



## COOKE SCIENTIFIC

4231 NE 110<sup>th</sup> ST, SEATTLE, WA 98125

PHONE: (206) 695-2267 FAX: 206-368-5430

COOKESS@COMCAST.NET

WWW.COOKESCIENTIFIC.COM

### Memorandum

TO: Prakash Modi  
FROM: Sarah Spear Cooke  
DATE: February 24, 2016  
SUBJECT: Wetland A Western Edge Boundary Verification, City of Woodinville, Wa.  
Woodinville Project #32204L

---

I was asked to perform a wetland boundary review for the western edge of Wetland A as seen on the attached Figure 1 in January 2016. No data forms and no rating was required as part of this scope (see attached correspondence with the City). I was asked to review this portion of the boundary that was delineated in January 2014 (Acera, May 2014), because the City's consultant (Otak April 2015) felt this edge of the wetland continued past the marked boundary as seen by the vegetation later in the spring.

In preparation for the site visit, I reviewed the two critical areas reports submitted to the City for the Site. These include:

- *Stream and Wetland Assessment Report and Buffer Reduction Plan. Acera. May 2014.*
- *Modi Short Plat Third Party Wetland Review. Otak. April 8, 2015*

#### **Important Note**

The difficulty of the site characteristics and the time of year the evaluation was done presented multiple problems in performing this review. The City telling you that "in theory" the site visit could occur in January during the winter is problematic on this site because the vegetation indicators are missing at that time of the year. The official wetland delineation protocol requires that all three indicators are present for a delineation to be verifiable. My delineation can only be verified once the vegetation indicators have returned- which will likely be in March once the growing season has begun. The City's own 3<sup>rd</sup> party reviewer Otak specifically mentioned that skunk cabbage was seen growing in April 2015 outside (uphill) of the western wetland boundary Acera marked in January of 2014. I had asked the City specifically address my concern that this site visit was occurring during the time when the emergent species were not present and the fact that the site was extremely wet and all the soils appeared hydric from below the flat area where the building is proposed (Figure 1 and Photo P10). Despite the lack of the vegetation indicators outside of the growing season, you asked me to proceed with the January field work. It was raining when we visited the site and it had been raining for a couple of days so the site was quite wet. The site is highly vegetated (much of it blackberries) and there are downed logs covering the ground all limiting access to much of the hillside.

**Summary of Site Visit Findings:** (Photos P1-P10, including photo location map)

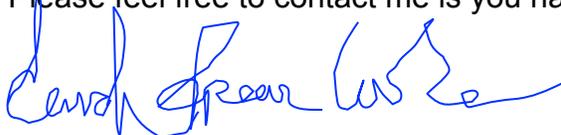
Based on my professional experience a re-evaluation of western boundary was done between the edges identified by the City of Woodinville in January 2016. New wetland flags, shown on Figure 1 correctly reflect the new wetland boundaries at the time of the site visit in January 2016. This boundary was established with the vegetation criteria missing because of the time of year (winter) and the soils were saturated and all looked hydric, possibly due to prolonged winter rains.

I placed 6 flags along the western edge of Wetland A (Figure 1); starting from the northwestern flag of wetland A that connects to Flag M1 and ending at Flag M6 that ties to the wetland flag at the southwest corner of Wetland A. The vegetation found around flag M1 (Photo P2) was 30% pacific ninebark (*Physocarpus capitatus*, FACW), 15% salmonberry (*Rubus spectabilis*, FAC), 60% Sitka spruce (*Picea sitchensis*, FAC), 35% red alder (*Alnus rubra*, FAC), and 10% pig-a-back (*Tolmea menziesii*, FACW) . The soils were very dark (2.5YR4/2) organic-rich sandy loam. There was water to the surface of the soil for most of this area and certainly within the top 6-inches of the soil surface when the soil was augered.

Flags M1, M2, M3, and M4 define a channel heading upslope to just below the flat area that contained 1-2-inch deep water at the time of the site visit. There is a plastic pipe lining this channel that is conveying water from an unknown uphill source (Photos P3, P4, P5). There is a concrete rubble pile just north of this swale that restricts the flow in this channel southward (photo P1). The channel was eroded into the highly organic black soil (10YR3/1) (P5) that is present on much of the slope that I could access. There was a significant amount of blackberry and downed woody debris making access difficult throughout much of the slope. There was no vegetation present in this channel, only overhanging trees that were not rooted in the wetland. There were no emergent species present at this time of year and all the species present were FAC (Sitka spruce, red alder and salmonberry) with the exception of the sword fern (*Polystichum munitum*) so the ferns growing on slightly higher elevation hummocks were used to determine the wetland boundary to the south between flags M3 and M4.

I found drainages that initiate somewhere between the upper level area (where the development pad is located), and the wetland edge in at least four locations. Three of the drainages were seen right as the slope transitions from grading gently downhill and drops abruptly to the lower previously delineated Wetland A edge along the line formed by the new boundary flags M4, M5, and M6 (Photos P7 and P8). Unfortunately there was a very large downed tree, many smaller downed trees and a thick patch of blackberry (*Rubus armeniacus* (FACU) and other FAC species such as salmonberry and red alder, in this area so no further investigation was possible further uphill to the west to see if the drainages continued up the slope from the edge marked by Flags M4 – M6 (Photos P7, P8). The old Acera wetland edge is shown as photo P9 right near the southwest flag of Wetland A.

Please feel free to contact me if you have further questions.



Sarah Spear Cooke, Fellow, International Society of Wetland Scientists

**HEIGHT CALCULATIONS:**

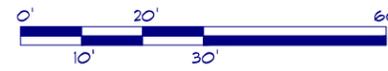
A = 109.5	43	4,708.5
B = 106.5	39	4,153.5
C = 108	9.7	1,047.6
D = 109	20.1	2,190.9
E = 114	21	2,394
F = 122	22	2,684
G = 122	12	1,464
H = 117.5	20	2,350
I = 118	7.3	861.4
J = 118.5	14.5	1,718.25
K = 118.5	4	474
L = 118.5	10	1,185
M = 116.5	2	233
N = 114.5	14.5	1,660.25
	239.1	27,124.4

**IMPERVIOUS SURFACES:**

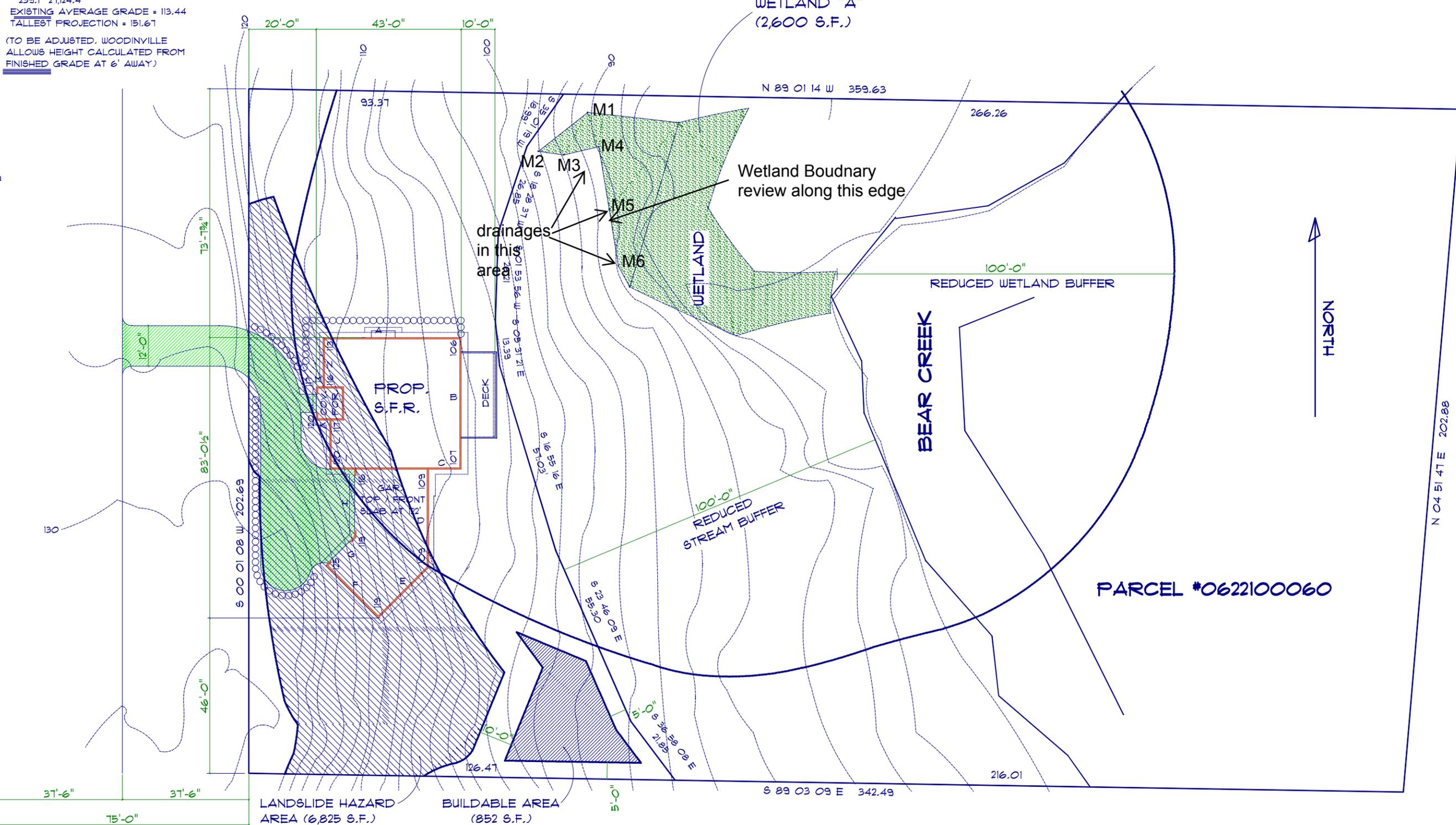
HOUSE (INC. OVERHANGS)	= 2,878 S.F.
REAR EXPOSED DECK	= 216 S.F. (NO OVERHANGS)
DRIVE AND ENTRY WALK	= 1,275 S.F.
WALK AND STAIRS TO BASEMENT	= 155 S.F. (EXPOSED)
<b>TOTAL</b>	<b>= 4,524 S.F.</b>

**LOT COVERAGE:**

LOT = 71,103 S.F.
FOOTPRINT = 2,508 S.F. (EXCLUDING DECK) = 3.53%
CRITICAL AREA = 53,113 S.F.
BUILDABLE AREA = 852 S.F.



SCALE: 1" = 30'-0"



136th AVE. N.E.



PARCEL #0622100060

**Stanbrooke**  
CUSTOM HOMES  
www.Stanbrooke.com  
STANBCH983PP  
4809 Pacific Highway E.  
Fife, Washington 98424  
Main (253) 345-5050  
Fax (253) 345-5065

**MODI RES.**  
19400 136th AVE. N.E.  
WOODINVILLE WA. 98072  
(KING COUNTY)

**SITE PLAN**  
SCALE: 1" = 30'-0"

Revisions:	
Date:	Drawn by:

Drawn by: WJU  
Checked by:  
Date: 09/02/15

Sheet:  
1 OF 1



P10

P6

P1

P7

P2,3

P8,9

P4

P5

# Modi Property, Woodinville

January 24, 2016



P1.JPG



P2.JPG



P3.JPG



P4.jpg

# Modi Property, Woodinville

January 24, 2016



P5.jpg



P6.JPG



P7.JPG



P8.JPG

# *Modi Property, Woodinville*

*January 24, 2016*



P9.JPG



P10.JPG

XFINITY Connect

cookess@comcast.net  
+ Font Size -

---

**FW: Modi RUP- Western boundary delineation**

---

**From :** P Modi <pmodi2002@hotmail.com>  
**Subject :** FW: Modi RUP- Western boundary delineation  
**To :** cookess@comcast.net

Fri, Jan 22, 2016 11:46 AM

Hey Sarah,

Below is the email exchange with City of Woodinville with respect to the need to fill in additional Data forms for the scoped work of correcting the 3 flags. According to them there is no need to refill additional dat forms nor any kind of additional soil evaluation etc.

Hope this helps.

Thanks,  
-Prakash

---

From: agnesk@ci.woodinville.wa.us  
To: pmodi2002@hotmail.com  
Subject: RE: Modi RUP- Western boundary delineation  
Date: Fri, 22 Jan 2016 17:38:26 +0000

Prakash-

You do not need to evaluate the wetland again in terms of soil, etc. We already have those things, it's more about where the actual wetland boundary is.

Thanks,  
Agnes

---

**From:** P Modi [mailto:pmodi2002@hotmail.com]  
**Sent:** Friday, January 22, 2016 9:29 AM  
**To:** Agnes Kowacz <agnesk@ci.woodinville.wa.us>  
**Subject:** RE: Modi RUP- Western boundary delineation

Agnes,

So if I am reading it right, since Acera and Otak has already completed the data points, there is no need for additional data points. Please confirm.

Thanks,  
Prakash.

Sent from my Windows Phone

---

**From:** Agnes Kowacz  
**Sent:** 1/22/2016 8:37 AM  
**To:** P Modi  
**Subject:** RE: Modi RUP- Western boundary delineation  
Prakash-

The rating has been determined so no need to evaluate that. The write up should be on the delineation. I think photos may be helpful showing why the wetland was delineated where it was on the western boundary. Thanks,

Agnes

---

**From:** P Modi [<mailto:pmodi2002@hotmail.com>]  
**Sent:** Friday, January 22, 2016 8:31 AM  
**To:** Agnes Kowacz <[agnesk@ci.woodinville.wa.us](mailto:agnesk@ci.woodinville.wa.us)>  
**Subject:** RE: Modi RUP- Western boundary delineation

Hey Agnes,

One more quick clarification. I know you asked for a very simple report capturing the work done to reflag the western boundary. I am assuming there is no need for any additional wetland determination data forms or any new pictures etc.. **Please Confirm**

Thanks,  
-Prakash

---

From: [pmodi2002@hotmail.com](mailto:pmodi2002@hotmail.com)  
To: [agnesk@ci.woodinville.wa.us](mailto:agnesk@ci.woodinville.wa.us)  
Subject: RE: Modi RUP- Western boundary delineation  
Date: Wed, 20 Jan 2016 20:44:29 +0000  
Thanks Agnes!

---

From: [agnesk@ci.woodinville.wa.us](mailto:agnesk@ci.woodinville.wa.us)  
To: [pmodi2002@hotmail.com](mailto:pmodi2002@hotmail.com)  
Subject: RE: Modi RUP- Western boundary delineation  
Date: Wed, 20 Jan 2016 20:01:17 +0000  
[Hi Prakash-](#)

Please see my answers in red below.

**Agnes Kowacz | Associate Planner**  
**City of Woodinville**  
17301 133<sup>rd</sup> Ave NE  
Woodinville, WA 98072  
Office: (425) 877-2293  
Email: [agnesk@ci.woodinville.wa.us](mailto:agnesk@ci.woodinville.wa.us)

---

**From:** P Modi [<mailto:pmodi2002@hotmail.com>]  
**Sent:** Tuesday, January 19, 2016 1:38 PM  
**To:** Agnes Kowacz <[agnesk@ci.woodinville.wa.us](mailto:agnesk@ci.woodinville.wa.us)>  
**Subject:** RE: Modi RUP- Western boundary delineation

Hey Agnes,

Can you please respond back to each of my below question?

Thanks,  
-Prakash

---

From: [pmodi2002@hotmail.com](mailto:pmodi2002@hotmail.com)  
To: [agnesk@ci.woodinville.wa.us](mailto:agnesk@ci.woodinville.wa.us)  
Subject: Modi RUP- Western boundary delineation

Date: Mon, 18 Jan 2016 17:39:02 +0000  
Hey Agnes,

Just need to confirm to ensure City and myself are on the same page with respect to the scope of work to complete the City's ask around western wetland delineation.

1. Per City, northern, southern and eastern wetland boundary are correct. ONLY work that needs to be corrected is the "**Western boundary delineation**" and more specifically **3 flags that forms the western boundary - Please Confirm**  
You will want to evaluate the boundary line between the three western flags and establish a new boundary (see attached).

2. No re-work for OHWM or rerating of wetland or any work to re-evaluate linkage between wetland and Stream buffer is needed - **Please Confirm**  
**No, this does not need to be done.**

3. I can go forward and complete this western wetland boundary delineation NOW in January i.e in next week or so - **Please confirm** there is no timeline restrictions. **No time restrictions.**

4. Per my understanding...City need a brief report (couple of page) reflecting the work done to correct the western boundary- **Please confirm** that no additional information is needed. **Yes, correct.**

Thanks in advance for your quick response.

Regards,  
-Prakash

---

