



Legislation Text

File #: FCDECM2021-03, **Version:** 2

Clerk 04/07/2021

A MOTION stating the Flood Control District Zone District executive committee's intent to include the Willowmoor Floodplain Restoration Project in the Sammamish Capital Investment Strategy, explore near-term mitigation strategies for Lake Sammamish property owners, and continue to pursue permits required for ongoing maintenance of the Sammamish River Transition Zone.

WHEREAS, the Willowmoor Floodplain Restoration Project ("the Willowmoor Project") proposes to reconfigure the Sammamish River Transition Zone ("the Zone") and adjacent undeveloped King County property, and

WHEREAS, the Zone was constructed as part of the overall Sammamish River Improvement Project ("the Improvement Project") in the 1960s by the U.S. Army Corps of Engineers ("the Corps") in cooperation with King County primarily to control flooding in the Sammamish river valley, and

WHEREAS, King County is responsible for maintaining the Improvement Project through an operation and maintenance agreement with the Corps, and

WHEREAS, the King County Flood Control Zone District ("the District"), through the King County water and land resources division as its service provider, funds and conducts annual maintenance of the Zone, including mowing, trimming, removal of vegetation, removal of accumulated sediments in the channel and associated mitigation efforts. The District also funds and conducts mitigation activities required to receive maintenance permits, and removal of obstructions from the low flow channel, such as logs and beaver dams as necessary, and

WHEREAS, in order to perform annual maintenance of the Zone, King County must apply for a five-year permit from the co-managers of the Sammamish River: the Washington Department of Fish and Wildlife and the Muckleshoot Indian Tribe Fisheries Division. The five-year permit contains limitations on the timing and nature of activities allowed in the Zone, including restricting trimming of vegetation to the Washington State mandated "fish-window" of August 1 through 15 and mandating that mowing may only occur when the Sammamish River is not connected to the floodplain, specifically, in late September when the high flow channel is dry. Each five-year permit includes consideration that ongoing maintenance is a continuing disruption of the natural river process and an acknowledgment that additional mitigation may be required for new requests, such as the removal of mature trees, an increase in the area for mowing, or the removal of reed canary grass buildup because those actions have an ecological impact similar to dredging, and

WHEREAS, state agency and tribal government representatives have expressed concern that current maintenance actions adversely affect water quality and habitat and are in conflict with federal, state and local efforts to protect and enhance riverine habitat for recovery of salmon species listed under the federal Endangered Species Act, and

WHEREAS, in recent years, property owners around Lake Sammamish have expressed concerns about high lake levels impacting their properties, and

WHEREAS, the Willowmoor Project was created with the intent to reduce the frequency and duration of high lake levels while maintaining downstream Sammamish river flood control performance, and

WHEREAS, in 2011, King County and representatives of Lake Sammamish residents signed the Lake Sammamish Flood Reduction Plan, including a four-fold increase in mowing of the Zone, cutting buffer vegetation, removal of cutting and clippings, and sediment and debris removal evaluation, and

WHEREAS, since mid-2013, the District's service provider, the King County, has been collecting data, conducting technical analyses and engaging various stakeholders in developing a suite of conceptual design alternatives for the Willowmoor Project, and

WHEREAS, in parallel with the process for developing options for reducing lake levels with reconfiguration within the Zone, eight cold-water supplementation concepts were identified, developed, analyzed and compared as a tool for reducing fish morbidity, and

WHEREAS, on June 6, 2016, the District executive committee approved Motion 2016-04.1, which provided direction to proceed to 30 percent design with the Project, including, in part: developing the split channel alternative in such a way that balanced the objectives of flood control, habitat restoration, fish passage and sustainability; conducting a feasibility analysis of a dynamic weir that included costs and benefits; developing a maintenance plan for when the project is complete; pursuing grant sources and identifying funding partners to further evaluate cold water supplementation and assume ongoing maintenance costs should the option be selected; and continuing existing maintenance during design and permitting phases, and

WHEREAS, King County prepared a report dated May 22, 2018, in response to the issues listed in Motion 2016-14.1. The report, using the "Modified Existing Conditions HEC-RAS" model for lake levels, indicated that there was no significant difference in flood risk reduction between the wide and narrow side channel alternatives and that the manually operated weir, which assumed adjustments in weir height only on a seasonal basis, was not expected to reduce lake levels for a significant number of flood days, and

WHEREAS, the District requested King County evaluate the flood risk reduction of a dynamic weir, which could be adjusted with greater frequency and in anticipation of major weather events. In response, the county prepared a progress memorandum for an addendum to the weir analysis dated July 5, 2019, using the "Contemporary Conditions spreadsheet." The analysis preliminarily indicated a 25 percent to 47 percent reduction in flood days exceeding lake elevation of 27 feet was possible using a remote dynamically operated weir, and

WHEREAS, the July 5, 2019 progress memorandum included a sensitivity analysis that indicated the consequence of incorrect parameter estimation for downstream risks was very high, and could have negative consequences on the city of Redmond's stormwater infrastructure, and

WHEREAS, in June 2020 the final Remotely Operated Dynamic Weir Analysis Addendum Technical Memorandum confirmed the preliminary results of the July 5, 2019 progress memorandum, and

WHEREAS, because the predicted flood reduction benefits of the 2018 and 2019 analyses of Zone and weir configuration varied significantly due to differences in data availability and model setup, the District requested a third-party review of the models and analysis to inform further decision making for the Willowmoor Project, and

WHEREAS, the District issued a request for proposals for a third-party evaluation in 2019 and again in 2020 and no responses were received in either cycle, and

WHEREAS, in February 2020, Lake Sammamish experienced historic flooding, with reported damage to property including docks, crawlspaces and small outbuildings around the lake totaling almost \$650,000. King County collected damage estimates from property owners across the County, but the total storm damage did not meet the threshold for federal emergency support; and

WHEREAS, climate change is projected to increase the frequency and intensity of heavy rainfall events in King County in coming years, increasing the potential for high lake level events and associated flooding around the lake, and

WHEREAS, uphill development around Lake Sammamish and in tributary stream basins may have resulted in increased runoff into the lake during storms, and

WHEREAS, the impact of climate change and development make adaptation and mitigation necessary, in addition to flood risk reduction efforts, and

WHEREAS, Lake Sammamish and the Transition Zone are integral parts of the Sammamish River basin and that changes in one part of the basin, including tributaries to the Sammamish River, have implications for other parts of the basin, and

WHEREAS, the Sammamish river capital investment strategy ("Sammamish CIS") is intended to take a comprehensive look at the entire Sammamish river basin in collaboration with the Corps, cities and other

stakeholders and to update the capital investment and maintenance strategy for meeting the flood risk reduction, fish habitat, and navigability requirements of the Corps's 1964 River Improvement Operations & Maintenance Manual for the Improvement Project. The Sammamish CIS will identify and prioritize near-, mid-, and long-term capital projects for implantation that meet the authorized intent and purpose of the Improvement Project, and

WHEREAS, on June 16, 2020, the District executive director approved the Sammamish CIS work program, and

WHEREAS, the Sammamish CIS did not include the Willowmoor Project because the third-party review had not been completed, and

WHEREAS, any capital project in the Zone will require time for design, permitting and construction and flooding occurs on Lake Sammamish nearly every year and near-term solutions are needed, and

WHEREAS, the 2021 adopted District budget includes an additional \$1,000,000 for the Willowmoor Project;

NOW, THEREFORE, BE IT MOVED BY THE EXECUTIVE COMMITTEE OF THE KING COUNTY FLOOD CONTROL ZONE DISTRICT:

SECTION 1. In coordination with King County as the District's service provider, the District will undertake the following near-term measures:

A. Update the Sammamish river capital investment strategy work program authorization and project charter to include Lake Sammamish, the Willowmoor project, Bear creek and Issaquah creek to ensure a complete basin-wide approach, subject to approval by the District executive director;

B. Work with cities that border Lake Sammamish to design and implement a near-term grant program to help fund flood mitigation options for lakeside landowners, such as floating docks, relocation or elevation of outbuilding and other damage-reduction and floodproofing measures;

C. Conduct outreach to homeowners' associations and others on the lake to make them aware of their

potential eligibility for flood-reduction grants and flood insurance to ensure broad awareness of existing resources available to lakeside residents;

D. Prepare a high-level assessment of the scope and level of effort needed for data collection and a tributary gaging, groundwater monitoring and weather station network that would be able to support lake level forecasting;

E. Continue to pursue the permits from the co-managers of the Sammamish River, the Washington Department of Fish and Wildlife and the Muckleshoot Indian Tribe needed to continue vegetation maintenance in the Zone; and

F. Identify updates to the 2021 work plan and budget needed to undertake the work described in this motion for potential inclusion in the 2021 midyear budget update.

SECTION 2. The District executive director will:

A. Work collaboratively with King County, present to the Executive Committee before June 30, 2021, a scope and draft a scope of work for consultant services to:

1. Determine the adequacy of the methodology analyzed in the June 2020 Remotely Operated Dynamic Weir Analysis Addendum Technical Memorandum confirming the preliminary results of the July 5, 2019 progress memorandum; and

2. Evaluate the feasibility and potential impact on flooding and Chinook salmon fish passage of a remotely operated dynamic weir that could include a wider notch than in the current configuration and be adjusted multiple times throughout the year in response to forecast storms; and

B. Explore possible county-owned locations closer to Lake Sammamish for sandbag distribution.

SECTION 3. The District requests King County reach out to city stormwater programs in Bellevue, Issaquah, Sammamish and Redmond through existing contacts and coordination venues to learn more about their current plans, including stormwater retrofits and green stormwater infrastructure initiatives, such as rain gardens, and share its findings to the

District executive director.