2023 Update to the 7th Drinking Water Infrastructure Needs Survey and Assessment

Lead Service Line Information:

Addendum to the EPA's Report to Congress

Background

Congress created the Drinking Water State Revolving Fund (DWSRF) program in the 1996 Amendments to the Safe Drinking Water Act (SDWA). Within the section of the SDWA authorizing the Drinking Water State Revolving Fund (DWSRF), Congress directed the U.S. Environmental Protection Agency (EPA) to examine the capital improvement needs of public water systems in the United States through the Drinking Water Infrastructure Needs Survey and Assessment (DWINSA). By law, the DWINSA results guide the EPA's distribution of DWSRF funding to states.

For more than two decades, states have designed and managed their DWSRF programs to reflect the needs of their states under the authorization given to them by Congress. State SRF program managers serve as the direct contact to local water systems in their state for both the DWINSA and the DWSRF program at large. The EPA allots DWSRF funds appropriated by Congress and provides capitalization grant terms and conditions, guidance, and program oversight. The DWSRF program is an important relationship between the EPA, the states, and the Territory of Puerto Rico to upgrade and improve the nation's drinking water infrastructure.

Purpose of the 2023 Update

America's Water Infrastructure Act of 2018 amended Section 1452(h) of the SDWA to mandate that the EPA evaluate and include the cost to replace all lead service lines (LSLs) in any DWINSA conducted after October 23, 2018. All public water systems participating in the 7th DWINSA were asked to provide information on the number of service lines in their system (whether owned by the system, the customer, or jointly owned by both the water system and the customer) and what they knew about the service line materials and connectors. The service line information reported in the 7th DWINSA released in 2023 reflects information available and collected in 2021. At the time of data collection, most systems in the U.S. did not have an inventory of their service lines because initial inventories were required to be submitted by water systems under the EPA's Lead and Copper Rule Revisions (LCRR) by October 16, 2024 – years after 7th DWINSA data collection. It was within this evolving information landscape of early inventory development that the DWINSA requested states and water systems to use their best professional judgement to respond to the LSL questionnaire, reflecting their expertise in understanding their drinking water systems, the age of the neighborhoods they serve, their lead in drinking water monitoring history, and other relevant information that informs their understanding of the status of lead in their distribution system. This knowledge enabled systems to provide estimates of LSLs in the 7th DWINSA, and for states to make state-level decisions on methodology, advise their water systems on responding to the service line questionnaire and review and submit their state information to the EPA.

The EPA used the results of the service line materials information collected under the 7th DWINSA as the basis for allotting the Fiscal Year 2023 Drinking Water State Revolving Fund (DWSRF) Bipartisan Infrastructure Law (BIL) lead service line (LSL) replacement funding. After this release, the EPA received feedback from stakeholders regarding various aspects of the service line materials information. Stakeholder comments noted that service line inventories were in an early development stage at the time of the 7th DWINSA data collection and that the original service line questionnaire would benefit from clarification and simplification. The EPA sought to address these concerns through an update to the 7th DWINSA conducted in 2023 that continued to leverage the long-established DWINSA process between the EPA and the states, while targeting revisions to the data collection form and enabling the collection and assessment of more recent information.

Methodology

The drinking water systems selected to participate in the 7th DWINSA included all large systems, a random sample of medium systems for each state, and a national random sample of small systems. This methodology is outlined in Sections 1.2 and 2.2 in the 7th DWINSA Report to Congress.[1] The 2023 update to the 7th DWINSA allowed small, medium, and large water systems that were selected to participate in the 7th DWINSA 2021 survey to update their original response or to provide a response if they had not previously completed the service line questionnaire. The update included systems in the 50 states, Puerto Rico, the District of Columbia, and U.S. territories (Guam, American Samoa, the Northern Mariana Islands, and the U.S. Virgin Islands). American Indian and Alaska Native Village water systems were not re-surveyed because they have a statutory set-aside of 2% of funds appropriated (or $20 million, whichever is greater) so their information on service line materials was not used for distributing DWSRF BIL LSL Replacement funds. While the opportunity to update the survey information was voluntary and limited to the service line questionnaire, the EPA performed outreach to encourage states to submit updated information. States performed the critical role of providing outreach to medium and large water systems on the opportunity, assisting systems with survey completion, reviewing the data submitted by systems, and facilitating submission of information to the EPA. The EPA performed this role for small systems. The primary data collection period was from September to December 2023.

To improve on the original questionnaire for the 2023 update, the EPA simplified the instructions, removed service line ownership categories, and reduced the number of galvanized service line material categories by consolidating categories. To lessen burden on participating water systems, the updated questionnaire was pre-populated with the water system's service line material data used for the 7th DWINSA.

As with all DWINSAs, participation in the 2023 update of the 7th DWINSA was voluntary. Systems were provided with the opportunity to review and verify or update their original service line questionnaire response based on new information or to provide a response if they had not previously participated. Questionnaires for medium and large systems were sent to states for distribution to their systems. This process followed the long-standing approach used for the

[1] https://www.epa.gov/system/files/documents/2023-09/Seventh%20DWINSA_September2023_Final.pdf

DWINSA in which states facilitate and review data for their medium and large water systems. States chose the level of participation for these systems and were trained to facilitate their role in reviewing information prior to submitting to the EPA. Meanwhile, the EPA sent questionnaires directly to small water systems and territories. The EPA offered direct technical assistance to small water systems and territories to complete the update.

Data Quality

Prior to launching the 2023 update, the EPA hosted EPA-State DWINSA Workgroup meetings receiving input on and reviewing the questionnaire to be used for the update. The EPA also sent instructions for responding to the update to states for distribution to medium and large systems. The EPA sent these instructions directly to small systems. Upon receipt of completed questionnaires from states and small systems, the EPA's quality assurance activities for responses included, but were not limited to, screening response forms, assessing for anomalies and outliers, comparing the sum of the reported service lines to the number of reported service connections, comparing the submissions against publicly available data, and assessing for trends and/or significant changes.

The EPA identified systems that reported a high number of LSLs or significant increases in the number of reported LSLs compared to the 7th DWINSA, and compared these responses to publicly available information regarding the number of LSLs in a system. In many cases, the data accurately reflected the updated information submitted to the agency. For a few states where there was no readily available public information, the EPA contacted personnel at a number of systems to confirm that the data submitted by their state for the 7th DWINSA and the 2023 update accurately reflected their understanding of their service line materials. In two cases, the EPA modified state-submitted data with system-submitted responses to match the information provided by the systems in those communications.

The EPA also reviewed state submissions to identify state-level trends in the reported number of service lines in each material category at medium and large systems. EPA followed up on these observations in a few circumstances, to request state methodologies and had discussions with state personnel to understand their methodology and process for conducting quality assurance on systems' responses to the 7th DWINSA and 2023 update. Following these collaborations, EPA better understood the states' submitted information and identified no reasons for adjustments.

Participation Summary

A total of 67 percent of the surveyed small, medium, and large water systems provided a response for the update. Coupled with the information from the 7th DWINSA, this increased the overall response to the service line questionnaire to 78 percent. The EPA surveyed 2,888 medium and large systems and a total of 2,089 responses were received (72%): 596 reporting updates and 1,493 indicating no updates. The EPA surveyed 695 small systems with a total of 132 responses (19 percent): 64 reporting updates and 68 indicating no updates.

Results

The EPA used the same methodology to develop projected LSL counts in each state as used

for the 7th DWINSA. The EPA used the updated information when available. For water systems that opted to not update their responses to the service line questionnaire, the data previously reported under the 7th DWINSA was used. The calculation for projecting LSL counts is explained in Appendix A of the 7th DWINSA Report to Congress.[2]

Based on the results of the updated 7th DWINSA, the total projected number of LSLs in the United States is 9.0 million. The updated 7th DWINSA provides the best available national and state-level projections of service line materials and counts as of 2023.

Exhibit 1 shows the number of surveyed systems that responded to the 2023 update for each category of service line material. A system may have responded with information on more than one type of service line.

Exhibit 1: Number of Surveyed Systems that Responded to the State Service Line Questionnaire and 2023 Update to the 7th DWINSA (National Summary)

Type of Service Line (Material)	Number of System Responses in 7th DWINSA	Number of System Responses in 2023 Update to the 7th DWINSA
1. Systems that reported any lead content in any of their service lines or connectors	725	838
2. Systems that did not know the material of some or all their service lines	843	914
3. Systems that reported some standalone galvanized service lines	127	132
4. Systems that reported that they had no lead content	920	874
5. Not reported	898	824

Note: A system may have reported data for more than one category (e.g., reported they have lead content in some service lines (Row 1) and known no lead content in other service lines (Row 4). The system would be included as responding in both rows.

LSL Counts by State/Territory

This addendum reflects the data collected and analyzed as part of the 2023 update to the 7th DWINSA. It does not reflect more recent and ongoing action taken by the EPA because of concerns that Florida and Texas had not reliably reported data to the EPA under the 7th Drinking Water Infrastructure Needs Survey and Assessment (DWINSA). To address these concerns, the EPA required both states to provide their Lead and Copper Rule Revisions initial inventory service line count data[3] for the 7th DWINSA surveyed systems, which will be used to evaluate the appropriateness of these states' Bipartisan Infrastructure Law Lead Service Line Replacement allotments.

[2] https://www.epa.gov/system/files/documents/2023-09/Seventh%20DWINSA_September2023_Final.pdf

[3] The EPA's 2021 Lead and Copper Rule Revisions required public water systems to conduct an initial service line inventory and submit it to their primacy agency and make it public by October 16, 2024.

Exhibit 2 shows the estimated service line materials by state/territory and material type based on the updated 7th DWINSA survey responses.

Exhibit 2: Estimated Service Line Material Based on 2023 Update to the 7th DWINSA Survey Response

	Service Line Material				
State/Territory	Lead Content	Standalone Galvanized	No Lead Content	Unknown Material	Not Reported
Alabama	65,356	21,767	1,316,150	304,958	190,001
Alaska	385	989	38,984	25,863	47,519
Arizona	8,398	29,398	1,478,065	383,832	182,042
Arkansas	77,346	21,884	458,700	106,771	554,555
California	13,191	198,523	8,996,785	220,196	232,774
Colorado	91,261	2,641	1,277,161	189,167	105,074
Connecticut	24,025	2,902	300,914	354,723	37,573
Delaware	17,974	8,375	132,071	56,732	87,236
District of Columbia	23,952	714	26,295	89,039	0
Florida[4]	638,425	691,380	2,840,070	1,337,656	1,121,628
Georgia	177,378	49,390	2,243,589	714,537	75,058
Hawaii	6,812	2,320	219,485	32,816	20,818
Idaho	30,910	29,127	302,771	45,025	79,803
Illinois	702,526	28,550	1,720,894	797,594	489,701
Indiana	173,829	3,646	1,060,990	606,115	30,954
Iowa	70,071	8,549	715,124	230,493	88,472
Kansas	28,596	22,970	378,796	574,679	39,530
Kentucky	67,601	30,370	798,127	697,651	9,703
Louisiana	140,763	11,295	742,830	277,371	524,749
Maine	11,568	9,030	173,361	47,085	30,236
Maryland	63,774	28,295	861,171	484,368	20,375
Massachusetts	132,626	24,740	1,108,781	525,632	28,533
Michigan	183,756	5,618	1,822,858	558,069	115,176
Minnesota	87,672	2,088	251,606	1,022,658	33,852
Mississippi	4,230	5,481	447,261	364,477	402,203
Missouri	127,323	13,106	1,405,246	239,396	186,253
Montana	3,790	8,897	83,645	87,057	89,499
Nebraska	34,837	1,691	408,344	123,076	29,979
Nevada	6,341	2,269	762,671	32,423	21,386
New Hampshire	11,289	1,825	208,451	42,527	13,590

[4] The EPA identified concerns regarding unreliable reporting of information provided by Florida in the original 7th DWINSA and took actions as part of the 2023 update to address it to the extent possible at the time. Since the update, the EPA has considered and taken further corrective actions.

State/Territory	Service Line Material				
	Lead Content	Standalone Galvanized	No Lead Content	Unknown Material	Not Reported
New Jersey	294,553	106,755	955,284	935,003	138,708
New Mexico	2,652	3,175	262,789	152,107	210,369
New York	299,629	8,586	1,613,497	1,106,599	535,727
North Carolina	212,225	63,379	1,877,030	903,976	99,665
North Dakota	12,693	588	117,767	20,105	82,749
Ohio	435,373	14,129	1,495,585	816,226	857,424
Oklahoma	12,409	2,925	577,386	742,692	43,421
Oregon	1,466	5,821	434,847	160,512	568,783
Pennsylvania	261,024	22,571	1,197,085	1,586,412	692,223
Puerto Rico	36,539	12,393	1,143,328	174,788	110,563
Rhode Island	16,103	132	62,569	157,896	68,299
South Carolina	48,120	11,810	781,503	787,203	180,647
South Dakota	5,577	1,468	219,756	35,970	26,000
Tennessee	79,147	21,191	522,847	1,937,119	209,438
Texas[5]	14,564	11,934	7,589,930	1,307,821	4,067,197
Utah	7,666	9,397	337,433	161,250	371,235
Vermont	3,215	2,817	102,531	14,469	43,558
Virginia	64,521	26,730	662,953	412,119	1,021,771
Washington	12,205	98,155	1,273,884	1,119,114	48,055
West Virginia	7,039	3,473	216,616	414,293	23,018
Wisconsin	266,572	12,342	901,473	186,913	155,208
Wyoming	7,605	2,818	98,924	41,003	27,653
Subtotal	5,126,903	1,710,414	55,026,212	23,745,575	14,469,984
American Samoa	10	11	9,690	200	177
Guam	0	1,650	0	37,892	5,195
Northern Mariana Islands	9	293	2,876	8,770	1,047
Virgin Islands	4	6	7,906	27,464	88
Subtotal	23	1,959	20,471	74,326	6,506
Total	5,126,926	1,712,373	55,046,683	23,819,901	14,476,490

National Service Lines

Based on the findings from the 2023 update to the 7th DWINSA, the total projected number of LSLs in the United States is 9.0 million for the states, U.S. Territories, Puerto Rico, and the District of Columbia (see Exhibit 3), a decrease from 9.2 million estimated in the 7th DWINSA

[5] The EPA identified concerns about the unreliable reporting of information provided by Texas in the original 7th DWINSA and took action as part of the 2023 update to address this unreliable reporting. Since the update, the EPA has considered and taken further corrective actions.

(see Exhibit 6). There are an estimated 2.8 million standalone galvanized service lines that have never been downstream of lead.

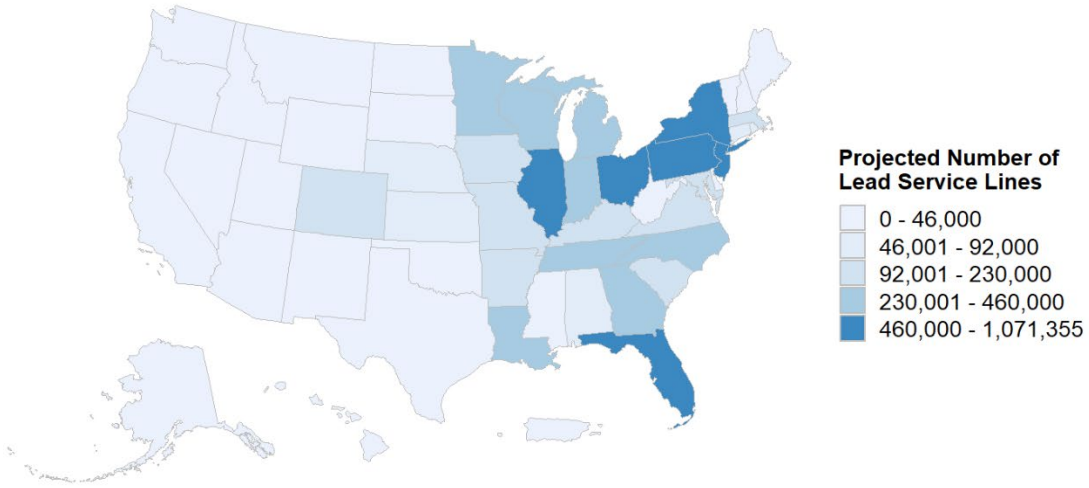
Exhibit 3: 2023 Update to the 7th DWINSA National Projected Service Lines by Material

Service Line Material	Projected Count*
Lead Content	9,031,938
Stand-Alone Galvanized	2,861,269
No-Lead Content	88,289,166
National Total Service Lines	100,182,373

**Projected Count includes known service lines and unknown and unreported service lines projected to be in one of these three categories.*

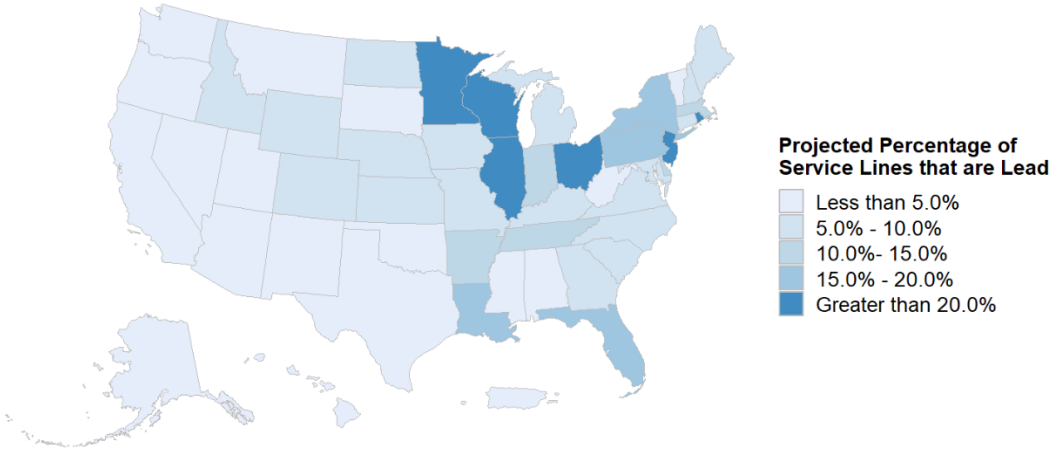
Exhibit 4 shows the distribution of projected LSLs across the nation by state. Information for the District of Columbia and the territories that is not visible on the map is provided in Exhibit 6. These values of projected lead service lines are derived from information on known lead service lines, service lines of unknown material, and unreported service lines as explained in Appendix A of the 7th DWINSA Report to Congress.

Exhibit 4: 2023 Update to the 7th DWINSA Projected Number of Lead Service Lines by State



In many cases, states have very few LSLs because their population is small and they have few service lines. Though they may have few LSLs, the share of their service lines that contain lead might be relatively large. Exhibit 5 shows projected LSLs by state as a percentage of total service lines. Information for the District of Columbia and the territories that is not visible on the map is provided in Exhibit 6.

Exhibit 5: 2023 Update to the 7th DWINSA Projected Number of Lead Service Lines by State as a Percentage of Total Service Lines



State-Level Results

Exhibit 6 shows a comparison of the projected LSLs by state and territory for the 7th DWINSA to the 2023 Update to the 7th DWINSA.

Exhibit 6: Total Projected Lead Service Lines by State for 7th DWINSA and 2023 Update to the 7th DWINSA

	7th DWINSA Projected LSL		2023 Update 7th DWINSA Projected LSL	
State	Number	% of Total[a]	Number	% of Total[a]
Alabama	91,544	1.00%	88,409	0.98%
Alaska	1,454	0.02%	1,084	0.01%
Arizona	11,429	0.12%	11,532	0.13%
Arkansas	171,771	1.87%	169,026	1.87%
California	13,476	0.15%	13,840	0.15%
Colorado	111,907	1.22%	110,847	1.23%
Connecticut	146,574	1.60%	52,774	0.58%
Delaware	42,479	0.46%	34,309	0.38%
District of Columbia	27,058	0.29%	65,801	0.73%
Florida[6]	1,159,300	12.62%	1,014,952	11.24%
Georgia	45,985	0.50%	234,073	2.59%

[6] The EPA identified concerns regarding unreliable reporting of information provided by Florida in the original 7th DWINSA and took actions as part of the 2023 update to address it to the extent possible at the time. Since the update, the EPA has considered and taken further corrective actions.

	7th DWINSA Projected LSL		2023 Update 7th DWINSA Projected LSL	
State	Number	% of Total[a]	Number	% of Total[a]
Hawaii	9,589	0.10%	8,410	0.09%
Idaho	49,434	0.54%	41,545	0.46%
Illinois	1,043,294	11.35%	1,071,355	11.86%
Indiana	265,400	2.89%	263,247	2.91%
Iowa	96,436	1.05%	98,230	1.09%
Kansas	54,107	0.59%	69,408	0.77%
Kentucky	40,207	0.44%	120,963	1.34%
Louisiana	266,984	2.91%	266,933	2.96%
Maine	18,057	0.20%	16,179	0.18%
Maryland	71,166	0.77%	97,543	1.08%
Massachusetts	117,090	1.27%	190,674	2.11%
Michigan	301,790	3.28%	245,236	2.72%
Minnesota	136,873	1.49%	359,012	3.97%
Mississippi	11,098	0.12%	11,326	0.13%
Missouri	202,112	2.20%	162,386	1.80%
Montana	14,125	0.15%	10,737	0.12%
Nebraska	53,230	0.58%	46,822	0.52%
Nevada	9,048	0.10%	6,783	0.08%
New Hampshire	14,819	0.16%	14,149	0.16%
New Jersey	349,357	3.80%	527,686	5.84%
New Mexico	15,453	0.17%	6,230	0.07%
New York	494,007	5.38%	555,696	6.15%
North Carolina	369,715	4.02%	311,173	3.45%
North Dakota	26,443	0.29%	22,656	0.25%
Ohio	745,061	8.11%	809,990	8.97%
Oklahoma	28,679	0.31%	28,866	0.32%
Oregon	3,530	0.04%	3,883	0.04%
Pennsylvania	688,697	7.50%	662,717	7.34%
Puerto Rico	51,490	0.56%	45,284	0.50%
Rhode Island	75,749	0.82%	62,324	0.69%
South Carolina	108,177	1.18%	103,469	1.15%
South Dakota	4,141	0.05%	7,101	0.08%
Tennessee	381,342	4.15%	351,768	3.89%
Texas[7]	647,640	7.05%	24,843	0.28%
Utah	14,293	0.16%	19,181	0.21%
Vermont	5,263	0.06%	4,934	0.05%

[7] The EPA identified concerns about the unreliable reporting of information provided by Texas in the original 7th DWINSA and took action as part of the 2023 update to address this unreliable reporting. Since the update, the EPA has considered and taken further corrective actions.

	7th DWINSA Projected LSL		2023 Update 7th DWINSA Projected LSL	
State	Number	% of Total[a]	Number	% of Total[a]
Virginia	187,883	2.04%	187,187	2.07%
Washington	22,030	0.24%	22,495	0.25%
West Virginia	20,259	0.22%	20,592	0.23%
Wisconsin	341,023	3.71%	343,834	3.81%
Wyoming	10,477	0.11%	12,380	0.14%
State Subtotal	9,188,545	100.00%	9,031,875	100.00%
Territories	35,202	0.39%[b]	63	0.00%[c]
Total	9,223,745		9,031,938	

a. *Service lines as a percentage of total for the 50 states, the District of Columbia, and Puerto Rico. Excludes the territories. The percentage does not include the U.S. territories because the allotment of funds to the states is based on the percentage of lead service lines in each state as a share of the total number of lead service lines in the 50 states, the District of Columbia, and Puerto Rico.*

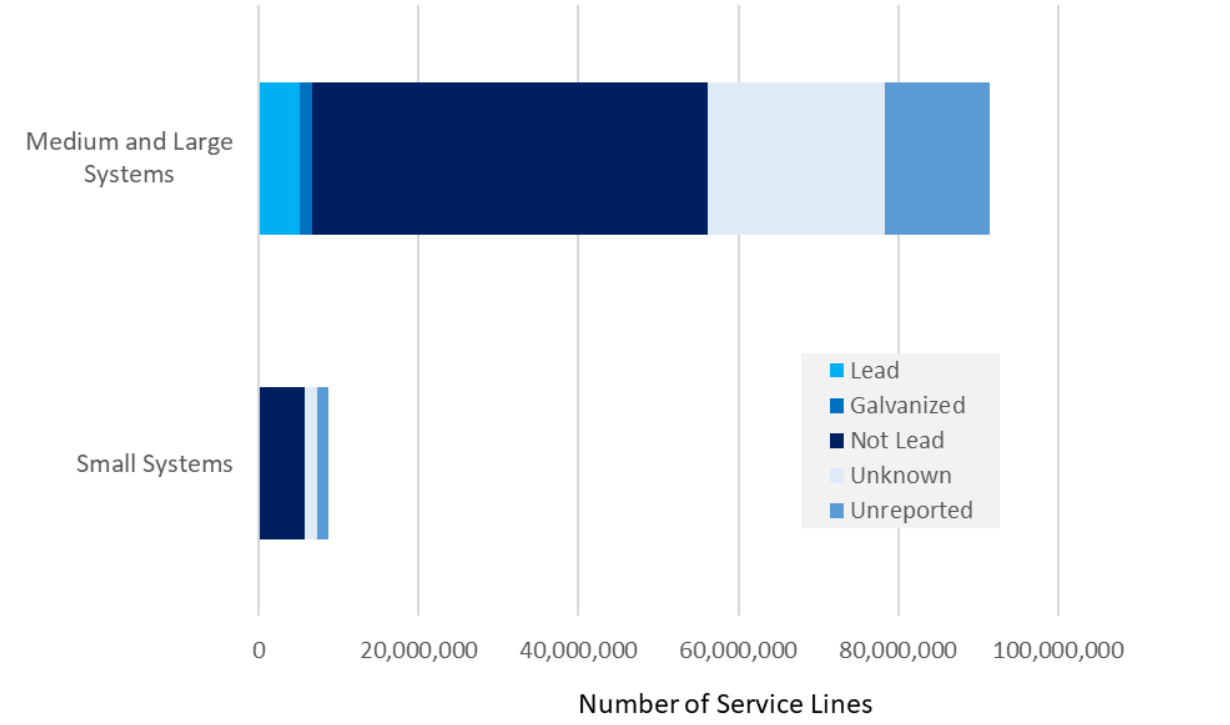
b. *Percentage of total of the 50 states, the District of Columbia, Puerto Rico, and the U.S. territories.*

c. *Percentage of total of the 50 states, the District of Columbia, Puerto Rico, and the U.S. territories. Percentage is less than 0.005% but is greater than 0%.*

Note: Numbers may not total due to rounding.

Exhibit 7 shows the 2023 update 7th DWINSA national total of the number of estimated service lines by type of material and system size.

Exhibit 7: 2023 Update to the 7th DWINSA Estimated Number of State Service Lines by Material Type and System Size



2023 Update to the 7th DWINSA LSL Information Addendum

Appendix A State-by-State LSL Count Charts

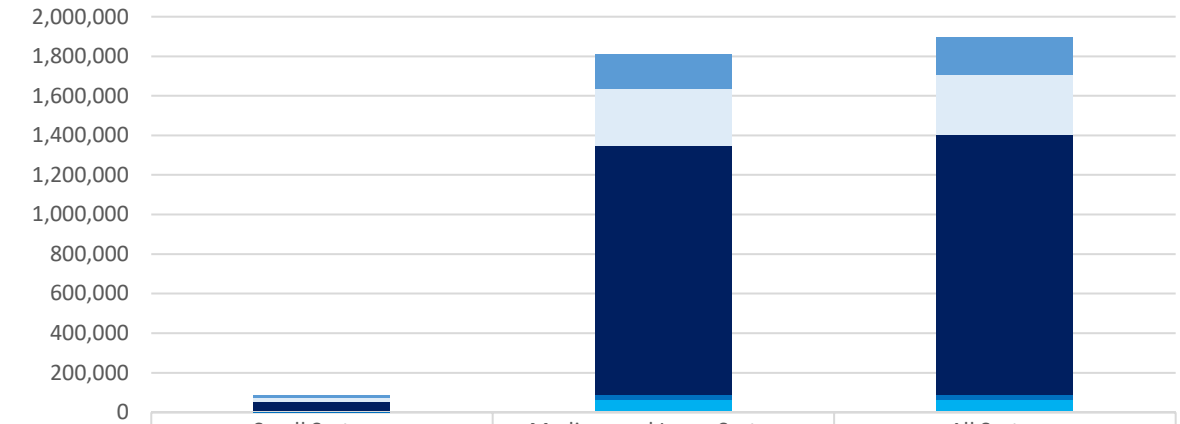
Appendix A provides state-specific information on the number of estimated and projected service lines by system size and material type.

The bar chart and table at the top of each state profile present the estimated number of service lines by material and by water system size, and the pie chart in the lower left presents the total estimated number by material. The EPA used survey response sample data to estimate the proportion of service lines in each state that are in each of the five material type categories (including unknown and not reported).

The pie chart in the lower right shows the projected service lines findings for lead, galvanized, and all other materials and reflects the total number of service lines in each state that fit these three categories, including unknown and unreported service lines that might be lead. These findings are projected from the estimated findings based on the proportion of known service lines that are lead or galvanized to the number of lines of known material. The term galvanized within this appendix refers to standalone galvanized service lines. Numbers may not total due to rounding.

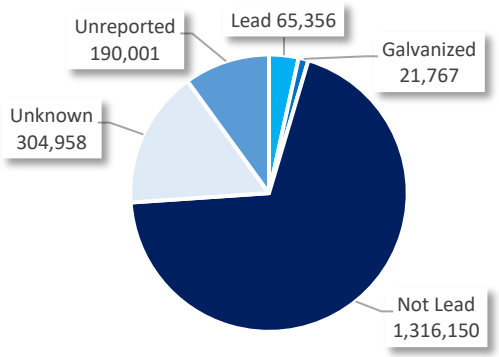
Alabama

Alabama Estimated Service Lines by System Size

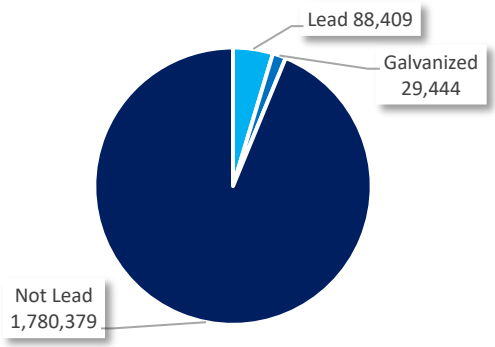


	Small Systems	Medium and Large Systems	All Systems
Unreported	13,971	176,030	190,001
Unknown	15,751	289,207	304,958
Not Lead	54,282	1,261,868	1,316,150
Galvanized	839	20,927	21,767
Lead	797	64,559	65,356
Total	85,641	1,812,591	1,898,232

Alabama Service Lines – Estimated from Survey Responses

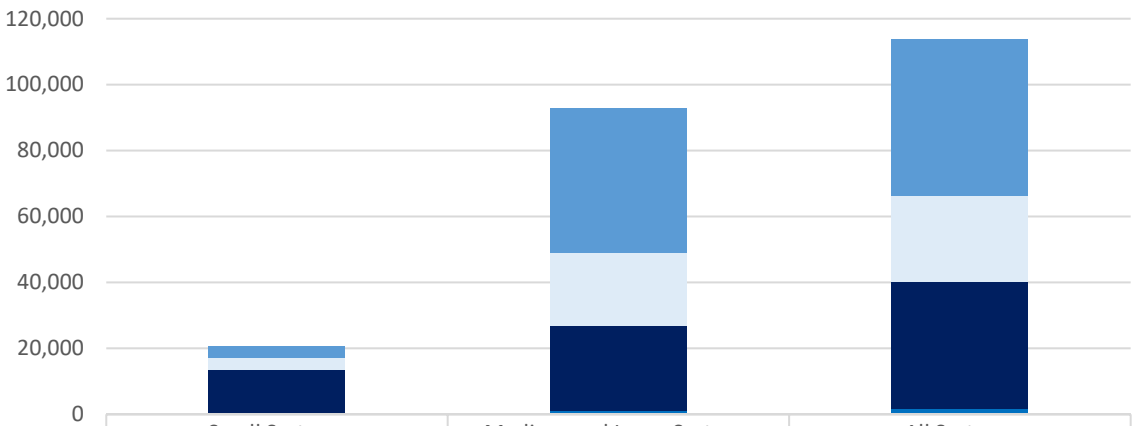


Alabama Projected Service Lines



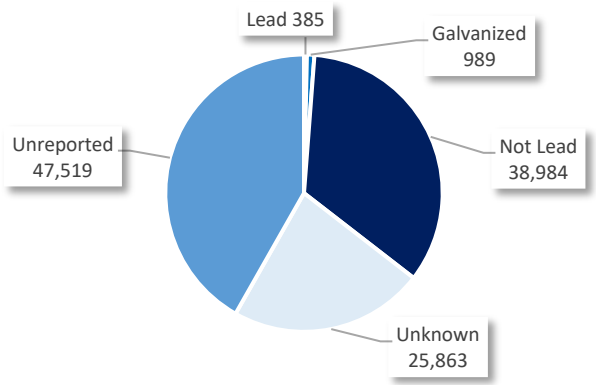
Alaska

Alaska Estimated Service Lines by System Size

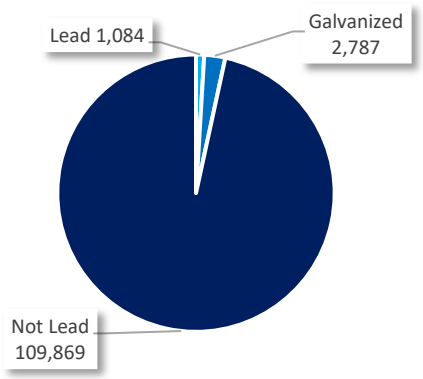


	Small Systems	Medium and Large Systems	All Systems
Unreported	3,541	43,978	47,519
Unknown	3,741	22,123	25,863
Not Lead	13,149	25,834	38,984
Galvanized	223	766	989
Lead	187	198	385
Total	20,841	92,899	113,740

Alaska Service Lines – Estimated from Survey Responses

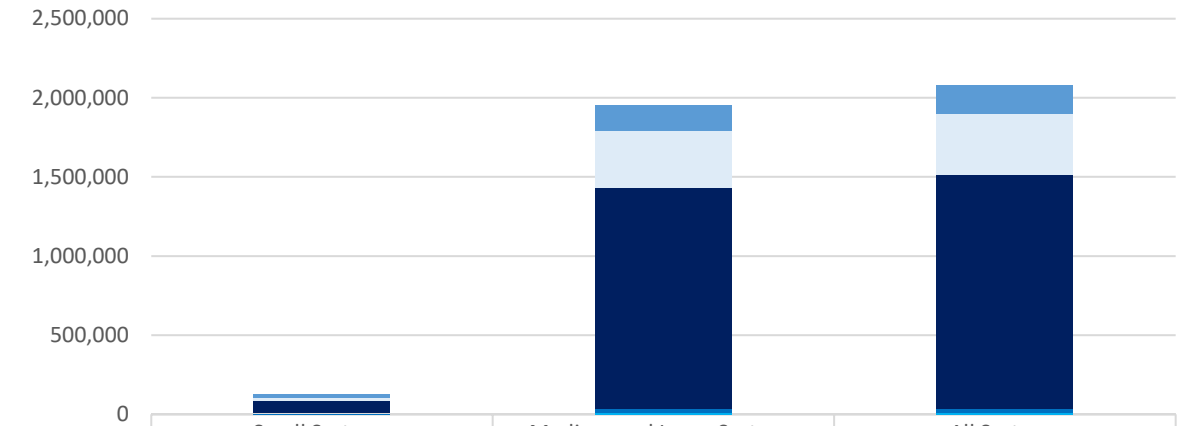


Alaska Projected Service Lines



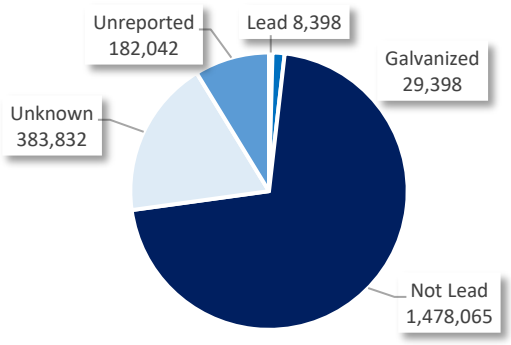
Arizona

Arizona Estimated Service Lines by System Size

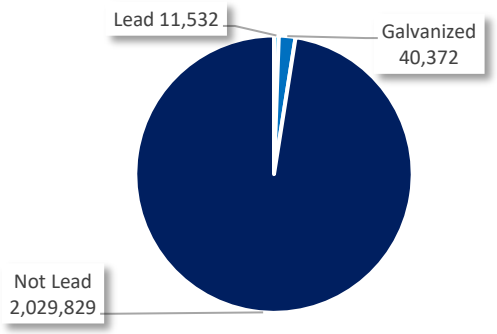


	Small Systems	Medium and Large Systems	All Systems
Unreported	21,872	160,169	182,042
Unknown	23,411	360,420	383,832
Not Lead	81,959	1,396,106	1,478,065
Galvanized	1,363	28,034	29,398
Lead	1,172	7,226	8,398
Total	129,777	1,951,956	2,081,733

Arizona Service Lines – Estimated from Survey Responses

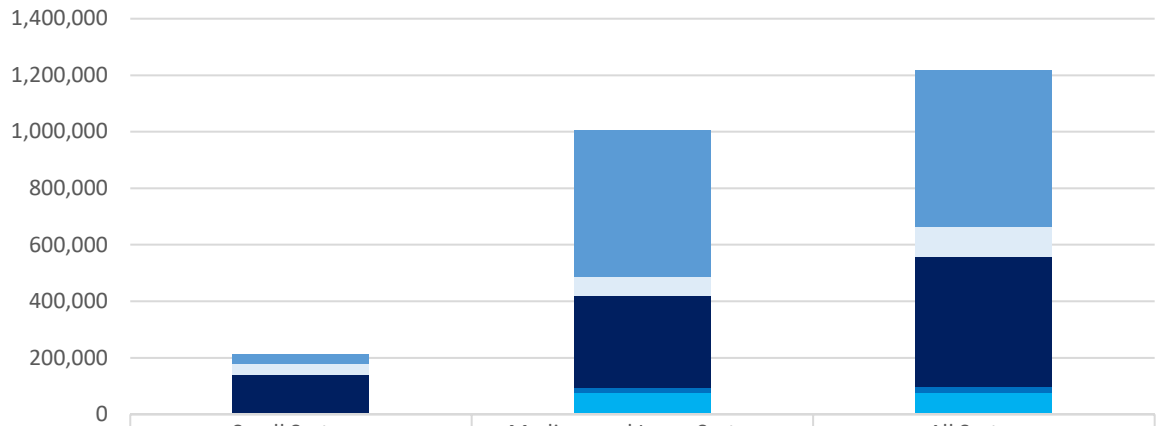


Arizona Projected Service Lines



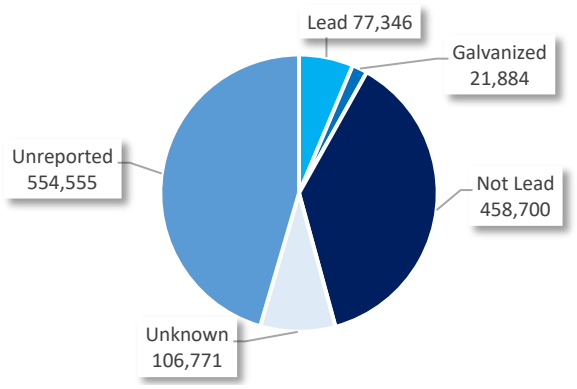
Arkansas

Arkansas Estimated Service Lines by System Size

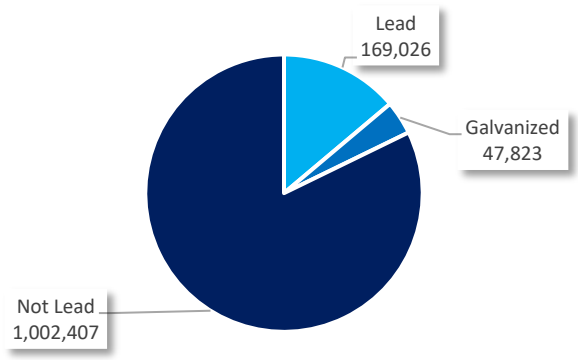


	Small Systems	Medium and Large Systems	All Systems
Unreported	34,433	520,122	554,555
Unknown	39,002	67,769	106,771
Not Lead	134,220	324,480	458,700
Galvanized	2,061	19,823	21,884
Lead	1,975	75,371	77,346
Total	211,691	1,007,565	1,219,256

Arkansas Service Lines – Estimated from Survey Responses

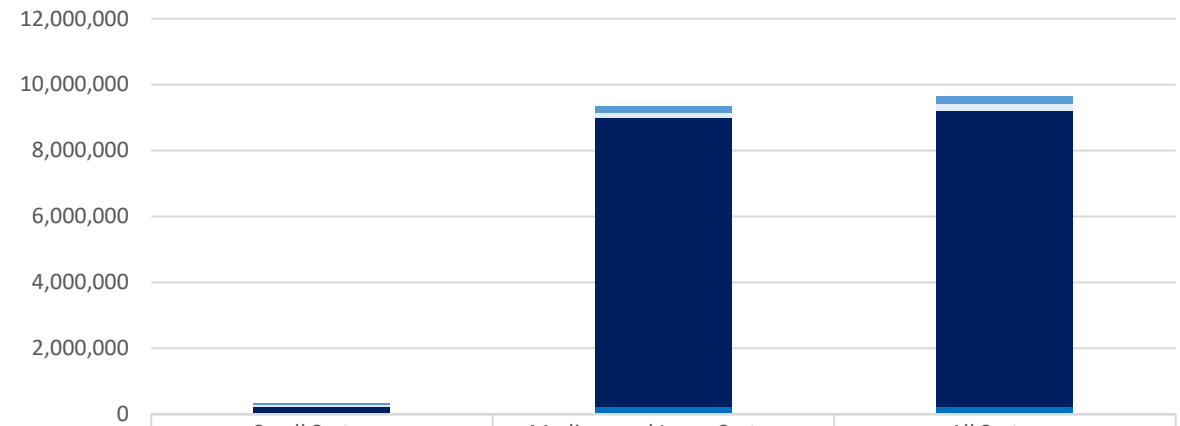


Arkansas Projected Service Lines



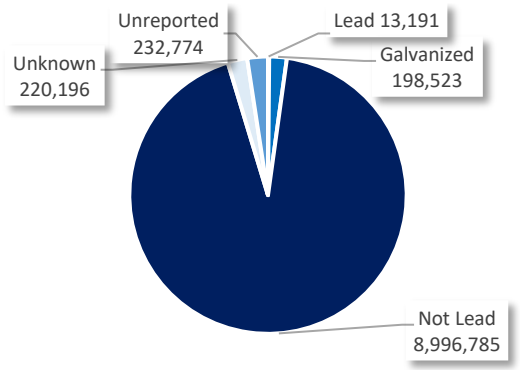
California

California Estimated Service Lines by System Size

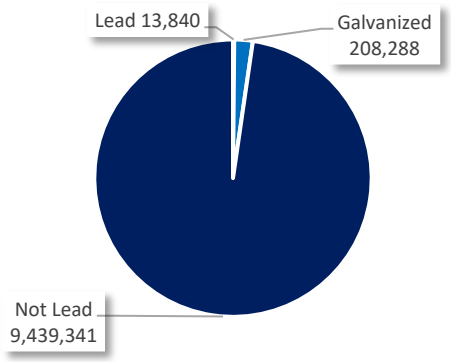


	Small Systems	Medium and Large Systems	All Systems
Unreported	56,216	176,559	232,774
Unknown	60,519	159,677	220,196
Not Lead	211,491	8,785,294	8,996,785
Galvanized	3,490	195,033	198,523
Lead	3,033	10,158	13,191
Total	334,748	9,326,721	9,661,469

California Service Lines – Estimated from Survey Responses

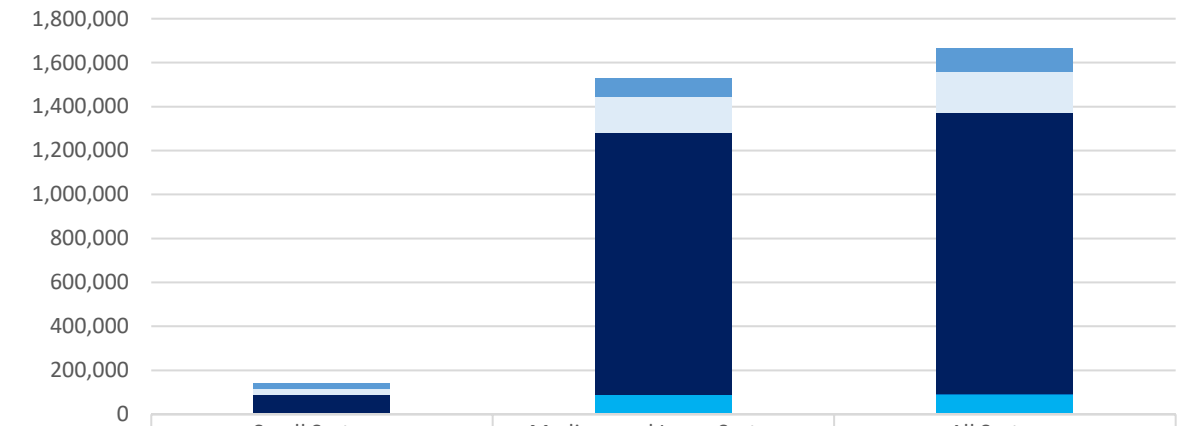


California Projected Service Lines



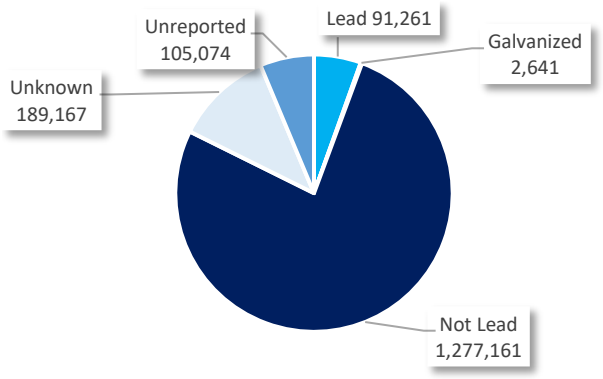
Colorado

Colorado Estimated Service Lines by System Size

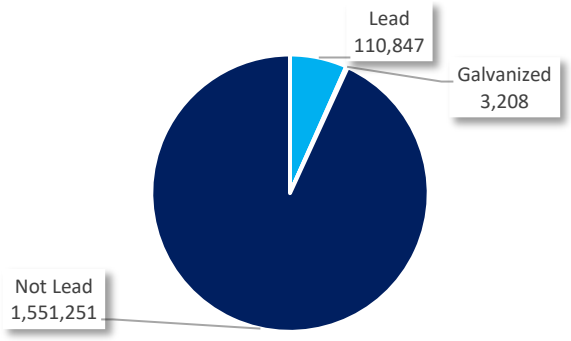


	Small Systems	Medium and Large Systems	All Systems
Unreported	22,677	82,397	105,074
Unknown	25,288	163,879	189,167
Not Lead	87,432	1,189,729	1,277,161
Galvanized	1,373	1,268	2,641
Lead	1,277	89,985	91,261
Total	138,047	1,527,258	1,665,305

Colorado Service Lines – Estimated from Survey Responses

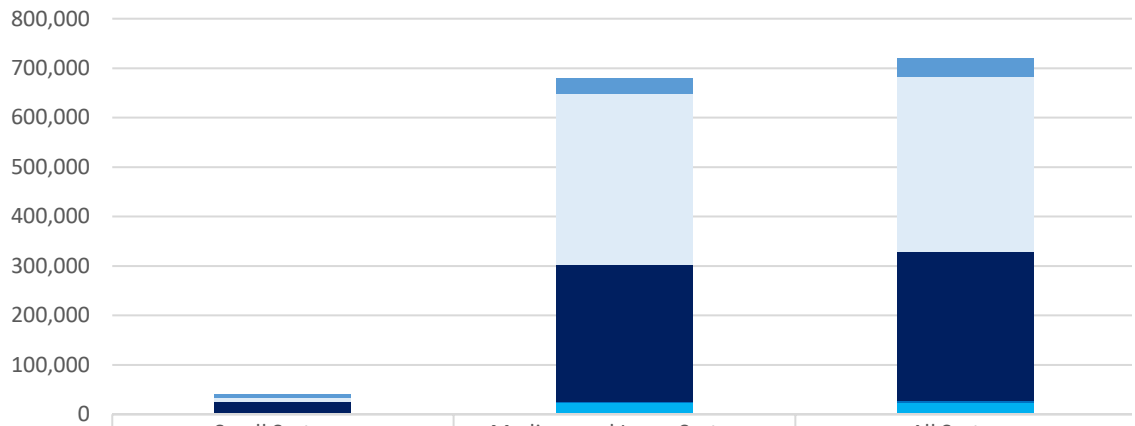


Colorado Projected Service Lines



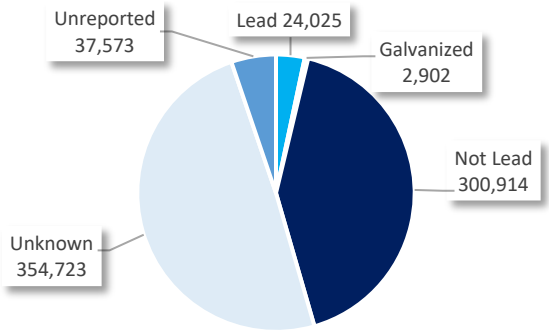
Connecticut

Connecticut Estimated Service Lines by System Size

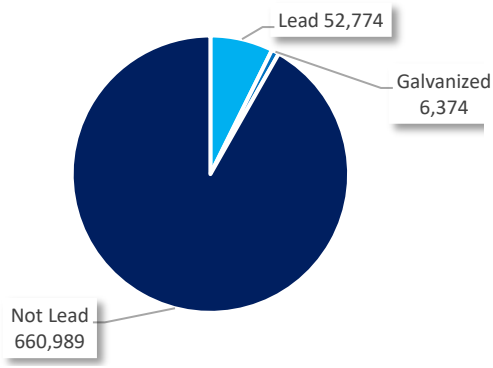


	Small Systems	Medium and Large Systems	All Systems
Unreported	6,669	30,904	37,573
Unknown	7,299	347,424	354,723
Not Lead	25,379	275,535	300,914
Galvanized	409	2,492	2,902
Lead	367	23,658	24,025
Total	40,124	680,013	720,137

Connecticut Service Lines – Estimated from Survey Responses

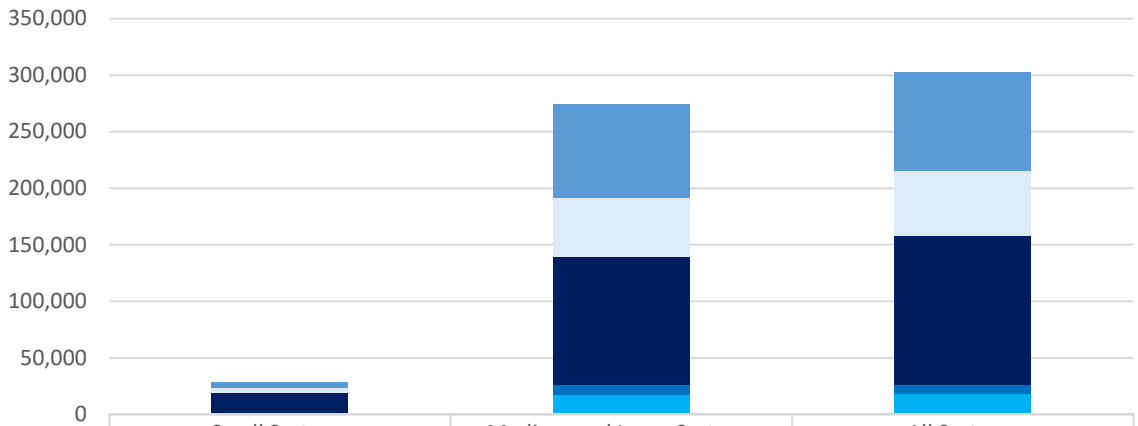


Connecticut Projected Service Lines



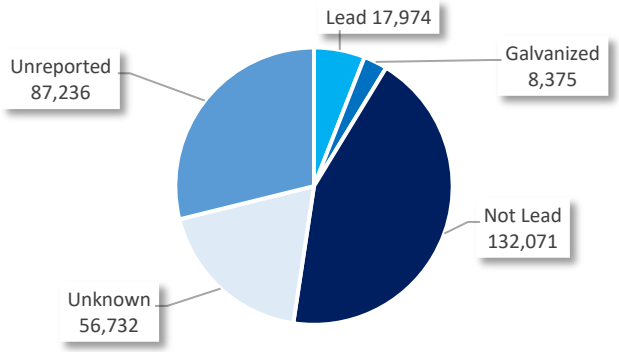
Delaware

Delaware Estimated Service Lines by System Size

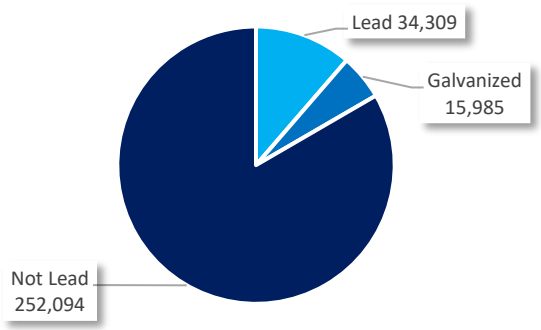


	Small Systems	Medium and Large Systems	All Systems
Unreported	4,702	82,534	87,236
Unknown	5,217	51,515	56,732
Not Lead	18,066	114,005	132,071
Galvanized	286	8,089	8,375
Lead	263	17,711	17,974
Total	28,534	273,854	302,388

Delaware Service Lines – Estimated from Survey Responses

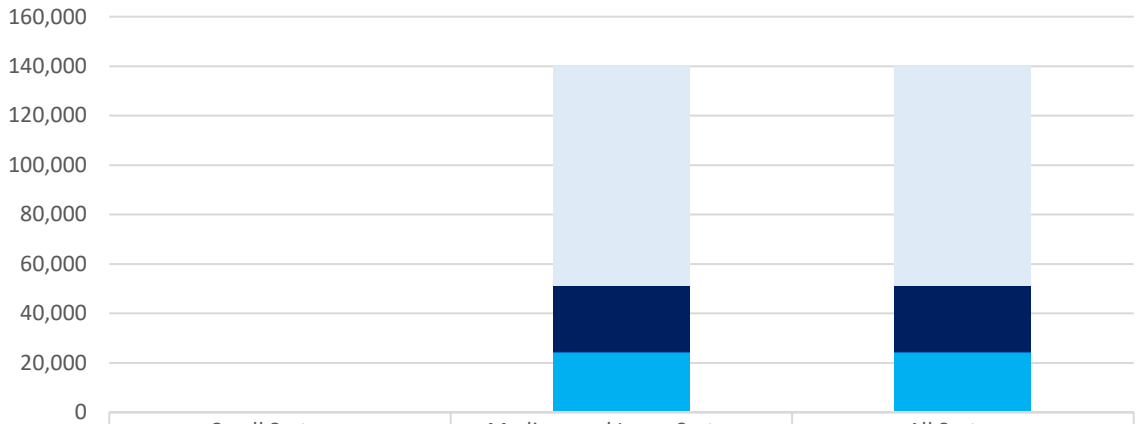


Delaware Projected Service Lines



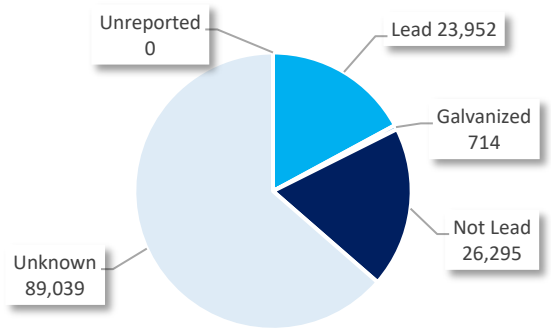
District of Columbia

District of Columbia Estimated Service Lines by System Size

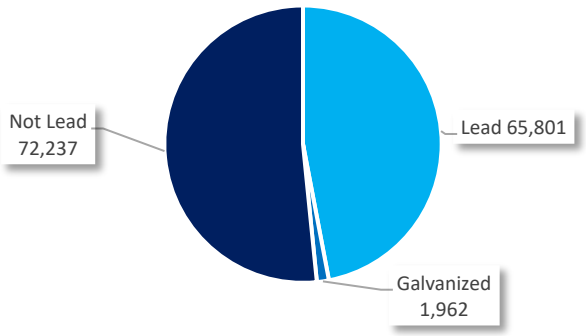


	Small Systems	Medium and Large Systems	All Systems
Unreported	0	0	0
Unknown	0	89,039	89,039
Not Lead	0	26,295	26,295
Galvanized	0	714	714
Lead	0	23,952	23,952
Total	0	140,000	140,000

District of Columbia Service Lines – Estimated from Survey Responses

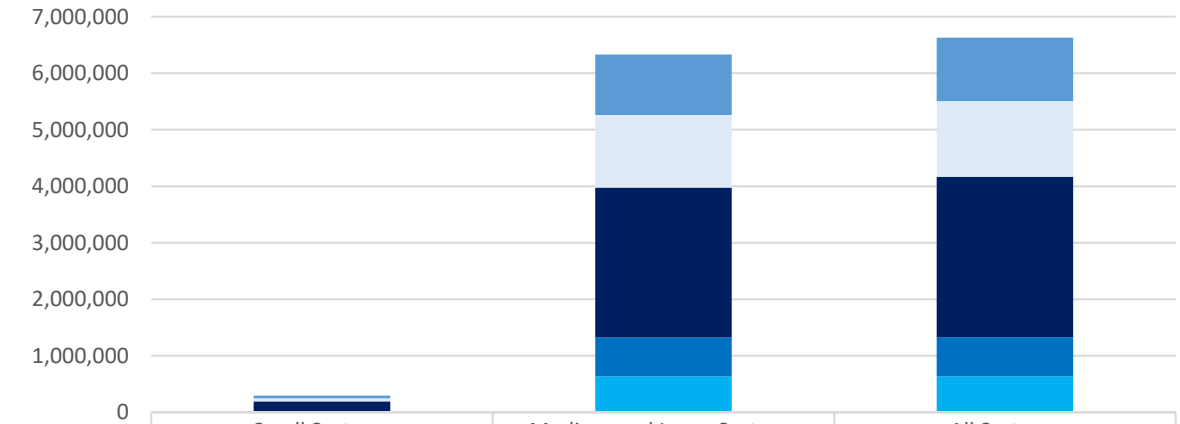


District of Columbia Projected Service Lines



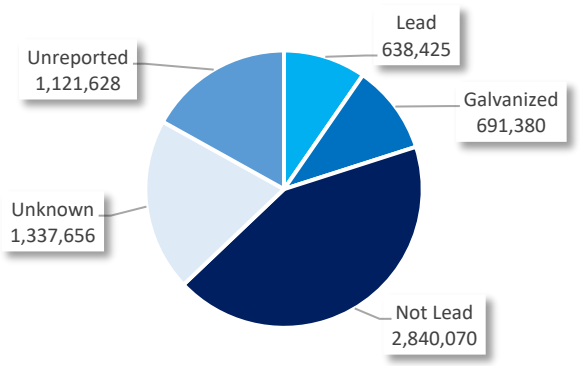
Florida[8]

Florida Estimated Service Lines by System Size

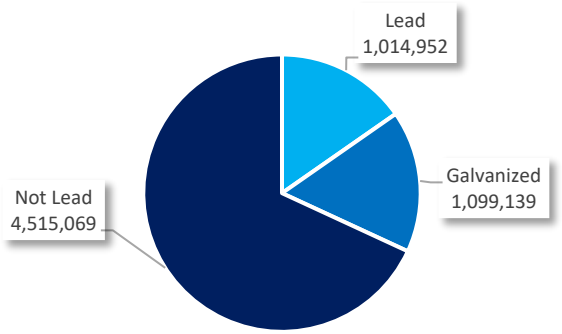


	Small Systems	Medium and Large Systems	All Systems
Unreported	50,422	1,071,206	1,121,628
Unknown	53,342	1,284,313	1,337,656
Not Lead	187,419	2,652,651	2,840,070
Galvanized	3,167	688,213	691,380
Lead	2,663	635,762	638,425
Total	297,014	6,332,146	6,629,160

Florida Service Lines – Estimated from Survey Responses



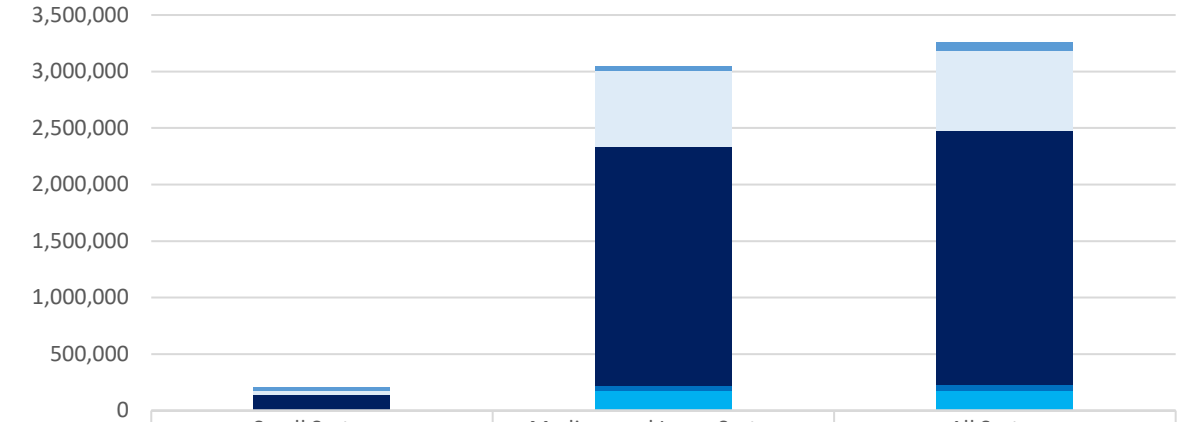
Florida Projected Service Lines



[8] The EPA identified concerns regarding unreliable reporting of information provided by Florida in the original 7th DWINSA and took actions as part of the 2023 update to address it to the extent possible at the time. Since the update, the EPA has considered and taken further corrective actions.

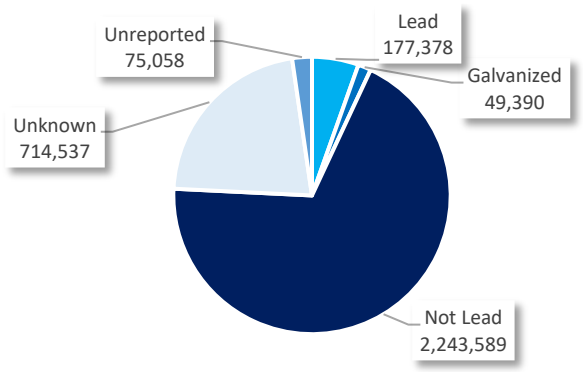
Georgia

Georgia Estimated Service Lines by System Size

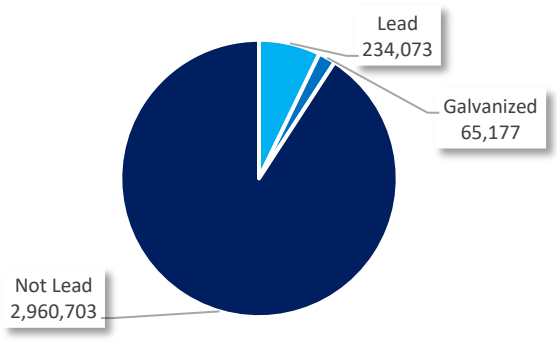


	Small Systems	Medium and Large Systems	All Systems
Unreported	34,902	40,157	75,058
Unknown	38,832	675,705	714,537
Not Lead	134,350	2,109,239	2,243,589
Galvanized	2,117	47,273	49,390
Lead	1,960	175,418	177,378
Total	212,160	3,047,792	3,259,952

Georgia Service Lines – Estimated from Survey Responses

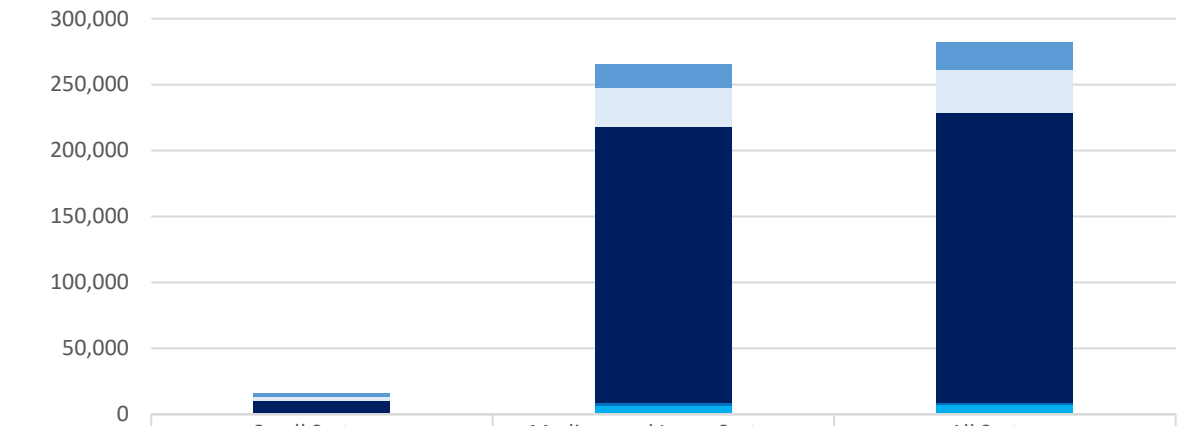


Georgia Projected Service Lines



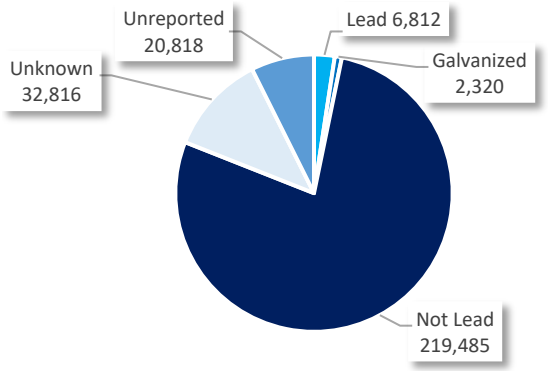
Hawaii

Hawaii Estimated Service Lines by System Size

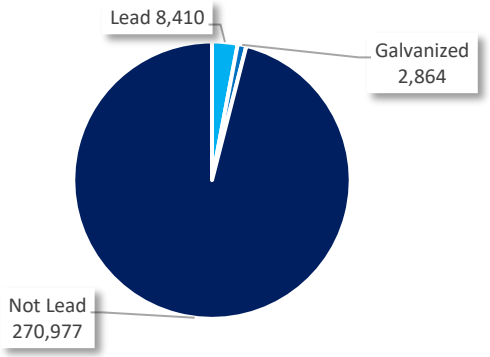


	Small Systems	Medium and Large Systems	All Systems
Unreported	2,650	18,168	20,818
Unknown	2,972	29,844	32,816
Not Lead	10,258	209,228	219,485
Galvanized	160	2,160	2,320
Lead	150	6,662	6,812
Total	16,190	266,061	282,251

Hawaii Service Lines – Estimated from Survey Responses

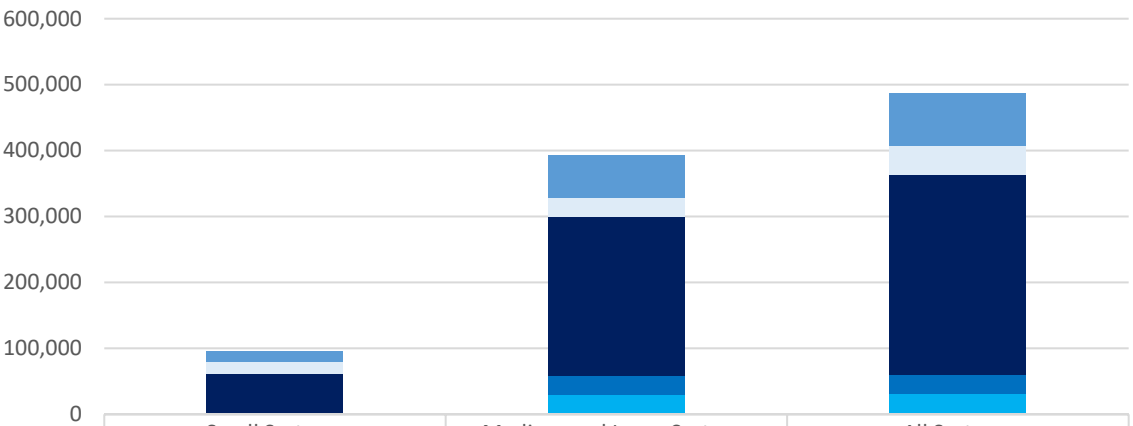


Hawaii Projected Service Lines



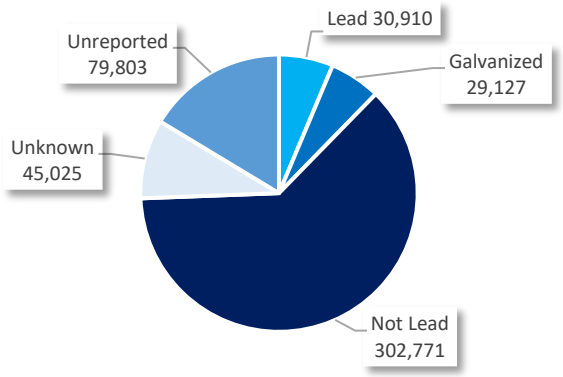
Idaho

Idaho Estimated Service Lines by System Size

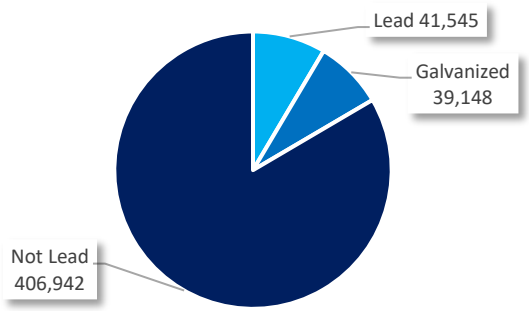


	Small Systems	Medium and Large Systems	All Systems
Unreported	16,036	63,767	79,803
Unknown	17,247	27,778	45,025
Not Lead	60,288	242,482	302,771
Galvanized	996	28,131	29,127
Lead	864	30,046	30,910
Total	95,431	392,204	487,635

Idaho Service Lines – Estimated from Survey Responses

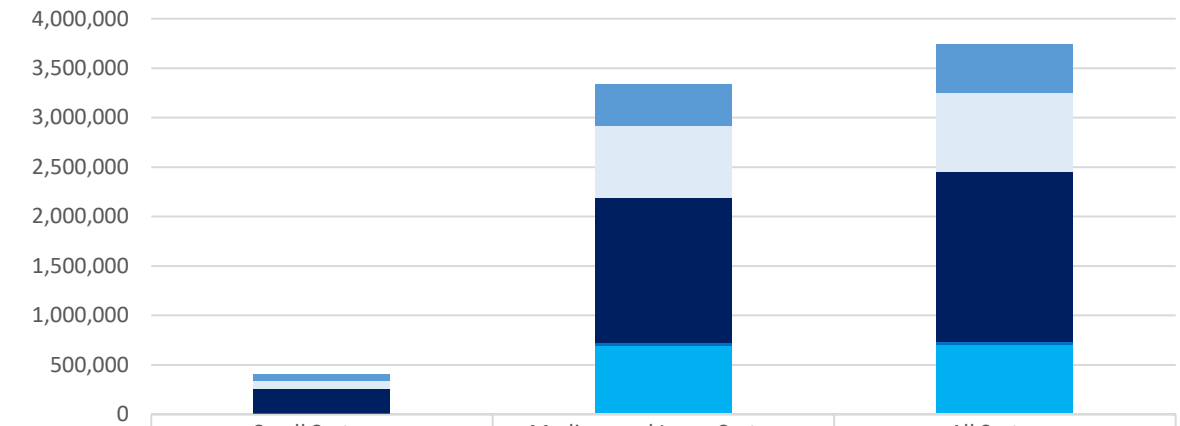


Idaho Projected Service Lines



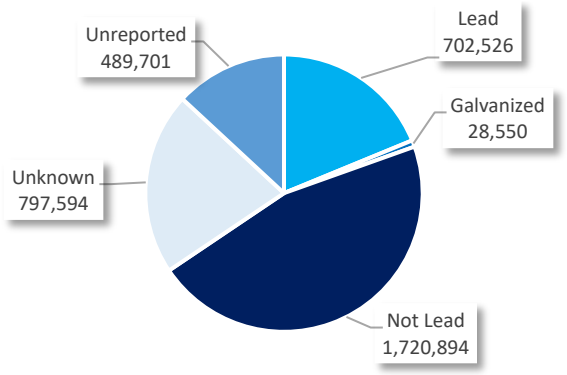
Illinois

Illinois Estimated Service Lines by System Size

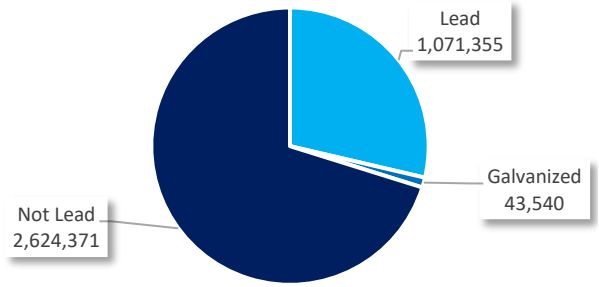


	Small Systems	Medium and Large Systems	All Systems
Unreported	65,423	424,278	489,701
Unknown	73,829	723,765	797,594
Not Lead	254,354	1,466,540	1,720,894
Galvanized	3,927	24,623	28,550
Lead	3,737	698,789	702,526
Total	401,270	3,337,996	3,739,266

Illinois Service Lines – Estimated from Survey Responses

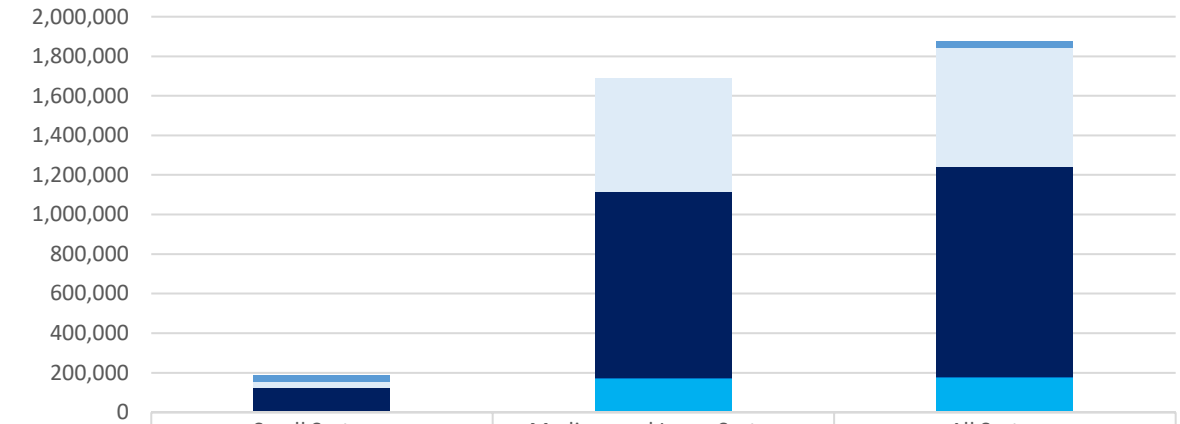


Illinois Projected Service Lines



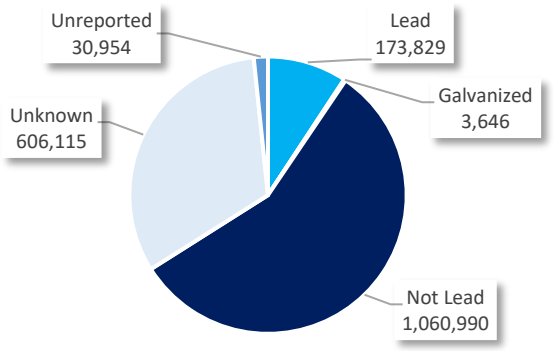
Indiana

Indiana Estimated Service Lines by System Size

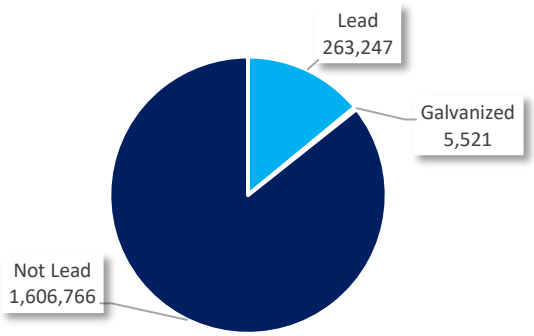


	Small Systems	Medium and Large Systems	All Systems
Unreported	30,954	0	30,954
Unknown	34,462	571,653	606,115
Not Lead	119,208	941,782	1,060,990
Galvanized	1,877	1,769	3,646
Lead	1,739	172,090	173,829
Total	188,240	1,687,294	1,875,534

Indiana Service Lines – Estimated from Survey Responses

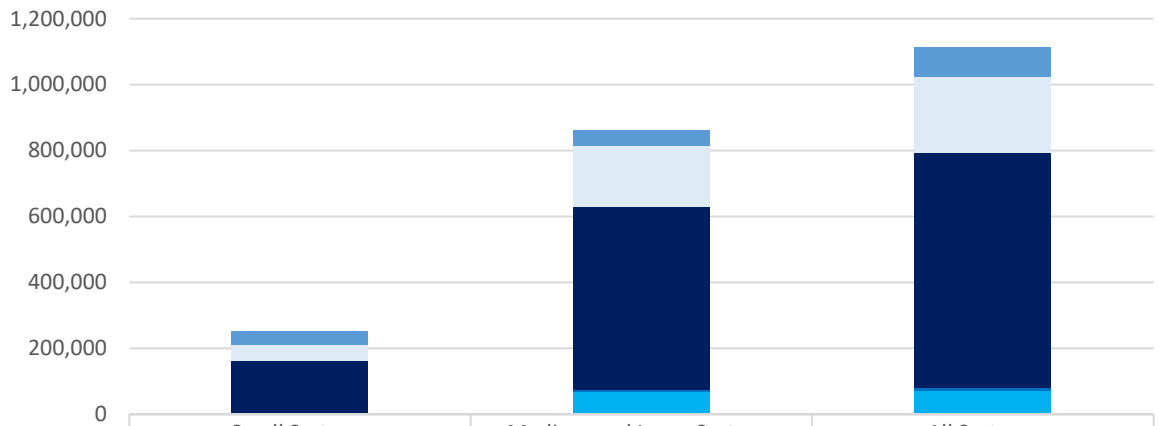


Indiana Projected Service Lines



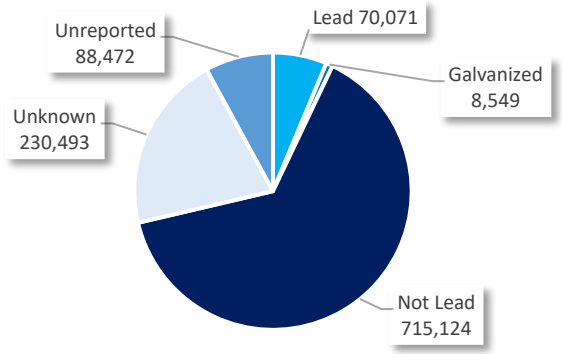
Iowa

Iowa Estimated Service Lines by System Size

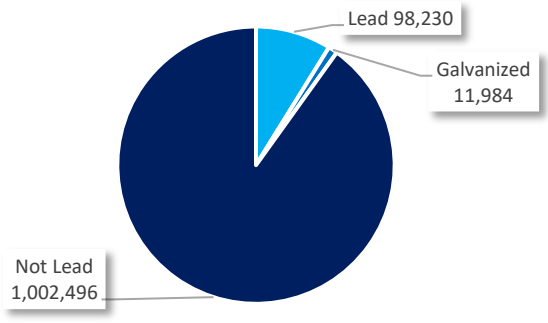


	Small Systems	Medium and Large Systems	All Systems
Unreported	41,215	47,257	88,472
Unknown	46,152	184,341	230,493
Not Lead	159,369	555,755	715,124
Galvanized	2,488	6,060	8,549
Lead	2,332	67,739	70,071
Total	251,556	861,153	1,112,709

Iowa Service Lines – Estimated from Survey Responses

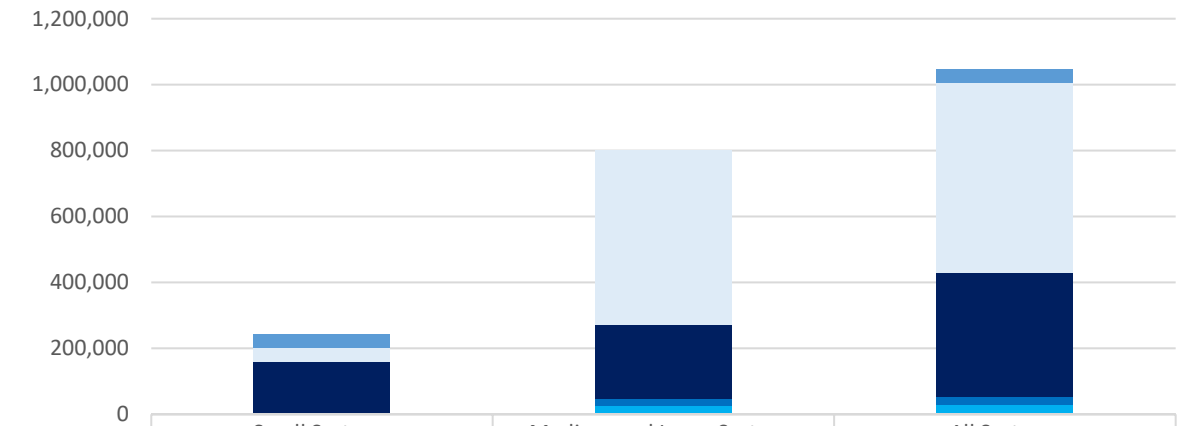


Iowa Projected Service Lines



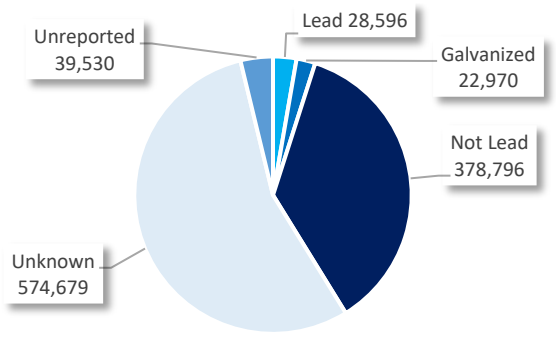
Kansas

Kansas Estimated Service Lines by System Size

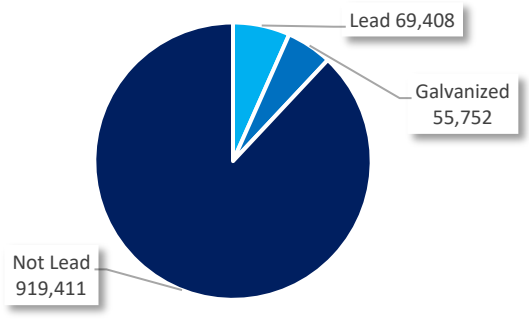


	Small Systems	Medium and Large Systems	All Systems
Unreported	39,530	0	39,530
Unknown	44,613	530,066	574,679
Not Lead	153,696	225,099	378,796
Galvanized	2,373	20,597	22,970
Lead	2,258	26,338	28,596
Total	242,470	802,100	1,044,570

Kansas Service Lines – Estimated from Survey Responses

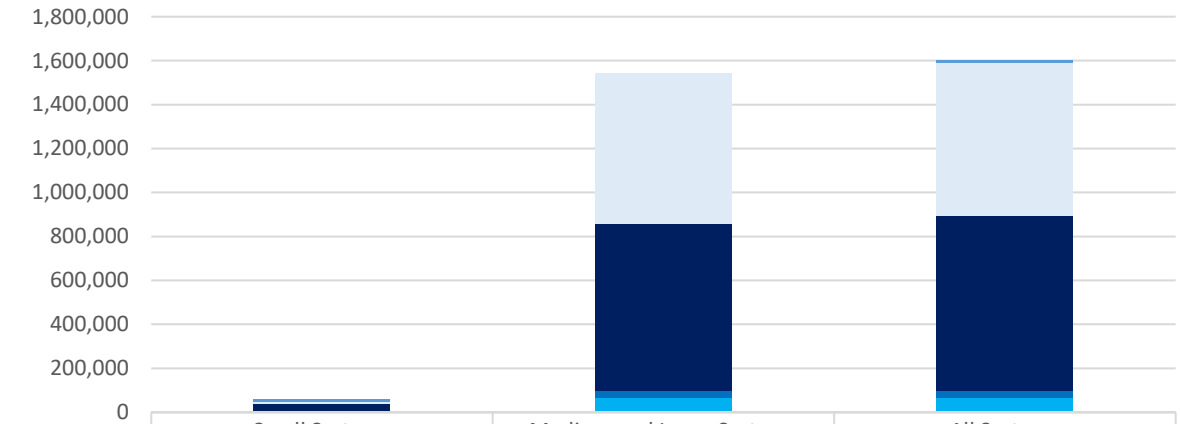


Kansas Projected Service Lines



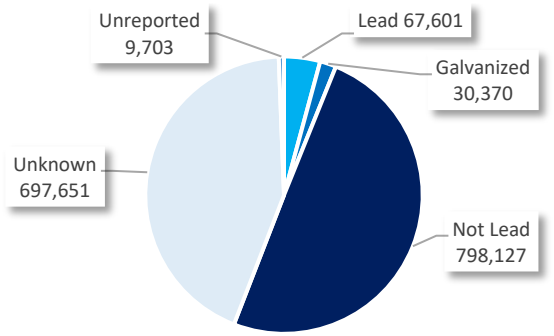
Kentucky

Kentucky Estimated Service Lines by System Size

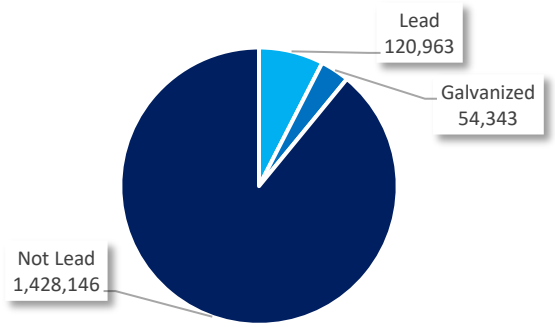


	Small Systems	Medium and Large Systems	All Systems
Unreported	9,703	0	9,703
Unknown	10,919	686,732	697,651
Not Lead	37,648	760,479	798,127
Galvanized	584	29,786	30,370
Lead	552	67,049	67,601
Total	59,406	1,544,046	1,603,452

Kentucky Service Lines – Estimated from Survey Responses

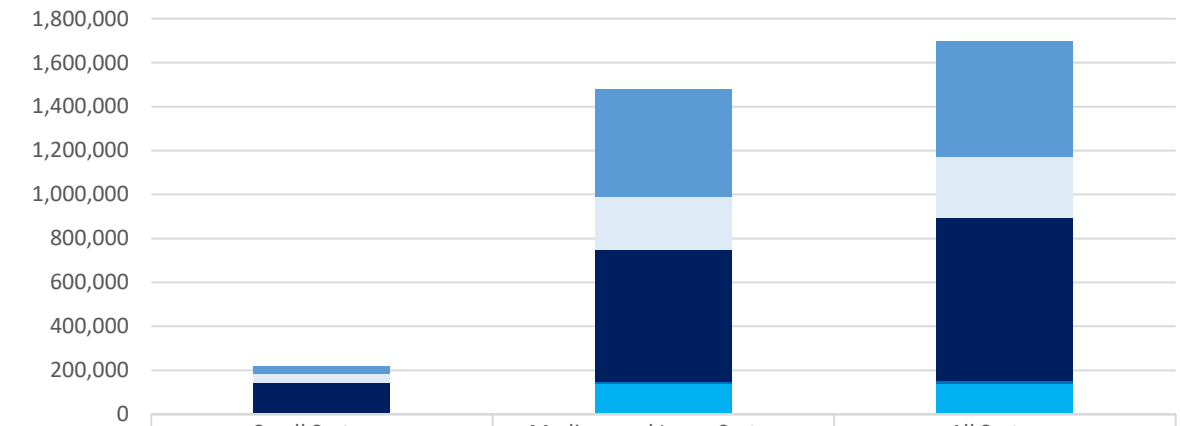


Kentucky Projected Service Lines



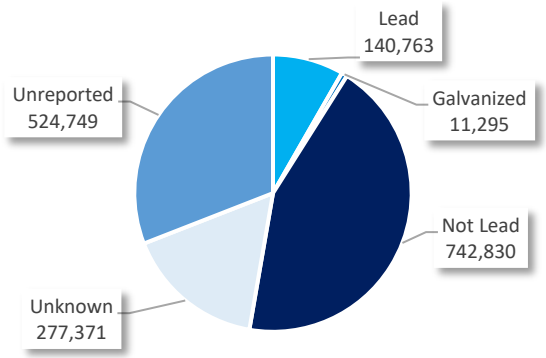
Louisiana

Louisiana Estimated Service Lines by System Size

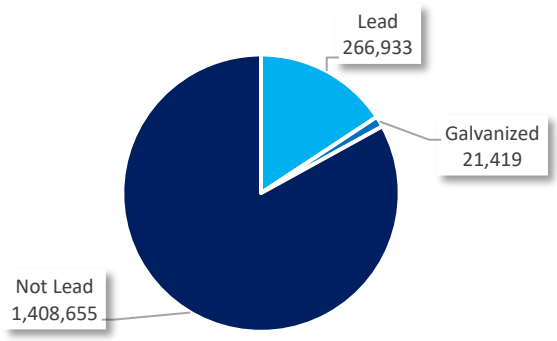


	Small Systems	Medium and Large Systems	All Systems
Unreported	35,803	488,946	524,749
Unknown	40,468	236,903	277,371
Not Lead	139,352	603,478	742,830
Galvanized	2,147	9,148	11,295
Lead	2,049	138,714	140,763
Total	219,818	1,477,189	1,697,007

Louisiana Service Lines – Estimated from Survey Responses

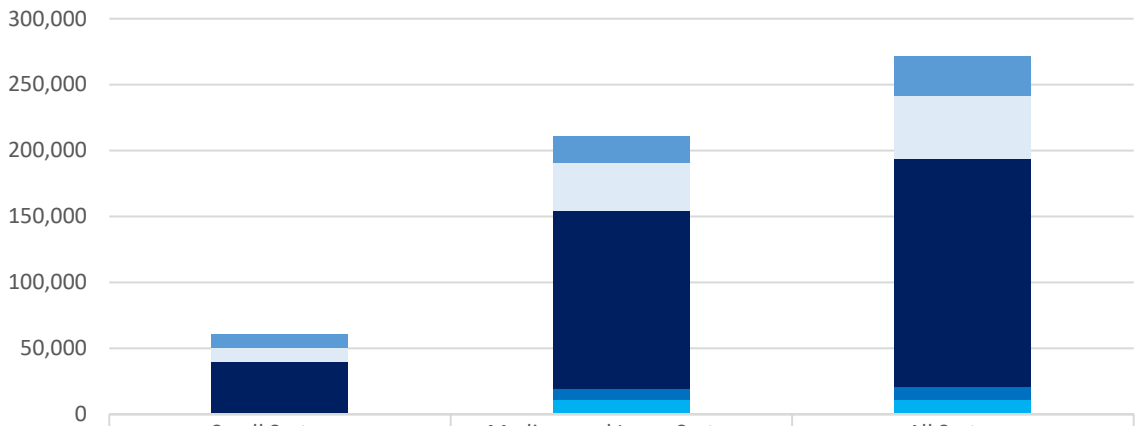


Louisiana Projected Service Lines



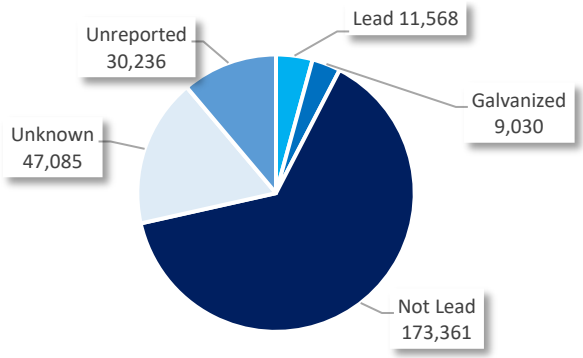
Maine

Maine Estimated Service Lines by System Size

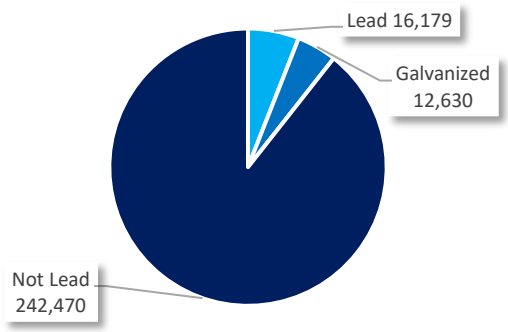


	Small Systems	Medium and Large Systems	All Systems
Unreported	9,897	20,339	30,236
Unknown	11,110	35,975	47,085
Not Lead	38,336	135,025	173,361
Galvanized	596	8,434	9,030
Lead	562	11,006	11,568
Total	60,500	210,779	271,279

Maine Service Lines – Estimated from Survey Responses

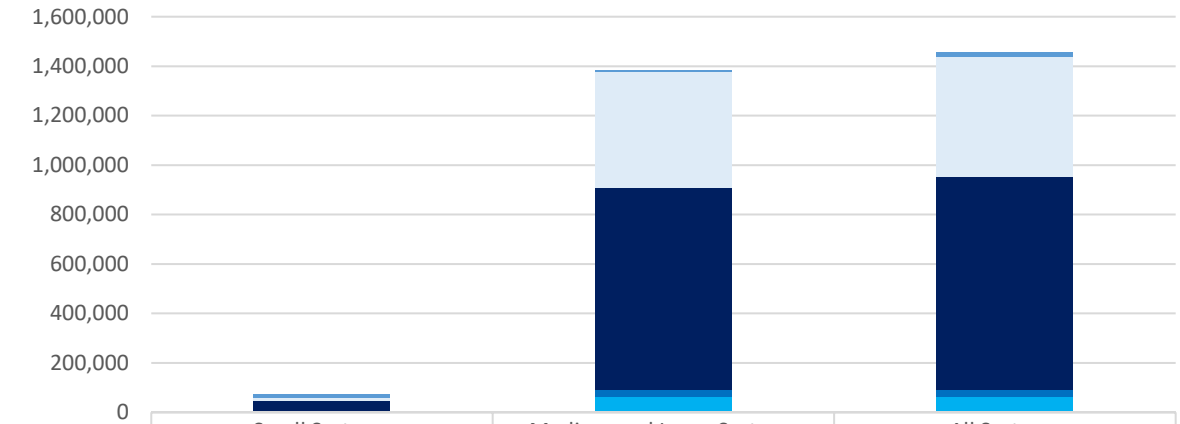


Maine Projected Service Lines



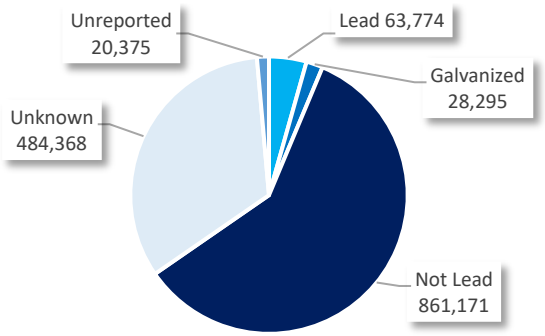
Maryland

Maryland Estimated Service Lines by System Size

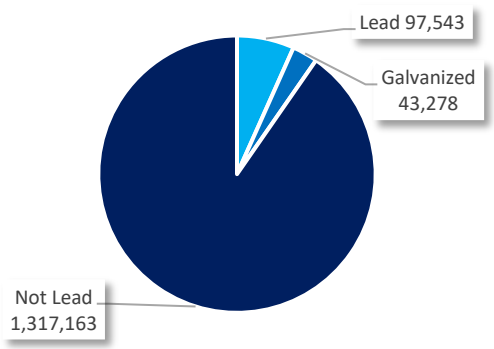


	Small Systems	Medium and Large Systems	All Systems
Unreported	12,055	8,320	20,375
Unknown	13,183	471,186	484,368
Not Lead	45,848	815,323	861,171
Galvanized	740	27,555	28,295
Lead	663	63,112	63,774
Total	72,488	1,385,496	1,457,984

Maryland Service Lines – Estimated from Survey Responses

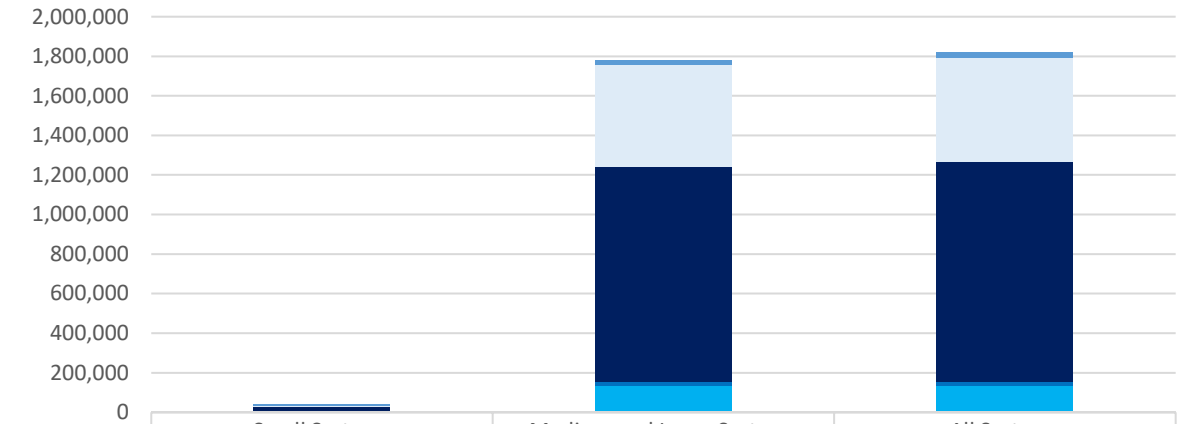


Maryland Projected Service Lines



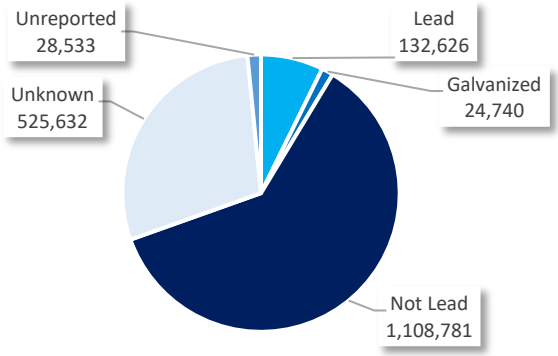
Massachusetts

Massachusetts Estimated Service Lines by System Size

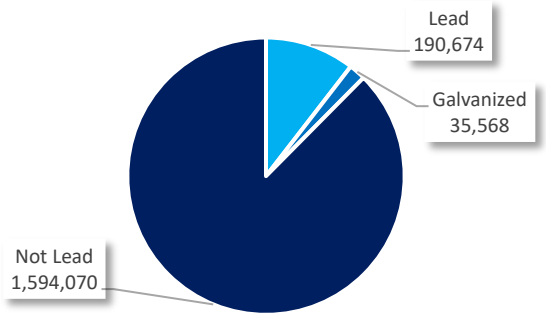


	Small Systems	Medium and Large Systems	All Systems
Unreported	6,899	21,633	28,533
Unknown	7,306	518,327	525,632
Not Lead	25,661	1,083,120	1,108,781
Galvanized	433	24,307	24,740
Lead	365	132,262	132,626
Total	40,663	1,779,649	1,820,312

Massachusetts Service Lines – Estimated from Survey Responses

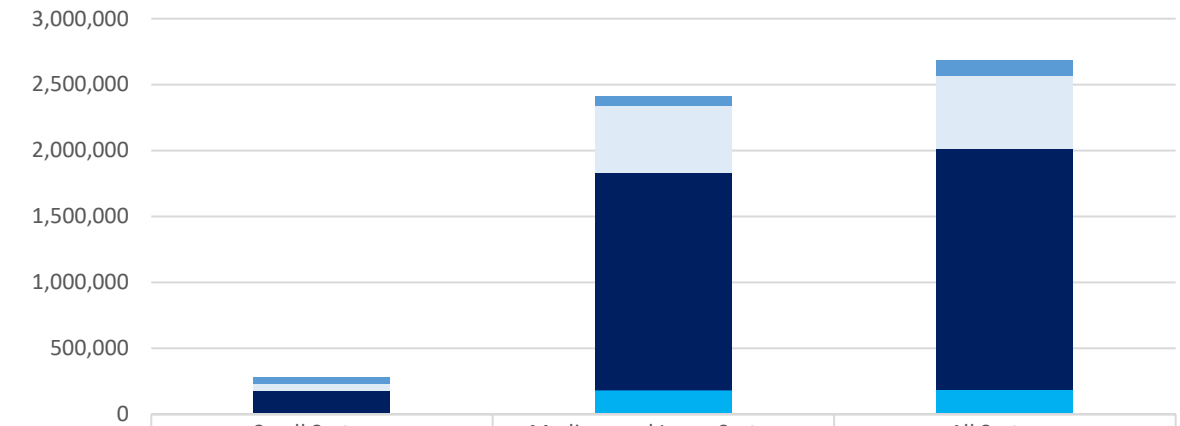


Massachusetts Projected Service Lines



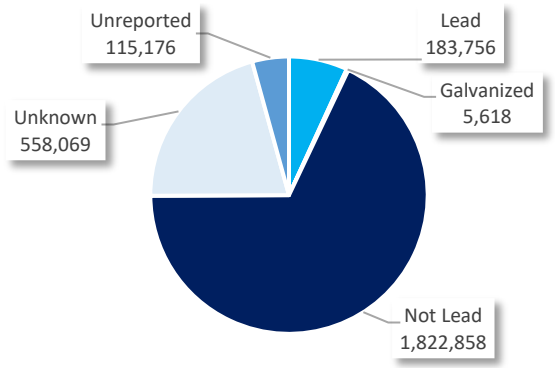
Michigan

Michigan Estimated Service Lines by System Size

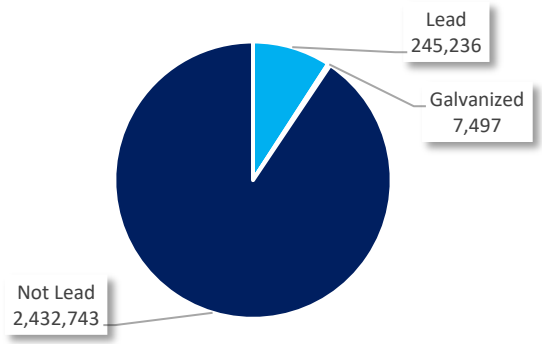


	Small Systems	Medium and Large Systems	All Systems
Unreported	46,026	69,150	115,176
Unknown	50,659	507,410	558,069
Not Lead	175,841	1,647,017	1,822,858
Galvanized	2,813	2,804	5,618
Lead	2,551	181,205	183,756
Total	277,890	2,407,586	2,685,476

Michigan Service Lines – Estimated from Survey Responses

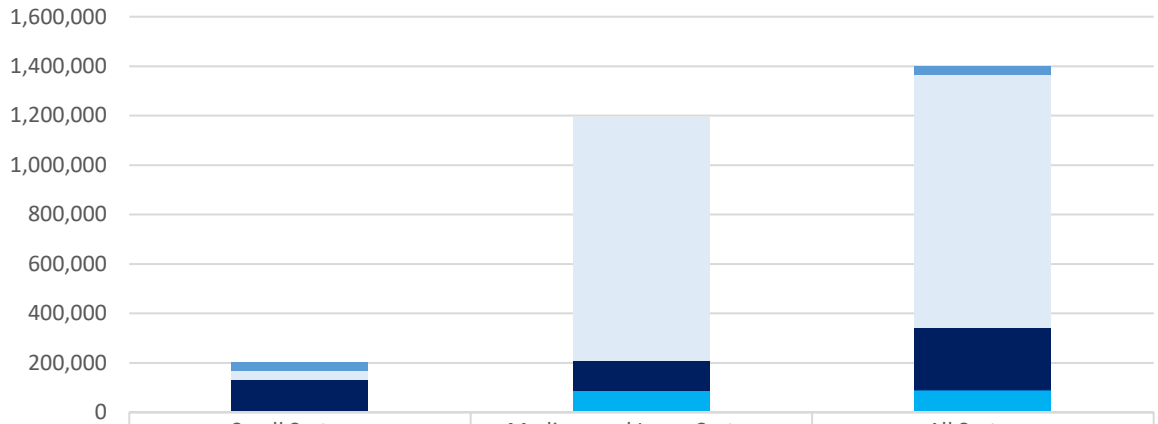


Michigan Projected Service Lines



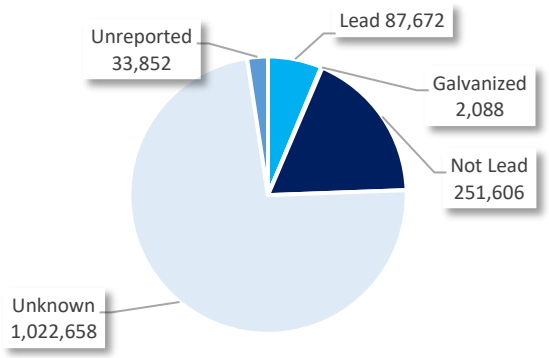
Minnesota

Minnesota Estimated Service Lines by System Size

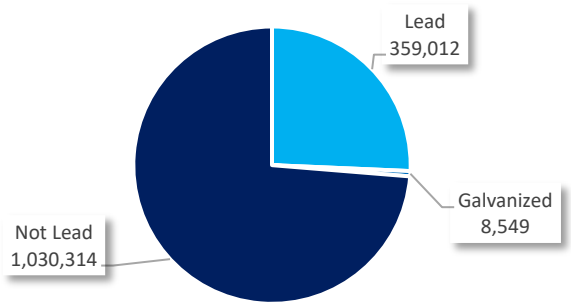


	Small Systems	Medium and Large Systems	All Systems
Unreported	33,852	0	33,852
Unknown	36,788	985,870	1,022,658
Not Lead	128,190	123,416	251,606
Galvanized	2,088	0	2,088
Lead	1,847	85,825	87,672
Total	202,765	1,195,111	1,397,876

Minnesota Service Lines – Estimated from Survey Responses

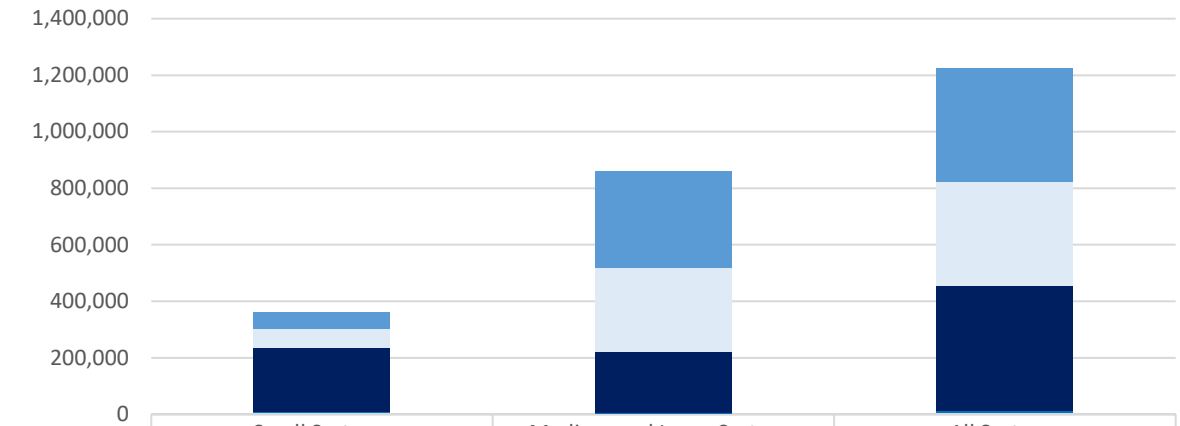


Minnesota Projected Service Lines



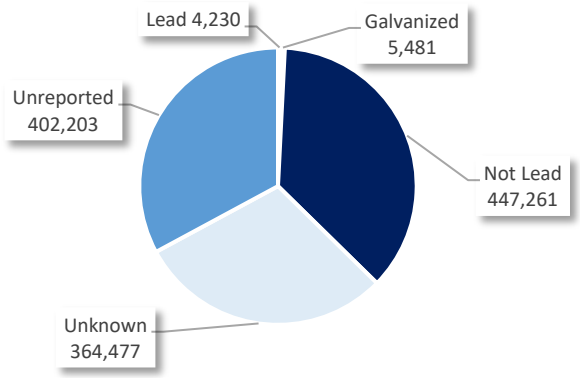
Mississippi

Mississippi Estimated Service Lines by System Size

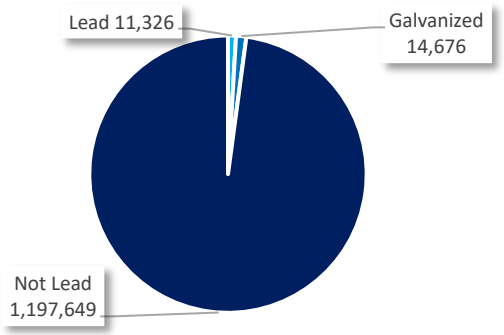


	Small Systems	Medium and Large Systems	All Systems
Unreported	59,337	342,866	402,203
Unknown	66,471	298,005	364,477
Not Lead	229,507	217,755	447,261
Galvanized	3,581	1,899	5,481
Lead	3,359	870	4,230
Total	362,255	861,396	1,223,651

Mississippi Service Lines – Estimated from Survey Responses

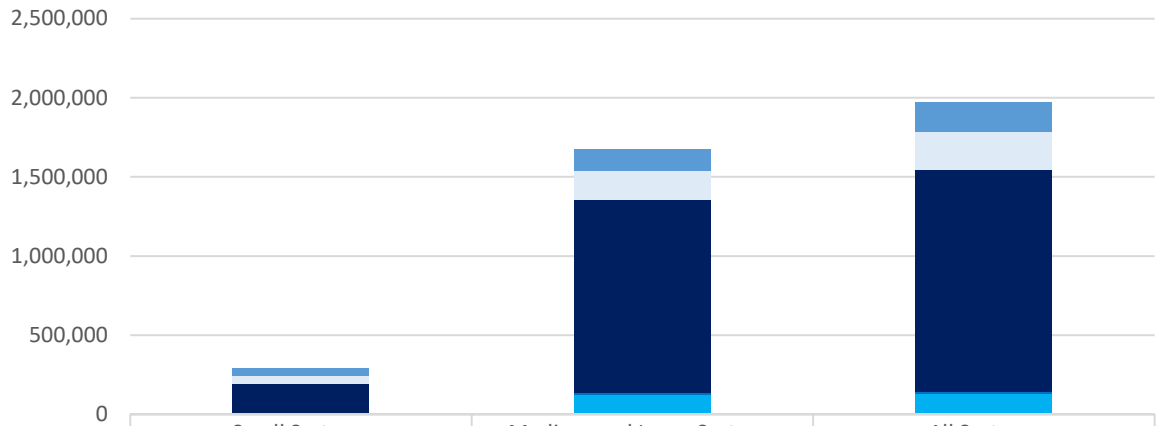


Mississippi Projected Service Lines



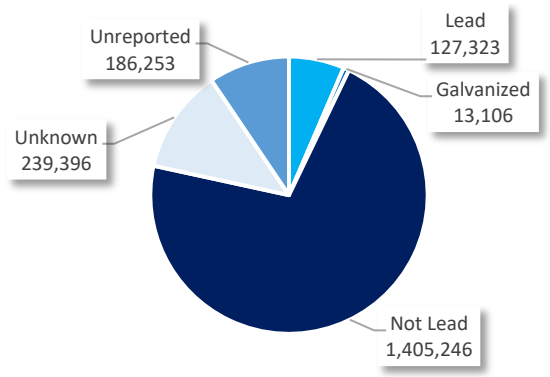
Missouri

Missouri Estimated Service Lines by System Size

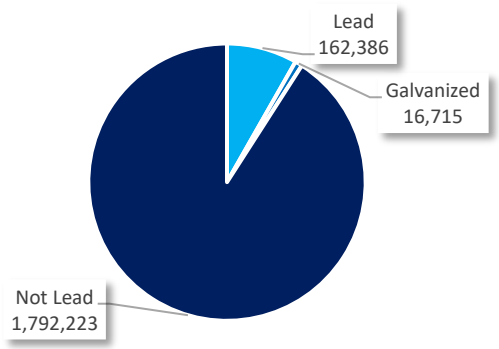


	Small Systems	Medium and Large Systems	All Systems
Unreported	48,714	137,539	186,253
Unknown	53,580	185,816	239,396
Not Lead	186,018	1,219,228	1,405,246
Galvanized	2,979	10,127	13,106
Lead	2,697	124,626	127,323
Total	293,988	1,677,336	1,971,324

Missouri Service Lines – Estimated from Survey Responses

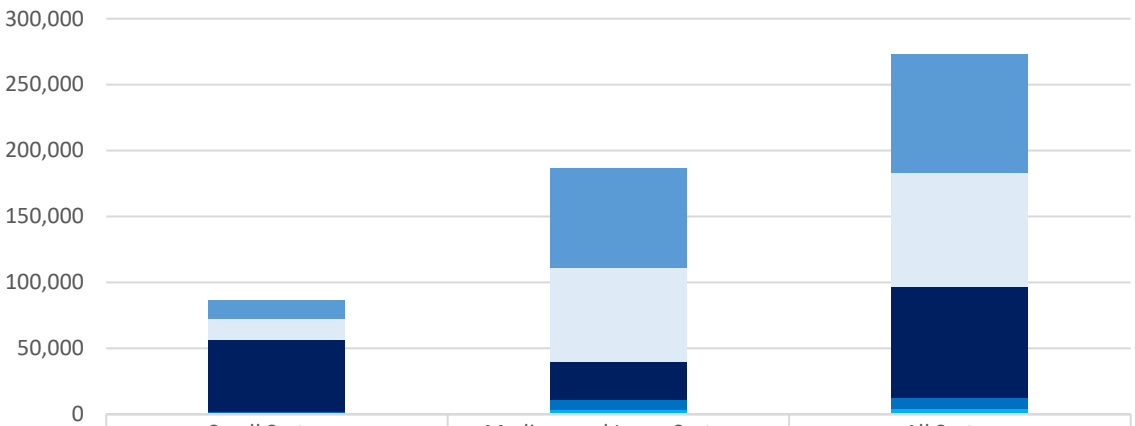


Missouri Projected Service Lines



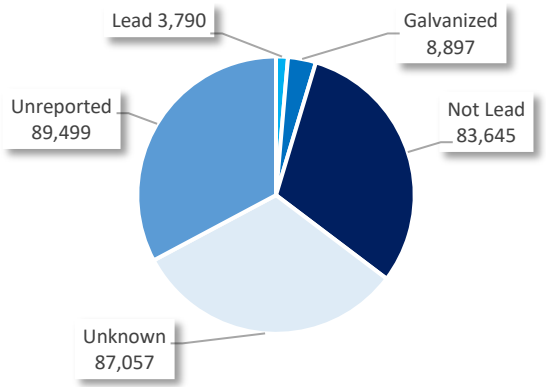
Montana

Montana Estimated Service Lines by System Size

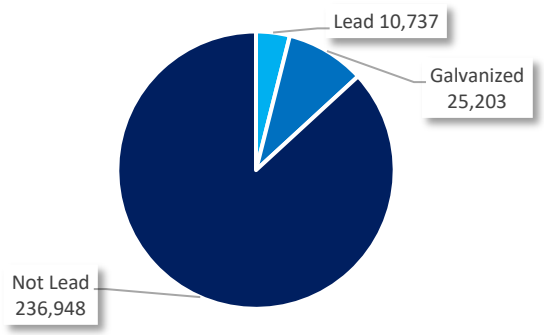


	Small Systems	Medium and Large Systems	All Systems
Unreported	14,312	75,187	89,499
Unknown	15,788	71,269	87,057
Not Lead	54,764	28,881	83,645
Galvanized	873	8,023	8,897
Lead	795	2,995	3,790
Total	86,532	186,356	272,888

Montana Service Lines – Estimated from Survey Responses

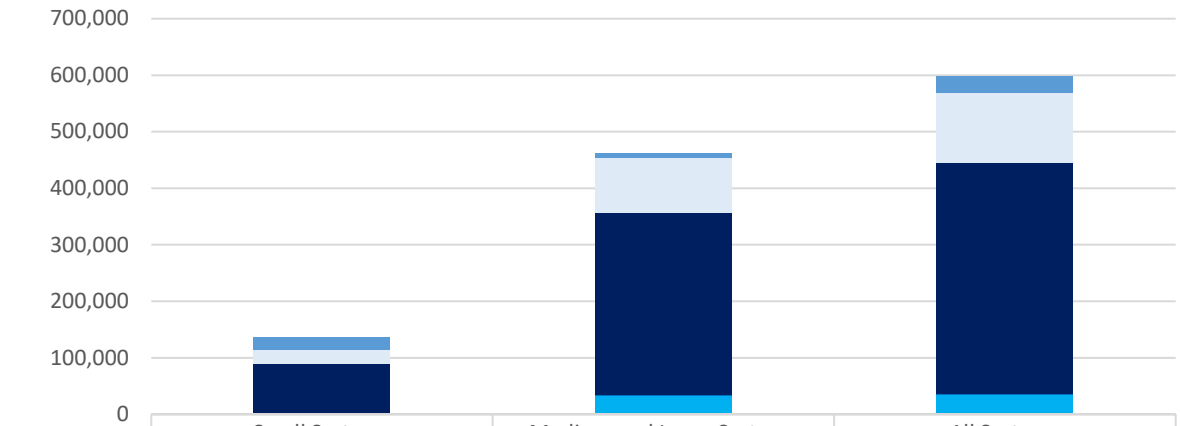


Montana Projected Service Lines



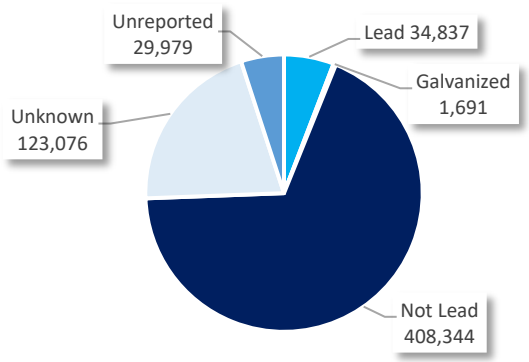
Nebraska

Nebraska Estimated Service Lines by System Size

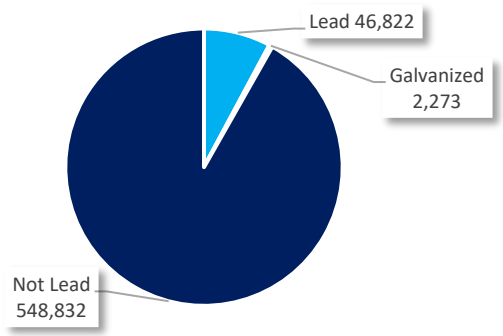


	Small Systems	Medium and Large Systems	All Systems
Unreported	22,341	7,638	29,979
Unknown	24,984	98,091	123,076
Not Lead	86,308	322,036	408,344
Galvanized	1,350	341	1,691
Lead	1,262	33,574	34,837
Total	136,246	461,681	597,927

Nebraska Service Lines – Estimated from Survey Responses

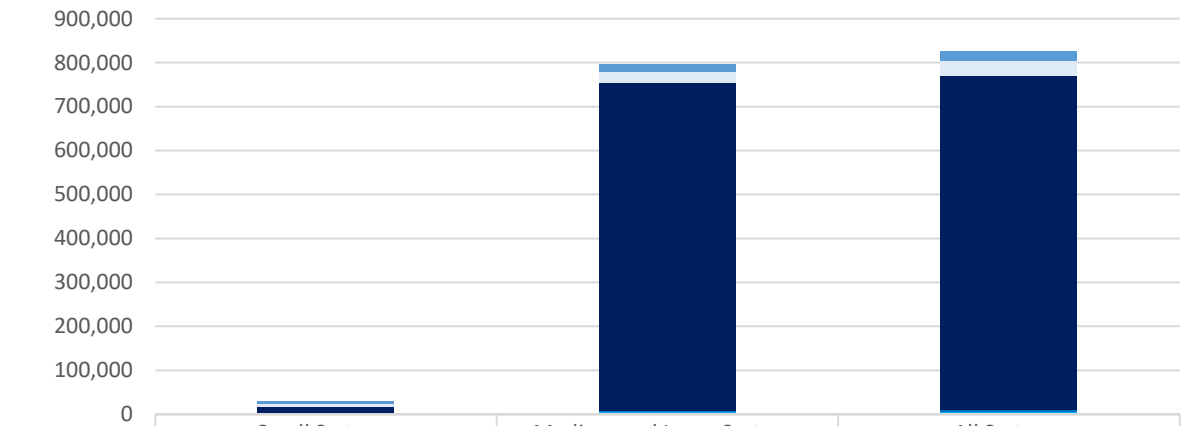


Nebraska Projected Service Lines



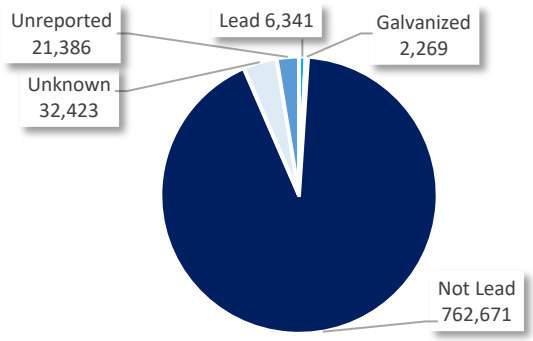
Nevada

Nevada Estimated Service Lines by System Size

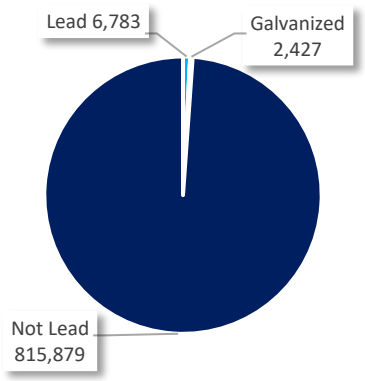


	Small Systems	Medium and Large Systems	All Systems
Unreported	4,788	16,598	21,386
Unknown	5,179	27,244	32,423
Not Lead	18,072	744,599	762,671
Galvanized	296	1,973	2,269
Lead	260	6,081	6,341
Total	28,595	796,495	825,090

Nevada Service Lines – Estimated from Survey Responses

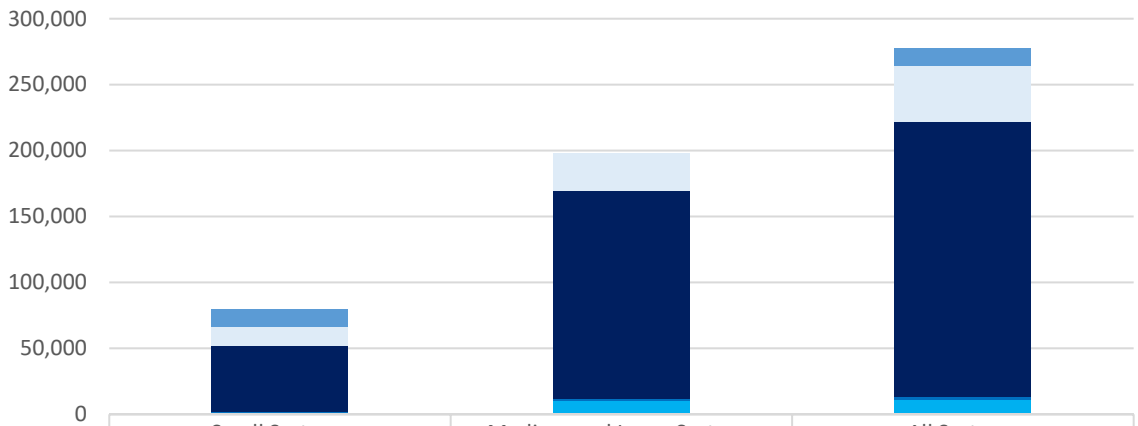


Nevada Projected Service Lines



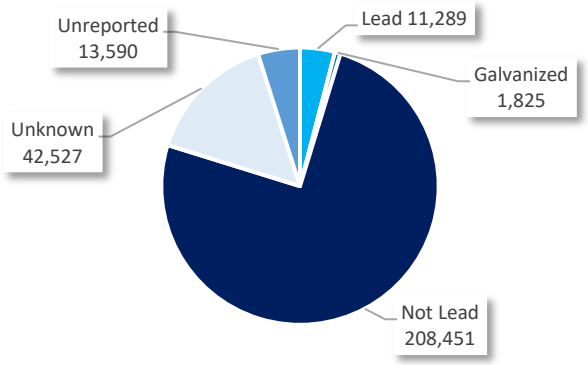
New Hampshire

New Hampshire Estimated Service Lines by System Size

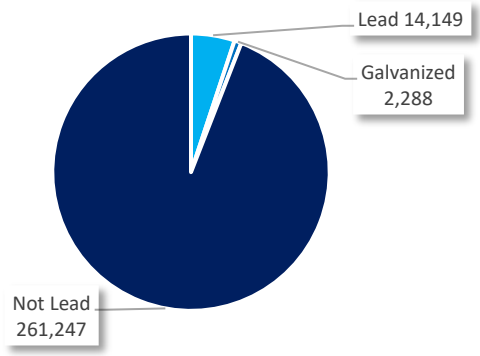


	Small Systems	Medium and Large Systems	All Systems
Unreported	13,590	0	13,590
Unknown	14,313	28,214	42,527
Not Lead	50,360	158,091	208,451
Galvanized	856	969	1,825
Lead	714	10,575	11,289
Total	79,833	197,850	277,683

New Hampshire Service Lines – Estimated from Survey Responses

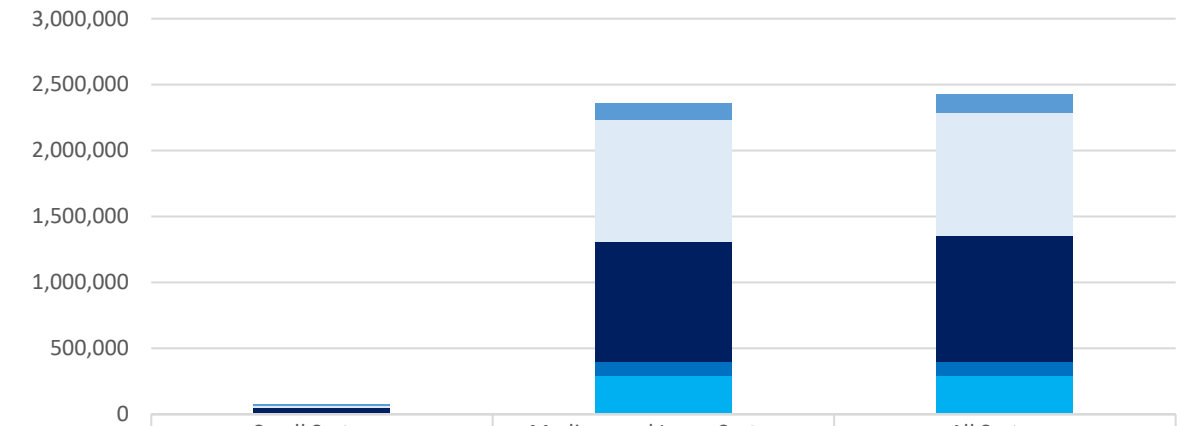


New Hampshire Projected Service Lines



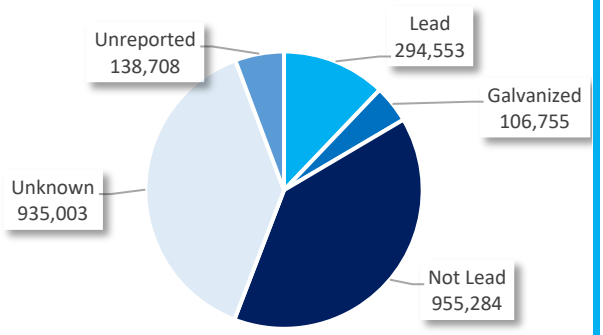
New Jersey

New Jersey Estimated Service Lines by System Size

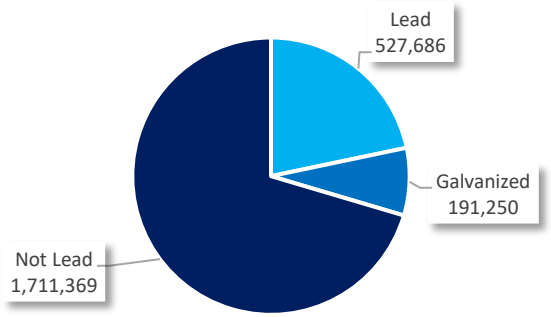


	Small Systems	Medium and Large Systems	All Systems
Unreported	12,126	126,582	138,708
Unknown	13,309	921,694	935,003
Not Lead	46,236	909,048	955,284
Galvanized	743	106,013	106,755
Lead	670	293,884	294,553
Total	73,083	2,357,221	2,430,304

New Jersey Service Lines – Estimated from Survey Responses

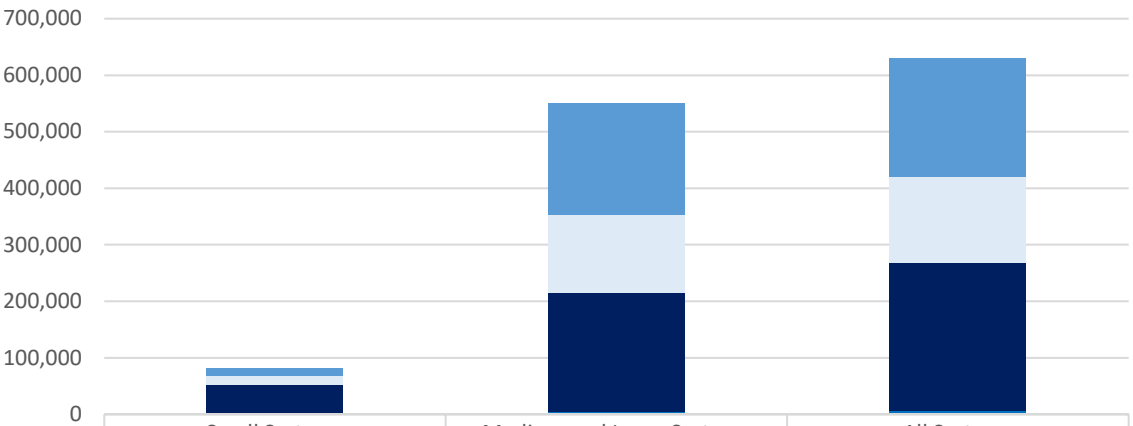


New Jersey Projected Service Lines



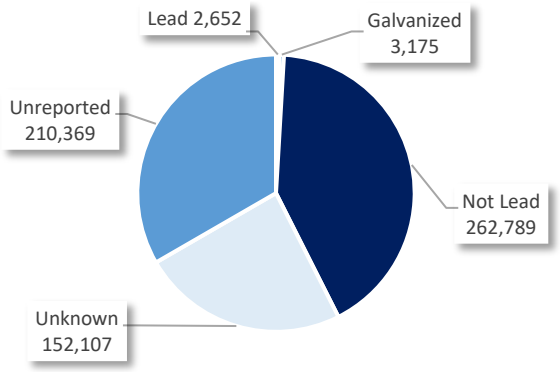
New Mexico

New Mexico Estimated Service Lines by System Size

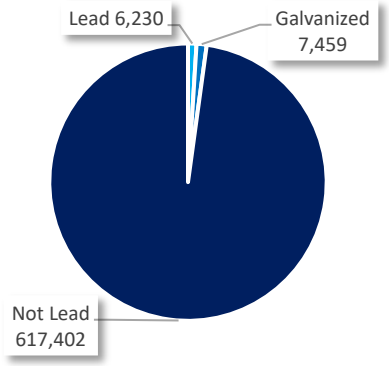


	Small Systems	Medium and Large Systems	All Systems
Unreported	13,521	196,848	210,369
Unknown	14,794	137,312	152,107
Not Lead	51,444	211,346	262,789
Galvanized	830	2,345	3,175
Lead	744	1,908	2,652
Total	81,332	549,759	631,091

New Mexico Service Lines – Estimated from Survey Responses

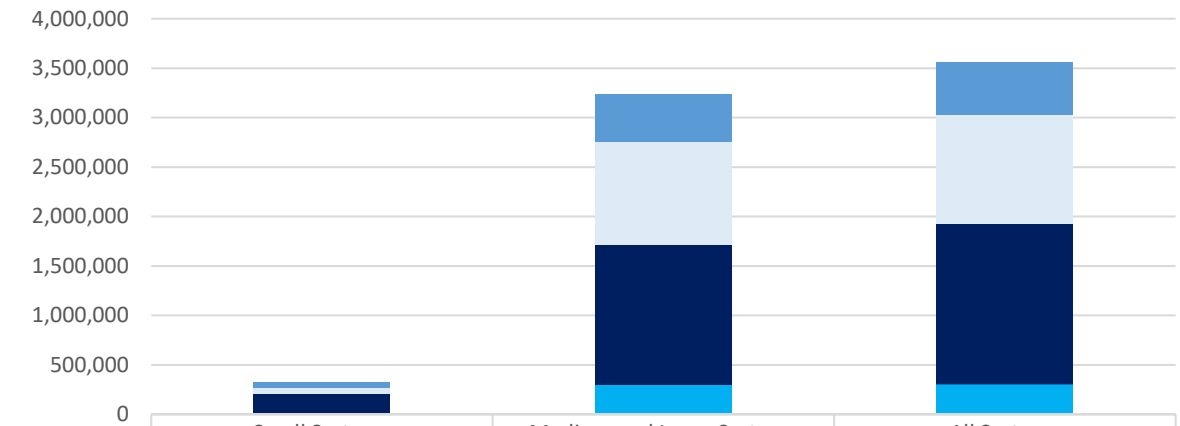


New Mexico Projected Service Lines



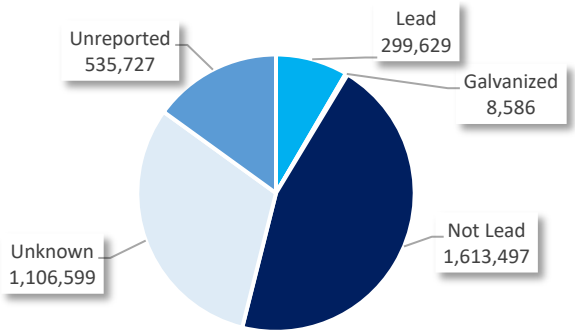
New York

New York Estimated Service Lines by System Size

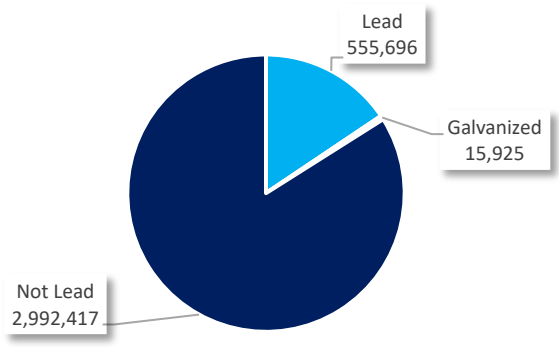


	Small Systems	Medium and Large Systems	All Systems
Unreported	52,996	482,731	535,727
Unknown	59,501	1,047,098	1,106,599
Not Lead	205,303	1,408,194	1,613,497
Galvanized	3,193	5,393	8,586
Lead	3,008	296,621	299,629
Total	324,001	3,240,037	3,564,038

New York Service Lines – Estimated from Survey Responses

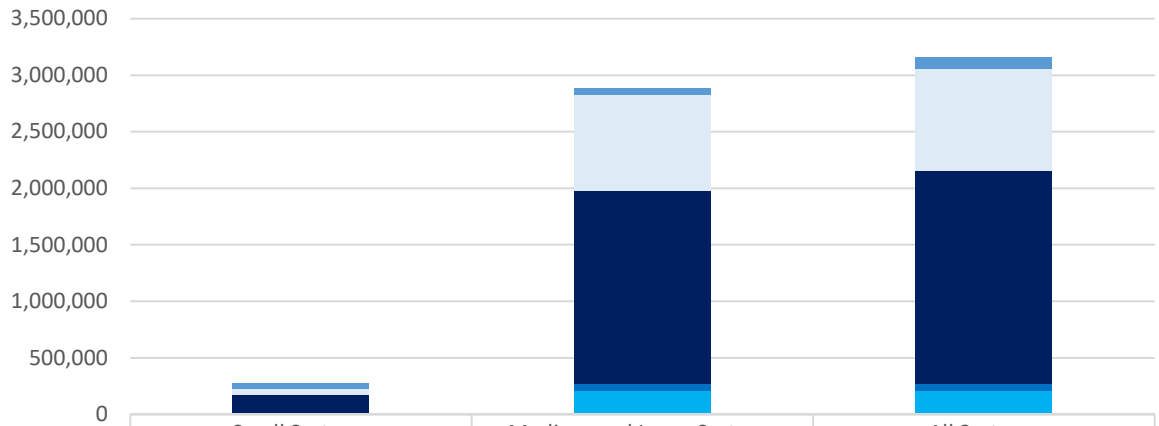


New York Projected Service Lines



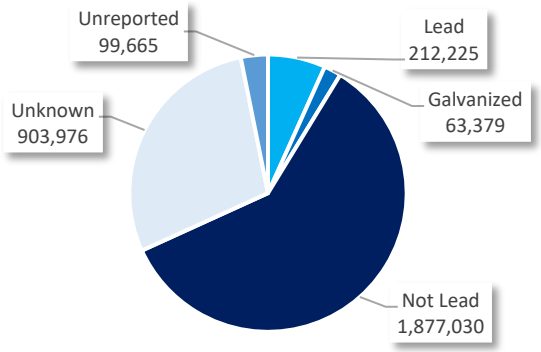
North Carolina

North Carolina Estimated Service Lines by System Size

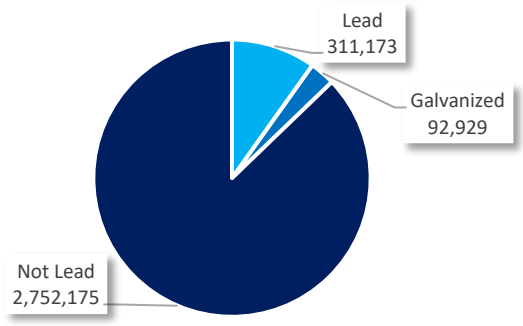


	Small Systems	Medium and Large Systems	All Systems
Unreported	45,353	54,312	99,665
Unknown	49,462	854,514	903,976
Not Lead	172,167	1,704,863	1,877,030
Galvanized	2,790	60,589	63,379
Lead	2,486	209,740	212,225
Total	272,258	2,884,018	3,156,276

North Carolina Service Lines – Estimated from Survey Responses

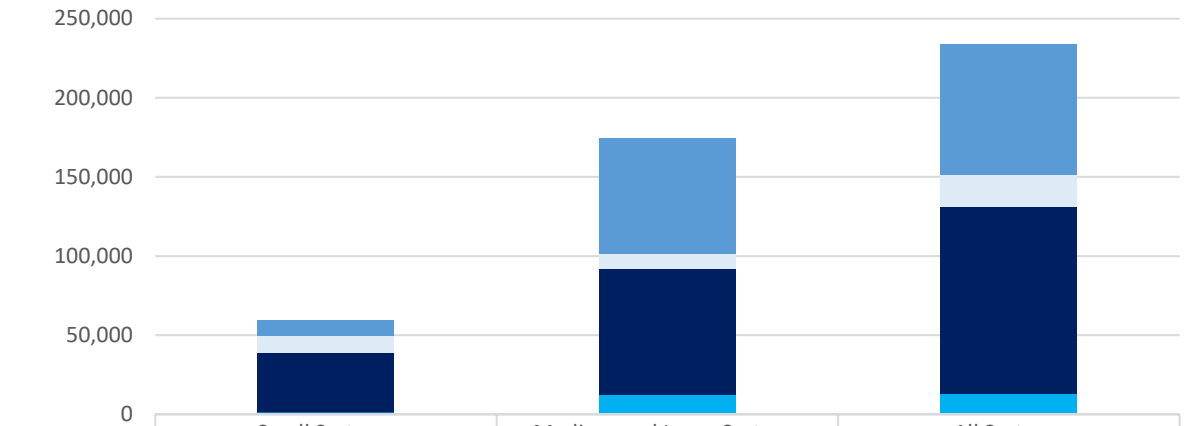


North Carolina Projected Service Lines



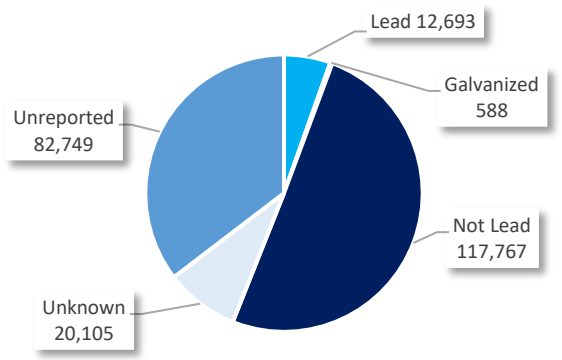
North Dakota

North Dakota Estimated Service Lines by System Size

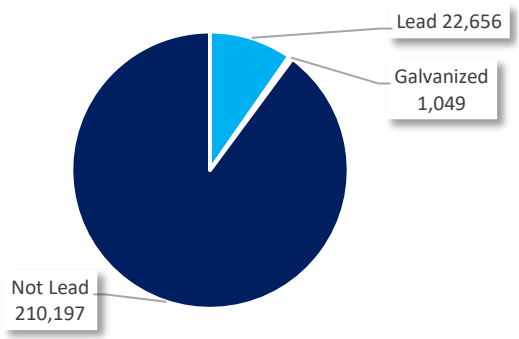


	Small Systems	Medium and Large Systems	All Systems
Unreported	9,767	72,982	82,749
Unknown	10,990	9,116	20,105
Not Lead	37,895	79,872	117,767
Galvanized	588	0	588
Lead	556	12,138	12,693
Total	59,795	174,107	233,902

North Dakota Service Lines – Estimated from Survey Responses

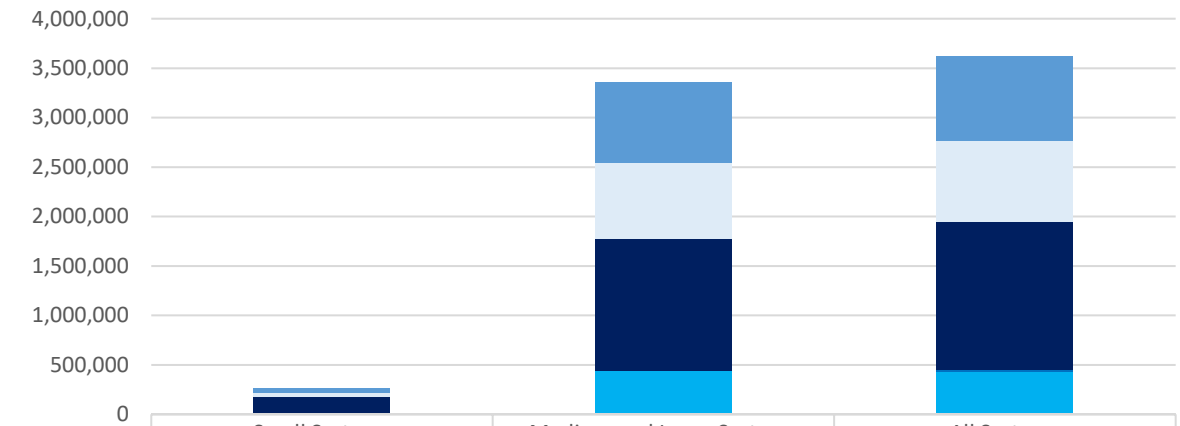


North Dakota Projected Service Lines



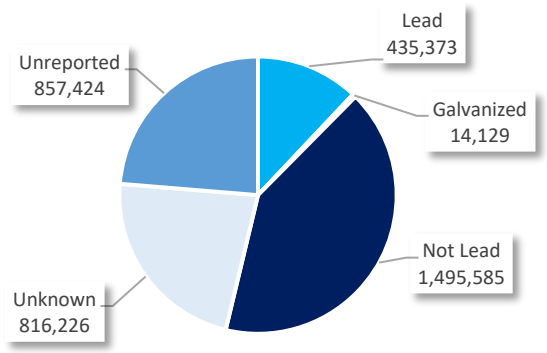
Ohio

Ohio Estimated Service Lines by System Size

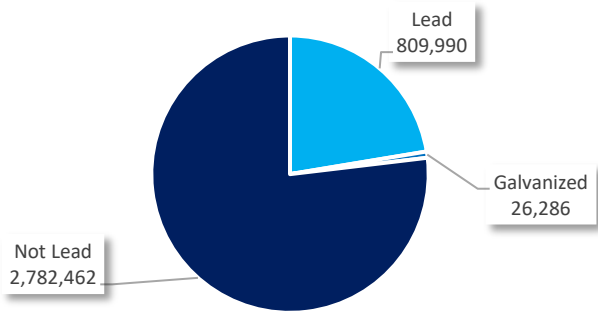


	Small Systems	Medium and Large Systems	All Systems
Unreported	43,607	813,817	857,424
Unknown	48,474	767,751	816,226
Not Lead	167,757	1,327,829	1,495,585
Galvanized	2,647	11,482	14,129
Lead	2,446	432,927	435,373
Total	264,930	3,353,807	3,618,737

Ohio Service Lines – Estimated from Survey Responses

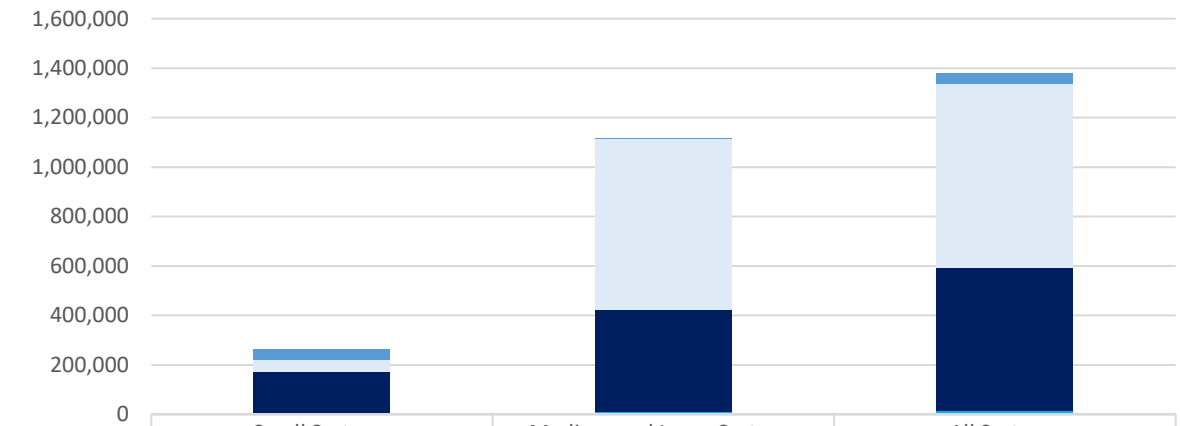


Ohio Projected Service Lines



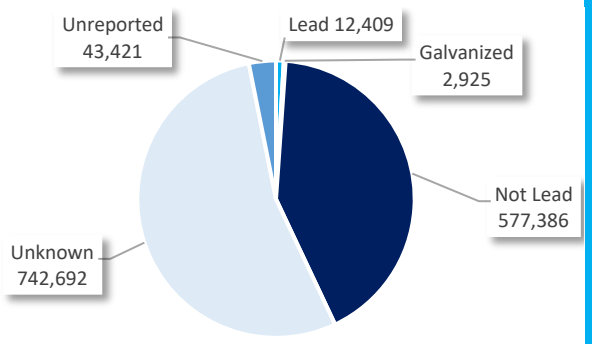
Oklahoma

Oklahoma Estimated Service Lines by System Size

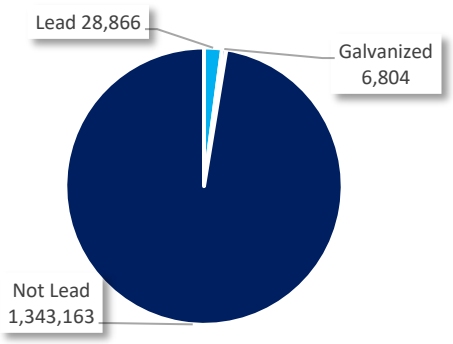


	Small Systems	Medium and Large Systems	All Systems
Unreported	43,077	344	43,421
Unknown	48,516	694,177	742,692
Not Lead	167,244	410,142	577,386
Galvanized	2,590	335	2,925
Lead	2,454	9,954	12,409
Total	263,881	1,114,951	1,378,832

Oklahoma Service Lines – Estimated from Survey Responses

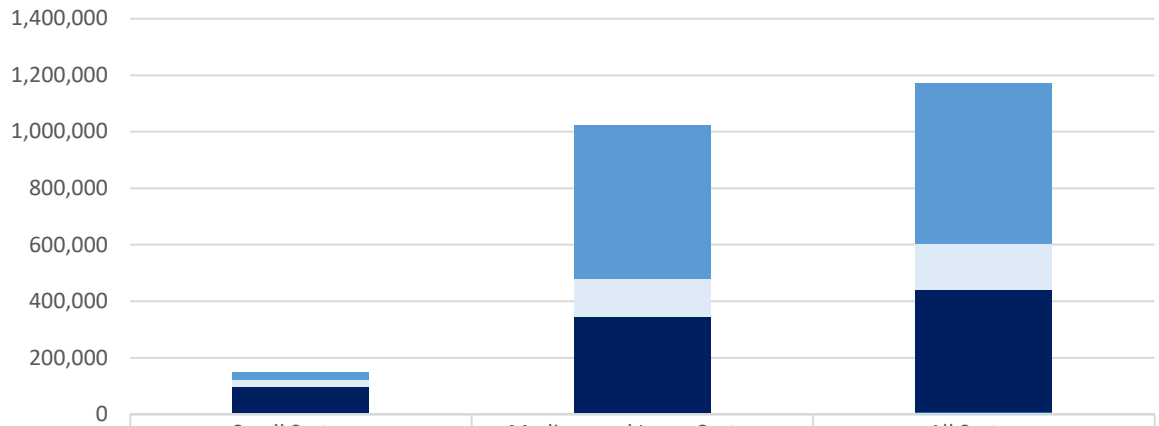


Oklahoma Projected Service Lines



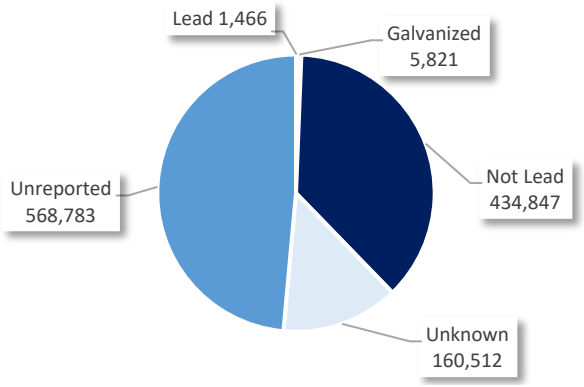
Oregon

Oregon Estimated Service Lines by System Size

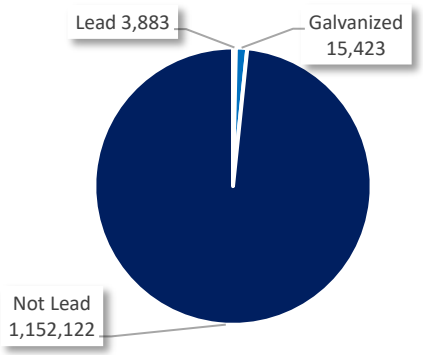


	Small Systems	Medium and Large Systems	All Systems
Unreported	24,585	544,198	568,783
Unknown	27,050	133,462	160,512
Not Lead	93,904	340,943	434,847
Galvanized	1,503	4,318	5,821
Lead	1,362	104	1,466
Total	148,404	1,023,024	1,171,428

Oregon Service Lines – Estimated from Survey Responses

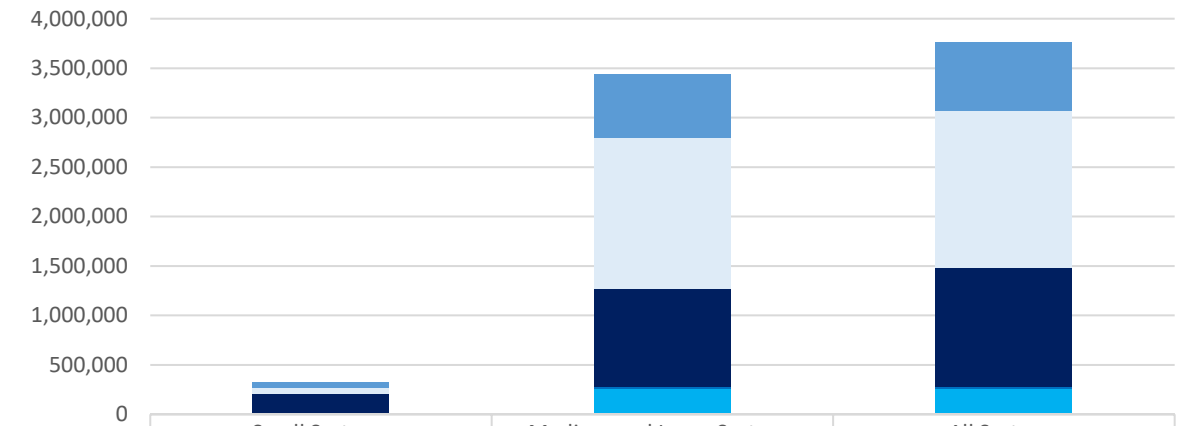


Oregon Projected Service Lines



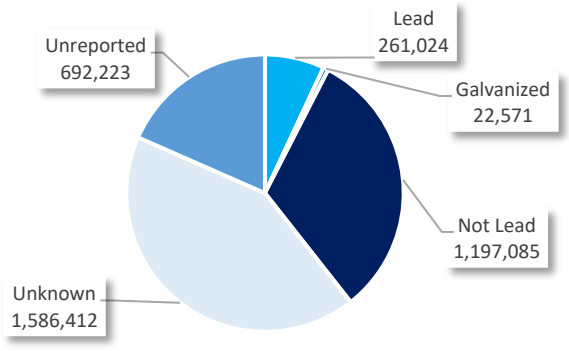
Pennsylvania

Pennsylvania Estimated Service Lines by System Size

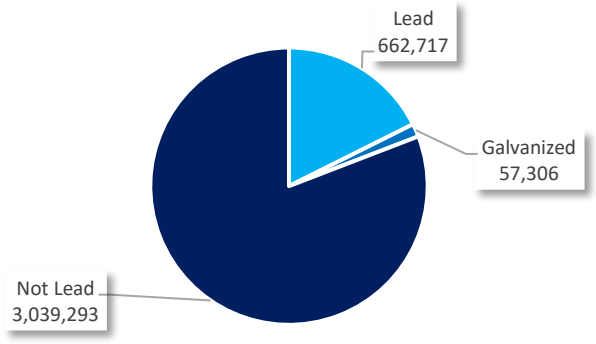


	Small Systems	Medium and Large Systems	All Systems
Unreported	53,217	639,007	692,223
Unknown	58,941	1,527,471	1,586,412
Not Lead	204,203	992,882	1,197,085
Galvanized	3,238	19,333	22,571
Lead	2,972	258,053	261,024
Total	322,571	3,436,745	3,759,316

Pennsylvania Service Lines – Estimated from Survey Responses

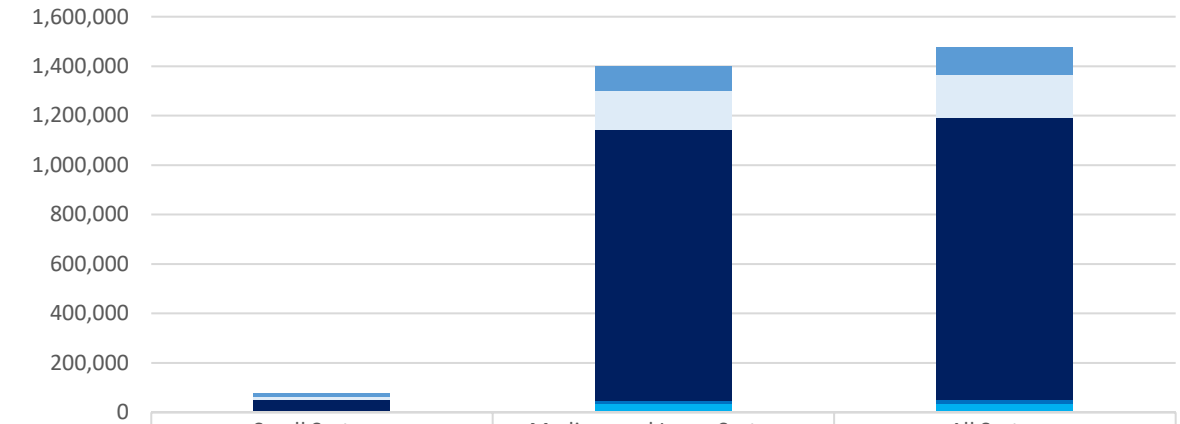


Pennsylvania Projected Service Lines



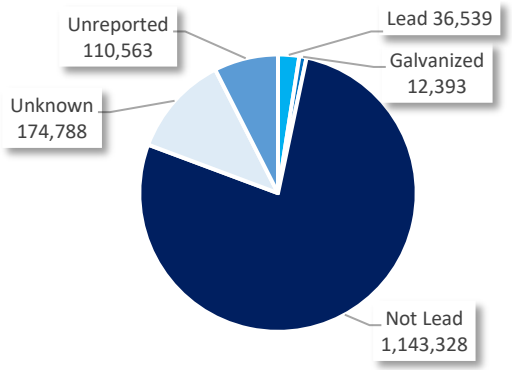
Puerto Rico

Puerto Rico Estimated Service Lines by System Size

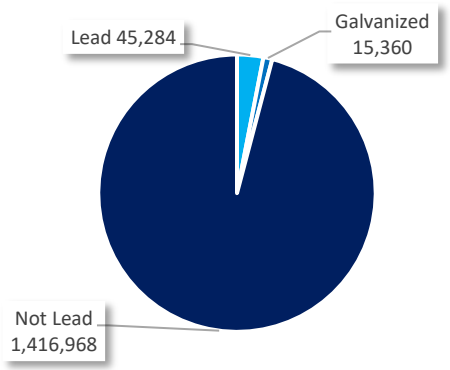


	Small Systems	Medium and Large Systems	All Systems
Unreported	12,908	97,656	110,563
Unknown	14,345	160,443	174,788
Not Lead	49,647	1,093,681	1,143,328
Galvanized	784	11,610	12,393
Lead	724	35,815	36,539
Total	78,407	1,399,205	1,477,612

Puerto Rico Service Lines – Estimated from Survey Responses

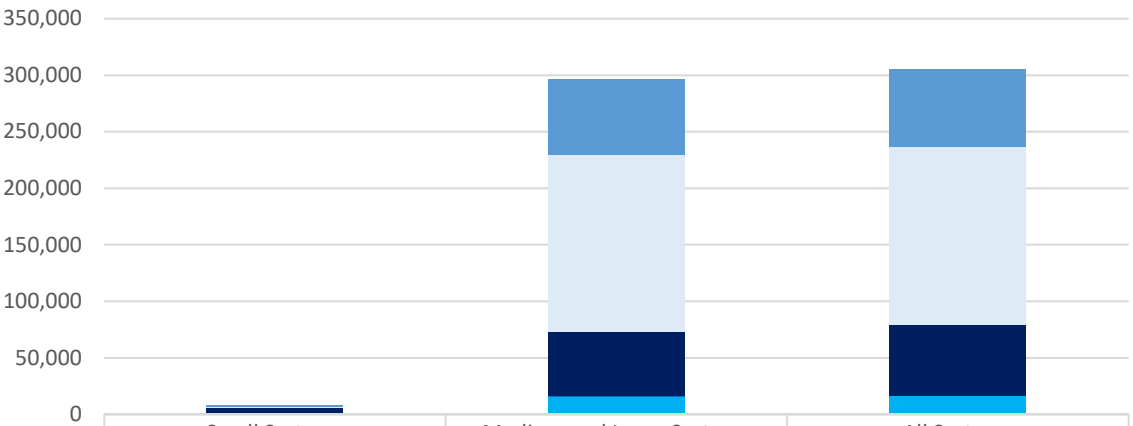


Puerto Rico Projected Service Lines



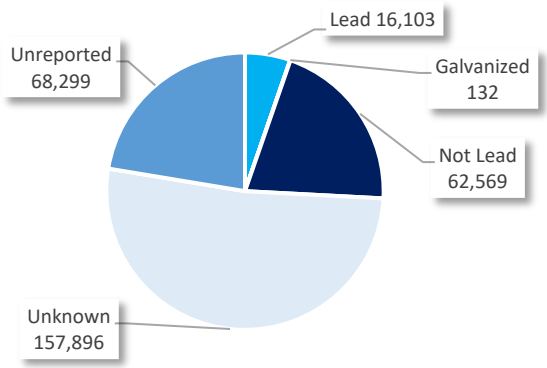
Rhode Island

Rhode Island Estimated Service Lines by System Size

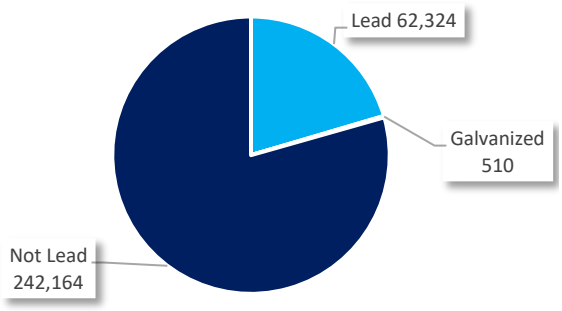


	Small Systems	Medium and Large Systems	All Systems
Unreported	1,488	66,811	68,299
Unknown	1,475	156,420	157,896
Not Lead	5,292	57,277	62,569
Galvanized	97	34	132
Lead	73	16,030	16,103
Total	8,425	296,573	304,998

Rhode Island Service Lines – Estimated from Survey Responses

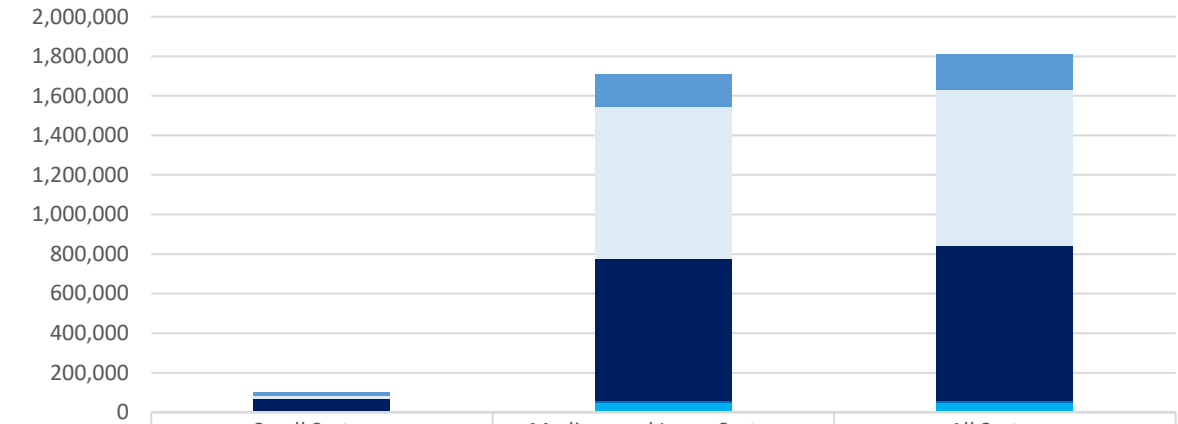


Rhode Island Projected Service Lines



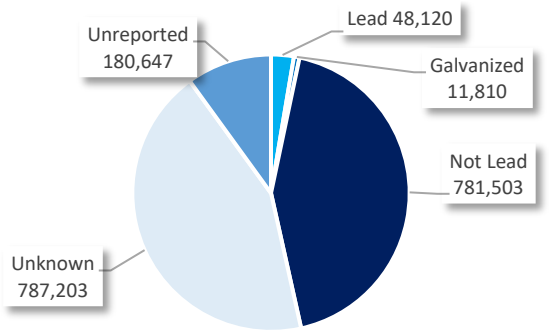
South Carolina

South Carolina Estimated Service Lines by System Size

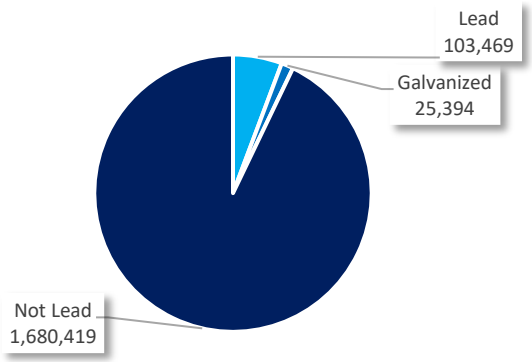


	Small Systems	Medium and Large Systems	All Systems
Unreported	16,806	163,841	180,647
Unknown	18,672	768,531	787,203
Not Lead	64,629	716,874	781,503
Galvanized	1,020	10,790	11,810
Lead	942	47,178	48,120
Total	102,069	1,707,213	1,809,282

South Carolina Service Lines – Estimated from Survey Responses

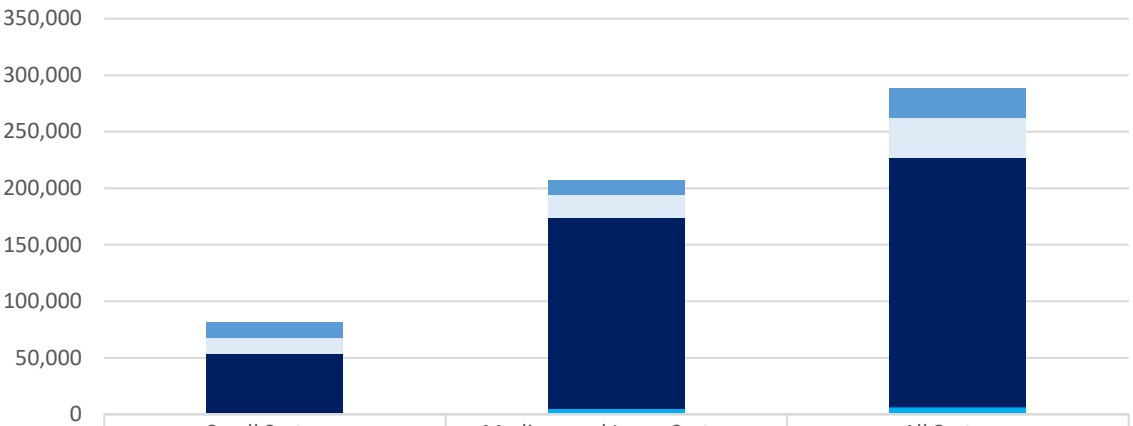


South Carolina Projected Service Lines



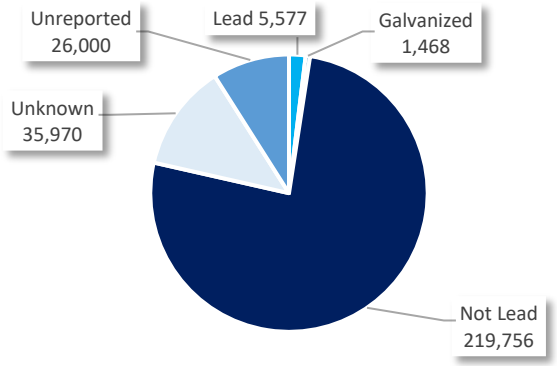
South Dakota

South Dakota Estimated Service Lines by System Size

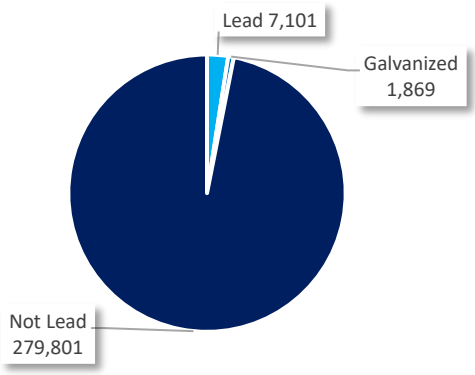


	Small Systems	Medium and Large Systems	All Systems
Unreported	13,327	12,673	26,000
Unknown	14,920	21,049	35,970
Not Lead	51,525	168,232	219,756
Galvanized	805	663	1,468
Lead	754	4,823	5,577
Total	81,330	207,440	288,770

South Dakota Service Lines – Estimated from Survey Responses

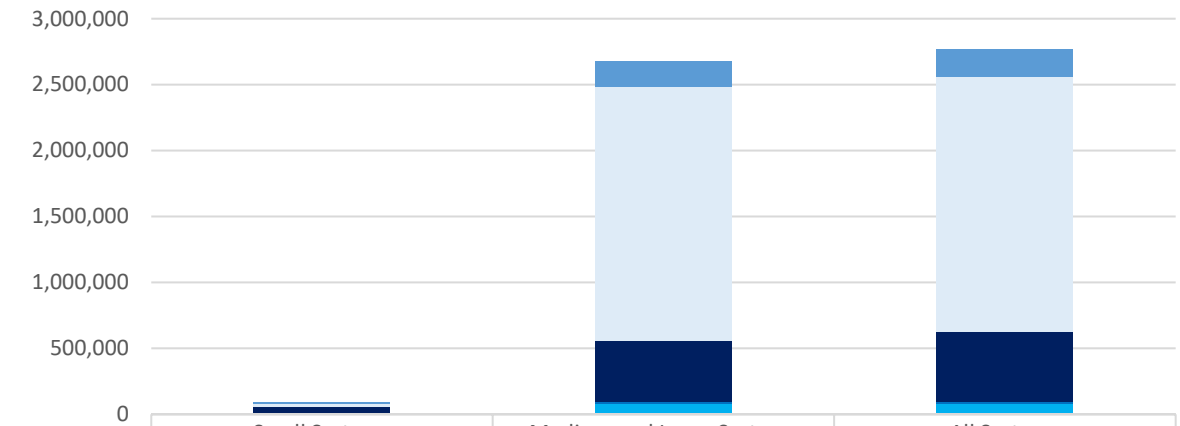


South Dakota Projected Service Lines



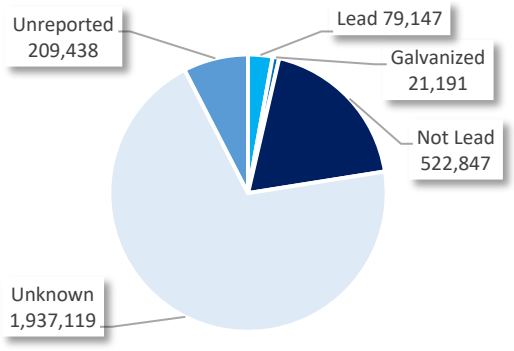
Tennessee

Tennessee Estimated Service Lines by System Size

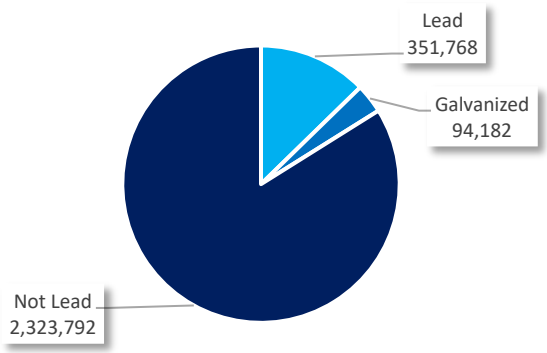


	Small Systems	Medium and Large Systems	All Systems
Unreported	15,278	194,160	209,438
Unknown	17,237	1,919,883	1,937,119
Not Lead	59,387	463,459	522,847
Galvanized	917	20,273	21,191
Lead	872	78,274	79,147
Total	93,691	2,676,050	2,769,741

Tennessee Service Lines – Estimated from Survey Responses

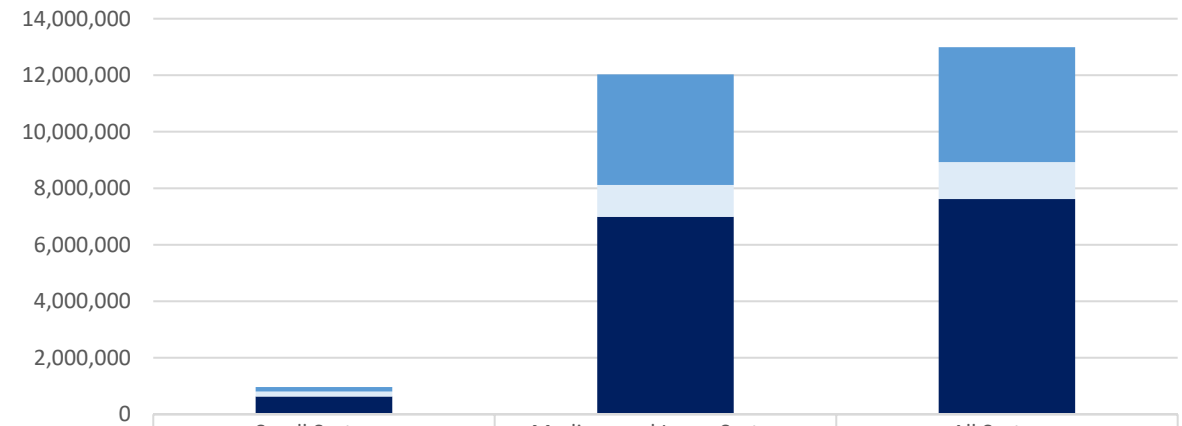


Tennessee Projected Service Lines



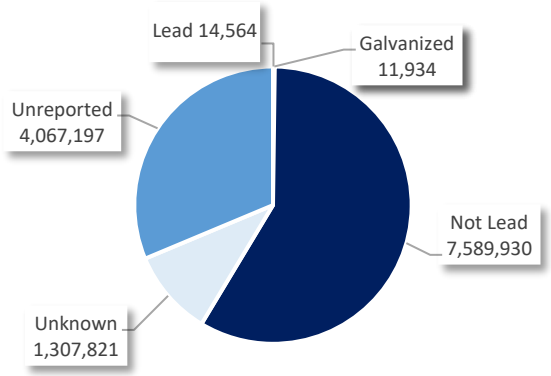
Texas[9]

Texas Estimated Service Lines by System Size

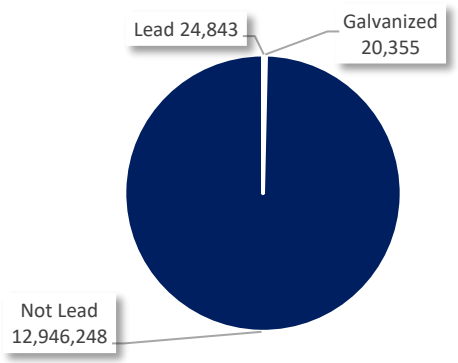


	Small Systems	Medium and Large Systems	All Systems
Unreported	157,743	3,909,454	4,067,197
Unknown	176,595	1,131,226	1,307,821
Not Lead	609,852	6,980,078	7,589,930
Galvanized	9,525	2,409	11,934
Lead	8,923	5,641	14,564
Total	962,638	12,028,808	12,991,446

Texas Service Lines – Estimated from Survey Responses



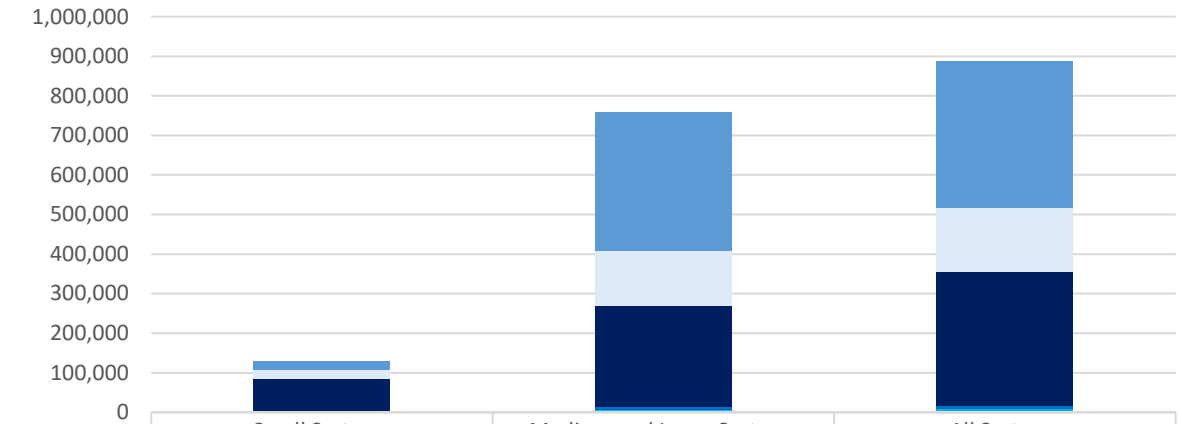
Texas Projected Service Lines



[9] The EPA identified concerns about the unreliable reporting of information provided by Texas in the original 7th DWINSA and took action as part of the 2023 update to address this unreliable reporting. Since the update, the EPA has considered and taken further corrective actions.

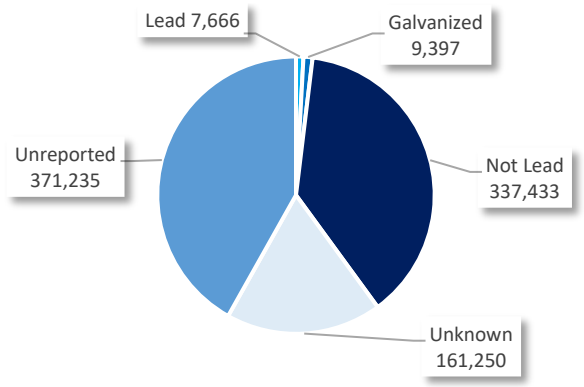
Utah

Utah Estimated Service Lines by System Size

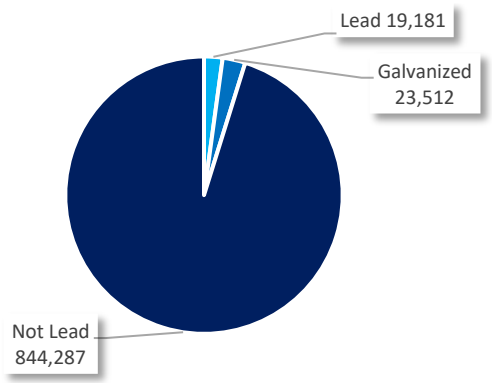


	Small Systems	Medium and Large Systems	All Systems
Unreported	21,149	350,086	371,235
Unknown	23,628	137,622	161,250
Not Lead	81,647	255,786	337,433
Galvanized	1,279	8,118	9,397
Lead	1,193	6,473	7,666
Total	128,896	758,084	886,980

Utah Service Lines – Estimated from Survey Responses

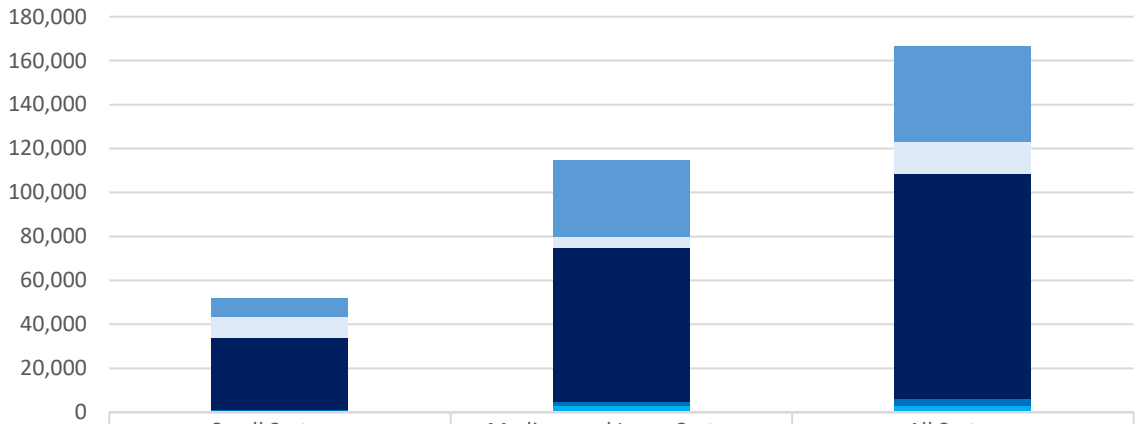


Utah Projected Service Lines



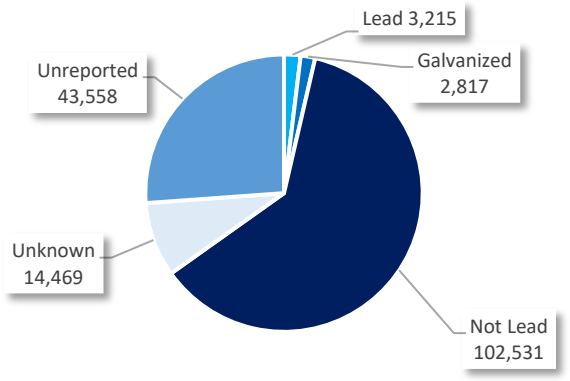
Vermont

Vermont Estimated Service Lines by System Size

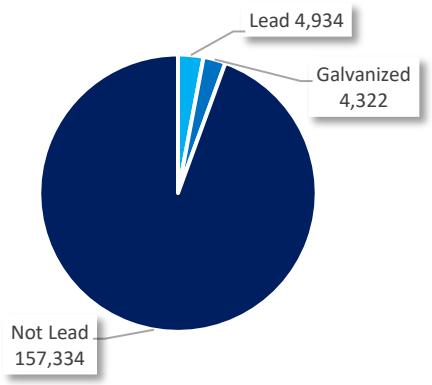


	Small Systems	Medium and Large Systems	All Systems
Unreported	8,549	35,010	43,558
Unknown	9,504	4,964	14,469
Not Lead	32,891	69,641	102,531
Galvanized	519	2,298	2,817
Lead	480	2,736	3,215
Total	51,942	114,648	166,590

Vermont Service Lines – Estimated from Survey Responses

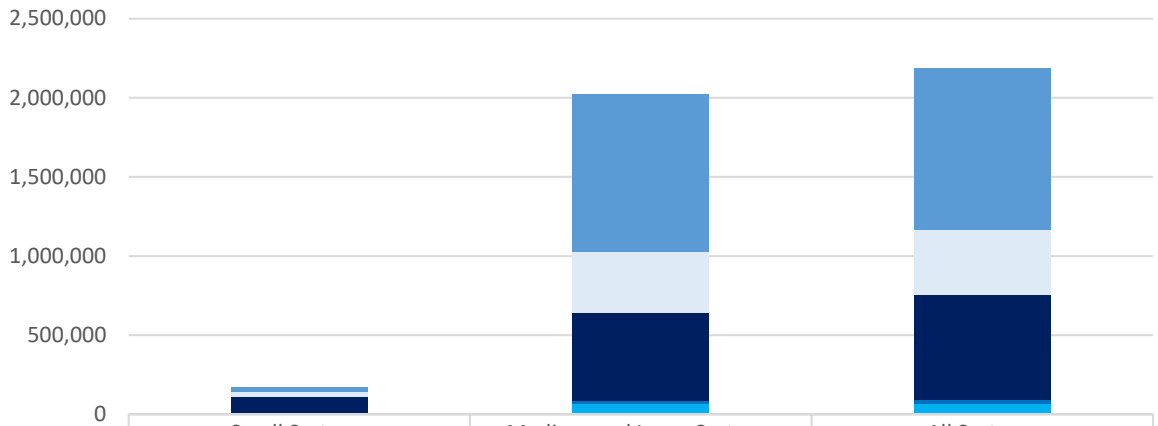


Vermont Projected Service Lines



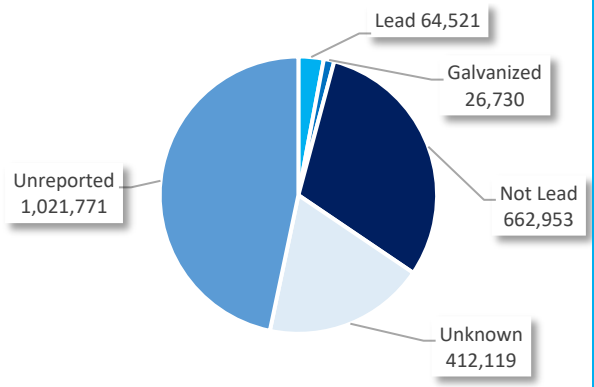
Virginia

Virginia Estimated Service Lines by System Size

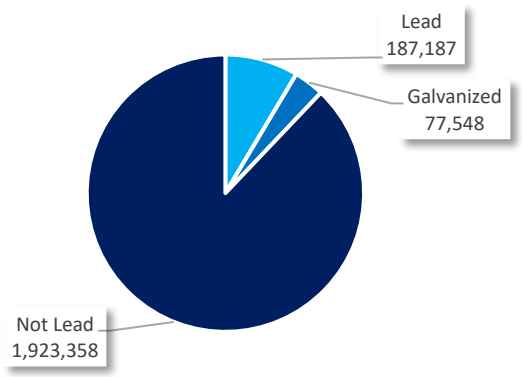


	Small Systems	Medium and Large Systems	All Systems
Unreported	27,906	993,865	1,021,771
Unknown	30,593	381,526	412,119
Not Lead	106,319	556,634	662,953
Galvanized	1,711	25,019	26,730
Lead	1,539	62,982	64,521
Total	168,068	2,020,026	2,188,094

Virginia Service Lines – Estimated from Survey Responses

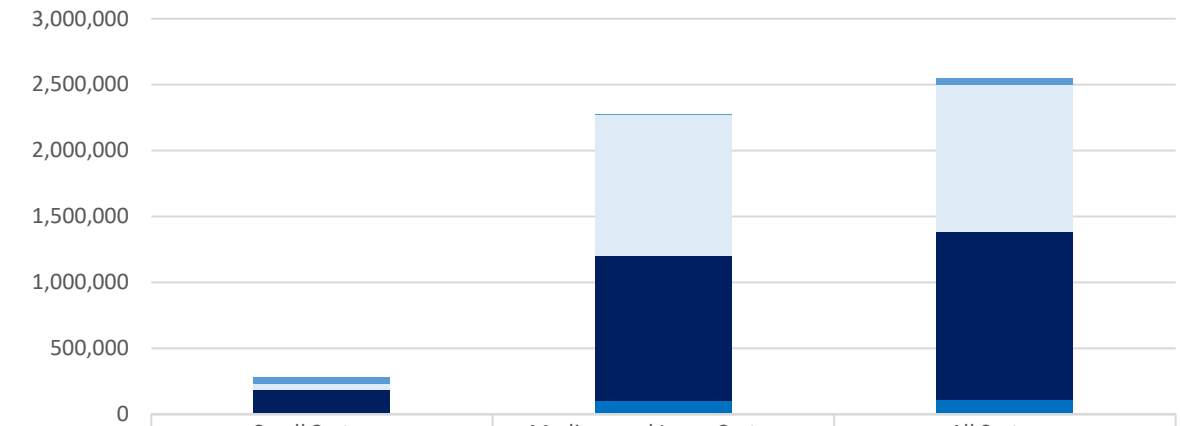


Virginia Projected Service Lines



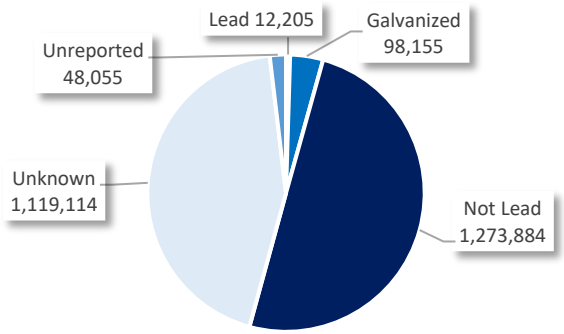
Washington

Washington Estimated Service Lines by System Size

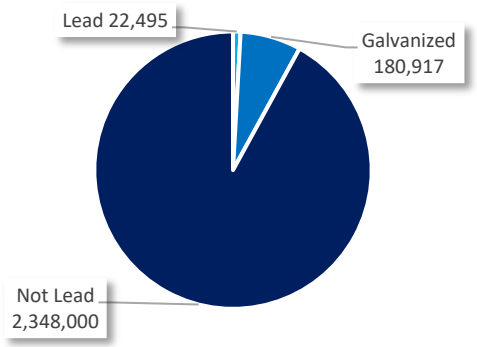


	Small Systems	Medium and Large Systems	All Systems
Unreported	47,988	67	48,055
Unknown	50,323	1,068,791	1,119,114
Not Lead	177,296	1,096,587	1,273,884
Galvanized	3,032	95,123	98,155
Lead	2,507	9,697	12,205
Total	281,146	2,270,266	2,551,412

Washington Service Lines – Estimated from Survey Responses

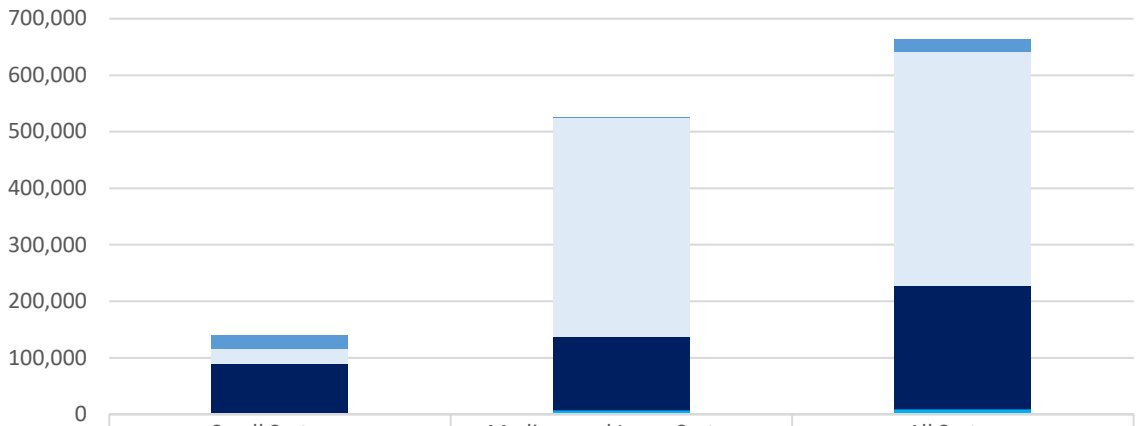


Washington Projected Service Lines



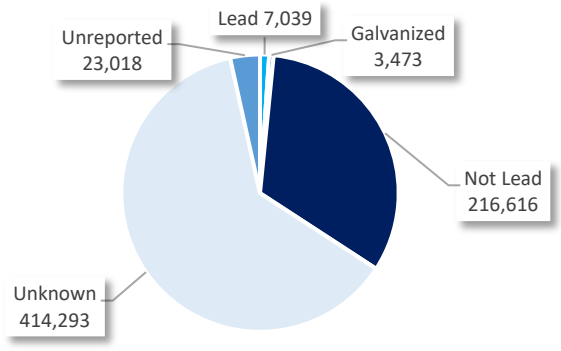
West Virginia

West Virginia Estimated Service Lines by System Size

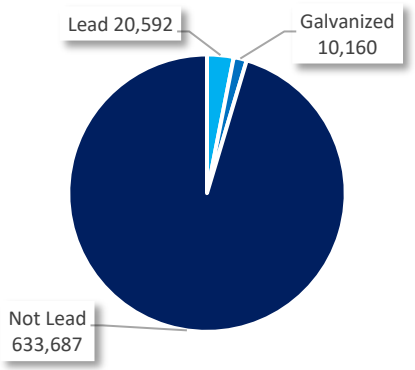


	Small Systems	Medium and Large Systems	All Systems
Unreported	22,998	20	23,018
Unknown	25,231	389,062	414,293
Not Lead	87,666	128,950	216,616
Galvanized	1,409	2,064	3,473
Lead	1,269	5,770	7,039
Total	138,574	525,865	664,439

West Virginia Service Lines – Estimated from Survey Responses

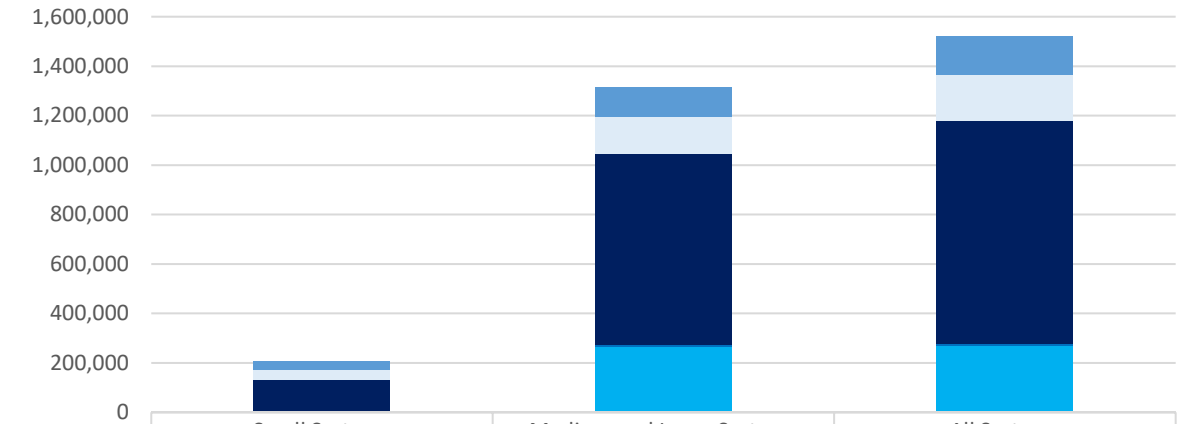


West Virginia Projected Service Lines



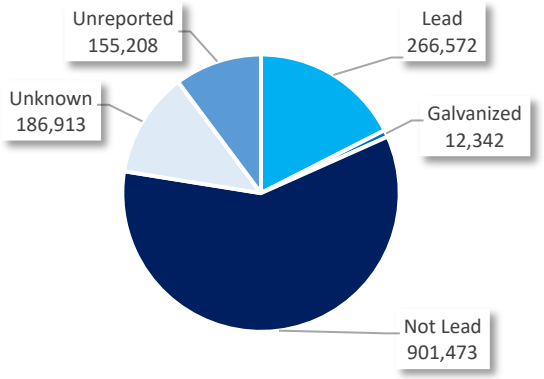
Wisconsin

Wisconsin Estimated Service Lines by System Size

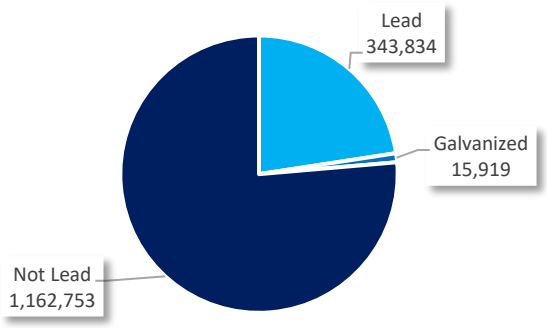


	Small Systems	Medium and Large Systems	All Systems
Unreported	34,045	121,163	155,208
Unknown	37,510	149,402	186,913
Not Lead	130,161	771,312	901,473
Galvanized	2,080	10,262	12,342
Lead	1,889	264,683	266,572
Total	205,685	1,316,822	1,522,507

Wisconsin Service Lines – Estimated from Survey Responses

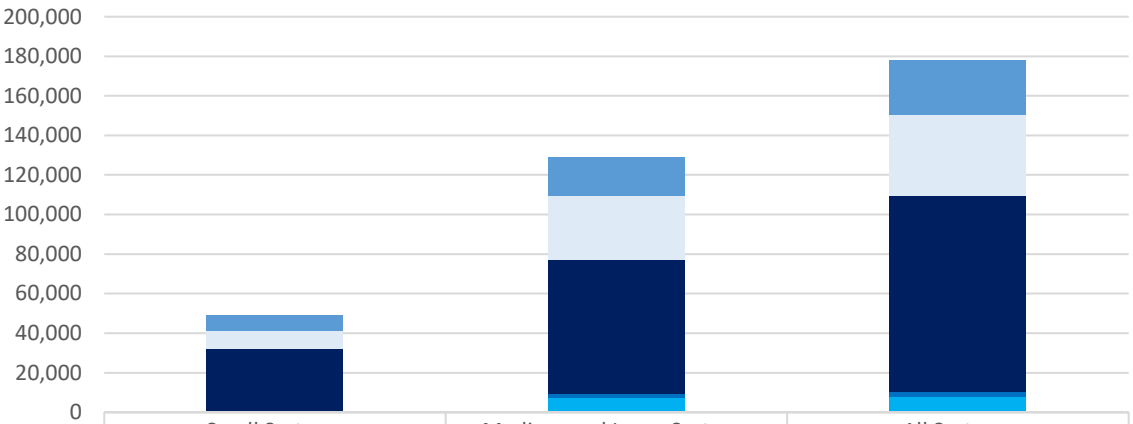


Wisconsin Projected Service Lines



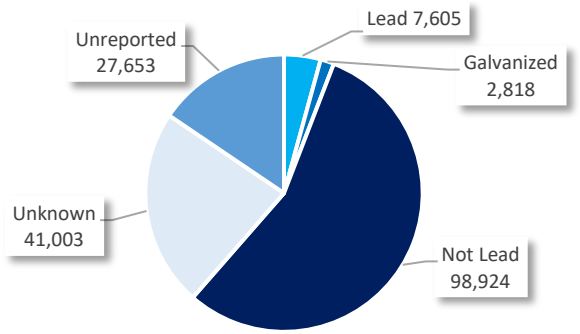
Wyoming

Wyoming Estimated Service Lines by System Size

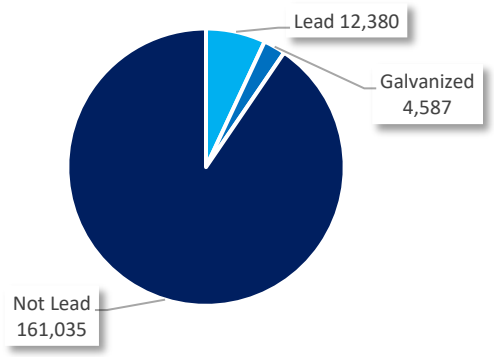


	Small Systems	Medium and Large Systems	All Systems
Unreported	8,145	19,508	27,653
Unknown	8,952	32,051	41,003
Not Lead	31,087	67,837	98,924
Galvanized	498	2,319	2,818
Lead	451	7,155	7,605
Total	49,132	128,870	178,002

Wyoming Service Lines – Estimated from Survey Responses

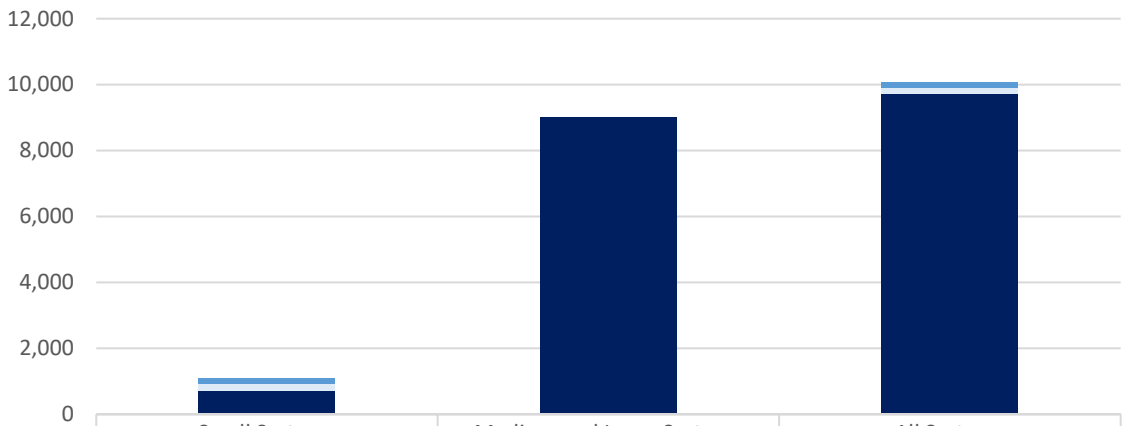


Wyoming Projected Service Lines



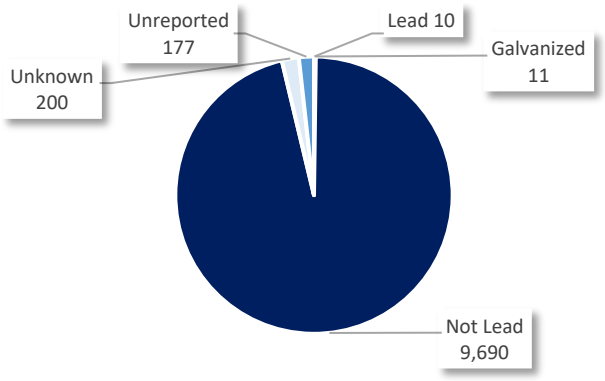
American Samoa

American Samoa Estimated Service Lines by System Size

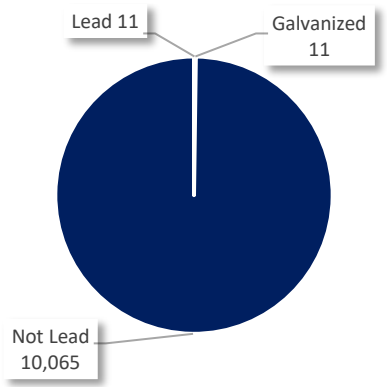


	Small Systems	Medium and Large Systems	All Systems
Unreported	177	0	177
Unknown	200	0	200
Not Lead	690	9,000	9,690
Galvanized	11	0	11
Lead	10	0	10
Total	1,087	9,000	10,087

American Samoa Service Lines – Estimated from Survey Responses

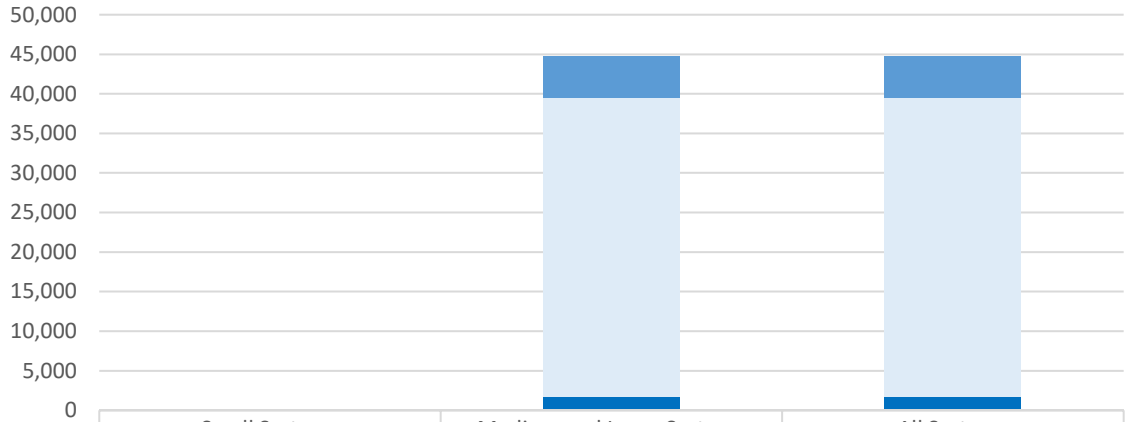


American Samoa Projected Service Lines



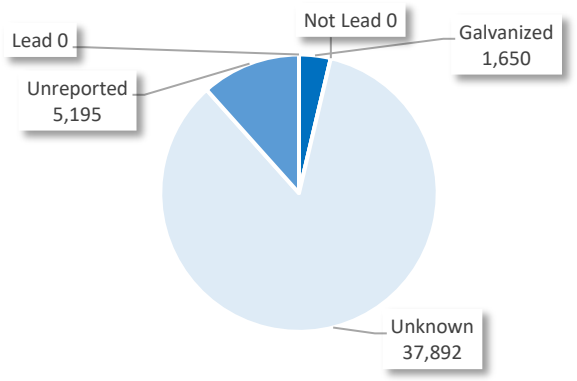
Guam

Guam Estimated Service Lines by System Size

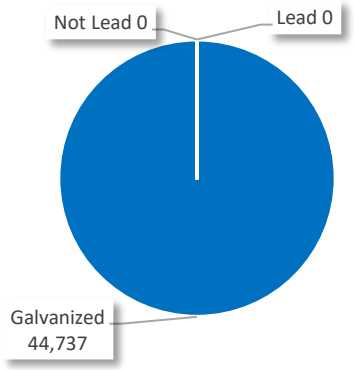


	Small Systems	Medium and Large Systems	All Systems
Unreported	0	5,195	5,195
Unknown	0	37,892	37,892
Not Lead	0	0	0
Galvanized	1	1,649	1,650
Lead	0	0	0
Total	1	44,736	44,737

Guam Service Lines – Estimated from Survey Responses

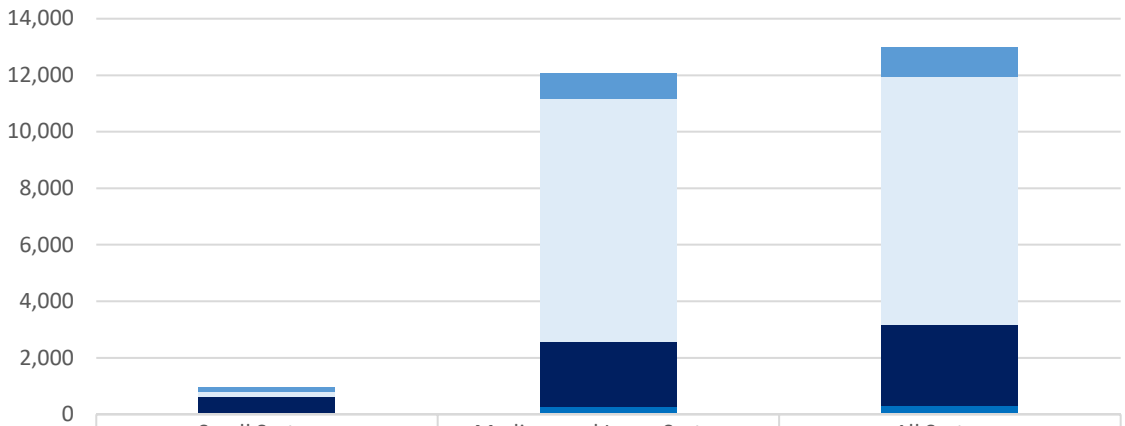


Guam Projected Service Lines



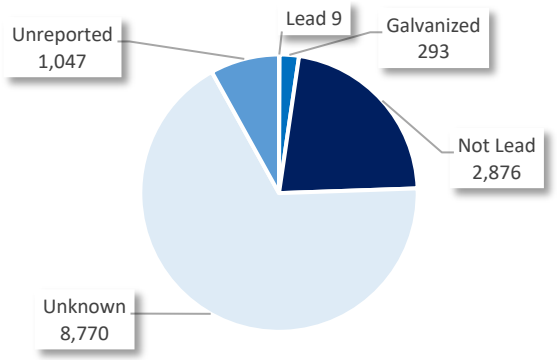
Northern Mariana Islands

Northern Mariana Islands Estimated Service Lines by System Size

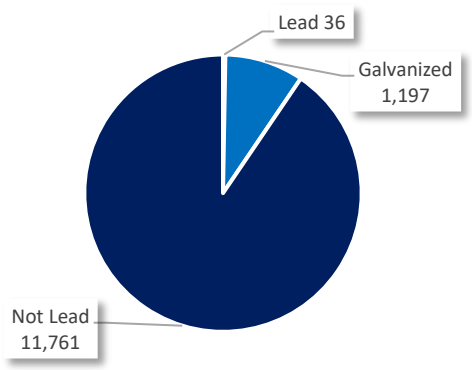


	Small Systems	Medium and Large Systems	All Systems
Unreported	153	893	1,047
Unknown	174	8,596	8,770
Not Lead	599	2,277	2,876
Galvanized	9	284	293
Lead	9	0	9
Total	944	12,050	12,994

Northern Mariana Islands Service Lines – Estimated from Survey Responses

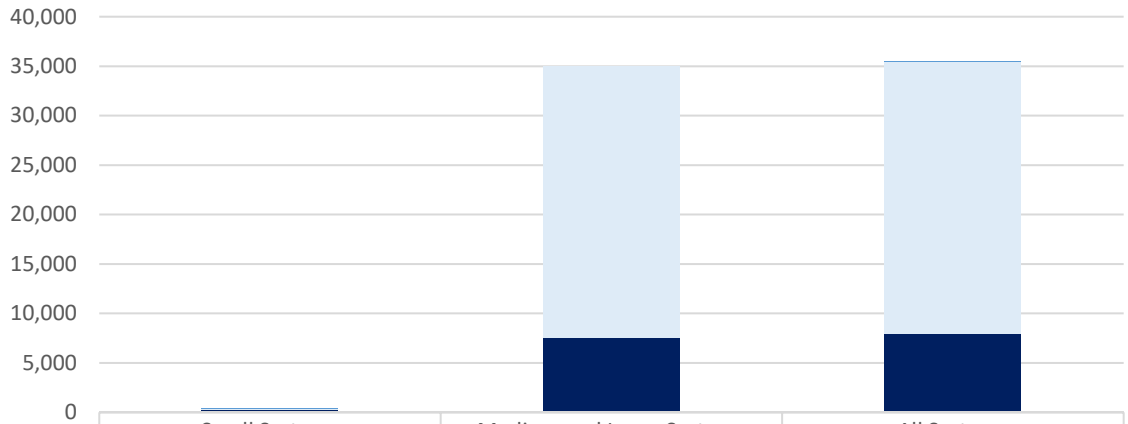


Northern Mariana Islands Projected Service Lines



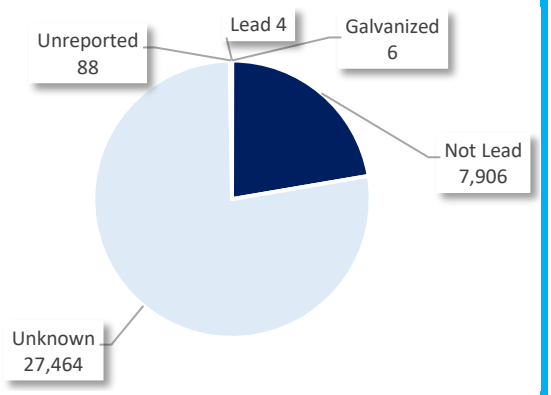
Virgin Islands

Virgin Islands Estimated Service Lines by System Size

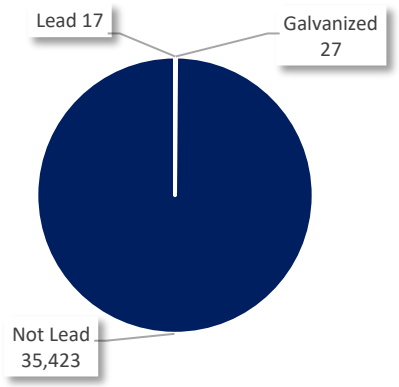


	Small Systems	Medium and Large Systems	All Systems
Unreported	88	0	88
Unknown	78	27,386	27,464
Not Lead	291	7,615	7,906
Galvanized	6	0	6
Lead	4	0	4
Total	466	35,001	35,467

Virgin Islands Service Lines – Estimated from Survey Responses

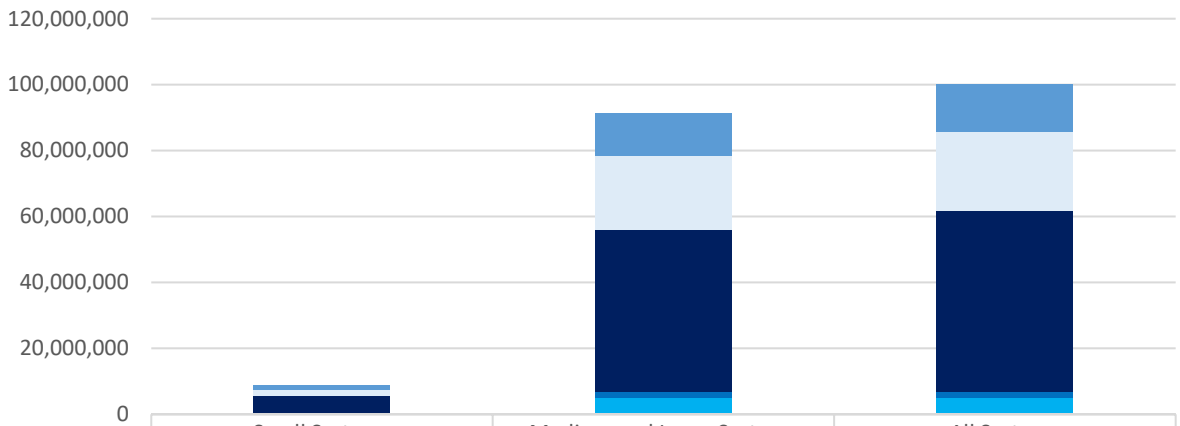


Virgin Islands Projected Service Lines



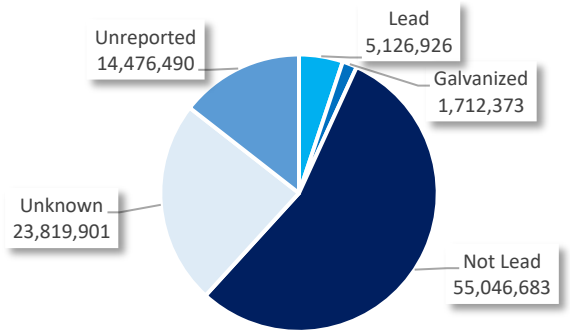
All

All Estimated Service Lines by System Size



	Small Systems	Medium and Large Systems	All Systems
Unreported	1,449,524	13,026,966	14,476,490
Unknown	1,602,900	22,217,000	23,819,901
Not Lead	5,555,954	49,490,729	55,046,683
Galvanized	88,312	1,624,062	1,712,373
Lead	80,784	5,046,141	5,126,926
Total	8,777,475	91,404,898	100,182,373

All Service Lines – Estimated from Survey Responses



All Projected Service Lines