

# Northwest Arctic

11 subsistence communities dot the sound and the rivers

By KARINNE WIEBOLD



**N**orthwestern Alaska, which is home to 13 nationally protected areas and a designated international biosphere reserve, has been recognized globally for its beauty and abundant natural resources. It's also ancestral land of the Inupiat people, who have lived in the area for thousands of years and are the majority of its 7,850 residents today.

The Northwest Arctic Borough covers nearly 40,000 square miles — about the size of Vermont, New Hampshire, Massachusetts, and Maryland combined. The 11 communities — 12 if you count the Red Dog Mine and its small village worth of workers — are widely spread with no connecting roads.

Instead, the borough's nearly 5,000 square miles of water are its transportation nexus, and the villages' locations reflect that importance. Kivalina, Kotzebue, and Deering are all on the shores of Kotzebue Sound.

The Kobuk River supports Noorvik, Kiana, Ambler, Shungnak, and Kobuk. Buckland, Noatak, and Selawik are also located off rivers. (See the map on the next page.)

Kotzebue is the largest community by far, at 3,154 people, and it serves as the borough seat and regional transportation hub. The city sits just 20 feet above sea level on a gravel spit that juts into the sound.

## Transportation challenges and high living costs

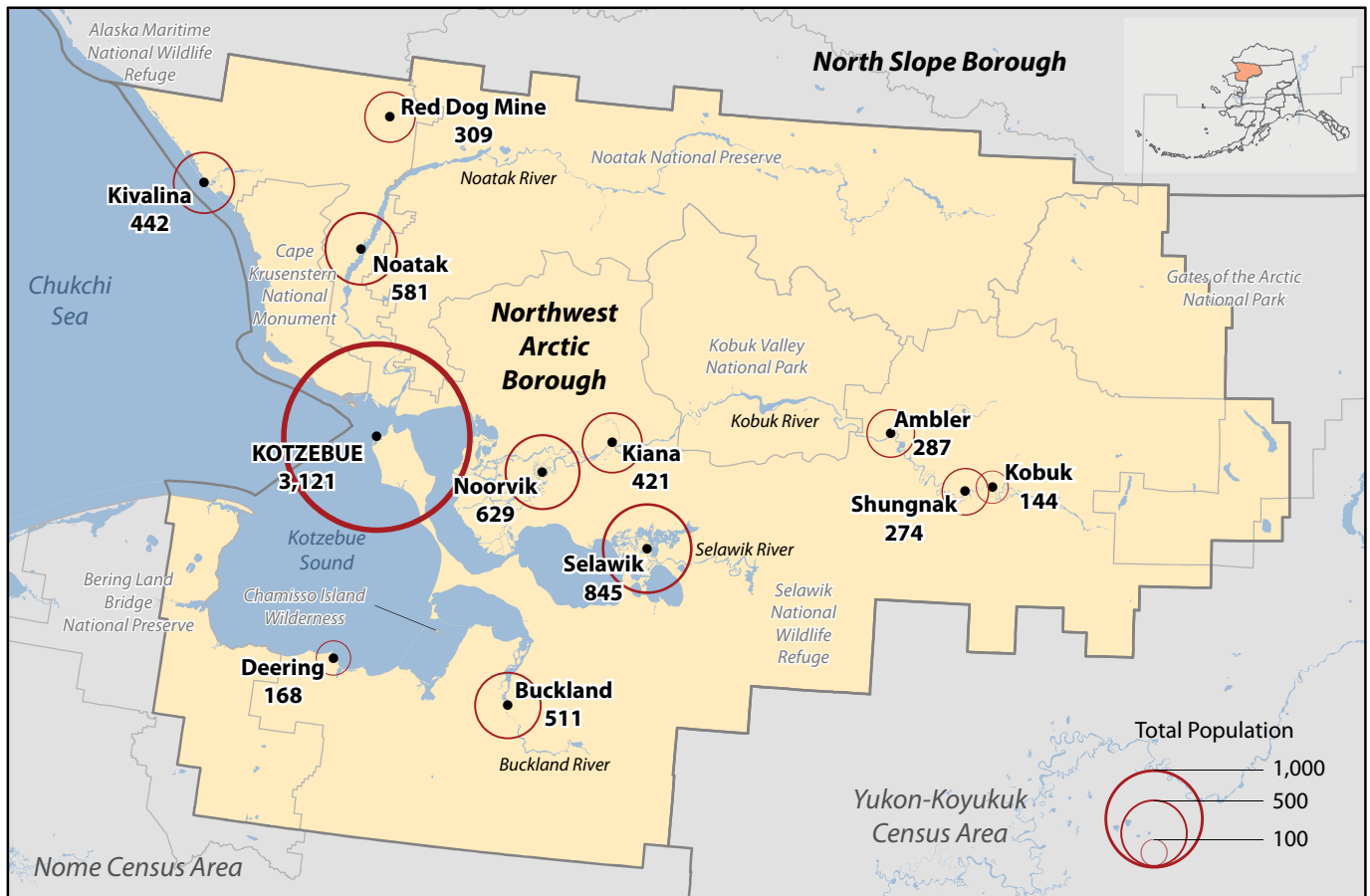
Kotzebue Sound is vast and shallow, about 100 miles long and 70 miles wide, and full of chum salmon as well as smaller numbers of other species. The word is that Kotzebue chum are larger and have a higher



Above, spotted saxifrage and bearberry grow on the tundra in the summer near Rabbit Creek. At right, a woman at a subsistence camp near Kotzebue uses an ulu to separate the blubber from the hide of a bearded seal. The blubber can be rendered into seal oil and used as a dipping sauce, and the hide can be used to make rope or to cover a wooden boat frame.

Photos courtesy of National Park Service





Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section

## A resurgence for the small commercial chum fishery

According to the Alaska Department of Fish and Game, chum salmon is the only species in the area with sufficient numbers for commercial fishing.

The Northwest Arctic Borough's number of permit holders has varied considerably over the last three decades, driven by demand and price. Even if the fish are present and fishermen are waiting, the fishery's remote location and the fact that only chum are available mean there aren't always buyers. Chum, called keta in production, is the lowest-value salmon species.

In 2002, the last large buyer pulled out and commercial fishing was dormant for several years. But since then, buyers have reentered the market and permit holders and total catch have both increased significantly. In 2017, 98 total permit holders harvested 463,749 fish and earned \$1.8 million. Because most permit holders are local, this has brought a notable amount of additional income into the borough.

oil content than chum from other areas, making them more desirable for commercial and subsistence use. (See the sidebar at left for more about the area's small commercial chum fishery.)

The sound is ice-free just three months a year, so goods must be flown in during the other nine months. Even when the sound is clear, it's so shallow that barges have to anchor 15 miles out of town and send smaller barges the rest of the way into town. Locals say a disproportionate share of transportation costs are incurred in those last 15 miles.

In years with below-average snowfall, villagers navigate the additional challenge of silt-clogged rivers. In spring, melted snow floods the rivers and pushes out much of the silt that has accumulated there, but when there hasn't been enough snow to clear the rivers, even regional barges have a hard time making it to the up-river villages.

These high transportation costs mean Kotzebue's weekly food costs are double that of Anchorage, and the more remote villages are even higher. UAF Cooperative Extension estimated grocery expenses for a

family of four at \$463 per week, as of late 2017.

## Subsistence is fundamental

Subsistence may not be paid labor, but it's a vital economic contribution that demands the time and effort of residents, from children to elders, to offset high living costs. Residents gather and share a range of wild resources, as they have for centuries.

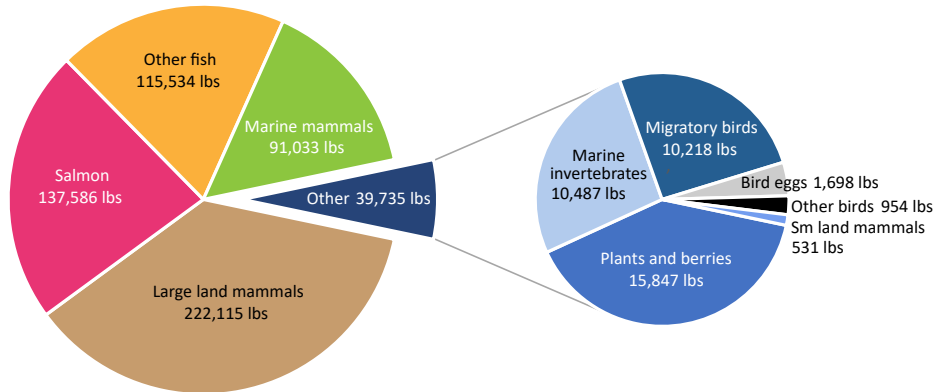
Villagers harvest beluga and bowhead whales, salmon and other fish, seals, sea otters, crabs, mussels, clams, and shrimp. They hunt caribou, moose, musk oxen, and Dall sheep to eat and use the pelts of otter, beaver, fox, and hare to make hats, mittens, parkas, slippers, and art. The tundra provides blueberries, cranberries, na-goonberries, sourdock, willow leaves, and wild celery.

Many a visitor has arrived with a cooler full of fresh fruits and vegetables from one of Alaska's cities, and locals have refilled it with local sheefish, caribou, and salmon for their return home.

A 2014 Department of Fish and Game subsistence

# 1 What A Year of Subsistence Looks Like

## POUNDRAGE BY TYPE OF FOOD, KOTZEBUE, 2014



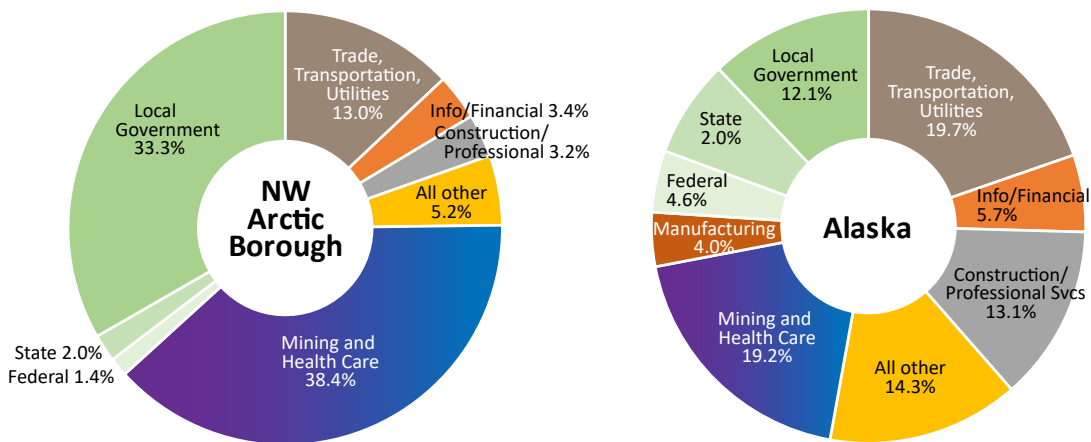
Source: Alaska Department of Fish and Game

survey determined that Kotzebue residents harvested more than 600,000 pounds of food that year, reducing their need for expensive imported groceries. (See Exhibit 1.)

The study found that 99 percent of villagers consumed food that had been caught, trapped, hunted, picked, gathered, or foraged. Eighty-eight percent of the residents attempted subsistence activities, 86 percent harvested, 96 percent received food from someone else, and 82 percent shared food.

# 2 Mining, Health Care, Local Government Big in the Borough

## PERCENT OF TOTAL EMPLOYMENT BY INDUSTRY,\* NW ARCTIC BOROUGH AND STATEWIDE, 2017



\*Employment must be suppressed when industry job numbers are small enough that individual employers are identifiable. To protect employer confidentiality but show the big-picture differences between the borough and state economies, we grouped some Northwest Arctic Borough industries, also grouping the statewide numbers to allow comparison.

Note: Local government includes tribal government. In the borough, about 14 percent of local government is tribal.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section

## The borough exists because of the mine

While subsistence is the area's foundation, the Red Dog Mine is its economic driver and the reason the borough was formed in 1986. The mine, one of the largest zinc mines in the world, created a tax base that made it possible to provide local government services. In unincorporated areas of Alaska, state government provides those services.

NANA, the Alaska Native Regional Corporation, selected the land under the Alaska National Interests Lands Conservation Act, or ANILCA, in 1980 after investigations showed it could contain valuable minerals.

The mine supports the borough through taxes and fees, employs between 500 and 600 people, and shares profits with NANA. NANA collected about \$355 million in fiscal year 2018, of which it distributed \$217.7 million to other regional corporations and \$3.8 million to shareholders.

Red Dog is operated by Teck Alaska Inc., a subsidiary of the global Teck Resources Limited, on NANA-owned land. As Teck recoups the cost of developing the mine, its profit-sharing arrangement with NANA shifts so that NANA receives a growing share of annual profits.

The mine is expected to last until 2031, but Teck continues to explore in the area and is optimistic about further development potential, although some prospects are on state land.

Red Dog employs about equal percentages of locals, nonresidents, and Alaskans from other areas. Remote mining work with schedules such as two weeks on, two weeks off gives workers substantial freedom to live wherever they choose.

## Mining, health care, and local government are the big employers

Borough-wide, only about 18 percent of workers are nonresidents. Sixty-four percent of the people working in the borough are local, and the remaining 18 percent are Alaska residents from other areas.

Of the locals who work, the vast majority (92 percent) work in the borough.

Mining and health care represent about 40 percent of



Kivalina, a village in the Northwest Arctic Borough, faces the mounting effects of erosion. Photo courtesy of Flickr user ShoreZone

## 3 A Majority Native Borough

### NW ARCTIC BOROUGH POPULATION, 2017

Race	Population	Percent
Alaska Native	6,243	80%
White	954	12%
Black	96	1%
Asian	74	1%
Pacific Islander	13	<1%
Two or more races	470	6%

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section

local jobs (the borough had 2,843 total in 2017), with mining's share slightly larger. Both industries pay well, but mining pays some of the borough's highest wages.

A third of jobs are in local government, which provides many basic services. (See Exhibit 2.) Of the area's local government, about 14 percent is tribal.

The majority of jobs are in Kotzebue, although the smaller villages have local government jobs in the schools and village administration as well as a handful of private retail and health care jobs. The nonprofit Maniilaq Association, which operates the Indian Health Service-owned hospital in Kotzebue as well as health clinics in each village, estimates it employs 550 people.

## A young, majority Native area that continues to grow

The Northwest Arctic Borough remains a majority

Alaska Native area, and mainly Inupiaq. Just under 80 percent of the borough’s population was Native in 2017 compared to 18.5 percent statewide, and another 6 percent were mixed race. (See Exhibit 3.)

The borough has 582 more males than females, and while most age groups show disparity, it’s biggest with men between 45 and 69, who outnumber women of those ages by 41 percent. (See Exhibit 4.) This is likely due to the higher percentage of men in mining.

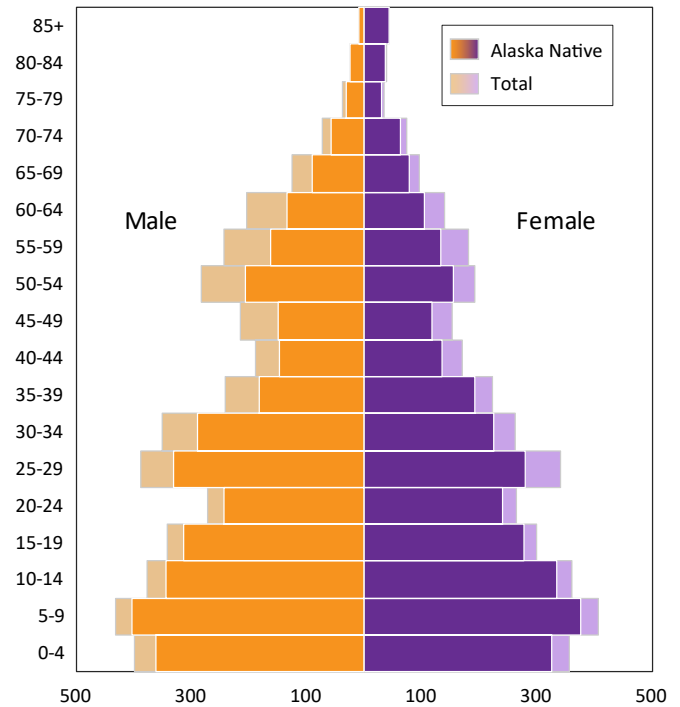
The borough is also markedly young, with a median age of 27.8 versus 34.9 statewide. Like the rest of the state, though, the borough is getting older. The Northwest Arctic Borough has “aged” by more than two years in less than a decade, with its median age climbing from 25.7 to 27.8. Over the same period, Alaska’s median age rose from 33.8 to 34.9.

As is common for areas with a young population, the borough has a higher birth rate than the state as a whole, at 2.46 versus 1.46 statewide. While more people have moved out of the borough than into it since 2000, natural increase (births minus deaths) has been more than enough to offset the migration losses in most years, keeping the borough growing. While the borough population increased nearly 9 percent between 2000 and 2018, however, the state as a whole grew by 16 percent over that period.

Karinne Wiebold is an economist in Juneau. Reach her at (907) 465-6039 or [karinne.wiebold@alaska.gov](mailto:karinne.wiebold@alaska.gov).

# 4 More Males At Most Ages

## AGE AND RACE, NW ARCTIC BOROUGH, 2017



Note: Alaska Native includes Alaska Native alone or in combination with another race.  
 Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section



A boat travels down the Kobuk River. Boats are essential for travel, hunting, and other subsistence activities. In the winter, villagers travel the frozen rivers on snowmachines. Photo courtesy of National Park Service