

DRAFT

## **APPENDIX B**

### **Drainage Problems and Complaints**

City of Sammamish Drainage complaints in the project vicinity

ID	Date	Description	Assigned to:	Status	First Name	Last name	Address	Entered	Action	Type	Location	Neighborhood	Date closed	Date entered
2852	8/23/2004	Mr. Reilly had to have the City maintenance crew respond this weekend to a flooding issue at his residence - there is a creek now running down and around his house between his house and his neighbor's. He's not sure exactly how this came to pass, but he knows that something is going to need to be done about this creek, because it is definitely going to be a flooding problem. Requesting someone check it out and see if there isn't some remedy.	elafrance	CLOSED	Mike	Reilly	4215 E LK Sammamish Shore LN SE	crupke	Colleen spoke to Eric L about this, he and Aaron Sundberg and the maintenance crew are already working on this today. Colleen recontacted Mr. Reilly, advised him of this. Completed.	Drainage Problems	E LK Sammamish Shore LN SE		9/1/04	
4602	1/18/2007	Mr. Moore called this morning to report a drainage problem along E. Lake Sammamish Pkwy at Perigrine Point. Water is flowing like a rive off the banks and over the road and part of the bank has broken away and slid down. Could someone please investigate this problem and give him a call.	Elafrance	CLOSED	Carvel	Moore	4299 E Lake Sammamish Shore Lane SE	lhachey	Crews have responded. Case closed	Drainage Problems		Perigrine Point		
5240	11/26/2007	From: Ed Roberts [mailto:eroberts@seanet.com] Sent: Fri 11/16/2007 8:45 AM To: John Cunningham Subject: Lake Sammamish Polution Mr Cunningham, We have a problem at 3839 & 3901 East Lake Sammamish Shore Lane SE. Ever sense the trail went in we have run off from our street during heavy rains, yesterday we had a large plum in the lake. I have called the county several times and they have and they have cleaned their ditches but it has not solved the problem. The City needs to see what can be done to protect the lake from further damage as we enter the wet season. Thanks, Ed Roberts 425 369 1800	Jcunningham	CLOSED	Ed	Roberts	E Lk Sammamish Shore Ln SE	lhachey	From: John Cunningham Sent: Fri 11/23/2007 9:35 AM To: Ed Roberts Subject: RE: Lake Sammamish Polution Good Morning Mr. Roberts. We will take a look at this and see what we can figure out. Thank you for brining this to our attention. John c.	Drainage Problems	3839 & 3901 East Lake Sammamish			
5297	12/20/2007	Flooding at the bottom of 212th at E Lk Samm Pkwy.	csimpson	CLOSED	Anonymo us			dlunde		Drainage Problems	212th			
5299	12/24/2007	Mr. Moore left a message Saturday (12/22) in regards to flooding in his and his neighbor's garages from run-off originating off Peregrine Pt. Way SE. I happened to drive by there (as I was working a little Saturday). It was 30 to 60 minutes after it had stopped raining. Water was cascading across the south sidewalk on Peregrine, across the Parkway down to Shore Ln where Mr. Moore lives.	shartwig	CLOSED	Karvel	Moore		thudson		Drainage Problems	E Lk Samm Sh Ln SE - 4200 Block			

ID	Date	Description	Assigned to:	Status	First Name	Last name	Address	Entered	Action	Type	Location	Neighborhood	Date closed	Date entered
7796	3/28/2011	<p>Online Citizen Action Request:</p> <p>Description: Water has been bubbling out of the top of a heavy drain for at least 3 weeks. The water runs down the side of the paved street, then crosses over and is flooding our shared waterfront recreational lot. We didn't report it sooner because it has been so rainy and because we thought it was coming from a nearby construction site. But with the drier weather weather we can now tell that the drain is seriously backed up. The drain is large, round, and topped with a heavy grate. We'd like to see the drain unplugged so our lot can dry out and we can clean up all the debris that washed ashore this winter. Thank you!</p> <p>Location: The drain is located opposite the home at 4229 East Lake Sammamish Shorelane SE. The drain is positioned between the pavement and the railroad tie retaining wall that borders the recreation trail.</p> <p>There's actually a little "cut-out" in the retaining wall to accomodate the drain. You can easily follow the path the water takes after overflowing the drain. Our waterfront lot -- the one being flooded -- is located 3 parcels down from the 4229 property. Sorry to not be more exact, but our shared waterfront lot doesn't really have an address and the parcel number listed in the database is a duplicate of one farther north on the lake.</p>	Elafrance	CLOSED	Celeste and Bob	Boyer	21007 SE 42nd ST	crupke	<p>Forwarded to Michelle, Kyle, Martin and Ho</p> <p>4/6/11: Celeste called checking the status of this because situation is becoming worse. Colleen referred her to M&amp;O. Michelle indicates that at some point Kyle requested that this be referred to Eric. Colleen has no record of it being referred to Eric. This CAR now being forwarded to Eric and Lisa. This also corresponds with M&amp;O WO #11-295</p> <p>4/12/11 EL made site visit, determined it is likely a clogged private stysem. Will contact KC and homeowner to advise. LW</p>	Drainage Problems	Oppositie 4229 ELS Shore Lane SE		4/12/11	Mar 28 2011 2:55PM
8545	10/4/2012	Email from Mona 10/3/12: I just received a complaint from the folks that live at 4289 East Lake Sammamish Shore Lane SE calling about the runoff from the gutters and downspouts at 4291 East Lake Sammamish Shore Lane SE. He said this is creating a wetland situation in his back yard and he'd like us to do something about having his neighbors keep their own runoff on their lot and not have it run out onto his lot. Looks like the house at 4291 may have a wetland out back since it's undeveloped, but nothing is showing up in iMap. Perhaps Kathy can expand on this. At any rate, the big house is complaining that the little house is dumping all their stormwater/drainage onto him. Help...thanks!	Elafrance	CLOSED	Citizen		4289 East Lake Sammamish Shore Lane SE	lwerre	Made a site visit and determined neighbor is not doing anything wrong or different, may just be a change in ground water. LW 10/11/12	Drainage Problems	4289 East Lake Sammamish Shore Lane SE		10/11/12	Oct 4 2012 1:31PM
8564	10/23/2012	Broken catch basin	Elafrance	CLOSED	Misty	Weber	4039 E Lk Samm Sh Ln SE	lwerre	Driveway drain is on private road. Homeowner will have to repair. LW 10/23/12	Drainage Problems	4039 E Lk Samm Sh Ln SE		10/23/12	Oct 23 2012 9:18AM

Drainage Related Comments Received During Open House Public Meetings in March 2014

Segment	Comment Type	Contact Information	What are your top priorities and concerns about the trail design?	Please share any other questions or comments that you would like King County to consider during the design process?	Do you have any other special access concerns or issues that King County should be aware of during design and construction?	Are you aware of any private utilities that may conflict with construction activities?
A	Form	Daniel "Dan" O'Donnell 4229 E Lake Sammamish Shore Lane SE Sammamish, WA 98075 425-567-0447 or 206-714-6608 (cell)	Fencing, drainage, stop signs at trails to roads, shrubbery	Fencing to limit access to properties. Better drainage for wetland.	Fencing?	2 house waterlines cross under the trail. Owners can direct for marking.
A	Form	Carv and Elynne Moore 4299 East Lake Sammamish Shore Lane SE Sammamish, WA 98075 (center section 217) cnemoore@aol.com 425-557-8237	Preservation of old, existing trees, preserving beautiful flowering trees and bushes on the berm. We also have landscape lighting and irrigation we want to preserve, privacy is also an issue and concerns about increase in crime.	We would so appreciate working together to make this a win win situation. We have so much beautiful landscaping we would like to keep and maintain.	We want to make sure we have access to our driveway, and parking. We are very concerned about flooding that occurs from Pergtine Point comes down our driveway, crosses he trail, and floods our property.	Yes -- irrigation and landscaping lighting that exist on berm.
A	Form	Allen McNaughton 4229 East Lake Sammamish Shore Lane SE Sammamish, WA 98075 abmcnaug@aol.com 425-392-4287	Love the trail -- a few concerns/wishes. 1. Safety at crossings -- cyclists don't stop even if they have stop signs. 2. Fencing would like along our property - chain link. Hate look of post rail put up Issaquah section. Have had issues with trail users going off trail and going to lake.	Save my Doug fir trees! Several planted on bank over last 10 year. Would really appreciate it if they could be preserved.	Assume you mean to our homes? Road by house is narrow - construction parking could block access. Use of yard as turn around.	Water lines crosses under path current drainage is inadequate during periods of heavy rain.
A	Form	Trevor Nies 4007 East Lake Sammamish Shore Lane SE Sammamish, WA 98075 T-man@live.com 206-799-6013	I would like to have the expansion of the trail to the east of it so I can move the retaining wall east towards trail. This is important to allow access in and out of my garage I'm building. Note, I am looking to rebuild my retaining wall now so also want to make sure it doesn't get torn down during trail expansion.	How will the drainage ditch be improved? Note it flooded my house this winter!		No

## Craig Buitrago

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**From:** Jenny Bailey  
**Sent:** Thursday, February 20, 2014 10:16 AM  
**To:** Craig Buitrago  
**Cc:** Phoebe Johannessen  
**Subject:** FW: Reiko at 4009 E Lk Samm Shore Lane - water damage

-----Original Message-----

From: Auld, Gina [mailto:Gina.Auld@kingcounty.gov]  
Sent: Thursday, February 20, 2014 10:10 AM  
To: Jenny Bailey  
Cc: Phoebe Johannessen  
Subject: FW: Reiko at 4009 E Lk Samm Shore Lane - water damage

FYI.....

Gina Auld  
Capital Project Manager

King County Facilities Management Division | Parks CIP  
201 South Jackson Street, Suite 700  
Seattle, WA 98104-3854  
206.477.4552 | 206.724.1296 (cell) | 206.263.6217 (fax)

Please Note My New Phone Number

-----Original Message-----

From: Nunnenkamp, Robert  
Sent: Thursday, February 20, 2014 9:59 AM  
To: Auld, Gina  
Cc: Clow, Rodger  
Subject: RE: Reiko at 4009 E Lk Samm Shore Lane - water damage

This is the first time I've seen this happen. We know we have a sediment problem coming from the other side of the parkway and are proactive about keeping the ditch clear. I believe this was an extraordinary event but it illustrates the current system has limitations.

-----Original Message-----

From: Auld, Gina  
Sent: Thursday, February 20, 2014 9:02 AM  
To: Nunnenkamp, Robert  
Cc: Clow, Rodger  
Subject: RE: Reiko at 4009 E Lk Samm Shore Lane - water damage

Thanks Robert. Does this overflow frequently or does this happen on bigger rain events? I see there seems to be quite a bit of silt washed down, does this happen frequently or during bigger rain events? Is the silt coming from the trail?

I will bring this to Phoebe's attention but the more details we can provide her the better.

Thank you.

Gina Auld  
Capital Project Manager

King County Facilities Management Division | Parks CIP  
201 South Jackson Street, Suite 700  
Seattle, WA 98104-3854  
206.477.4552 | 206.724.1296 (cell) | 206.263.6217 (fax)

Please Note My New Phone Number

-----Original Message-----

From: Nunnenkamp, Robert  
Sent: Thursday, February 20, 2014 8:59 AM  
To: Auld, Gina  
Cc: Clow, Rodger  
Subject: RE: Reiko at 4009 E Lk Samm Shore Lane - water damage

Yes. We had big rains over the weekend and the system overflowed. The system has culverts of varying sizes and residents have modified the system on our property as well.

-----Original Message-----

From: Auld, Gina  
Sent: Thursday, February 20, 2014 8:56 AM  
To: Nunnenkamp, Robert  
Cc: Clow, Rodger  
Subject: RE: Reiko at 4009 E Lk Samm Shore Lane - water damage

Hi Robert,

I am assuming you are forwarding the photos that went with the below e-mail to me so we can look at the drainage issue while designing the South Sammamish Segment? Can I get some more information on this?

Thank you.

Gina Auld  
Capital Project Manager

King County Facilities Management Division | Parks CIP  
201 South Jackson Street, Suite 700  
Seattle, WA 98104-3854  
206.477.4552 | 206.724.1296 (cell) | 206.263.6217 (fax)

Please Note My New Phone Number

-----Original Message-----

From: Nunnenkamp, Robert  
Sent: Thursday, February 20, 2014 8:45 AM  
To: Auld, Gina  
Subject: FW: Reiko at 4009 E Lk Samm Shore Lane - water damage

This is an area we'll need to take a closer look at as the plans go to 60%. While this was most likely an extraordinary event, we should look at designing the drainage to help minimize the possibility of overflow. This area gets a lot of sediment and the ditch gets cleaned out every year.

-----Original Message-----

From: Clow, Rodger  
Sent: Thursday, February 20, 2014 7:00 AM  
To: Nunnenkamp, Robert  
Subject: FW: Reiko at 4009 E Lk Samm Shore Lane - water damage

Hi Robert,

Here are some of the photos sent to me from the property owner. I took some more photos yesterday and will forward those as soon as I have a chance.

Thanks,  
Rodger

-----Original Message-----

From: reikhi@u.washington.edu [mailto:reikhi@u.washington.edu]  
Sent: Wednesday, February 19, 2014 9:50 PM  
To: Clow, Rodger  
Subject: Reiko at 4009 E Lk Samm Shore Lane - water damage

Hi Rodger,

Thank you for your quick response, very much appreciated your call today.

Awaiting your call tomorrow to discuss what you saw at our place this afternoon.

I've attached some pictures I took on Tuesday for your reference as well. The event actually happened last Sunday around midnight (about 2 days before these pictures were taken).

Look forward to speaking with you tomorrow.

Thanks again,  
Reiko Hisamatsu

July 21, 2014

King County  
KSC-NR-0700  
201 S Jackson St, Ste 700  
Seattle, WA 98104-3855

Dear Sir or Madam:

I am the homeowner at 4293 East Lake Sammamish Shore Lane SE, and last Monday, July 14, I was present when the County and its consultant, Parametrix, made an on-site introduction of the plans the County has for improving the East Lake Sammamish Trail adjacent to my property. My property is roughly located south of stations 217+75 and 218+75.

During the session I was told that the proper procedure to ask detailed questions was to submit them in writing and set up a follow up appointment with the County and/or Parametrix.

Accordingly here are my questions:

1) I would like to know how much water I should expect in the creek that flows on the west side of my property during the 100 year storm event that I was told was being used as the design criteria. Specifically, since the uphill developments have introduced significant amounts of impermeable surfacing and it appears that the County intends to collect the outfall from several culverts and divert it into the culvert that feeds the creek, I am very worried that the amount of water will exceed the bank capacity of this salmon-bearing creek. This is my most important question and I would like to know the answer to this question quantitatively. During the appointment I would like to see the area that has been determined to be contributory to this runoff.

2) Why do all the trees south of the new trail adjacent to my property have to be removed and replaced with a reinforced earthen berm? This is going to remarkably impact the sight lines from my property and expose the property to sounds that are currently damped by the numerous, large diameter trees that the County plans to remove.



3) With regard to the same piece of land, south of the trail and north of the roadway that serves the homeowners along East Lake Sammamish Shore Lane, SE, there is currently landscape lighting that is powered from my house service. Will it be replaced in some form with the new landscaping plan? The drawings did not depict any lighting.

4) Does the County intend to reimburse me for all the large diameter trees that I have planted and maintained in that same piece of land over the last 18 years?

I have engaged the services of a Professional Engineer to assist me with my questions, and intend to have him present at the appointment. His name is Stephen Laccinole, and he is a currently registered Civil and Structural Engineer in Washington State.

Would you please call me after reviewing this so that I can schedule with the appropriate persons at the appropriate time.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Eva', with a long, sweeping horizontal line extending to the right.

Dr. Eva C. Vanderhoeven  
4293 East Lake Sammamish Shore Lane, SE  
Sammamish, WA 98075

## Craig Buitrago

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**From:** Jenny Bailey  
**Sent:** Tuesday, October 28, 2014 7:33 AM  
**To:** Paul Fendt; Craig Buitrago  
**Subject:** FW: 140930 ELST S Samm - Vanderhoeven

Just FYI...

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**From:** Laura LaBissoniere [mailto:llabissoniere@prrbiz.com]  
**Sent:** Monday, October 27, 2014 10:13 PM  
**To:** Gina Auld; Jenny Bailey  
**Subject:** Fwd: 140930 ELST S Samm - Vanderhoeven

FYI

LAURA LABISSONIERE MILLER  
Associate  
206.462.6398<<tel:206.462.6398>> | C 206.734-9420 |

Begin forwarded message:

Resent-From: <[ELST@kingcounty.gov](mailto:ELST@kingcounty.gov)<<mailto:ELST@kingcounty.gov>>>  
From: Steve Laccinole <[selaccinole@selpeco.com](mailto:selaccinole@selpeco.com)<<mailto:selaccinole@selpeco.com>>>  
Date: October 27, 2014 at 6:46:29 PM PDT  
To: ELST Master Plan <[ELST@kingcounty.gov](mailto:ELST@kingcounty.gov)<<mailto:ELST@kingcounty.gov>>>  
Cc: "[eva.vanderhoeven@gmail.com](mailto:eva.vanderhoeven@gmail.com)<<mailto:eva.vanderhoeven@gmail.com>>"  
<[eva.vanderhoeven@gmail.com](mailto:eva.vanderhoeven@gmail.com)<<mailto:eva.vanderhoeven@gmail.com>>>,  
"[mdavis@sammamish.us](mailto:mdavis@sammamish.us)<<mailto:mdavis@sammamish.us>>"  
<[mdavis@sammamish.us](mailto:mdavis@sammamish.us)<<mailto:mdavis@sammamish.us>>>  
Subject: RE: 140930 ELST S Samm - Vanderhoeven

Dear Gina,

Thank you for working through the logistics of scheduling the meeting this coming Wednesday. Dr. Vanderhoeven and I will be looking forward to it. I would like to request that the engineer who will stamp both the alignment and the drainage drawings as the Engineer in Responsible Charge also be in attendance at this meeting as there are only two true objectives underlying Dr. Vanderhoeven's concerns, both of them technical in nature. Those are:

1) The present alignment of the trail requires extensive tree removal and re-grading of the southern side of the trail, as well as a retaining wall. Based on a cursory review a realignment of the centerline on both sides of station 118+00 should be achievable with thoughtful engineering that doesn't just take the centerline of the original railroad right of way as the centerline of the trail. This realignment would salvage trees, preserve privacy of Dr. Vanderhoeven's property and may even save the county and/or city expense.

2) The water that is discharging through the creek (a Class S-2 salmon stream as re-designated by Fish and Wildlife agencies) needs to be carefully dealt with as the additional impervious surface and the uphill and

rework of the unnamed streams north of the right of way in this area is a significant concern to the habitat as well as Dr. Vanderhoeven's property.

There is considerable history surrounding this particular lot that the County should also be aware of before taking the drawings from their present 60% completion to a bid ready state. We will describe this to you during the meeting.

Since the meeting date is on the 29th, the last day for filing concerns about the development, this email will constitute the basis for Dr. Vanderhoeven's petitions here. Thanks for providing the opportunity to work with the County and City as opposed to just resisting the development.

S.E. (Steve) Laccinole, PE, SE  
Principal Engineer  
Selpeco Resources, Inc.  
206-255-0885  
[www.selpeco.com](http://www.selpeco.com)<<http://www.selpeco.com>>

From: ELST Master Plan [<mailto:ELST@kingcounty.gov>]  
Sent: Tuesday, September 30, 2014 12:36 PM  
To: [selaccinole@selpeco.com](mailto:selaccinole@selpeco.com)<<mailto:selaccinole@selpeco.com>>  
Cc: [eva.vanderhoeven@gmail.com](mailto:eva.vanderhoeven@gmail.com)<<mailto:eva.vanderhoeven@gmail.com>>;  
[mdavis@sammamish.us](mailto:mdavis@sammamish.us)<<mailto:mdavis@sammamish.us>>  
Subject: 140930 ELST S Samm - Vanderhoeven

Dear Mr. Laccinole,

Thank you for your meeting request and for your ongoing engagement with the East Lake Sammamish Trail project. Members from our project team are available to meet with you in late October or early November. We anticipate that the Tree Preservation Plans will be available to review at that time. Maggie Humphreys with our public outreach team will follow-up by phone to schedule a meeting within that time frame.

Thank you again for your email.

Best,

Gina Auld  
Capital Project Manager

King County Department of Natural Resources| Parks CIP  
201 South Jackson Street, Suite 700  
Seattle, WA 98104-3854  
Project Hotline: 1-888-668-4886<<tel:1-888-668-4886>>

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From: Steve Laccinole [[selaccinole@selpeco.com](mailto:selaccinole@selpeco.com)<<mailto:selaccinole@selpeco.com>>]

Sent: Monday, September 29, 2014 10:39 AM

To: 'Fereshteh'

Cc: ELST Master Plan; [mdavis@sammamish.us](mailto:mdavis@sammamish.us)<<mailto:mdavis@sammamish.us>>; Eva Vanderhoeven

Subject: SHOR14-0022 and SSDP2014-00171: Meeting Request

Dear Sir/Madam

This email is to request a technical meeting with the Engineer in Responsible Charge for this project. The request is being made on behalf of Dr. Eva Vanderhoeven who owns the property located at 4293 East Lake Sammamish Shore Lane, SE Sammamish WA 98075.

Dr. Vanderhoeven's property is going to experience two severe impacts from the trail expansion project that may be mitigated through proper design and, possibly, waivers and a technical discussion may help to produce a solution that would negate the need for any further protest of any form. Those two impacts are:

- 1) The amount of storm water runoff that is being channeled via culverts and surface drainage into the stream that is on Dr. Vanderhoeven's property may damage not only her property but also the ability of the stream to harbor its designation as a salmon bearing stream.
- 2) The number of large trees being removed to establish sight lines for vehicle traffic that will cross the new trail appears to be mitigated by a realignment of the trail to the north while still being able to be located within the trail right of way.

Please advise as to available windows of time for such a meeting. Selpeco will be represented by myself and, if necessary, an additional civil and/or environmental engineer. The objective will be to avoid land use conflict through technical savvy and creativeness. Thank you.

S.E. (Steve) Laccinole, PE, SE

Principal Engineer

Selpeco Resources, Inc.

206-255-0885

[www.selpeco.com](http://www.selpeco.com)<<http://www.selpeco.com>>

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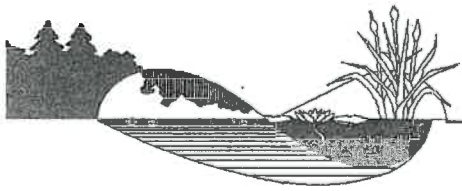
This email has been scanned for email related threats and delivered safely by Mimecast.  
For more information please visit <http://www.mimecast.com>

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## B-twelve Associates, Inc.

1103 W. Meeker St.  
Kent, WA 98032-5751

(v) 253-859-0515  
(f) 253-852-4732  
info@b12assoc.com

June 11, 2004

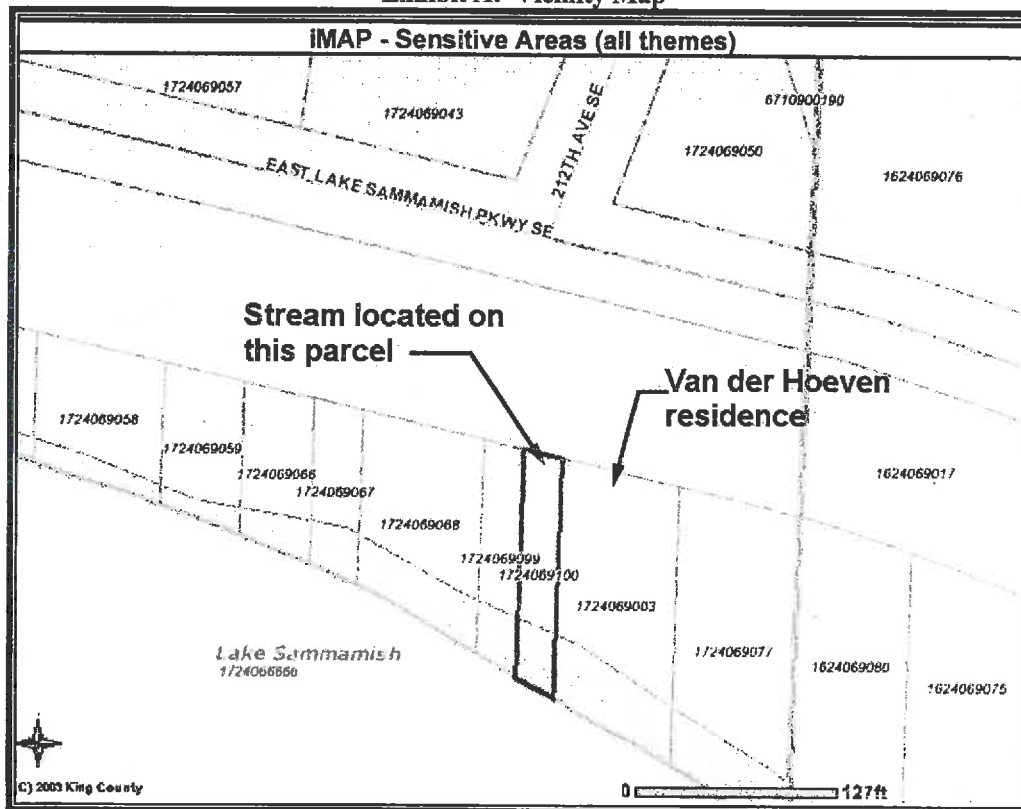
Mrs. Eva Van der Hoeven  
4293 E. Lake Sammamish Shore Lane SE  
Sammamish, WA 98075

Re: Van der Hoeven Property  
B-twelve Job #A4-116

Dear Eva,

Per your request, we have completed a study of the sensitive areas on your property located just west of your house at 4293 E. Lake Sammamish Shore Lane SE, in the City of Sammamish, WA. (See Exhibit A.) The narrow lot, Parcel No. 1724069100, contains a stream that flows into Lake Sammamish. This letter describes the current conditions of the stream and buffer, as well our recommendations for additional protection of the sensitive area.

**Exhibit A: Vicinity Map**



## **BACKGROUND**

The clearing and grading of the stream area occurred in June 1999 without a grading permit, and was therefore considered a violation in King County. The County classified the stream as a Class 2S, and recommended the addition of log weirs and planting of native vegetation on the site. The County required a Restoration Plan, but had not received a plan before the site was annexed into the City of Sammamish in January 2000.

The City of Sammamish sent the property owners a Notice to Comply, dated January 16, 2004. The Notice requests a special study to be completed by a professional biologist, as well as a mitigation plan, if necessary. These items are to be submitted along with the grading permit application.

Ronda Litzau of the City of Sammamish has met with you on the site to observe the conditions of the restoration area. I have corresponded with Ronda and have met with Steve Roberge at the City to discuss this project. It is B-twelve's understanding that the City is generally supportive of the improvements that occurred on the site, but that they are seeking the opinion of a professional biologist.

According to the property owner, before they began restoring the site, it was overgrown with blackberries and contained a large amount of debris. The basement of your home located east of the stream was flooding more frequently due to a higher volume of stormwater coming from upstream. Restoration on the site (prior to receipt of a permit) included the removal of a dilapidated fence, blackberries, and five (5) trucks full of trash. Garbage found on the narrow lot included 16 tires, a refrigerator, car parts, and over 200 bottles. With direction from a UW professor, the stream was graded so that it would contain the water as it flowed to Lake Sammamish. Natural meanders were added to the stream channel, and the banks of the stream were stabilized with rocks and vegetation. The site conditions are described in more detail below.

## **SITE OBSERVATIONS**

Darcey Miller of B-twelve Associates visited the site to inspect current conditions on March 5 and May 16, 2004. The stream area contains a fairly dense mix of native trees, shrubs, and herbaceous species, as well as some non-native flowers. (See Photographs and Sheet W-1: Existing Conditions Map.) A large willow and large Oregon ash are located at the north end of the stream, and provide shade for much of the stream and buffer. In addition, several Oregon ash are also located near the woodshed, and closer to the Lake. A large tree trunk was observed on the north portion of the western streambank. This trunk and the large trees near the stream were located on the site prior to the completion of any restoration work. No wetlands were observed on the site.

The stream area contains a small amount of watercress and reed canary grass, which will eventually block stream flow. The site has been kept free of all other invasive species without the use of any pesticides or machinery.

A small footbridge is located over the stream, approximately three-quarters of the way down the stream from the driveway. A footpath leading from the bridge to the woodshed consists of sandstone blocks with sand between the blocks, and is generally pervious.

We understand that more water is flowing through this feature than even several years ago. We believe that this water consists at least partially of stormwater from impervious surfaces upstream, as more development is occurring. However, blocked culverts appear to also be a cause of more water coming down through the stream on the site. We observed a blocked culvert to the north of the Sammamish Trail, oriented in a north-south direction under E. Lake Sammamish Shore Lane SE. (See Sheet W-1.) In addition, several culverts are also blocked that drain under E. Lake Sammamish Parkway SE and into the ditch to the north of the Trail.

## **CONCLUSIONS and RECOMMENDATIONS**

It is our opinion that the grading and restoration work on the site has greatly improved the overall condition of the sensitive area. The removal of garbage and of non-native invasive species is beneficial to water quality and to wildlife. The planted vegetation is very healthy, and it appears to be helping to stabilize the soil along the streambanks. The mowed lawn begins near the west property line of the lot on which the Van der Hoeven residence is located. We understand that this lawn has existed since construction of the house, and was not considered by King County to be part of the violation.

The buffers were graded to gradual slopes, and are therefore able to support vegetation. The stream meanders appear to be slowing the water as it flows down to the lake. The rocks along the stream banks also appear to be stable, and they help to prevent soil erosion along the banks.

The footbridge on the site is located completely outside of the Ordinary High Water Mark (OHWM). It provides minimal shading of the stream, and plants are growing right up to its edges. The bridge also allows access to the other side of the property, on which the woodshed is located.

In order to attempt to limit the amount of water flowing through the site, we suggest that the City maintain the culvert under E. Lake Sammamish Shore Lane SE.



## **ENHANCEMENT PLAN**

Although the stream and buffers are in very good condition, we recommend that the following restoration actions be completed in order to further improve the functions and values of the sensitive area.

1. Additional native trees, shrubs, and herbaceous species should be installed as shown on the Enhancement Plan. (See Sheet W-2.) Species and locations have been chosen to fill in gaps, to stabilize streambanks, to improve wildlife habitat, and to provide more shading of the stream. We recommend that planting occur during the rainy season (October-March) in order to ensure that the plants get enough water. If plants are installed outside of this time frame, they must be irrigated at least once per day until October.

2. Non-native herbaceous species should be removed from the stream and planted buffer.

3. All invasive species, such as watercress and reed canary grass, should be removed from the stream and planted buffer areas.

4. A gate should be placed across the north end of the footpath in order to provide privacy for the property owners and limit access by the public to the stream area.

5. We recommend that an installation sign-off be completed by the City or a biologist. The sign-off will ensure that the actions described above have been completed. It will also note any differences between the plan and the actual planting locations.

### **6. Maintenance Program**

- Himalayan blackberry, Japanese knotweed, evergreen blackberry, reed canary grass, Scots broom, English ivy, morning glory, watercress, or other invasive species should be controlled by hand and without chemicals within the sensitive areas.
- Replace dead or failed plant material after the annual monitoring report has specified which plants have not survived. Replacement species are to be of the same species, size and location as original plantings. Plantings are to be installed during the dormant period (late October through mid-March).
- Remove tree staking and guy wires from all trees after one year.

### **7. Monitoring Plan**

- One monitoring should be performed approximately one year following the installation sign-off. The property owner may complete the monitoring letter,

which should include a plant survival count, estimate of invasive species coverage, and photographs. If performance standards are not met, additional plants must be planted before the project may be accepted as complete.

- Performance Standards

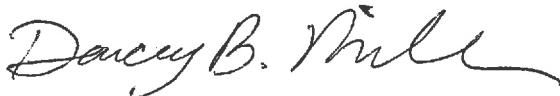
- a. No more than 10% of the vegetation coverage may consist of non-native or invasive species at the end of the monitoring period.
- b. Evaluation of the success of the mitigation project will be based upon a 90% survival rate for all planted vegetation at the end of the monitoring period.

We believe that with the recommendations described above, the actions completed on the site comply with the Environmentally Sensitive Areas chapter of the Sammamish Municipal Code (Chapter 21A.50). It is our opinion that the stream restoration has improved the condition of the sensitive area, and will continue to improve it as both the existing and new plants grow to maturity.

Please feel free to call or e-mail me (Darcey@b12assoc.com) if you have any questions or require any additional information. Thank you.

Sincerely,

*B-twelve Associates, Inc.*



Darcey B. Miller  
Wetland Ecologist

## **PHOTOGRAPHS**



**Photograph 1: Culvert at north end of stream**



**Photograph 2: Stream and buffer, facing north to woodshed**





**Photograph 3:** Stream and buffer, facing west at footbridge



**Photograph 4:** Stream and buffer, facing south to lake from footbridge