Schools, Settlement, and Sanitation in Alaska
Native Villages

Gigi Berardi, Western Washington University

Abstract. The effective adaptation to a harsh and seasonal environment represented by the mobility of traditional Alaska Native communities has been undermined and replaced with the "persistent village." Traditional settlement sites typically were selected for their access to food and other subsistence resources. Early correspondence and reports from the federal Bureau of Education illustrate the important role that schools often played in the consolidation of Native populations. In response to the establishment of schools, among several other influences, permanent villages developed and increased in size. Providing sanitation services was considered by educators to be a central part of their broad mission to improve the life of the Native population, and sanitation was a major focus of teachers' and administrators' activities. However, many of the village sites that had been suitable for temporary or seasonal use by a relatively small population were not well suited—due to geographic considerations such as soils, topography, or remote location—to adequate sanitation for a year-round, larger population. As schools contributed to the consolidation of settlements, they helped situate today's remote Alaska villages that now face numerous economic, social, and political challenges, including providing reliable and affordable sanitation.

This article analyzes the role of schools in promoting the consolidation of remote Alaska Native settlements into permanent villages—with accompanying change in environmental, social, and economic conditions—and the extent to which schools once provided sanitation services supplied by various agencies today. Alleviating Alaska's contemporary rural sanitation problems requires understanding of their causes and history, including the role of various influences in the past and in the present. Clarification of the significant role of schools in the consolidation of villages and the resulting

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challenges to sanitation delivery in the years following can contribute to this understanding.

Over centuries, Alaska Natives in isolated villages were able to survive in coherent, viable communities in high-latitude areas due to their traditional seasonal mobility. Such mobility allowed for the best use of resources critical for subsistence harvest (Ducker 1991: 3; Federal Field Committee for Development Planning in Alaska [FFC] 1968: 50–52; Fienup-Riordan 1983: 33–38; Freeman 1984; VanStone 1984a, 1984b). For example, it was not uncommon for populations in Northwest Alaska to move at least twice a year in search of animals to hunt, trap, and fish.2

Ann Fienup-Riordan (1986: 32) discussed a “regular rotation” occurring between the spring coastal camp, the summer fish camp at the mouth of a river, the fall blackfish and whitefish harvest on the tundra flats, and winter ice fishing on the many frozen pools of water in the area. The movement was mostly limited, the various harvest sites falling within thirty miles of each other. However, travel between the territories of different village groups sometimes was necessary (ibid.: 32–33).3 Ernest S. Burch noted that perhaps only a few Southwest Alaskan and Pacific Eskimo groups were able to stay in one place all year (1988: 73). Although it is commonly thought that village sites were relatively permanent in Southeast Alaska (FFC 1968: 41), there were exceptions, with some enumerated towns being little more than camps even in Southeast Alaska (Blackman 1990: 230).

Today mobility, this effective adaptation to harsh, remote living conditions, has been undermined and replaced with the “persistent village,” typically located in remote and isolated regions, economically as well as physically distant from centers of wealth and power.4

Some semisedentary communities (Fienup-Riordan 1986) existed even before the first permanent Russian settlement (and the first school) were established in 1784 at Three Saints Bay on Kodiak Island (Darnell 1970: 99; Marshall 1987; U.S. Department of the Interior U.S. Census Office [USDICO] 1884: 41). Alaska Natives used regular sites for seasonal food gathering and many settlements were at least partially consolidated by the time of Euronamerican contact (Levin 1991: 64).

As would be expected from their subsistence resource economies, traditional Alaska Native villages were located primarily for access to food and other resources (Joint Federal-State Commission on Policy and Programs Affecting Alaska Natives [JFSC] 1994a: 13–14). Salmon streams were particularly important to many Native populations. Other considerations in certain situations included defensibility from attack (for example, for some Southeast Alaska sites), and occurrence of soils suitable for constructing subterranean dwellings (for example, along the northwestern and southwestern coasts).5
Many settlements were seasonal—used either during a season of local food resource abundance or as winter refuge near at least a minimally sufficient food supply.* Seasonal sites also varied in their degree of development. For example, summer fish camps on the western arctic coast might consist of temporary shelters, while winter settlements for the same people would be substantial dwellings able to provide necessary protection from the weather. Hunting communities—particularly in the interior—were more mobile than groups dependent on fishing, because of the greater distances needed to be traveled for hunting and the lower predictability of location of prey animals. Lastly, the location of even semipermanent settlements periodically could change, as residents might relocate to a more suitable location in response to an event such as a flood, or for improved access to food or other resources.\(^7\)

The spatial predictability of key food resources, and the corresponding stability of settlements, varied between regions. Ivan Petroff reported seasonal summer migrations along the Yukon and Kuskokwim Rivers (USDICO 1884: 5). H. Dewey Anderson and Walter Crosby Eells (1935: 36) noted seasonal influxes of people along the mainland Arctic coast. For Alaska Natives in northern and western coastal areas, proximity to marine mammals, as well as fish, was a high priority, even to the extent of locating permanent settlements in wetlands. For example, Yupik along the Kuskokwim River and in the Yukon-Kuskokwim Delta built villages in wetlands close to hunting and fishing resources (USDICO 1893: 174). Availability of fresh water or wood for fuel generally were less important considerations (Anderson and Eells 1935: 31).\(^4\)

As contact with external cultures increased in Alaska, a variety of military, commercial, and administrative influences—varying in impact depending on the geographic area—came to have important roles in the consolidation of traditional settlements and seasonal camps into larger, permanent villages.\(^8\) In some situations, reduction in the subsistence resource base of traditional economies from outside competition also resulted in consolidation (Alonso and Rust 1976: 179).

Trading stations were a significant and early influence. For example, VanStone (1974) noted that in Western Alaska, the effects of trade predated actual contact, causing large moves in village locations and the seasonal activities of Native populations. Villages also typically grew around mission stations (Jorgensen 1950: 61–62; USDICO 1884). Some villages consolidated with the establishment of canneries (Davis 1978: 74, for example, discussing Yakutat).

Other influences on consolidation included whaling stations, woodcutting and loading sites for river boat traffic, barge loading and unloading sites, mining centers, and illness epidemics (children whose parents had...
died then concentrated in village schools for care). An appreciation of the influence of military posts, trading posts, fish canneries, mines, mission stations, and clinics or hospitals can be gained from the descriptions and case studies discussed by numerous authors.10 Natural events such as floods also periodically led to the relocation of a village.11 More recent influences on village consolidation include maintaining access to income transfer payments (Kruse n.d.; Tussing 1982),12 and qualifying for Native Corporation membership and related income (Gorsuch 1979).13

This article considers the contribution of schools to village consolidation. The establishment of schools by the U.S. Department of the Interior's Bureau of Education, beginning over a century ago, was a particularly effective intervention in settling or consolidating the population. Education of Natives by outsiders began with the establishment of Russian schools several hundred years ago (JFSC Programs Affecting Alaska Natives 1994b: 127). A formal educational system, committed to establishing and maintaining schools for Alaska Natives, was established by the Federal Bureau of Education after Alaska became a U.S. civil and judicial district in 1884. In addition to delivering a regular school program for young students, schools also were involved in adult education, various summer programs, school lunch programs, and community activities (Darnell 1970: 10). The system remained in place until 1933 when responsibility for the schools was transferred to the Bureau of Indian Affairs.

Improving sanitation among Alaska Natives was one of the Bureau's major functions—to control, as one administrator put it, "[their activities] in the bathroom" (Darnell 1970: 173, 182, 212). Efforts to improve household and community sanitation were a main focus of teachers and school administrators' activities, and yet the permanent villages that grew up near schools often faced severe environmental challenges in achieving adequate sanitation services and practices.

Many rural Alaska communities, especially villages in northern coastal and interior areas, are situated on soils (commonly called "muskeg" or "wet tundra") that are wet, high in organic matter, slow to decompose, and may be frozen for long periods of time. The development of villages on such sites often has had environmental consequences in the disposal of wastes or provision of clean water supplies. Villages were not located with public works and expanding populations in mind (JFSC 1994b: 13). A seasonal settlement that may have been highly satisfactory for a small, mobile community two or three hundred years ago often is, today, inappropriate for a permanent population ten to twenty times larger, especially for the delivery of reliable and cost-effective sanitation services.

Examples drawn from the correspondence and previous studies used
in this article are mostly from Western Alaska (villages such as Akiak, Bethel, Buckland, Hooper Bay), although examples also are used from interior Alaska (Allakaket, Ruby), South-central Alaska (Eklutna), and Southeast Alaska (Hydaburg). Analysis of archival records constituted the principal research method for this study.14

Schools and the Consolidation of Settlements

Significant Alaska Native population shifts toward centers of economic activity did not begin until the late nineteenth century, attracting especially survivors of disease and famine (JFS 1994a: 9). Traditional rural Alaska Native villages typically were small, even late in the nineteenth century when some consolidation already had occurred (Anderson and Eells 1935: 32). Review of the data from the 1880 census—the first census conducted after the United States acquired Alaska and the most comprehensive estimate of population to that time—shows that two-thirds of the more than 320 Alaska Native villages identified contained less than one hundred people (Table 1).

Causes for community change were complex and varied between villages, but a pattern of village consolidation driven by the availability of public services, amenities, and employment opportunities seems consistent over decades (Alonso and Rust 1976; Kruse and Foster 1986).15 The continuing consolidation of villages has been reflected in the reduction in the proportion of small villages, even while the total rural population increased in size (Rollins 1978). By the time of the 1950 census, 47 percent of a total of 218 enumerated places contained less than one hundred people, and the rural population totaled 47,829; by the 1980 census, 29 percent of 223 places contained less than one hundred people, and the rural population totaled 83,914 (Kruse and Foster 1986).

The often pivotal influence that the establishment of schools had on consolidating villages has been discussed by James H. Ducker (1991, 1996) and Nancy Yaw Davis (1978). For example, schools along the Noatak, Kobuk, and Selawik Rivers in 1907 and 1908 were a powerful draw to Natives in the area. Ducker (1996) argued that the Natives built permanent homes at sites near the schools, establishing villages that survive today. He noted (ibid.: 54), “A movement to a school village within the traditional society territory was not unprecedented, though the congregation of so many Natives in a single site for many consecutive years was novel for all northwest Alaska Natives except those at the major whaling villages of Wales, Point Hope and Barrow.”

The Organic Act of 1884 made Alaska a U.S. civil and judicial district
Table 1. Number and size of Alaska Native villages in 1880 census

<table>
<thead>
<tr>
<th>Population size</th>
<th>Arctic Division</th>
<th>Yukon Division</th>
<th>Kuskokwim Division</th>
<th>Aleutian Division</th>
<th>Kodiak Division 5</th>
<th>South-eastern Division</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;400</td>
<td>1</td>
<td>0^b</td>
<td>0^c</td>
<td>1</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>300–399</td>
<td>0</td>
<td>0^c</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>200–299</td>
<td>4</td>
<td>1</td>
<td>6</td>
<td>3</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>100–199</td>
<td>2</td>
<td>24</td>
<td>22</td>
<td>6</td>
<td>7</td>
<td>12</td>
</tr>
<tr>
<td>&lt;100</td>
<td>19</td>
<td>70</td>
<td>52</td>
<td>10</td>
<td>42</td>
<td>21</td>
</tr>
<tr>
<td>Total population</td>
<td>3,094^4</td>
<td>6,870</td>
<td>8,911</td>
<td>2,451</td>
<td>4,352</td>
<td>7,225</td>
</tr>
<tr>
<td>Total number of villages</td>
<td>26</td>
<td>95^d</td>
<td>83^f</td>
<td>20</td>
<td>54^b</td>
<td>44^40</td>
</tr>
<tr>
<td>Total population of native villages:</td>
<td>32,903</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total number of villages:</td>
<td>&gt;322</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

These data need to be interpreted with some caution due to widely reputed inaccuracies in Petroff's work as census commissioner. Reportedly there was little consistency in methods of data collection through 1910 (Levin 1991: 3; Rollins 1978: 1). Anderson and Eells (1935: 104), in fact, note that some of the increase in population from 1890 to 1900 "was probably due to more adequate counting rather than to actual increase in the native population." See Ernest S. Burch (1984) and Michael J. Levin (1991) for further discussion of changes in Alaska Native populations.

Source: Data from USDCO-1884

^a In addition, 800 people are said to be living in the “interior,” in an unspecified number of villages beyond the 26 identified.

^b No villages of 400 or more people are identified, but two relatively large clusters of people are noted—700 people in "Tennishah villages" and 500 people on Saint Lawrence Island.

^c No villages of 300 or more people are identified, but 300 people are recorded as living along a stretch of Yukon Delta coast.

^d Ninety-five villages are identified; see notes b and c above, and, in addition, 336 people are recorded as living in three clusters in different parts of the region and the number of their villages is not specified.

^e No villages of 400 or more people are identified, but 400 people are recorded as living on Nunivak Island.

^f Includes two villages recorded at "Paugwik" and containing a total of 191 people; the size of these villages is not specified and they are not included in categories above. In addition, 180 people are recorded as living in an unspecified number of villages on "Molchatna" River, and 35 people are recorded as "roaming Kotschane" and the number of their villages, if any, is not specified.

^g Port Moller to Yakagwa.

^h Includes two villages on Afognak Island containing a total of 339 people; the size of these villages is not specified and they are not included in the categories above. In addition, a total of 170 people are recorded as living in the Copper River, Comptroller Bay, and Yakagwa regions, in an unspecified number of villages.

^i Plus an unspecified number of villages along the coast near Yakutat, containing 200 people.
and gave the secretary of interior the power to establish a system of federal schools. Laws subsequent to the act provided for a civil code allowing for the incorporation of towns and the creation of school districts in those incorporated towns. The influence of schools on sedentarizing populations became more pronounced in the early part of the twentieth century when the Bureau of Education launched an effort to expand the school system (Ducker 1991: 14), more than doubling the number of schools, from 35 to 82 in a five-year period (1906–11).

This expansion was in large part a response to the gold discoveries in Northwest Alaska; the belief arose that more schools were needed to train both the children of the mostly white entrepreneurs moving into the area, and the Native children “so that they might find viable economic and social roles to play in western society rather than be overwhelmed and destroyed by an onslaught of American settlers” (ibid.).

Early correspondence reveals the effectiveness of schools in consolidating population. For example, A. N. Evans (superintendent, Northwest District) observed that Natives at Eek River (in Southwest Alaska) began to combine villages, thinking that by so doing the Bureau would grant them a school (Evans 1912; see also Lopp 1919). In February 1912 Evans visited Eek and noted (1912: 5) that there were seventy Natives in the village in above-ground cabins, “and they stated that about forty other natives would move there as soon as they were certain that a school would be established.” Responding to the growth of villages near schools, Evans recommended additions to the schools at Noatak, Selawik, Hooper Bay, and Akiak. He reported (ibid.: 2) that on the Kobuk, Selawik, and Noatak Rivers, “the Natives were scattered for several hundred miles; but they were in such wretched condition and so anxious to acquire school advantages that they came together in a village at the point where a school was erected.”

The Bureau of Education’s schools were sufficiently popular that they became the core of new settlements. Ducker (ibid.: 50–51) noted that “Superintendent Shields observed that, the natives will establish a permanent village at any good place where the Government establishes a permanent school and industrial plant. It is a remarkable fact that a Government school is the only thing that will hold natives even in a bad place, for they want school advantages for their children.” Eventually, the schools, all the services they delivered, and, later, expanded government subsidies and services “finally led almost all Indians [in the subarctic] to adopt an at least seasonally sedentarized existence in town or hamlet” (Helm 1981: 664).

Reasons for moving near schools were numerous: to obtain clothes and other provisions; for employment (as teacher aides, for example); and,
for religious purposes (schools were associated with missions). Perhaps one of the strongest reasons was to be close to potential sources of trade and income (Ducker 1996: 3).

Despite the appeal of schooling, not all Natives were immediately drawn to move and settle near schools. Fienup-Riordan (1992: 2) referred to such resistance at the time of early contact as “realistic opportunism,” that is, “a general friendliness and willingness to trade when it suited them.” Later in the historic period, Fienup-Riordan (ibid.: 5) noted that “whereas Bureau of Education employees made only limited progress in their efforts to transform Alaska Natives into laborers in the larger society [the missionaries] had an undeniable impact.” Fienup-Riordan (ibid.: 11) also noted that in the 1890s missionaries to Nelson Island were frustrated in their work, which even after a year on the island was, “hampered by the isolation of the area and the migratory habits of the people.”

While the draw of schools was new in Native culture, the consolidation of communities can be seen, at least in part, as merely an effort to increase standards of living. As Ducker (1996: 54) noted, consolidation near schools can be viewed as “the response of at least some members of a mobile and competitive people intent on maintaining their families with traditional hunting and fishing while gaining a better understanding of a stronger and wealthier society that offered material advantages.” In some cases, decline in population (Burch 1984; Levin 1991) affected the ability of villages to meet their economic needs, and, “consequently, two or perhaps three villages might have consolidated into a single village” (Alonso and Rust, 1976: 191).

Some educators recognized the threat of social difficulties or subsistence resource shortages resulting from concentrating the rural population in bigger villages, but believed that, on balance, this consolidation was needed. For example, John Kilbuck (1935: 2, 5) wrote from Akiak to Commissioner of Education P. P. Claxton that “villages of 400 to 600 will work out satisfactorily wherever there is an industry instituted to which the people can devote their time and energy profitably,” and, “owing to the conditions of the country and climate it seems that the gathering of the people into villages is the only way to reach any number of individuals.” Kilbuck (ibid.: 5) nevertheless believed that, although centralized schools were the most efficient way to educate and serve large congregations of people, the lower population densities made more sense in some ways, “scattering out the families more to themselves, like a rural community in the States, would more likely build up the moral and physical constitution of the people as a whole.”

In correspondence to the commissioner of Education, Evans (1911:
2) wrote of his belief that “with proper management, the natives will be able to congregate in larger settlements.” In a subsequent letter to the commissioner, Evans (1912: 6) also said, “At a place like Point Barrow, physical conditions [referring particularly to the limited availability of hunting resources but also driftwood] are such that it would be improper to encourage Natives to congregate in settlements that are too large.”

Discussing the Upper Kuskokwim region, Evans (ibid.: 5) noted, “The natives are scattered in small settlements but have declared their willingness to congregate at some one point, provided a school was granted them, and combining their villages for seven or eight months during the winter.” He went on to note, “In a region where fish are plentiful and where they have plenty of fuel and game, as afforded by the Kuskokwim, the natives condition is decidedly improved by getting together under the influence and advice of a competent teacher.”

Nevertheless, when numbers of people in the settlements proved to be higher than the local environment could support, people compensated for this by having school schedules conform to the calendar of subsistence needs and traveling farther afield (ibid.: 12). As long as participation in subsistence activities was not undermined, Natives would attend school.

Admittedly, some fairly large and permanent villages existed at the time of contact, such as Kingigin, Karluk, and Tikigaq. To some extent, Natives may have been resigned to a certain level of sickness (Fortune 1996). As Robert Fortune (1992: 260) noted, “Petroff believed that both major forms of tuberculosis were aggravated by the style of living of the Natives, and he was frustrated by the peoples’ seeming resignation to their fate.” Through World War II, lower population numbers and continued movement to seasonal camps may have helped minimize major sanitation problems. For example, Burch (1984: 316) noted that, in the Kotzebue Sound area in the period 1800–1940, overall population declined from a high of 3,950 in 1800 to a low of 1,050 in 1920, rising to 2,155 in 1940. The postwar population more than doubled to 5,215 in 1980. Only in more recent decades have some well-publicized disease outbreaks prompted a wider concern with general sanitation in villages (Hulen 1992).

Observers noted unsanitary conditions in the expanding villages. For example, Margaret Lantis (1959: 48–49) reported that elders in the Lower Kuskokwim considered illness was partly the result of “direct contamination via open drainage through the village as a result of the type and location of houses and waste disposal.” Lantis (ibid.) also noted that “in Eek there was considerable discontent regarding drainage from the graveyard and the spot where human wastes were dumped.” She explained (ibid.: 50) that both spots were drained by a swale through the village between two
clusters of houses and that people attributed disease to poor drainage and the direction of drainage, and that "pups and children walked through this low place in the village and undoubtedly did track human waste into the houses." Robert Fortune (1992: 87, 210–11) reported that the cold, damp, smoky indoor environments resulted in widespread respiratory infections in Bethel and St. Michael.

Consolidation into permanent settlements had both advantages and disadvantages for Alaska Native people in the near term, apart from the implications for long-term village sanitation services and problems. On the one hand, concentration of population could lead to more disease, both from increased contact between people facilitating the spread of infectious disease—particularly newly introduced diseases to which Natives had not developed resistance such as influenza—and from unsanitary conditions. As Levin (1991: 4) noted, "as Alaska became more 'settled,' the conditions for wider spread of tuberculosis became riper." More general cultural changes associated with village consolidation were also thought to affect health. Lantis (1959: 48–49) reported from her interviews with Elders in the Lower Kuskokwim that she repeatedly heard that "illness came with the white people ... due to change in diet [of the Natives], especially their eating so much flour and sugar, and in their clothing [as well as deterioration in sanitary conditions]."

On the other hand, concentration of population obviously aided the delivery of sanitation and health services. As Anderson and Eells (1935: 407) noted, the health work in the villages, at least in the Kotzebue area in the 1930s, included giving health examinations; making diagnoses and treatment plans; instructing natives in home care and first aid; presenting classes in hygiene, health, and the use of medicines; and making sick calls in Native homes.

As subsistence hunting and fishing declined, so did the accidental injuries resulting from these often dangerous activities (Fortune 1992: 45). However, since most communities continued a significant scale of subsistence activities, this source of physical risk commonly persisted.

Further, many sources of community vulnerability probably were reduced by consolidation. As Robert A. McKennan (1981: 566) noted, "Even in aboriginal times specific local bands were probably transitory in nature. The bands were of such small size that periodic famines, warfare, and later, diseases introduced by Whites could easily reduce them to a point where they were no longer viable. The survivors would be forced to join another and larger band or starve."

This mixture of advantages and disadvantages for sanitation and health would have been among the considerations in Alaska Natives' decisions to resettle, basically for a variety of economic reasons. As June Helm
(1981: 664) noted, “Within the historic era, [Alaska Natives] have reoriented their interests and activities in response to the redefined resources of their natural surroundings and to the offerings and demands of the intruding, European-derived society.”

Schools as a “Civilizing” Influence

The education system developed around it the mythology that it was a civilizing force. Native schools were seen by administrators and teachers as having a broad mission to improve the Natives’ lives. For example, by 1922 the Bureau of Education asserted responsibility for a number of social services, with education just one of its many functions (U.S. Department of the Interior, Bureau of Education [USDBE] 1923). The Bureau was to maintain schools but also extend medical relief, provide sanitary living conditions and assistance, foster commercial enterprises including the reindeer industry, and “relieve destitution.” The Bureau also operated orphanages in Kanakanak and Tyonek for children whose family had died in the influenza epidemic.

The goals of the government educators and the Christian missionaries overlapped, rooted as both were in the same culture. As the Alaska Natives Commission observed, “Hand-in-hand with the missionaries, the government teachers, who in many instances operated as de facto, all-purpose agents of government, set about the task of making modern Americans of the last of the continent’s aboriginal peoples. . . . In the schoolhouses and boarding schools, in the churches and in the orphanages, Native children would learn how to become good Christians and good Americans” (JFSC 1994a: 11). The link between “civilizing” and “Christianizing” has been widely discussed, for example by Fienup-Riordan (1990, 1992) and Judith Kleinfeld (1992). As Fienup-Riordan (1990: 80) said, “The self-imposed task of civilizing and bringing to Christianity the indigenous “heathen” consumed [the missionaries’] energy and imagination.”

The Bureau of Education further attempted to sedentarize semimobile populations by promoting reindeer herding in western and northwestern Alaska. The program was intended to prevent starvation and, ultimately, to turn seminomadic hunters into more sedentary pastoralists. Reindeer herding was seen as another tool in furthering the Bureau’s mission of educating and ultimately “civilizing” Alaska Natives; reindeer were termed by Commissioner of Education W. T. Harris the “schoolbooks” necessary for the education of the Alaska Natives (USDBE 1898). By 1923 reindeer herding had assumed a primary role among Bureau activities (USDBE 1924: 32).

The Bureau of Education extended its mission to the point of estab-
lishing a new town, Hydaburg, complete with a sawmill (Case 1984: 210-11; USDHE 1913). According to the 1924 Bureau report (USDHE 1925: 27), "The teacher must be a community leader and do many things not ordinarily considered within the scope of the teacher's function."

As well as education, schools also provided clothing and food. In fact, shortages of these sometimes led to the closing of the school (Ducker 1991: 7). In Point Hope a teacher observed that village population (and school enrollment) was greatly affected by food availability (USDHE 1935: 925). In some places the village population dropped to half its usual size when threatened with food shortages (ibid.). In addition, substantial incentives (for example, windows and doors for building materials) for constructing or improving dwellings were also offered to villagers by missionary schools.24

In effect, the teachers functioned as social workers, being instructed to "lay hold on every possible opportunity of assisting the development of the natives" (USDHE 1909: 1298).25 Teachers were to assist with industrial development, domestic arts, sanitary conditions and hygienic living, as well as the inclusion of moral principles into work programs.26 Referring to about 2,800 Natives between the Yukon and Kuskokwim Rivers, Evans (1912: 2-3) expressed the view that "the only permanent way in which to render them relief [from their "wretched condition"] is through the establishing of schools whereby they can receive the necessary training along sanitary lines."

Villagers used school facilities and services for more than schooling their children. A school in Gamble, for example, was recognized as a "real community center for recreation, public meetings, and laundry and health facilities" (Hughes and Hughes 1960: 326, as cited in Davis 1978: 34). As recently as 1952-55, the wide-ranging role of the teachers was recognized as being a provider of health, radio communication, legal advice, education, and welfare (Davis 1978: 35).

However, the "civilizing" mission of the schools can be seen in the tradeoffs sought from the Natives in exchange for the amenities of schooling. A widespread prohibition on the use of Native languages has been widely noted (e.g., JFSC 1994a: 11). More broadly, the Bureau of Education recommended (USDHE 1935) that Natives be required to "renounce [their] adherence to tribal customs," before being accepted as good citizens.

Early Schools and Sanitation Services

As the Alaska Natives Commission noted, the goal of the Bureau of Education was to guide all phases of life, from the schoolroom to the bathroom, home, and herd (JFSC 1994b: 129). To support such an effort the Bureau
of Education tried to send teachers with medical training, and, in some cases, medical doctors to the schools. The effort was expanded in later years to include the furnishing of medical supplies and medical texts to villages not reached by personnel who could administer direct aid. Sanitation and medical services were seen as linked. For example, one Bureau report (USDBE 1907: 377) stated that there was a need for free-of-charge Native medical care due to the unsanitary conditions in the villages.

By 1916 the Bureau was providing permanent medical professionals (Ducker 1991: 26). Before that, teachers with some medical training would emphasize health on formal “Weigh Days” and “Hair Cut and Clean-Up Days” and with monthly physical inspections of students (ibid.: 34). In the early 1890s it was recognized that a teacher’s responsibilities included work on “personal cleanliness, health, diet, improved habitations, drainage, and . . . an increased food supply” (USDBE 1892: 1260). School medical personnel were expected to, among other things, burn rubbish, teach fumigation, and dig ditches to drain stagnant pools (USDBE 1926: 32).

Schools also became medical support centers in the period of serious epidemics among Native populations around the turn of the century. Natives were attracted to areas with medical supplies. They knew that people in villages with schools had a better chance of survival against the influenza and measles epidemics. Teachers were not as susceptible to disease and also had medicine available for distribution (Fortune 1992: 215–26).

Improving sanitation was an explicit purpose of the Bureau of Education in Native communities, integral to its broadly conceived mission of improving the life of the Natives (Darnell 1970: 173, 182, 212). Basic sanitation included delousing, cleaning homes, bathing weekly, and filtering drinking water (Ducker 1991: 26). Building toilets was a major focus, as were efforts to control disease resulting from the contamination of water by wastes. Teacher Lulu Evans (1917) reported that her sanitation work in the month of May included spraying “sloughs in and near [Akiak] with kerosene, and chloronaphalene chloride of lime placed in drains, ditches, toilets and on garbage piles.” Anderson and Eells (1935: 418) in a report also discussed unhygienic toilet conditions in the schools, recording the percentage of schools with outside privies, sanitary toilets, or neither.

The goal of improving sanitation grew out of a widespread concern by people involved in establishing rural schools around the turn of the century about the sanitation practices and conditions of Native villages. Disposal of human and food wastes, clean water supplies, cleanliness of streets, air quality in houses, and other aspects of domestic sanitation were often viewed critically.

Some observers at the time noted that sanitary conditions in con-
temporary non-Native settlements often were poor as well, particularly in
gold-mining boom towns such as Nome and St. Michael (Fortune, 1992:
177-78). Fortune (ibid.: 34) said, “The standard of hygiene and sanita-
tion was sometimes no better among the Europeans of the time,” and he
observes that neither Native village or European town might escape the
“filth, decaying food, human excreta, contaminated drinking water, close
contact with animals, crowding, and poor ventilation” that was common-
place into the twentieth century. The often appalling state of sanitation
in early-nineteenth-century America has been widely noted (e.g., Larkin
1988). Fortune (1992: 34) also related accounts of Sitka, the capital of
Russian America, at a somewhat earlier time as being wretched, dirty,
and odoriferous, and cites Captain George Vancouver’s description of a
Russian trading post in Cook Inlet in 1794 as having a terrible stench “of
an immense collection of all kinds of filth, offal, etc.”

Moreover, school facilities themselves sometimes were less than ex-
emplary in their sanitary conditions. Fortune (ibid.: 193) noted that even
the physicians and other health care providers in Native settlements at the
turn of the century had little better to offer villagers—certainly no more
than just a few basic drugs—than could be provided by traditional shamans
and herbalists. And, noting that school buildings were overcrowded and
hardly models of good sanitation themselves, Bureau personnel at Bethel
described the classroom as “crowded, and disgustingly unattractive [so as
to give] an excellent training in unsanitation” (Reed 1913).

Education staff recognized that a major difficulty with providing ade-
quate sanitation services was the physical characteristics of village sites.
As Petroff (in USDA 1893: 14) wrote, “It is difficult even to find sufficient
dry ground outside of the houses upon which to pitch a tent, and at low
tide it is almost impossible to pass between the village and the water’s
edge . . . separated as they are by an almost impassable mud.”

Siting of Schools

The widespread concern about sanitation often was reflected in efforts
to site village schools. Perhaps the most important dominant sanita-
tion-related considerations were drainage and other soil characteristics, with
the objective to avoid wetlands or low-lying land that could be flooded
(Ducker 1991; Kilbuck 1911, 1912; Anderson and Eells 1935: 95); both soil
erosion and tidal waves forced people to look for higher ground. The
amount of rainfall also was an influencing factor in Southeast Alaska, with
drier sites being preferred (Chisholm 1929).

However, in many regions, good sites for schools were not easy to
find. In the low-lying coastal or wetland areas of western and arctic Alaska,
in particular, suitable soils and topography were scarce in the vicinity of many settlements. For example, reports from the Bethel school repeatedly commented on the area’s predominantly “wet, swampy condition” and drainage problems (Boyd 1915, 1916, 1917; Jones 1930; Rock 1910). Inevitably, if an existing site offered a structure in place or Natives were more likely to continue to settle in low ground close to food sources, teachers would accommodate this, even if it meant the school would be in wetlands (Boyd 1915).

Consequently, schools generally were sited in existing villages and sometimes in existing buildings, as a Bureau report noted (USDA 1888: 104). The establishment of a school in an existing village then contributed significantly to its permanence and growth.

Moreover, the choice of a site for a community where a new school would be built often was driven by larger considerations than environmental suitability. Schools sometimes were intentionally established in isolated areas away from existing towns as a mechanism to draw Native people away from “unsettling western influences” (Ducker 1996: 27). Principal perceived threats were exposure to drinking alcohol and gambling, and the practice of white men living with Native women, unmarried. In effect, schools were used in these cases to move populations or existing settlements to more remote sites to buy time—before what was expected to be eventual assimilation—with space, that is, isolation from harmful contacts. Thus, the Bureau of Education created schools to serve as magnets for settlement, helping to produce current population densities that are sustainable only with outside assistance.

Use of schools to relocate Native populations is illustrated by the case of the schools in Council and in White Mountain, on the Seward Peninsula (Ducker 1996: 57–59). The school in Council was closed in a deliberate attempt to move Native families with children to White Mountain, away from what were considered the corrupting influences of the mining town of Council. Council’s population then dropped from three hundred in 1910 to just one hundred in 1920. Similarly, a school—eventually financed by the Bureau of Education—was the main attraction for relocation of many Natives from the mining settlement at Candle (also on the Seward Peninsula) to Buckland, twenty miles to the east.

The Bureau essentially created new settlements or strengthened older ones through its decisions on where to place schools. More broadly, Ducker (1996: 63) said, “It was in support of such communities [in harsh environments], leavened with appropriate instruction from teachers, that the bureau coaxed movement from white towns and created schools in the wilderness.”

This “civilizing” purpose of schools led in some places to the estab-
lishment of schools—and the creation of villages—in new sites away from existing settlements, in locations that still may not have had suitable soils and topography for easy sanitation. The siting of schools apart from white populations a century ago has practical consequences today. In some cases, schools were sited in even more remote areas, making the delivery of services from hub communities more difficult and more expensive.

At the same time, a strategy for administrative efficiency in the school system also supported the more fundamental cultural and economic reasons for community consolidation. As Frank Darnell (1970: 351-52) noted, “Since much of the Native population is presently living in widely separated, isolated communities which do not offer opportunities for much more than a subsistence economy, it is almost impossible for the people to become integrated into either the Alaskan economy or the dominant culture.” Education Commissioner Claxton (cited in Ducker 1996: 60), in testimony before a subcommittee of the House Committee on Appropriations in April 1914, argued that “Government funds could be saved and better education provided Natives if they could be concentrated into about sixty villages,” rather than their existing 160 settlements, some of which were very small. As Darnell (1970: 351) noted, “the harsh climate, irregular terrain, and vast distances make communication difficult and create problems of logistics, thereby reducing efficiency and creating the need for large financial commitments in order to provide and maintain schools.”

Conclusion

This article has discussed the contribution that concerns over sanitation—as one of several factors—that had in establishing and siting Alaska Native schools, the role of schools in providing sanitation services in early years, and the part that schools played in the establishment or growth of rural Alaska Native villages. This perspective leads to a better understanding of how schools and villages came to be located where they are.

One time solutions can become problems later, as populations, cultural practices, and values change. Traditional small, temporary settlements can be seen to be environmentally adapted for sanitation management in some ways, as well as for natural resource utilization. People often moved away from winter settlements in the summer, thereby reducing overall waste accumulation in any one location and allowing some decomposition and disposal. Traditionally communities were small, most wastes were biodegradable, and some were recycled within the community—for example, dogs ate fish guts and other waste—thus minimizing waste accumulation.

In Alaska, many settlement locations that may have been suited to the
mainly seasonal villages of a small, mobile Alaska Native population two hundred years ago are not suitable for the basic public works, plumbing, and water treatment services that modern villages are demanding today. As schools contributed to the consolidation of settlements and the year-round concentration of populations at sites with unfavorable conditions for sanitation, they helped situate today’s remote Alaska villages now facing challenges for providing reliable and affordable sanitation.

One of the most important factors in the high cost of sanitation is the remoteness of most villages and the attendant logistical difficulties of providing capital development, operation and maintenance, and technical assistance for sanitation services. Schools played a significant role in establishing permanent villages at many of these locations, and have become part of the system of public services and transfers that maintains these population centers where they would not otherwise be supported by resource-based production.

However, the consolidation of Alaska Native communities also can be viewed as reflecting continuing cultural evolution. Alaska Natives historically have adapted their interests and activities in response to the commodification of the resources of their natural surroundings by, and to the offerings and demands of, the encroaching Euroamerican society. Still, despite consolidation of settlements, communities maintain considerable mobility in many of their traditional subsistence resource utilization activities.

By choosing to stay in these remote areas with many physical geographic constraints, villagers in Alaska today validate a way of life that faces many challenges: control over natural resources (subsistence), establishing political authority (sovereignty), and restoring environmental and human health with what has been up to now expensive and complicated technology (sanitation). Villagers choose a rate of change appropriate and amenable to them. Perhaps this is the way it has been since contact.

Notes

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1 This was true even to the extent that entire villages would sometimes move. For example, Langdon (1993) cited cases of this in Western Alaska at about the time of contact. The Calista Corporation (1992: 14) reported that when the first census taker traveled along the Kuskokwim River in 1880, he recorded "Mutechlagamuit" as a village, noting a population of forty-one, whereas it was actually the site of a summer fish camp. See also Burch 1981: 11 for a discussion of the relocation of settlements of Natives of Point Hope.

Nancy Yaw Davis (1976: 51-52) described the mobility of villages in more recent times, even in the milder environment of Southeast Alaska, noting, for example, that villagers moved from Craig to Klawock, consolidating in Klawock. She noted that the key is flexibility, being able to move at will; permanent residences encroach on this flexibility (ibid.: 56).

2 Sometimes they traveled a kilometer or two, sometimes they moved several hundreds of kilometers in a single year. The extent of the seasonal movements largely was a function of the weather they were escaping from and to, and the quantity and quality of the game they pursued. Burch (1988: 73) gave an example of such movement with the case of the Napaatarmiut, a Northwest Alaskan group of about 250 whose territory includes a large flat area along the lower Noatak River, a mountainous area to the east, hills west of the river, and some land along the nearby seacoast.

3 See Burch 1975 for an interesting discussion of the capacity for and mechanism of interregional transportation over long distances.

4 State and federal income transfers support such communities. Self-governance and local resource management are contested issues here as elsewhere in Alaska. See discussion in Berardi 1998, and Huskey’s review (1992) of the economics of village Alaska, and the contributions of subsistence, transfers, and the market to the economic survival of remote villages.

5 See, for example, the summary description of village siting considerations in Report on Population and Resources of Alaska at the Eleventh Census: 1890 (U.S. Census 1893), indicating that winter villages (for example in the lower Kuskokwim)
were commonly sited in wet, turfy coastal areas due to the primacy of other factors. "The sites of these tundra villages [of the western Kuskokwim] near the seashore are always convenient for hunting seals or belugas; the settlements in the lake region of the interior seem to have been planted at the few points where the peaty soil rises sufficiently above the level swamp to permit . . . digging into it and constructing a shelter for human beings" (ibid.: 169, 171).

6 See Burch 1981: 82, for an interesting discussion of seasonal movements of Eskimo populations, particularly among the Lower Noatak, who followed the same sequence of movements each year unless their normal grounds were low in food supply.

7 See the discussion in Anderson and Eells 1935: 31, 95–96, 181, FTC (1968: 41), and USDI (1893: 166).


9 Although both the preexisting population settlement pattern and the response of the Native population to consolidation influences varied between regions in Alaska, there are sufficient common responses in communities to the influence of schools to justify exploration of the roles of schools as a key to village consolidation, health, sanitation, and some resulting environmental problems. Regional differences are described in the case studies and the literature cited in this article. Many of the cases noted here are from Western Alaska, where the tradition of impermanent settlements, early contact with outside commercial and religious interests, sizable Native populations, and geomorphologic conditions difficult for sanitation all combine to make settlement consolidation influences and resulting sanitation problems particularly evident.

Langdon, in his popularized Native People of Alaska (1993: 15, 28, 42, 76, 82) describes the variability in spatial or geographic settlement and mobility patterns, including the Aleuts' villages of about 200 people living in five to ten dwellings with seasonal camps; Northern Eskimo bands of closely related families of between 20 and 200 people with larger coastal communities of up to 600 or more people; sedentary villages of between 100 and 300 people among the southern Eskimos; Athabaskan bands of between 15 and 75 people in related families with seasonal camps; and the relatively permanent winter villages of the Tlingit and Haida. Also see scholarly references in note 8 above.


According to Burch (1984: 314), writing on the Kusgok Sound Eskimos, "The period of consolidation began in 1897, when a Society of Friends mission was established at the site of the modern town of Kusgok. This was followed in 1898–1899 by a gold rush to the Noatak . . . Between 1905 and 1915 several other missions, as well as schools, were built in various locations throughout the region, and domesticated reindeer herds were established to replace the en-
tirely depleted caribou population... When the reindeer population crashed and fur hunting ceased to be profitable during the Depression of the 1930s, the Eskimos became sedentarized in the mission-school villages."

In sum, as Alonso and Rust said (1976: 1), "Two centuries of intermittent but increasingly pervasive white contacts has involved the development of certain sites at which Natives of the surrounding areas congregated for more efficient performance of the white military, religious, or commercial purposes at hand. Village consolidation resulted." They added that "in the Aleutian Islands alone there were several hundred villages in the 18th century, less than two dozen in 1970." They go on to write that the trend continued "in North and West Alaska [where] there were 181 villages in 1950, whereas in 1970 a 70 percent larger population lived in only 168 villages in that area."

As in the case of Backland, described by teacher Iva Taber (1913: 5–6): "We asked them why do they have their homes across the river... and they told us they went over for protection from the bad storms. And we had 67 Natives there in the village altogether. Just before we left there they found a fine new place for the village a few miles up the river where there is plenty of wood and good water and they say very little wind comes there." See also Anderson and Ells 1933: 95 and FFC 1968: 41.

11 See the discussion of village economics in Huskey 1992. Subsidies for population growth continue today. Huskey estimates that government income transfers alone in Western Alaska have increased population by as much as three times what the region could support without the transfers.

13 The Alaska Native Claims Settlement Act of 1971 provided for conveying Native corporation status, with its accompanying land entitlement and individual membership rights, to villages with twenty-five or more Native residents. Yet, as Darnell (1970: 332) noted, "since much of the Native population is presently living in widely separated, isolated communities which do not offer opportunities for much more than a subsistence economy, it is almost impossible for the people to become integrated into... the Alaskan economy." See also Berardi 1998.

14 Main sources of archival material were: (1) annual reports of the Commissioner of Education, Bureau of Education, U.S. Department of the Interior, located in the National Archives, University of Alaska, Anchorage; (2) records of the Bureau of Indian Affairs, Record Group 75, microfilm rolls 1–28 (most of the citations in this article are from correspondence on roll 28, the "New Schools File," which contains reports and queries regarding the need for new schools), also at the National Archives, University of Alaska, Anchorage; and (3) related documents at the Alaska Heritage Resource Survey, Division of History and Archeology, Alaska Department of Natural Resources, Anchorage.

The archival records contain correspondence between the general agent for education in Alaska and the commissioner of education dating from 1886—two years after the passage of the Organic Act of 1884, which established Alaska as a U.S. district—through 1937. The records also contain correspondence between teachers, district officers, and other Bureau administrators.

Supplementary information on the history of village schools and education services was gathered through interviews conducted with personnel at the U.S. Environmental Protection Agency, Anchorage; Institute of Social and Economic Research (University of Alaska, Anchorage); Alaska Department of
Schools, Settlement, and Sanitation in Alaska Native Villages

Environmental Conservation; U.S. Public (Indian) Health Service; U.S. Natural Resource Conservation Service; University of Alaska, Fairbanks, and University of Alaska, Anchorage; Alaska Department of Community and Regional Affairs; Rural Alaska Sanitation Coalition; Yukon-Kuskokwim Health Corporation; Association of Village Council Presidents; and individual village elders and council members in the villages of Bethel, Old Harbor, and Ouzinkie. These interviews corroborated archival information in some instances, and taught me about physical environments and sanitation problems in particular villages.

The consistent influence of the availability of public services on village consolidation had an amplified effect in the late 1970s and the 1980s as state spending—funded by new revenues from oil production—greatly increased. This increased public spending provided schools, sanitation, and other public services in small villages that previously had been unserviced. Migration back to small villages occurred and such populations are often now dependent on services provided by these transfer payments (FFC 1968: 59–62; Huskey 1984; Kruse 1984; Kruse and Foster 1986; Lane et al. 1982).

Also see FFC 1968.

For further discussion of the history of education in Alaska, see Darnell and Hoem 1996.

Evans (Evans 1912: 9) related that the schools at Noatak and Selawik had been built four years before and already the schoolrooms were “entirely too small to accommodate the number of children—as a usual thing there are three children in each seat and the seats closely crowded together.” He recommended the construction of additional rooms and the hiring of an assistant teacher. At Hooper Bay, he wrote (ibid.: 9), “the school established last year is too small for the number of children . . . the school room was crowded with children.” He also noted (ibid.: 10) that at Akiak, “the new school established last summer, is entirely too small.”

Similar reports are common from other regions. For example, an early report from the general agent of education in Alaska to the commissioner of education (USDI: B 1888: 105) reported that one family moved eighty miles to a new school in Kodiak, and men in three settlements agreed to leave to build a new one to serve a school in Tongass (ibid.: 107). In a letter written in 1921 from a teacher in Ruby to the secretary of the interior, two Native families were reported to have moved to Ruby to send their children to school, and more were said to be coming the following fall (Keller 1921). People nevertheless maintained their fishing camps and hunting cabins; for example, at Cape Apanow, the Natives would have their winter homes near the school (Evans 1912: 2).

Other correspondence echoed this concern. For example, in the 1915 “General Report of Conditions—Bethel” prepared by Bertha Boyd (1915: 1), she expressed concern that the village was becoming too large, that “to make a living from the country it is necessary for the people to be more or less scattered.”

Although initially school schedules were flexible to meet local needs (mostly subsistence hunting, trapping, and fishing), later year-round attendance demands posed a conflict in time. The 1889–90 Bureau report (USDI: B 1891: 759) discussed the adoption of a rigid nine-month school calendar. Gardens that the schools had started would need to be maintained at the same time that people needed to devote their time to tending their fish camp. Boyd (1926: 9) noted, however, that Natives planted gardens at fish camps. She remarked that “many
white people would hesitate about rowing six miles to weed a bed of turnips.” A teacher in Buckland, Iva Taber (1916: 1), reported that “those who were anxious to have their children in school all [left summer camps] and went back [to the village] with us.” Some educators advocated establishing temporary schools at sites of summer fish camps (UDSHE 1907: 394–95), since they believed that Native knowledge about “catching, curing, packing, and marketing of cod and salmon” was “deficient in all respects” (ibid.: 395). Point Ellis and Sitikah Bay had such temporary summer schools (UDSHE 1908: 1026).

Appendix B of Levin’s work (1992: 109–17) provides similar data for all regions in Alaska.

The wholesale cultural assimilation objectives of the Bureau shifted somewhat over time; by the 1920s Bureau personnel in some places sought to “preserve” Natives on reservations away from the bad elements of “white society” (Fiepipe-Riordan 1992: 4).

The 1891–92 Bureau report (UDSHE 1893) discussed the introduction of domestic reindeer to serve as a regular food source that would compensate for the diminished stocks of whales and walruses and as a “civilizing influence” on the Natives.

The reindeer-herding program was designed to benefit the northern Alaska Natives, who were experiencing much poorer harvests after the decline in populations of sea mammals due to the unrestricted commercial harvest of whales, walrus, and seals. However, for the most part the program was not successful; the Natives served mostly as hired herdsmen, with minimal economic impact on village life (see VanStone 1984a: 156). Such economic activity also furthered the objectives of the land grant colleges, namely, to make money from enterprises on public lands (Case 1984: 208–10).

In correspondence to the commissioner of education, George Boulter (1908: 4–5) wrote that “the mission people are offering inducements for the natives to settle at Allachaket, by donating two windows and a door for each cabin that is built,” and further, that “Arctic City will become a matter of history, as there is no inducement to warrant the natives settling there.”

There was some concern as to whether this comprehensive assistance would create dependencies. The 1907 Bureau report (UDSHE 1907: 387) argued that the government efforts should not suppress self-sufficiency. The 1910 report (UDSHE 1910: 1343) discussed villagers being trained in self-reliance, to the end of self-government.

It was felt that improvements in sanitation could be made in part through training in construction of better houses with improved ventilation and light. This was a departure, for practical purposes, from typical programs (UDSHE 1908: 1026), a shift from “routine work by the children in the school room to the general improvement of the industrial, sanitary, and moral condition of the native communities.” Emphasis was to be placed on practical learning.

This was seen almost as a cost-saving measure so as not to involve other agencies. Schools and hospitals were to carry out such work, rather than introduce new or other agencies (UDSHE 1907: 385).

For example, a superintendent's reports give considerable attention to the poor condition of students' and teachers' toilets after visiting a school, and efforts to improve them (Orr 1912a, 1912b).

Reports to the commissioner of education carried toilet counts (as, for ex-
ample, the sanitary report from O. B. Orr in Akiak (1913b) or the annual report for Akiak in 1917 prepared by May Wynne (1917). The widespread concern is illustrated by a Bethel teacher's commentary that "a substantial privy has been erected . . . [doing] away in one family with the shameful habit of sitting promiscuously in the grass behind the house" (Rook 1912: 17).

31 The general view is typified by such comments as "It is a well known fact that sanitary conditions in the native villages of Alaska are very bad" (USDI 1907: 390); the writer went on to note the animal carcasses, decaying food, and refuse in the village. Similar observations can be found in reports to the commissioner of education, such as the 1926 report describing traditional subterranean homes as "small, filthy hovels with little light and no ventilation" (USDI 1927: 23); a narrative accompanying the 1880 census report, describing, for example, houses in the missionary settlement of Nushagak as being surrounded by "stray morsels of food left from one meal to the other, and a soft mixture of mud and offal" (USDI 1884: 13); a narrative accompanying the 1890 census report describing conditions in underground houses along the northwestern coast (Anderson and Eells 1935: 244); a discussion of Native sanitation by a public health nurse, Lulu Heron (ibid.: 407-8); an ethnologist's observations on the winter houses of Point Barrow villages (Murdoch 1892: 72, 76); a teacher's annual report noting the "neglected state" of village sanitation upon her arrival, and that garbage and waste were thrown outside peoples' doors with one or two pretenses of toilets (Seller 1913: 11); or the 1915 annual report from the Barrow school to the Bureau of Education (Richardson and Richardson 1915). The 1929 Bureau report (USDI 1930: 37) contrasted villages with Bureau influence and those without, on the Bering and Arctic seacoasts, stating that those Natives residing in villages without schools had traditional homes with small, sod houses, partly underground with floors filthy with litter and refuse (this is a traditional means of disposal), and wet from seepage and drips from the walls and roof.

In considering these early descriptions, Fortune noted (1992: 34), "It is apparent from these accounts that many early visitors were impressed and often dismayed by the vermin, dirt, and stench they found. Their descriptive comments, unfortunately, usually betray thinly veiled attitudes of superiority, condescension, or even contempt towards those whom many of them considered to be unenlightened savages."

The use of urine exemplifies differences in cultural perceptions. To the outsiders from Europe or America, urine was unsanitary. But in Alaska Native society, urine traditionally was used as an astringent, cleanser, and softener, especially for newborn infants (USDI 1893: 136). Anderson and Eells (1935: 64) also noted that in bathing, "the Eskimos . . .athed themselves with urine from the khashgii urine buckets." And among the Aleuts, urine was kept in an open area in a trough and was used to wash hair, soften skins, or make dyes (Langdon 1993: 16).

32 However, it may have been for the wet conditions, or the fear at least, that Natives settled in these areas. Anderson and Eells (1935: 31) wrote, "Eskimo villages were sometimes located in swampy country where the water supply was from tundra ooze, timber for building was unnecessary because of the available supply of sod and whalebone and the seal-oil lamp using blubber for both heating and cooking took the place of wood fuel." They noted (ibid.: 115)
that many villages (of the twenty that they surveyed) were on “wet ground, with a third being actually miry underfoot.”

The physical environment of the Delta low country is described in correspondence from U.S. Marshal Chas Jones (1930) to Commissioner of Education William John Cooper as deplorable, with the Natives living in small, overcrowded houses. One teacher noted a “wet, swampy condition . . . water seems not to drain out of the moss even [though] ditches are made” (Rock 1910: 18), and another, in the 1915 “General Report of Conditions—Bethel” (Boyd 1915), that the early thaw left the ground in bad condition, and that the puddles needed filling and draining. In the next year’s report (1916: 1), Boyd wrote that “no more cabins should be built in the village as it is already crowded and is built around a sink hole almost impossible to drain.” And drainage was again a theme in the subsequent report (Boyd 1917: 1): “Considerable filling and draining was accomplished” but the sinkhole was “still with many years accumulation of filth.”

In fact, the Bureau was sometimes reluctant to establish schools that were in a previously uninhabited area. Considerations in possibly moving a Bureau facility (an orphanage) to Eklutna illustrate this. A letter from Jonathan H. Wagner, the chief of the Alaska Division to the commissioner of education dated 26 May 1924 advised against the move. Even though there was an inlet and good (agricultural) soil, “there is no village at Eklutna. A few natives would probably move there. . . . [but] Most of these natives would not desert their established hunting and fishing grounds for a new location” (Wagner 1924: 2).

Wrote Keller (1922: 5), “Is there no law to compel a white man to marry the native woman with whom he lives?” Ducker (1996: 8) described efforts by the Bureau of Education to attract Inupiat populations from the corrupting influences of communities such as Nome, Council, Candle, and Deering. To do this, the bureau created new settlements and revived old ones with the siting of schools along the Noatak, upper Kobuk, and Selawik Rivers in 1907 and 1908. See also correspondence dated 23 May 1923, discussing siting a school in Kanatak for “a very high class of natives” (Rucker 1923). A report from Taber (1923: 2–3) noted, “Buckland is a fine place for the natives, especially to keep them away from the white men who desire to get them to do wrong.” A letter to the commissioner of education from teacher A. N. Evans (1922: 8) talked about the influence of “undesirable characters” in town and urged the bureau to fund a new building, a place where a teacher can do some “actual village work” and the “natives can have a reading room, and if possible, a small room which can be used as a gymnasium; thus drawing and attracting the natives from the undesirable quarters of the city.”

As a case study, see the discussion of Bethel in Ducker 1996.

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