**Figure 6**

**Connections over 200 kbps in at Least One Direction 2015-2019**

**(In thousands)**

|  | *2015* | *2016* | | *2017* | | *2018* | | *2019* | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *Technology* | *Dec* | *Jun* | *Dec* | *Jun* | *Dec* | *Jun* | *Dec* | *Jun* | *Dec* |
| Total | 375,790 | 395,496 | 404,849 | 408,692 | 420,838 | 428,864 | 451,062 | 459,327 | 466,302 |
| Total Fixed | 102,111 | 103,980 | 105,593 | 106,130 | 108,065 | 109,087 | 110,784 | 112,725 | 114,291 |
| Mobile Wireless | 273,679 | 291,516 | 299,256 | 302,562 | 312,773 | 319,776 | 340,278 | 346,603 | 352,012 |

Some previously-published data may have been revised. Numbers may not sum to totals due to rounding.

Source: FCC Form 477.

**Figure 7**

**Residential Connections over 200 kbps in at Least One Direction 2015-2019**

**(In thousands)**

|  | *2015* | *2016* | | *2017* | | *2018* | | *2019* | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *Technology* | *Dec* | *Jun* | *Dec* | *Jun* | *Dec* | *Jun* | *Dec* | *Jun* | *Dec* |
| Total | 322,557 | 330,987 | 337,978 | 341,094 | 351,966 | 358,867 | 378,286 | 383,605 | 388,344 |
| Total Fixed | 93,434 | 95,001 | 96,607 | 97,071 | 98,845 | 99,758 | 101,348 | 103,118 | 104,703 |
| Mobile Wireless | 229,122 | 235,985 | 241,371 | 244,022 | 253,121 | 259,109 | 276,938 | 280,486 | 283,641 |

Some previously-published data may have been revised. Numbers may not sum to totals due to rounding.

Source: FCC Form 477.



Fixed Connections over 200 kbps in at Least One Direction (in thousands)

|  | *Downstream Speed* | | | | |  |
| --- | --- | --- | --- | --- | --- | --- |
| *Upstream Speed* | *Less than 10 Mbps* | *At least 10 Mbps and less than 25 Mbps* | *At least 25 Mbps and less than 100 Mbps* | *At least 100 Mbps and less than 940 Mbps* | *At least 940 Mbps* | *Total* |
| Less than 3 Mbps | 8,777 | 10,370 | 1,687 | 10 | # | 20,845 |
| At least 3 Mbps & Less than 20 Mbps | 270 | 2,628 | 16,779 | 44,437 | 39 | 64,153 |
| At least 20 Mbps | # | 77 | 3,614 | 19,614 | 5,989 | 29,293 |
| Total | 9,047 | 13,075 | 22,080 | 64,061 | 6,028 | 114,291 |

Percentages

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Less than 3 Mbps | 7.7 | 9.1 | 1.5 | 0.0 | 0.0 | 18.2 |
| At least 3 Mbps & Less than 20 Mbps | 0.2 | 2.3 | 14.7 | 38.9 | 0.0 | 56.1 |
| At least 20 Mbps | 0.0 | 0.1 | 3.2 | 17.2 | 5.2 | 25.6 |
| Total | 7.9 | 11.4 | 19.3 | 56.1 | 5.3 | 100.0 |

Note: Numbers may not sum to totals due to rounding. # = Rounds to zero.

Source: FCC Form 477.



Residential Fixed Connections over 200 kbps in at Least One Direction (in thousands)

|  | *Downstream Speed* | | | | |  |
| --- | --- | --- | --- | --- | --- | --- |
| *Upstream Speed* | *Less than 10 Mbps* | *At least 10 Mbps and less than 25 Mbps* | *At least 25 Mbps and less than 100 Mbps* | *At least 100 Mbps and less than 940 Mbps* | *At least 940 Mbps* | *Total* |
| Less than 3 Mbps | 7,346 | 9,446 | 1,625 | 10 | 0 | 18,428 |
| At least 3 Mbps & Less than 20 Mbps | 160 | 2,355 | 14,208 | 42,845 | 38 | 59,606 |
| At least 20 Mbps | # | 36 | 3,164 | 17,772 | 5,697 | 26,669 |
| Total | 7,506 | 11,837 | 18,997 | 60,627 | 5,736 | 104,703 |

Percentages

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Less than 3 Mbps | 7.0 | 9.0 | 1.6 | 0.0 | 0.0 | 17.6 |
| At least 3 Mbps & Less than 20 Mbps | 0.2 | 2.2 | 13.6 | 40.9 | 0.0 | 56.9 |
| At least 20 Mbps | 0.0 | 0.0 | 3.0 | 17.0 | 5.4 | 25.5 |
| Total | 7.2 | 11.3 | 18.1 | 57.9 | 5.5 | 100.0 |

Note: Numbers may not sum to totals due to rounding. # = Rounds to zero.

Source: FCC Form 477.

**Figure 11**

**Connections over 200 kbps in at Least One Direction by Technology 2015-2019**

**(in thousands)**

|  | *2015* | *2016* | | *2017* | | *2018* | | *2019* | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *Technology* | *Dec* | *Jun* | *Dec* | *Jun* | *Dec* | *Jun* | *Dec* | *Jun* | *Dec* |
| Total | 375,790 | 395,496 | 404,849 | 408,692 | 420,838 | 428,864 | 451,062 | 459,327 | 466,302 |
| Total Fixed | 102,111 | 103,980 | 105,593 | 106,130 | 108,065 | 109,087 | 110,784 | 112,725 | 114,291 |
| aDSL | 28,134 | 27,488 | 26,527 | 25,505 | 24,193 | 23,074 | 22,377 | 21,163 | 20,214 |
| sDSL | 60 | 55 | 42 | 44 | 28 | 28 | 20 | 17 | 16 |
| Other Wireline1 | 637 | 622 | 599 | 619 | 581 | 558 | 557 | 501 | 525 |
| Cable Modem | 59,706 | 61,456 | 63,325 | 64,060 | 66,196 | 67,165 | 68,882 | 70,750 | 72,516 |
| FTTP2 | 10,450 | 11,087 | 11,986 | 12,831 | 13,890 | 14,889 | 15,492 | 16,748 | 17,376 |
| Satellite | 2,071 | 2,079 | 1,864 | 1,826 | 1,872 | 1,939 | 1,971 | 1,984 | 1,975 |
| Fixed Wireless | 1,054 | 1,193 | 1,250 | 1,245 | 1,306 | 1,434 | 1,485 | 1,561 | 1,669 |
| Mobile Wireless | 273,679 | 291,516 | 299,256 | 302,562 | 312,773 | 319,776 | 340,278 | 346,603 | 352,012 |

1 Power Line and Other are summarized with Other Wireline for confidentiality reasons. See Technical Notes at the end of the report for a description of

FCC Form 477 technology categories and other reporting requirements.

2 Fiber to the premises.

Note: Some previously-published data may have been revised. Numbers may not sum to totals due to rounding.

Source: FCC Form 477.



**Figure 13**

**Residential Connections over 200 kbps in at Least One Direction by Technology 2015-2019**

**(in thousands)**

|  | *2015* | *2016* | | *2017* | | *2018* | | *2019* | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *Technology* | *Dec* | *Jun* | *Dec* | *Jun* | *Dec* | *Jun* | *Dec* | *Jun* | *Dec* |
| Total | 322,557 | 330,987 | 337,978 | 341,094 | 351,966 | 358,867 | 378,286 | 383,605 | 388,344 |
| Total Fixed | 93,434 | 95,001 | 96,607 | 97,071 | 98,845 | 99,758 | 101,348 | 103,118 | 104,703 |
| aDSL | 25,139 | 24,486 | 23,691 | 22,774 | 21,653 | 20,671 | 20,126 | 18,976 | 18,159 |
| sDSL | 16 | 10 | 8 | 12 | 9 | 9 | 4 | 4 | 5 |
| Other Wireline1 | 54 | 51 | 32 | 74 | 67 | 74 | 76 | 62 | 74 |
| Cable Modem | 55,799 | 57,358 | 59,145 | 59,687 | 61,567 | 62,320 | 63,813 | 65,457 | 67,141 |
| FTTP2 | 9,592 | 10,140 | 10,956 | 11,776 | 12,702 | 13,663 | 14,205 | 15,410 | 16,011 |
| Satellite | 1,891 | 1,897 | 1,676 | 1,637 | 1,688 | 1,751 | 1,787 | 1,805 | 1,795 |
| Fixed Wireless | 943 | 1,059 | 1,100 | 1,112 | 1,158 | 1,270 | 1,338 | 1,405 | 1,520 |
| Mobile Wireless | 229,122 | 235,985 | 241,371 | 244,022 | 253,121 | 259,109 | 276,938 | 280,486 | 283,641 |

1 Power Line and Other are summarized with Other Wireline for confidentiality reasons. See Technical Notes at the end of the report for a description of

FCC Form 477 technology categories and other reporting requirements.

2 Fiber to the premises.

Note: Some previously-published data may have been revised. Numbers may not sum to totals due to rounding.

Source: FCC Form 477.



**Figure 15**

**Fixed Connections at Least 10 Mbps Downstream and 1 Mbps Upstream by Technology 2015-2019**

**(in thousands)**

|  | *2015* | *2016* | | *2017* | | *2018* | | *2019* | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *Technology* | *Dec* | *Jun* | *Dec* | *Jun* | *Dec* | *Jun* | *Dec* | *Jun* | *Dec* |
| Total | 76,886 | 80,397 | 84,038 | 86,886 | 90,609 | 94,071 | 97,302 | 100,464 | 103,595 |
| aDSL | 9,799 | 10,349 | 10,810 | 11,321 | 11,598 | 11,822 | 12,038 | 11,829 | 11,704 |
| sDSL | 8 | 8 | 10 | 14 | 9 | 11 | 6 | 5 | 5 |
| Other Wireline1 | 197 | 203 | 209 | 246 | 262 | 271 | 292 | 261 | 301 |
| Cable Modem | 55,710 | 57,951 | 60,349 | 61,704 | 63,978 | 65,808 | 67,716 | 69,704 | 71,934 |
| FTTP2 | 9,528 | 10,088 | 10,935 | 11,811 | 12,869 | 13,898 | 14,815 | 16,078 | 16,854 |
| Satellite | 1,393 | 1,467 | 1,342 | 1,373 | 1,402 | 1,595 | 1,677 | 1,726 | 1,737 |
| Fixed Wireless | 252 | 330 | 383 | 418 | 491 | 666 | 759 | 861 | 1,059 |

1 Power Line and Other are summarized with Other Wireline for confidentiality reasons. See Technical Notes at the end of the report for a description of

FCC Form 477 technology categories and other reporting requirements.

2 Fiber to the premises.

# = Rounds to zero.

Note: Some previously-published data may have been revised. Numbers may not sum to totals due to rounding.

Source: FCC Form 477.



**Figure 17**

**Residential Fixed Connections at Least 10 Mbps Downstream and 1 Mbps Upstream by Technology 2015-2019**

**(in thousands)**

|  | *2015* | *2016* | | *2017* | | *2018* | | *2019* | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *Technology* | *Dec* | *Jun* | *Dec* | *Jun* | *Dec* | *Jun* | *Dec* | *Jun* | *Dec* |
| Total | 71,784 | 74,841 | 78,201 | 80,671 | 84,163 | 86,973 | 89,873 | 92,698 | 95,649 |
| aDSL | 9,069 | 9,526 | 9,963 | 10,415 | 10,657 | 10,862 | 11,073 | 10,812 | 10,682 |
| sDSL | 1 | 2 | 2 | 6 | 5 | 6 | 2 | 1 | 2 |
| Other Wireline1 | 43 | 47 | 30 | 71 | 64 | 65 | 68 | 58 | 70 |
| Cable Modem | 52,294 | 54,274 | 56,538 | 57,617 | 59,864 | 61,142 | 62,810 | 64,556 | 66,691 |
| FTTP2 | 8,776 | 9,248 | 10,004 | 10,835 | 11,762 | 12,741 | 13,589 | 14,800 | 15,536 |
| Satellite | 1,386 | 1,460 | 1,333 | 1,362 | 1,387 | 1,575 | 1,655 | 1,702 | 1,708 |
| Fixed Wireless | 213 | 283 | 332 | 365 | 425 | 582 | 676 | 768 | 960 |

1 Power Line and Other are summarized with Other Wireline for confidentiality reasons. See Technical Notes at the end of the report for a description of

FCC Form 477 technology categories and other reporting requirements.

2 Fiber to the premises.

# = Rounds to zero.

Note: Some previously-published data may have been revised. Numbers may not sum to totals due to rounding.

Source: FCC Form 477.



**Figure 19**

**Fixed Connections at Least 25 Mbps Downstream and 3 Mbps Upstream by Technology 2015-2019**

**(in thousands)**

|  | *2015* | *2016* | | *2017* | | *2018* | | *2019* | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *Technology* | *Dec* | *Jun* | *Dec* | *Jun* | *Dec* | *Jun* | *Dec* | *Jun* | *Dec* |
| Total | 54,338 | 58,765 | 62,933 | 68,280 | 73,875 | 78,952 | 82,965 | 86,744 | 90,471 |
| aDSL | 938 | 1,239 | 1,476 | 2,530 | 3,586 | 4,298 | 4,988 | 5,233 | 5,523 |
| sDSL | \* | \* | \* | \* | \* | \* | \* | \* | \* |
| Other Wireline1 | 138 | 155 | 166 | 203 | 219 | 203 | 228 | 220 | 263 |
| Cable Modem | 45,530 | 48,696 | 51,740 | 54,829 | 57,870 | 60,859 | 62,880 | 64,938 | 67,171 |
| FTTP2 | 7,673 | 8,587 | 9,422 | 10,344 | 11,489 | 12,568 | 13,605 | 14,902 | 15,866 |
| Satellite | \* | \* | \* | \* | \* | \* | \* | \* | \* |
| Fixed Wireless | 55 | 72 | 92 | 120 | 143 | 224 | 267 | 325 | 449 |

1 Power Line and Other are summarized with Other Wireline for confidentiality reasons. See Technical Notes at the end of the report for a description of

FCC Form 477 technology categories and other reporting requirements.

2 Fiber to the premises.

\* = Data withheld for confidentiality reasons.

# = Rounds to zero.

Note: Some previously-published data may have been revised. Numbers may not sum to totals due to rounding.

Source: FCC Form 477.



**Figure 21**

**Residential Fixed Connections at Least 25 Mbps Downstream and 3 Mbps Upstream by Technology 2015-2019**

**(in thousands)**

|  | *2015* | *2016* | | *2017* | | *2018* | | *2019* | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *Technology* | *Dec* | *Jun* | *Dec* | *Jun* | *Dec* | *Jun* | *Dec* | *Jun* | *Dec* |
| Total | 51,812 | 55,729 | 59,518 | 64,520 | 69,447 | 73,288 | 76,873 | 80,256 | 83,725 |
| aDSL | 897 | 1,173 | 1,408 | 2,418 | 3,410 | 4,068 | 4,712 | 4,911 | 5,168 |
| sDSL | \* | \* | \* | \* | \* | \* | \* | \* | \* |
| Other Wireline1 | 31 | 41 | 27 | 67 | 59 | 54 | 61 | 53 | 64 |
| Cable Modem | 43,746 | 46,527 | 49,300 | 52,154 | 54,748 | 56,620 | 58,342 | 60,125 | 62,231 |
| FTTP2 | 7,089 | 7,916 | 8,674 | 9,532 | 10,553 | 11,570 | 12,546 | 13,780 | 14,690 |
| Satellite | \* | \* | \* | \* | \* | \* | \* | \* | \* |
| Fixed Wireless | 46 | 57 | 75 | 101 | 119 | 193 | 234 | 283 | 400 |

1 Power Line and Other are summarized with Other Wireline for confidentiality reasons. See Technical Notes at the end of the report for a description of

FCC Form 477 technology categories and other reporting requirements.

2 Fiber to the premises.

\* = Data withheld for confidentiality reasons.

# = Rounds to zero.

Note: Some previously-published data may have been revised. Numbers may not sum to totals due to rounding.

Source: FCC Form 477.



**Figure 23**

**Fixed Connections at Least 100 Mbps Downstream and 20 Mbps Upstream by Technology 2015-2019**

**(in thousands)**

|  | *2015* | *2016* | | *2017* | | *2018* | | *2019* | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *Technology* | *Dec* | *Jun* | *Dec* | *Jun* | *Dec* | *Jun* | *Dec* | *Jun* | *Dec* |
| Total | 5,317 | 6,866 | 7,968 | 9,676 | 12,148 | 14,619 | 18,750 | 22,217 | 25,603 |
| aDSL | 1 | 1 | 2 | 16 | 47 | 59 | 207 | 387 | 569 |
| sDSL | # | # | 1 | 1 | 1 | 1 | 1 | # | \* |
| Other Wireline1 | 113 | 117 | 140 | 174 | 192 | 174 | 196 | 178 | 211 |
| Cable Modem | 4,329 | 5,259 | 5,356 | 6,055 | 7,149 | 8,352 | 9,466 | 11,426 | 13,088 |
| FTTP2 | 856 | 1,470 | 2,438 | 3,403 | 4,729 | 5,976 | 8,815 | 10,146 | 11,634 |
| Satellite | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \* |
| Fixed Wireless | 17 | 20 | 31 | 28 | 30 | 56 | 65 | 79 | 101 |

1 Power Line and Other are summarized with Other Wireline for confidentiality reasons. See Technical Notes at the end of the report for a description of

FCC Form 477 technology categories and other reporting requirements.

2 Fiber to the premises.

\* = Data withheld for confidentiality reasons.

# = Rounds to zero.

Note: Some previously-published data may have been revised. Numbers may not sum to totals due to rounding.

Source: FCC Form 477.



**Figure 25**

**Residential Fixed Connections at Least 100 Mbps Downstream and 20 Mbps Upstream by Technology 2015-2019**

**(in thousands)**

|  | *2015* | *2016* | | *2017* | | *2018* | | *2019* | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *Technology* | *Dec* | *Jun* | *Dec* | *Jun* | *Dec* | *Jun* | *Dec* | *Jun* | *Dec* |
| Total | 4,854 | 6,316 | 7,291 | 8,879 | 11,030 | 13,171 | 17,101 | 20,322 | 23,469 |
| aDSL | 1 | 1 | 2 | 15 | 42 | 53 | 194 | 344 | 512 |
| sDSL | # | # | # | # | # | # | # | # | \* |
| Other Wireline1 | 23 | 28 | 24 | 61 | 53 | 46 | 47 | 27 | 36 |
| Cable Modem | 4,135 | 5,020 | 5,071 | 5,695 | 6,591 | 7,491 | 8,512 | 10,312 | 11,883 |
| FTTP2 | 683 | 1,253 | 2,170 | 3,089 | 4,324 | 5,534 | 8,292 | 9,574 | 10,952 |
| Satellite | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \* |
| Fixed Wireless | 12 | 14 | 24 | 20 | 20 | 47 | 56 | 65 | 86 |

1 Power Line and Other are summarized with Other Wireline for confidentiality reasons. See Technical Notes at the end of the report for a description of

FCC Form 477 technology categories and other reporting requirements.

2 Fiber to the premises.

\* = Data withheld for confidentiality reasons.

# = Rounds to zero.

Note: Some previously-published data may have been revised. Numbers may not sum to totals due to rounding.

Source: FCC Form 477.



**Figure 30**

**Fixed Connections by Downstream Speed Tier and Technology as of December 31, 2019**

**(in thousands)**

|  | *Downstream Speed* | | | | | |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *Technology* | *Less than 4 Mbps* | *At least 4 Mbps and less than 10 Mbps* | *At least 10 Mbps and less than 25 Mbps* | *At least 25 Mbps and less than 100 Mbps* | *At least 100 Mbps and less than 940 Mbps* | *At least 940 Mbps* | *Total* |
| aDSL | 3,006 | 3,908 | 7,115 | 5,480 | 705 | # | 20,214 |
| sDSL | \* | \* | \* | \* | \* | # | 16 |
| Other Wireline1 | 188 | 35 | 38 | 32 | 224 | 7 | 525 |
| Cable Modem | 311 | 258 | 3,802 | 10,988 | 55,205 | 1,953 | 72,516 |
| FTTP | 152 | 332 | 980 | 4,035 | 7,837 | 4,040 | 17,376 |
| Satellite | \* | \* | \* | \* | \* | 0 | 1,975 |
| Fixed Wireless | 231 | 378 | 596 | 355 | 81 | 27 | 1,669 |
| Total | 4,074 | 4,973 | 13,075 | 22,080 | 64,061 | 6,028 | 114,291 |

Percentages

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| aDSL | 2.6 | 3.4 | 6.2 | 4.8 | 0.6 | 0.0 | 17.7 |
| sDSL | \* | \* | \* | \* | \* | 0.0 | 0.0 |
| Other Wireline1 | 0.2 | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | 0.5 |
| Cable Modem | 0.3 | 0.2 | 3.3 | 9.6 | 48.3 | 1.7 | 63.4 |
| FTTP | 0.1 | 0.3 | 0.9 | 3.5 | 6.9 | 3.5 | 15.2 |
| Satellite | \* | \* | \* | \* | \* | 0.0 | 1.7 |
| Fixed Wireless | 0.2 | 0.3 | 0.5 | 0.3 | 0.1 | 0.0 | 1.5 |
| Total | 3.6 | 4.4 | 11.4 | 19.3 | 56.1 | 5.3 | 100.0 |

1 Power Line and Other are summarized with Other Wireline for confidentiality reasons. See Technical Notes at the end of the report for a description of FCC Form 477 technology categories

and other reporting requirements.

# = Rounds to Zero.

\* = Data withheld for confidentiality reasons.

Note: Numbers may not sum to totals due to rounding.

Source: FCC Form 477.

**Figure 31**

**Residential Fixed Connections by Downstream Speed Tier and Technology as of December 31, 2019**

**(in thousands)**

|  | *Downstream Speed* | | | | | |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *Technology* | *Less than 4 Mbps* | *At least 4 Mbps and less than 10 Mbps* | *At least 10 Mbps and less than 25 Mbps* | *At least 25 Mbps and less than 100 Mbps* | *At least 100 Mbps and less than 940 Mbps* | *At least 940 Mbps* | *Total* |
| aDSL | 2,536 | 3,442 | 6,395 | 5,148 | 638 | # | 18,159 |
| sDSL | \* | \* | \* | \* | \* | \* | 5 |
| Other Wireline1 | 2 | 2 | 6 | 8 | 53 | 3 | 74 |
| Cable Modem | 259 | 180 | 3,508 | 8,780 | 52,565 | 1,849 | 67,141 |
| FTTP | 130 | 307 | 843 | 3,576 | 7,294 | 3,861 | 16,011 |
| Satellite | \* | \* | \* | \* | \* | 0 | 1,795 |
| Fixed Wireless | 208 | 351 | 547 | 321 | 69 | 23 | 1,520 |
| Total | 3,164 | 4,342 | 11,837 | 18,997 | 60,627 | 5,736 | 104,703 |

Percentages

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| aDSL | 2.4 | 3.3 | 6.1 | 4.9 | 0.6 | 0.0 | 17.3 |
| sDSL | \* | \* | \* | \* | \* | \* | 0.0 |
| Other Wireline1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 |
| Cable Modem | 0.2 | 0.2 | 3.4 | 8.4 | 50.2 | 1.8 | 64.1 |
| FTTP | 0.1 | 0.3 | 0.8 | 3.4 | 7.0 | 3.7 | 15.3 |
| Satellite | \* | \* | \* | \* | \* | 0.0 | 1.7 |
| Fixed Wireless | 0.2 | 0.3 | 0.5 | 0.3 | 0.1 | 0.0 | 1.5 |
| Total | 3.0 | 4.1 | 11.3 | 18.1 | 57.9 | 5.5 | 100.0 |

1 Power Line and Other are summarized with Other Wireline for confidentiality reasons. See Technical Notes at the end of the report for a description of FCC Form 477 technology categories

and other reporting requirements.

# = Rounds to Zero.

\* = Data withheld for confidentiality reasons.

Note: Numbers may not sum to totals due to rounding.

Source: FCC Form 477.

**Figure 32**

**Nationwide Number of Providers of Connections over 200 kbps in at Least One Direction**

**by Technology 2015-2019**

|  | *2015* | *2016* | | *2017* | | *2018* | | *2019* | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *Technology* | *Dec* | *Jun* | *Dec* | *Jun* | *Dec* | *Jun* | *Dec* | *Jun* | *Dec* |
| aDSL | 778 | 769 | 774 | 768 | 743 | 738 | 721 | 715 | 691 |
| sDSL | 179 | 171 | 160 | 161 | 150 | 136 | 127 | 123 | 121 |
| Other Wireline1 | 250 | 244 | 236 | 243 | 235 | 249 | 243 | 222 | 211 |
| Cable Modem | 392 | 388 | 385 | 384 | 383 | 372 | 381 | 381 | 373 |
| FTTP | 990 | 1,017 | 1,066 | 1,103 | 1,147 | 1,183 | 1,269 | 1,309 | 1,330 |
| Satellite | 10 | 6 | 6 | 5 | 6 | 6 | 6 | 6 | 5 |
| Fixed Wireless | 983 | 1,027 | 1,071 | 1,095 | 1,160 | 1,188 | 1,239 | 1,248 | 1,280 |
| Mobile Wireless | 96 | 99 | 98 | 98 | 83 | 73 | 71 | 70 | 67 |
| Total | 1,917 | 1,957 | 2,000 | 2,030 | 2,090 | 2,129 | 2,215 | 2,223 | 2,247 |

1 Power Line and Other are summarized with Other Wireline for confidentiality reasons.

Note: Multiple Form 477 filers within a holding company structure count as one provider. Some previously-published data may have been revised.

Source: FCC Form 477.



**Figure 34**

**Residential Fixed Connections and Households by State as of December 31, 2019**

**(Connections and households, in thousands)**

|  | | *At least 200 kbps in at least One Direction* | | *At least 10 Mbps Down and 1 Mbps Up* | | *At least 25 Mbps Down and 3 Mbps Up* | | *At least 100 Mbps Down and 20 Mbps Up* | | *At least 940 Mbps Down and 500 Mbps Up* | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *State* | *Households* | *Connections* | *Subscribership Ratio* | *Connections* | *Subscribership Ratio* | *Connections* | *Subscribership Ratio* | *Connections* | *Subscribership Ratio* | *Connections* | *Subscribership Ratio* |
| Alabama | **1,868** | 1,429 | 0.77 | 1,235 | 0.66 | 1,020 | 0.55 | 250 | 0.13 | 34 | 0.02 |
| Alaska | **253** | 207 | 0.82 | 183 | 0.72 | 133 | 0.52 | 42 | 0.16 | 0 | 0.00 |
| American Samoa | **10** | \* | \* | \* | \* | \* | \* | 0 | 0.00 | 0 | 0.00 |
| Arizona | **2,571** | 2,275 | 0.88 | 1,993 | 0.78 | 1,797 | 0.70 | 400 | 0.16 | \* | \* |
| Arkansas | **1,158** | 815 | 0.70 | 672 | 0.58 | 513 | 0.44 | 149 | 0.13 | 10 | 0.01 |
| California | **13,044** | 11,720 | 0.90 | 11,013 | 0.84 | 9,735 | 0.75 | 2,005 | 0.15 | 179 | 0.01 |
| Colorado | **2,149** | 1,992 | 0.93 | 1,749 | 0.81 | 1,594 | 0.74 | 194 | 0.09 | 59 | 0.03 |
| Connecticut | **1,371** | 1,244 | 0.91 | 1,174 | 0.86 | 995 | 0.73 | 295 | 0.22 | 2 | 0.00 |
| Delaware | **363** | 356 | 0.98 | 345 | 0.95 | 333 | 0.92 | 96 | 0.26 | \* | \* |
| District of Columbia | **284** | 262 | 0.92 | 252 | 0.89 | 238 | 0.84 | 92 | 0.32 | \* | \* |
| Florida | **7,736** | 7,651 | 0.99 | 7,215 | 0.93 | 6,304 | 0.81 | 1,751 | 0.23 | 119 | 0.02 |
| Georgia | **3,759** | 3,207 | 0.85 | 2,920 | 0.78 | 2,413 | 0.64 | 811 | 0.22 | 129 | 0.03 |
| Guam | **42** | \* | \* | \* | \* | \* | \* | 0 | 0.00 | 0 | 0.00 |
| Hawaii | **459** | 465 | 1.01 | 447 | 0.97 | \* | \* | \* | \* | \* | \* |
| Idaho | **630** | 527 | 0.84 | 396 | 0.63 | 315 | 0.50 | 70 | 0.11 | 8 | 0.01 |
| Illinois | **4,846** | 3,979 | 0.82 | 3,651 | 0.75 | 2,941 | 0.61 | 788 | 0.16 | 36 | 0.01 |
| Indiana | **2,570** | 2,053 | 0.80 | 1,813 | 0.71 | 1,454 | 0.57 | 421 | 0.16 | 32 | 0.01 |
| Iowa | **1,265** | 990 | 0.78 | 803 | 0.63 | 688 | 0.54 | 169 | 0.13 | 10 | 0.01 |
| Kansas | **1,129** | 925 | 0.82 | 820 | 0.73 | 665 | 0.59 | 223 | 0.20 | 63 | 0.06 |
| Kentucky | **1,735** | 1,376 | 0.79 | 1,199 | 0.69 | 1,011 | 0.58 | 249 | 0.14 | 20 | 0.01 |
| Louisiana | **1,739** | 1,323 | 0.76 | 1,186 | 0.68 | 978 | 0.56 | 286 | 0.16 | 22 | 0.01 |
| Maine | **560** | 518 | 0.93 | 450 | 0.80 | 358 | 0.64 | 17 | 0.03 | \* | \* |
| Maryland | **2,205** | 2,058 | 0.93 | 1,973 | 0.89 | 1,851 | 0.84 | 704 | 0.32 | \* | \* |
| Massachusetts | **2,617** | 2,438 | 0.93 | 2,347 | 0.90 | 2,274 | 0.87 | 510 | 0.19 | \* | \* |
| Michigan | **3,935** | 3,186 | 0.81 | 2,900 | 0.74 | 2,426 | 0.62 | 438 | 0.11 | 19 | 0.00 |
| Minnesota | **2,186** | 1,843 | 0.84 | 1,578 | 0.72 | 1,401 | 0.64 | 171 | 0.08 | 26 | 0.01 |
| Mississippi | **1,104** | 729 | 0.66 | 602 | 0.55 | 418 | 0.38 | 100 | 0.09 | 13 | 0.01 |
| Missouri | **2,415** | 1,913 | 0.79 | 1,631 | 0.68 | 1,359 | 0.56 | 422 | 0.17 | 84 | 0.03 |
| Montana | **428** | 353 | 0.83 | 289 | 0.68 | 243 | 0.57 | 27 | 0.06 | \* | \* |
| Nebraska | **759** | 627 | 0.83 | 557 | 0.73 | 467 | 0.62 | 129 | 0.17 | 19 | 0.03 |

**Figure 34 - Continued**

**Residential Fixed Connections and Households by State as of December 31, 2019**

**(Connections and households, in thousands)**

|  | | *At least 200 kbps in at least One Direction* | | *At least 10 Mbps Down and 1 Mbps Up* | | *At least 25 Mbps Down and 3 Mbps Up* | | *At least 100 Mbps Down and 20 Mbps Up* | | *At least 940 Mbps Down and 500 Mbps Up* | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *State* | *Households* | *Connections* | *Subscribership Ratio* | *Connections* | *Subscribership Ratio* | *Connections* | *Subscribership Ratio* | *Connections* | *Subscribership Ratio* | *Connections* | *Subscribership Ratio* |
| Nevada | **1,099** | 984 | 0.90 | 920 | 0.84 | 814 | 0.74 | 201 | 0.18 | \* | \* |
| New Hampshire | **532** | 520 | 0.98 | 484 | 0.91 | 443 | 0.83 | 48 | 0.09 | \* | \* |
| New Jersey | **3,232** | 3,005 | 0.93 | 2,920 | 0.90 | 2,838 | 0.88 | 1,543 | 0.48 | \* | \* |
| New Mexico | **780** | 609 | 0.78 | 461 | 0.59 | 380 | 0.49 | 35 | 0.04 | 3 | 0.00 |
| New York | **7,343** | 6,367 | 0.87 | 6,193 | 0.84 | 5,817 | 0.79 | 3,077 | 0.42 | \* | \* |
| North Carolina | **3,965** | 3,519 | 0.89 | 3,130 | 0.79 | 2,848 | 0.72 | 778 | 0.20 | 112 | 0.03 |
| North Dakota | **318** | 277 | 0.87 | 262 | 0.82 | 243 | 0.76 | 48 | 0.15 | 1 | 0.00 |
| Northern Mariana Isl | **16** | \* | \* | \* | \* | \* | \* | 0 | 0.00 | 0 | 0.00 |
| Ohio | **4,676** | 3,858 | 0.82 | 3,498 | 0.75 | 2,919 | 0.62 | 503 | 0.11 | 16 | 0.00 |
| Oklahoma | **1,480** | 1,094 | 0.74 | 926 | 0.63 | 755 | 0.51 | 218 | 0.15 | 27 | 0.02 |
| Oregon | **1,612** | 1,407 | 0.87 | 1,236 | 0.77 | 1,113 | 0.69 | 134 | 0.08 | 20 | 0.01 |
| Pennsylvania | **5,053** | 4,300 | 0.85 | 3,951 | 0.78 | 3,642 | 0.72 | 981 | 0.19 | \* | \* |
| Puerto Rico | **1,193** | 471 | 0.39 | 358 | 0.30 | 206 | 0.17 | 25 | 0.02 | \* | \* |
| Rhode Island | **410** | 373 | 0.91 | 369 | 0.90 | 358 | 0.87 | \* | \* | \* | \* |
| South Carolina | **1,922** | 1,658 | 0.86 | 1,519 | 0.79 | 1,284 | 0.67 | 308 | 0.16 | 26 | 0.01 |
| South Dakota | **344** | 282 | 0.82 | 267 | 0.77 | 245 | 0.71 | 26 | 0.08 | # | 0.00 |
| Tennessee | **2,597** | 2,083 | 0.80 | 1,905 | 0.73 | 1,593 | 0.61 | 541 | 0.21 | 83 | 0.03 |
| Texas | **9,692** | 8,259 | 0.85 | 7,687 | 0.79 | 6,619 | 0.68 | 2,277 | 0.23 | 303 | 0.03 |
| Utah | **977** | 884 | 0.90 | 781 | 0.80 | 688 | 0.70 | 138 | 0.14 | 31 | 0.03 |
| Vermont | **260** | 248 | 0.95 | 204 | 0.79 | 165 | 0.63 | 24 | 0.09 | \* | \* |
| Virgin Islands | **43** | \* | \* | 17 | 0.39 | \* | \* | 0 | 0.00 | 0 | 0.00 |
| Virginia | **3,151** | 2,709 | 0.86 | 2,507 | 0.80 | 2,339 | 0.74 | 892 | 0.28 | \* | \* |
| Washington | **2,848** | 2,583 | 0.91 | 2,303 | 0.81 | 2,107 | 0.74 | 231 | 0.08 | 55 | 0.02 |
| West Virginia | **733** | 516 | 0.70 | 405 | 0.55 | 335 | 0.46 | 92 | 0.12 | 2 | 0.00 |
| Wisconsin | **2,358** | 1,969 | 0.83 | 1,749 | 0.74 | 1,454 | 0.62 | 177 | 0.08 | 12 | 0.01 |
| Wyoming | **230** | 194 | 0.84 | 163 | 0.71 | 147 | 0.64 | 9 | 0.04 | # | 0.00 |
| Total | **122,060** | 104,703 | 0.86 | 95,649 | 0.78 | 83,725 | 0.69 | 23,469 | 0.19 | 3,786 | 0.03 |

# = Rounds to Zero; \* = Data withheld for confidentiality reasons.

Note: Numbers may not sum to totals due to rounding.

Sources: FCC Form 477 (Connections); 2015-2019 ACS 5-year estimates; Census 2010.

**Figure 35**

**Connections by Type of End User by State as of December 31, 2019**

**(Connections over 200 kbps in at least one direction, in thousands)**

|  | *Connections* | | *Percentages* | |  |
| --- | --- | --- | --- | --- | --- |
| *State* | *Residential* | *Business* | *Residential* | *Business* | *Total* |
| Alabama | 5,404 | 1,286 | 80.8 | 19.2 | 6,690 |
| Alaska | 842 | 130 | 86.6 | 13.4 | 972 |
| American Samoa | \* | \* | \* | \* | \* |
| Arizona | 8,113 | 1,445 | 84.9 | 15.1 | 9,558 |
| Arkansas | 3,112 | 818 | 79.2 | 20.8 | 3,930 |
| California | 48,994 | 8,262 | 85.6 | 14.4 | 57,256 |
| Colorado | 6,722 | 1,359 | 83.2 | 16.8 | 8,082 |
| Connecticut | 4,207 | 947 | 81.6 | 18.4 | 5,154 |
| Delaware | 1,135 | 228 | 83.3 | 16.7 | 1,363 |
| District of Columbia | 1,049 | 564 | 65.0 | 35.0 | 1,614 |
| Florida | 26,184 | 4,855 | 84.4 | 15.6 | 31,038 |
| Georgia | 12,108 | 2,769 | 81.4 | 18.6 | 14,877 |
| Guam | 193 | 41 | 82.4 | 17.6 | 234 |
| Hawaii | 1,795 | 317 | 85.0 | 15.0 | 2,112 |
| Idaho | 1,904 | 384 | 83.2 | 16.8 | 2,288 |
| Illinois | 14,908 | 3,163 | 82.5 | 17.5 | 18,071 |
| Indiana | 7,176 | 1,570 | 82.0 | 18.0 | 8,746 |
| Iowa | 3,406 | 784 | 81.3 | 18.7 | 4,190 |
| Kansas | 5,079 | 728 | 87.5 | 12.5 | 5,808 |
| Kentucky | 5,030 | 924 | 84.5 | 15.5 | 5,954 |
| Louisiana | 5,382 | 979 | 84.6 | 15.4 | 6,362 |
| Maine | 1,452 | 430 | 77.1 | 22.9 | 1,882 |
| Maryland | 7,550 | 1,284 | 85.5 | 14.5 | 8,834 |
| Massachusetts | 8,600 | 1,757 | 83.0 | 17.0 | 10,357 |
| Michigan | 11,210 | 2,542 | 81.5 | 18.5 | 13,751 |
| Minnesota | 6,354 | 1,432 | 81.6 | 18.4 | 7,786 |
| Mississippi | 3,130 | 593 | 84.1 | 15.9 | 3,723 |
| Missouri | 6,819 | 1,464 | 82.3 | 17.7 | 8,283 |
| Montana | 1,114 | 302 | 78.7 | 21.3 | 1,415 |
| Nebraska | 2,029 | 563 | 78.3 | 21.7 | 2,592 |
| Nevada | 3,631 | 625 | 85.3 | 14.7 | 4,257 |
| New Hampshire | 1,526 | 394 | 79.5 | 20.5 | 1,920 |
| New Jersey | 10,862 | 2,153 | 83.5 | 16.5 | 13,015 |
| New Mexico | 2,302 | 412 | 84.8 | 15.2 | 2,714 |
| New York | 25,231 | 4,694 | 84.3 | 15.7 | 29,925 |
| North Carolina | 11,349 | 2,635 | 81.2 | 18.8 | 13,984 |
| North Dakota | 857 | 229 | 78.9 | 21.1 | 1,086 |
| Northern Mariana Isl | \* | \* | \* | \* | \* |
| Ohio | 13,428 | 3,063 | 81.4 | 18.6 | 16,491 |
| Oklahoma | 4,377 | 849 | 83.7 | 16.3 | 5,226 |
| Oregon | 4,825 | 1,045 | 82.2 | 17.8 | 5,869 |
| Pennsylvania | 14,850 | 3,207 | 82.2 | 17.8 | 18,057 |
| Puerto Rico | 3,493 | 409 | 89.5 | 10.5 | 3,902 |
| Rhode Island | 1,176 | 241 | 83.0 | 17.0 | 1,417 |
| South Carolina | 5,522 | 1,236 | 81.7 | 18.3 | 6,759 |
| South Dakota | 911 | 245 | 78.8 | 21.2 | 1,156 |
| Tennessee | 7,531 | 1,784 | 80.8 | 19.2 | 9,316 |
| Texas | 34,612 | 5,914 | 85.4 | 14.6 | 40,526 |
| Utah | 3,302 | 712 | 82.3 | 17.7 | 4,014 |
| Vermont | 695 | 218 | 76.2 | 23.8 | 913 |
| Virgin Islands | 126 | 15 | 89.1 | 10.9 | 141 |
| Virginia | 9,069 | 2,238 | 80.2 | 19.8 | 11,307 |
| Washington | 8,930 | 1,789 | 83.3 | 16.7 | 10,719 |
| West Virginia | 1,644 | 325 | 83.5 | 16.5 | 1,969 |
| Wisconsin | 6,341 | 1,428 | 81.6 | 18.4 | 7,770 |
| Wyoming | 655 | 163 | 80.0 | 20.0 | 818 |
| Total | 388,344 | 77,958 | 83.3 | 16.7 | 466,302 |

# = Rounds to Zero.

\* = Data withheld for confidentiality reasons.

Note: Numbers may not sum to totals due to rounding.

Source: FCC Form 477.

**Figure 36**

**Connections by Technology by State as of December 31, 2019**

**(Connections over 200 kbps in at least one direction, in thousands)**

| *State* | *ADSL* | *SDSL* | *Other Wireline1* | *Cable Modem* | *Fiber* | *Satellite* | *Fixed Wireless* | *Mobile Wireless* | *Total* |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Alabama | 414 | \* | 4 | 858 | 210 | \* | 9 | 5,132 | 6,690 |
| Alaska | 77 | \* | 2 | \* | 10 | \* | 10 | 729 | 972 |
| American Samoa | 0 | 0 | 0 | \* | \* | 0 | \* | \* | \* |
| Arizona | 590 | \* | 12 | 1,626 | 135 | \* | 45 | 7,112 | 9,558 |
| Arkansas | 320 | # | \* | 421 | 89 | \* | 10 | 3,035 | 3,930 |
| California | 2,457 | 3 | \* | 8,636 | 1,384 | \* | 161 | 44,404 | 57,256 |
| Colorado | \* | # | 18 | 1,421 | 153 | \* | 85 | 5,914 | 8,082 |
| Connecticut | \* | \* | 2 | 1,067 | 32 | \* | # | 3,792 | 5,154 |
| Delaware | \* | \* | 2 | 249 | \* | \* | \* | 977 | 1,363 |
| District of Columbia | \* | \* | 6 | \* | \* | \* | \* | 1,315 | 1,614 |
| Florida | 1,277 | \* | 34 | 5,778 | 1,126 | \* | 23 | 22,715 | 31,038 |
| Georgia | 816 | \* | 10 | 2,010 | 590 | \* | 8 | 11,370 | 14,877 |
| Guam | \* | 0 | 0 | \* | \* | 0 | 0 | 193 | 234 |
| Hawaii | \* | \* | 1 | \* | 68 | \* | 2 | 1,599 | 2,112 |
| Idaho | 216 | \* | 3 | 246 | 41 | \* | 52 | 1,713 | 2,288 |
| Illinois | 978 | # | \* | 2,936 | 284 | \* | 82 | 13,730 | 18,071 |
| Indiana | 521 | \* | 3 | 1,260 | 335 | \* | 53 | 6,523 | 8,746 |
| Iowa | 288 | 1 | \* | 494 | 210 | \* | 55 | 3,110 | 4,190 |
| Kansas | 207 | # | \* | 505 | 228 | \* | 46 | 4,800 | 5,808 |
| Kentucky | 358 | \* | 2 | 840 | 233 | \* | 22 | 4,459 | 5,954 |
| Louisiana | 352 | \* | 3 | 852 | 175 | \* | 11 | 4,909 | 6,362 |
| Maine | 108 | 1 | \* | 426 | 12 | \* | 8 | 1,315 | 1,882 |
| Maryland | \* | # | 16 | 1,209 | \* | \* | 5 | 6,657 | 8,834 |
| Massachusetts | \* | \* | 18 | 2,000 | \* | \* | 14 | 7,692 | 10,357 |
| Michigan | 691 | 1 | \* | 2,466 | 150 | \* | 46 | 10,305 | 13,751 |
| Minnesota | 479 | 2 | \* | 1,225 | 226 | \* | 38 | 5,782 | 7,786 |
| Mississippi | 311 | \* | 1 | 352 | 65 | \* | 9 | 2,919 | 3,723 |
| Missouri | 572 | \* | 7 | 1,032 | 343 | \* | 48 | 6,206 | 8,283 |
| Montana | 95 | \* | 2 | 226 | 32 | \* | 26 | 1,019 | 1,415 |
| Nebraska | 139 | # | \* | 389 | 109 | \* | 38 | 1,906 | 2,592 |

**Figure 36 - Continued**

**Connections by Technology by State as of December 31, 2019**

**(Connections over 200 kbps in at least one direction, in thousands)**

| *State* | *ADSL* | *SDSL* | *Other Wireline1* | *Cable Modem* | *Fiber* | *Satellite* | *Fixed Wireless* | *Mobile Wireless* | *Total* |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Nevada | 180 | # | 5 | \* | 72 | \* | 28 | 3,187 | 4,257 |
| New Hampshire | 64 | \* | 4 | 467 | 32 | \* | 2 | 1,346 | 1,920 |
| New Jersey | 104 | \* | 25 | 2,118 | \* | \* | # | 9,712 | 13,015 |
| New Mexico | 233 | \* | 4 | 350 | 37 | \* | 25 | 2,049 | 2,714 |
| New York | 266 | \* | 36 | 4,931 | 1,713 | \* | 9 | 22,918 | 29,925 |
| North Carolina | 683 | \* | 7 | 2,540 | 493 | \* | 14 | 10,172 | 13,984 |
| North Dakota | 32 | # | \* | 175 | 96 | \* | 4 | 775 | 1,086 |
| Northern Mariana Isl | \* | 0 | 0 | \* | \* | 0 | 0 | \* | \* |
| Ohio | 866 | \* | 11 | 2,807 | 368 | \* | 55 | 12,333 | 16,491 |
| Oklahoma | 334 | # | \* | 612 | 153 | \* | 50 | 4,021 | 5,226 |
| Oregon | 236 | # | \* | 1,044 | 185 | \* | 34 | 4,330 | 5,869 |
| Pennsylvania | 456 | # | 24 | 3,113 | \* | \* | 9 | 13,383 | 18,057 |
| Puerto Rico | \* | 0 | \* | \* | 21 | \* | 23 | 3,268 | 3,902 |
| Rhode Island | \* | \* | 2 | \* | \* | \* | \* | 1,011 | 1,417 |
| South Carolina | 376 | \* | 3 | 1,128 | 244 | \* | 5 | 4,965 | 6,759 |
| South Dakota | 39 | \* | # | 187 | 69 | \* | 10 | 845 | 1,156 |
| Tennessee | 429 | # | \* | 1,288 | 464 | \* | 18 | 7,048 | 9,316 |
| Texas | 1,762 | # | \* | 4,976 | 1,778 | \* | 253 | 31,509 | 40,526 |
| Utah | 185 | \* | 6 | 554 | 151 | \* | 57 | 3,054 | 4,014 |
| Vermont | 80 | \* | 2 | 159 | 29 | \* | 4 | 634 | 913 |
| Virgin Islands | \* | 0 | \* | \* | \* | \* | \* | \* | 141 |
| Virginia | 240 | # | \* | 1,606 | 978 | \* | 27 | 8,348 | 11,307 |
| Washington | 420 | # | \* | 2,021 | 217 | \* | 42 | 7,932 | 10,719 |
| West Virginia | \* | \* | 1 | 351 | 17 | \* | 4 | 1,400 | 1,969 |
| Wisconsin | 526 | \* | 3 | \* | 176 | \* | 47 | 5,630 | 7,770 |
| Wyoming | 47 | # | \* | 120 | 12 | \* | 30 | 600 | 818 |
| Total | 20,214 | 16 | 525 | 72,516 | 17,376 | 1,975 | 1,669 | 352,012 | 466,302 |

1 PowerLine and Other are summarized with Other Wireline for confidentiality reasons. See Technical Notes at the end of the report for a description of FCC Form 477 technology categories and

other reporting requirements.

# = Rounds to Zero.

\* = Data withheld for confidentiality reasons.

Note: Numbers may not sum to totals due to rounding.

Source: FCC Form 477.

**Figure 37**

**Percentage of Fixed Connections by Downstream Speed by State as of December 31, 2019**

|  | *Over 200 kbps Upstream and* | | | | |
| --- | --- | --- | --- | --- | --- |
| *State* | *% over 200 kbps Downstream* | *% at least 10 Mbps Downstream* | *% at least 25 Mbps Downstream* | *% at least 100 Mbps Downstream* | *% at least 940 Mbps Downstream* |
| Alabama | 99.7 | 87.7 | 73.3 | 53.5 | 2.8 |
| Alaska | 99.0 | 85.9 | 62.3 | \* | \* |
| American Samoa | \* | \* | \* | \* | \* |
| Arizona | 99.8 | 93.5 | 79.5 | 54.1 | 4.9 |
| Arkansas | 99.8 | 85.1 | 64.9 | 35.2 | 2.5 |
| California | 99.8 | 93.0 | 81.8 | 60.5 | 3.7 |
| Colorado | 99.8 | 93.8 | 80.3 | 52.3 | 6.6 |
| Connecticut | 99.7 | 93.5 | 80.6 | 70.0 | 2.6 |
| Delaware | 99.9 | 96.1 | 92.8 | 76.2 | 13.7 |
| District of Columbia | 99.9 | 94.2 | 88.7 | 80.5 | 15.0 |
| Florida | 99.8 | 95.3 | 86.2 | 66.5 | 2.6 |
| Georgia | 99.5 | 91.0 | 78.6 | 58.6 | 5.1 |
| Guam | \* | \* | \* | \* | \* |
| Hawaii | 100.0 | 95.0 | \* | \* | 1.6 |
| Idaho | 99.7 | 85.9 | 61.3 | 41.7 | 2.0 |
| Illinois | 99.8 | 91.4 | 78.2 | 58.9 | 2.5 |
| Indiana | 99.5 | 89.0 | 74.6 | 53.8 | 2.6 |
| Iowa | 99.7 | 86.9 | 70.8 | 36.1 | 3.0 |
| Kansas | 99.8 | 89.4 | 70.9 | 47.6 | 7.8 |
| Kentucky | 99.5 | 87.4 | 74.4 | 53.2 | 1.9 |
| Louisiana | 99.7 | 89.8 | 74.7 | 50.7 | 3.1 |
| Maine | 99.2 | 85.1 | 69.1 | 57.4 | 0.5 |
| Maryland | 99.9 | 95.6 | 90.0 | 74.7 | 15.3 |
| Massachusetts | 100.0 | 95.5 | 92.5 | 81.2 | 10.7 |
| Michigan | 99.5 | 90.7 | 79.4 | 60.4 | 1.4 |
| Minnesota | 99.9 | 90.7 | 76.8 | 50.5 | 3.3 |
| Mississippi | 99.5 | 82.9 | 60.9 | 36.5 | 2.2 |
| Missouri | 99.7 | 87.9 | 72.3 | 54.0 | 5.1 |
| Montana | 99.8 | 86.7 | 69.8 | 52.9 | 4.6 |
| Nebraska | 99.6 | 91.1 | 75.0 | 55.5 | 4.6 |

**Figure 37 - Continued**

**Percentage of Fixed Connections by Downstream Speed by State as of December 31, 2019**

|  | *Over 200 kbps Upstream and* | | | | |
| --- | --- | --- | --- | --- | --- |
| *State* | *% over 200 kbps Downstream* | *% at least 10 Mbps Downstream* | *% at least 25 Mbps Downstream* | *% at least 100 Mbps Downstream* | *% at least 940 Mbps Downstream* |
| Nevada | 99.9 | 95.2 | 84.5 | 62.3 | 5.0 |
| New Hampshire | 99.4 | 91.4 | 84.4 | 74.5 | 4.6 |
| New Jersey | 99.8 | 96.6 | 93.6 | 82.3 | 14.7 |
| New Mexico | 99.9 | 86.0 | 64.2 | 36.2 | 2.0 |
| New York | 99.7 | 96.3 | 90.4 | 79.1 | 9.0 |
| North Carolina | 99.4 | 91.0 | 81.0 | 65.4 | 3.5 |
| North Dakota | 99.9 | 95.3 | 86.8 | 67.7 | 3.3 |
| Northern Mariana Isl | \* | \* | \* | \* | \* |
| Ohio | 99.8 | 90.9 | 75.8 | 56.6 | 1.0 |
| Oklahoma | 99.8 | 84.8 | 67.9 | 44.5 | 4.5 |
| Oregon | 99.7 | 91.4 | 79.4 | 54.6 | 4.0 |
| Pennsylvania | 99.8 | 92.2 | 84.9 | 68.8 | 10.2 |
| Puerto Rico | 100.0 | 77.1 | 48.0 | \* | \* |
| Rhode Island | 99.7 | 98.2 | 94.7 | \* | \* |
| South Carolina | 99.8 | 92.0 | 79.0 | 61.4 | 2.1 |
| South Dakota | 99.8 | 95.8 | 86.4 | 60.5 | 2.1 |
| Tennessee | 99.7 | 91.5 | 79.2 | 62.2 | 5.0 |
| Texas | 99.9 | 93.0 | 79.8 | 58.0 | 5.3 |
| Utah | 100.0 | 93.3 | 78.8 | 49.4 | 6.3 |
| Vermont | 98.1 | 80.9 | 67.7 | 56.1 | 6.0 |
| Virgin Islands | \* | \* | \* | \* | \* |
| Virginia | 99.6 | 92.6 | 85.5 | 69.2 | 13.8 |
| Washington | 99.6 | 92.6 | 81.6 | 58.4 | 5.5 |
| West Virginia | 97.8 | 77.7 | 64.3 | 47.7 | 2.6 |
| Wisconsin | 99.3 | 90.0 | 74.3 | 57.7 | 1.2 |
| Wyoming | 99.9 | 87.9 | 76.6 | 49.1 | 0.5 |
| Total | 99.7 | 92.1 | 80.6 | 61.3 | 5.3 |

Source: FCC Form 477.

**Figure 38**

**Providers of Connections by Technology by State as of December 31, 2019**

**(Connections over 200 kbps in at least one direction, in thousands)**

| *State* | *ADSL* | *SDSL* | *Other Wireline1* | *Cable Modem* | *Fiber* | *Satellite* | *Fixed Wireless* | *Mobile Wireless* | *Total* |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Alabama | 22 | \* | 14 | 16 | 38 | \* | 22 | 7 | 72 |
| Alaska | 16 | \* | 8 | \* | 16 | \* | 19 | 9 | 39 |
| American Samoa | 0 | 0 | 0 | \* | \* | 0 | \* | \* | \* |
| Arizona | 21 | \* | 21 | 15 | 39 | \* | 52 | 6 | 102 |
| Arkansas | 22 | 5 | \* | 16 | 44 | \* | 29 | 5 | 85 |
| California | 33 | 12 | \* | 30 | 87 | \* | 125 | 5 | 206 |
| Colorado | \* | 5 | 24 | 16 | 75 | \* | 65 | 9 | 136 |
| Connecticut | \* | \* | 9 | 8 | 22 | \* | 6 | 4 | 34 |
| Delaware | \* | \* | 7 | 4 | \* | \* | \* | 4 | 26 |
| District of Columbia | \* | \* | 12 | \* | \* | \* | \* | 4 | 40 |
| Florida | 20 | \* | 28 | 19 | 71 | \* | 38 | 6 | 111 |
| Georgia | 24 | \* | 24 | 25 | 87 | \* | 25 | 5 | 116 |
| Guam | \* | 0 | 0 | \* | \* | 0 | 0 | 4 | 4 |
| Hawaii | \* | \* | 8 | \* | 11 | \* | 5 | 5 | 22 |
| Idaho | 20 | \* | 12 | 16 | 40 | \* | 41 | 9 | 75 |
| Illinois | 49 | 4 | \* | 19 | 96 | \* | 90 | 6 | 177 |
| Indiana | 37 | \* | 24 | 11 | 79 | \* | 66 | 4 | 124 |
| Iowa | 78 | 15 | \* | 40 | 168 | \* | 85 | 8 | 233 |
| Kansas | 25 | 5 | \* | 23 | 69 | \* | 66 | 9 | 125 |
| Kentucky | 15 | \* | 12 | 27 | 53 | \* | 28 | 7 | 98 |
| Louisiana | 16 | \* | 16 | 16 | 38 | \* | 24 | 6 | 71 |
| Maine | 12 | 5 | \* | 7 | 19 | \* | 14 | 5 | 40 |
| Maryland | \* | 4 | 19 | 16 | \* | \* | 25 | 5 | 75 |
| Massachusetts | \* | \* | 15 | 10 | \* | \* | 17 | 6 | 61 |
| Michigan | 32 | 5 | \* | 25 | 76 | \* | 58 | 7 | 132 |
| Minnesota | 40 | 9 | \* | 20 | 86 | \* | 58 | 5 | 136 |
| Mississippi | 18 | \* | 9 | 12 | 25 | \* | 15 | 6 | 55 |
| Missouri | 35 | \* | 27 | 18 | 74 | \* | 71 | 7 | 141 |
| Montana | 20 | \* | 10 | 7 | 34 | \* | 36 | 6 | 62 |
| Nebraska | 31 | 5 | \* | 17 | 59 | \* | 51 | 7 | 104 |

**Figure 38 - Continued**

**Providers of Connections by Technology by State as of December 31, 2019**

**(Connections over 200 kbps in at least one direction, in thousands)**

| *State* | *ADSL* | *SDSL* | *Other Wireline1* | *Cable Modem* | *Fiber* | *Satellite* | *Fixed Wireless* | *Mobile Wireless* | *Total* |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Nevada | 17 | 5 | 13 | \* | 34 | \* | 28 | 5 | 68 |
| New Hampshire | 8 | \* | 8 | 5 | 19 | \* | 8 | 6 | 33 |
| New Jersey | 10 | \* | 24 | 9 | \* | \* | 10 | 4 | 60 |
| New Mexico | 19 | \* | 16 | 10 | 34 | \* | 38 | 6 | 71 |
| New York | 31 | \* | 26 | 21 | 75 | \* | 29 | 7 | 115 |
| North Carolina | 18 | \* | 20 | 26 | 61 | \* | 26 | 6 | 98 |
| North Dakota | 20 | 4 | \* | 9 | 32 | \* | 12 | 6 | 50 |
| Northern Mariana Isl | \* | 0 | 0 | \* | \* | 0 | 0 | \* | \* |
| Ohio | 33 | \* | 25 | 32 | 79 | \* | 71 | 4 | 157 |
| Oklahoma | 34 | 5 | \* | 13 | 59 | \* | 46 | 11 | 108 |
| Oregon | 35 | 6 | \* | 18 | 60 | \* | 47 | 6 | 101 |
| Pennsylvania | 22 | 4 | 18 | 25 | \* | \* | 27 | 8 | 105 |
| Puerto Rico | \* | 0 | \* | \* | 11 | \* | 13 | 5 | 24 |
| Rhode Island | \* | \* | 6 | \* | \* | \* | \* | 4 | 22 |
| South Carolina | 18 | \* | 11 | 14 | 37 | \* | 12 | 6 | 54 |
| South Dakota | 20 | \* | 10 | 9 | 39 | \* | 21 | 8 | 73 |
| Tennessee | 22 | 4 | \* | 20 | 71 | \* | 37 | 6 | 111 |
| Texas | 68 | 13 | \* | 31 | 128 | \* | 160 | 11 | 254 |
| Utah | 19 | \* | 14 | 11 | 34 | \* | 36 | 8 | 73 |
| Vermont | 8 | \* | 7 | 5 | 19 | \* | 10 | 6 | 37 |
| Virgin Islands | \* | 0 | \* | \* | \* | \* | \* | \* | 7 |
| Virginia | 23 | 4 | \* | 20 | 73 | \* | 44 | 6 | 115 |
| Washington | 26 | 5 | \* | 26 | 66 | \* | 56 | 6 | 118 |
| West Virginia | \* | \* | 11 | 16 | 27 | \* | 19 | 6 | 65 |
| Wisconsin | 41 | \* | 20 | \* | 75 | \* | 48 | 6 | 113 |
| Wyoming | 13 | 4 | \* | 7 | 23 | \* | 22 | 8 | 46 |
| Total | 691 | 121 | 211 | 373 | 1,330 | 5 | 1,280 | 67 | 2,247 |

1 Power Line and Other are summarized with Other Wireline for confidentiality reasons. See Technical Notes at the end of the report for a description of FCC Form 477 technology categories and

other reporting requirements.

# = Rounds to Zero.

\* = Data withheld for confidentiality reasons.

Note: Numbers may not sum to totals due to rounding.

Source: FCC Form 477.



**Figure 40**

**Distribution of Counties by Ratio of Residential Fixed Connections over 200 kbps in at Least One Direction**

**to County Households by Technology as of December 31, 2019**

|  | *Ratio of Residential Fixed Connections to County Households* | | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *Technology* | *Zero* | *Greater than 0 and no more than 5%* | *Greater than 5 and no more than 10%* | *Greater than 10 and no more than 20%* | *Greater than 20 and no more than 30%* | *Greater than 30 and no more than 40%* | *Greater than 40 and no more than 50%* | *Greater than 50 and no more than 60%* | *Greater than 60 and no more than 80%* | *Greater than 80 and no more than 100%* | *100% or more* |
| aDSL | 1.7 | 8.2 | 10.8 | 31.0 | 24.7 | 13.5 | 6.1 | 2.2 | 1.6 | 0.2 | 0.2 |
| sDSL | 94.9 | 5.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Other Wireline | 93.8 | 6.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Cable Modem | 10.9 | 8.0 | 5.6 | 12.4 | 13.4 | 11.5 | 11.7 | 11.2 | 13.0 | 1.7 | 0.6 |
| FTTP | 14.9 | 42.8 | 11.8 | 12.0 | 6.2 | 4.1 | 2.9 | 2.0 | 2.9 | 0.3 | 0.1 |
| Satellite | 0.4 | 64.6 | 22.4 | 11.0 | 1.2 | 0.2 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| Fixed Wireless | 13.6 | 60.7 | 12.2 | 8.8 | 3.0 | 1.1 | 0.4 | 0.1 | 0.1 | 0.0 | 0.0 |
| Total | 0.1 | 0.0 | 0.0 | 0.7 | 0.7 | 1.1 | 4.7 | 10.8 | 48.1 | 28.9 | 4.9 |

1 Power Line and Other are summarized with Other Wireline. See Technical Notes at the end of the report for a description of Form 477 technology categories and other reporting requirements.

Note: Numbers may not sum to totals due to rounding.

Sources: FCC Form 477; 2015-2019 ACS 5-year estimates; and Census 2010.



**Figure 42**

**Distribution of Census Tracts by Ratio of Residential Fixed Connections over 200 kbps in at Least One Direction**

**to Tract Households by Technology as of December 31, 2019**

|  | *Ratio of Residential Fixed Connections to Tract Households* | | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *Technology* | *Zero* | *Greater than 0 and no more than 5%* | *Greater than 5 and no more than 10%* | *Greater than 10 and no more than 20%* | *Greater than 20 and no more than 30%* | *Greater than 30 and no more than 40%* | *Greater than 40 and no more than 50%* | *Greater than 50 and no more than 60%* | *Greater than 60 and no more than 80%* | *Greater than 80 and no more than 100%* | *100% or more* |
| aDSL | 4.1 | 25.5 | 15.8 | 25.4 | 16.7 | 7.0 | 2.9 | 1.4 | 0.8 | 0.2 | 0.2 |
| sDSL | 99.3 | 0.7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Other Wireline | 99.1 | 0.7 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Cable Modem | 4.7 | 2.8 | 1.5 | 3.4 | 4.9 | 9.2 | 14.7 | 18.5 | 28.5 | 9.5 | 2.3 |
| FTTP | 34.5 | 21.7 | 8.2 | 11.1 | 7.8 | 6.0 | 4.3 | 2.9 | 2.8 | 0.5 | 0.2 |
| Satellite | 24.8 | 64.9 | 5.6 | 3.7 | 0.8 | 0.2 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| Fixed Wireless | 67.6 | 25.1 | 3.1 | 2.5 | 0.9 | 0.4 | 0.2 | 0.1 | 0.1 | 0.0 | 0.0 |
| Total | 0.8 | 0.1 | 0.2 | 0.4 | 0.5 | 1.1 | 2.5 | 5.5 | 28.3 | 45.2 | 15.5 |

1 Power Line and Other are summarized with Other Wireline. See Technical Notes at the end of the report for a description of FCC Form 477 technology categories and other reporting requirements.

Note: Numbers may not sum to totals due to rounding.

Sources: FCC Form 477; 2015-2019 ACS 5-year estimates; and Census 2010.

**Figure 43**

**Percentage of Developed Census Blocks with Residential Fixed Service by Technology as of December 31, 2019**

**(Internet Access Service over 200 kbps in at least one direction)**

|  | *Number of Providers* | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *Technology* | *Zero* | *One* | *Two* | *Three* | *Four* | *Five* | *Six* | *Seven or More* |
| aDSL | 22.8 | 75.2 | 1.9 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| sDSL | 99.6 | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Other Wireline1 | 99.2 | 0.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Cable Modem | 32.0 | 64.0 | 3.9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| FTTP | 71.6 | 27.0 | 1.3 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| Satellite | 0.0 | 0.1 | 0.9 | 98.9 | 0.0 | 0.0 | 0.0 | 0.0 |
| Fixed Wireless | 47.9 | 27.9 | 15.5 | 6.4 | 1.9 | 0.3 | 0.0 | 0.0 |
| aDSL and/or Cable Modem and/or FTTP | 10.7 | 24.2 | 55.9 | 8.6 | 0.6 | 0.0 | 0.0 | 0.0 |
| Any Technology | 0.0 | 0.1 | 0.0 | 3.7 | 14.2 | 39.7 | 24.5 | 17.8 |

1 Power Line and Other are summarized with Other Wireline. See Technical Notes at the end of the report for a description of FCC Form 477 technology categories and other reporting requirements.

Note: Numbers may not sum to totals due to rounding. The number of providers in a census block does not necessarily reflect the number of choices available to a particular household, and does not

purport to measure competition. Providers may list a census block on FCC Form 477 if service can be provided to at least one location in the block. Developed census blocks are those with housing

units based on the 2010 census.

Sources: FCC Form 477 and Census 2010.

**Figure 44**

**Distribution of Counties by Ratio of Residential Fixed Connections to County Households by State as of December 31, 2019**

**(Connections over 200 kbps in at least one direction)**

|  | | *Ratio of Residential Fixed Connections over 200 kbps in at Least One Direction to County Households* | | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *State* | *Counties* | *Zero* | *Greater than 0 and no more than 5%* | *Greater than 5 and no more than 10%* | *Greater than 10 and no more than 20%* | *Greater than 20 and no more than 30%* | *Greater than 30 and no more than 40%* | *Greater than 40 and no more than 50%* | *Greater than 50 and no more than 60%* | *Greater than 60 and no more than 80%* | *Greater than 80 and no more than 100%* | *100% or more* |
| Alabama | 67 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 14 | 32 | 10 | 0 |
| Alaska | 29 | 0 | 0 | 0 | 1 | 0 | 1 | 2 | 2 | 12 | 8 | 3 |
| American Samoa | 5 | 2 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 |
| Arizona | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 6 | 7 | 0 |
| Arkansas | 75 | 0 | 0 | 0 | 0 | 0 | 2 | 9 | 30 | 30 | 4 | 0 |
| California | 58 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 44 | 3 |
| Colorado | 64 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 5 | 19 | 23 | 16 |
| Connecticut | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 0 |
| Delaware | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 |
| District of Columbia | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| Florida | 67 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 18 | 26 | 19 |
| Georgia | 159 | 0 | 0 | 0 | 0 | 3 | 5 | 13 | 25 | 63 | 42 | 8 |
| Guam | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| Hawaii | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 3 |
| Idaho | 44 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 6 | 20 | 12 | 5 |
| Illinois | 102 | 0 | 0 | 0 | 1 | 0 | 0 | 3 | 16 | 61 | 21 | 0 |
| Indiana | 92 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 60 | 21 | 0 |
| Iowa | 99 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 84 | 12 | 1 |
| Kansas | 105 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 5 | 75 | 23 | 0 |
| Kentucky | 120 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 13 | 75 | 26 | 0 |
| Louisiana | 64 | 0 | 0 | 0 | 0 | 0 | 1 | 12 | 11 | 29 | 11 | 0 |
| Maine | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 10 | 5 |
| Maryland | 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 15 | 2 |
| Massachusetts | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 3 |
| Michigan | 83 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 3 | 49 | 25 | 4 |
| Minnesota | 87 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 51 | 32 | 2 |
| Mississippi | 82 | 0 | 0 | 0 | 0 | 1 | 4 | 25 | 29 | 19 | 3 | 1 |
| Missouri | 115 | 0 | 0 | 0 | 0 | 0 | 2 | 11 | 18 | 62 | 20 | 2 |
| Montana | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 32 | 18 | 3 |
| Nebraska | 93 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 12 | 66 | 13 | 0 |

**Figure 44 - Continued**

**Distribution of Counties by Ratio of Residential Fixed Connections to County Households by State as of December 31, 2019**

**(Connections over 200 kbps in at least one direction)**

|  | | *Ratio of Residential Fixed Connections over 200 kbps in at Least One Direction to County Households* | | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *State* | *Counties* | *Zero* | *Greater than 0 and no more than 5%* | *Greater than 5 and no more than 10%* | *Greater than 10 and no more than 20%* | *Greater than 20 and no more than 30%* | *Greater than 30 and no more than 40%* | *Greater than 40 and no more than 50%* | *Greater than 50 and no more than 60%* | *Greater than 60 and no more than 80%* | *Greater than 80 and no more than 100%* | *100% or more* |
| Nevada | 17 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 7 | 7 | 0 |
| New Hampshire | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 3 |
| New Jersey | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18 | 3 |
| New Mexico | 33 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 18 | 9 | 3 |
| New York | 62 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 25 | 31 | 5 |
| North Carolina | 100 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 42 | 47 | 8 |
| North Dakota | 53 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 29 | 16 | 5 |
| Northern Mariana Isl | 4 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 |
| Ohio | 88 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 6 | 50 | 31 | 0 |
| Oklahoma | 77 | 0 | 0 | 0 | 0 | 0 | 2 | 10 | 23 | 36 | 5 | 1 |
| Oregon | 36 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 14 | 16 | 4 |
| Pennsylvania | 67 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 31 | 33 | 3 |
| Puerto Rico | 78 | 0 | 0 | 0 | 20 | 18 | 8 | 13 | 15 | 3 | 1 | 0 |
| Rhode Island | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 1 |
| South Carolina | 46 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 9 | 18 | 15 | 2 |
| South Dakota | 66 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 41 | 18 | 2 |
| Tennessee | 95 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 66 | 16 | 2 |
| Texas | 254 | 0 | 0 | 0 | 0 | 0 | 2 | 11 | 32 | 139 | 58 | 12 |
| Utah | 29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 17 | 7 |
| Vermont | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 4 |
| Virgin Islands | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 |
| Virginia | 134 | 0 | 0 | 0 | 0 | 1 | 4 | 5 | 15 | 59 | 47 | 3 |
| Washington | 39 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 11 | 22 | 4 |
| West Virginia | 55 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 8 | 37 | 8 | 0 |
| Wisconsin | 72 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 31 | 35 | 5 |
| Wyoming | 23 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 9 | 12 | 1 |
| Total | 3,234 | 3 | 0 | 0 | 22 | 24 | 37 | 151 | 349 | 1555 | 934 | 159 |

Note: Numbers may not sum to totals due to rounding. See Technical Notes at the end of the report.

Sources: FCC Form 477; 2015-2019 ACS 5-year estimates (Households for U.S. and District of Columbia); Census 2010 (Households for Puerto Rico, American Samoa,

Guam, Northern Mariana Islands and U.S. Virgin Islands).

**Figure 45**

**Distribution of Census Tracts by Ratio of Residential Fixed Connections to Tract Households by State as of December 31, 2019**

**(Connections over 200 kbps in at least one direction)**

|  | | *Ratio of Residential Fixed Connections over 200 kbps in at Least One Direction to Tract Households* | | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *State* | *Tracts* | *Zero* | *Greater than 0 and no more than 5%* | *Greater than 5 and no more than 10%* | *Greater than 10 and no more than 20%* | *Greater than 20 and no more than 30%* | *Greater than 30 and no more than 40%* | *Greater than 40 and no more than 50%* | *Greater than 50 and no more than 60%* | *Greater than 60 and no more than 80%* | *Greater than 80 and no more than 100%* | *100% or more* |
| Alabama | 1,179 | 5 | 0 | 0 | 0 | 9 | 49 | 85 | 168 | 443 | 337 | 83 |
| Alaska | 167 | 2 | 0 | 0 | 4 | 1 | 6 | 1 | 9 | 56 | 67 | 21 |
| American Samoa | 18 | 2 | 0 | 0 | 0 | 5 | 6 | 3 | 0 | 0 | 1 | 1 |
| Arizona | 1,526 | 12 | 3 | 4 | 13 | 14 | 17 | 39 | 89 | 349 | 598 | 388 |
| Arkansas | 686 | 1 | 0 | 0 | 1 | 5 | 40 | 85 | 122 | 259 | 148 | 25 |
| California | 8,036 | 56 | 2 | 4 | 9 | 12 | 38 | 55 | 195 | 1,596 | 4,772 | 1,297 |
| Colorado | 1,249 | 14 | 1 | 0 | 0 | 2 | 3 | 10 | 19 | 231 | 694 | 275 |
| Connecticut | 829 | 4 | 0 | 0 | 1 | 0 | 1 | 2 | 14 | 128 | 536 | 143 |
| Delaware | 215 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 3 | 45 | 97 | 68 |
| District of Columbia | 179 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 4 | 54 | 69 | 50 |
| Florida | 4,199 | 39 | 0 | 1 | 2 | 1 | 11 | 40 | 98 | 656 | 1,778 | 1,573 |
| Georgia | 1,964 | 11 | 1 | 0 | 1 | 10 | 32 | 95 | 138 | 567 | 797 | 312 |
| Guam | 56 | 7 | 0 | 0 | 4 | 5 | 2 | 5 | 4 | 10 | 4 | 15 |
| Hawaii | 326 | 13 | 0 | 0 | 0 | 1 | 0 | 1 | 3 | 42 | 137 | 129 |
| Idaho | 298 | 0 | 0 | 0 | 2 | 2 | 4 | 7 | 16 | 117 | 120 | 30 |
| Illinois | 3,121 | 6 | 1 | 1 | 4 | 6 | 23 | 75 | 217 | 1,146 | 1,407 | 235 |
| Indiana | 1,508 | 4 | 1 | 0 | 4 | 1 | 11 | 48 | 126 | 646 | 563 | 104 |
| Iowa | 825 | 4 | 0 | 0 | 0 | 0 | 3 | 12 | 52 | 475 | 246 | 33 |
| Kansas | 770 | 10 | 0 | 0 | 1 | 2 | 1 | 16 | 60 | 316 | 305 | 59 |
| Kentucky | 1,115 | 10 | 0 | 1 | 0 | 7 | 17 | 36 | 85 | 443 | 456 | 60 |
| Louisiana | 1,136 | 12 | 1 | 1 | 3 | 9 | 29 | 93 | 139 | 414 | 354 | 81 |
| Maine | 351 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 79 | 187 | 83 |
| Maryland | 1,394 | 9 | 0 | 0 | 0 | 0 | 7 | 14 | 45 | 222 | 680 | 417 |
| Massachusetts | 1,471 | 12 | 0 | 0 | 1 | 1 | 3 | 1 | 20 | 220 | 934 | 279 |
| Michigan | 2,767 | 29 | 1 | 3 | 7 | 17 | 40 | 127 | 221 | 824 | 1,261 | 237 |
| Minnesota | 1,335 | 4 | 0 | 0 | 0 | 2 | 5 | 11 | 35 | 461 | 719 | 98 |
| Mississippi | 661 | 4 | 0 | 0 | 0 | 9 | 35 | 121 | 136 | 230 | 105 | 21 |
| Missouri | 1,393 | 4 | 0 | 0 | 2 | 8 | 25 | 68 | 162 | 456 | 546 | 122 |
| Montana | 271 | 2 | 0 | 0 | 1 | 0 | 3 | 6 | 7 | 114 | 116 | 22 |
| Nebraska | 532 | 3 | 0 | 1 | 0 | 0 | 0 | 5 | 24 | 218 | 242 | 39 |

**Figure 45 - Continued**

**Distribution of Census Tracts by Ratio of Residential Fixed Connections to Tract Households by State as of December 31, 2019**

**(Connections over 200 kbps in at least one direction)**

|  | | *Ratio of Residential Fixed Connections over 200 kbps in at Least One Direction to Tract Households* | | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *State* | *Tracts* | *Zero* | *Greater than 0 and no more than 5%* | *Greater than 5 and no more than 10%* | *Greater than 10 and no more than 20%* | *Greater than 20 and no more than 30%* | *Greater than 30 and no more than 40%* | *Greater than 40 and no more than 50%* | *Greater than 50 and no more than 60%* | *Greater than 60 and no more than 80%* | *Greater than 80 and no more than 100%* | *100% or more* |
| Nevada | 683 | 5 | 0 | 0 | 1 | 0 | 9 | 14 | 22 | 165 | 320 | 147 |
| New Hampshire | 294 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 23 | 179 | 88 |
| New Jersey | 2,004 | 10 | 1 | 0 | 1 | 5 | 7 | 4 | 19 | 350 | 1,097 | 510 |
| New Mexico | 499 | 2 | 3 | 2 | 4 | 8 | 13 | 14 | 54 | 176 | 179 | 44 |
| New York | 4,900 | 81 | 8 | 5 | 15 | 15 | 21 | 39 | 116 | 1,427 | 2,361 | 812 |
| North Carolina | 2,183 | 18 | 1 | 0 | 1 | 0 | 7 | 17 | 105 | 652 | 919 | 463 |
| North Dakota | 205 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 11 | 96 | 72 | 25 |
| Northern Mariana Isl | 22 | 2 | 0 | 0 | 0 | 1 | 6 | 6 | 0 | 7 | 0 | 0 |
| Ohio | 2,946 | 8 | 0 | 1 | 2 | 4 | 20 | 61 | 193 | 1,101 | 1,350 | 206 |
| Oklahoma | 1,046 | 0 | 0 | 2 | 6 | 17 | 37 | 78 | 176 | 368 | 272 | 90 |
| Oregon | 827 | 2 | 0 | 0 | 0 | 0 | 2 | 6 | 17 | 204 | 509 | 87 |
| Pennsylvania | 3,217 | 27 | 1 | 1 | 8 | 5 | 7 | 37 | 104 | 1,069 | 1,608 | 350 |
| Puerto Rico | 903 | 18 | 59 | 104 | 183 | 137 | 118 | 80 | 51 | 49 | 31 | 73 |
| Rhode Island | 241 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 38 | 153 | 47 |
| South Carolina | 1,097 | 12 | 0 | 0 | 0 | 11 | 13 | 53 | 94 | 350 | 373 | 191 |
| South Dakota | 222 | 0 | 0 | 0 | 1 | 0 | 0 | 6 | 12 | 109 | 75 | 19 |
| Tennessee | 1,497 | 21 | 1 | 0 | 1 | 6 | 13 | 58 | 144 | 586 | 522 | 145 |
| Texas | 5,253 | 40 | 1 | 0 | 2 | 21 | 63 | 180 | 452 | 1,721 | 1,932 | 841 |
| Utah | 588 | 4 | 2 | 0 | 2 | 1 | 2 | 0 | 12 | 111 | 335 | 119 |
| Vermont | 184 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 24 | 104 | 54 |
| Virgin Islands | 29 | 0 | 0 | 0 | 1 | 2 | 1 | 2 | 5 | 14 | 3 | 1 |
| Virginia | 1,895 | 23 | 0 | 0 | 3 | 13 | 28 | 49 | 110 | 448 | 816 | 405 |
| Washington | 1,446 | 2 | 1 | 1 | 0 | 4 | 4 | 6 | 15 | 212 | 940 | 261 |
| West Virginia | 484 | 0 | 0 | 3 | 8 | 10 | 15 | 25 | 68 | 201 | 128 | 26 |
| Wisconsin | 1,393 | 3 | 1 | 0 | 1 | 4 | 1 | 8 | 42 | 520 | 716 | 97 |
| Wyoming | 132 | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 48 | 70 | 9 |
| Total | 73,767 | 564 | 90 | 136 | 300 | 394 | 799 | 1,810 | 4,038 | 20,886 | 33,340 | 11,410 |

Note: Numbers may not sum to totals due to rounding. See Technical Notes at the end of the report.

Sources: FCC Form 477; 2015-2019 ACS 5-year estimates (Households for U.S. and District of Columbia); Census 2010 (Households for Puerto Rico, American Samoa,

Guam, Northern Mariana Islands and U.S. Virgin Islands).

