

A photograph of a snowy landscape, likely a remote settlement in Alaska. In the background, there are several small, light-colored buildings and a larger, tan-colored building with a red container next to it. A snow-covered hill rises in the distance. In the foreground, a large pile of trash, including white plastic bags and a cardboard box, is scattered on the snow. A small, dark-colored trash bin is also visible near the trash pile.

Water and Sanitation Summary for Alaska

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Alaska is 1.5 Million Sq. Km. (580,000 Sq. Miles)

2016 Population = 740,000 people

About 0.5 People Per Sq Km



Population Distribution of Alaska *(Total population = 740,000)*

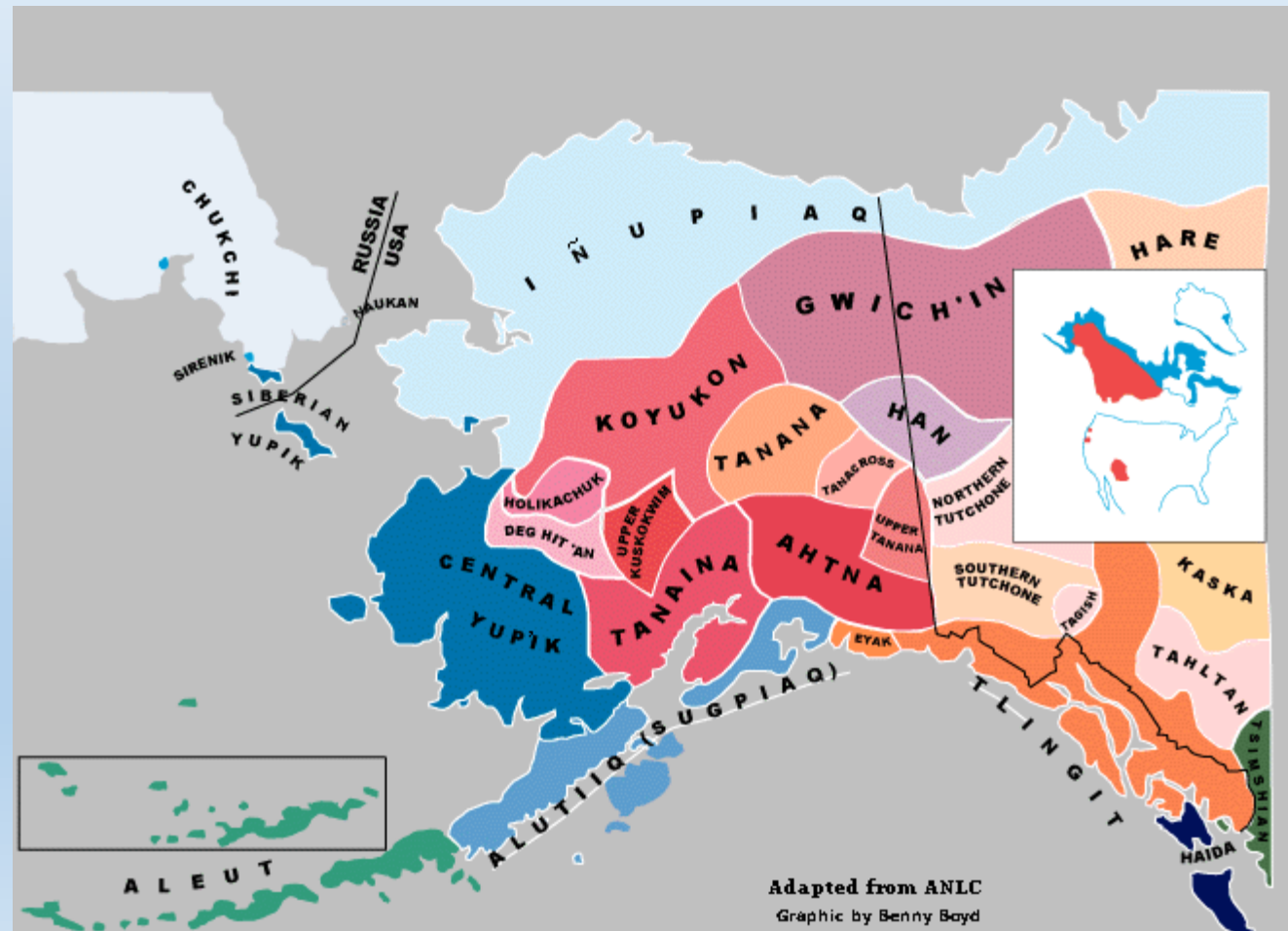


- About 54% of population (400,000 people) lives within one hour drive of downtown Anchorage.
- Roughly 10% of population lives in 185 remote communities, with populations less than 1,100 people.

(“Rural Alaska” in this presentation)

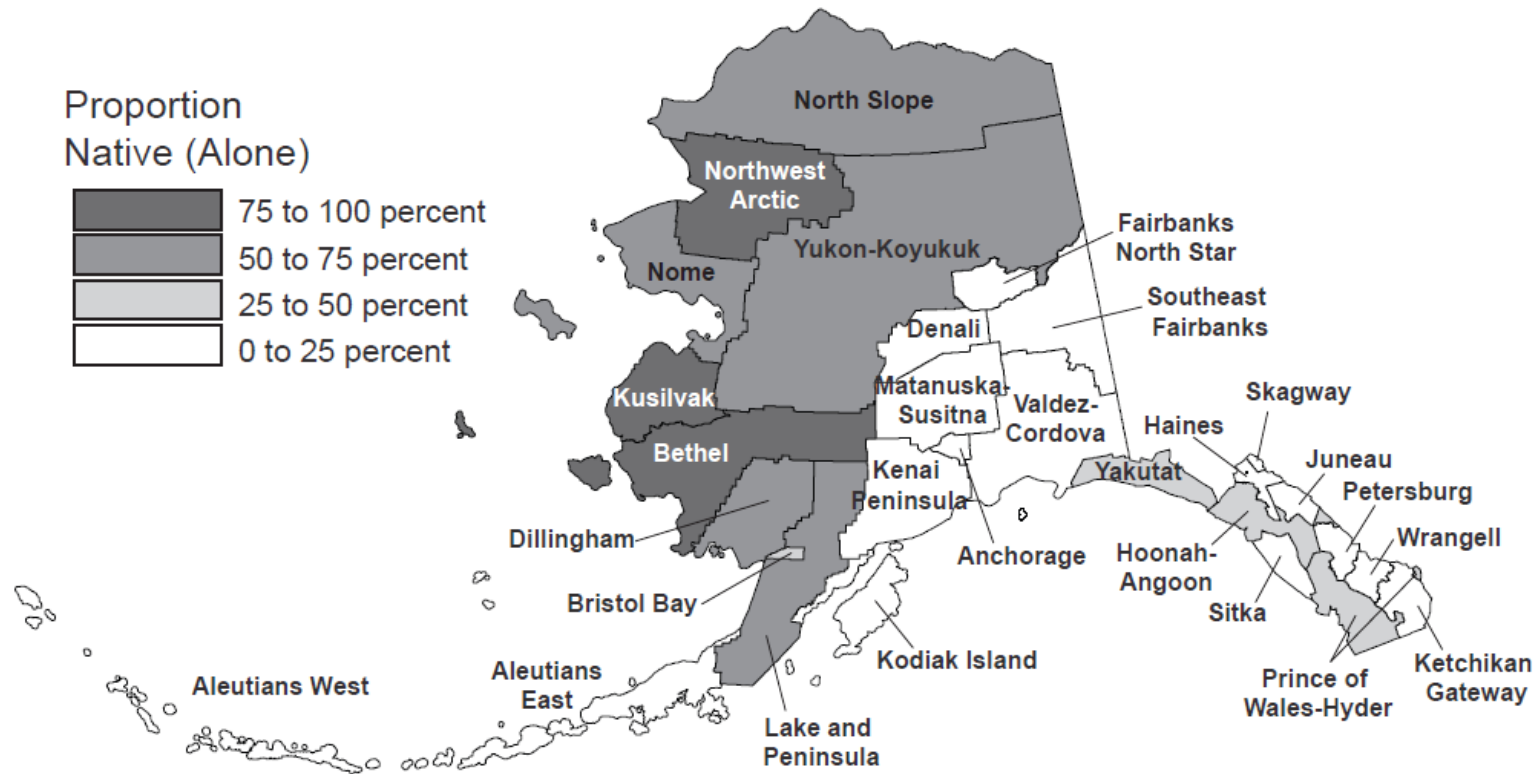
Alaska Population by Ethnic Group (2000)

| White | Alaska Native | Asian | Black | Pacific Islands |
|-------|---------------|-------|-------|-----------------|
| 70% | 18% | 5% | 4% | 1% |




Geographic Dispersion of Alaska Native Population

Proportion Alaska Native (Alone) by Borough and Census Area, 2014

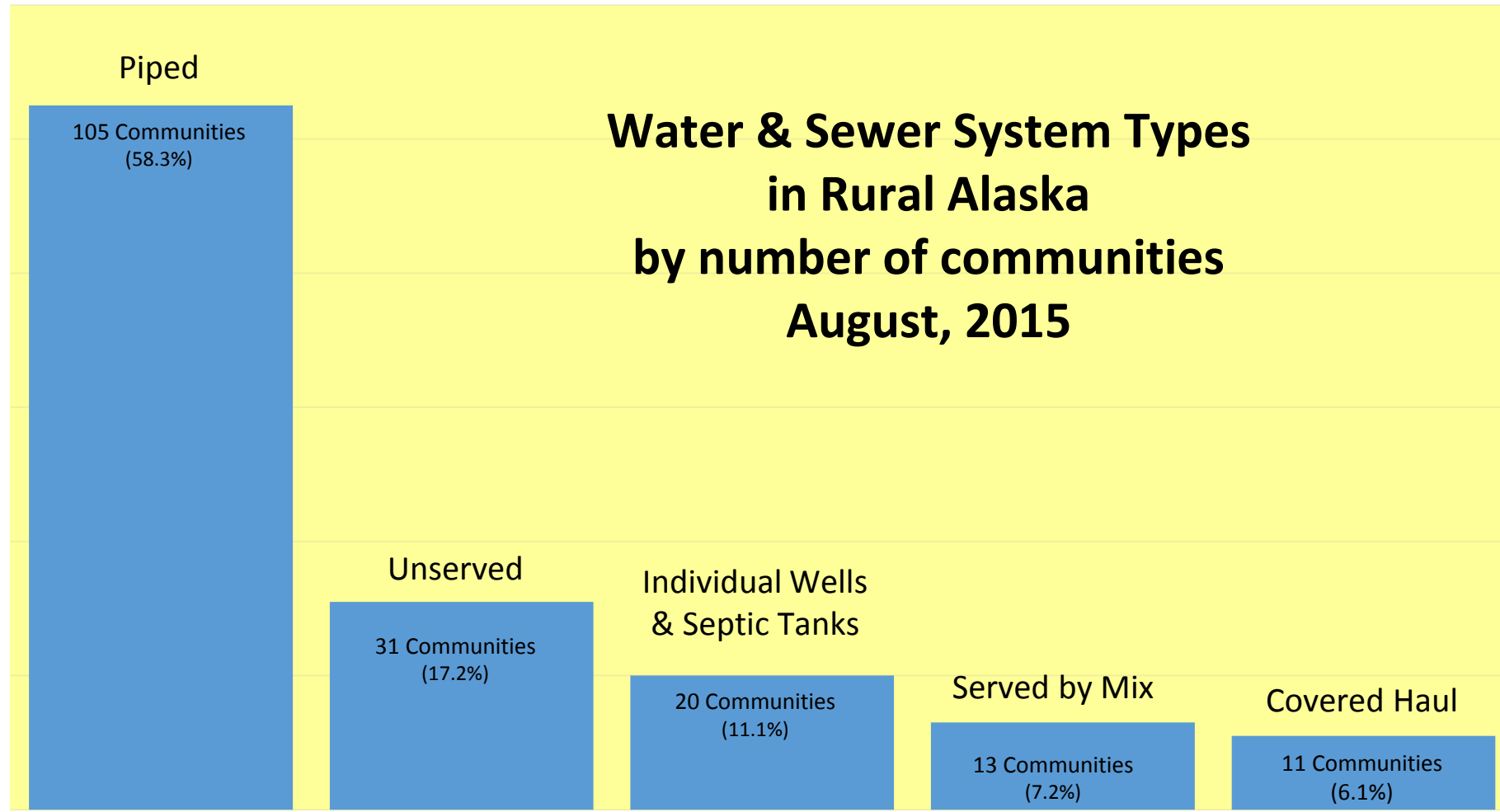


Sources: Alaska Department of Labor and Workforce Development, Research and Analysis Section; and U.S. Census Bureau

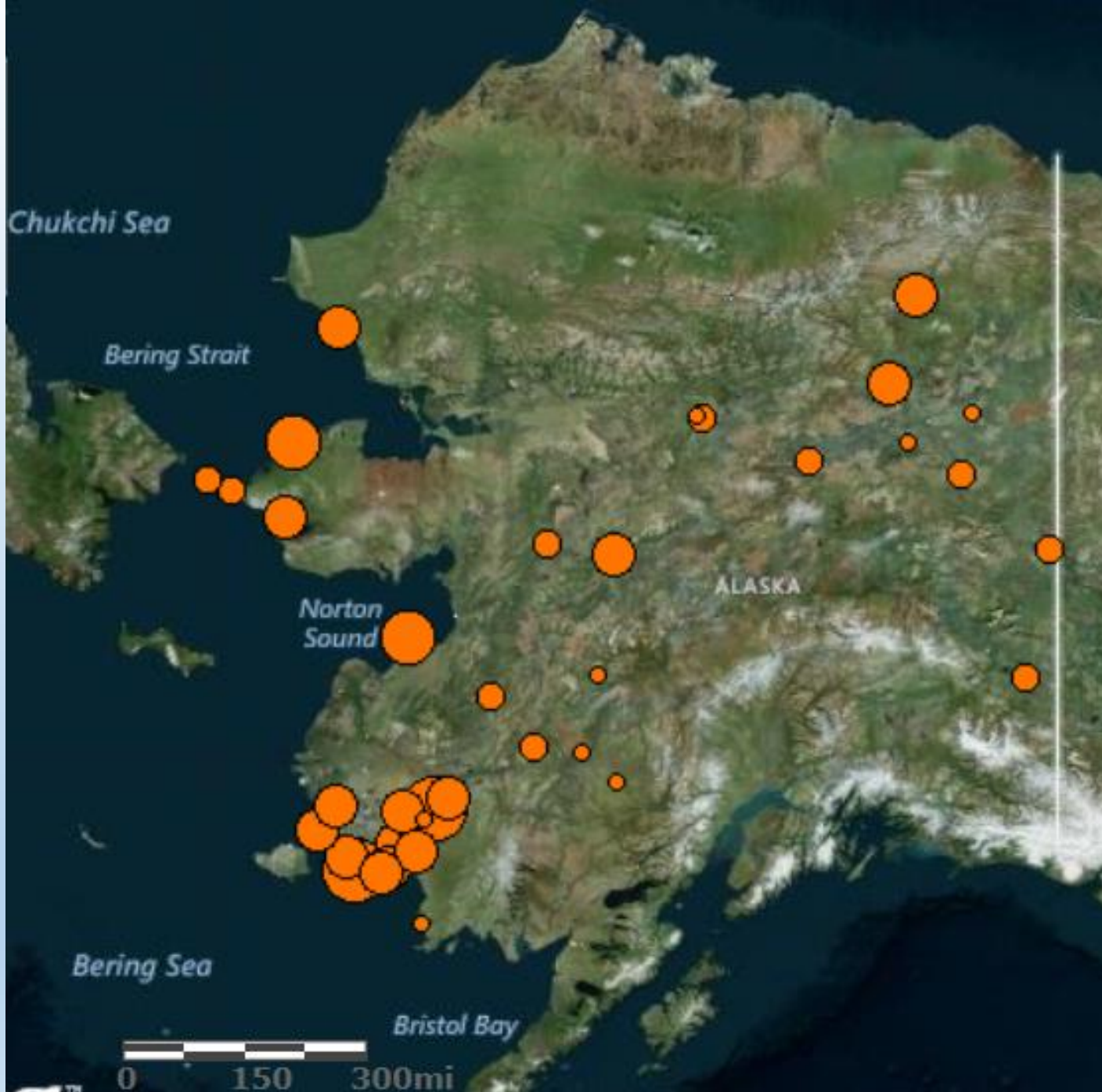
Three Levels of Water and Sewer Service in Rural Alaska Communities

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- “Served” communities with a small percentage of unserved homes
 - “Unserved” communities where the only service in the community is a washeteria and a community watering point
 - “Under-served” communities with a closed haul water and sewer system

Rural Alaska Sanitation



Location of Unserved Alaska Communities



Communities by Population Size

- < 25 Residents
- 25 - 49
- 50 - 99
- 100 - 149
- 150 +

Alaska Housing Characteristics: Water and Sewer Service

- Total number of homes in Alaska: 264,270
- Number of homes in Alaska villages (rural Alaska): 34,300
- Number of unserved homes: 3,285
 - Total unserved homes in unserved communities: 2,135
 - Total unserved homes in served communities: 1,150
- Total number of under-served homes (water and sewer haul system): 789



Sources for Capital and Operational Expenses

- Capital – 100% Federal and State Grants
 - Grants do not require local contribution
 - Loans are available, but communities have limited capacity to borrow
- Operation and Maintenance Costs
 - 100% local user fees + local subsidies (gaming revenue, for example)
 - No Federal or State subsidy funding is available

Regulatory Authority in Alaska

- Public water systems: All water is treated to standards established nationally by the U.S. Safe Drinking Water Act, regardless of ultimate use (drinking, washing, flushing, household landscaping, etc.)



- Waste water systems: All wastewater discharges must meet treatment standards established nationally by the U.S. Clean Water Act. Specifically, the National Pollutant Discharge Elimination Program (NPDES) identifies treatment and discharge requirements for domestic wastewater treatment and disposal systems.

Alaska Challenges

- High cost of needed capital construction in remote Alaska villages (over \$2 billion)
- Inability of most Alaska villages to borrow money, even for small capital improvements
- High cost of operation and maintenance, due largely to the high cost of energy
- Lack of state or federal subsidy to support and encourage good operation and maintenance practices
- Impact of climate change on traditional sources of water
- Environmentally threatened communities and infrastructure

