



MEMORANDUM

Date: October 6, 2008

To: Parks & Community Services Board

From: Dan DeWald, Natural Resource Manager
Geoff Bradley, Environmental Programs Supervisor

Subject: Kelsey West Tributary Habitat Restoration Project
(Informational, No Board Action Requested)

At the October 14th Park Board meeting, staff will present the status of the Kelsey West Tributary Habitat Restoration Project. This presentation is informational, and we welcome your questions and feedback.

Background

Kelsey Creek Park is a 150-acre historic farm site with developed park land, forested hillsides, wetlands, and streams. Both Kelsey Creek and the West Tributary of Kelsey Creek bisect the park as they flow towards the Mercer Slough and Lake Washington. Historically, significant numbers of Chinook, Coho, and Sockeye salmon return and spawn in the West Tributary at Kelsey Creek Park and points upstream. Over the last 15-20 years, however, sediment deposits from upstream development have raised and narrowed the existing West Tributary channel to levels that are detrimental to healthy fish populations and have increased the frequency of flooding within the park.

The West Tributary flows into the park from the north through the Glendale Golf Course, then southerly through the park until it connects with the main Kelsey Creek Channel near the Lake Hills Connector. Park development in the late 1960s routed the stream to a newly excavated channel, and the area was landscaped to develop a Japanese Garden. The new stream channel is narrow, shallow, has a sandy stream bed, and its riparian buffer is limited and dominated by non-native species and reed canary grass. The historic channel still exists but with little defined stream channel or bed, and it has been invaded by a dense mixture of native and invasive shrub species.

Past stream channel reconfiguration combined with sediment deposits have significantly reduced the cross-section of the West Tributary Stream channel and reduced stream flow capacity. Stream flow capacity is also constricted by the undersized spans of the three bridges located within the park. As a result, seasonal flooding occurs within the park when creek flows increase quickly during storm events.

Project Description

This project will restore 760 feet of the historic stream channel, restore the channel cross-section and hydraulic capacity, enhance stream and wetland habitat for the benefit of native fish and wildlife, remove flow constrictions, construct a new boardwalk, and replace the three bridges to improve stream flow. Improvements to the stream channel and riparian corridor are included in the project. Stream conditions will be improved via the installation of stream bed gravel, large woody debris and log-weirs throughout the project stream reach, and the construction of a sedimentation basin at the upstream boundary of the park. Riparian corridor improvements include invasive vegetation removal, site grading, and seeding and planting of native vegetation to widen and enhance the riparian buffer.

Immediate benefits to fish and salmonid populations with these improvements include improved fish passage throughout the stream, improved spawning habitat, and cooler water temperatures to aid the development of juvenile fish. Long-term benefits include decreased sedimentation, increased numbers of spawning salmonid populations, sustained decreased water temperatures as riparian plantings mature to provide increased shade and cover, and increased riparian plant diversity to aid a healthier, more productive ecosystem.

Additionally, the project will benefit park users by reducing flooding in the park. Secondary to the stream and habitat improvements, the project also includes development of environmental education materials and interpretive signage to inform the public about the project and its benefits. This project supports the City's efforts to provide diverse wildlife and plant populations within the city and to improve the park visitors' experience.

Current Status

Construction of the new stream channel, bridges, and boardwalk has been completed. Parks is currently working with the contractor, OHNO Construction, to identify and complete punch list items. Installation of plant material is scheduled to begin on October 14. A large community volunteer project to assist with the planting is scheduled for October 21. The project is expected to be 95% complete by the end of October. The installation of the emergent plugs in the riparian areas directly adjacent to the new channels will be completed in spring 2009 to reduce the possibility of wash out with high winter creek flows. Parks is currently developing the maintenance and monitoring contracts necessary for on-going maintenance of the project.