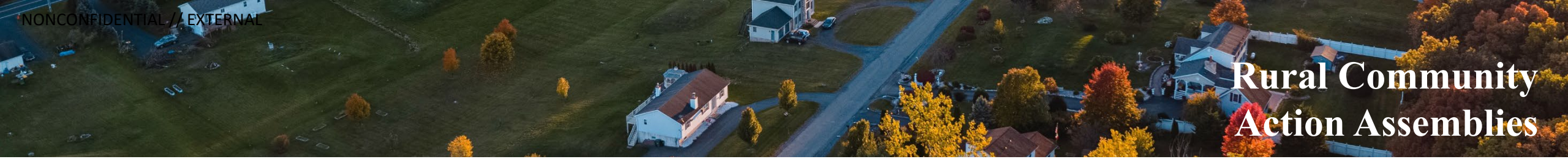
Enfield, North Carolina

- Located in Halifax County
- County Distress Rank - Tier 1
- Population - 1,825
- Household Income - $28,602
- Poverty rate - 39.91%

Sources: https://worldpopulationreview.com/us-cities/enfield-nc-population
https://www.commerce.nc.gov/grants-incentives/county-distress-rankings-tiers#TierRankingbyCounty-495



Rural Community Action Assemblies

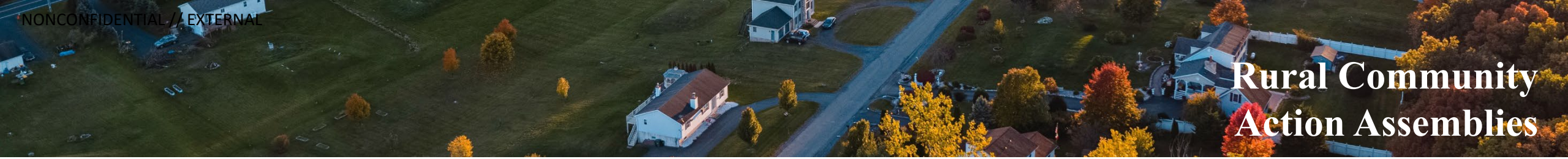


Rural Community Action Assemblies

Local Community Partners

- Enfield Alliance Coalition
- Community of Hope Center
- Town of Enfield
- Public Library
- Relay Sites

Rural Community Action Assemblies



Rural Community Action Assemblies

Collaborations & Funding

Connect Humanity

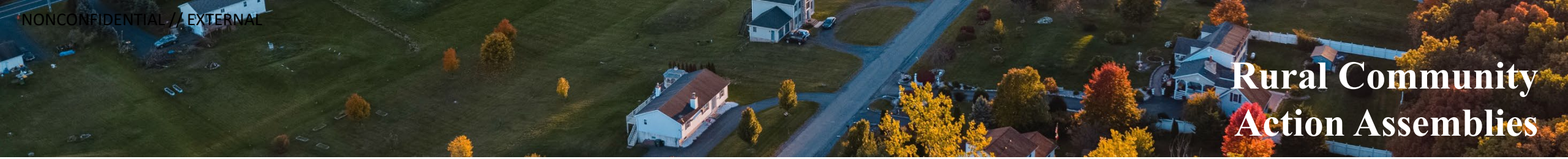
TRUIST

althea

Internet Society

Rural Community Action Assemblies

Rural Community Action Assemblies



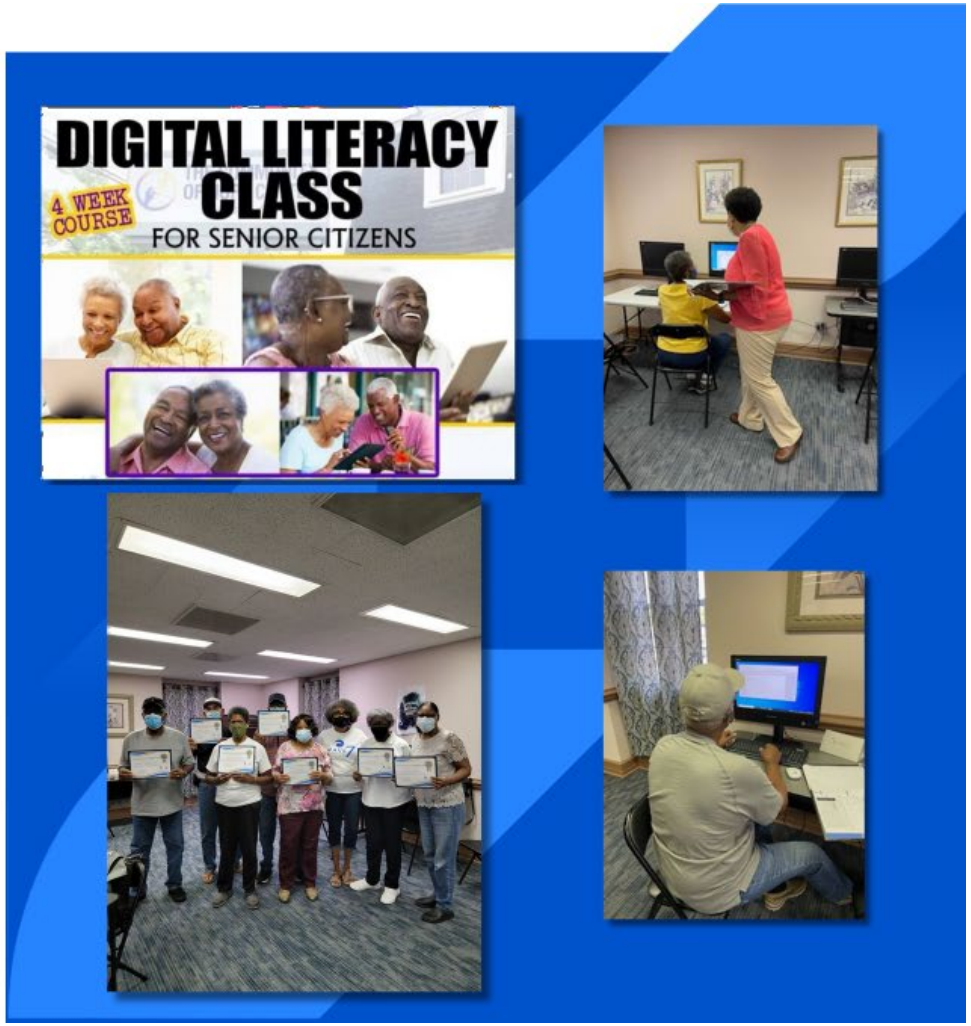
Rural Community Action Assemblies

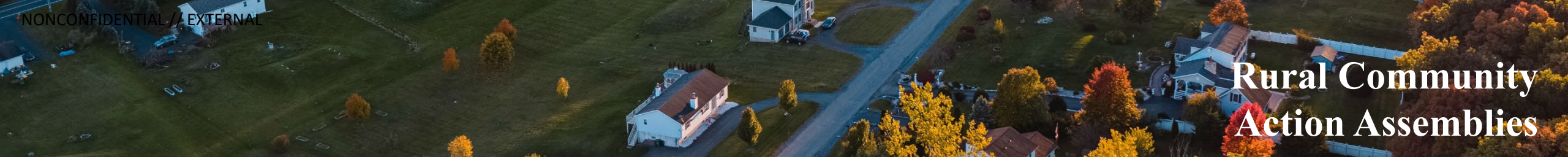
DIGITAL LITERACY

This four-week course is designed to equip Senior Citizens with the knowledge of basic computer skills to help them stay in touch with their family and friends when using computers and digital devices.

Community of Hope Center
201 Batchelor Avenue
Enfield, North Carolina
252-592-6070

WAVE 7





Rural Community Action Assemblies

WAVE 7 OUTREACH INITIATIVE

Supporting & Connecting Families with 1 Year Free Internet & Chrome Books

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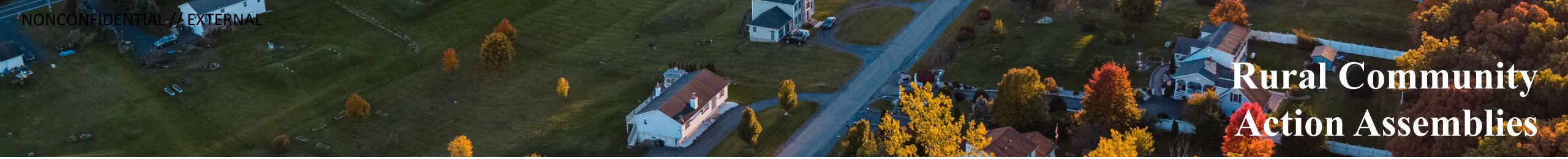
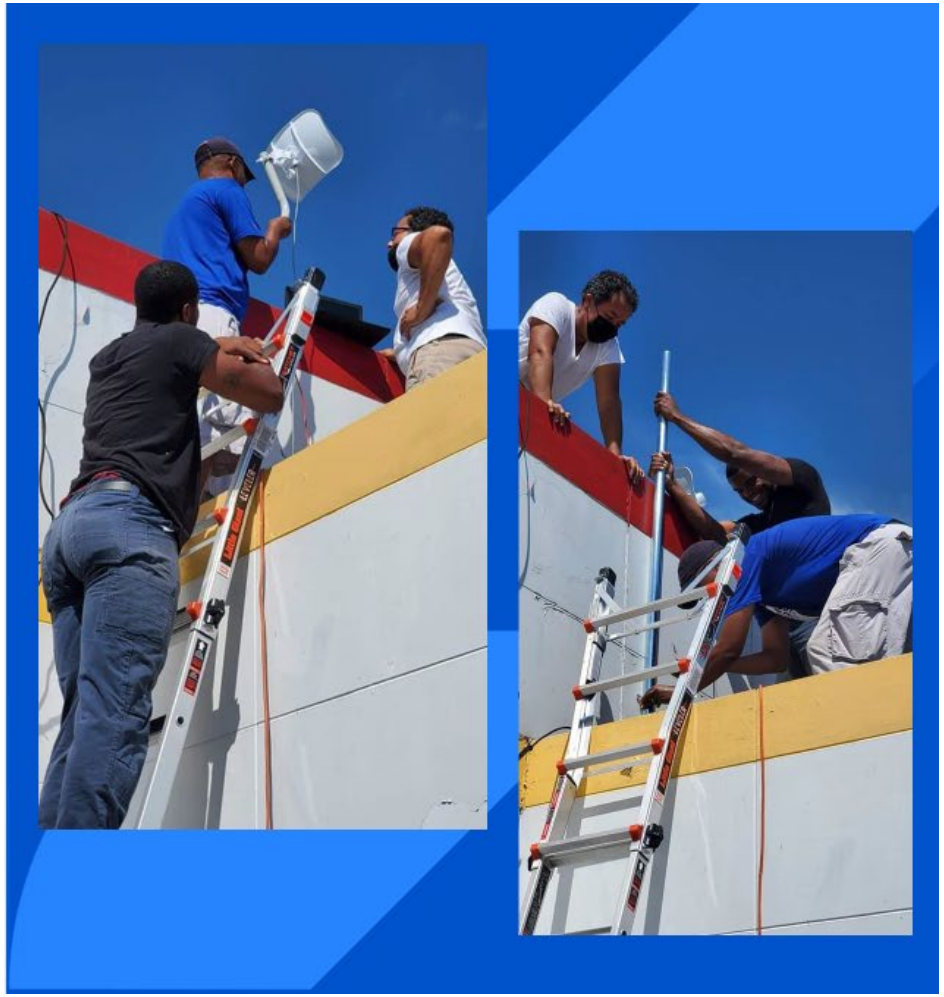


Rural Community Action Assemblies

DIGITAL STEWARDS

Providing training to local residents who help manage and build out the community network.

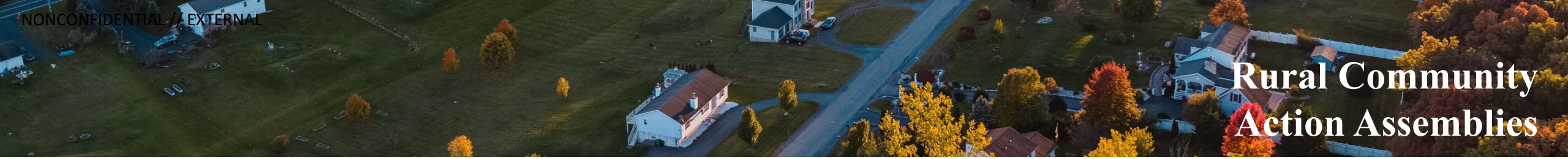


Rural Community Action Assemblies

Southern Secrets

"For years, we were not able to keep up with the e-commerce that other small businesses were benefiting from. We have now expanded, thanks to Wave 7."

Jennifer Locke McCann
Co-Owner of Southern Secrets

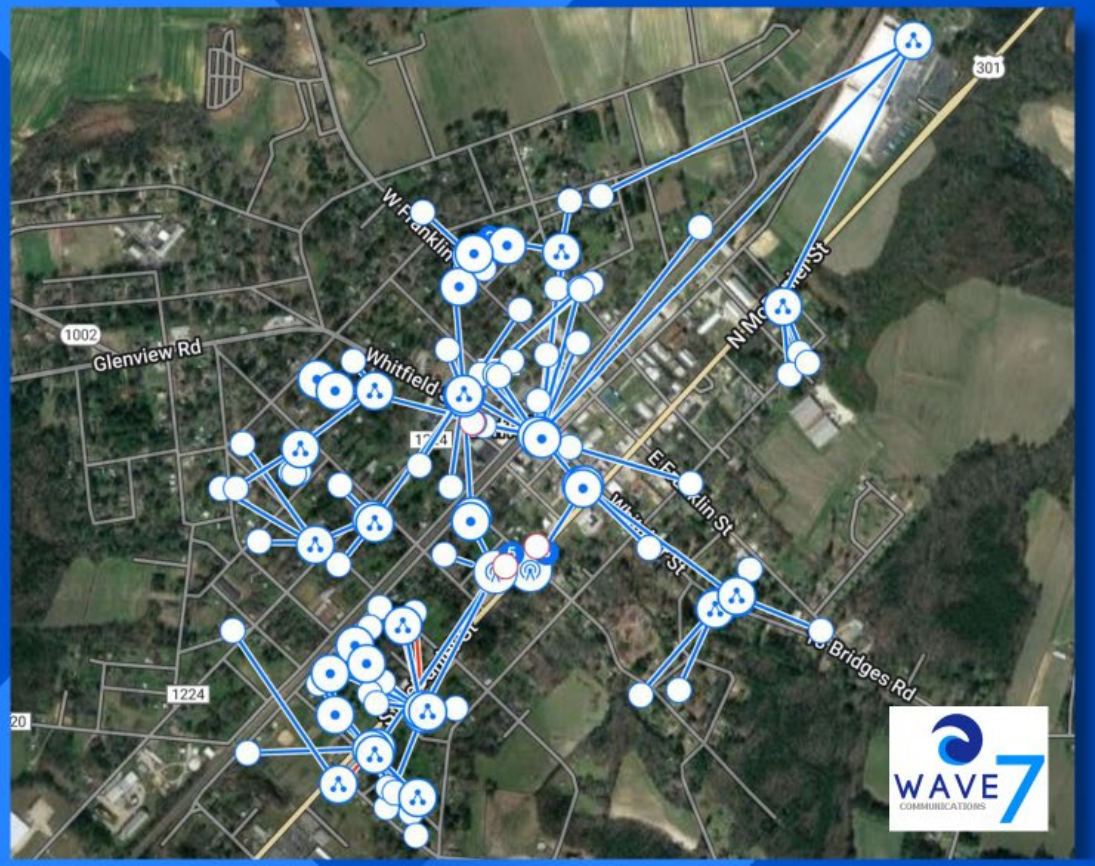


Rural Community Action Assemblies

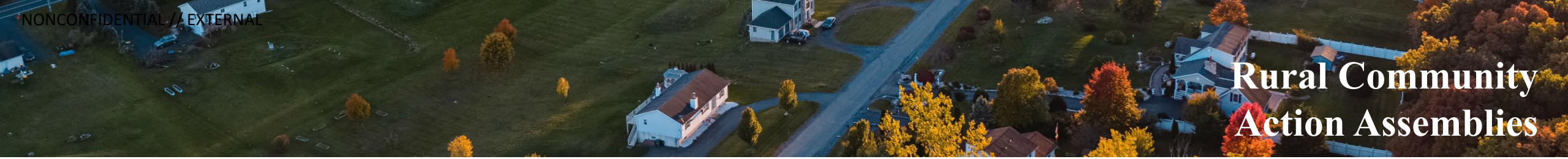
SERVICE AREA

Currently providing service to residents & businesses

Neighbors Helping Neighbors



Rural Community Action Assemblies



Rural Community Action Assemblies

WAVE 7 COMMUNICATIONS

336-553-6877
lashawn@wave7comm.net
catchwave7.com

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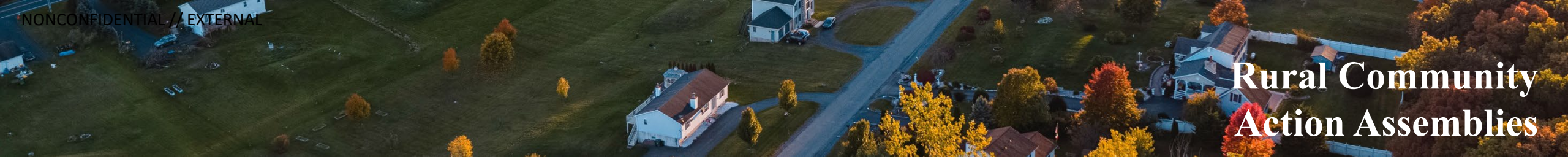

Q&A: Submit questions in the chat, raise your hand, and share your name and organization

- Roberto Gallardo, Director, Purdue Center for Regional Development
- Marty Qually, Adams (PA) County Commissioner
- LaShawn Williamson, Founder & CEO at Wave 7 Communications, LLC
- *Moderator*: Christopher Ali, Pioneers Chair in Telecommunications, Penn State University

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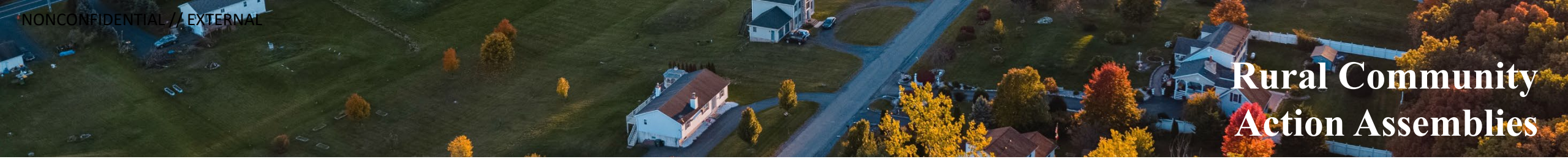

Thank You!

- Our next Rural Community Action Assembly is scheduled for **August 16, 2023**
  - Recovery Friendly Workplaces
- Suggestions or questions about the series?
  - Send them to: Philip.Jones@phil.frb.org

FEDERAL RESERVE BANK PHILADELPHIA

PennState College of Agricultural Sciences