

Local 9-1-1 Systems Blue Ribbon Committee PSAP Survey



ARKANSAS
GIS OFFICE



Foreword

The Arkansas Department of Emergency Management in partnership with the Arkansas GIS Office conducted the first of its kind research of the 9-1-1 systems of Arkansas. This report summarizes the result of a statewide survey commissioned by the Local 9-1-1 Systems Blue Ribbon Study Committee. This committee was created by Act 1171 of the 89th General Assembly. Its purpose is to perform a comprehensive study of local 9-1-1 systems, including equipment, training, staffing, funding, and capabilities of 9-1-1 PSAPs and to make recommendations for a statewide network that is efficient and effective.



Executive Summary

The survey confirms anecdotal testimony provided during committee meetings hosted around the state. 9-1-1 system development in Arkansas is not coordinated on a statewide basis. Each implementation is unique, creates challenges for leveraging economy of scale and may be financially inefficient. These systems have been implemented over a span of several decades by local officials making best use of scarce resources. They represent many intergovernmental partnerships, mutual

aid and dedication to public safety. Their service to the public is admirable.

HOWEVER, ON A STATEWIDE BASIS THERE IS A LACK OF STANDARDIZATION IN SERVICE DELIVERY, SOFTWARE, TRAINING AND INTEROPERABILITY. GIVEN THE COMPLEXITY OF WHAT IS REVEALED IN THIS SURVEY, ARKANSAS IS FAR FROM IMPLEMENTING NEXT GENERATION 9-1-1.

However, on a statewide basis there is a lack of standardization in service delivery, software, training and interoperability. Given the complexity of what is revealed in this survey, Arkansas is far from implementing Next Generation 9-1-1. These systems are built based on jurisdictional

boundaries and emergencies do not stop at the city limit or county line. Interoperability is tantamount to a seamless provision of service, yet there is minimal interoperability statewide. The majority of 9-1-1 calls in Arkansas originate from a wireless phone. This fact creates an ever increasing requirement for emergency service dispatchers to have the ability to seamlessly transfer calls and data to neighboring jurisdictions or cover a larger geographic territory.



A word cloud of the “Additional Concerns” responses on the survey.

Disclaimer

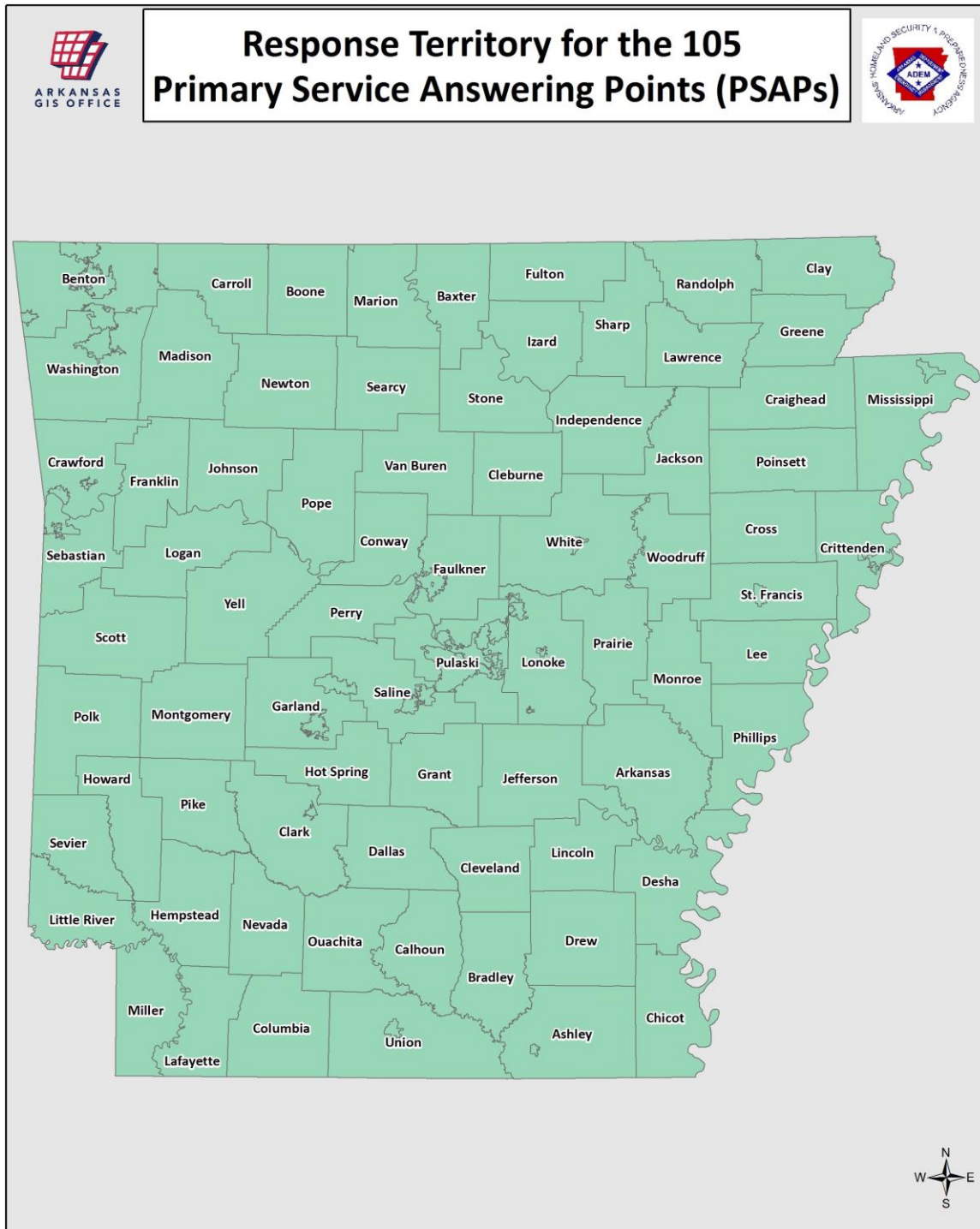
Information summarized from the survey was collected for the period between August 19th and November 10th, 2014. Due to time constraints of the final report the results in this summary have not been verified with on-site visits. As such there may be some discrepancy.

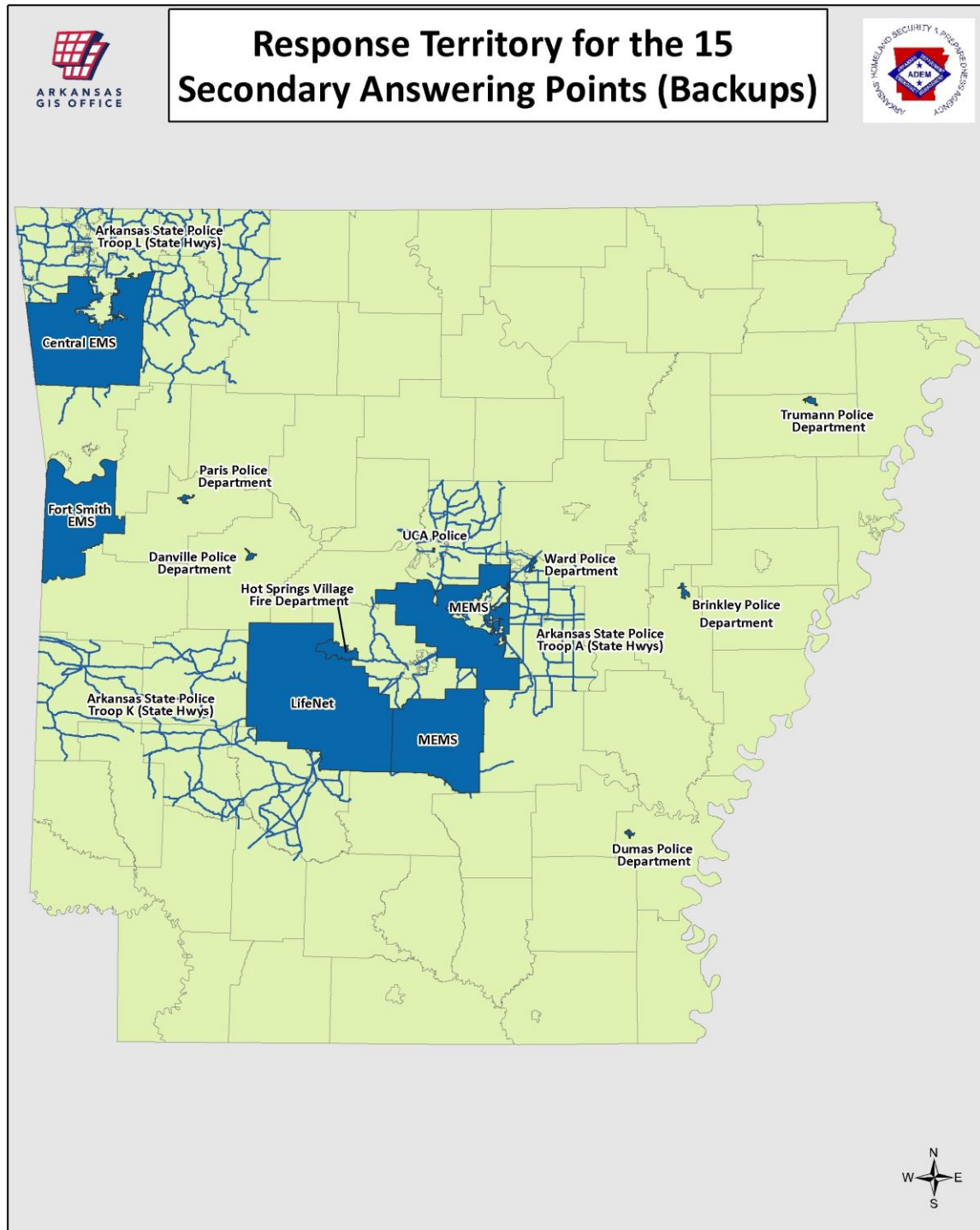
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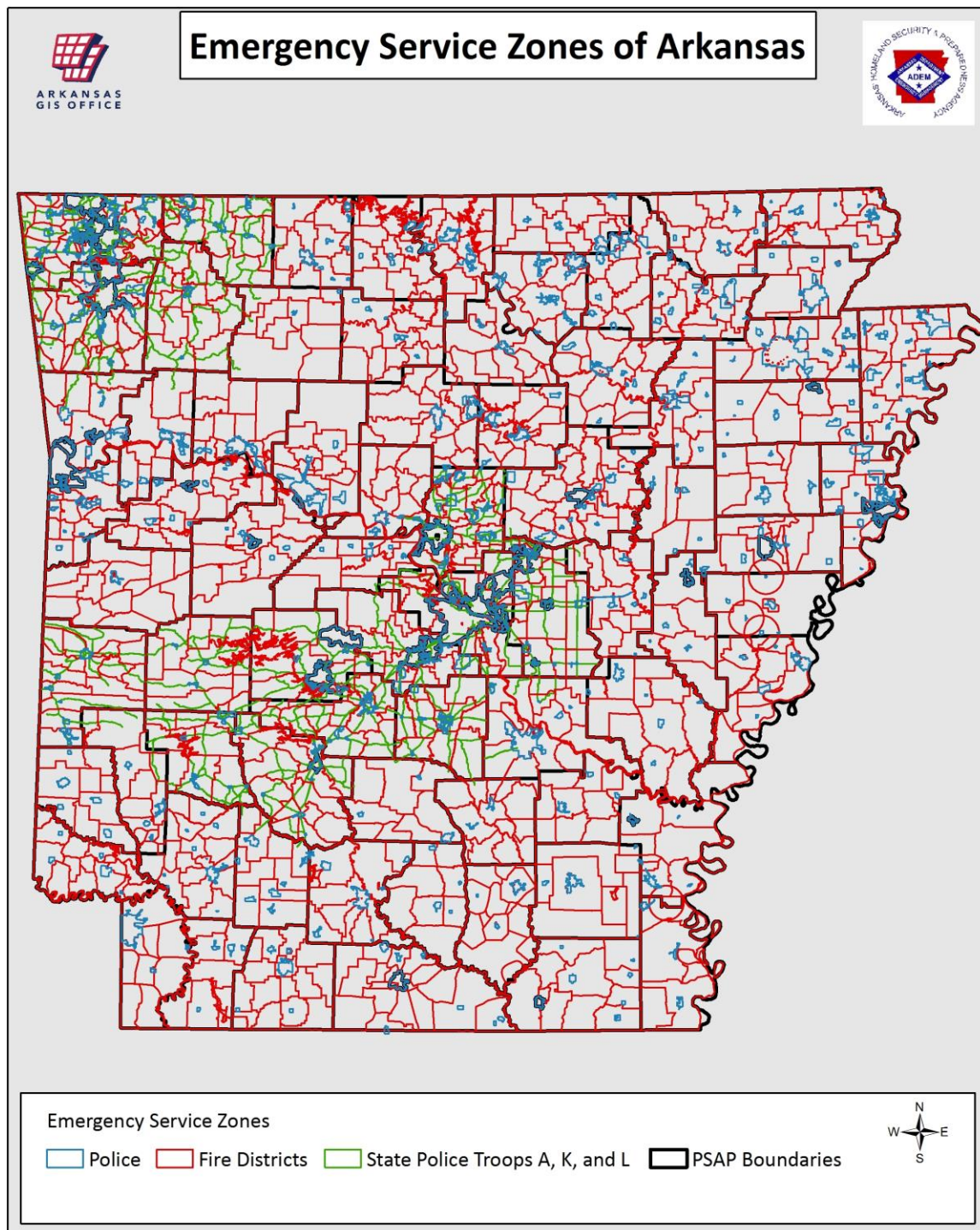
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QUESTION: Is this PSAP a primary or secondary? (A primary PSAP is defined by the FCC as being able to receive 9-1-1 calls 24/7, 365 days per year, and is the first point of contact for a 9-1-1 caller. A secondary PSAP receives a 9-1-1 call only after being transferred from a primary.)



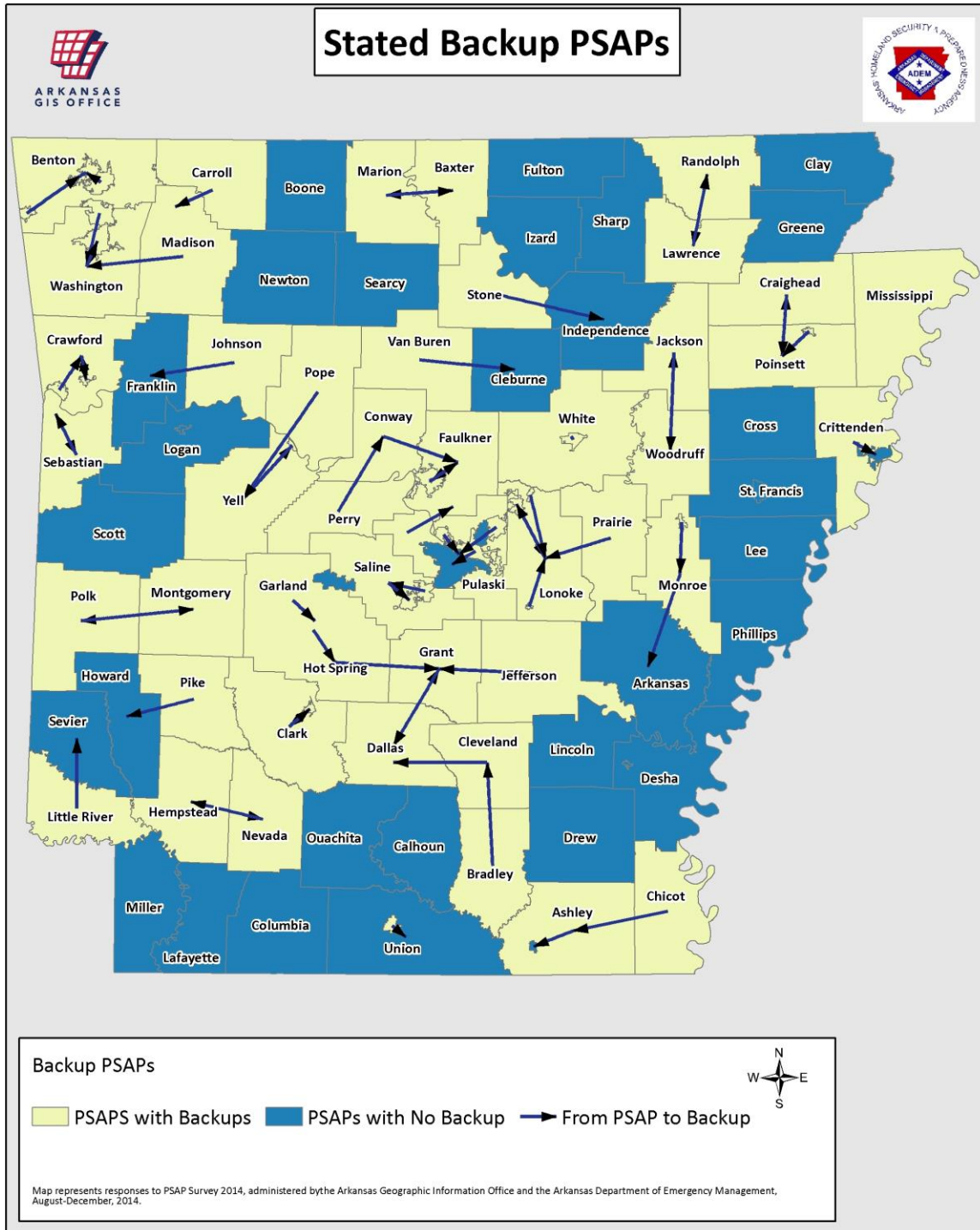


There are 105 PSAPs in the state and fifteen secondary PSAPs. Fifty-five (55) PSAPs have service territory covering a whole County. Some County level PSAPs are physically operated by county government and some are operated by municipal government. For example: the Marianna Police Department operates the PSAP serving all of Lee County. This map shows that three State Police Troops have a secondary PSAP and their geographic service areas are the U.S. and State Highways in those Troop districts.

Figure 1 –Police, Fire and Ambulance Service Zones

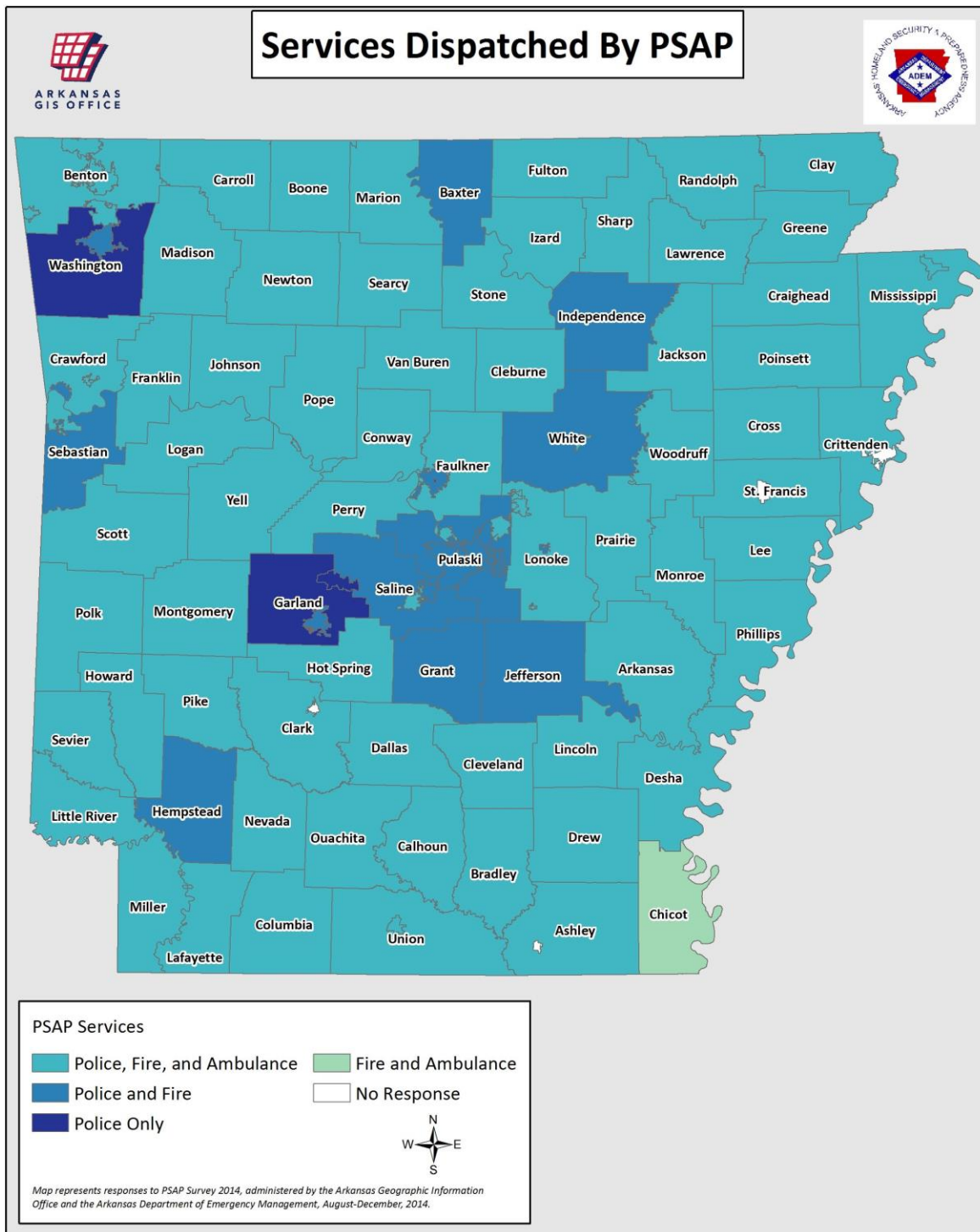
The map above illustrates the complexity of a dispatcher's decision tree. It underscores the importance of call taking software and computer aided dispatch to assist the dispatcher. This shows the tangled nature of service zones and the importance of accurate data in the 9-1-1 systems software.

QUESTION: Please specify your backup PSAP. If you do not have a backup, enter "none".



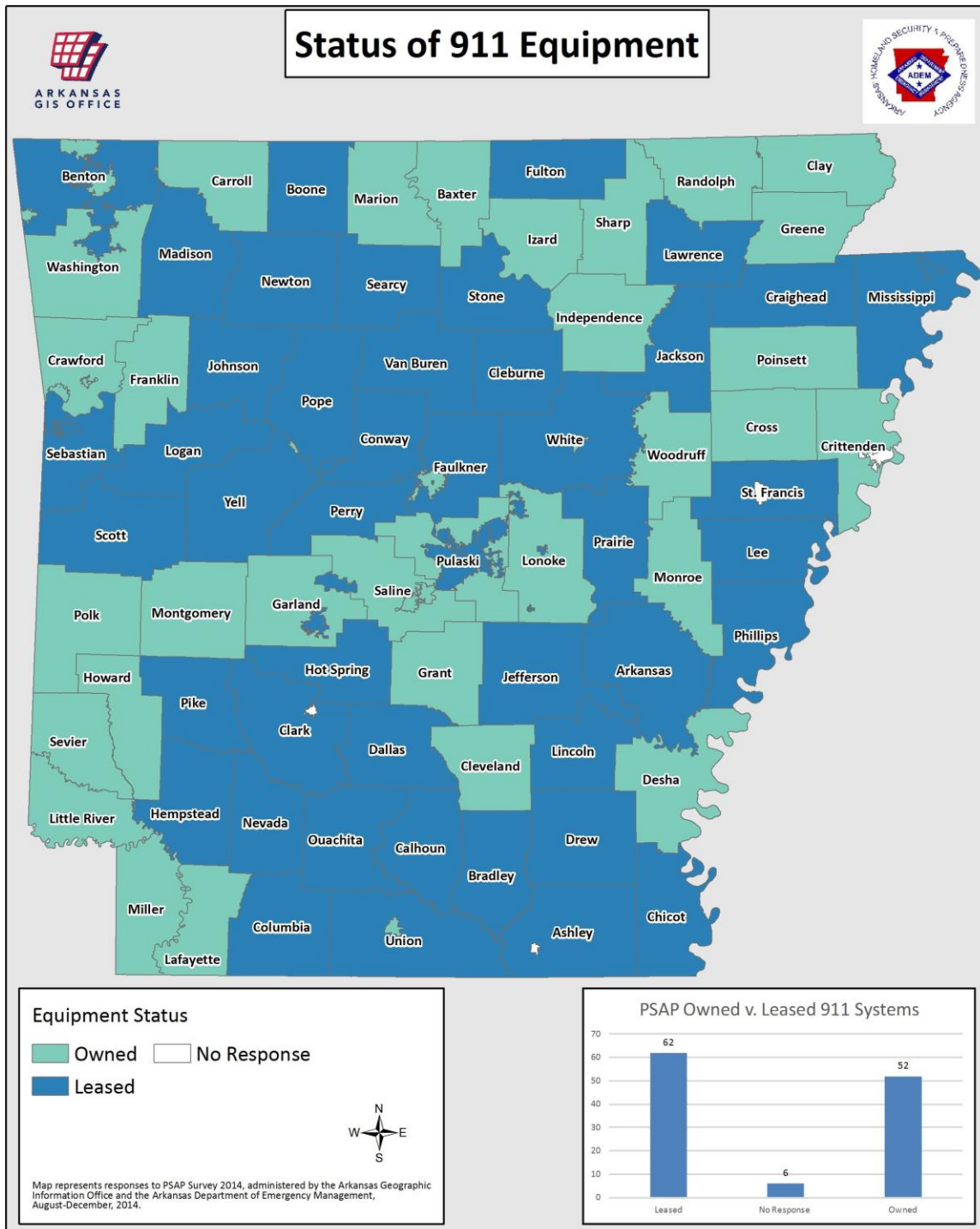
The committee may find it alarming that 33 PSAPs responded they have no backup.

QUESTION: Please choose the services that your PSAP dispatches. Check all that apply.

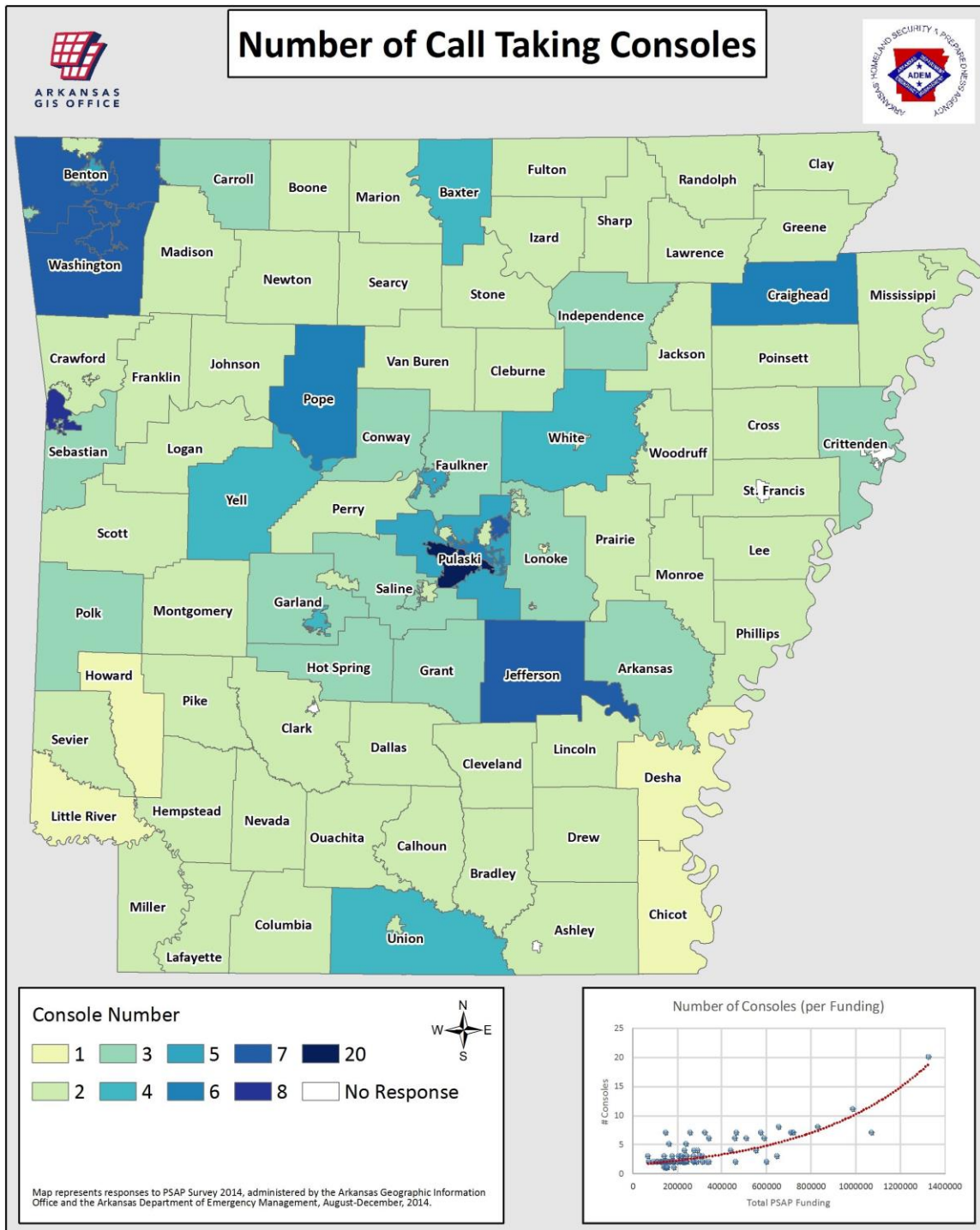


The PSAPs have unique combinations of emergency response dispatch. The majority dispatch Police, Fire and Ambulance service but not all. For other combinations the data about the emergency is passed on to the appropriate service response. The map of emergency service zones on the previous page shows why this lack of standardization may cause inefficiency.

QUESTION: Is your 9-1-1 call taking equipment owned or leased?

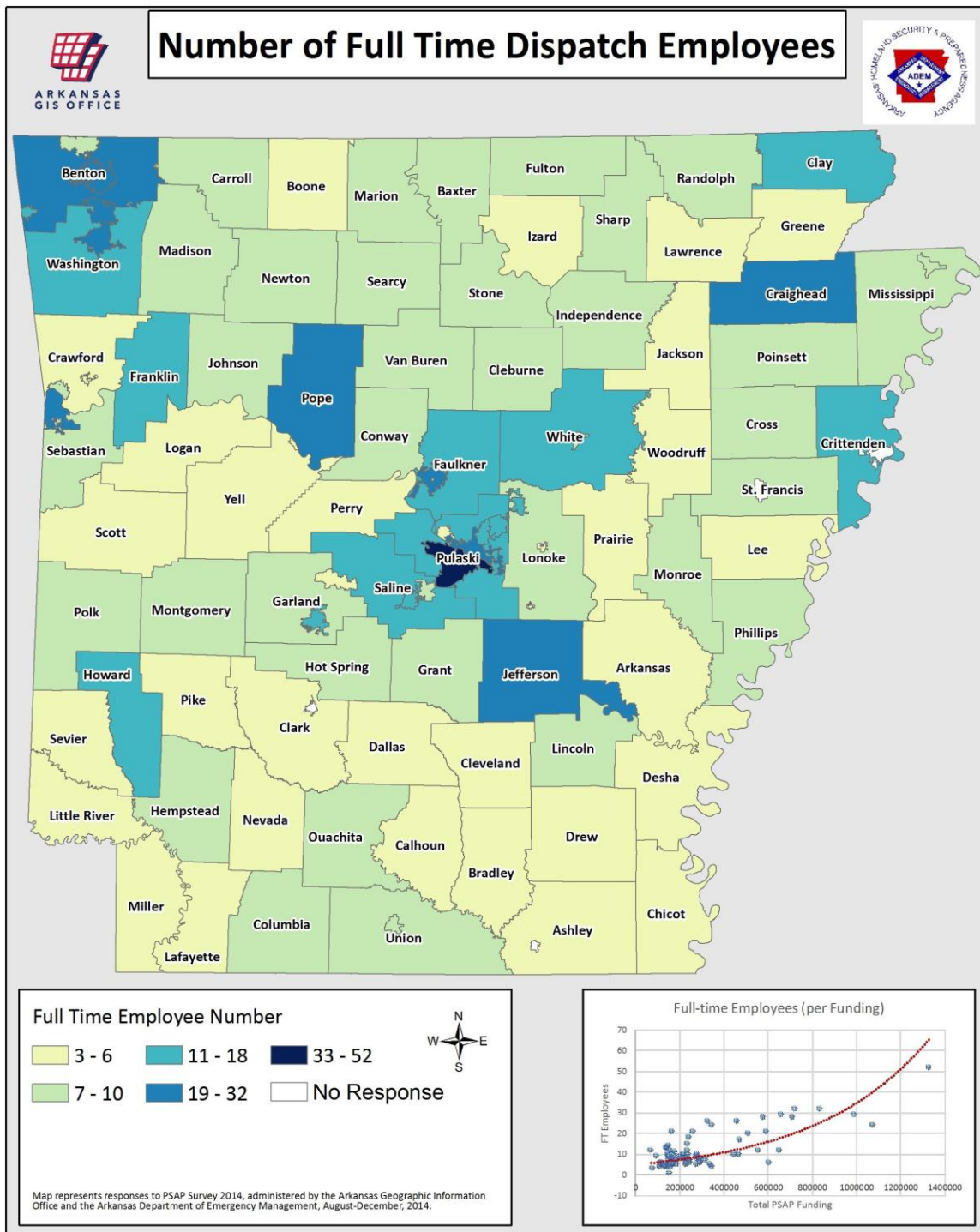


QUESTION: How many total call taking consoles does your PSAP utilize?



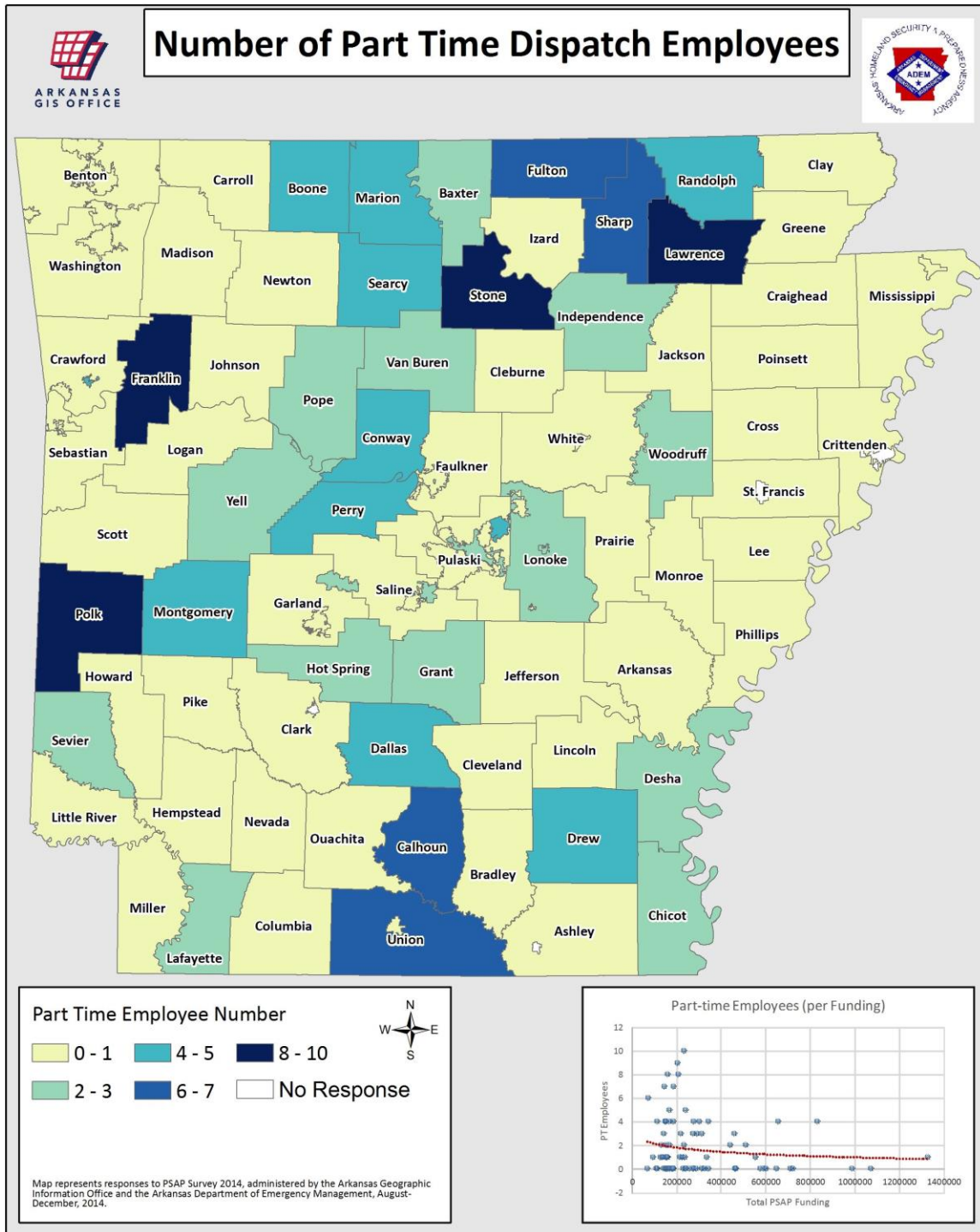
The majority of PSAPs operate with less than three call taking consoles which is in proportion with funding.

QUESTION: How many full time call taker/dispatch employees does your PSAP have?



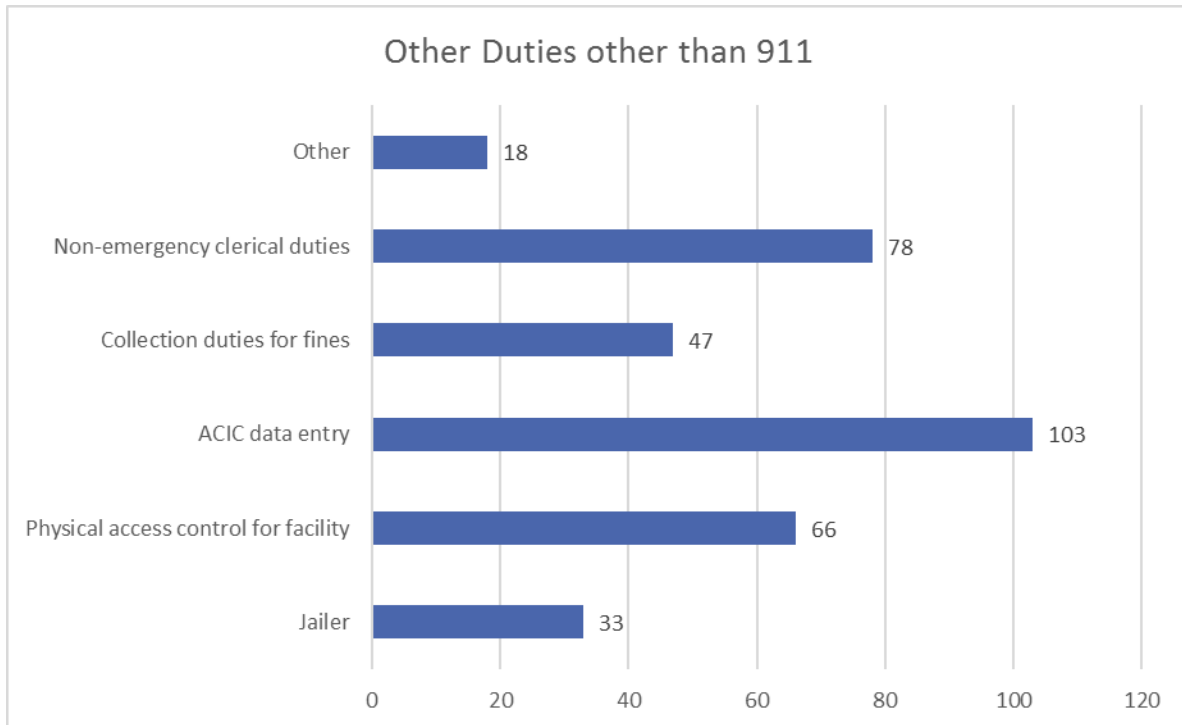
The number of total full time dispatch employees and call taking consoles correspond to the total funding available for the jurisdiction. The majority operate with fewer than ten dispatchers 24 x 7 x 365.

QUESTION: How many part time call taker/dispatch employees does your PSAP have?



Part time dispatch employees are highest in the jurisdictions with less funding.

QUESTION: Please identify any duties other than 9-1-1 call taking or dispatching your personnel are required to perform. Check all that apply.

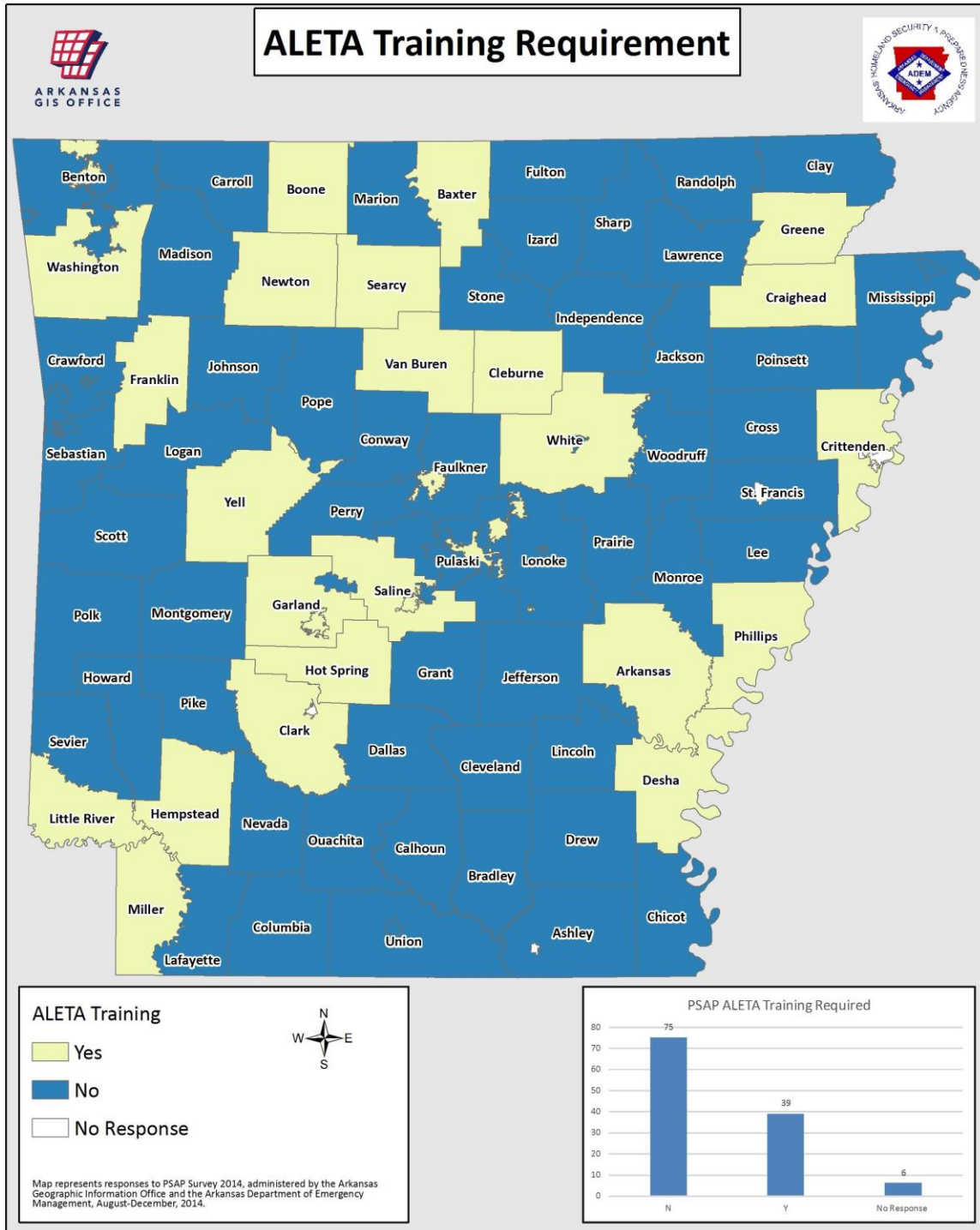


Eighty-three (83) PSAPs run three (3) shifts of eight (8) hours, while thirty-five (35) run two (2) shifts of twelve (12) hours. This is heavily influenced by dispatchers performing dual support of law enforcement activities and emergency response activities. As seen above, PSAPs use a combination of full-time and part-time dispatchers. In most cases dispatchers are performing non-emergency call taking duties that include jail duty. Most of the other duties assigned to dispatchers can be suspended to respond to the emergency call. However, jailer duty performance cannot be suspended for emergency call taking and vice-versa. A dispatcher simply cannot perform these duties at the same time without public risk.

36 PSAPs have only one dispatcher on duty during a third shift.

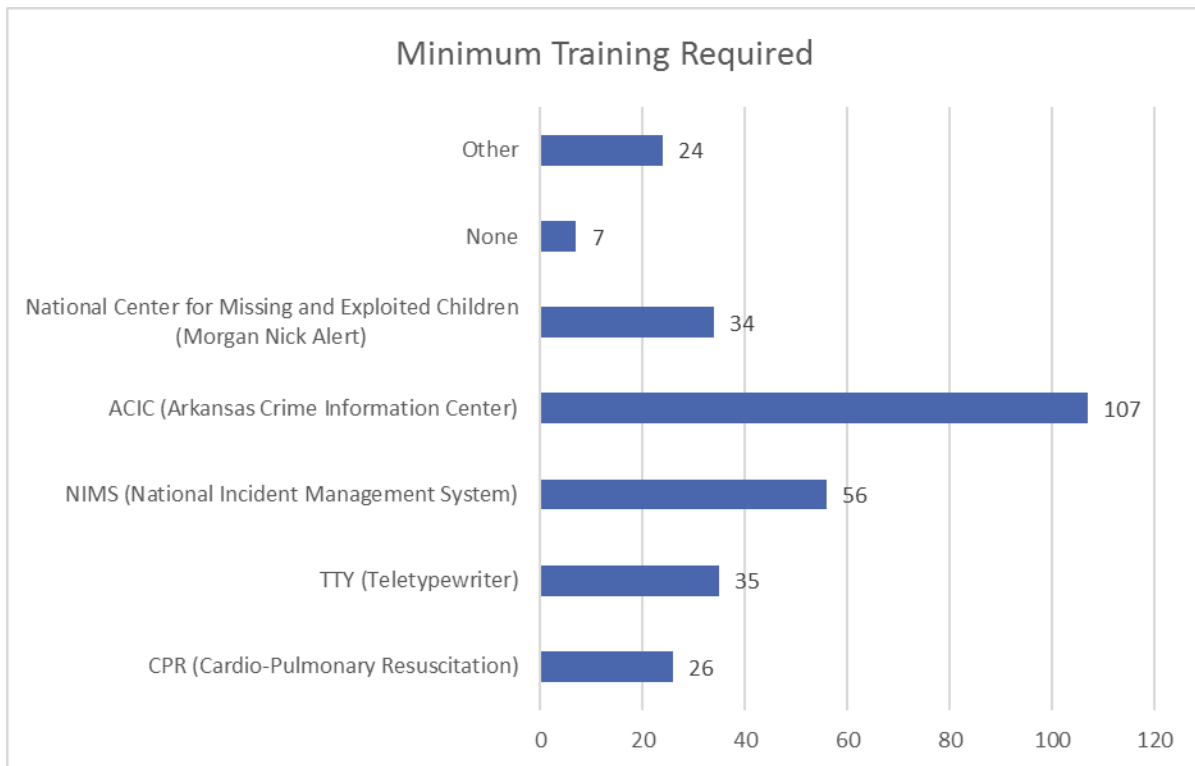
40 PSAPs have only one dispatcher on duty during the second shift.

QUESTION: Does your PSAP require the Arkansas Law Enforcement Training Academy (ALETA) basic telecommunicator training course for each call taker/dispatcher?



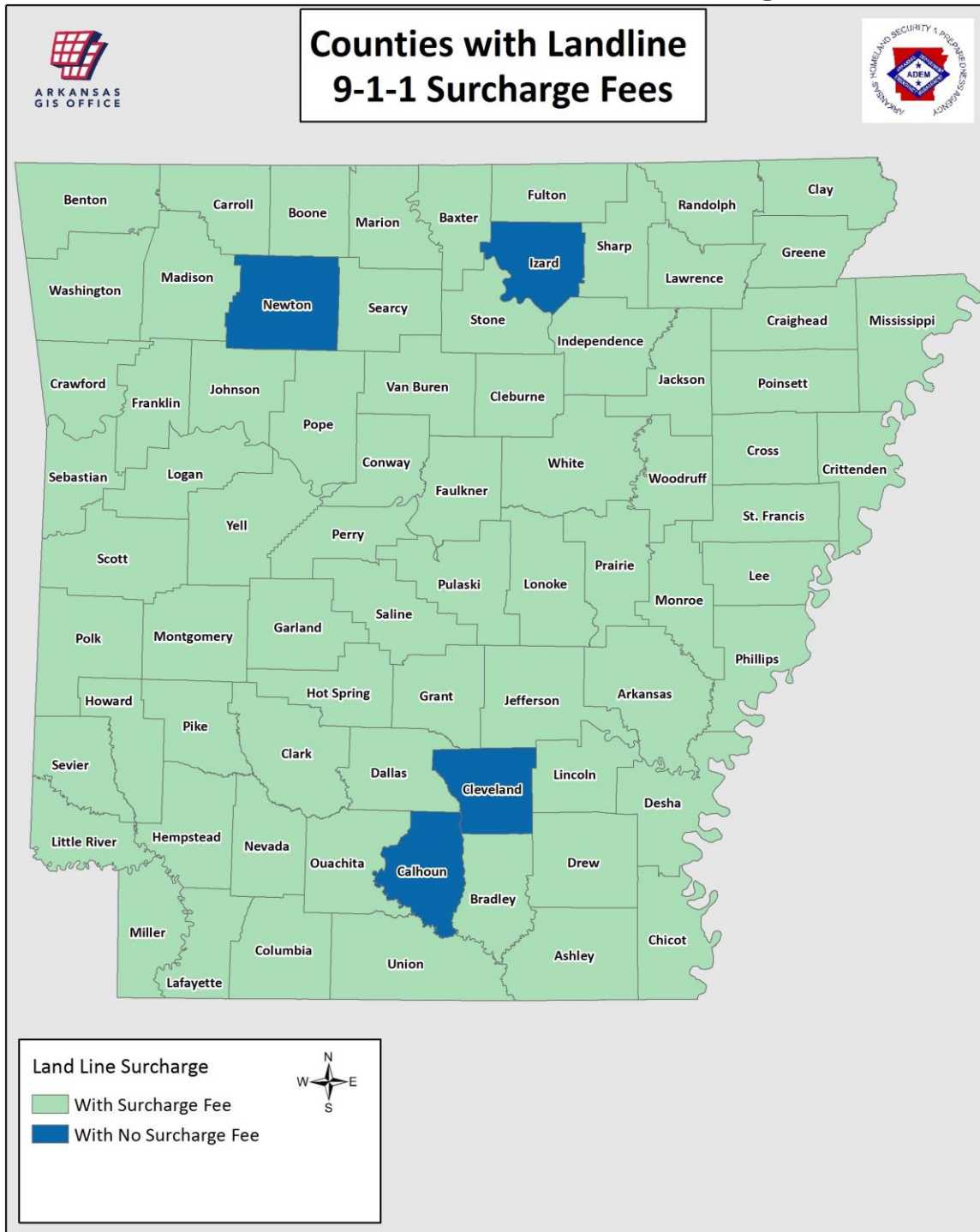
The majority of PSAPs do not require dispatcher training at the Arkansas Law Enforcement Training Academy. This is not to say that dispatchers from those PSAPs answering “No” have not received training. Rather it is not a requirement.

QUESTION: Identify any other minimum training requirements for your call takers/dispatchers. Check all that apply.



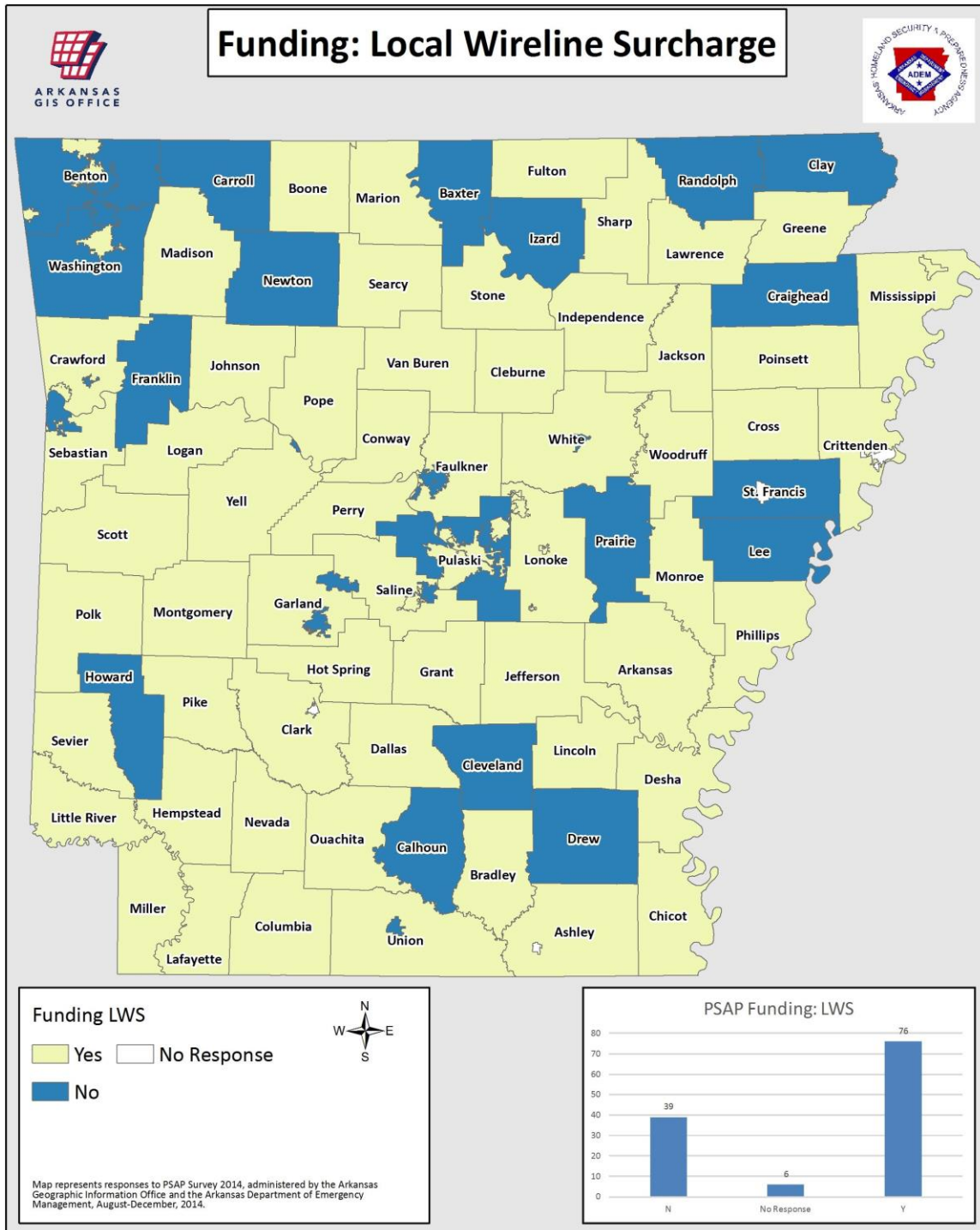
Minimum training requirements vary with the exception of the Arkansas Crime Information Center (ACIC). An overwhelming number of PSAPs require ACIC training. This is a function of supporting both law enforcement activity and emergency response activity. Surprisingly seven respondents state they have “None” for a minimum training requirement.

FIGURE 2: Counties with Landline 9-1-1 Surcharge Fees

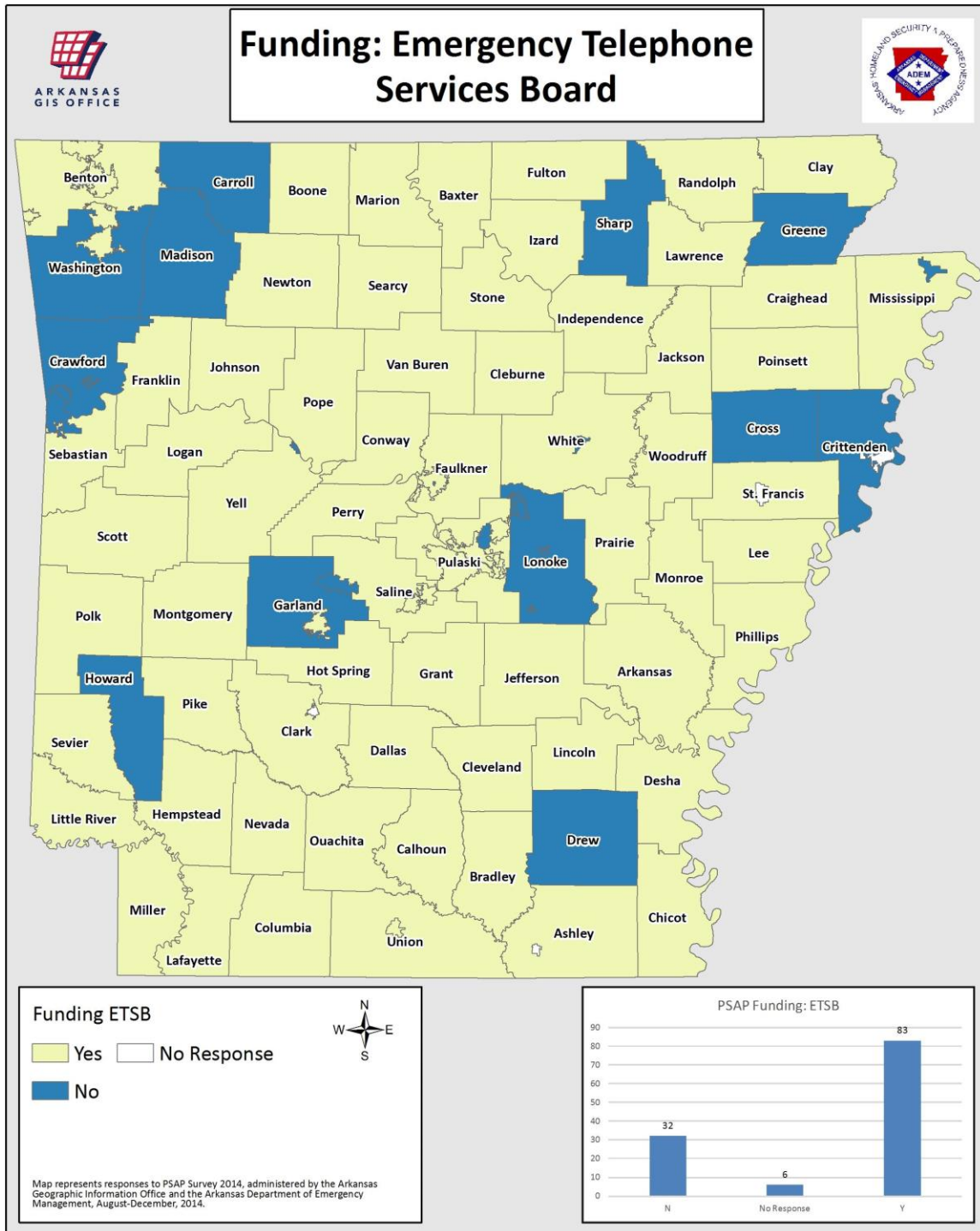


Only four (4) of the state’s seventy-five (75) counties do not have Landline 9-1-1 Surcharge Fees. However, as shown in the map below, thirty-nine (39) respondents to the survey indicate that they do not have a Local Wireline Surcharge. This suggests that employees who are responsible for administering the PSAP operation are not fully aware of their funding sources.

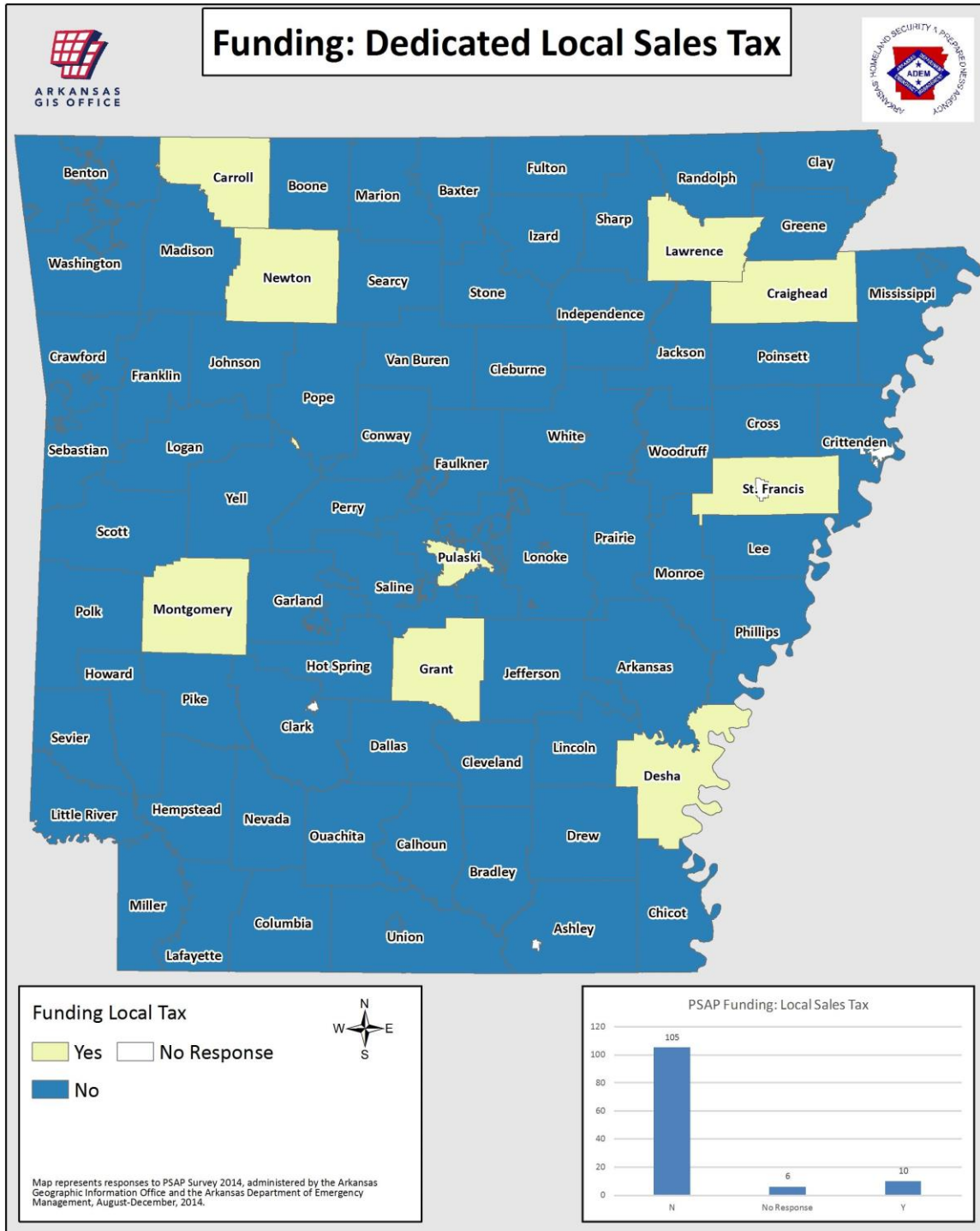
QUESTION: Please identify the funding sources for your PSAP. Check all that apply. [NEXT FOUR MAPS]



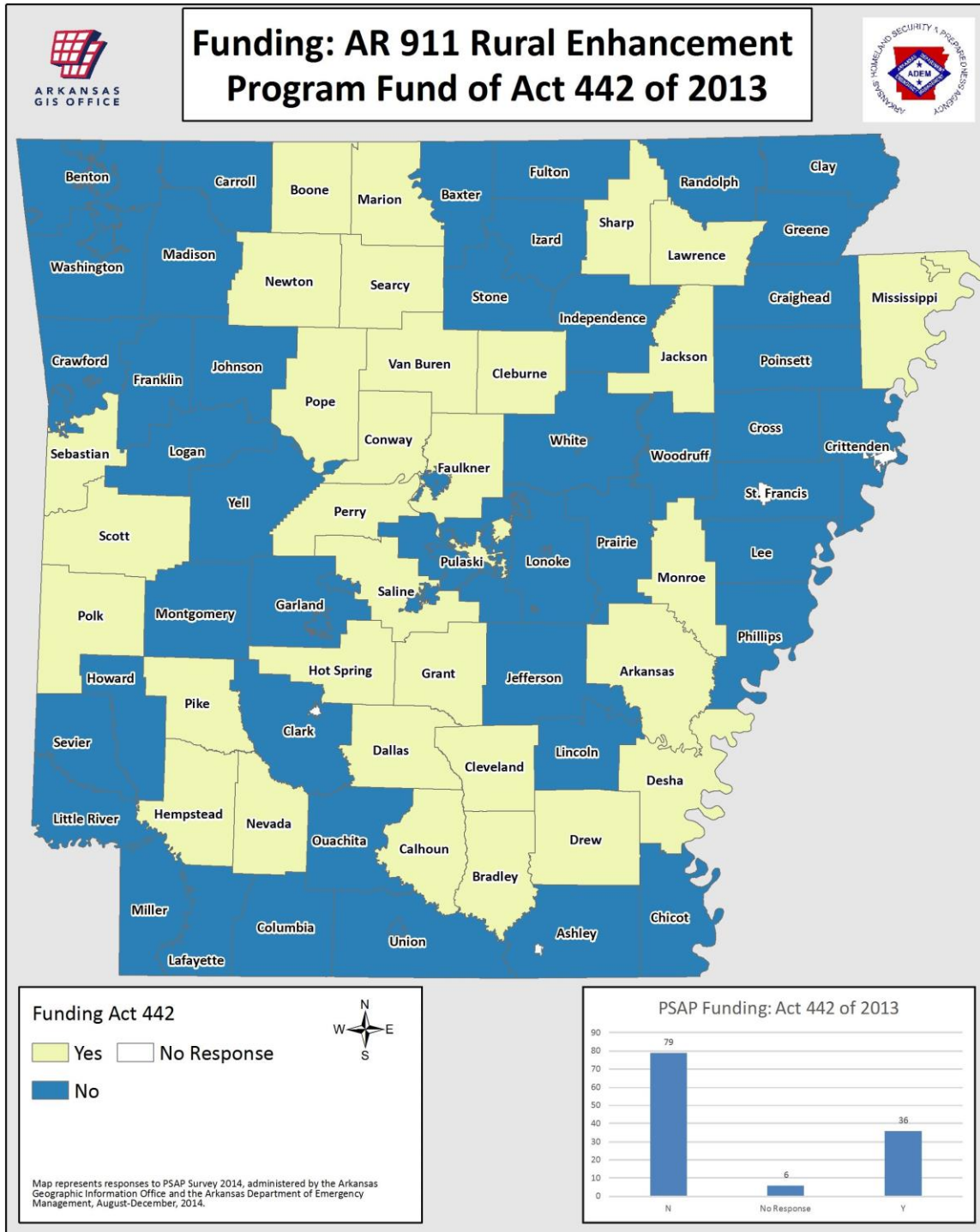
The map on the previous page shows Newton, Izard, Calhoun and Cleveland counties are the only counties that do not incur a local wireline surcharge. Yet several counties show “No” for a local wireline surcharge. Either some of these are instances where the whole county is served by a municipal PSAP and funds are interlocal transfer, or the respondents are unaware of their funding source.



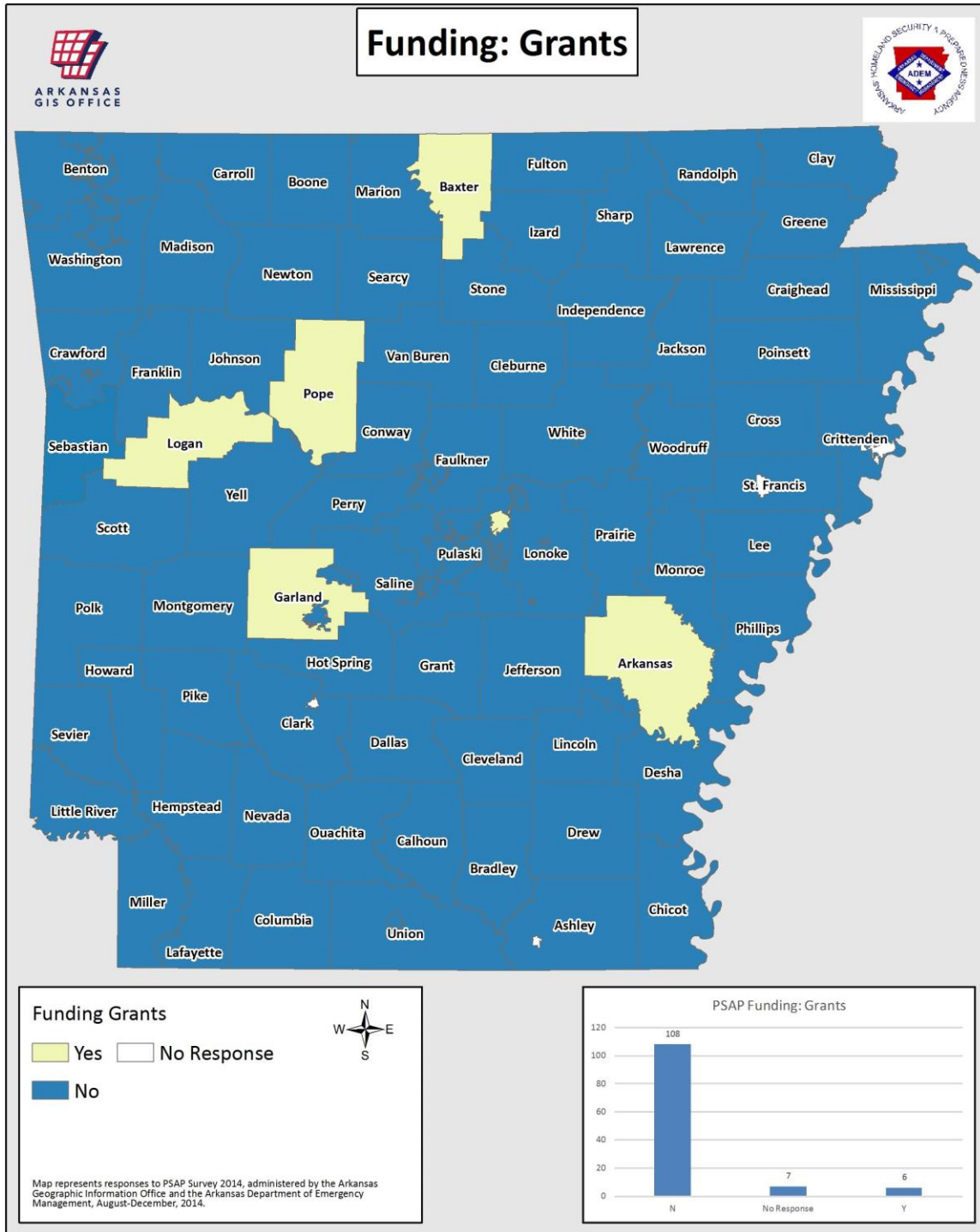
As seen above, this map demonstrates another disconnect between PSAPs and funding. All counties receive Emergency Telephone Service Board (ETSB) funding; yet thirty-two respondents indicate that they do not receive funding from the ETSB.



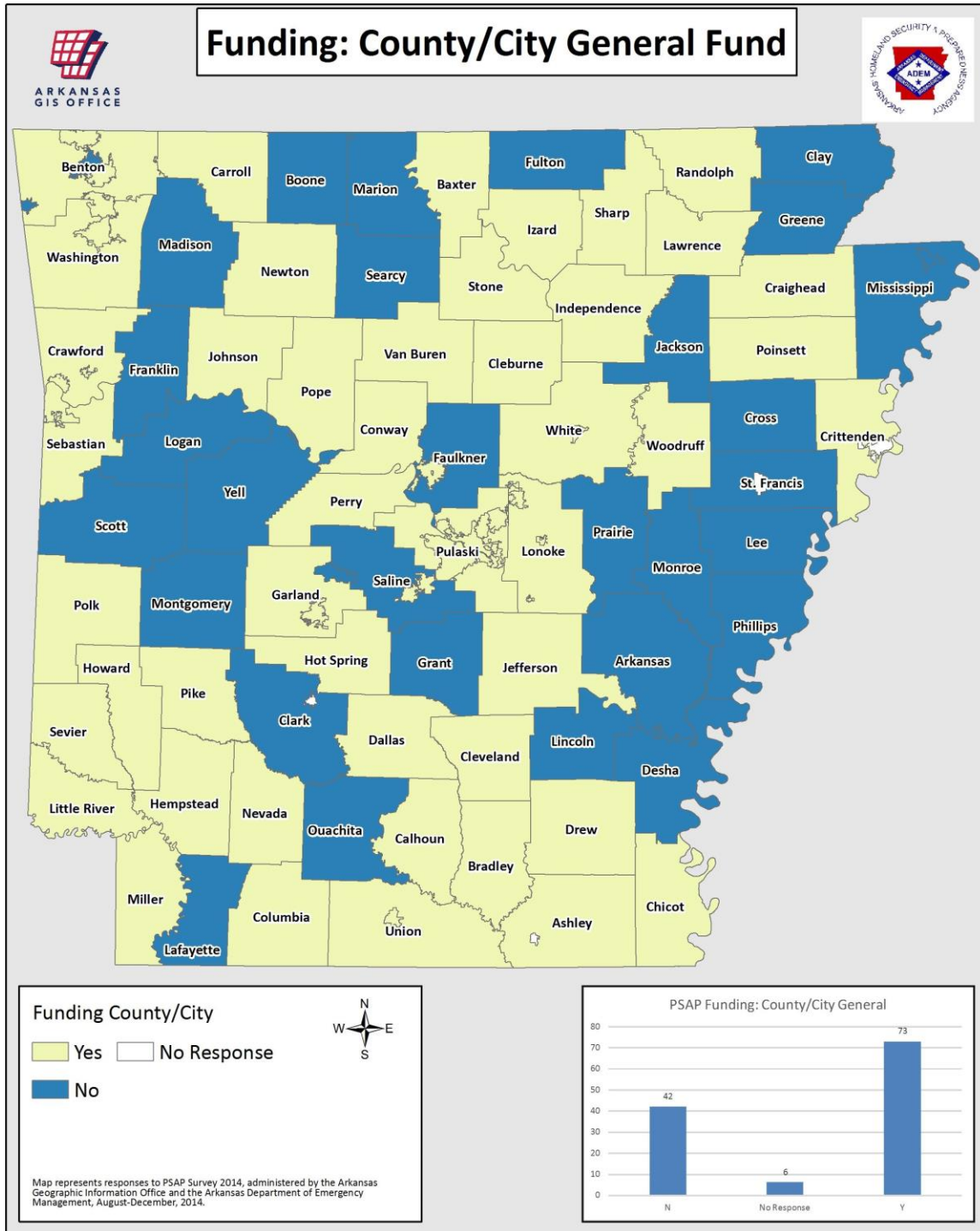
In addition to all other funding sources, ten PSAPs receive some funding from a dedicated local sales tax.



As seen in the previous maps, this map demonstrates more disconnect regarding funding. All of these jurisdictions receive funds through Act 442, but seventy-nine (79) PSAPs responded to the survey stating that they do not receive funds from this program.

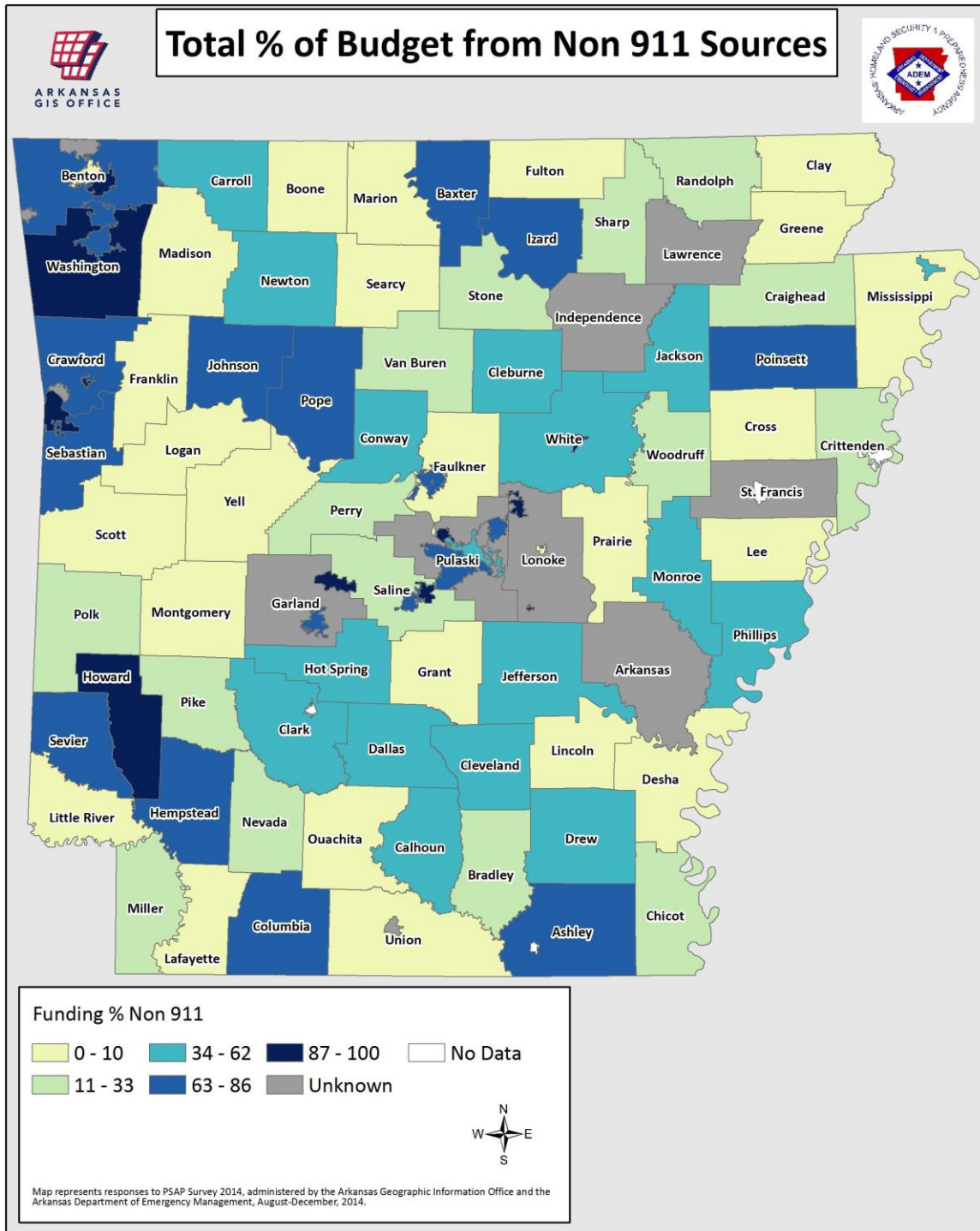


Only six PSAPs indicated they receive funding from grants. There may be opportunity for additional grant funding. Given the number of staff at the PSAPs and their workload there is likely no time for personnel to seek, prepare and submit grant applications.

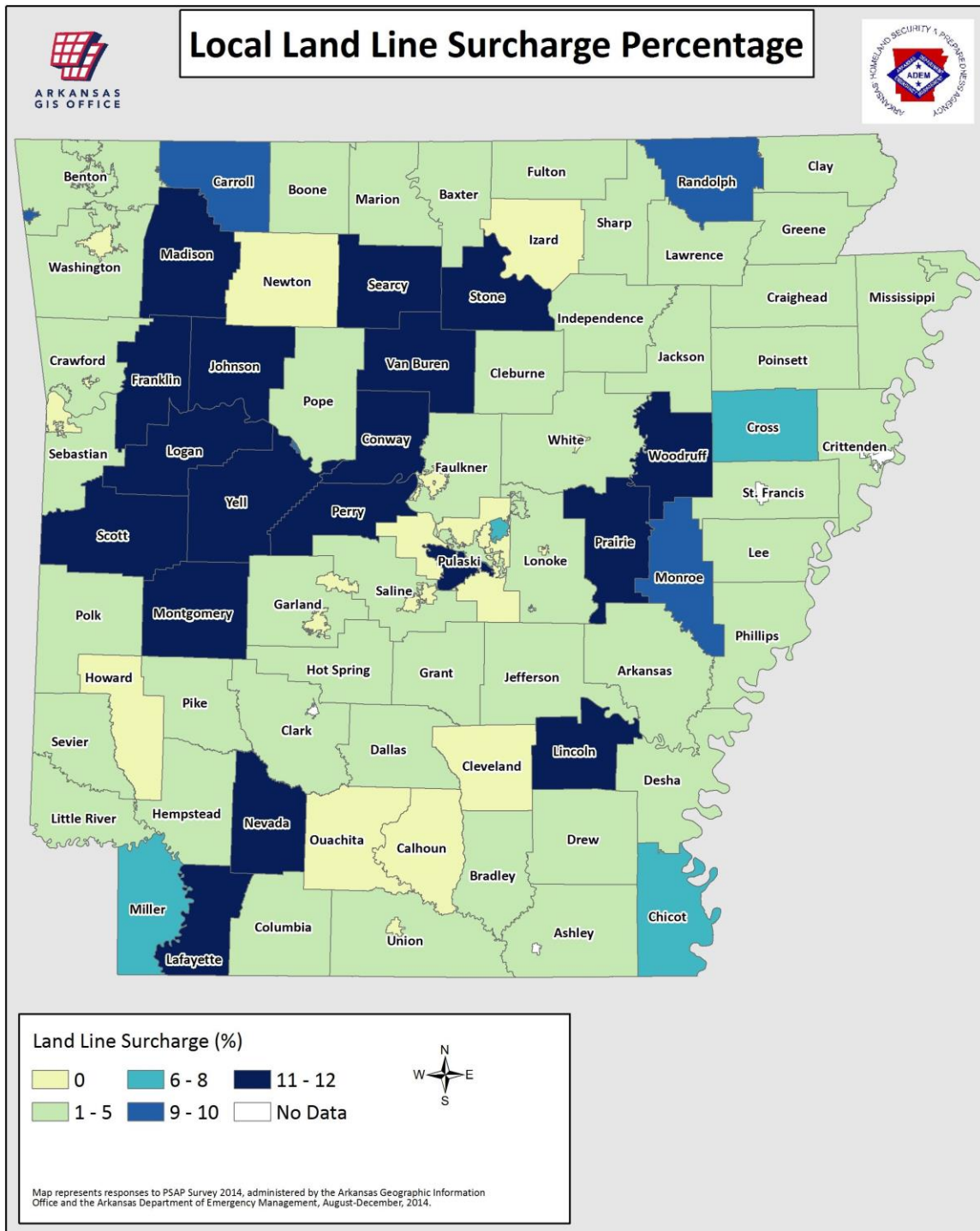


This map indicates that the majority of PSAPs across the state dip into County/City General Funds to operate their PSAP.

QUESTION: What portion or percentage of your 9-1-1 budget is funded by non 9-1-1 revenue sources, such as county/city general funds?

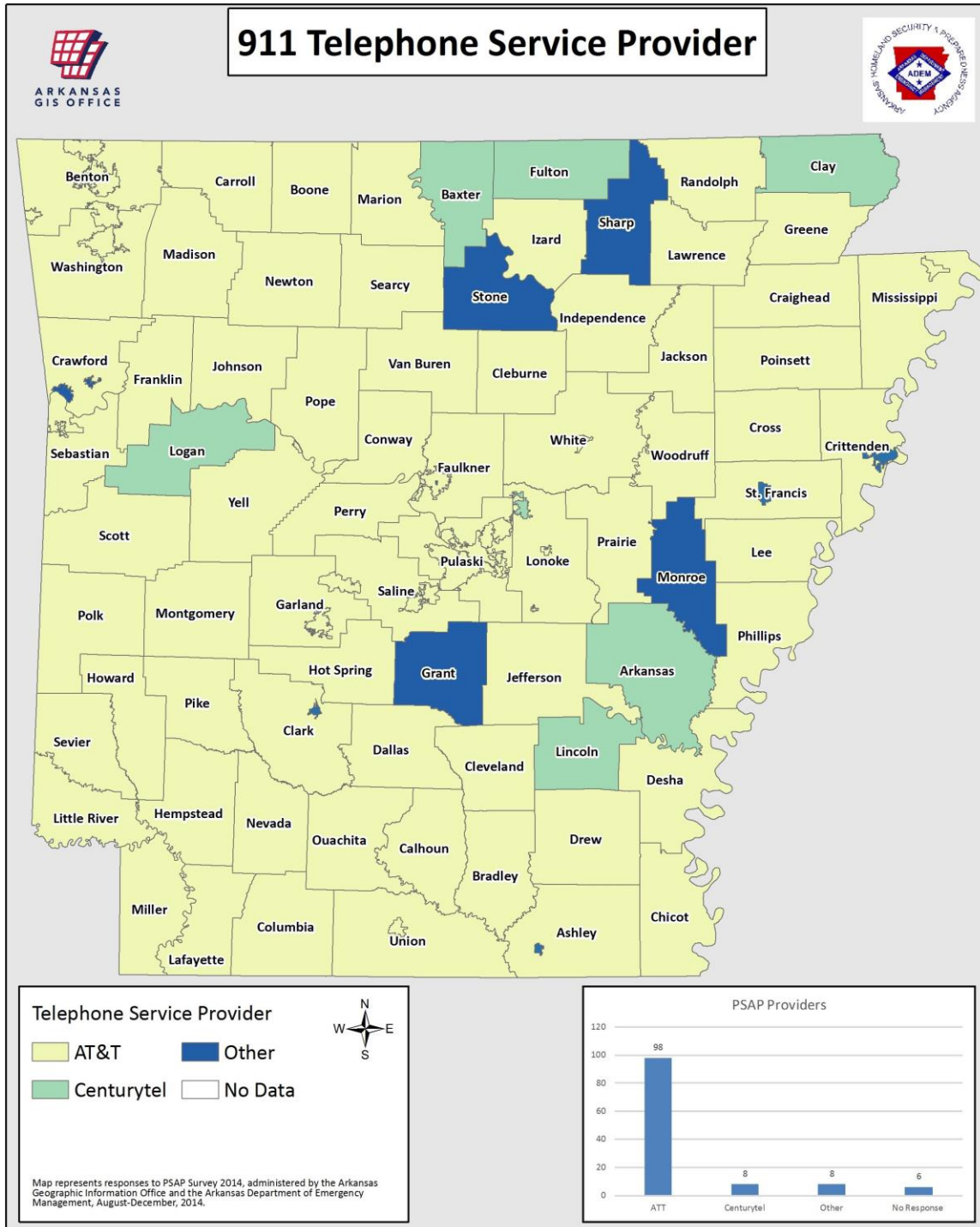


QUESTION: Please choose the percentage of the local land line surcharge.



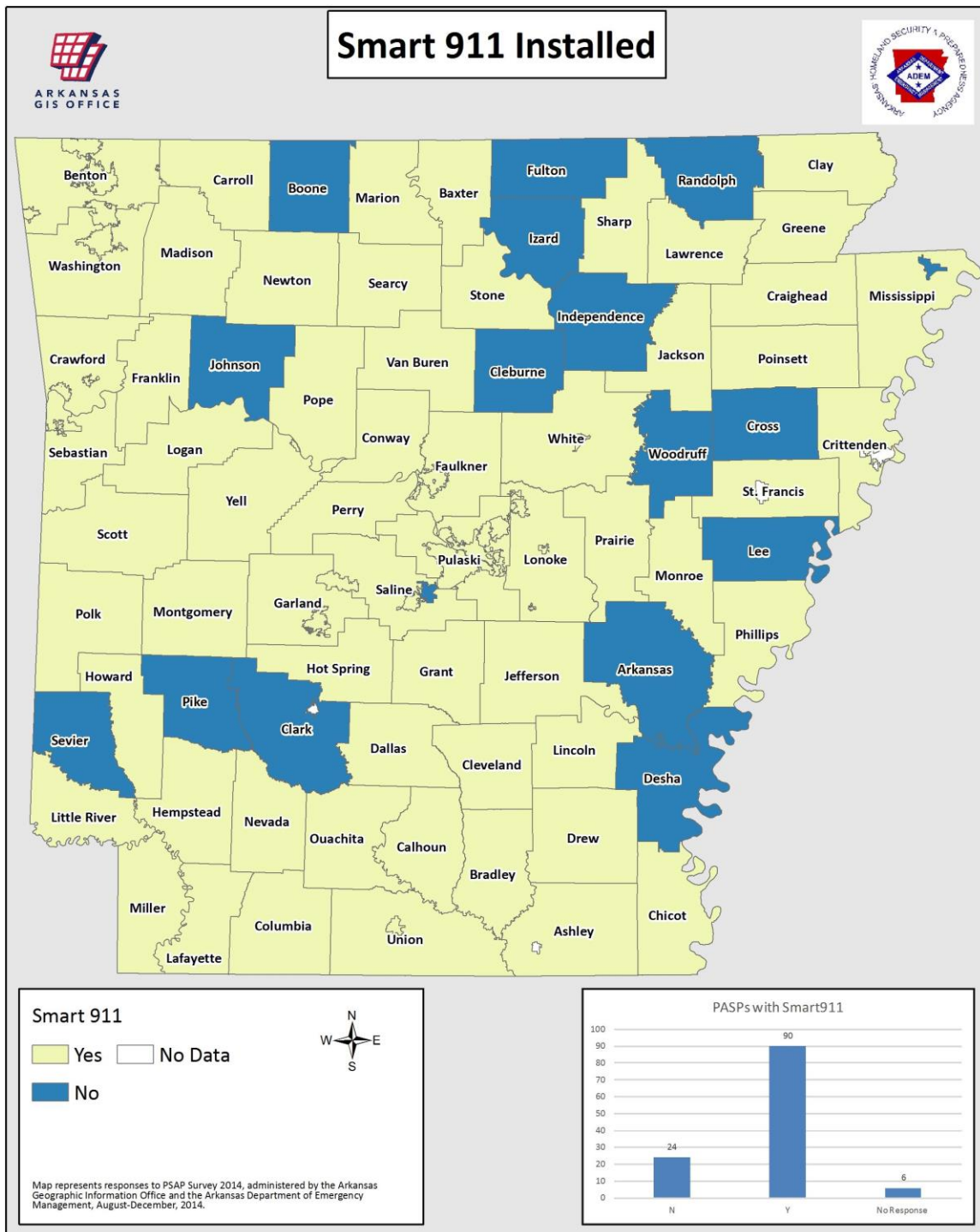
Comparing the maps from the previous two pages shows a correlation among PSAPs where the Local Wireline Surcharge is highest. Areas with higher surcharges are less likely to subsidize PSAP operations with other funding and have the lowest percentage of funding from non 9-1-1 sources.

QUESTION: Who is your 9-1-1 telephone service provider?

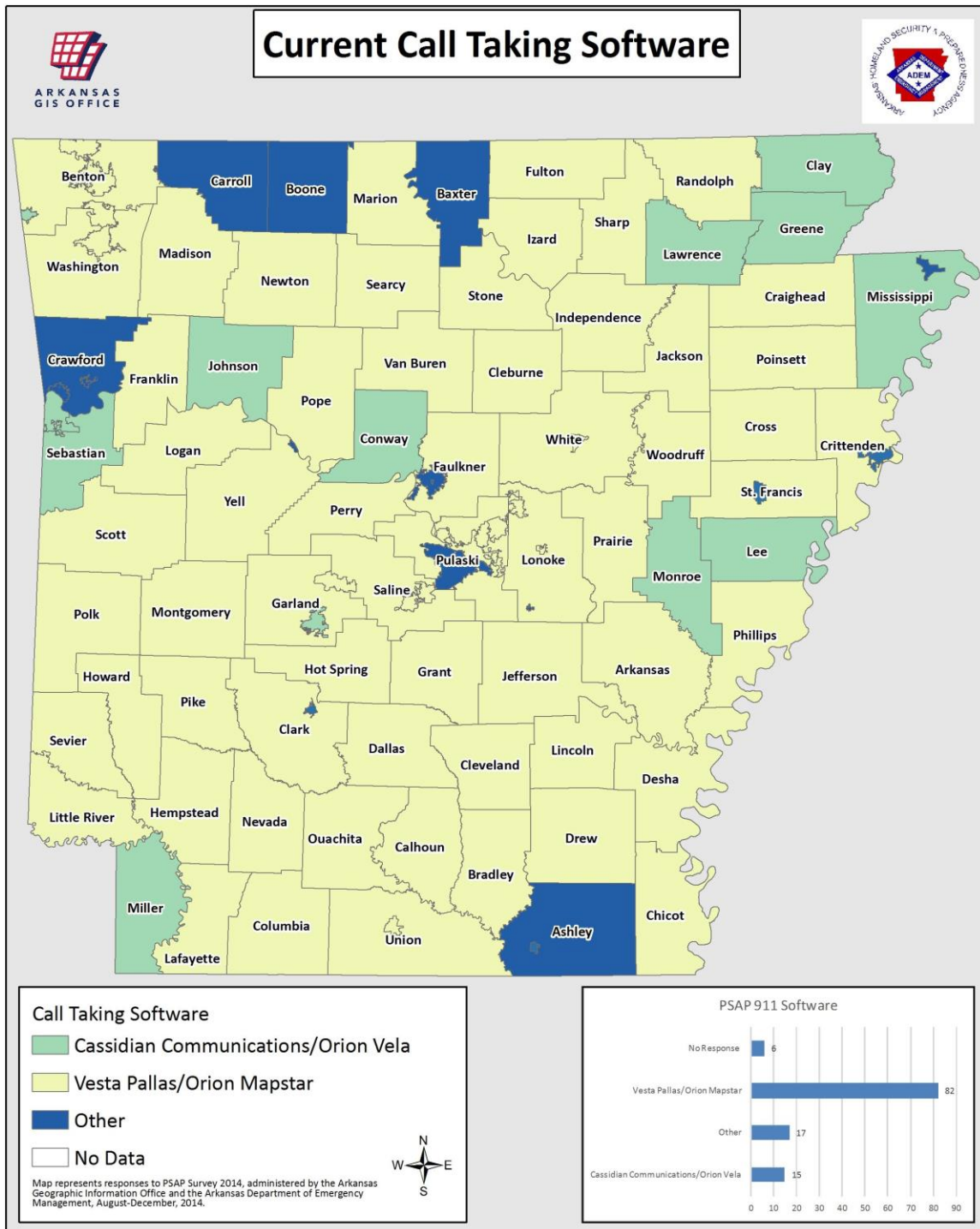


The majority of PSAPs are served by AT&T for emergency telephone service.

QUESTION: Has Smart 911 been installed at each of your call taking/dispatching consoles?

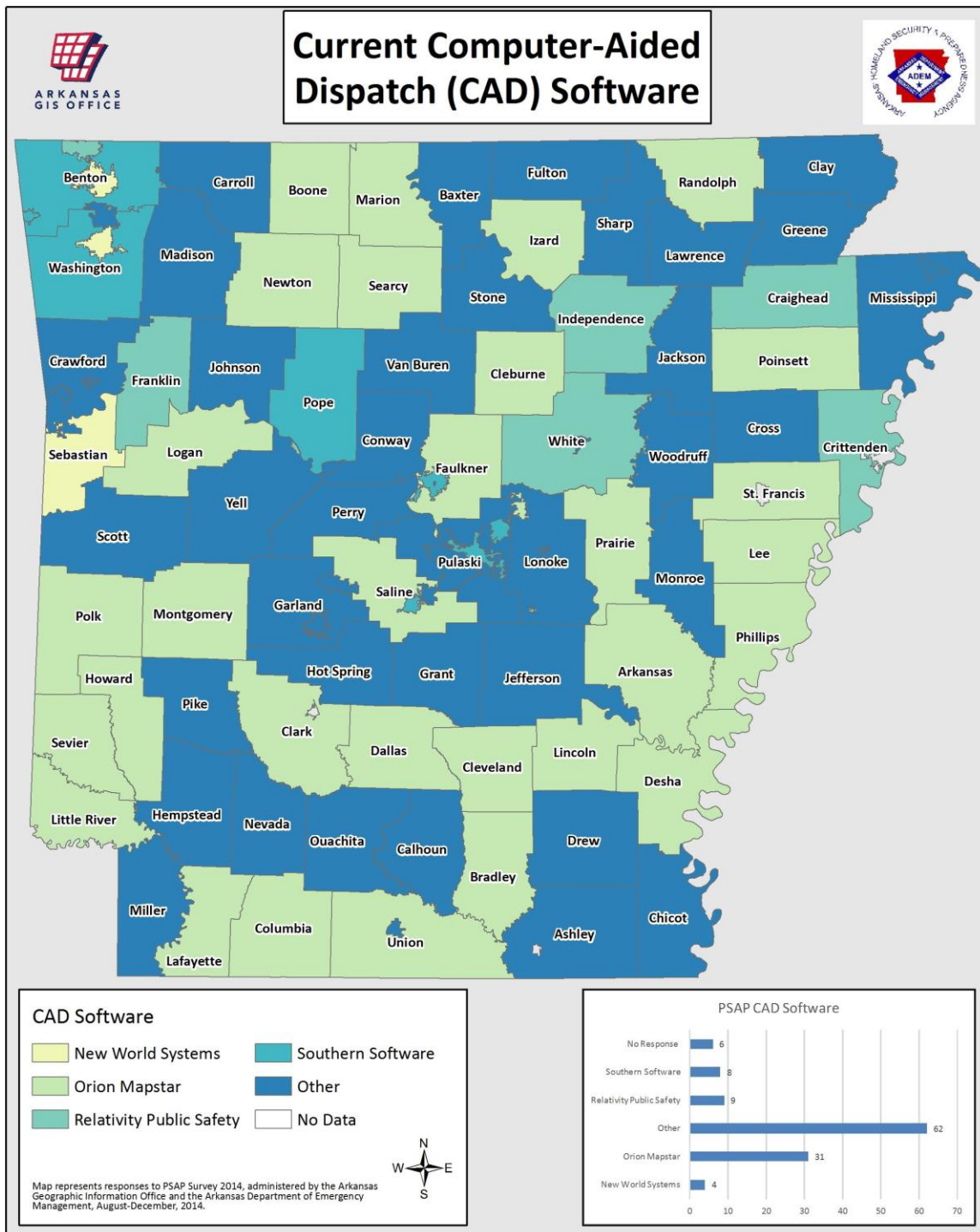


QUESTION: What is your current 911 call taking software?



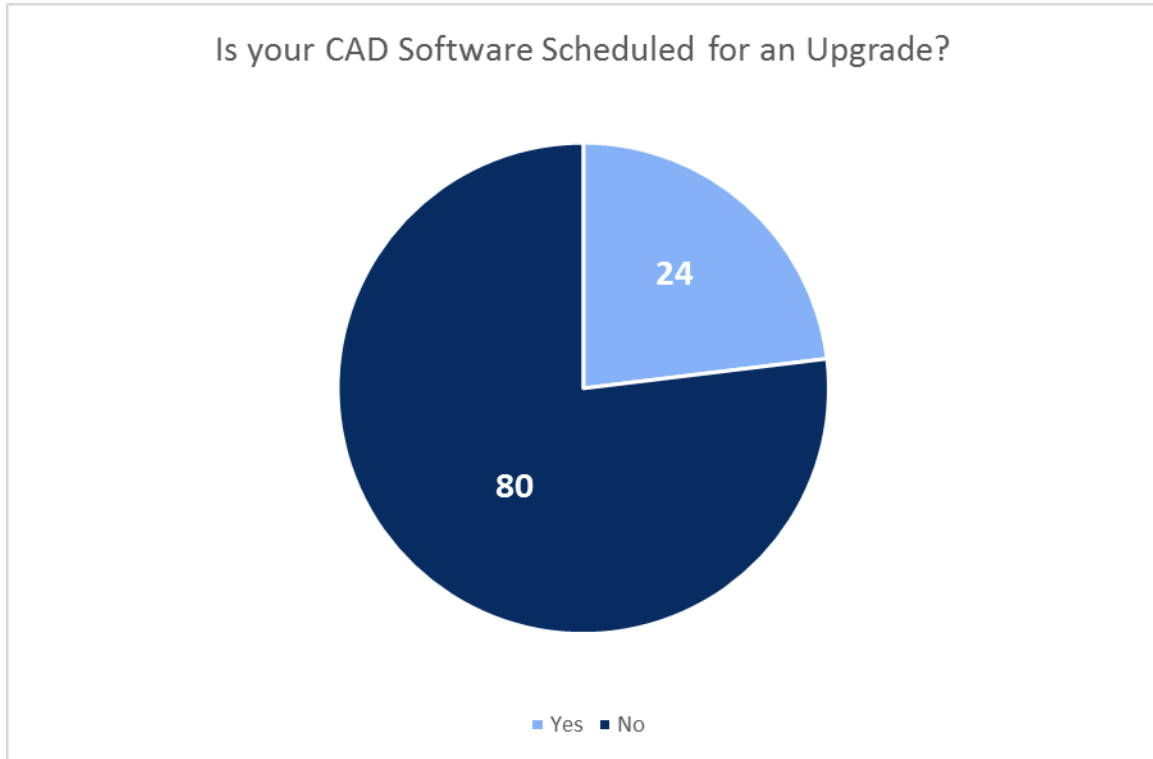
This map indicates that many of the PSAPs are using the same call taking software.

QUESTION: What is your current CAD software and what version do you use?

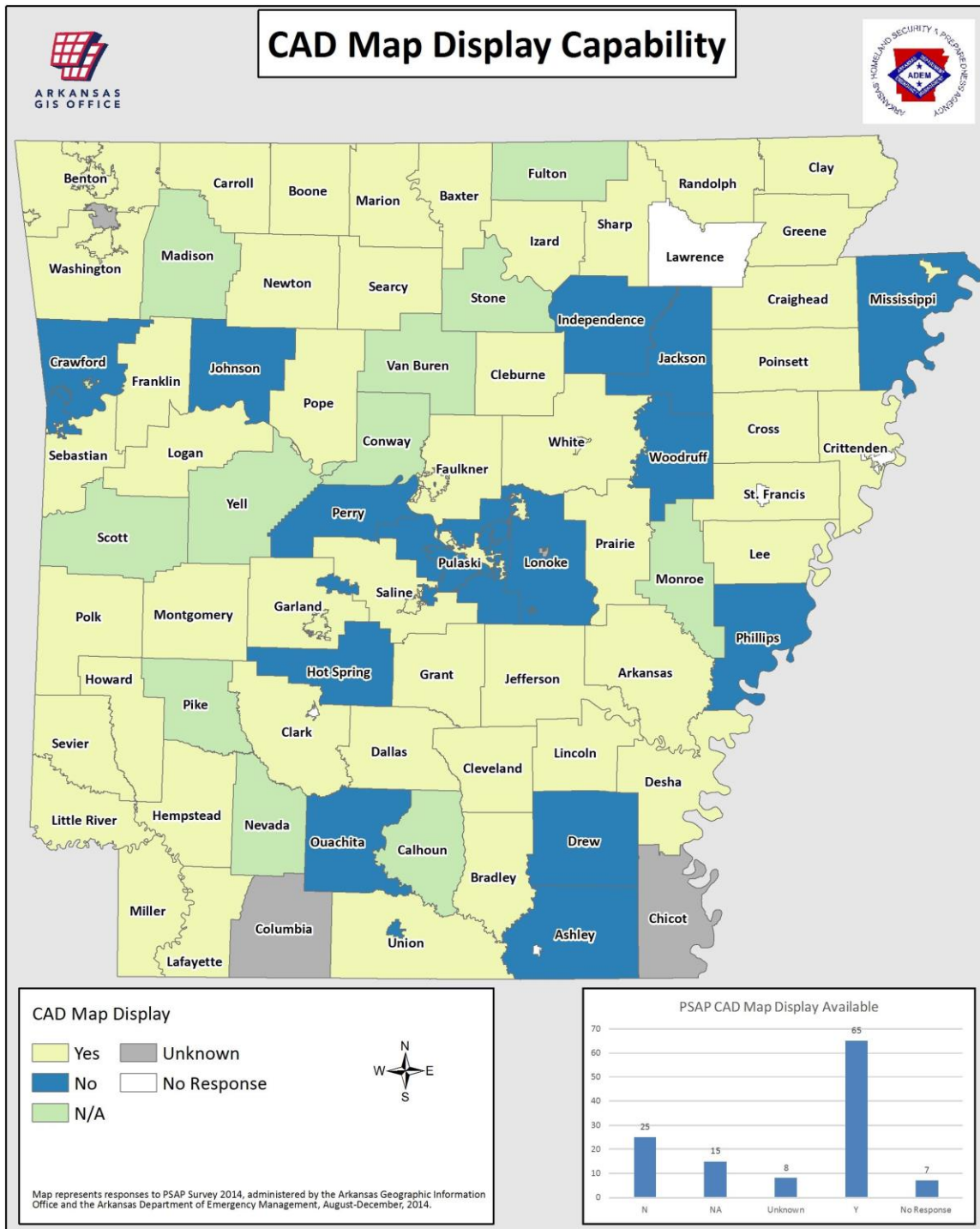


This map demonstrates a lack of interoperability between PSAPs Computer Aided Dispatch software. If a jurisdiction receives a call from a neighboring jurisdiction, this lack of interoperability means that the call information cannot be automatically shared between agencies. Instead dispatchers must verbalize the information. This delays response and may introduce errors.

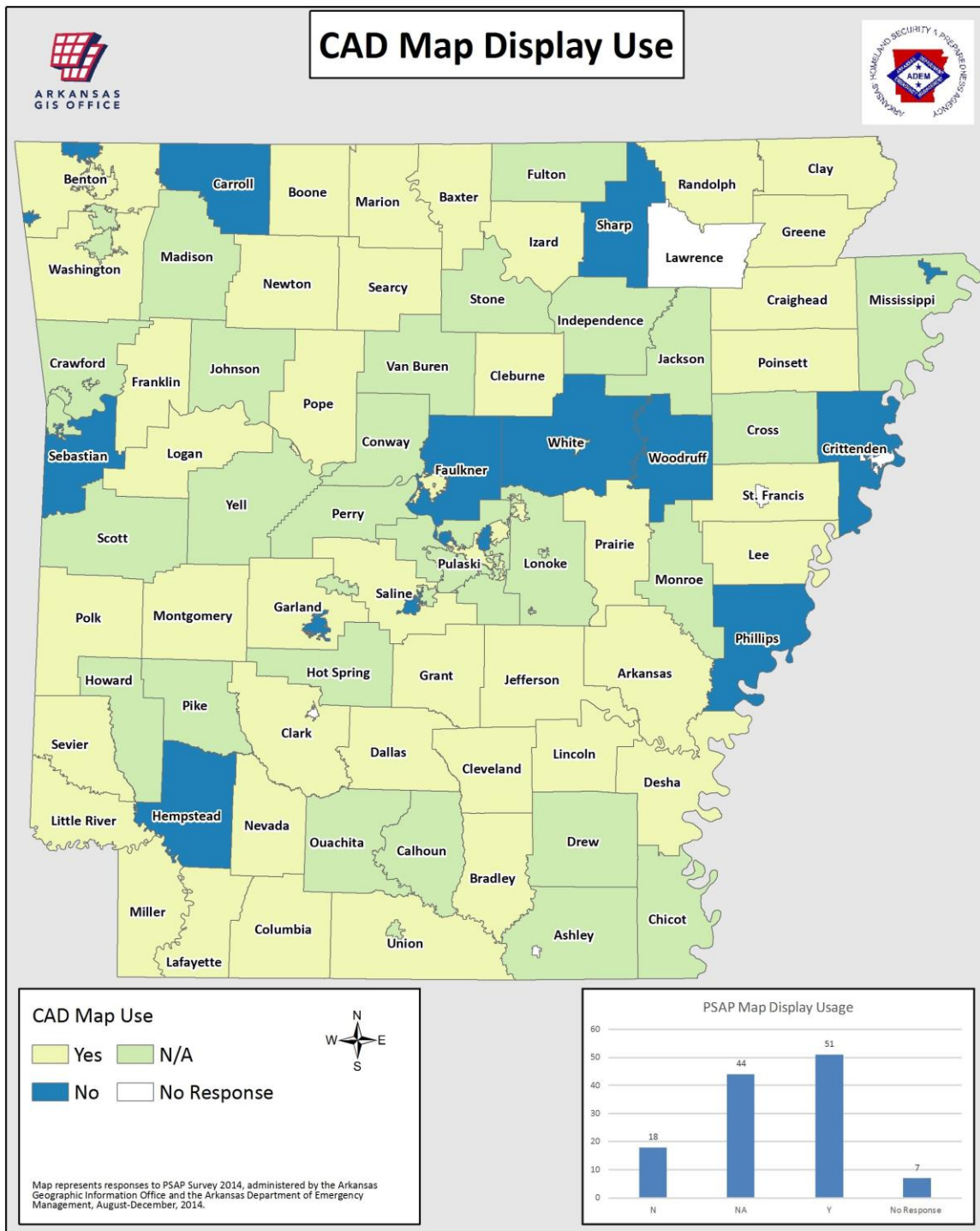
QUESTION: Is your CAD software scheduled for an upgrade or replacement?



QUESTION: Does your CAD software have map display capability?

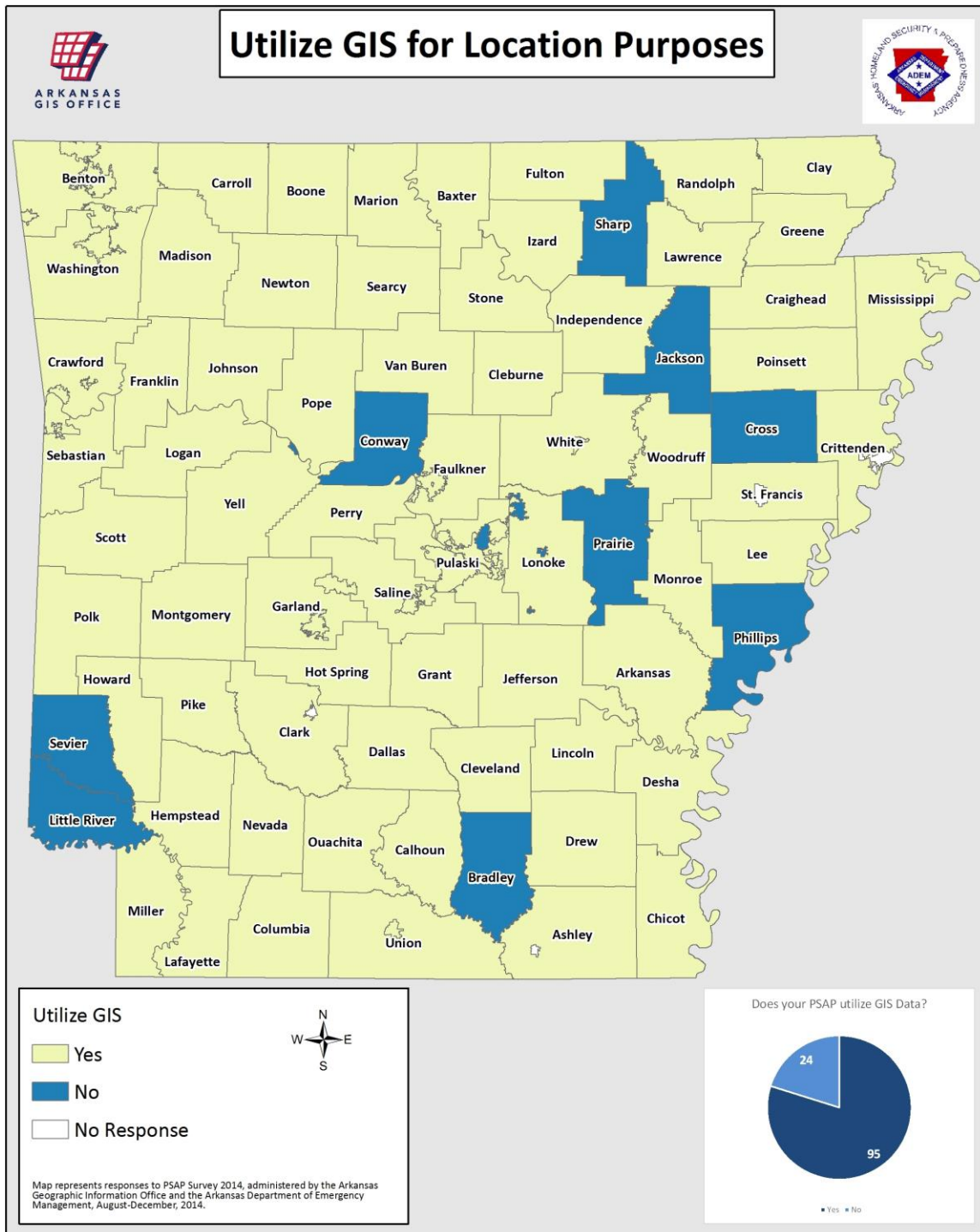


QUESTION: If you answered "Yes" to [the previous question], are you using the map display capabilities in your dispatch center?



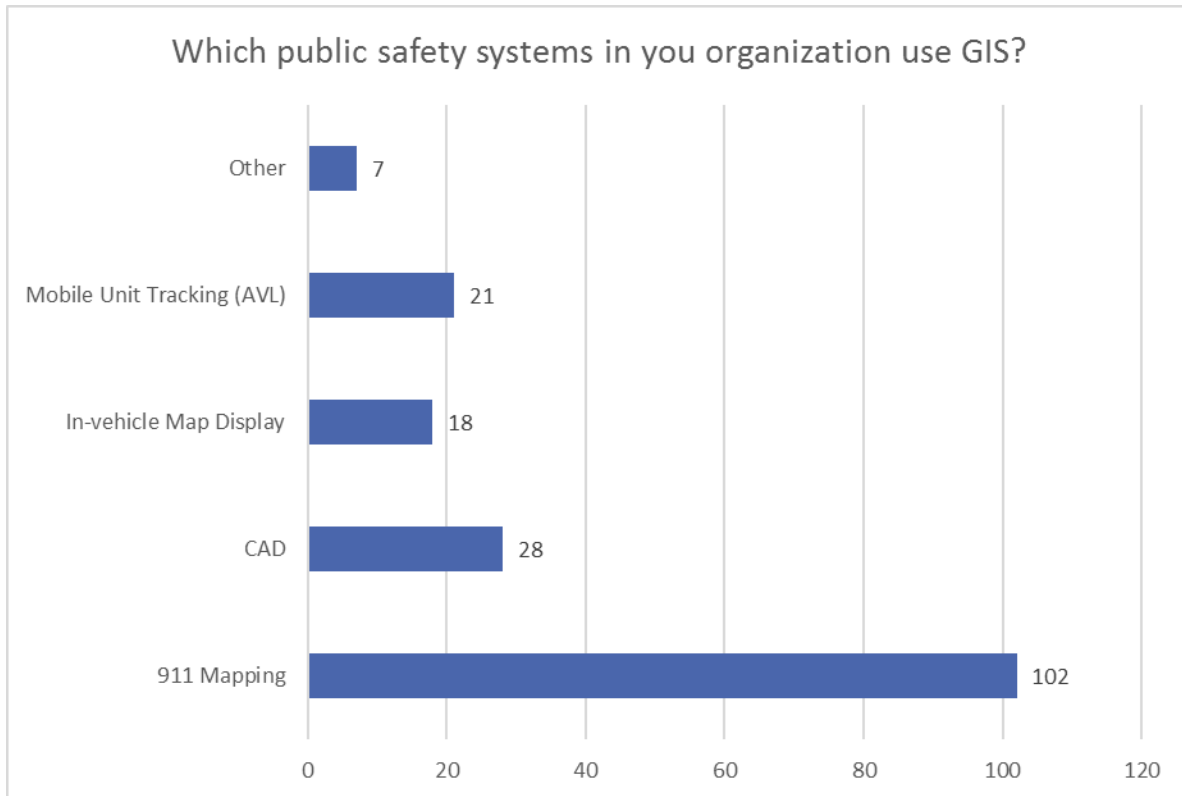
Many of the counties answering “No” to this question do not use the map functionality in their CAD systems because they already have mapping functionality on their call taking software. For instance, White County does not use the CAD mapping capability due to the fact that they use the mapping capability on their 911 Call Taking software, Orion MapStar.

QUESTION: Does your PSAP utilize GIS data for location purposes?



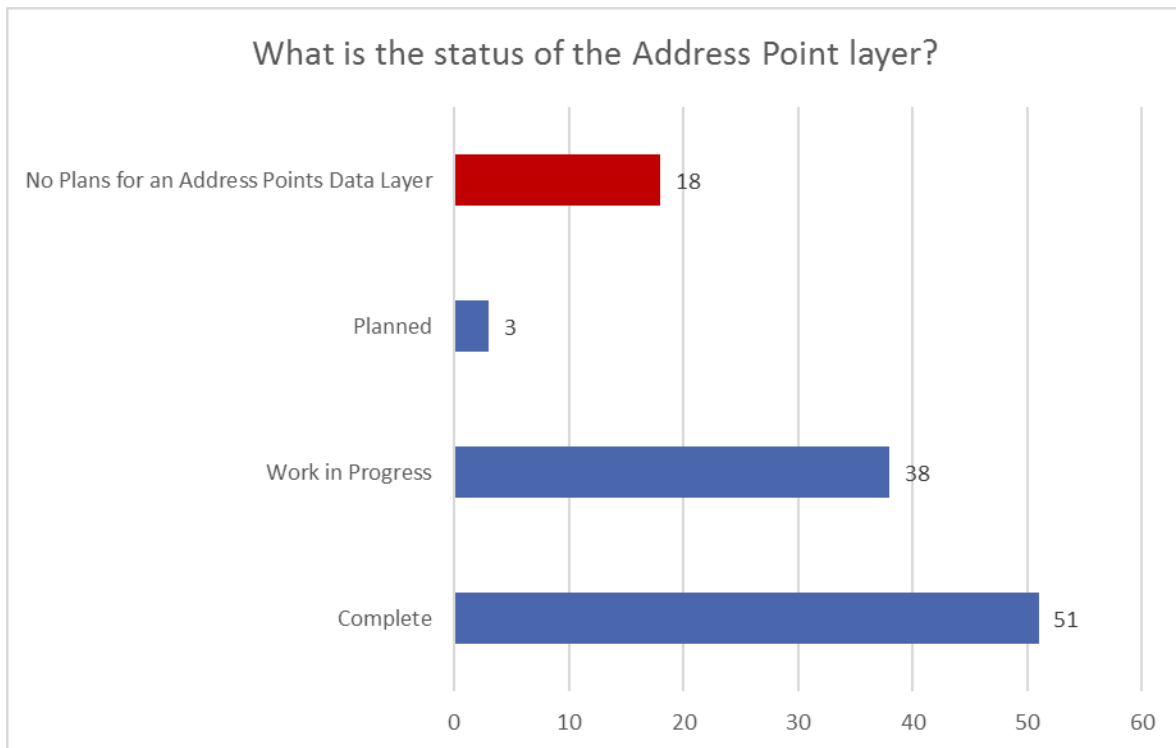
The majority of PSAPs are using GIS capability, but twenty-four (24) do not. This response surprised the Arkansas GIS Office because the agency has coordinated GIS data for roads, address points and other layers in all counties.

QUESTION: Which public safety systems in your organization utilize GIS data?



This question highlights the fact that most PSAPs use GIS to create the data that supports their 9-1-1 mapping capabilities.

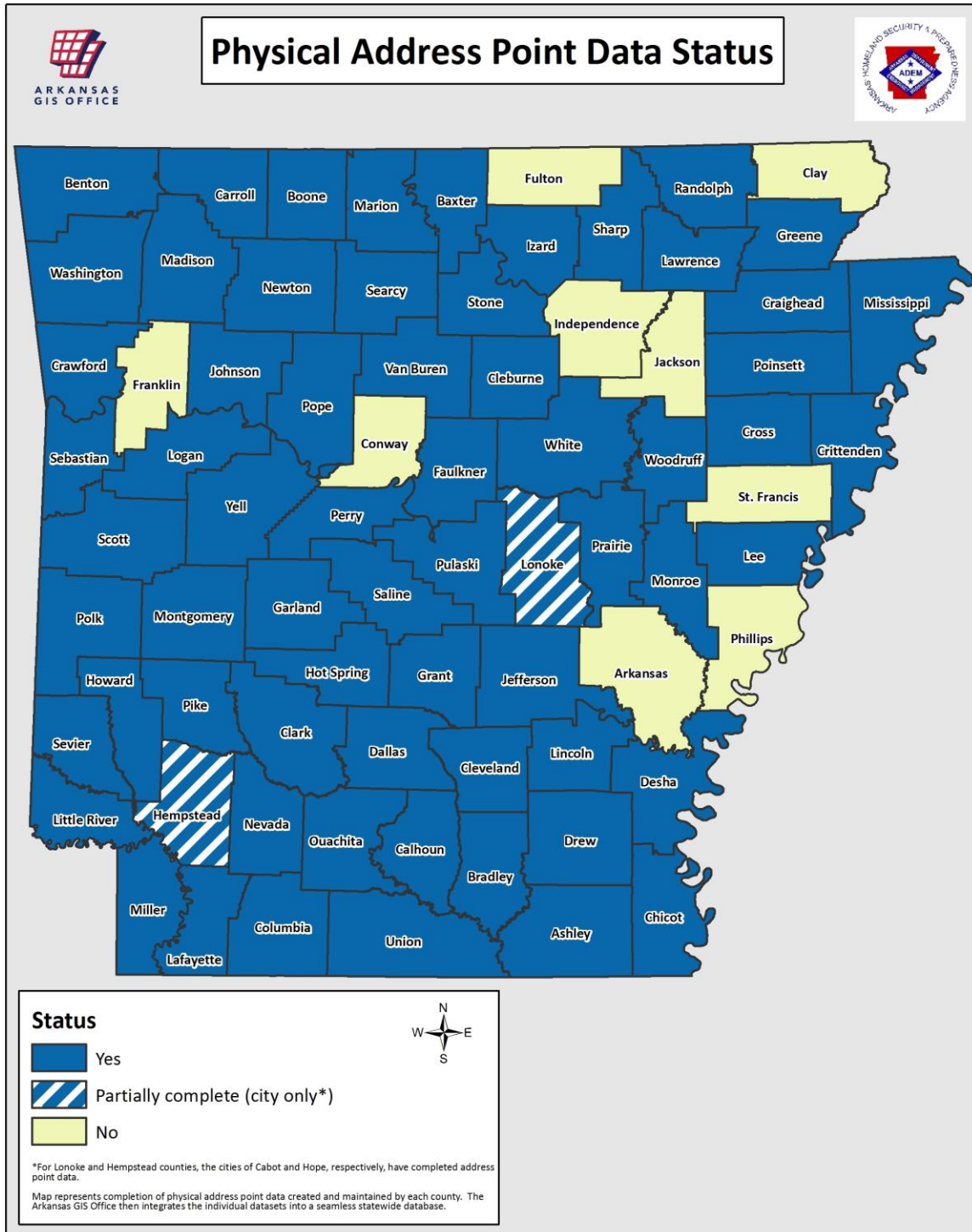
QUESTION: What is the status of the address point data layer?



While eighteen (18) respondents indicate that they have “No Plans for an Address Point Data Layer,” the GIS Office – in cooperation with addressing authorities in the state – have acquired statewide address points for all but eleven (11) counties in Arkansas (See Map Below). As the state plans for implementation of NextGen 9-1-1, the address point file will be the most important dataset in the 9-1-1 environment. This ignorance regarding address points indicates two possibilities:

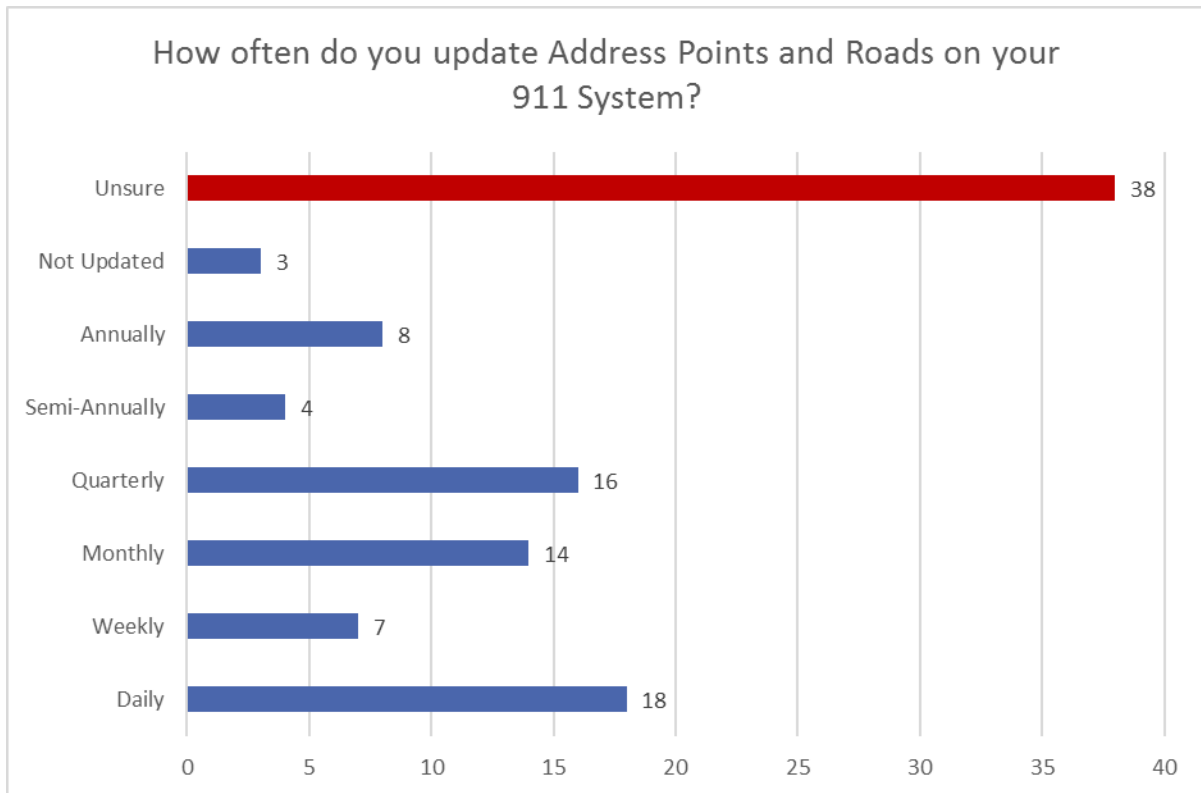
- 1) lack of local coordination between the addressing authority and dispatch centers, or;
- 2) the Arkansas GIS Office failed to adequately coordinate with these PSAPs.

Through this survey, the GIS Office has identified these PSAPs and will educate them about the existence of the address point data.



This map shows the statewide status of physical address point data creation as of December 19, 2014. Data from each county is available for download from the Arkansas GIS Office website across jurisdictional boundaries. Unfortunately, eighteen (18) respondents answered “No Plan for Address Points” when the majority of the state has been complete and published.

QUESTION: How often are updates made to the address points and roads in your 911 system?

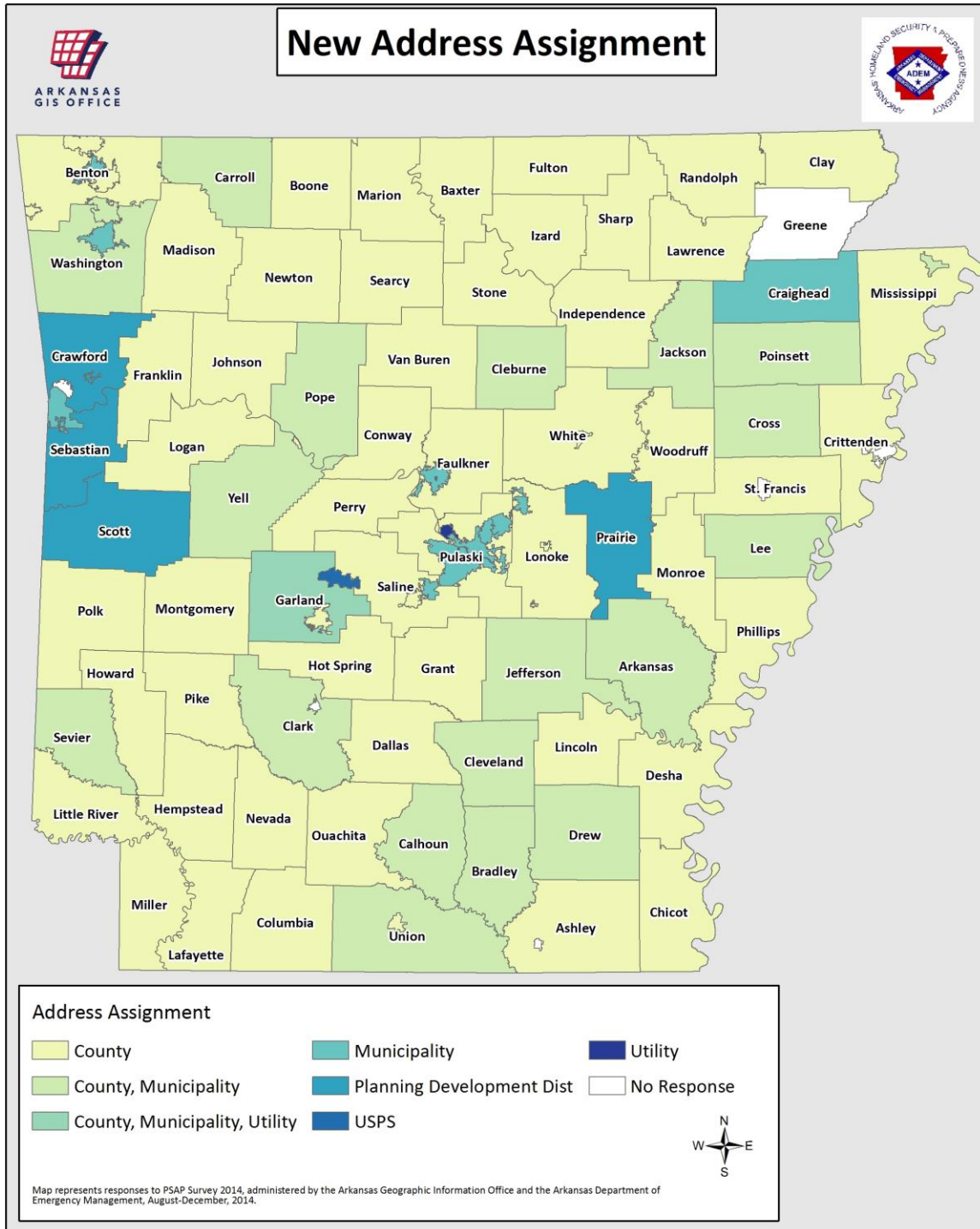


The first question a 9-1-1 call taker asks is “What is your emergency?” The second question is “What is your location?” Only twenty-five (25) PSAPs responded that their address points and roads – critical data when dispatching a 9-1-1 call – are updated on a weekly or daily basis. This suggests three possible failures:

- 1) interlocal coordination between the addressing authority and the PSAP
- 2) the PSAP personnel do not know how to update their systems, or;
- 3) the PSAP vendor is not performing their contractual duties to update the systems

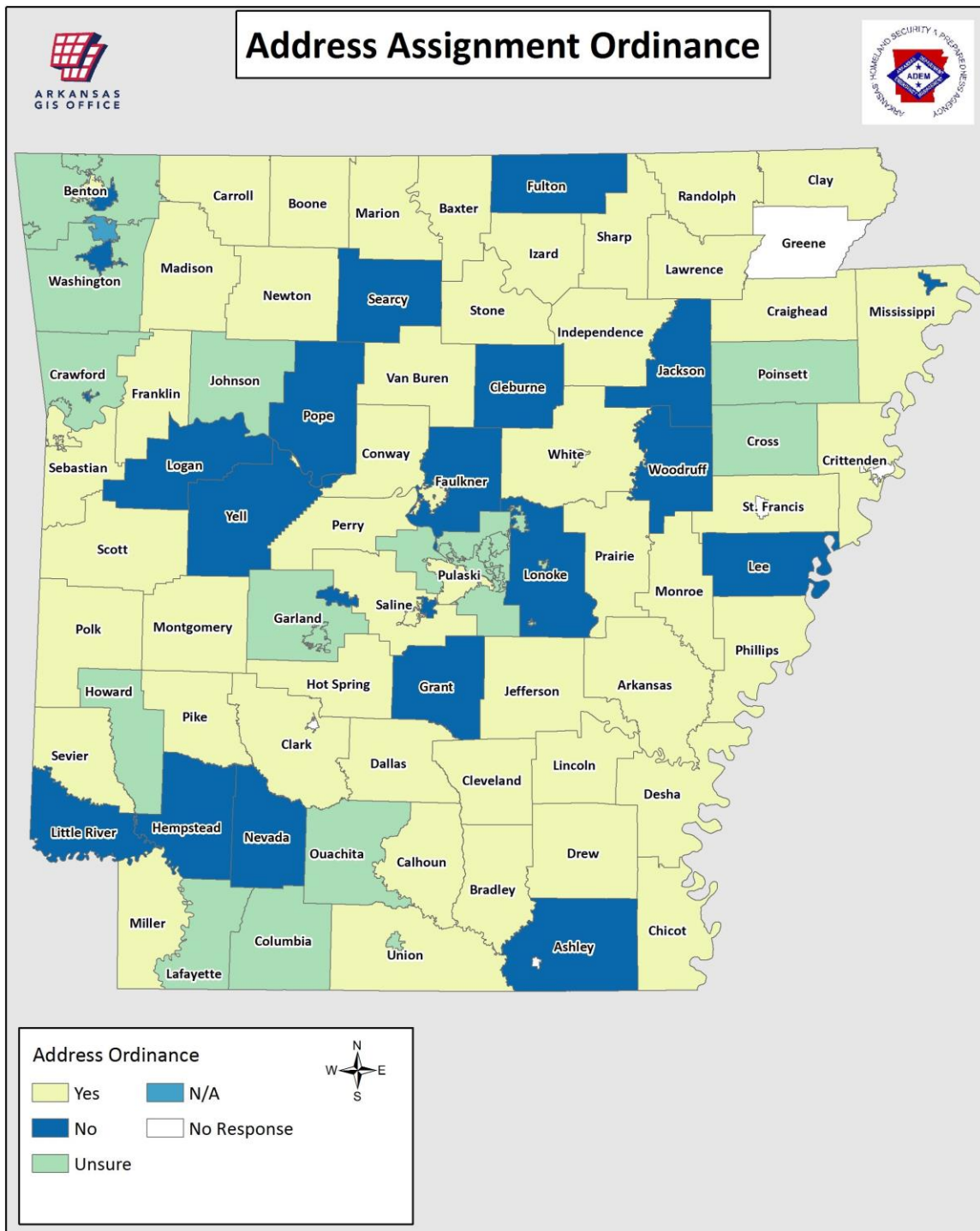
Thirty-eight (38) PSAPs are “Unsure” if they update their data and three (3) are certain they do not. Due to this lack of timely maintenance, is the public at risk?

QUESTION: Who assigns NEW addresses in your jurisdiction?

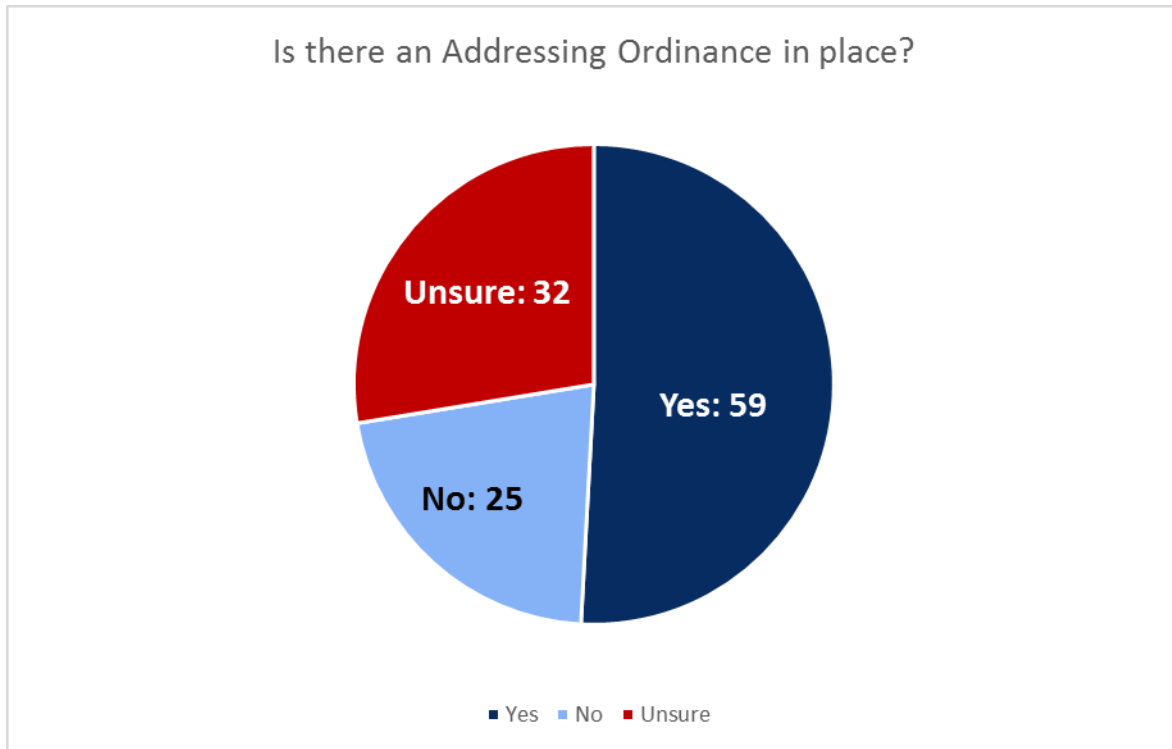


This map reveals a lack of uniformity in address assignment and may cause a delay in timely address data updates to the 9-1-1 system.

QUESTION: Is there an ordinance in place that specifies a standard process for assigning addresses and/or an address schema?

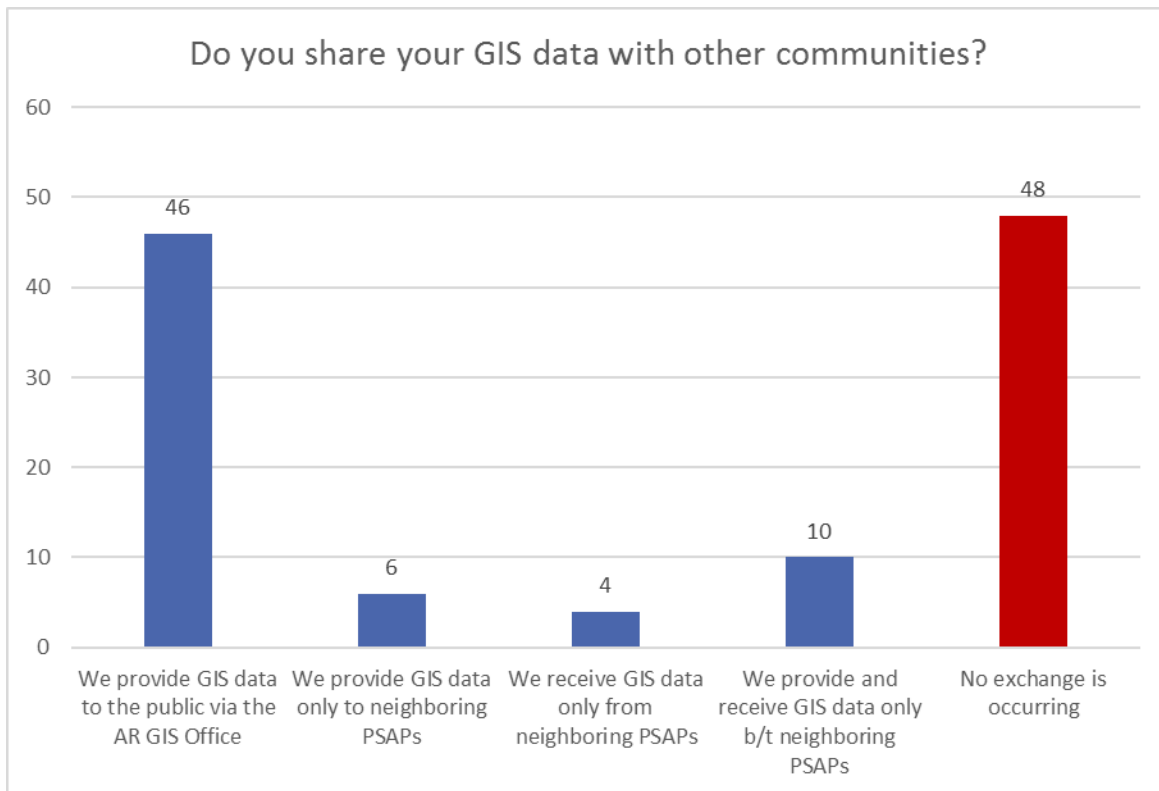


QUESTION: Is there an ordinance in place that specifies a standard process for assigning addresses and/or an address schema?



The map on the previous page and the graph above indicate a lack of standardization on the address assignment process. When there is a lack of coordination within a jurisdiction regarding address assignments, then lives are at risk.

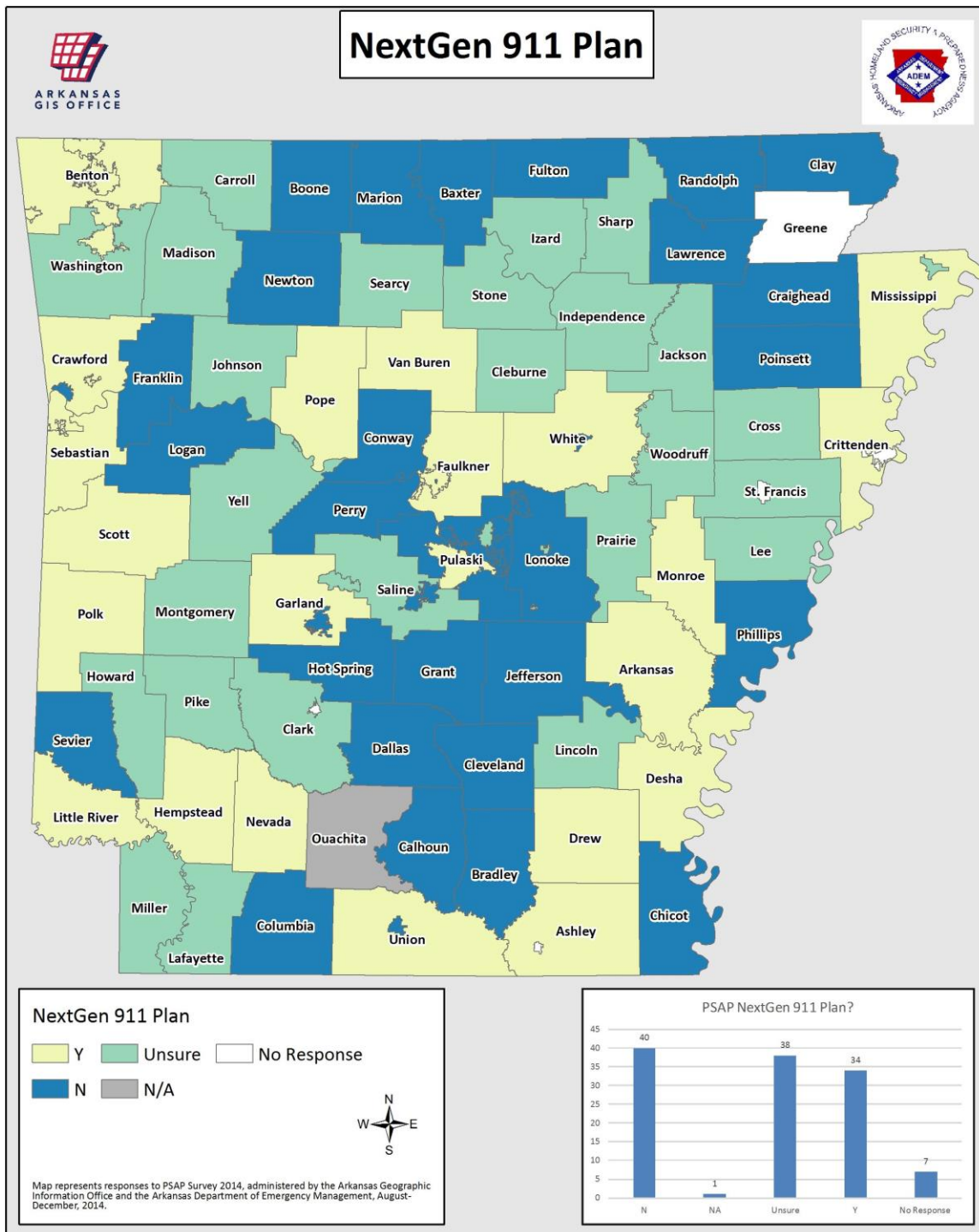
QUESTION: Do you currently share GIS data with other communities (Ex: via the Arkansas GIS Office, etc)?



87% of emergency calls in AR are wireless; many originate in neighboring jurisdictions. Yet, 48 of the state's PSAPs responded stating that they have no GIS data from neighboring jurisdictions. Once the dispatcher identifies a call has originated in a neighboring jurisdiction, they must transfer the call and information verbally or manually. This delays response and may introduce errors.

46 PSAPs responded that they share with the Arkansas GIS Office. One important service that the GIS Office provides is to standardize GIS data statewide regardless of jurisdiction. One statewide file; one common standard; easily shared among jurisdictions.

QUESTION: Does your PSAP have a plan for implementing Next Generation 911?



Only 34 PSAPs indicate a plan for NextGen 911. The remainder of the state has no plan or is unsure of a plan going forward.

Acknowledgements

We would like to express our profound thanks to the personnel involved in this effort to design the survey, coordinate responses, conduct calls, prepare analysis and report the results.

David Maxwell, Director, Arkansas Department of Emergency Management

Tina Owens, Deputy Director, Arkansas Department of Emergency Management

Randie Jones, 9-1-1 Coordinator, Arkansas Department of Emergency Management

Shelby Johnson, State Geographic Information Officer, Arkansas GIS Office

Seth LeMaster, GIS Lead, Arkansas GIS Office

Anthony Davis, Sr. GIS Analyst, Arkansas GIS Office

Lara Wood, GIS Analyst, Arkansas GIS Office

Jonathan Duran, GIS Analyst, Arkansas GIS Office

Gary "Bud" Gray, Chairman, Emergency Telephone Service Board

Renee Hoover, Administrator, Emergency Telephone Service Board