March 25, 2013

Desiree Goble
City of Kirkland
Planning and Community Development
123 – 5th Avenue
Kirkland, WA 98125

Re: JayMarc Homes, LLC – Bridle Trails
Wetland/Stream Delineation Report Review

Dear Desiree:

This letter presents the findings of an environmental review of a wetland and stream delineation study completed by Wetland Resources on behalf of JayMarc Homes LLC for the Bridles Trails property off 116th Avenue SE. The study area consists of five parcels (parcel # 162505-9017, -9021, -9022, -9031, and -9034). The following document was reviewed for this study:

Critical Area Study for JayMarc Homes, LLC – Bridle Trails, Kirkland, WA. Prepared by Wetland Resources, Inc. February 2013.

Methods

Public-domain information on the subject properties was also reviewed for this study. These sources include USDA Natural Resources Conservation Service Soil maps, U.S. Fish and Wildlife Service National Wetland Inventory maps, City of Kirkland Sensitive Areas Map, Washington Department of Fish and Wildlife interactive mapping programs (PHS on the Web), and King County's GIS mapping website (iMAP).

I visited the site on March 12 and 13, 2013 to verify findings reported by Wetland Resources.

Findings

The site is currently developed with a mix of residential homes and equestrian facilities, arenas, barns and paddocks. Mapped wetlands, Yarrow Creek, and an unnamed stream are documented on or near the subject property. With a few minor exceptions, I concur with the report findings.

Wetland Findings

A minor change to the boundary of Wetland A is recommended and I scored the wetland differently resulting in a lesser wetland type.

The report lumped three wetland segments, which are separated by driveways, into one wetland rating unit. Based on observed hydrologic connections and flow dynamics, I broke the wetland into two separate units, Wetlands B and C. Most wetland flags were present at the time of my site visit. However, with a few exceptions flagging along the northeast edge of Wetland B was missing. The surveyed boundary appeared to be accurate, based on field observations, sparse flagging, property lines, and aerial photos.

Additionally, I encountered a marginal area along the north property line, down slope of Wetland A. An offsite drainage pipe, approximately 4 inches in diameter, was discharging into a shallow depression on the day of my site visit. It was raining at the time. The area is sparsely vegetated and contains cottonwood saplings and Himalayan blackberry. The sandy loam soil was saturated, but did not exhibit hydric soil indicators. This is not a jurisdictional wetland and no additional documentation is recommended to satisfy City of Kirkland permitting requirements.

Stream Findings

Stream A is accurately characterized as a seasonal non-fish bearing Type C stream. The city's GIS mapping shows this stream following along the northern property line and into Yarrow Creek on the west end of the site. However, observed flows are directed north via culvert. A shallow ditch, which parallels the east-west edge of the enclosed arena, also empties into that culvert. The culvert appears to convey flows to the north, away from the subject property. No stream channel was present below that culvert, located on the downslope end of Wetland A. Class C streams in primary basins in the City of Kirkland require a 35 foot buffer. The 50 foot buffer of Wetland A is the most encumbering feature.

Yarrow Creek (Stream B) is mapped in the west end of the site, within Wetlands B and C. According to city sensitive area maps, this is a salmonid-bearing stream. The report accurately classifies it as a Class A stream. Class A streams in primary basins in the City of Kirkland require a 75 foot buffer. Since the stream lies within Wetlands B and C, the wetland buffer is the most encumbering feature.

Recommendations

Specifically, the following report corrections are recommended:

1. Expand the boundary of Wetland A by a few feet to include the entire culvert outfall. Survey new point OHA-6 (pink- & black-stripped flag) on downslope edge of culvert. See photo, below.

2. Correct the Wetland Field Data Form for Wetland A. As shown on the attached form, it scores less than 22 points and is therefore, a Type 3 wetland. Type 3 wetlands in primary basins require a 50-foot buffer.
3. Although it does not change the onsite buffer, it should be noted that the offsite wetland (Wetland C) shown to the southeast connects to the southwest segment of Wetland B. Additionally, this wetland area receives unidirectional flow from the north via the stream, but is otherwise separated from the northern wetland (Wetland B) by the adjacent access driveway and associated fill. This constitutes a break in the wetland unit. South of the 4602 116th Avenue NE driveway, this unit should be labeled Wetland C. Wetland C is also a Type 2 wetland with a 75 foot buffer.
4. Update the wetland delineation map to show the corrections to Wetland A (Type 3, 50-foot buffer, add point OHA-6) and Wetland C (re-label the southern segment of Wetland B as Wetland C and show off-site wetland connection). See attached mark-up for clarification.
5. If any wetland fill or other direct wetland impacts are proposed, the applicant should be advised that Ecology wetland rating forms will be needed for state and federal permitting.

I recommend that the City accept the Wetland Resources report once the corrections listed above are implemented. Please call if you have any questions or if I can provide you with any additional information.

Sincerely,

Nell Lund, PWS
Ecologist

Enclosures

WETLAND FIELD DATA FORM – JayMarc – Bridle Trails property located at 4646 116th Avenue NE Kirkland, WA 98033.

Rating done on March 13, 2013 by The Watershed Company.

WETLAND FIELD DATA FORM

Wetland A
Type 3

BEGIN BY CHECKING ANY OF THE FOLLOWING (a. – e.) THAT APPLY:

a. The wetland is contiguous to Lake Washington;

b. The wetland contains at least 1/4 acre of organic soils, such as peat bogs or mucky soils;

c. The wetland is equal to or greater than 10 acres in size and having three or more wetland classes, as defined by the U.S. Fish & Wildlife Service (Cowardin et al., 1979), one of which is open water;

d. The wetland has significant habitat value to state or federally listed threatened or endangered wildlife species; or

e. The wetland contains state or federally listed threatened or endangered plant species.

IF ANY OF THE CRITERIA LISTED ABOVE ARE MET, THEN THE WETLAND IS CONSIDERED TO BE TYPE 1. IF THAT IS THE CASE, PLEASE CONTINUE TO COMPLETE THE ENTIRE FORM, BUT DO NOT ASSIGN POINTS.

IF THE WETLAND DOES NOT MEET THE CRITERIA LISTED ABOVE FOR TYPE 1, COMPLETE THE ENTIRE FORM, USING THE ASSIGNED POINTS TO DETERMINE IF IT IS A TYPE 2 OR TYPE 3 WETLAND.

Type 2 wetlands typically have at least two wetland vegetation classes, are at least partially surrounded by buffers of native vegetation, connected by surface water flow (perennial or intermittent) to other wetlands or streams, and contain or are associated with forested habitat.

1. Total wetland area

Estimate wetland area and score from choices	Acres		Point Value	**Points**
	>20.00	=	6	
	10-19.99	=	5	
	5-9.99	=	4	
	1-4.99	=	3	
	0.1-0.99	=	2	**2**
	<0.1	=	1	

(2 points)

2. Wetland classes: Determine the number of wetland classes that qualify, and score according to the table.

	# of Classes		Points
Open Water: if the area of open water is >1/3 acre or >10% of the total wetland area	1	=	1
Aquatic Beds: if the area of aquatic beds is >10% of the **open water** area **or** >1/2 acre	2	=	3
Emergent: if the area of emergent class is >1/2 acre **or** >10% of the total wetland area	3	=	5
Scrub-Shrub: if the area of scrub-shrub class is >1/2 acre **or** >10% of the total wetland area	4	=	7
Forested: if the area of forested class is >1/2 acre or >10% of the total wetland area	5	=	10

(3 points)

3. Plant species diversity.

For all wetland classes which qualified in 2 above, count the number of different plant species and score according to the table below. You do not have to name them.

e.g., if a wetland has an aquatic bed class with 3 species, and emergent class with 4 species and a scrub-shrub class with 2 species, you would circle 2, 2, and 1 in the second column (below).

Class	# of Species	Point Value	Class	# of Species	Point Value
Aquatic Bed	1-2	= 1	Scrub-Shrub	1-2	= 1
	3	= 2		3-4	= 2
	>3	= 3		>4	= 3
Emergent	1-2	= 1	Forested	1-2	= 1
	3-4	= 2		3-4	= 2
	>4	= 3		>4	= 3

(3 points)

4. Structural diversity.

If the wetland has a forested class, add 1 point for each of the following attributes present:

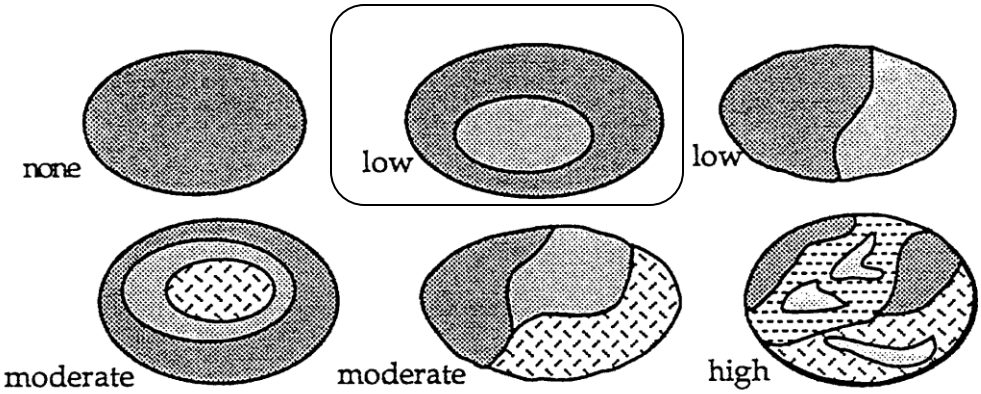
Trees >50′ tall	= 1
Trees 20′ to 49′ tall	= 1
shrubs	= 1
Herbaceous ground cover	= 1

(4 points)

5. Intersperesion between wetland classes.

Decide from the diagrams below whether interspection between wetland classes is high, moderate, low or none

3 = High
2 = Moderate
1 = Low
0 = None



(1 points)

6. Habitat features

Add points associated with each habitat feature listed:

Is there evidence of current use by beavers?	= 3
Is a heron rookery located within 300′?	= 2
Are raptor nest(s) located within 300′?	= 1
Are there at least 2 standing dead trees (snags) per acre?	= 1
Are there any other perches (wires, poles, or posts)?	= 1
Are there at least 3 downed logs per acre?	= 1

(0 points)

7. Connection to streams

Is the wetland connected at any time of the year via surface water? **(score one answer only)**

Is the wetland connected at any time of the year via surface water?

To a perennial stream or a seasonal stream *with* fish	= 5
To a seasonal stream *without* fish	= 3
Is not connected to any stream	= 0

(3 points)

8. Buffers

Step 1: Estimate (to the nearest 5%) the percentage of each buffer or land-use type (below) that adjoins the wetland boundary. Then multiply these percentages by the factor(s) below and enter result in the column to the right.

	% of Buffer		Step 1	Width Factor		Step 2
Roads, buildings or parking lots	%	X 0 =			=	
Lawn, grazed pasture, vineyards or annual crops	40 %	X 1 =	40	2	=	80
Ungrazed grassland or orchards	%	X 2 =			=	
Open water or native grasslands	%	X 3 =			=	
Forest or shrub	60 %	X 4 =	240	1	=	240
				Add buffer total 320		

Step 2: Multiply result(s) of step 1:

By 1 if buffer width is 25-50′

By 2 if buffer width is 50-100′

By 3 if buffer width is >100′

Enter results and add subscores

Step 3: Score points according to the following table:

Buffer Total

900-1200 = 4

600-899 = 3

300-599 = 2

100-299 = 1

(2 points)

9. Connection to other habitat areas:

Is there a riparian corridor to other wetlands within 0.25 of a mile, or a corridor >100′ wide with good forest or shrub cover to any other habitat area? = 5

Is there a narrow corridor <100′ wide with good cover or a wide corridor >100′ wide with low cover to any other habitat area? = 3

Is there a narrow corridor <100′ wide with low cover or a significant habitat area within 0.25 mile but no corridor? = 1

Is the wetland and buffer completely isolated by development and/or cultivated agricultural land? = 0

(3 points).

10. Scoring

Add the scores to get a total: 21

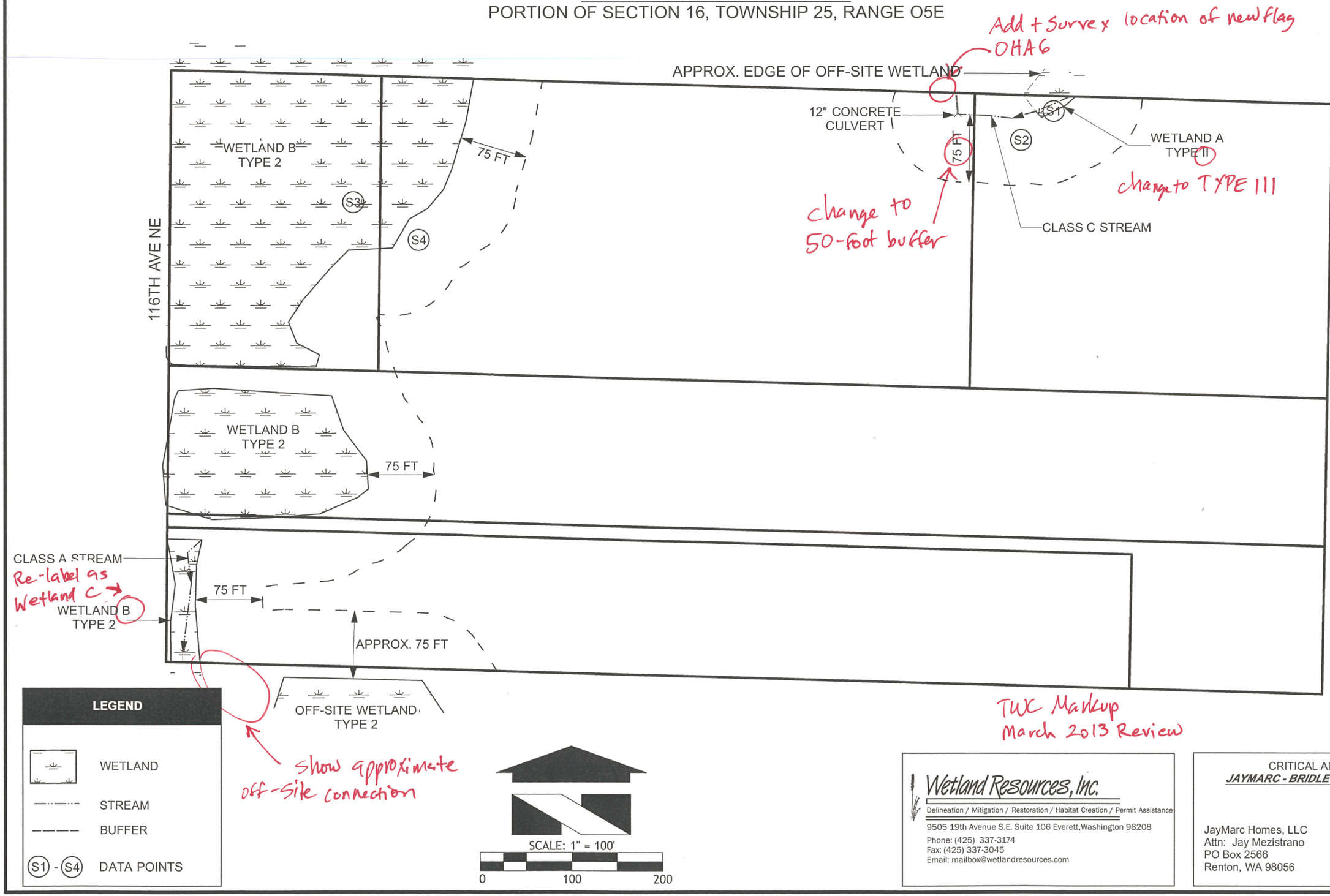
Question: Is the total greater than or equal to 22 points?

Answer:

Yes = Type 2

No = Type 3

CRITICAL AREA STUDY
JAYMARC - BRIDLE TRAILS
PORTION OF SECTION 16, TOWNSHIP 25, RANGE O5E



TWC Markup
March 2013 Review

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CRITICAL AREA STUDY
JAYMARC - BRIDLE TRAILS PROPERTY

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Renton, WA 98056

Sheet 1/1
WRI Job # 12257
Drawn by: MK
Date: 2.12.13