

# ALASKA

## ALASKA DEPARTMENT OF NATURAL RESOURCES, DIVISION OF FORESTRY

The Alaska Department of Natural Resources Division of Forestry (DOF) received a grant from the USDA Forest Service in 2015 for a project in Fairbanks, AK, entitled “Using Green Infrastructure to Restore the Chena River Watershed.” This grant funding has helped to complete several green infrastructure projects in the Chena watershed, which supports the second largest spawning population of Chinook (King) salmon in the Yukon River drainage.

The Chena River, running through the City of Fairbanks, supports the second largest spawning population of Chinook (King) salmon in the Yukon River drainage. Alaskans rely on salmon; commercial, sport and subsistence fishing are all integral parts of the Alaskan lifestyle. Subsistence users are especially dependent on salmon as part of a healthy diet. In 2012, the U.S. Department of Commerce declared the Chinook salmon fishery a disaster for the Yukon River drainage due to low salmon returns.

Many man-made projects are harming the salmon population. The expansion of impermeable surfaces (buildings, parking lots, sidewalks, streets and other hard surfaces) in Fairbanks and the decrease in natural vegetation has resulted in increased stormwater runoff into the Chena. Cold water fish species like salmon have further been harmed by increased sediment, petroleum products, water temperature, and low dissolved oxygen conditions. Development along the riverbank has also removed much of the riparian vegetation that is critical for food and cover from predators.

Although stormwater runoff and its associated pollutants remain a threat to the Chena River, recent data shows that several changes in Fairbanks have led to positive improvements in water quality during the 1990s and early 2000s. These include: reductions in stormwater runoff; additional permit requirements for construction sites; and efforts to increase green infrastructure applications and reduce the amount of impervious surfaces in the urban area.



Transit Park is using green infrastructure such as stormwater trees and permeable pavers to help retain rainwater and soak it into the ground. Photo Credit: Alaska DOF.



S Salon is using green infrastructure such as flow-through planters to help retain rainwater and soak it into the ground on their property. Photo Credit: Alaska DOF.

In downtown Fairbanks, this 2015 DOF project contributed to this effort by adding trees to intercept stormwater, planting vegetation with large volumes of soil to infiltrate runoff, and putting in landscape features including flow-through planters, pervious pavement and rain barrels to further reduce runoff. Green street designs were incorporated to reduce stormwater within the right of way to reduce the amount of runoff into storm sewers. All of these changes have been put in place to make headway on improving conditions for the salmon population in the Chena River.

Partners for this USDA Forest Service Landscape Scale Restoration Grant funded project include: the Tanana Valley Watershed Association, the Fairbanks Green Infrastructure Group, Alaska Department of Environmental Conservation, Chena Riverfront Commission, City of Fairbanks, Fairbanks North Star Borough, Fairbanks Soil & Water Conservation District, and the U.S. Fish & Wildlife Service.

## FOR MORE INFORMATION

Alaska Department of Natural Resources, Division of Forestry, Community Forestry Program  
<http://forestry.alaska.gov/community>