CHANGE IN THE NUMBER OF SALMON

Outcome: Increase Salmon Stock

Countywide Planning Policy Rationale

"All jurisdictions shall identify critical fish and wildlife habitats and species and develop regulations that a) promote their protection and proper management; and b) integrate native plant communities and wildlife with other land uses where possible." (CA-8) "Natural drainage systems including associated riparian and shoreline habitat shall be maintained and enhanced to protect water quality, reduce public costs, protect fish and wildlife habitat, and prevent environmental degradation. Jurisdictions within shared basins shall coordinate regulations to manage basins and natural drainage systems which include provisions to: a) protect the natural hydraulic and ecological functions of drainage systems, maintain and enhance fish and wildlife habitat, and restore and maintain those natural functions; b) control peak runoff rate and quantity of discharges from new development to approximate pre-development rates; and c) preserve and protect resources and beneficial functions and values through maintenance of stable channels, adequatel low flows, and reduction of future storm flows, erosion, and sedimentation." (CA-9) "...Jurisdictions shall coordinate land use planning and management of fish and wildlife resources with affected state agencies and the federally-recognized Tribes." (CA-11)

Salmonid fish species native to King County include chinook, coho, sockeye/kokanee, pink and chum salmon, rainbow (including steelhead), cutthroat, bull and dolly varden trout and pygmy mountain whitefish. The Endangered Species Act currently identifies both the bull trout and chinook as threatened species in King County waters. Throughout much of Washington state, the maintenance of these fish populations is co-managed by the State of Washington and the treaty Indian tribes. While local jurisdictions do not manage fish populations directly, they do have responsibility for activities, such as land-use regulation, which influence salmon habitats.

This indicator looks at natural chinook escapement (the number of mature, adult chinook returning to their stream of origin to spawn naturally) in King County's four major Watershed Resource Inventory Areas: the Snohomish (WRIA 7), Cedar/ Sammamish (WRIA 8), Green/ Duwamish (WRIA 9) and Puyallup/ White (WRIA 10). Figure 18.1 shows the Chinook escapement from 1968 to 2008 in each WRIA and illustrates the annual variability of fish returns.

Escapement rates are still drastically short of 2055 targets set for chinook populations. As shown below, there is much variability in escapement returns, due in part to natural environmental conditions such as ocean warming cycles and precipitation but also to human activities including land-use practices that alter the natural stream flow. However, harvest and hatchery management efforts may contribute to increasing chinook returns, such as those seen in WRIA 9. Because habitat restoration activities have only just begun and have not yet been implemented in earnest, it is too early to attribute what are considered cyclical trends in chinook populations to these efforts.
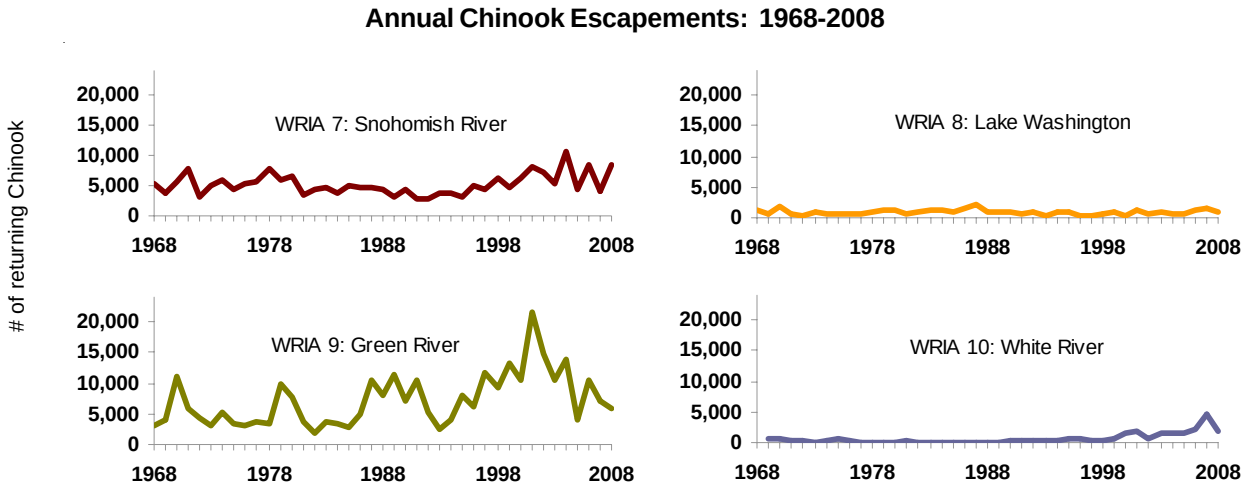
Figure 18.1