



# Willow Creek Water Quality Monitoring

July 1, 2016

## Why is DEC sampling Willow Creek water quality?

Mining (in upper drainage areas of Willow Creek), urbanized development near the creek and recreational impacts (fishing, camping, etc.) has caused the Department of Environmental Conservation (DEC) to be concerned about the water quality in Willow Creek and increased DEC's priority for obtaining water quality information.



## What information do we have already?

Through a DEC grant program, water quality data was collected in the summer and fall of 2014 and spring 2015. The water quality sampling documented fecal coliform bacteria results greater than state standards allow for two sampling sites downstream of the Parks Highway. All other water quality parameters tested met Alaska's Water Quality Standards.



## What additional information is being collected?

DEC is collecting additional fecal coliform bacteria samples this summer and conducting microbial source tracking (a type of DNA testing) to determine if the bacteria are caused by human activity. DEC is also monitoring most of the same water quality parameters previously collected to confirm they are within state standards.



## What are potential sources of the bacteria?

Fecal coliform bacteria are naturally found in the digestive tracts of all birds, warm blooded animals, and humans. They are used as indicators of possible sewage contamination because they are commonly found in human and animal feces. Although fecal coliform bacteria are generally not harmful themselves, they indicate the possible presence of other disease-causing bacteria, viruses, and protozoans that also live in human and animal digestive systems. Because of this, contact with fecal coliform bacteria could pose health risks.

Bacteria from human sources or activities (outhouses, on-site septic systems, horses, dogs, etc.) are regulated through the State Water Quality Standards found in Title 18 Chapter 70 (18 AAC 70) of the Alaska Administrative Code. Bacteria from wildlife (moose, beaver, birds, etc.) are considered naturally occurring. Determining the source of bacteria can be challenging.



## Where and when will the results be available?

A project report summarizing the water monitoring results will be available for download on the DEC water reports webpage (<http://dec.alaska.gov/water/wqsar/reports.html>) anticipated in early 2017. The report for water monitoring conducted in 2014-2015 is already available on this same web page.

## Contacts

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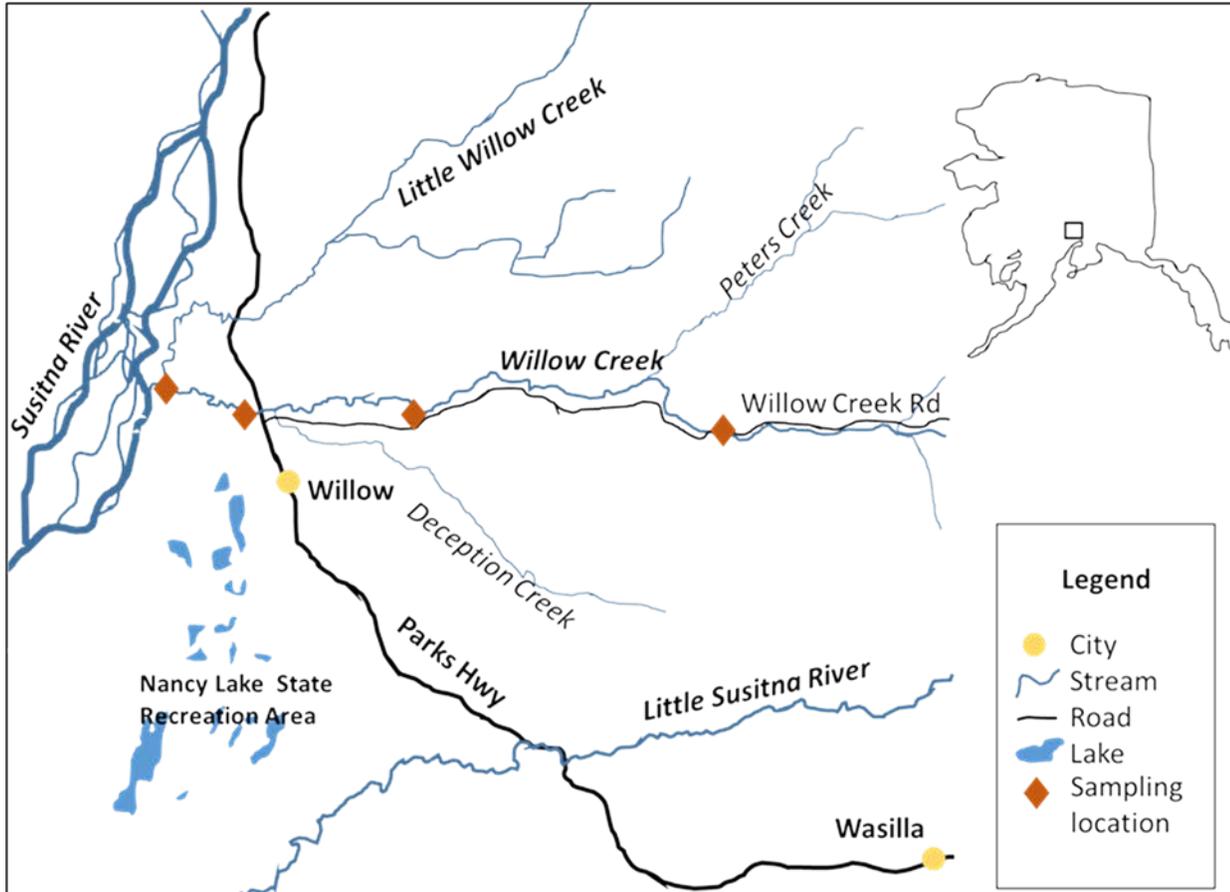


Figure 1. Location of Willow Creek in south-central Alaska with approximate sampling locations.