

## One-third of villages lacking in-home water tap

**NEW URGENCY: Absence of modern systems linked to disease.**

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As 2006 closes, 34 percent of Alaska Native villages still do not have modern water and sewer services.

That statistic was presented at a session sponsored by the Alaska Environmental Health Association in Anchorage last week.

The session, hosted by the 24th annual Alaska Health Summit, was led by Public Health Service officers, Dr. Thomas Hennessy, director of Arctic Investigations Program at the Centers for Disease Control and Prevention, and Troy Ritter, senior environmental health consultant for Alaska Native Tribal Health Consortium.

"Does In-Home Water Service Reduce the Risk of Infectious Diseases? An Evaluation in the Alaska Native Population," was their presentation's title.

While building the infrastructure for modern water services in rural villages has been an ongoing effort for some time now, it has taken on a new urgency given the results of a recently completed study that links lack of water service to infectious diseases.

The study, in which researchers surveyed the Yukon-Kuskokwim region, examined the relationship between proximity to potable water and wastewater disposal and the risk of infectious diseases.

The Yukon-Kuskokwim region of Alaska is the least developed in terms of modern water services and highest for rates of hospitalization due to infectious diseases. For the study, modern water services refers to pressurized water systems in the home, meaning the ability to turn on a faucet.

"Practically all villages have a purified water point -- a small treatment facility where villagers can go with a bucket to get water," said Ritter.

These water points are often just a hose coming out of a small building or room, he added.

This means that while access to drinking water is a lesser issue, it is not the case with simple actions such as hand-washing and disposing of wastewater.

Forty-six percent of Alaska Native deaths in the 1950s, when in-home water service in Alaska villages was close to nonexistent, were due to infectious diseases, according to Hennessy. His research shows that since 1957 the number of homes without water has gone down as well as the rate of infections.

The research further shows that children in villages without running water tend to have many more infectious diseases.

"Evidence that there is a connection," Hennessy said.

There are several problems with this situation, according to Ritter and Hennessy. The main problem is a lack of awareness in these communities about the importance of hygiene. For instance, many people may reuse the same water bowl for washing their hands.

"Quantity is the most important characteristic of a water supply," said Ritter. "Water use less than eight gallons per capita per day was shown to be coincident with serious health consequences," he said.

"The more water you get to the homes, the more opportunity they have to wash hands and clean their clothes and dishes," said Hennessy.

The majority of villages that do not have modern water services are either built on permafrost ground or on swampy tundra areas. That creates difficulty and higher costs for building the necessary pipe systems.

Village size is also a factor.

"The less families in a community, the less likely they are to get modern water service," Ritter said.

Efforts to get running water to rural Alaska villages have been ongoing, with several agencies involved, among them tribal health organizations. But, currently there is no near-term solution to this situation.

