

# Feb. 2020

# Lake Sammamish Flooding

Damage Photos, Letters of Concern,  
Citizen Petition, Estimated Damages



Prepared with data dated 2/15/2020 and subject to change as damage assessment continues

## **PURPOSE**

This presentation is intended to provide local, state, and federal agencies, as well as fellow neighbors, documentation reflecting recent flood damage to Lake Sammamish properties.

### **Resident concerns are heightened because of the following facts:**

- (a) The Corps of Engineers, nearly 2 decades ago, forewarned of flooding.
- (b) Expert opinion declared the Transition Zone conditions were diminishing lake outflow.
- (c) More than a decade ago the Corps declared the entire river flood control system deficient due to lack of maintenance, obstructive vegetation, and man-made changes. Excess vegetation and sediment remain in the TZ.
- (d) Redmond and King County have permitted development in Bear Creek basin resulting in that tributary's flow being 3 times the floodway design.
- (e) The Willowmoor project, initially cited by the County to resolve these issues nearly 2 decades ago, has languished.
- (f) Recent rainfall patterns, which were below those included in the Corps' flood control design, produced major damage to shoreline properties and resident improvements. This need not have occurred.

## **SUPPORTING ACTIONS**

To reflect the degree and magnitude of damage and to frame resident concerns, a petition and survey were circulated to lake residents.

The full petition can be found in Appendix A

## **DAMAGE ASSESSMENT**

Lake side property owners were asked the extent flooding impacted their properties.

**We asked about their:**

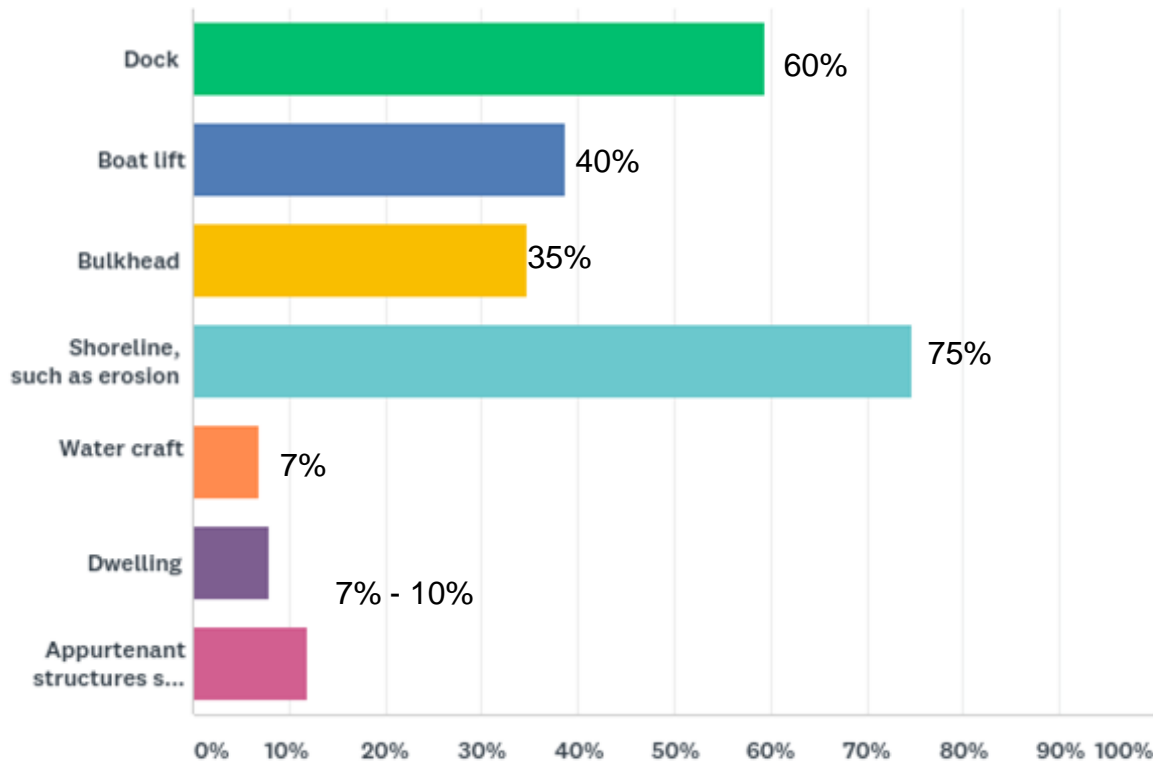
- |                     |                          |               |
|---------------------|--------------------------|---------------|
| > Docks             | > Boat Lifts             | > Water Craft |
| > Shoreline Erosion | > Bulkheads              |               |
| > Dwellings         | > Appurtenant Structures |               |

**Following are photographs reflecting some of the damage.**

**It is important to note that at the time these were taken, lake levels were still elevated and a full assessment of damage has not been possible.**

## DAMAGE SUMMARY

(% of respondents witnessing damage by type)



**NOTE: it is important to point out that, until lake levels recede, a complete assessment is not possible.** 4

## EXAMPLES OF DOCK DAMAGE





## EXAMPLES OF DOCK DAMAGE





## EXAMPLES OF DOCK DAMAGE





## EXAMPLES OF **BOAT LIFT & WATER CRAFT** DAMAGE



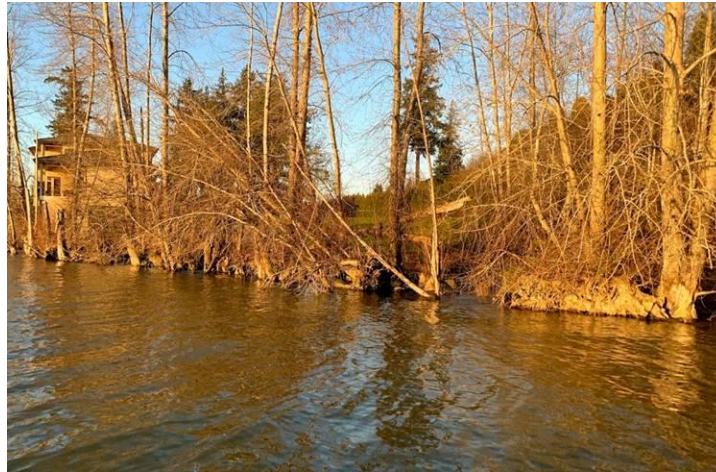


## EXAMPLES OF **SHORELINE & BULKHEAD** DAMAGE





## EXAMPLES OF **SHORELINE & BULKHEAD** DAMAGE





## EXAMPLES OF **SHORELINE & BULKHEAD** DAMAGE





## EXAMPLES OF **STRUCTURE** DAMAGE



## EXAMPLES OF **STRUCTURE** DAMAGE





Hundreds more photographs of flood damage and shoreline destruction will be available soon.

We advised residents to alert King County and the Corps of Engineers of their losses.

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We are aware that more than 3 dozen such appeals\* for support have been submitted to these agencies.



A few examples follow...

\* Thank you to those who submitted and included pictures of the damage!



## Example #1 Resident Letter of Concern

I've lived in Washington for most of my 53 years and have never felt the need to send a complaint letter...until now.

The (mis)management of Lake Sammamish water levels or run off is absolutely ridiculous and needs to get addressed. This is no longer an issue requiring further 'analysis', it's an issue requiring leadership - your leadership. We need your help and we need your sense of urgency.

Many Lake Sammamish residents (including me and my family) will be paying thousands of dollars to repair damages caused by this most recent flooding due to the ongoing negligence of those we trust (and vote into office) to address issues that make our living situations safe. I realize you have budgets, priorities, obligations to balance the needs of people with the needs of fish, etc. But, this has gone well beyond reasonable and with a little more focus and a little more effort could easily get addressed.

You may also be thinking to yourselves - this is just a privileged citizen living on the lake...a first world problem. I live in the Rosemont neighborhood of Lake Sammamish (Bellevue); one of the lake's earlier developments. I'm surrounded by neighbors who moved to the lake well over 30 years ago, are on fixed incomes and have seen their docks break away, (unmovable) debris land on their shores (or yards), landscape ruined, etc. It's quite tragic and we simply need to use this latest flooding as a learning tool to drive action and to solve this issue.

## Example #2 Resident Letter of Concern

I am a 20 year resident of west Lake Sammamish and before that, 30 years above the lake with lake access. In these 50 years, this is by far the worst flooding that I can recall. Years ago, Mr. Dunn promised us, at a meeting, that King County was looking after this problem and maintaining the weir. We were encouraged. However, this apparently was just rhetoric and not action. At least, it was not on-going action.

For a few years, the winter water level seemed to improve. Obviously, this maintenance of the weir and the area surrounding it has not continued. I and most people living on Lake Sammamish are sick and tired of talk and promises.

If you are not concerned about our well-being and property, you better start being concerned about yourselves at election time. We will be watching!

### Example #3 Resident Letter of Concern

The situation of flood levels on Lake Sammamish has been talked about for years with only one year (2010) where action was taken after continued pressure from Lake Sammamish residents and directive from the 2008 COE study, that declared the Lake Sammamish Slough no longer met COE flood control standards. After 2010 there had been much discussion, meetings, presentations, about the Transition Zone (TZ) but no action.

... Today, inflow is measured with great accuracy. Now it is imperative to focus on the outflow – that is where the problem lies, the TZ. The damage to property in this latest (Feb 6th storm) is significant, estimated in the millions of dollars. Homes, docks, boats, bulkheads and shoreline, as well as habitat and environmental health have been exponentially affected. Just imagine the amount of debris now flowing into the TZ and the cost of removing it.

I would venture to say that this would have been completely avoidable had this situation been addressed and action taken to solve a known issue, present for a decade. I personally have no way of estimating this damage but by assuming that this actually reduces property values, the tax implications could be significant to King County.



## Example #4 Resident Letter of Concern

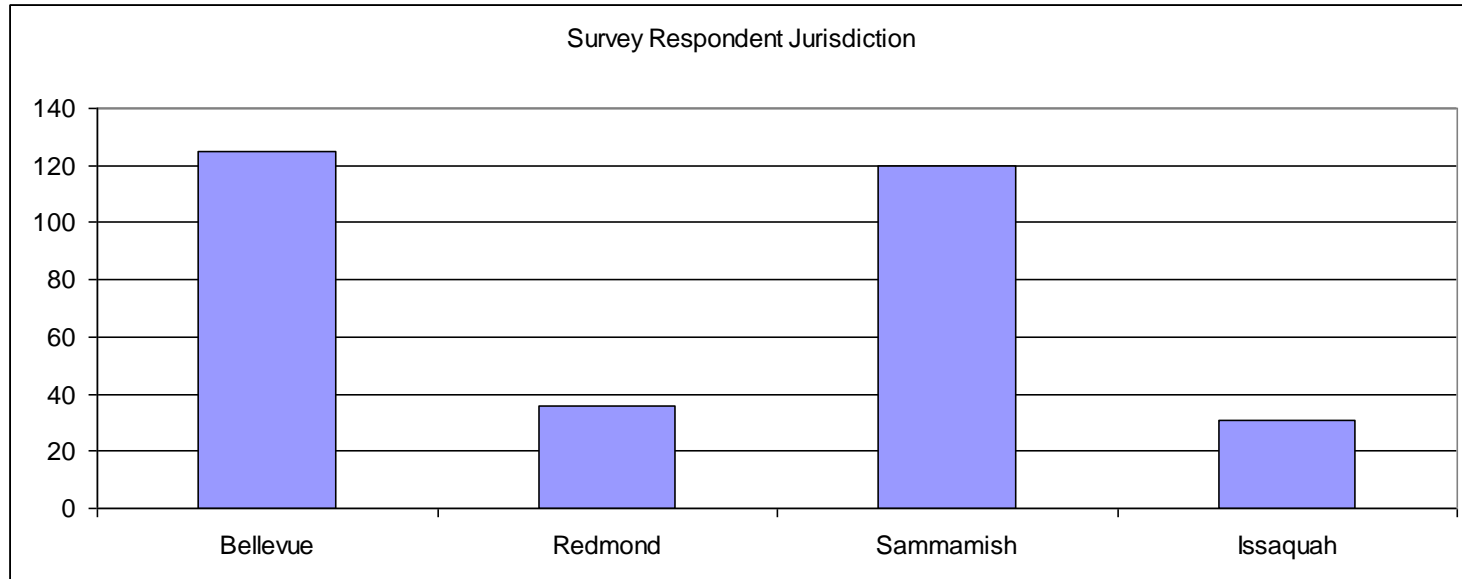
As of this writing the historically high (and terrifying) water level on Lake Sammamish has dropped only about 6-8", with many more days of rain looming on the horizon. This marks the highest lake level we have seen by far since we moved on to Lake Sammamish in 2001.

This lake is not draining properly, and on top of that we are receiving extra water, back flowing from Bear Creek from the transition zone at Marymoor park. Below is a page from the 2013 Willowmoor Design Hydrology Phase 1 Report –

*Analysis of lake levels... shows ... higher lake levels (beginning) around 1998 ... would be consistent with weir modifications that reduce lake outflow ... (and) suggests that vegetation conditions in the TZ have an influence on high lake levels...when annual TZ maintenance was discontinued.*

The weir, the plantings around the transition zone, the lack of maintenance in the transition zone and not dealing with issues causing Bear Creek back flows all are contributing to the flooding of our properties, resulting in expensive property damage.

# Neighborhood-level Response



**NOTE: Of about 1,000 residential parcels on Lake Samm., we were successful in reaching over 300 residents who completed the survey and agreed with the petition.**

**Due to the need to alert responsible agencies of the type and extent of the flooding impacts and resident requests, reaching out electronically (versus conventional mail) was the most practical means available.**

## **SURVEY RESULTS**

1. With limited ability to contact shoreline residents in an emergent situation, accumulated email addresses were used to solicit a preliminary assessment of damages. More than 300 replies (~30%) informed the survey results.
2. The damage assessment revealed the highest incidence of destruction was to the lake shoreline itself in the form of erosion, and accumulated debris.
3. Dock, Boat Lift, and Bulkhead damage accrued to 35 to 60% of respondents.
4. As might be expected during winter months, damage to boats and structures were reported at 7 – 10%

**Most important – it is likely that, when fully assessed, damages will exceed \$10 million**

## ESTIMATED RANGE OF DAMAGES

(Note the # responses and % of damage by type may change)

Item Damaged	Who Suffered Damage?				What might it cost for repair?			Range of Estimated Damages		
	Only Respondents		All Parcels		Range of Repair/Replace Cost			Damage Estimate		
	# Resp. = 312	# Parcels	# Parcels= 1055	# Parcels						
	% w Loss*	Damaged	% w Loss	Damaged	Low	Average	High	Low	Average	High
Dock	60%	187	60%	633	\$1,000	\$25,000	\$50,000	\$187,200	\$4,680,000	\$31,650,000
Lift	40%	125	40%	422	\$500	\$1,000	\$10,000	\$62,400	\$124,800	\$4,220,000
Bulkhead	35%	109	35%	369	\$1,000	\$5,000	\$15,000	\$109,200	\$546,000	\$5,538,750
Shoreline	75%	234	75%	791	\$1,000	\$2,500	\$3,000	\$234,000	\$585,000	\$2,373,750
Boat	7%	22	7%	74	\$500	\$1,000	\$5,000	\$10,920	\$21,840	\$369,250
Structure	10%	31	10%	106	\$5,000	\$10,000	\$20,000	\$156,000	\$312,000	\$2,110,000

\* - These values from survey results

Est. Range of Damages    **\$759,720    \$6,269,640    \$46,261,750**

### Estimation process explained:

*Who suffered damage?* Low estimate, only survey respondents. High estimate, all 1055 parcels suffered damage in the reported rates.

*Percent with Loss* – applied to both respondent total and total parcels.

*Range of Repair Cost* – Low, Average, and High values based on experience.

*Range of Damages* – Low estimate combines low values; High – combines high values.



# KEY REQUESTS OF AGENCIES

1. Provide Lake flood alerts and emergency items such as sand bags.
2. Activate streamlined permitting process to allow residents to expedite property repairs.
3. Install a dynamic weir for greater control of Lake water levels.
4. Remove sediment in the Transition Zone and eliminate excess obstructing vegetation as stipulated by the Corps.
5. Identify and expeditiously carry out measures to restore flow capacity throughout the river floodway and regain Corps certification.
6. Revise the goals and objectives of the Willowmoor Project to state that a primary purpose is to reduce flood impacts to Lake properties.

## APPENDIX A - PETITION

### Whereas –

- A. Recent storm conditions in the Lake Sammamish (Lake) basin, estimated to be less than the Corps' Sammamish River Flood Control Project's (Flood Project) design storm<sup>[1]</sup>, produced extensive flooding of lakeside properties with significant damages to property improvements, and
- B. Inspections by the Corps of Engineers (Corps) led that agency to inactivate the Flood Project as no longer meeting their standards due to obstructions to flow (e.g., excess vegetation, sediment accumulation, etc.), and forewarned the County of flooding potential on the Lake, and
- C. King County's Willowmoor Project planning studies<sup>[2]</sup> identified that lack of continuous, robust maintenance by the County along with a significant accumulation of sediment remaining in the Transition Zone, have led to diminished outflow capacity from the Lake, and

<sup>[1]</sup> Corps of Engineers "Channel Improvement General Design Memorandum", May 1962.

<sup>[2]</sup> King County Willowmoor Project, "2013 Willowmoor Design Hydrology Phase 1 Report".

## APPENDIX A - PETITION

### And, Whereas –

- D. Visual inspection[3] of the Transition Zone shows obstructive vegetation multiple times wider than prescribed by the Corps, and
- E. King County's staff have stated that increased flow from Bear Creek, which enters the Sammamish River below the Transition Zone, is significantly impeding Lake outflow[4], and
- F. The City of Bellevue's 2004 study of Lake water levels determined that the Lake's Ordinary High Water Level/Mark (OHWM) has been raised; but it must be realized this occurred unnaturally due to obstructions placed or allowed to remain in the flood control channel, and
- G. The artificially raised water levels on the Lake have unnaturally altered the wetland environment surrounding the Lake as well as damaged many legally developed improvements along the shoreline, and
- H. Residential property owners abutting the Lake and the Sammamish River contribute significant funds to King County's Flood Control District to mitigate flooding.

[3] Link to online photos <http://sensibleshorelines.org/wp-content/uploads/Bellevue-Feb-22-2016.pdf>

[4] Personal correspondence to M. Nizlek and statements by staff throughout the Willowmoor process.

## **APPENDIX A - PETITION**

### **Now Therefore –**

We the undersigned petition the Corps, King County, and the cities of Bellevue, Redmond, Sammamish, and Issaquah to:

1. Immediately provide Lake residents information on the availability of flood protection equipment, such as sand bags, and, as soon as possible, activate streamlined permitting processes to allow residents suffering flood damages to expedite property repairs.
2. Fund an independent entity (under guidance by the Corps) to evaluate the potential effectiveness of a dynamic weir to provide greater control of Lake water levels, and, if deemed effective, install and activate such a device prior to this year's fish spawning season.
3. Prior to this year's fish spawning season, remove accumulated sediment in the Transition Zone and eliminate obstructing vegetation within 10 ft. each side of the center, low flow channel, as stipulated by the Corps.



## APPENDIX A - PETITION

### Now Therefore –

4. Identify measures to restore Sammamish River flow capacity, such as dredging and removal of obstructions, along the entire length of the Sammamish Flood Control Project, with priority given to financial contributions from abutting jurisdictions to accomplish the most effective of these measures within one year; this process to include development of measures to mitigate impacts from Bear Creek as soon as possible and into the future as that basin develops.
5. Revise the goals and objectives of the Willowmoor Project to clearly state that the project's primary purpose is to implement improvements to Lake outflow to reduce flood impacts to Lake properties, with environmental enhancement objectives being of secondary importance.

Petition prepared by lakeshore residents: M. Nizlek, R. Brockway, J. Mackey, S. Sheffield, and P. Chung

**List of petition signers will be made available by jurisdiction of parcel upon agency request.**