

1 ..title

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

9 ..body

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

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

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

19 WHEREAS, the King County Flood Control Zone District ("the District"), through the  
20 King County water and land resources division as its service provider, ~~provides funding~~funds for  
21 and conducts ~~regular annual~~ maintenance of the Zone, including mowing, trimming, removal of  
22 vegetation, removal of accumulated sediments in the channel and associated mitigation efforts~~;~~  
23 The District also funds and conducts mitigation activities required to receive maintenance

24 permits, and removal of obstructions from the low flow channel, such as logs and beaver dams as  
25 necessary, and

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

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

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

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

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

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

54 ~~WHEREAS, the District has funded and implemented a variety of means to engage~~  
55 ~~various stakeholders and the public during the conceptual alternative development process for~~  
56 ~~the Willowmoor Project, and~~

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

60 WHEREAS, on June 6, 2016, the District executive committee approved Motion 2016-  
61 04.1, which provided direction to proceed to 30 percent design with the Project, including, in  
62 part: developing the split channel alternative in such a way that balanced the objectives of flood  
63 control, habitat restoration, fish passage and sustainability; conducting a feasibility analysis of a  
64 dynamic weir that included costs and benefits; developing a maintenance plan for when the  
65 project is complete; pursuing grant sources and identifying funding partners to further evaluate  
66 cold water supplementation and assume ongoing maintenance costs should the option be  
67 selected; and continuing existing maintenance during design and permitting phases, and

68 WHEREAS, King County prepared a report dated May 22, 2018, in response to the  
69 issues listed in Motion 2016-14.1. The report, using the "Modified Existing Conditions HEC-  
70 RAS" model for lake levels, indicated that there was no significant difference in flood risk

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71 reduction between the wide and narrow side channel alternatives and that the manually operated  
72 weir, which assumed adjustments in weir height only on a seasonal basis, was not expected to  
73 reduce lake levels for a significant number of flood days, and

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

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

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

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

90 WHEREAS, the District issued a request for proposals for a third-party evaluation in  
91 2019 and again in 2020 and no responses were received in either cycle, and

92 WHEREAS, in February 2020, Lake Sammamish experienced historic flooding, ~~resulting~~  
93 ~~in~~-with reported damage to property including docks, crawlspaces and small outbuildings around  
94 the lake totaling almost \$650,000. King County collected damage estimates from property

95 owners across the County, but the total storm damage did not meet the threshold for federal  
96 emergency support; and

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

100 ~~WHEREAS, the impact of climate change makes adaptation and mitigation necessary, in~~  
101 ~~addition to flood risk reduction efforts, and~~

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

104 ~~WHEREAS, the impact of climate change makes adaption and mitigation necessary, in~~  
105 ~~addition to flood risk reduction efforts, and~~

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

109 WHEREAS, the Sammamish river capital investment strategy ("Sammamish CIS") is  
110 intended to take a comprehensive look at the entire Sammamish river basin in collaboration with  
111 the Corps, cities and other stakeholders and to update the capital investment and maintenance  
112 strategy for meeting the flood risk reduction, fish habitat, and navigability requirements of the  
113 Corps's 1964 ~~operations & Maintenance Manual~~River Improvement Operations & Maintenance  
114 Manual for the Improvement Project. The Sammamish CIS will identify and prioritize near-,  
115 mid-, and long-term capital projects for implantation that meet the authorized intent and purpose  
116 of the Improvement Project, and

117 WHEREAS, on June 16, 2020, the District executive director approved the Sammamish  
118 ~~river capital investment strategy~~CIS work program ~~authorization, which;~~ and

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

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

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

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

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

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

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

138 C. Conduct outreach to homeowners' associations and others on the lake to make them  
139 aware of their potential eligibility for flood-reduction grants and flood insurance; to ensure broad  
140 awareness of existing resources available to lakeside residents;

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

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

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

149 SECTION 2. The District executive director will:

150 A. ~~Issue Working collaboratively with King County, present to the Executive Committee~~  
151 ~~before June 30, 2021, a third-party review scope and draft a scope of work for consultant~~  
152 ~~services to request for proposals for analysis of weir alternatives, to remain open until the~~  
153 ~~District executive director executes a contract for the work; and~~

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

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

160 ~~3. This request for proposal will remain open until the District executive director~~  
161 ~~executes a contract for the work.~~

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

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