# Lake Sammamish Water Level Issues

## Feb. 2015

Washington Sensible Shorelines Association

# Lake Sammamish residents are concerned about lake water levels

# High water damages shorelines and improvements

Here's are examples...

### Lake Sammamish Jan 2006

TI



# **High Water Damages**











# The long term effect?

Loss of Property



## Figure 1: Impact of Rising Waters on OHWM



# What's causing prolonged raised water levels?

# 2013 County Study Finds...

"... statistically significant increasing trends [in water levels] at the 27.0-, 27.5-, and 28.0-foot NGVD levels that were suggested as being attributable to altered maintenance protocols." Effective Drainage Is Key To Lake Level Control !

# How did we get here?

#### **Chronology of Key Flood Control Events**

1960's – Corps Built Sammamish River Flood Control Project (FCP) (County to maintain annually)





#### < LAKE SAMMAMISH

#### HEAD WATERS, SAMMAMISH RIVER

< WEIR

< TRANSITION ZONE (TZ)

(~ 1700 FT. LONG ELEV. DROP ~ 7 FT.)

< END OF TZ



### A Closer Look at the Weir



Reamona

Weir

Samm. River

Iransition Zone

Marymoor Park

Corps of Engineers' Flood Control at Marymoor Park

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1990's – Corps agrees to "Trial" Plantings (County reduces maintenance to once in 4 Years)

### **1990's Corps Agreed to Trial Plantings**



To Redmond



Weir

To Lake

Samm.

@2010

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Adapted From: King County Willowmoor Project Report

#### **Daily Average in Lake Levels Compared**



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# What did this look like to residents?

# Persistent High Water Levels



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> 2008 – Corps Inactivates Entire Flood Project ("Fails to meet standards")

# 2010

# Yet, residents still not informed about threat of flooding!

# **Residents Dig Deeper**



#### **Overgrowth in Floodway**

#### Weir Visible Here



Conditions Jun. 2010

**Center of Channel/Flow** 

06/03/2010



### **Agency Officials Meet with Residents (2010)**

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2010 – Residents' Evaluation & Appeal to Agencies

**2011 – County Resumes Annual Maintenance** 

### **Maintenance Is Increased**



# We were making progress...



# We were making progress...



### **Current Floodway Conditions**



Looking South – Lake WSE = 26.75' (NGVD)

#### < Sediment removal stopped here

### **Sediment causes this**

### **Example Obstructions**

Location: North End of TZ

#### Location: Mid-TZ



# "Trial" Plantings Over Twice the Approved Width EO C DO ROAT

2015

1990

### 85 ft + (instead of 35 ft)



And -

### **Obstructions continue to be allowed downstream.**



Photos downstream of Bear Creek

### **Example Obstructions**

Location: Park Entrance

Location: Park Entrance

H

# County's Solution

# The Willowmoor Project



# What's Needed?

**PRIOR TO PROJECT -**

### **Clear TZ to Corps' cross section, including:**

- sediment and obstruction removal
- "trial" plantings trimmed to 10 ft. width
- assurance of safe, small craft navigability

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#### Establish process to identify and correct basin drainage issues

Residents seek your support to protect and maintain our properties

Support our recommendations via City representative at the Flood Control District.

Actively participate in Willowmoor's design, keeping public informed of its progress.

Use Corps' OHWM for shoreline permits; not one shifted higher due to lack of TZ maintenance.

Organize other cities to develop a long-term, basin-wide drainage management plan.