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**SUBJECT:** BRIEFING ON KING COUNTY'S MANAGEMENT PLAN FOR THE SAMMAMISH SLOUGH AND ACTIVITIES TO ADDRESS FLOODING IN LAKE SAMMAMISH

**STAFF CONTACT:** Joyce Nichols, CMO, 452-4225

**POLICY ISSUE:** Mark Isaacson, King County's Water and Land Resources Division director and John Engel, King County's Supervising Engineer for the River and Floodplain Management Section, will provide a briefing on the County's management and operation of the Sammamish Slough and the action plan for addressing flooding in Lake Sammamish.

**NEEDED FROM** No action is requested at this time. Council requested an update on the County's plan for the Sammamish Slough flooding issues affecting Bellevue property owners living along Lake Sammamish.

**BACKGROUND:**

The outlet from Lake Sammamish into the Sammamish River at King County's Marymoor Park consists of a shallow fixed concrete spillway that functions as a weir and a wide steep section of channel downstream from the weir. The weir was designed to maintain lake levels for recreational purposes during summer months. The Sammamish Slough is owned, managed and maintained by King County. The area between the lake and the river is called the "transition zone" and includes the Sammamish Slough. King County is the property owner in the transition zone and manages vegetation in the transition zone. This channel is where the lake becomes the river. The channel features in the transition zone, including the weir, were originally constructed in the 1960s by the U.S. Army Corps of Engineers with King County as the local sponsor. The weir was reconstructed in 1998 to create a low flow passage notch for Chinook salmon.

The weir does not serve as a flood control structure as it does not detain the flow of water during high flow events. Other features in the channel are specifically designed to pass flood flows quickly downstream during high flow events. The weir helps hold water in the lake in summer for recreational uses, while still allowing for upstream fish passage, including salmon returning to the Issaquah Hatchery. Maintenance work is governed by an agreement between the Corps of Engineers and King County, with permits required by Washington Department of Fish and Wildlife and King County's Department of Development and Environmental Services.

In April 2011, in response to concerns regarding seasonal flooding raised by property owners along Lake Sammamish, King County developed an action plan to address high water levels in the lake. Several property owners expressed concerns over rising water levels in Lake Sammamish, the County's management of vegetation along the Slough and the build-up of sediments in the transition zone. Following several meetings with concerned property owners, King County developed an action plan to deal with the seasonal flooding. A copy of the 2011 agreement between the County and residents of Lake Sammamish is included as Attachment A. The County's plan includes the following actions:

- A four-fold increase in the frequency of mowing in the transition zone to remove the dense vegetation that impedes flows out of the lake. The County will mow both sides of the transition zone each year.
- Cutting back the willows and other vegetation along the channel to improve flows.
- Removing the cuttings and clippings after each cutting and/or mowing instead of allowing the material to build up and impeded flows.
- Evaluating removal of accumulated sediment in the transition zone between the lake and the Sammamish River to determine where sediment removal would be most beneficial to reduce flooding.
- Working with the City of Redmond on a project to modify the transition zone to create more capacity in the river.
- Working with the Washington Department of Natural Resources to test the efficacy of removing aquatic weeds for increased conveyance.

The longer-term plan for resolving high water levels and reducing flooding includes a project sponsored and jointly funded by the City of Redmond and the King County Flood Control District. The project may provide more conveyance capacity to get water out of Lake Sammamish and into the Sammamish River during times when lake levels are high. The project will match \$130,000 from Redmond with \$150,000 in District funds to do the feasibility analysis needed to pursue grants to fund the design and construction phases of the project. King County is also proposing a project that would remove sediment from portions of the upper bank through the Transition Zone to allow for increased conveyance capacity during higher flows.

Mr. Isaacson's presentation will provide additional background on the County's efforts to address the seasonal high water levels and reduce flooding and an update on work done by the County to implement the actions described in the plan. Additionally, Mr. Isaacson will respond to the questions included in a letter from Mayor Lee inviting Mr. Isaacson to provide a briefing for Council. A copy of this letter is included as Attachment B.

**ALTERNATIVES:**

N/A

**RECOMMENDATIONS:**

N/A

**ATTACHMENTS:**

- (A) April 2011 King County DNRP Lake Sammamish Flood Reduction Plan
- (B) April 26, 2012 Letter Inviting Mark Isaacson, King County Water and Land Resources Division Director to Brief Bellevue Council on Sammamish Slough Management Plan



**King County**  
 Department of  
 Natural Resources and Parks  
 Director's Office  
 King Street Center  
 201 S Jackson St, Suite 700  
 Seattle, WA 98104-3855

## **King County DNRP Lake Sammamish Flood Reduction Plan April, 2011**

This documents actions that King County DNRP is committed to taking to address Lake Sammamish flooding. Many factors contribute to the flooding along Lake Sammamish. Although many of the factors that contribute to the flooding are beyond King County's control, the County is fully committed to taking actions within its authority that will to reduce flooding, consistent with environmental protection and in compliance with applicable laws.

The County's scientific modeling indicates that the actions identified below will materially reduce high-water levels. Although actual outcomes could differ from the models, the County is committed to monitoring the success of the work and modifying it to ensure optimal results.

**To address the flooding occurring along Lake Sammamish, King County DNRP is committed to taking the following actions:**

1. **Four-fold increase in mowing.** King County will mow both sides of the transition zone every year. This is a four-fold increase in mowing frequency, compared to the prior schedule.  
Timing: Permit application: April 2011; Mowing: Fall 2011, the time when it will be most effective.
2. **Cutting buffer vegetation.** King County will cut back willows and other vegetation on the buffer to a maximum of ten feet adjacent to the low flow channel.  
Timing: Permit applications: April 2011; Cutting: Fall 2011, the time when it will be most effective.
3. **Removal of cuttings and clippings.** King County will remove cuttings and clippings after each cutting or mowing.  
Timing: Immediately following each cutting or mowing.
4. **Sediment and debris removal evaluation.** King County will retain a consultant to evaluate sediment and debris removal in the transition zone to determine areas in which sediment removal will be most beneficial and areas in which debris may be causing flow obstructions, along with related impacts and permitting requirements.  
Timing: Consultant identified: June 2011; Report complete: Summer 2012 or sooner; Follow up actions: Fall 2012
5. **Downstream Aquatic Weeds Removal.** King County will continue with a recently-started project to remove a large infestation of noxious aquatic weeds downstream of the transition zone. Weed removal is designed to improve water quality and flow.

Timing: Planning in progress; Weed removal: 2013 or sooner.

6. **Transition Zone Flood Reduction Capital Improvement Project.** King County will reallocate funds to match the City of Redmond's \$130,000 commitment to the initial phases (e.g., scoping and feasibility) of a project to modify the transition zone to reduce flooding.

Timing: Seek budget authorization: Spring 2011; Start of project scoping and feasibility (if budget authorization approved): Fall 2011

7. **Restoration of Navigability of Center ("Low Flow") Channel.** Center channel of transition zone will be restored to be navigable by small non-motorized watercraft.

Timing: In conjunction with each cutting.

8. **Monitor Plan Effectiveness.** King County will monitor the effectiveness of actions in the Lake Sammamish Flood Reduction Plan. King County will monitor and report at appropriate milestones to the King County Flood Control District Lake Sammamish water levels and discharge at the weir in order to facilitate monitoring to achieve optimal results. Original designed functionality was a discharge of, at a minimum, 1,500 CFS

9. at 29 feet NGVD.

Timing: Current calculation: Spring 2011; Monitoring: Ongoing.



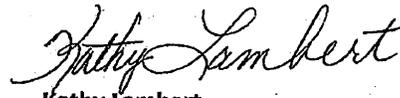
Mark Isaacson  
Director, King County WLRD



Bob Burns  
Deputy Director, King County DNRD

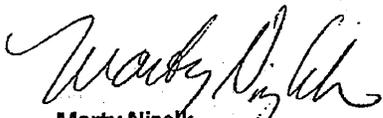


Jane Hague  
King County Councilmember

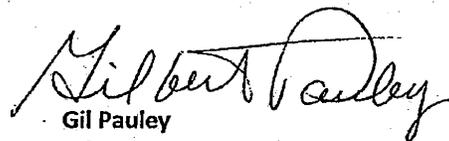


Kathy Lambert  
King County Councilmember

We the undersigned have been privy to discussions and contributed to developing this plan and agree this plan will move in the necessary direction to mitigate lake flooding and does not create any legal or financial obligations to the Lake Sammamish citizens.



Marty Nizek  
Lake Sammamish Resident



Gil Pauley  
Lake Sammamish Resident



Dwight Martin  
Lake Sammamish Resident



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April 26, 2012

Mr. Mark Isaacson, Director  
Water & Land Resources Division  
King County Department of Natural Resources and Parks  
King Street Center  
201 S Jackson Street, Room 600  
Seattle, WA 98104-3855

Dear Mr. Isaacson:

I am writing to apprise you of concerns that have been expressed by some Bellevue residents who live around Lake Sammamish regarding flood control measures and water levels in the lake and the Sammamish Slough.

Several of the concerns raised by residents involve high water levels around Lake Sammamish during the late spring months. In addition to the residents' concerns about the high water levels, to the extent that these levels are altering the Ordinary High Water mark it also impacts Bellevue's ongoing work to update our Shoreline Master Program (SMP). Due to both the timing of the SMP and that we are approaching the time of year when the lake levels are high, we would like you to attend an upcoming Bellevue City Council study session and provide a briefing on management issues for Lake Sammamish and the Sammamish Slough. May 29 would work well in our Council calendar if you would be available that evening.

Bellevue is aware that King County is in the process of working to solve this challenge and we appreciate and support the County's continued diligence in this matter. It would be most helpful for our Councilmembers and members of our community to better understand the following:

- Who has responsibility for managing the Slough and the "transition zone" between the Sammamish River and Lake Sammamish? Have responsibilities changed over time?
- What is the purpose and function of the weir?
- What is the status of the County's plan to manage/mow vegetation in the transition zone and the anticipated impact of this plan on water levels in the lake and/or the ordinary high water mark on the lake?
- Is there long-term funding and monitoring in place to assure the success of the management plan?
- What is the County's plan for removing the debris in the outlet channel that was discovered last year and how would that impact lake levels?
- What is the status of the joint project sponsored by the City of Redmond and the King County Flood Control District to provide more conveyance capacity in the Slough?

City of Bellevue offices are located at 450 - 110<sup>th</sup> Avenue N.E.

- Does the presence or absence of compliance by King County with the Corps of Engineers management plan for the Slough have any impact on anyone's ability to receive federal disaster assistance or other federal funding around Lake Sammamish?

I have asked Joyce Nichols from our City Manager's office to follow up with you on scheduling. I am looking forward to an opportunity to meet you and receive more information about this very important topic. Thank you for your time and attention to this request.

Sincerely,

A handwritten signature in black ink, appearing to read "Conrad Lee". The signature is fluid and cursive, with a long horizontal stroke at the end.

Conrad Lee  
Mayor

cc: Bellevue City Council  
King County Executive Dow Constantine  
King County Councilmember Jane Hague  
Steve Sarkozy