TEXAS 9-1-1 FUNDING ANALYSIS AND PUBLIC OPINION SURVEY

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SUMMARY OF KEY FINDINGS

This report assesses whether the existing 9-1-1 wireless fee adequately funds NG9-1-1 services in Texas and gauges Texans' support for increasing the 9-1-1 wireless fee from $0.50 to $0.75 per month. Three studies were conducted in October 2024 to (*i*) understand the sustainability of 9-1-1 funding in the State of Texas, (*ii*) compare the 9-1-1 funding model in Texas to those of other U.S. states, and (*iii*) gauge public opinion regarding adjustments to the 9-1-1 wireless fee. Key findings include:

- Texas faces a growing deficit in 9-1-1 funding. The $75.9 million deficit in 9-1-1 funding reported in 2022 is projected to reach $112.9 million in 2027, exceeding projected 9-1-1 revenue by 48%.

- Cord cutting saw annual wireline 9-1-1 fee revenue drop 37% from $106.7 million in 2008 to $67 million in 2022.

- Rising 9-1-1 service costs correspond with increasing demand and operational costs for Next-Generation 9-1-1 services between 2014-2022.

- Texas is one of only seven states with a statewide wireless 9-1-1 fee of $0.50 per month or less and, unlike most states, has not adjusted the fee since it was first imposed in 1997.

- Most Texans would support increasing the 9-1-1 wireless fee from $0.50 to $0.75 per month to maintain and upgrade 9-1-1 services. In a representative survey conducted in October 2024, 78% of Texans supported the proposed fee increase, 11% opposed the fee increase, and 11% were unsure.

- Most Texans think upgrading the 9-1-1 system is important to improve response times, prevent 9-1-1 service delays, and allow citizens to use multiple channels to share different types of information with responders.

Described below, these key findings provide policymakers with evidence needed to assess the sustainability of 9-1-1 funding in Texas and inform policy options for adjusting the 9-1-1 wireless fee.

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EXECUTIVE SUMMARY

This report describes the results of three studies conducted in October 2024 to understand the sustainability of 9-1-1 funding in the State of Texas. First, an analysis of Texas 9-1-1 costs and revenues (see Section 2) examined 9-1-1 service costs between 2008-2022 and 9-1-1 wireline, wireless, and prepaid wireless fee and other revenue collected during this period to maintain and upgrade 9-1-1 service across the state. This analysis resulted in three key findings:

- **Key Finding #1**: **Texas faces a growing deficit in 9-1-1 funding.** While 9-1-1 service costs have increased by an average of 1.8% annually since 2014, revenue generated by state 9-1-1 service fees has increased by an average of 0.6% annually. In 2022, the state reported a $75.9 million deficit which, by 2027, is projected to reach $112.9 million, exceeding projected 9-1-1 revenue by 48%.

- **Key Finding #2: Cord cutting trends saw inflation-adjusted Texas 9-1-1 fee revenue drop 10.2% from $268.1 million in 2008 to $243.6 million in 2022.** Between 2012-2022, wireline fee revenue decreased by an average of 2.4% annually. Over the same period, wireless fee revenue, raised from $0.50 fee on Texans' monthly wireless bill, rose an average of 0.4% annually. Annual prepaid wireless fee revenue and other revenue decreased by 4.1% and 0.6%, respectively.

- **Key Finding #3**: **Increasing demand and operational costs for Next-Generation 9-1-1 (NG9-1-1) services are associated with the rise in Texas 9-1-1 service costs between 2014-2022**. Significant predictors of 9-1-1 costs between 2014-2022 include the number/amount of (1) 9-1-1 calls processed at public safety answering points (PSAPs), (2) "other" calls (e.g., text-to-9-1-1) processed by PSAPs, (3) Texas residents, (4) NG9-1-1 expenditures by PSAPs, (5) PSAPs in the state, and (6) Full-time employee (FTE) telecommunicators working at PSAPs.

Second, a study of U.S. state 9-1-1 funding compared the $0.50 monthly wireless 9-1-1 fee collected by the State of Texas since 1997 with the statewide and alternative wireless fees charged by other states to support 9-1-1 services (see Section 3). This analysis resulted in two key findings:

- **Key Finding #4: Texas is one of only seven states with a statewide wireless 9-1-1 fee of $0.50 per month or less and, unlike most states, has not adjusted the fee since it was first imposed in 1997**. Of the 36 states with a statewide wireless 9-1-1 fee, 23 states adjusted the fee by either establishing, or increasing and/or decreasing, the fee at least once between 2014-2023. West Virginia ($3.64/month) charges subscribers with the highest statewide 9-1-1 wireless fee, while Arizona charges the least ($0.20/month).

- **Key finding #5: Texas jurisdictions have lower 9-1-1 wireless fees than most jurisdictions in states that charge only local 9-1-1 wireless fees or both state and local fees.** In the 14 states with alternative 9-1-1 wireless fee models, nearly all municipalities, counties, and

other 9-1-1 jurisdictions charge over $0.50/month in 9-1-1 wireless fees. These fees range from Chicago's nation-highest $5.00/month to $0.75/month in Cheyenne, Wyoming.

Third, a public opinion survey was administered to understand Texans' willingness to support an increase in the 9-1-1 wireless fee from $0.50 to $0.75 per month (see Section 4). The survey was administered online to a representative sample of 834 adult Texas residents in October 2024. This analysis resulted in three key findings:

- **Key Finding #6**: **Most Texans would support a $0.25 increase to their monthly wireless service bill to maintain and upgrade 9-1-1 services**. Among a representative sample of 834 adults living in Texas, 78% of Texans support a fee increase from $0.50 to $0.75 per month, 11% oppose the fee increase, and 11% remain unsure. Support for the fee increase cuts across demographic groups, including party affiliation, experience calling 9-1-1, and awareness of the existing $0.50 per month fee. In contrast, minority opposition to the fee increase is concentrated among the 6% of surveyed Texans who indicated that 9-1-1 upgrades were "not at all important."

- **Key Finding #7**: **Most Texans think upgrading the 9-1-1 system is important**, especially upgrades that improve response times, prevent 9-1-1 service delays, and allow citizens to use multiple channels to share different types of information with responders. When asked about the importance of 9-1-1 upgrades, 63% of surveyed Texans considered them "critically important" or "important," while 31% regarded them as "somewhat important." Only 6% considered upgrades "not at all important." Respondents identified upgrades enabling text-to-911, advanced location sharing for faster response times, and information sharing about pre-existing conditions as most important for themselves and their family and friends.

- **Key Finding #8**: **Most Texans would support a fee increase of up to $0.93 on their existing monthly wireless bill to upgrade NG9-1-1 services**. When asked how much more per month they would be willing to pay for NG9-1-1 service upgrades in addition to the existing $0.50 wireless fee, 50% of surveyed Texans indicated a willingness to pay $0.93 or more per month (suggesting potential support for up to $1.43 in monthly 9-1-1 wireless fees). Conversely, 49% of respondents were unwilling to pay for a fee increase of $0.93 or more. Consequently, these results suggest that a proposed fee increase of up to $0.93, for a total monthly charge of $1.43, would receive majority support in a hypothetical referendum.

1 INTRODUCTION

The statutory mandate to provide Next-Generation 9-1-1 (NG9-1-1) services for all Texans by 2025 stands to increase service provision costs for Texas 9-1-1 emergency communications districts without providing for a similar increase in the statutory 9-1-1 funding mechanisms (Texas Health & Safety Code § 771.059, 2021). The primary source of funding for 9-1-1 districts, the $0.50 monthly wireless fee, has not changed since it was established in 1997 (Texas Health & Safety Code § 771.0711, 1997).

To understand if adjustments to the 9-1-1 wireless fee are needed and identify policy options for wireless fee adjustments that will provide a long-term, sustainable funding mechanism for NG9-1-1 services, policymakers need to know (*i*) the extent to which the existing wireless fee and other 9-1-1 revenue address NG9-1-1 service provision costs, (*ii*) how the wireless service fee in Texas compares to funding mechanisms in other U.S. states, and (*iii*) the extent to which Texans support potential adjustments to the 9-1-1 wireless fee.

The consequences of continuing an unsustainable 9-1-1 funding model are significant for Texas policymakers and Texan households alike. If 9-1-1 districts cannot afford to provide NG9-1-1 services with funds from the existing 9-1-1 wireless fee, they must reduce the quality of services for Texans or rely on ongoing, supplemental funding from the state legislature and other sources. Consequently, identifying adjustments to the 9-1-1 wireless fee that adequately fund NG9-1-1 service provision and receive the majority support of Texans stands to provide a long-term, sustainable funding mechanism for 9-1-1 districts. Importantly, 9-1-1 and public safety costs are not optional. If unfunded they will result in deferred expenses and decreased capabilities for local 9-1-1 districts which, ultimately, can lead to greater risks to lives and property.

To inform policymakers on these issues, this report assesses whether the existing 9-1-1 wireless fee adequately funds NG9-1-1 services in Texas and gauges Texans' support for increasing the 9-1-1 wireless fee from $0.50 to $0.75 per month. To do so, the report describes the findings of three studies conducted in October 2024 to (*i*) understand the sustainability of 9-1-1 funding in the State of Texas (Section 2), (*ii*) compare the 9-1-1 funding model in Texas to those of other U.S. states (Section 3), and (*iii*) gauge public opinion regarding adjustments to the 9-1-1 wireless fee (Section 4). Described below, these studies' findings provide policymakers with evidence needed to assess the sustainability of 9-1-1 funding in Texas and inform policy options for adjusting the 9-1-1 wireless fee.

2 TEXAS 9-1-1 COST AND REVENUE ANALYSIS

Summary

This section describes the methods and results of an analysis of Texas 9-1-1 costs and revenue for the years 2008-2022. Key findings include:

- **Key Finding #1**: **Texas faces a growing deficit in 9-1-1 funding.** While 9-1-1 service costs have increased by an average of 1.8% annually since 2014, revenue generated by state 9-1-1 service fees has increased by an average of 0.6% annually. In 2022, the state reported a $75.9 million deficit which, by 2027, is projected to reach $112.9 million, exceeding projected 9-1-1 revenue by 48%.

- **Key Finding #2: Cord cutting trends saw inflation-adjusted Texas 9-1-1 fee revenue drop 10.2% from $268.1 million in 2008 to $243.6 million in 2022.** Between 2012-2022, wireline fee revenue decreased by an average of 2.4% annually. Over the same period, wireless fee revenue, raised from $0.50 fee on Texans' monthly wireless bill, rose an average of 0.4% annually. Annual prepaid wireless fee revenue and other revenue decreased by 4.1% and 0.6%, respectively.

- **Key Finding #3**: **Increasing demand and operational costs for Next-Generation 9-1-1 services are associated with the rise in Texas 9-1-1 service costs between 2014-2022**. Significant predictors of 9-1-1 costs between 2014-2022 include the number/amount of (i) 9-1-1 calls processed by PSAPs, (ii) "other" calls (e.g., text-to-9-1-1) processed by PSAPs, (iii) Texas residents, (iv) NG9-1-1 expenditures by PSAPs, (v) PSAPs in the state, and (6) FTE telecommunicators working at PSAPs.

Costs and Revenue for 9-1-1 Service in Texas

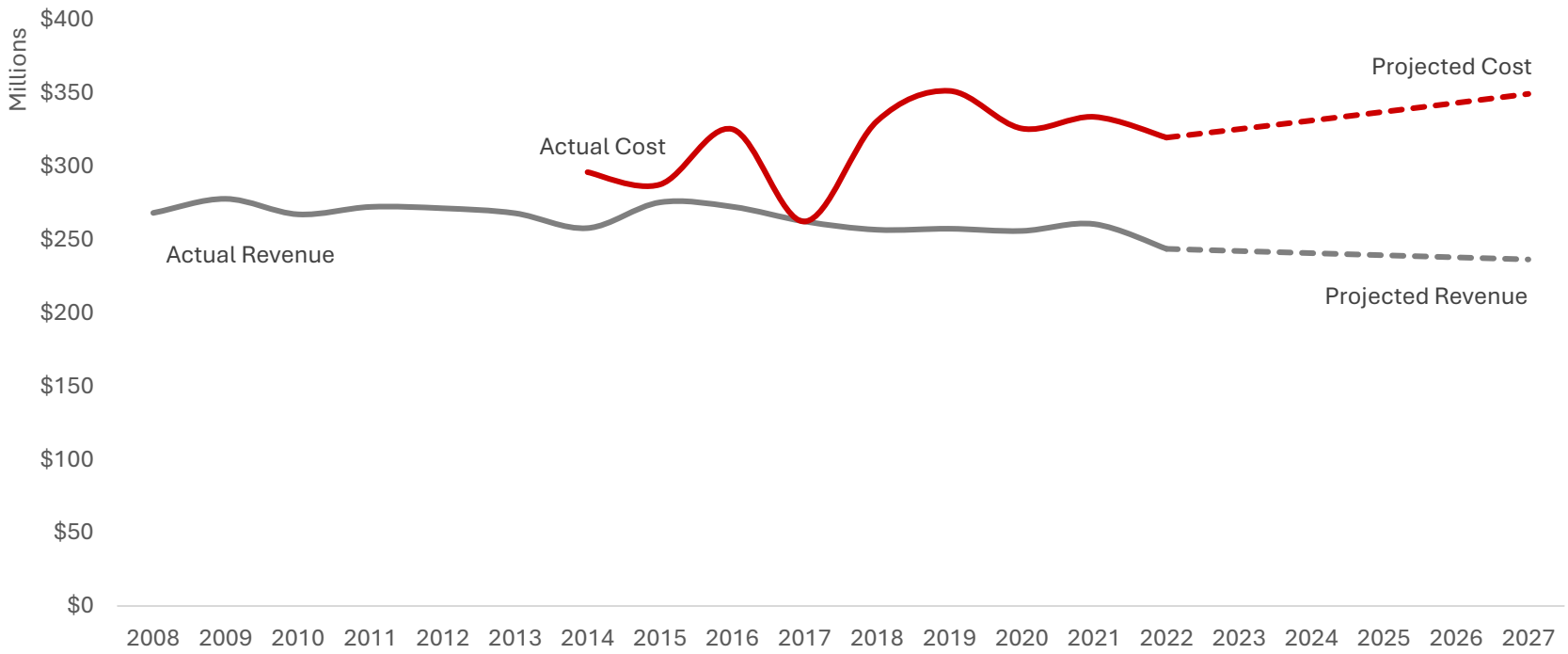

Figure 1: Actual and projected 9-1-1 costs and revenue

Figure 1 shows the total cost to provide 9-1-1 service in Texas, as reported to the FCC for the years 2014-2022, and 9-1-1 revenue collected by the state for the years 2008-2022 (see Appendix A). These are the only years for which Texas shared publicly available cost and revenue data with the FCC. Actual 9-1-1 costs during this period show a deficit in 9-1-1 funding for every year except 2017. This deficit increased from $38.1 million in 2014 to $75.9 million in 2022. Calculating the annual percentage change in costs and revenue, and then projecting costs and revenue based on a 1.8% average increase in costs over the period from 2014-2022 for costs, and a 0.6% decrease in revenue between 2008-2022, Figure 1 suggests that the deficit will grow to $112.9 million by 2027 if the current funding model remains unchanged. Such a deficit would exceed projected fee revenue by 48%.

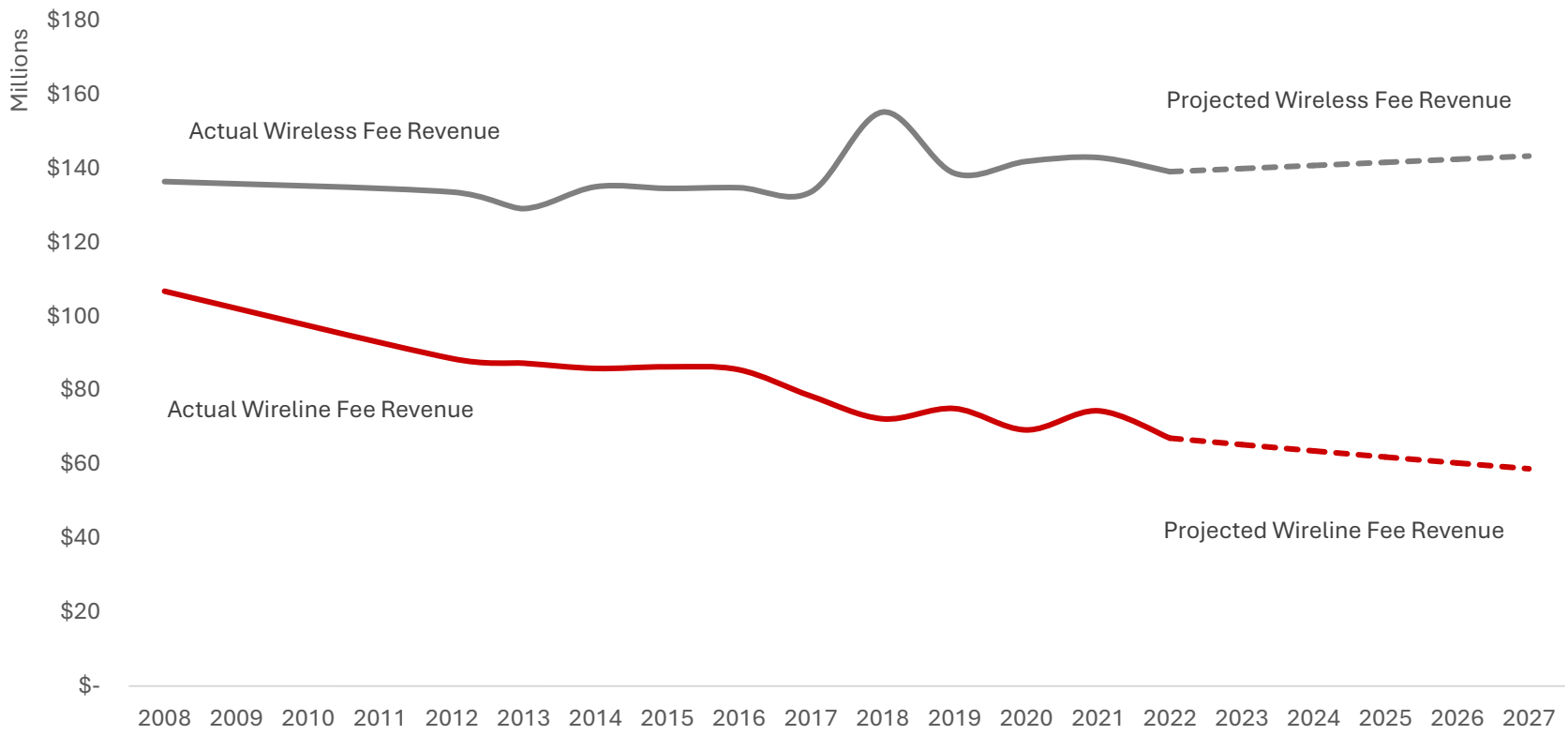

Figure 2: Actual and projected 9-1-1 wireless and wireline revenue

Figure 2 shows actual wireline and wireless fee revenue collected by the state of Texas to support 9-1-1 services between 2008-2022 (see Appendix A). During this period, wireline fee revenue steadily dropped 37.2% from $106.7 million in 2008 to $67 million in 2022. Over this period, wireline fees decreased by an average of 2.6% annually. Wireless fees have not made up the difference, remaining relatively flat at $139.1 million in 2022 compared to $136.2 million in 2008. During this period, wireless fees increased by an average of 0.6% annually. Projected at these rates, wireline fee revenue totals $58.7 million in 2027, a 45% decline since 2008. In comparison, projected wireless fee revenue totals $143.3 million in 2027, a 5% increase since 2008.

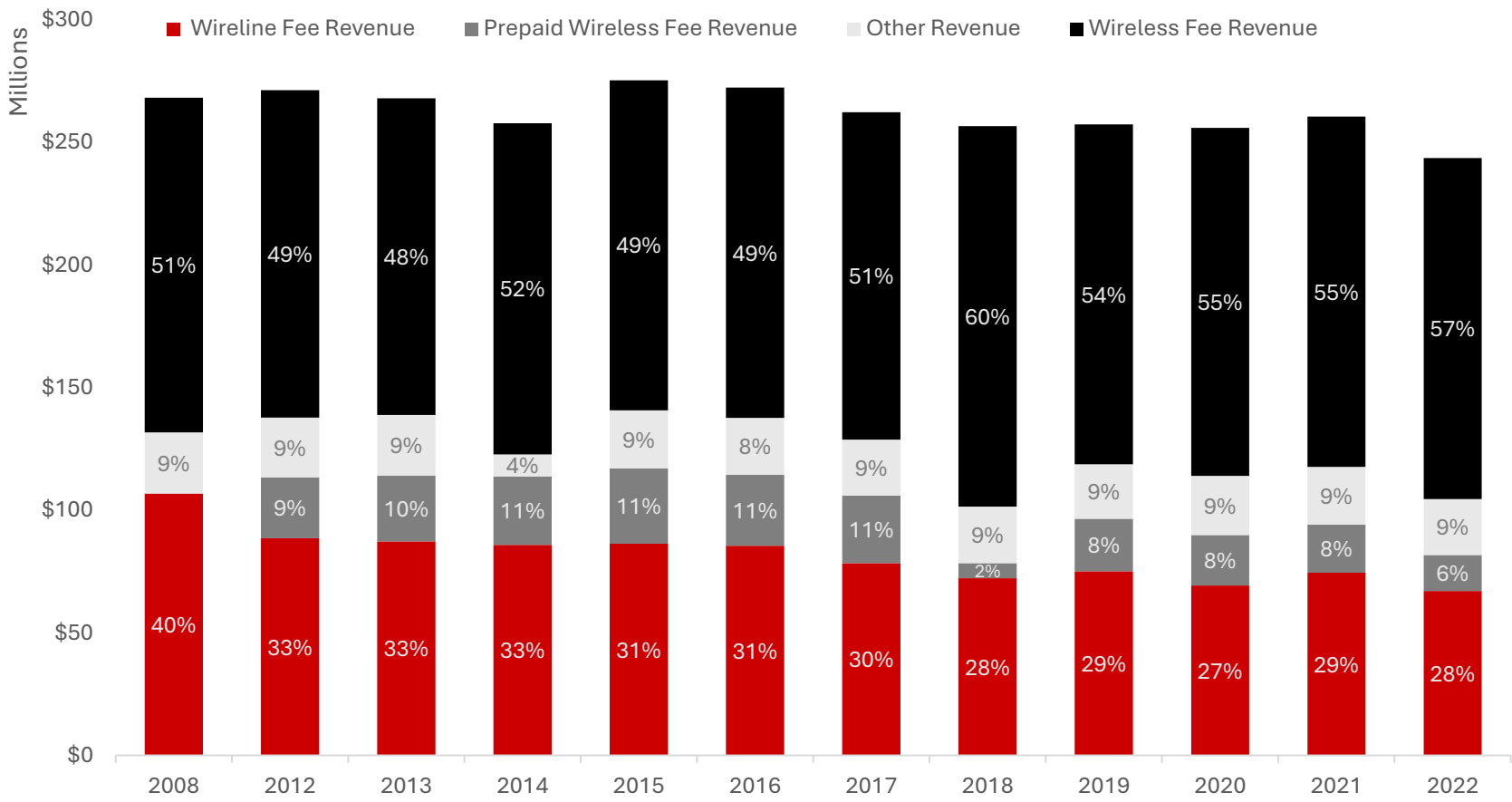

Figure 3: Texas wireline, wireless, and prepaid wireless fee and other revenue collected from 2008-2022

Figure 3 shows the inflation-adjusted 9-1-1 revenue collected by Texas between 2008-2022 (see Appendix A). Data for 2009-2011 is not publicly available (see Appendix A). Over this period, total revenue generally decreased, and wireline fee revenue declined from 40% of total revenue in 2008 to 28% of total revenue in 2022. Wireless fee revenue rose slowly from 51% in 2008 to 57% of total revenue in 2022. During this period, prepaid wireless fee revenue and other revenue accounted for an average of 7.9% and 8.5% of total revenue, respectively. As classified in Texas's FCC filings, "other revenue" includes funds that Texas 9-1-1 jurisdictions obtain from sources such as local general revenue, grants, and federal funds (see Appendix A).

Predictors of Texas 9-1-1 Costs

Using publicly available cost and revenue data for 2014-2022 (see Appendix A), analysis of the predictors of Texas 9-1-1 costs produced the following results:

- **Significant Factors**: The analysis identified that the most significant factors predicting Total 9-1-1 costs were Total Calls, Other Calls, Population, Total NG911 Expenditure, Total PSAPs, and FTE Telecommunicators (Figure 4).
- **Model Performance**: The model demonstrated stable performance across different validation techniques, suggesting that these factors are robust predictors of Total 9-1-1 costs within the limited dataset (see Appendix B).
- **Insights**: The analysis suggests the importance of operational (Total Calls, Other Calls, FTE Telecommunicator) and infrastructure factors (Total PSAPs) in driving costs, along with the emerging importance of the new expenditures required to support NG9-1-1 capabilities.

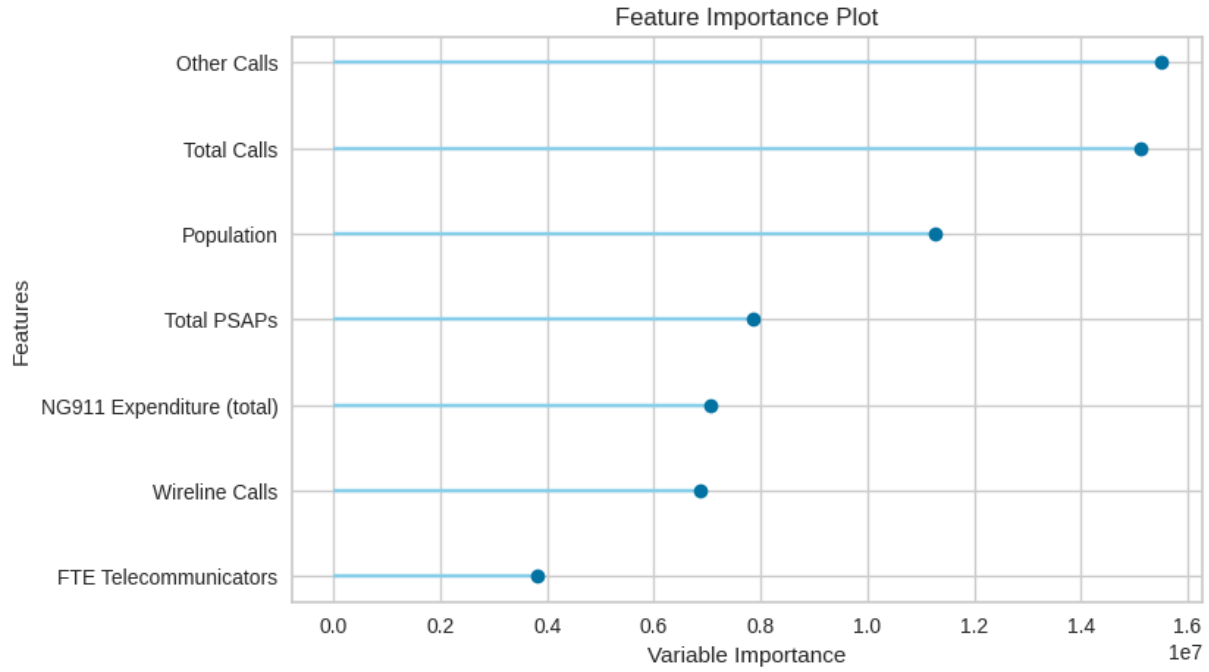

Figure 4: Significant predictors of Texas 9-1-1 costs

Conclusion

Analysis of annual Texas 9-1-1 costs and revenue between 2008-2022 shows that Texas faces a growing deficit in 9-1-1 funding. Analysis of cost and revenue trends shows a steady decline in wireline fee revenue and a reliance on relatively stagnant wireless fee revenue and other revenue sources to fund 9-1-1 services. During this period, total costs rose faster than total revenue, due to cost drivers that include increasing voice and non-voice calls, population growth, general inflation, and NG9-1-1 expenditures.

3 COMPARISON OF STATE 9-1-1 WIRELESS FEES

Summary

This section compares Texas's $0.50 per month 9-1-1 wireless fee with the wireless fees of other U.S. states. This study resulted in two key findings:

- **Key finding #4: Texas is one of only seven states with a statewide wireless fee of $0.50 per month or less and, unlike most states, has not adjusted the fee since it was first imposed in 1997**. Of the 36 states with a statewide 9-1-1 wireless fee, 23 states adjusted the fee by either establishing, or increasing and/or decreasing, the fee at least once between 2014-2023. West Virginia ($3.64/month) charges wireless subscribers with the highest statewide 9-1-1 wireless fee, while Arizona charges the least ($0.20/month).

- **Key finding #5: Texas jurisdictions have lower 9-1-1 wireless fees than most jurisdictions in states that charge only local 9-1-1 wireless fees or both state and local fees.** In the 14 states with alternative 9-1-1 wireless fee models, nearly all municipalities, counties, and other 9-1-1 jurisdictions charge over $0.50 per month in 9-1-1 wireless fees. These fees range from Chicago's nation-highest $5.00/month to $0.75/month in Cheyenne, Wyoming.

State Wireless Fee Model

As of 2023, 36 states impose a statewide 9-1-1 wireless fee, and no local wireless fees, to fund 9-1-1 services. However, these fees vary significantly from state to state (Figure 5). West Virginia ($3.64/month) charges wireless customers with the highest statewide 9-1-1 wireless fee, while Arizona charges the least ($0.20/month). Only six states impose wireless fees lower than Texas ($0.50/month).

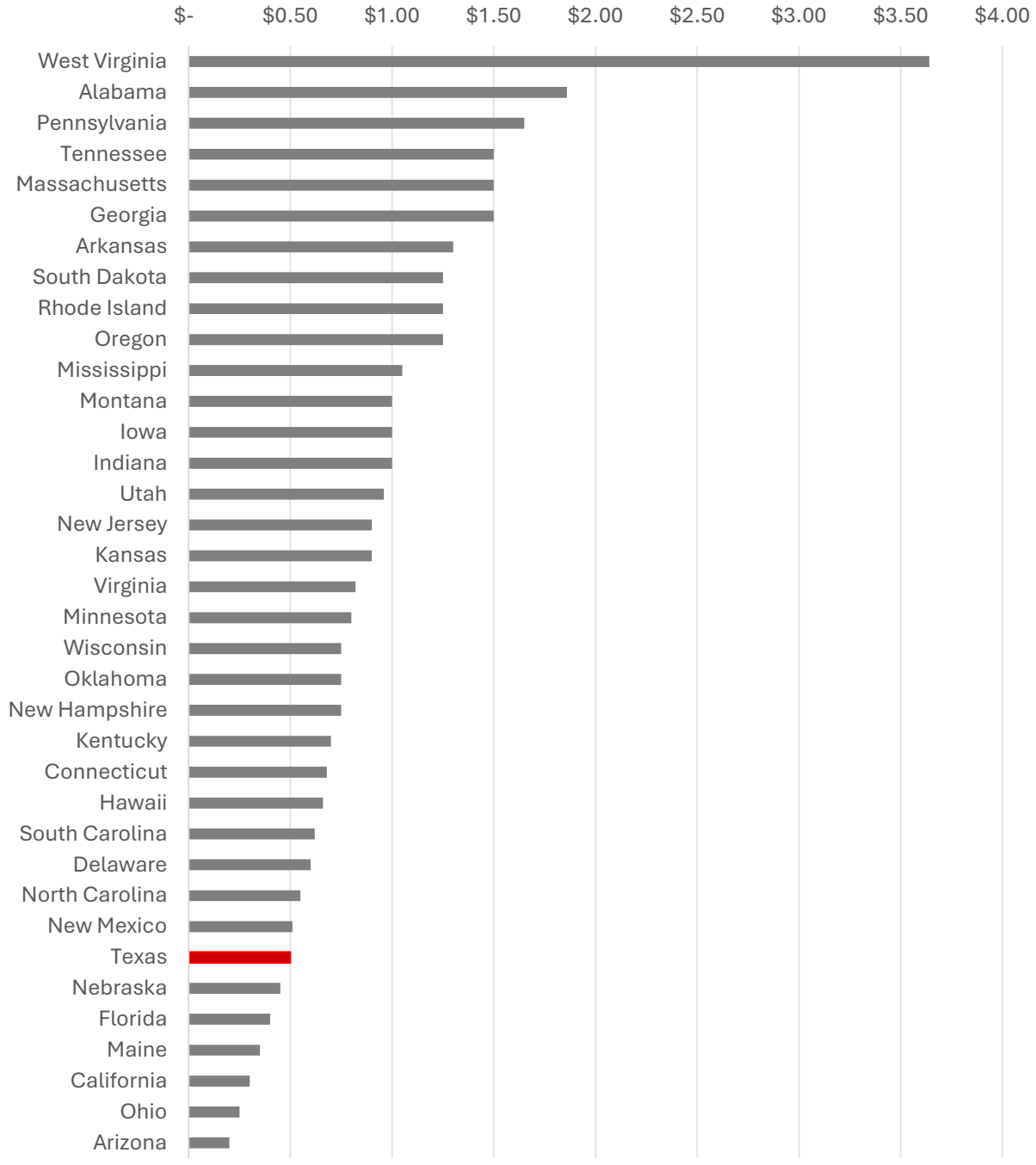

Figure 5: Monthly 9-1-1 wireless fee charged to wireless subscribers by state

Many states adjusted their 9-1-1 wireless fee over the last decade. Of the 36 states with only a state 9-1-1 wireless fee, 23 states adjusted the fee by either establishing, or increasing and/or decreasing the fee at least once between 2014-2023. Figure 6 shows the net increase or decrease in 9-1-1 wireless fees among the 20 states that made at least one fee adjustment. California, Georgia, and Oklahoma are not shown as they established a statewide wireless fee in 2022. For comparison, Figure 6 also shows Texas, which has not adjusted its $0.50/month wireless fee.

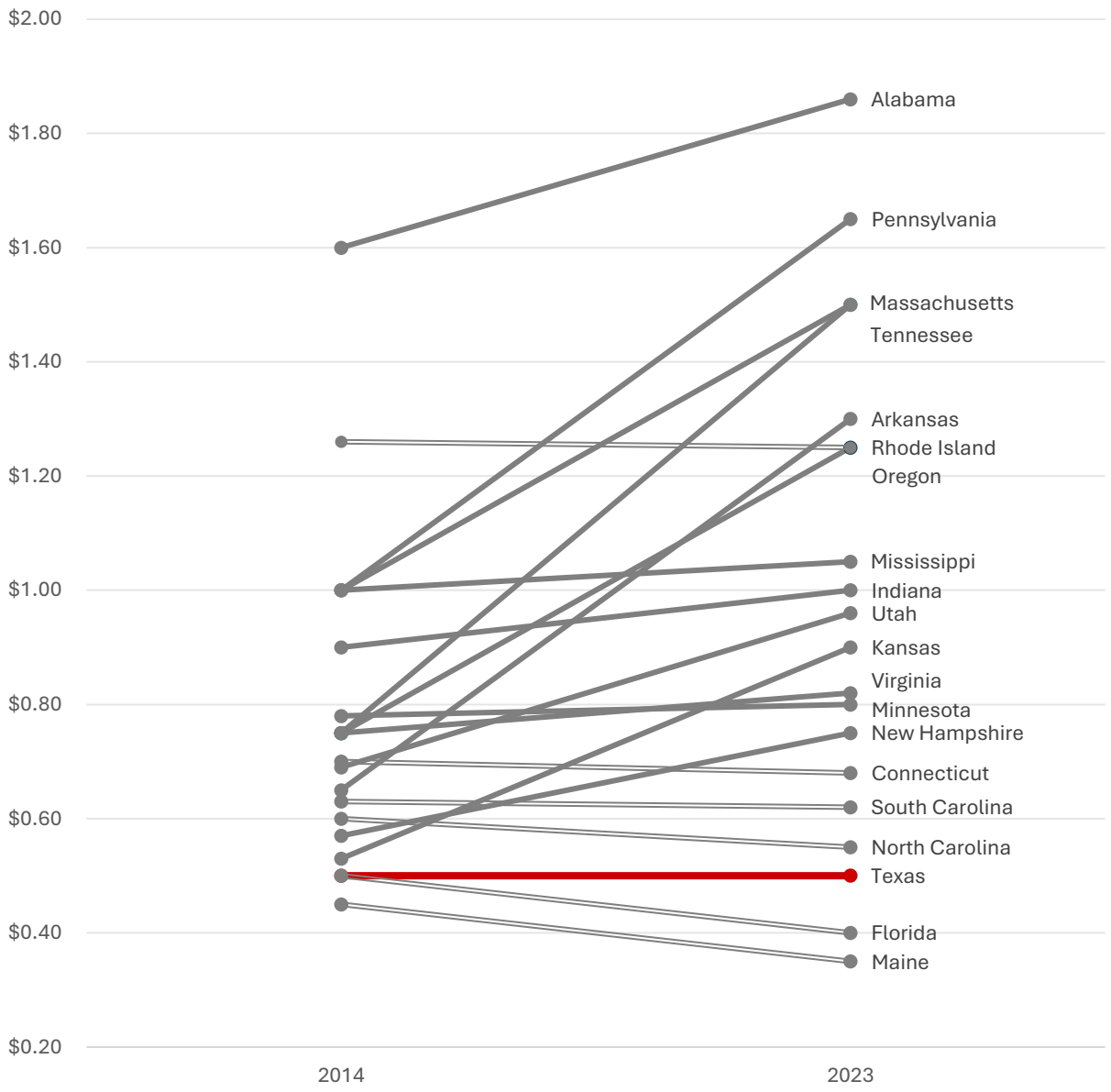

Figure 6: Net increase (solid line) or decrease (double line) to state 9-1-1 wireless fees between 2014-2023

Among the 36 states with only a state wireless fee, 14 raised the fee between 2014-2023. On average, these states raised the statewide wireless fee by $0.36/month. Massachusetts made the largest increase, raising the wireless fee from $0.75/month in 2014 to $1.50/month in 2023, followed by Arkansas ($0.65 to $1.30 per month) and Pennsylvania ($1.00 t0 $1.65 per month). Indiana, Virginia, Mississippi, and Minnesota made the lowest increases, with net increases to the 9-1-1 wireless fee of $0.10/month or less. Notably, all 14 of these states began 2014 with wireless fees higher than that of Texas and made additional fee increases over the next ten years.

In contrast, six states decreased the 9-1-1 wireless fee between 2014-2023 by an average of $0.05/month. These states include Rhode Island, South Carolina, Connecticut, North Carolina, Florida, and Maine. Despite the fee decreases, in 2023, only two of these states—Florida and Maine—charged a lower wireless fee than Texas. Between 2014-2023, Florida lowered its 9-1-1 wireless fee from $0.50/month to $0.40/month, while Maine decreased its fee from $0.45 to $0.35 per month.

However, 16 states, including Texas, made no adjustments to their statewide 9-1-1 wireless fees between 2014-2023. As of 2023, 11 of these states charged more than Texas's $0.50/month wireless fee, while only four states—Nebraska, California, Ohio, and Arizona—charged less than Texas.

Alternative Wireless Fee Models

As of 2023, 14 states employ alternative 9-1-1 wireless fee models (Figure 7). These alternative fee models include:

- **Varying local fees** (8 states): Alaska, Idaho, Illinois, Louisiana, Maryland, Nevada, North Dakota, and Wyoming allow local entities (e.g., counties) to set their own 9-1-1 wireless fee. In Illinois, for example, the 9-1-1 wireless fee in 2023 was $1.50/month in all counties except Chicago, which charges the nation's highest 9-1-1 wireless fee of $5.00/month. These states do not have a state 9-1-1 wireless fee.

- **State fee + Fixed local fee** (1 state): Washington charges a $0.25/month state fee and $0.70/month local fee for wireless customers in each of its 39 counties, for a total fee of $0.95/month.

- **State fee + Varying local fees** (3 states): Colorado, Michigan, and New York set fixed state fees in addition to local fees that vary by county/municipality. In Colorado, the state 9-1-1 wireless fee was $0.09 per month in 2023, which was charged in addition to monthly local fees that included $1.20 in Denver and $1.35 in Colorado Springs. In Michigan, the state 9-1-1 wireless fee was $0.25 per month with monthly local fees ranging from $0.42 in Detroit to $1.80 in Lancing. In New York, the state fee was $1.20 per month and local 9-1-1 wireless fees in most counties and New York City were $0.30 per month. However, Albany charged a higher local fee at $1.25 per month (Mackey & Hoffer, 2022; 2023).

- **Universal service fund** (1 state): Vermont established the Vermont Universal Service Fund (VUSF) in 1994 to fund 9-1-1 and other telecommunications services in the state. In 2023, the VUSF was funded by a 2.40% surcharge on retail telecommunications services provided to a Vermont address (State of Vermont, Department of Public Service, 2024).

- **No fee** (1 state): Missouri does not charge a state or local 9-1-1 wireless fee. Counties fund 9-1-1 services through general wireline, sales tax, or device tax funding mechanisms (Missouri 911 Service Board, 2024).

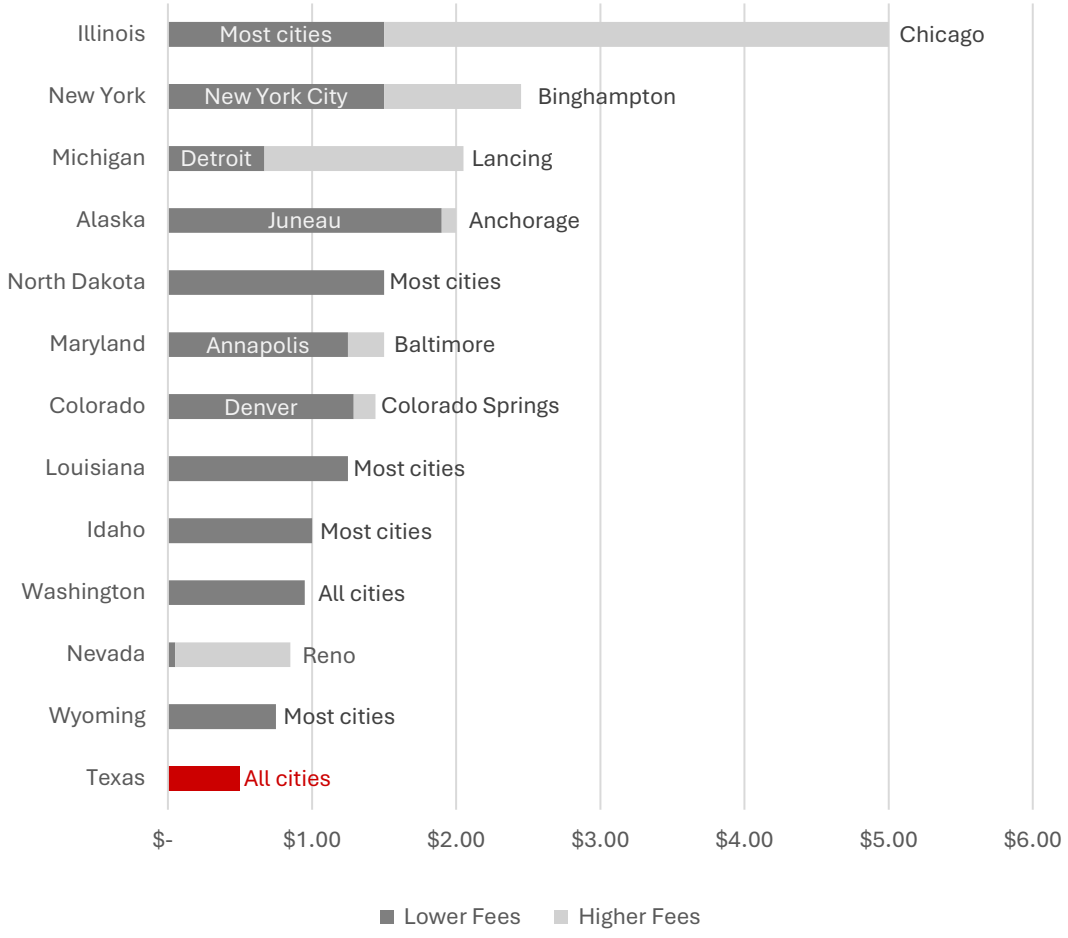

Figure 7: Texas's 9-1-1 wireless fees compared to states with alternative wireless fee models

4 PUBLIC OPINION SURVEY

Summary

To understand public opinion related to a proposed increase to the 9-1-1 wireless fee, a representative survey was administered to 834 adult Texas residents in October 2024. Results from the survey study contribute three key findings to the report:

- **Key Finding #6**: **Most Texans would support a $0.25 increase to their monthly wireless bill to maintain and upgrade 9-1-1 services**. Based on a representative survey conducted in October 2024, 78% of Texans support a fee increase from $0.50 to $0.75 per month, 11% oppose the fee increase, and 11% remain unsure. Support for the fee increase cuts across demographic groups, including party affiliation, experience calling 9-1-1, and awareness of the existing $0.50 fee. In contrast, minority opposition to the fee increase is concentrated among the 6% of surveyed Texans who indicated that 9-1-1 upgrades were "not at all important."

- **Key Finding #7**: **Most Texans think upgrading the 9-1-1 system is important**, especially upgrades that improve response times, prevent 9-1-1 service delays, and allow citizens to use multiple channels to share different types of information with responders. When asked about the importance of 9-1-1 upgrades, 63% of surveyed Texans considered them "critically important" or "important," while 31% regarded them as "somewhat important." Only 6% considered upgrades "not at all important." Respondents identified upgrades enabling text-to-911, advanced location sharing for faster response times, and information sharing about pre-existing conditions as most important for themselves and their family and friends.

- **Key Finding #8**: **Most Texans would support a fee increase of up to $0.93 on their existing monthly wireless bill to upgrade NG9-1-1 services**. When asked how much more per month they would be willing to pay for NG9-1-1 service upgrades in addition to the existing $0.50 wireless fee, 50% of surveyed Texans indicated a willingness to pay $0.93 or more per month (suggesting potential support for up to $1.43 in monthly 9-1-1 wireless fees). Conversely, 49% of respondents were unwilling to pay for a fee increase of $0.93 or more. Consequently, these results suggest that a proposed fee of up to $0.93 would receive majority support in a hypothetical referendum.

Results

This section presents a series of bar charts that convey the proportion of respondents and their answers to a series of key questions. These bar charts represent the overall findings from the public opinion survey. Selected crosstabs and statistical significance testing results are also presented below.

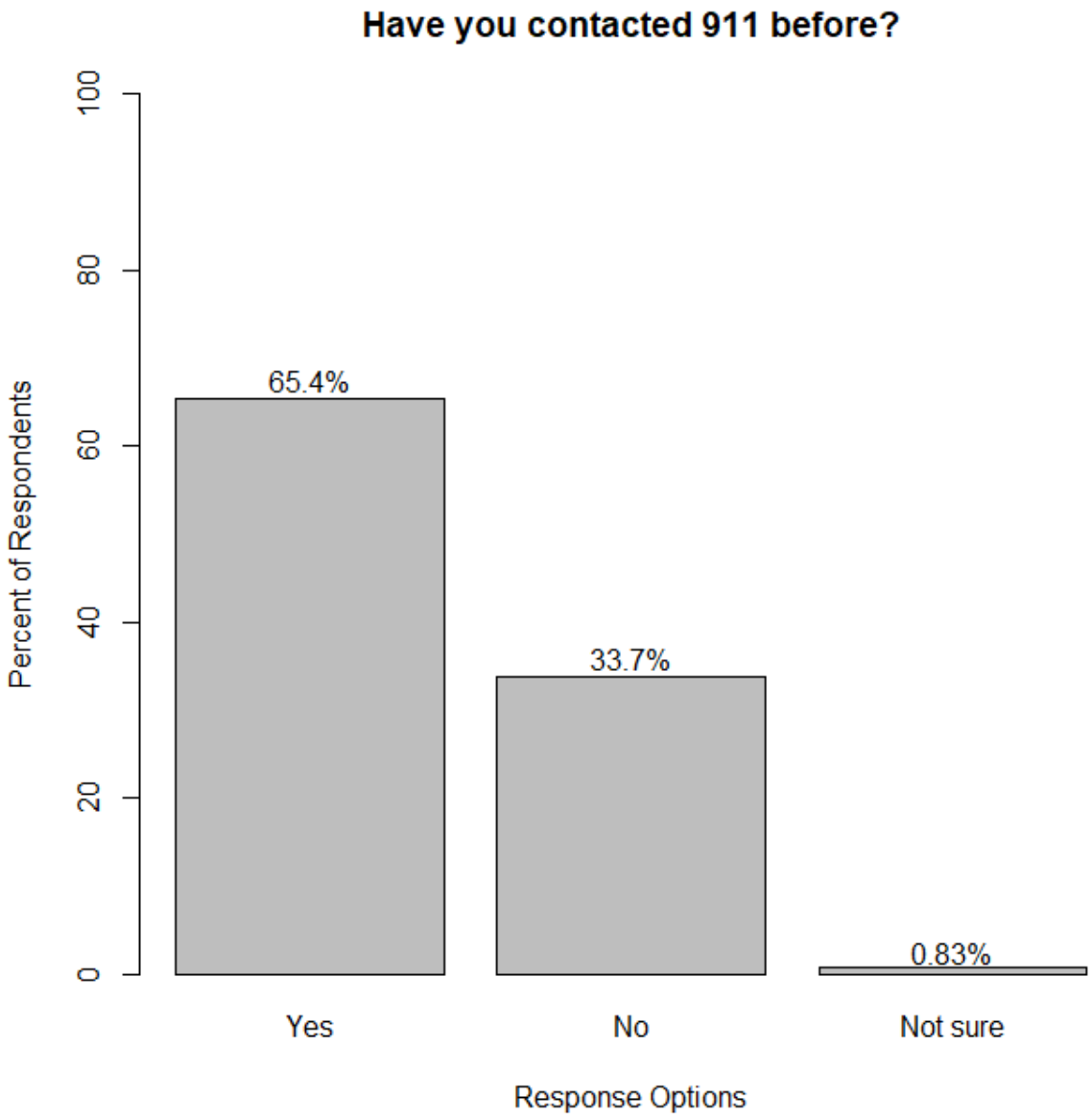

Figure 8: Experience with 911 in the State of Texas

Figure 8 conveys that most respondents have contacted 9-1-1 before. Only 34% of the sample responded that they have not contacted 9-1-1 before. Seven respondents were not sure about their experience contacting 9-1-1.

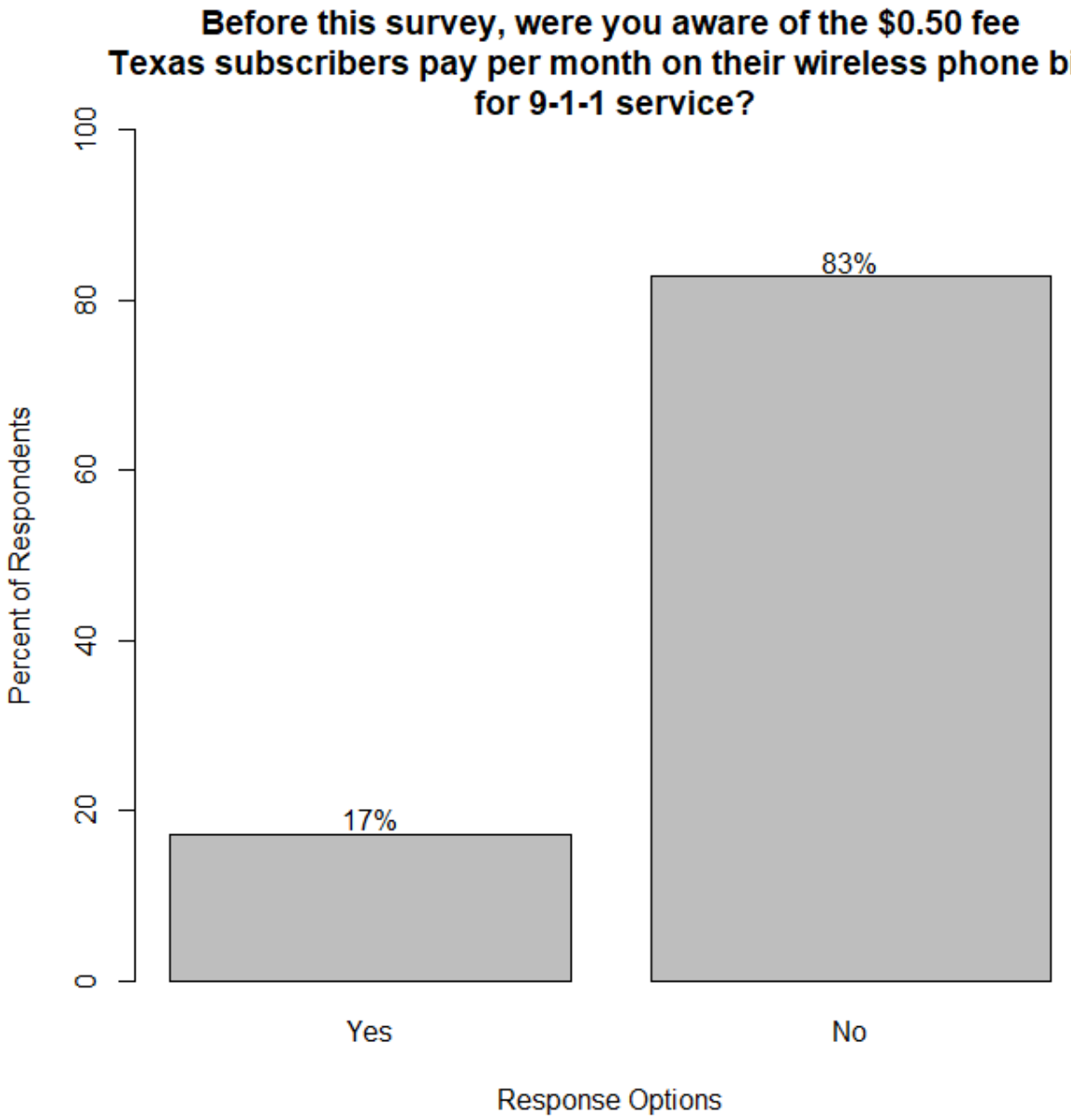

Figure 9: Awareness of wireless phone bill fee

Figure 9 demonstrates that the vast majority of surveyed Texans were not aware of the $0.50 monthly wireless fee for 9-1-1 services prior to their participation in the survey.

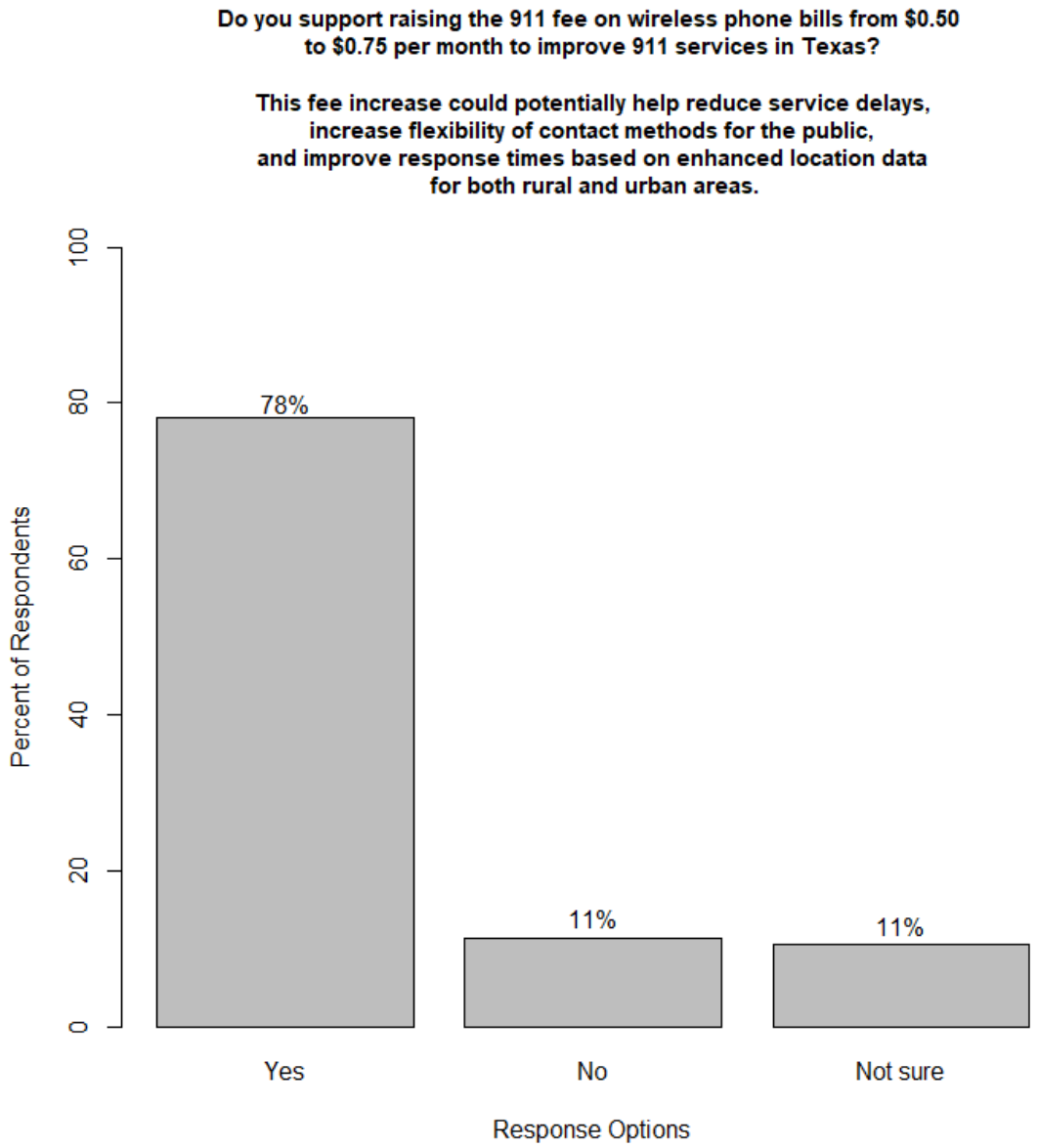

Figure 10: Support for 9-1-1 wireless fee increase

Figure 10 suggests that approximately 78% of the sample of Texas residents support a monthly wireless fee increase from $0.50 to $0.75. Importantly, firm opposition is limited to only 11% of the sample with the remaining 11% of the sample unsure about the increase.

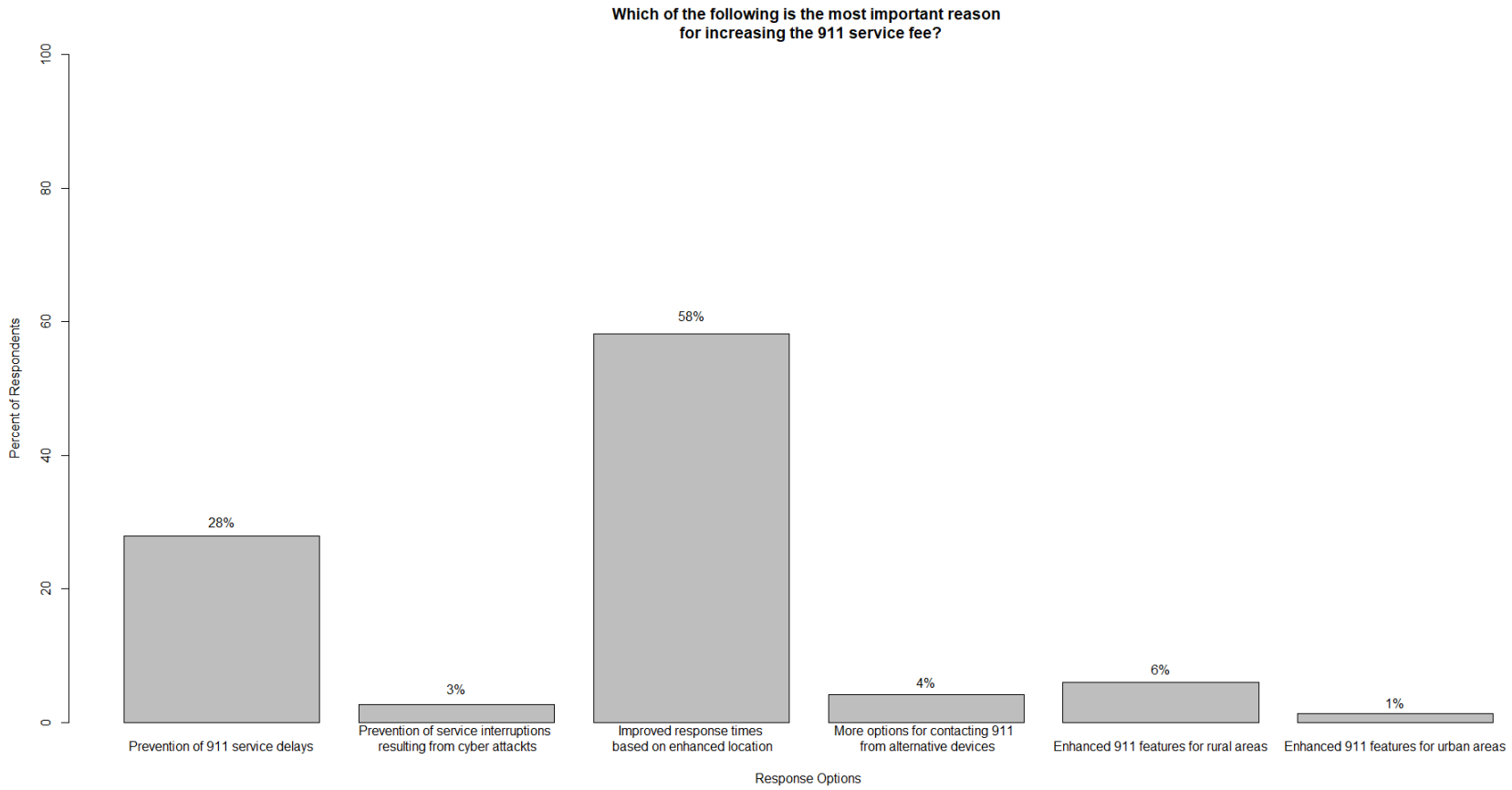

Figure 11: Reasons for increasing the monthly wireless fee

Figure 11 suggests that respondents were most likely to support the increased wireless fee if it supports NG9-1-1 upgrades that improve response times using enhanced location data. In general, speed seems to be important to respondents as the next most popular response option is the ability of the fee to prevent service delays. Protection from cyberattacks, modality of contact, and features for urban areas were the least popular among the surveyed Texans.

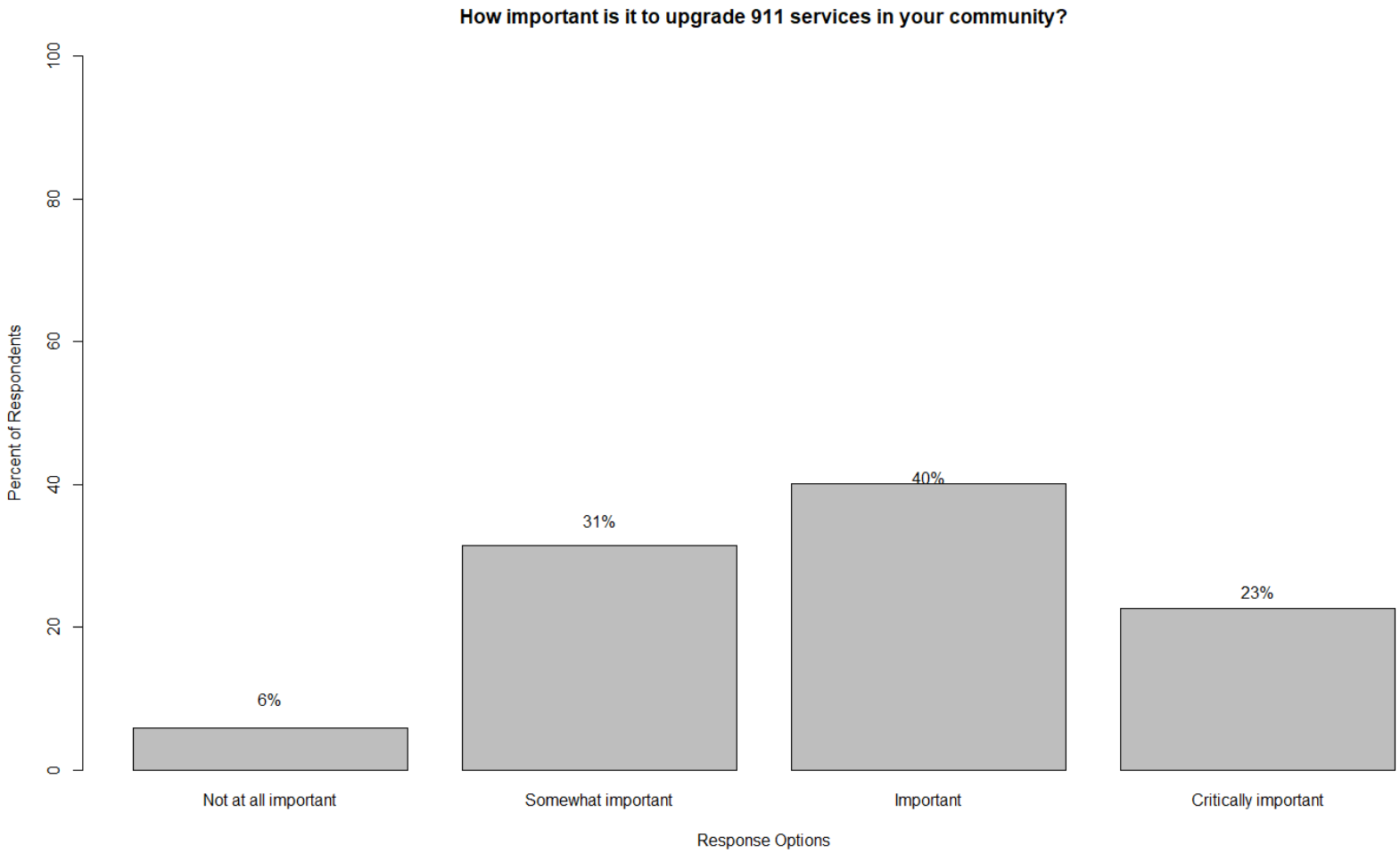

Figure 12: Importance of upgrades

Figure 12 suggests that most respondents recognized the importance of 9-1-1 upgrades in their community with only 6% seeing no importance at all. Specifically, 63% of the sample rated improvements to 9-1-1 services as either "important" or "critically important."

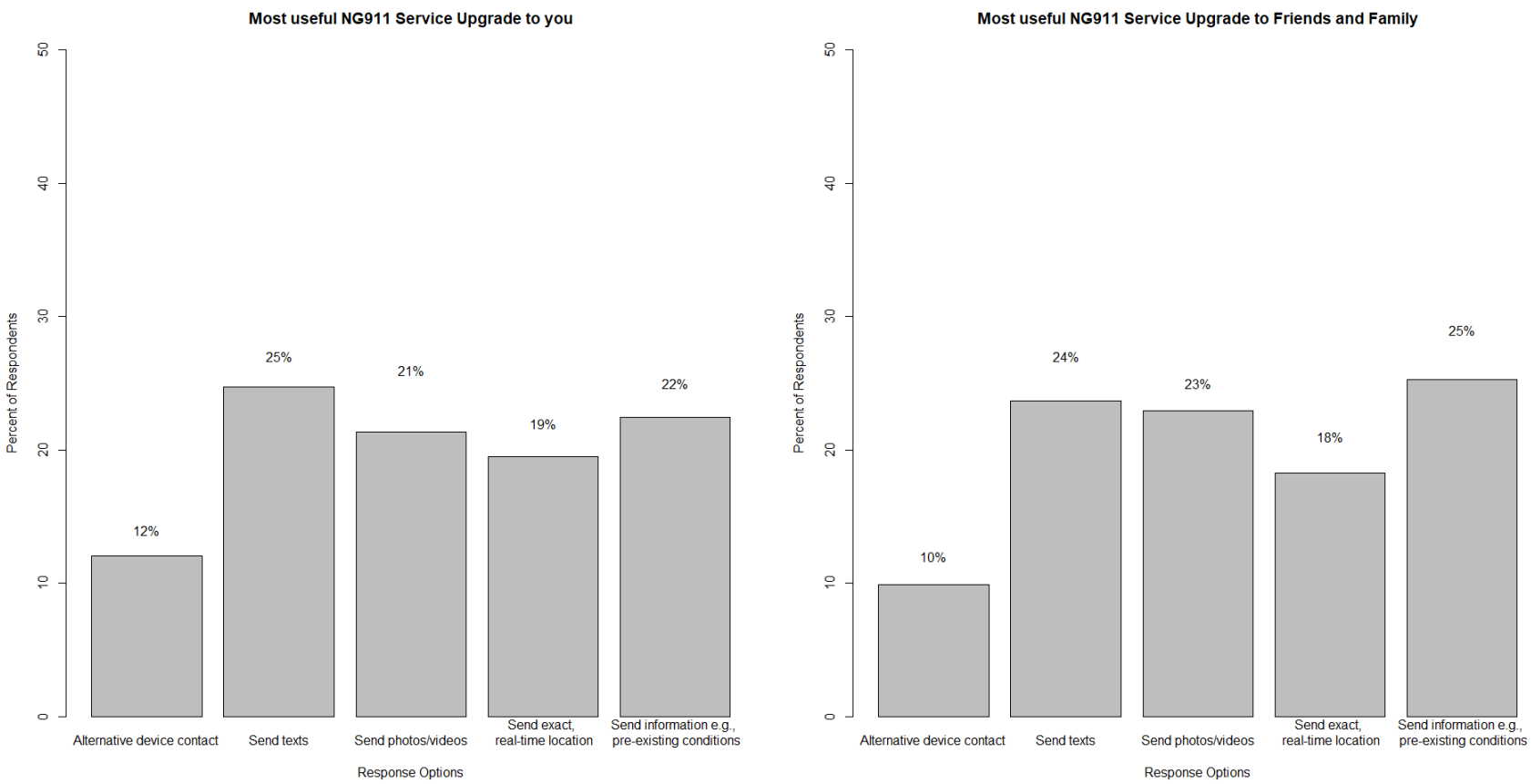

Figure 13: Most useful NG9-1-1 upgrades to yourself and family and friends

Figure 13 compares NG9-1-1 features respondents believe to be most useful to them versus their family and friends. Respondents view the need to send information concerning pre-existing conditions and other health information as the most important feature for others but not for themselves. Instead, respondents reported the ability to send text messages to 9-1-1 as the most important for themselves. Additionally, respondents were slightly more likely to rate exact, real-time information data as the most important feature for themselves than for their family and friends.

Having presented the summary level results from the survey of Texas residents, crosstab analyses are presented to examine support for and opposition to the proposed 9-1-1 wireless fee increase among subgroups of Texans.

Table 1: Response to fee support question by party ID

	Yes	No	Not sure
Democrats	81%	9%	10%
Republicans	74%	16%	10%

Table 1 suggests similarly strong support for a fee increase across the political spectrum, with both Democratic and Republican respondents expressing strong support. Support for the fee increase exceeds 70% among both Democrats and Republicans.

Table 2: Response to fee support question by fee awareness

	Yes	No	Not sure
Aware	77%	14%	9%
Unaware	78%	11%	11%

Table 2 suggests that support, and opposition, for the fee increase is not dependent on existing fee awareness. Regardless of whether Texans were aware of the existing $0.50 wireless fee before taking the survey, they overwhelmingly supported the monthly fee increase from $0.50 to $0.75.

Table 3: Response to fee support question by 911 contact

	Yes	No	Not sure
Yes	78%	11%	11%
No/not sure	76%	13%	11%

As with the previous result, support for the $0.25 fee increase does not seem to be related to previous 9-1-1 contact (Table 3). Those who have contacted 9-1-1 before are similarly likely to say they support the fee increase as respondents who have never called 9-1-1.

Figure 14 suggests that respondents who believe upgrades to the 9-1-1 system to be “not at all important” were highly likely to not support the $0.25 wireless fee increase. Respondents with all other levels of perceived importance of 9-1-1 upgrades were all likely to support the $0.25 fee increase relative to no support or unsure support. This is a statistically significant relationship based on a chi-squared test of independence, indicating that support for the fee increase is statistically dependent on respondents’ perceived importance of the upgrades associated with that fee increase. Importantly, as demonstrated in Figure 5, only 6% of our respondents rated the upgrades as “not at all important.”

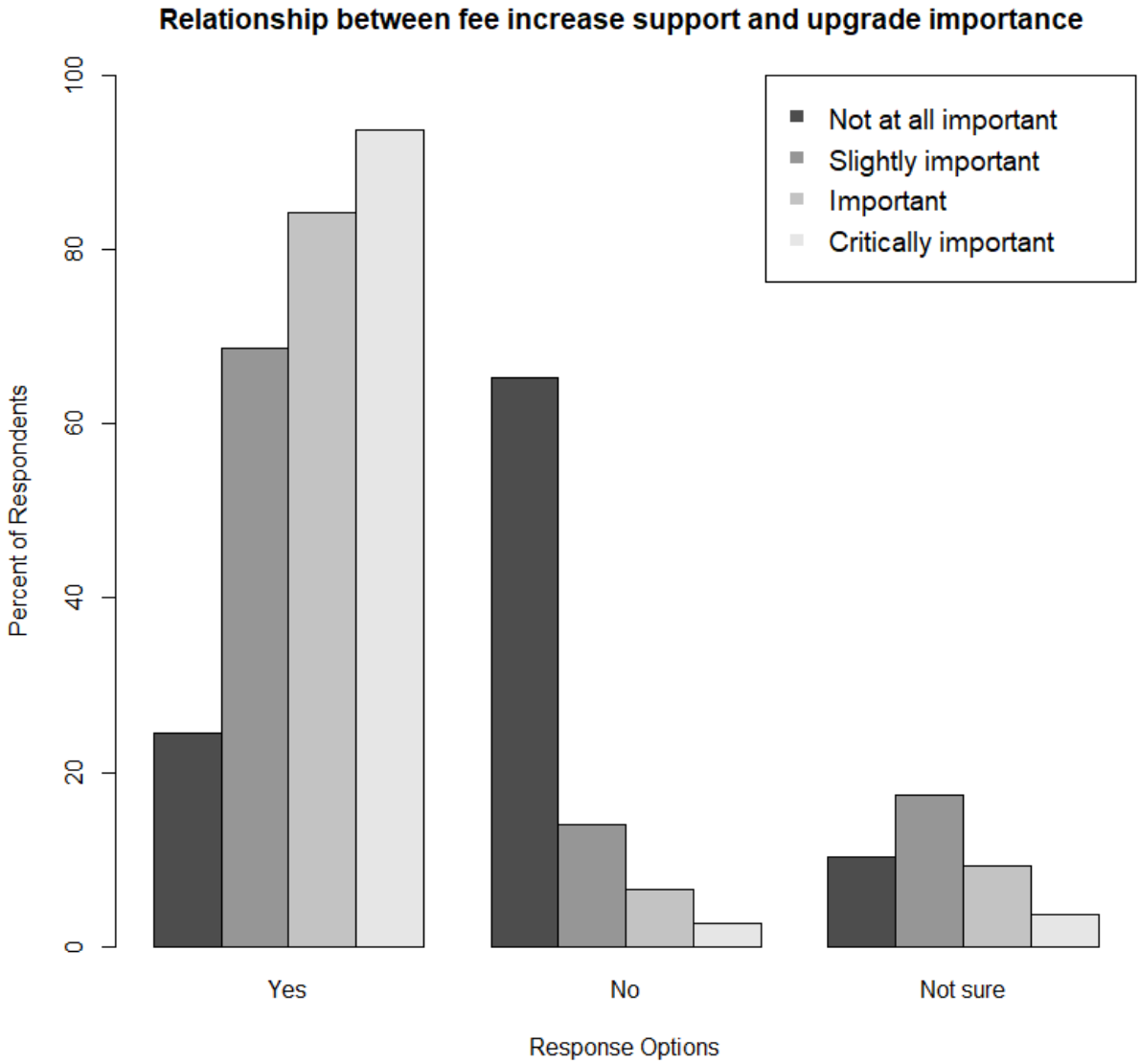

Figure 14: Support for $0.25 fee increases with perceived upgrade importance

Finally, the survey included a contingent valuation experiment based on Texans' responses to the following question:

> "The state of Texas requires 9-1-1 services in the state to transition to **Next Generation 9-1-1 (NG911)** systems by the end of 2025. NG911 services include migrating analog systems to modern internet protocol (IP) based technology which will allow multi-media and enhanced location capabilities that can lead to reduced response times and more efficient call processing. NG911 will also strengthen the resilience of the emergency response system by adding more redundancy, diversity, and cybersecurity measures.

> However, this transition will require significant investments in infrastructure and personnel training. To better facilitate this transition, the state of Texas is considering ***increasing the current wireless fee*** on all monthly cell phone bills in the state. Currently, Texas wireless subscribers pay 50 cents per month for 911 services.
>
> To guarantee the provision of NG911 services and the associated improvements to the Texas 911 system, would you be willing to pay **[random amount between $0.01 and $1.86]** more per month on your wireless bill?"

First, 65% of respondents said yes to this question for the values that they were shown, with a total of 35% saying either no (20% of the total) or not sure (15% of the total). This data, where no and not sure responses are treated the same—that is, as a no or 0—can then be analyzed to estimate mean and median willingness to pay values. In this case, the willingness to pay values are **in addition** to the existing $0.50 fee. Using the most conservative model assumptions, where respondents can also have negative willingness to pay, we find a mean of $1.87 and a median of $0.93 additional fee. Given the median has a natural interpretation, the point at which 50% of the population would support the fee increase, we believe this estimate of $0.93 to be the most important from this analysis. Essentially, the data suggest that for the sample of Texas residents, an increase in the monthly wireless service fee of $0.93 or less would receive majority support in a hypothetical referendum. This does not conclude this is the ideal or optimal fee, but these data do further suggest that a potential $0.25/month increase to the existing 9-1-1 wireless fee, for a total of $0.75/month, would likely find majority public support.

Conclusion

According to our data, residents of Texas overwhelmingly support a $0.25 increase to their monthly wireless service bill to support 9-1-1 services and NG9-1-1 upgrades. Furthermore, the experimental analysis suggests there is room to increase this fee by up to $0.93/month, to a total of $1.43/month, and still receive a majority of support from the Texas public. Additionally, the data suggest that upgrades to the 9-1-1 system are important to the public and should be focused on improvements to the ability of 9-1-1 services to collect accurate location data and improve response times. Modality options were also important to Texans, with respondents rating the ability to send text-to-91-1-messages as an important service upgrade to them and their family and friends. Overall, the public opinion survey suggests that there exists a robust base of public support for a $0.25/month wireless fee increase to support and upgrade 9-1-1 service in Texas.

5 DISCUSSION

Each day thousands of Texans access life-saving assistance from the 9-1-1 system. However, increasing costs associated with the statutory mandate to provide NG9-1-1 services for all Texans by 2025, combined with stagnant 9-1-1 revenue based on a $0.50 per month wireless fee unchanged since 1997, make the state's existing 9-1-1 funding model unsustainable. This report presents the findings of three studies conducted in October 2024 to assess the sustainability of 9-1-1 funding in Texas and inform policy options for wireless fee adjustments that can provide a long-term, sustainable funding mechanism for 9-1-1 services that Texans rely on in emergencies.

First, an analysis of Texas's 9-1-1 costs and revenues from 2008-2022 reveals a ballooning deficit in 9-1-1 funding. The rising costs associated with increased call volume, population growth, and NG9-1-1 upgrades have outpaced revenue growth. The latter reflects the steady decline in traditional landline ownership among Texan households, resulting in an average decrease of 2.4% annually in wireline fee revenue between 2012-2022. Meanwhile, revenue from the 9-1-1 wireless fee and prepaid wireless fee have not made up the difference. Between 2012-2022, wireless fee revenue, raised from $0.50 fee on Texans' monthly wireless bill, rose an average of only 0.4% annually, while annual prepaid wireless fee revenue decreased by 4.1%. Consequently, Texas 9-1-1 jurisdictions often rely on other sources of funding including local general revenue, grants, and federal assistance. As a result, Texas now faces a growing deficit in 9-1-1 funding with the $75.9 million deficit in 9-1-1 funding reported in 2022 projected to balloon to $112.9 million in 2027, exceeding projected 9-1-1 revenue by 48%.

Second, a comparison of Texas's 9-1-1 funding model with those of other states highlights the state's existing wireless fee as one of the lowest in the nation. Most states have adopted higher fees or alternative funding mechanisms to upgrade and ensure the sustainability of their 9-1-1 systems. Texas is one of only seven states with a statewide wireless 9-1-1 fee of $0.50 per month or less, and unlike most states, has not adjusted this fee since 1997. Of the 36 states with a statewide wireless 9-1-1 fee, 23 adjusted their fee at least once between 2014 and 2023, whereas Texas's fee remains unchanged since 1997. Texas jurisdictions also have lower 9-1-1 wireless fees compared to most jurisdictions in states with only local 9-1-1 wireless fees or both state and local fees. In the 14 states with alternative fee models, nearly all municipalities and counties charge over $0.50 per month, ranging from Chicago's nation-leading $5.00 wireless fee to Cheyenne's $0.75 monthly fee.

Third, a public opinion survey conducted in October 2024 indicates strong public support for an increase to the monthly 9-1-1 wireless fee. Among a representative sample of 834 adults living in Texas, 78% of Texans support a fee increase from $0.50 to $0.75 per month, 11% oppose the fee increase, and 11% remain unsure. Support for the fee increase cuts across demographic groups, including party affiliation, experience calling 9-1-1, and awareness of the existing $0.50 per month fee. Furthermore, most Texans believe that upgrading the 9-1-1 system is essential and are willing to contribute financially to support these improvements. Specifically, Texans prioritize upgrades that

improve response times, prevent 9-1-1 service delays, and allow citizens to use multiple channels to share different types of information with responders.

Together, these studies' findings provide policymakers with evidence that Texas's current 9-1-1 funding model is unsustainable. Recognizing this situation is critical for Texas policymakers and Texan households alike. If 9-1-1 districts cannot afford to provide NG9-1-1 services with funds from the existing $0.50 per month 9-1-1 wireless fee, they must reduce the quality of services for Texans or rely on ongoing, supplemental funding from the state legislature and other sources. Importantly, 9-1-1 and public safety costs are not optional. If unfunded they will result in deferred expenses and decreased capabilities for local 9-1-1 districts which, ultimately, can lead to greater risks to lives and property. However, this report provides evidence for a solution supported by the majority of Texans—increasing the monthly 9-1-1 wireless fee from $0.50 to $0.75—which stands to provide a long-term, sustainable funding mechanism for Texas 9-1-1 districts and the citizens they serve.

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APPENDIX A: DATA COLLECTION

Year	Wireline Fee Revenue	%Total Revenue	Wireless Fee Revenue	%Total Revenue	Prepaid Wireless Fee Revenue	%Total Revenue	Other Revenue	%Total Revenue	Total Revenue
2008	106,745,334.95	39.8%	136,387,477.54	50.9%	-	0.0%	24,954,456.42	9.3%	268,087,268.91
2012	88,551,467.66	32.6%	133,561,887.98	49.2%	24,761,994.17	9.1%	24,358,456.23	9.0%	271,233,806.04
2013	87,292,260.35	32.6%	129,077,722.83	48.2%	26,767,019.98	10.0%	24,717,481.48	9.2%	267,854,484.64
2014	85,877,275.84	33.3%	134,982,342.04	52.4%	27,814,202.62	10.8%	9,049,044.51	3.5%	257,722,865.01
2015	86,309,545.11	31.4%	134,541,629.46	48.9%	30,726,732.74	11.2%	23,694,058.38	8.6%	275,271,965.69
2016	85,510,080.00	31.4%	134,724,584.69	49.5%	28,939,688.16	10.6%	23,127,237.97	8.5%	272,301,590.82
2017	78,409,171.81	29.9%	133,565,873.51	50.9%	27,559,882.02	10.5%	22,739,279.17	8.7%	262,274,206.50
2018	72,247,721.10	28.2%	155,173,215.23	60.5%	6,122,907.33	2.4%	23,049,514.42	9.0%	256,593,358.08
2019	75,028,022.92	29.2%	138,624,404.00	53.9%	21,465,483.07	8.3%	22,164,353.61	8.6%	257,282,263.59
2020	69,243,426.34	27.1%	141,839,080.01	55.5%	20,605,147.07	8.1%	24,105,848.66	9.4%	255,793,502.09
2021	74,414,314.70	28.6%	142,876,408.82	54.9%	19,680,549.24	7.6%	23,485,144.16	9.0%	260,456,416.91
2022	67,017,627.00	27.5%	139,062,670.00	57.1%	14,675,293.00	6.0%	22,803,442.00	9.4%	243,559,032.00
Average	-	31.0%	-	52.6%	-	7.9%	-	8.5%	-

Table 4: Texas 9-1-1 wireline, wireless, and prepaid wireless fee and other revenue from 2008-2022

Table 4 shows data on 9-1-1 revenue (inflation adjusted) for the years 2008-2022 filed by the Commission on State Emergency Communications (CSEC) on behalf of the state of Texas (FCC, 2009, 2010, 2011, 2012, 2013, 2014; Tyler, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023). The CESC did not file publicly available wireline, wireless, and prepaid wireless fee and other revenue data for 2009-2011 with the FCC. As of October 2024, these are the only data filed by the state of Texas and made publicly available by the FCC. Table 4 shows the annual wireline, wireless, and prepaid wireless fee and other revenue data extracted from these reports and adjusted for inflation using the average annual consumer price index reported by the U.S. Bureau of Labor and Statistics. For each revenue source, the percentage of total revenue was calculated.

Other Revenue

Outside of wireline, wireless, and prepaid wireless fee revenue, Texas jurisdictions fund 9-1-1 services using other sources of local and state revenue. While FCC filings by the CESC do not provide a detailed breakdown for “other revenue” used to fund 9-1-1 between 2008-2022, these reports indicate three primary sources for these funds:

1. **Local General Revenue:** Jurisdictions can use general revenue to cover 9-1-1 costs not fully funded by dedicated wireline, wireless, and prepaid wireless fees (Tyler, 2017, 2019, 2020, 2012). The reports highlight cases in which jurisdictions had to rely on general funds:

    a. Dallas reported that 86% of 9-1-1 service costs ($32 million) were funded by city general revenues (Tyler, 2021).

    b. Carrollton reported that 63% of 9-1-1 service costs ($1,836,966) were paid for with city general revenue (Tyler, 2021).

    c. Highland Park reported that 91% of 9-1-1 service costs are funded by city funds (Tyler, 2020).

2. **Grants:** The CSEC distributes grants from legislatively appropriated 9-1-1 and equalization surcharge funds to RPCs for 9-1-1 service. CSEC also uses equalization surcharge revenue to fund emergency medical dispatch and trauma care systems through grants.

3. **Federal Funds:** CSEC distributes federal 9-1-1 grant funds to Texas 9-1-1 entities. In 2021, for example, the Texas legislature allocated $150 million from the federal American Rescue Plan Act to the NG9-1-1 Fund, administered by CSEC, for reimbursing eligible NG9-1-1 costs of Texas 9-1-1 entities.

Overall, the CESC's FCC filings emphasize that Texas municipalities, particularly municipal ECDs, bear a significant financial burden for funding 9-1-1 services. Although specific figures for each revenue source are not consistently reported across all years, the filings highlight the substantial contributions of local general revenue, grant programs, and federal funding in supporting Texas' 9-1-1 system.

Year	Projected Cost	Total Cost	Annual Cost Change	Total Revenue	Annual Revenue Change	Gross Income (Revenue-Cost)
2008	Actual	-	-	268,087,268.91	-	-
2009	Actual	-	-	277,663,771.90	3.6%	-
2010	Actual	-	-	267,114,372.89	-3.8%	-
2011	Actual	-	-	272,180,635.60	1.9%	-
2012	Actual	-	-	271,233,806.04	-0.3%	-
2013	Actual	-	-	267,854,484.64	-1.2%	-
2014	Actual	295,871,797.26	-	257,722,865.01	-3.8%	-38,148,932.26
2015	Actual	287,438,865.19	-2.9%	275,271,965.69	6.8%	-12,166,899.50
2016	Actual	325,188,945.21	13.1%	272,301,590.82	-1.1%	-52,887,354.39
2017	Actual	262,214,510.23	-19.4%	262,274,206.50	-3.7%	59,696.27
2018	Actual	330,683,170.70	26.1%	256,593,358.08	-2.2%	-74,089,812.62
2019	Actual	351,294,962.80	6.2%	257,282,263.59	0.3%	-94,012,699.21
2020	Actual	325,648,910.97	-7.3%	255,793,502.09	-0.6%	-69,855,408.88
2021	Actual	333,577,585.76	2.4%	260,456,416.91	1.8%	-73,121,168.84
2022	Actual	319,457,001.00	-4.2%	243,559,032.00	-6.5%	-75,897,969.00
2023	Projected	325,207,227.02	1.8%	242,097,677.81	-0.6%	-83,109,549.21
2024	Projected	331,060,957.10	1.8%	240,645,091.74	-0.6%	-90,415,865.36
2025	Projected	337,020,054.33	1.8%	239,201,221.19	-0.6%	-97,818,833.14
2026	Projected	343,086,415.31	1.8%	237,766,013.86	-0.6%	-105,320,401.45
2027	Projected	349,261,970.79	1.8%	236,339,417.78	-0.6%	-112,922,553.01

Table 5: Texas 9-1-1 costs and revenue 2008-2022 (actual), 2023-2027 (projected)

Table 5 shows data on actual total 9-1-1 costs and revenue (inflation adjusted) for the years 2008-2022 filed by the CSEC on behalf of the state of Texas (FCC, 2009, 2010, 2011, 2012, 2013, 2014; Tyler, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023). CSEC filings from 2008-2013 do not report total 9-1-1 costs. As of October 2024, these are the only data filed by the state of Texas and made publicly available by the FCC. Table 5 also shows the annual percentage change in cost and revenue, and the actual gross income (revenue minus cost) for each year between 2013-2022 and the projected gross income for years 2023-2027.

APPENDIX B: METHODOLOGY

Section 2: Analysis of Texas 9-1-1 Costs and Revenue

The section addresses the following research questions:

- What are the annual costs to provide 9-1-1 services?
- How much annual revenue is generated from 9-1-1 service fees?
- What are the predictors of Texas 9-1-1 service costs?

To answer these research questions, this report relies on public data the Texas Commission on State Emergency Communications (CSEC) provided to the Federal Communications Commission (FCC) that describes 9-1-1 costs and revenue for the years 2008-2022. The FCC's Public Safety and Homeland Security Bureau requested the data to fulfill the FCC's obligations under 47 U.S.C. § 615a-1(f)(2) of the New and Emerging Technologies Improvement (NET 911) Act of 2008, as amended by the Consolidated Appropriations Act of 2021. (FCC, 2024). This legislation requires the FCC to submit an annual report to Congress on the collection and distribution of 9-1-1 fees and other related charges by U.S. states and taxing jurisdictions, including information regarding NG911 and cybersecurity expenditures (FCC, 2024).

This report analyzes data from the 15 FCC filings submitted by the state of Texas to describe 9-1-1 costs and revenue between 2008-2022 (see Appendix A), the years for which data was filed by states and made available to the public by the FCC (FCC, 2009). Filings for Texas were prepared by CESC which gathered and submitted data on behalf of the state's 9-1-1 entities, which include the 20 regional planning commissions, 28 emergency communication districts, and 29 municipal 9-1-1 entities. These include annual data describing the following:

- **9-1-1 Costs**
  - Total 9-1-1 cost
  - Total NG9-1-1 cost
  - Total cybersecurity cost
- **9-1-1 Revenue**
  - State Fee Revenue
    - Wireline Fee Revenue
    - Wireless Fee Revenue
    - Prepaid Fee Revenue
    - Other Revenue
- **Revenue Sources**
  - State fees %
  - Local fee %
  - Gen Fund - State
  - Gen fund - County
  - State Grants
  - Federal Grants

- **System Characteristics**
  - Total PSAPs
    - Primary PSAPs
    - Secondary PSAPs
  - PSAPs accepting text-to-9-1-1
  - PSAPs connected to ESInets
  - FTE telecommunicators
  - PTE telecommunicators
  - Population
- **Service Volume**
  - Total 9-1-1 calls
    - Wireline calls
    - Wireless calls
    - VoIP calls
    - Other calls

Descriptive analysis of 9-1-1 funding examines 9-1-1 cost and revenue data submitted by the State of Texas to the FCC for the years 2008-2022 (FCC, 2023). This analysis involves comparing annual cost and revenue data to identify deficits and surpluses in Texas 9-1-1 funding, as well as comparing changes in revenue from the revenue sources reported to the FCC: wireline fee, wireless fee, prepaid wireless fee, and other revenue. Lastly, based on average annual changes in 9-1-1 costs and revenues, 5-year projections are made to understand likely funding scenarios between 2022, the last year of publicly available FCC data, and 2027.

The cost predictor analysis examines the relationship between Total 9-1-1 costs and twelve (12) influencing factors, including Total Calls, Other Calls, Wireline Calls, Wireless Calls, VoIP Calls, Total PSAPs, Total NG911 Expenditure, FTE Telecommunicators, Population, ESInet PSAPs, PSAPs Accepting Texts, and Total Cybersecurity Cost. Given the limited sample size (9 samples), appropriate methodologies were selected to ensure robust and reliable results.

Due to the small sample size, traditional methods such as multiple regression analysis may lead to overfitting and unreliable results. Instead, this study employed the following approaches:

- **Penalized Regression (Lasso Regression):** Lasso regression was used to perform variable selection, reducing the risk of overfitting by shrinking some coefficients to zero. This method is particularly suited to small sample sizes, helping identify the most significant factors contributing to Total 911 costs.

- **Principal Component Regression (PCR):** To address multicollinearity and reduce dimensionality, Principal Component Regression was applied. This method transforms the

original predictors into a smaller set of uncorrelated principal components that capture the most variance in the data, mitigating the risk of overfitting.

- **Cross-Validation (Leave-One-Out Cross-Validation - LOOCV):** LOOCV was used to assess model performance. This method maximizes the use of limited data and provides an unbiased estimate of model accuracy by testing on each individual data point.

- **Bayesian Regression:** Bayesian regression was also considered to incorporate prior knowledge into the model and provide more informative posterior distributions for the coefficients, addressing the uncertainty inherent in small sample sizes.

Given the small sample size, the use of advanced regression techniques like Lasso and Bayesian regression, coupled with rigorous cross-validation, allowed us to identify key predictors of Total 911 costs. While the findings are promising, further data collection and validation are recommended to enhance the robustness of these results. Future analyses may benefit from incorporating additional samples or using advanced machine learning methods to further refine the insights. Increasing the sample size for future studies can improve the stability and generalizability of the results.

Section 3: Analysis of State 9-1-1 Wireless Fees

This analysis uses data from the FCC's (2023) most recent *Annual Report to Congress on State Collection and Distribution of 911 and Enhanced 911 Fees and Charges*. The individual state filings assembled for the FCC's 2023 report to Congress, covering the period between January 1, 2022, to December 31, 2022, provide insight into state differences in 9-1-1 costs and funding mechanisms, particularly differences in 9-1-1 wireless fees imposed across the U.S.

However, while these reports offer insight, they provide an incomplete picture of state 9-1-1 funding because of gaps and inconsistencies in how individual states report 9-1-1 costs and revenue. Many states did not report accurate aggregate cost and revenue data because individual jurisdictions (e.g., counties) maintain these data and did not comprehensively or uniformly report costs and revenue data to the state authorities responsible for preparing the 2023 FCC report. Furthermore, in many states, jurisdictions intermingled 9-1-1 costs paid by wireline, wireless, pre-paid wireless, VoIP and/or other fees with costs paid by general funds. For example, Pennsylvania reported a total 9-1-1 service cost that includes expenses covered by both 9-1-1 fees and other funding sources (Fifteenth 911 Annual Fee Report [Pennsylvania], 2023). Furthermore, Idaho did not file an FCC report in 2023 (this study uses data from Idaho's 2022 filing). Consequently, while these reports provide a general picture of 9-1-1 costs, it makes it challenging to isolate specific expenditures covered by 9-1-1 fees. These reporting inconsistencies make it difficult to accurately compare costs across states and gain a clear national perspective on 9-1-1 funding.

Section 4: Public Opinion Survey Methodology

Survey data were collected in collaboration with CloudResearch Connect. The Connect panel of participants includes a high-quality pool of potential survey respondents based in Texas. The

Connect panel uses a series of rigorous attention, identity, geographic, and IP based checks to ensure high data quality. These data are tracked monthly and the most recent results from July 2024 demonstrate that 98% of respondents, from a sample of approximately 10% of the total pool of active respondents, successfully passed three attention checks. Attention checks are survey questions which attempt to gauge if respondents are reading survey questions closely and following relevant instructions. Open-ended response options, graded by both human and machine coding, are also used to attempt to guarantee high quality, reliable data. Additionally, researchers can participate in monitoring research participants and flag poor quality participants who then receive further monitoring and possibly from the company.

The survey was administered to a pool of adult respondents who reported their current place of residence as both in the United States and in the state of Texas. Responses were collected from a sample of 834 respondents between October 8 and October 23, 2024. The estimated survey completion time was 7 minutes, and respondents were paid $1.69 for their time, which was processed through PayPal or respondents' banks by CloudResearch Connect. The survey instrument was programmed in Qualtrics. In addition to the attention checks used by CloudResearch, two additional attention checks were added to the survey instrument to evaluate response data quality as well as potential causality for the experimental components.

Key questions of interest were organized into three sections of the survey instrument. The first section of the survey conducts a contingent valuation willingness to pay (WTP) exercise. In this section, respondents received a random hypothetical increase to their monthly wireless bill ranging from a $0.01 increase to a $1.86 increase (the second highest statewide monthly wireless fee, charged in Alabama; See Section 3). Responses to this question allowed for the estimation of a demand curve that describes the amount in wireless fees that Texans' are willing to pay for NG9-1-1 upgrades.

The survey instrument also included a question that asked, "Do you support raising the 911 fee on wireless phone bills from $0.50 to $0.75 per month to improve 911 services in Texas? This fee increase could potentially help reduce service delays, increase flexibility of contact methods for the public, and improve response times based on enhanced location data for both rural and urban areas." This question had response options of "Yes," "No," and "Not Sure." This question allowed a direct measure of support or opposition for a proposed wireless fee increase in Texas, while also informing respondents of some of the reasons for the increase.

Additionally, respondents were asked a series of descriptive questions to understand the surveyed Texans' interactions and opinions of 9-1-1 services and service fees. These included questions that asked if respondents had contacted 9-1-1 before and if they were aware of the $0.50 monthly fee Texas currently charges wireless phone users.

Other questions inquired about respondents' preferred allocation of resources toward NG9-1-1 improvements. Respondents were asked to rate the relative importance of potential NG9-1-1 service upgrades to understand which upgrades are most important to the public and that a potential fee increase might support.

Lastly, the survey collected basic demographic data such as race, ethnicity, age, gender, household size, marriage status, education, employment and income. In addition to demographic data, questions were included to collect political affiliation data, in terms of both ideology and party. Ideology measure ranges from strongly conservative to strongly liberal. For party, respondents were asked to choose between Democratic, Republican, Independent, and Other party options. For those who choose Independent or Other party, the survey instrument required them to choose either the Democratic or Republican party in a follow-question. Respondents were also asked to report their county of residence in Texas and how they perceive where they live as either urban, suburban, or rural. These demographic and political variables allow for interpretation of expressed support for or opposition to proposed 9-1-1 fee increases. Using these data, Section 4 breaks down the sample of respondents into these various subgroups to understand how support for a 9-1-1 wireless fee increase, as well as preferences for NG9-1-1 features might be a function of individual differences such as party affiliation, income, and education. In the next section, results are presented from the analysis of the collected survey data.

Table 6 below compares the sample to the general population of Texas residents in 2023 according to the US Census Bureau.

Table 6: Evaluating CloudResearch Connect Sample

Demographic	Sample (n=834)	Texas Census Estimates*
White	67.9%	76.8%
Black	14.4%	13.6%
Asian	6.7%	6.0%
Two or more races	6.2%	2.3%
Hispanic	20.6%	39.8%
Women	60.4%	50.1%
Men	37.8%	49.9%
Less than bachelor's degree	46.3%	67.7%
Bachelor's degree or higher	53.7%	32.3%
Persons 65 years and over	4.4%	13.7%
Employed	82.2%	64.6%
Household size	2.83	2.73

*Data from U.S. Census Bureau QuickFacts: Texas V2023

In general, the data from CloudResearch Connect exhibit patterns similar to other survey sample platforms in their sample characteristics. Specifically, the data are over-representative of women and higher educated individuals. On race, however, the data generally match the Texas public well with similar proportions for minority respondents, in particular Black and Asian respondents. Regarding ethnicity, the data do not reflect the prevalence of Hispanic people in the state. Additionally, respondents in the data are younger and more likely to be employed than the general population of Texas but have very similar average total household sizes.

Mean response time was approximately 11 minutes and 7 seconds with a median response time of 8 minutes and 21 seconds, both higher than our initial estimated time of 7 minutes. The survey included two extra attention checks to better understand the quality of the data collection efforts. For the first attention check, 99% of respondents passed by choosing the correct answer, while for our second, slightly more difficult attention check, 97% of respondents passed by choosing the correct answer.

Data was also collected on political party identification from the survey respondents. When allowed to choose independent or “other party”, approximately 49% identified as Democrats, 23% identified as Republicans, and the remaining 28% identified as Independents or other. For those who identified as Independents or other, respondents were “forced” to choose by asking “Do you identify more with the Democratic or Republican Party?”. When this data is incorporate into the initial measure, the study finds 65% of the sample identified as Democrats while 35% identified as Republicans.