



Puget Sound

Objective:

Protect and restore water quality, biodiversity, open space, and ecosystems

Strategy:

Restore Puget Sound and protect vulnerable, threatened, endangered species, and habitat

Why is this strategy important?

Over the past two centuries, population increase and land conversion have substantially altered King County's landscape. Less forests and natural land cover increase the need for engineered storm water controls and reduce the amount of habitat for animal and plant species.

Because of commitments made in regional plans and because of regulatory drivers, King County needs to undertake projects that will substantially expand and improve in habitat, while working efficiently on projects that make the best use of available resources.

State law requires that fish barriers are to be removed. The King County Roads Services Division addresses aged and failing road drainage infrastructure, roadway flooding problem locations, and water caused slope failures, while bringing structures up to state standards for fish passage. In addition to benefiting fish, the replacement of road culverts has multiple benefits for the county's road infrastructure and the traveling public. For example, replacement helps to reduce road closures due to collapse of old culverts, prevents water from overtopping roads and/or damaging private property during periods of heavy rain, and reduces soil erosion and scouring downstream of the culvert outfall.

How is our performance?

King County monitors the efficiency of storm water and restoration project development. In 2011, King County completed 86 percent of storm water capital project milestones, below the target of 100 percent. King County completed 55 percent of Restoration project milestones, also below target.

King County is also not meeting our targets in Salmon Recovery Plans, adopted in 2005 by King County and partners in the Puget Sound Region. These watershed plans outline the necessary actions to achieve the delisting of chinook salmon and benefit other salmonids including coho, and (the now ESA-listed) steelhead on the Endangered Species list. As of 2011, 24 have been completed, with an additional 64 projects underway, for a total of 88 out of 136 identified projects showing some progress.

Road Services Division opened at least 90 stream miles of potential upstream habitat for fish and other aquatic organisms since 1999. However, the pace of culvert replacement has slowed in recent years due to insufficient revenues for road maintenance and preservation activities.

The Central Puget Sound Basin is the most heavily urbanized areas of Puget Sound, and King County's armored marine shoreline is indicative of this. A high percentage of Puget Sound shoreline in King County has been armored with bulkheads and other structures. Bulkheads impede natural erosion and cut off the supply of sand, rocks and other natural features that are home to native plant and animal species. Conclusions from a baseline survey for shoreline armoring in 2005 show that many beach-feeding sediment sources have been locked up behind armoring. Much of King County's mainland shoreline has been armored -- in stark contrast to the relatively natural shorelines along Vashon-Maury Islands.

What can you do?

- Consider alternatives to bulkheads and other artificial barriers to marine shorelines.
- Encourage your local city or town to make tree protection regulations stronger.
- Volunteer to assist with salmon habitat restoration
- Be a salmon watcher

Moving forward

King County's ability to meet our Chinook Recovery Plan target is primarily hampered by a lack of dedicated funding for salmon recovery capital actions. The majority of dollars to support our success to date come from external grant sources.

Due to the budget-related cutbacks in the Roads capital improvement program, some larger, more expensive culvert replacements will be delayed indefinitely due to lack of funds. It is possible that some roads may need to be closed if the culverts fail or stream crossings become unsafe. The Division will endeavor to capitalize on any grant funding available for these larger stream projects when possible.

King County is working to decrease the rate of new and currently existing marine shoreline armoring in unincorporated areas. Recognizing that not all armoring has the same impacts, these reductions will be focused where sediment delivery is restricted and most important. Removing or preventing armoring in deeper, inter-tidal waters is also a priority. Many Vashon Island waterfront property owners who are applying for flexibility to critical areas regulations through the Rural Stewardship Planning process are being provided with alternatives to bulkhead construction.

Related Links

[**King County KingStat Chinook Salmon Recovery Projects Performance**](#)

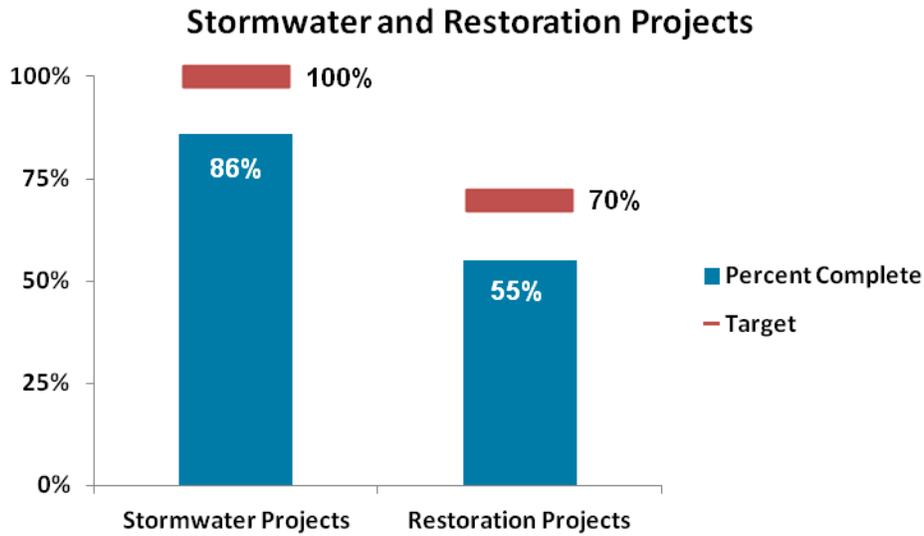
[**King County KingStat Shoreline Projects Performance**](#)

[**King County KingStat Capital Projects Performance**](#)

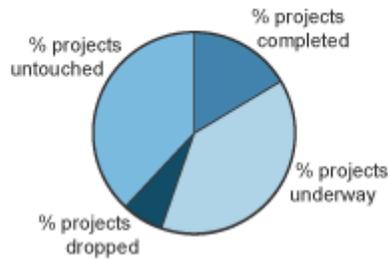
Technical Notes

Data provided by King County Roads Division and King County Department of Natural Resources

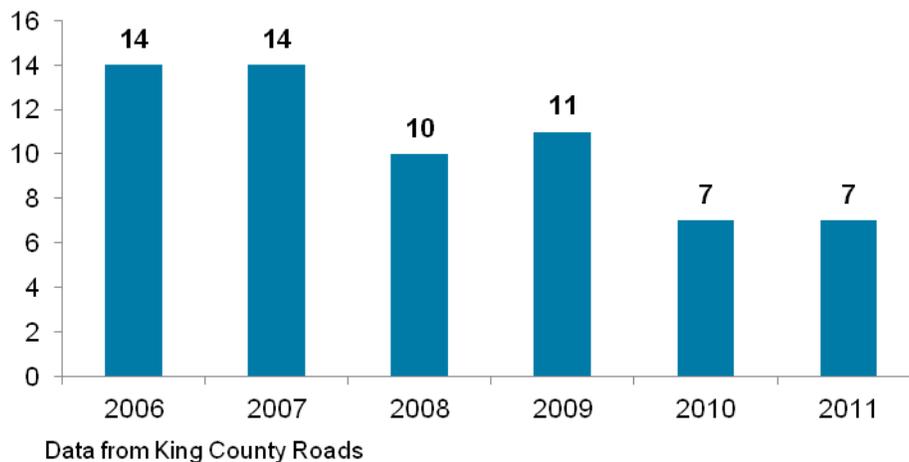
Charts and Maps



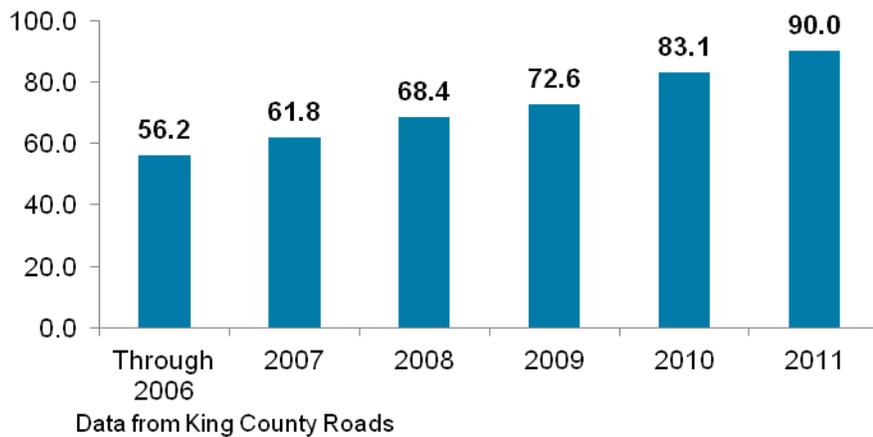
Chinook Salmon Recovery 10-Year Plan Status



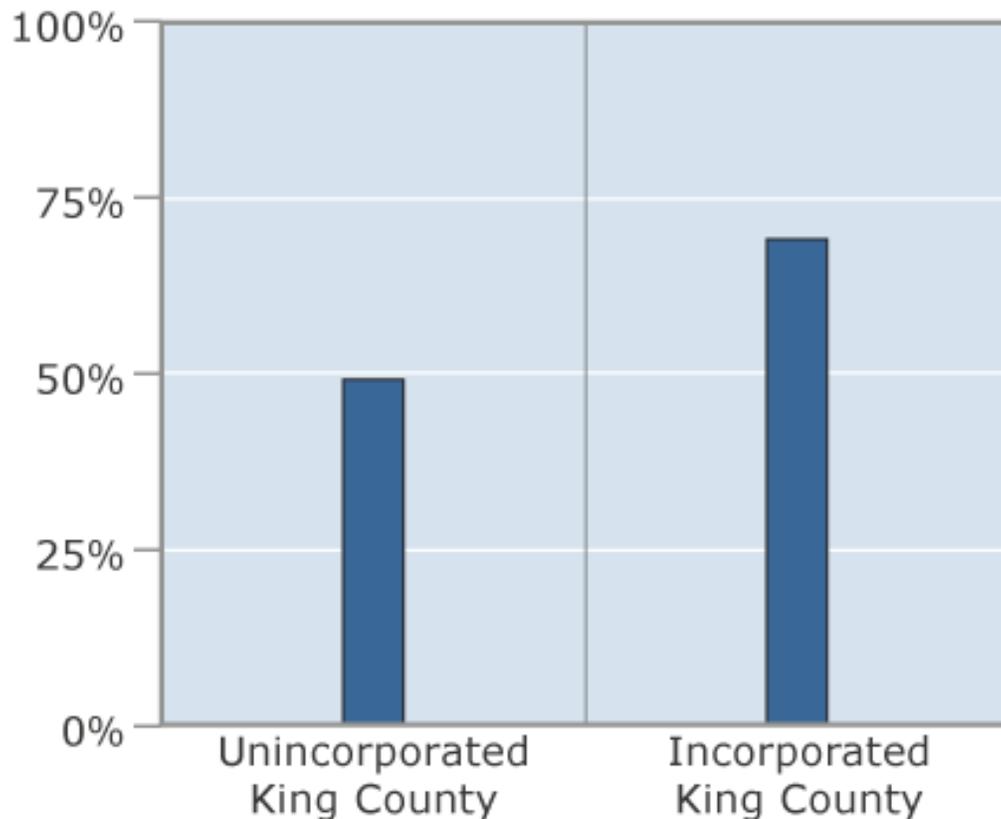
Unincorporated King County roadway culverts replaced with fish passable designs



Cumulative stream miles opened for fish passage in Unincorporated King County



Percent of armored* marine shorelines for incorporated and unincorporated King County - 2005



*Armored includes seawall or riprap protection

This data is updated every several years due to resource requirements for the process.