

February 13, 2023

Dirk Nevelle cdneve@icloud.com AOA-6678

SUBJECT: Critical Areas Designation for 10408 – 420th Ave. SE Parcel 032308-9160, King County, WA

Dear Dirk:

On February 1, 2023 AOA conducted a wetland and stream reconnaissance on the subject property utilizing the methodology outlined in the May 2010 *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0).* The northeast portion of the site is currently developed with your single-family residence and the remainder of the site is mostly mowed yard.

One stream (Stream 1) was previously identified in the southwest portion of the site as part of a Critical Areas Designation (CADS16-0163) and was delineated as part of our recent site review. **Attachment A** contains data sheets prepared for representative locations in the uplands on the site. These data sheets document the vegetation, soils, and hydrology information that aided in the no wetland determination for these areas.

Stream 1

Stream 1 drains from south to north through the southwest portion of the site. The stream contains a narrow riparian fringe vegetated with red alder (*Alnus rubra*), western red cedar (*Thuja plicata*), salmonberry (*Rubus spectabilis*), Himalayan blackberry (*Rubus armeniacus*), and creeping buttercup (*Ranunculus repens*).

Stream 1 was previously approved as a Type F stream and requires a standard 165-foot buffer and 15-foot structure setback.

Dirk Nevelle February 13, 2023 Page 2

If you have any questions regarding the delineation, please give me a call.

Sincerely,

ALTMANN OLIVER ASSOCIATES, LLC

John altman

John Altmann Ecologist

Attachments



PO Box 578 Carnation, WA 98014 Office (425) 333-4535 Fax (425) 333-4509

AOA - 6678

AOA Environmental Planning & Landscape Architecture

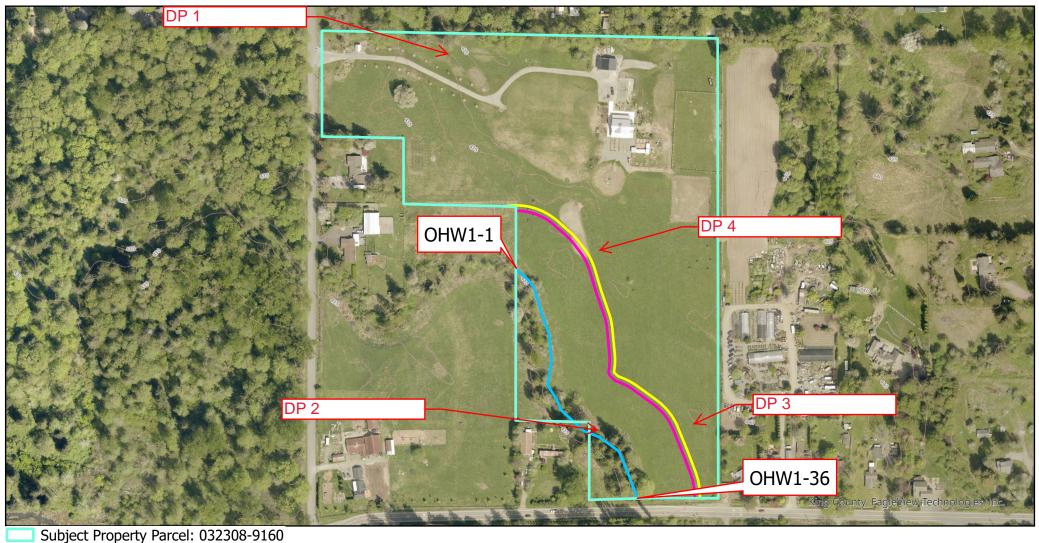
King County Parcel 032308-9160

Approximate OHW Type F Stream

Approximate 165' Stream Buffer

Approximate 15' Building Setback

Critical Areas Map





| Project Site: | Parcel 03 | 32308- | <u>9160</u> | | | С | ity/County: | | /King | 1 | | Sampling D | Date: | <u>2-1</u> - | 23 | |
|--------------------------|----------------|---------|--------------------|-----------|--------------------|-------------|-------------|----------|---------------|--------------|------------|--------------------|----------------|--------------|------------|---|
| Applicant/Owner: | Nevelle | | | | | | | | | State: | WA | Sampling F | oint: | DP# | <i>‡</i> 1 | |
| Investigator(s): | John Altn | nann, . | Jason Panzera, | Dain A | <u>ltmann</u> | | | Se | ection, | Towns | hip, Rang | je: <u>S3, T23</u> | <u>8N, R8E</u> | | | |
| Landform (hillslope, ter | race, etc. |): _ | | | | Local relie | ef (concave | , conve | x, non | e): <u>(</u> | concave | | Slop | be (%): | | _ |
| Subregion (LRR): | <u>A</u> | | | Lat | t: <u>47.50535</u> | | | Long: | <u>-121.7</u> | 7771 | | | Datum: | NAD8 | <u>3</u> | |
| Soil Map Unit Name: | <u>236, 53</u> | | | | | | | | | I | NWI class | sification: | PFOC | | | |
| Are climatic / hydrologi | c conditio | ns on t | he site typical fo | or this t | ime of year? | Yes | \boxtimes | No | | (lf no, | explain ir | n Remarks.) | | | | |
| Are Vegetation 🛛 🔀, | Soil | □, | or Hydrology | □, | significantly dis | turbed? | Are "Nor | mal Cir | cumst | ances" | present? | | Yes | \boxtimes | No | |
| Are Vegetation | Soil | □, | or Hydrology | □, | naturally proble | ematic? | (If neede | ed, expl | ain an | y answ | ers in Re | marks.) | | | | |

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| Hydrophytic Vegetation Present? | Yes | No | Ø | | | | |
|---------------------------------|-----|----|-------------|--|-----|----|-------------|
| Hydric Soil Present? | Yes | No | | Is the Sampled Area within a Wetland? | Yes | No | \boxtimes |
| Wetland Hydrology Present? | Yes | No | \boxtimes | | | | |
| Remarks: upland area, see map | | | | | | | |

| <u>Tree Stratum</u> (Plot size: <u>10'</u>) | Absolute <u>% Cover</u> | Dominant <u>Species?</u> | Indicator <u>Status</u> | Dominance Test Worksheet: | | |
|---|----------------------------|-----------------------------|----------------------------|--|--------------------------|-------|
| 1. <u>Acer macrophyllum</u> | <u>100</u> | <u>yes</u> | FACU | Number of Dominant Species | <u>2</u> | (A) |
| 2. <u>Prunus emarignata</u> | <u>50</u> | <u>yes</u> | FACU | That Are OBL, FACW, or FAC: | <u> </u> | (A) |
| 3. <u>Thuja plicata</u> | <u>10</u> | no | FAC | Total Number of Dominant | <u>6</u> | (B) |
| 4 | | | | Species Across All Strata: | <u>u</u> | (D) |
| 50% = <u>80</u> , 20% = <u>32</u> | <u>160</u> | = Total Cove | er | Percent of Dominant Species | 33.3 | (A/B) |
| Sapling/Shrub Stratum (Plot size: <u>10'</u>) | | | | That Are OBL, FACW, or FAC: | <u>33.3</u> | (7,0) |
| 1. <u>Rubus armeniacus</u> | <u>40</u> | <u>yes</u> | FAC | Prevalence Index worksheet: | | |
| 2. <u>Symphoricarpos albus</u> | <u>20</u> | <u>yes</u> | FACU | Total % Cover of: | Multiply by: | |
| 3 | | | | OBL species | x1 = | |
| l | | | | FACW species | x2 = | |
| 5 | | | | FAC species | x3 = | |
| 50% = <u>30</u> , 20% = <u>12</u> | <u>60</u> | = Total Cove | er | FACU species | x4 = | |
| <u>Herb Stratum (</u> Plot size: <u>10'</u>) | | | | UPL species | x5 = | |
| 1. <u>unidentified mowed lawn</u> | <u>40</u> | <u>yes</u> | | Column Totals:(A) | | (B) |
| 2. <u>Ranunculus repens</u> | <u>20</u> | yes | FAC | Prevalence Index = B/ | A = | |
| 3. <u>Taraxacum officinale</u> | <u>10</u> | no | FACU | Hydrophytic Vegetation Indicators: | | |
| 4 | | | | 1 – Rapid Test for Hydrophytic Veg | etation | |
| 5 | | | | □ 2 - Dominance Test is >50% | | |
| S | | | | □ 3 - Prevalence Index is $\leq 3.0^1$ | | |
| | | | | 4 - Morphological Adaptations ¹ (Pro | vide supporting | |
| 3 | | | | data in Remarks or on a separat | | |
|) | | | | 5 - Wetland Non-Vascular Plants ¹ | | |
| 10 | | | | Problematic Hydrophytic Vegetation | 1 ¹ (Explain) | |
| 1. | | | | , | () | |
| 50% = <u>35,</u> 20% = <u>14</u> | 70 | = Total Cove | er | ¹ Indicators of hydric soil and wetland hydric be present, unless disturbed or problemation | | |
| <u>Noody Vine Stratum (</u> Plot size: <u>10'</u>) | | | | be present, unless disturbed of problema | uc. | |
| 1 | | | | | | |
| 2. | | | | Hydrophytic | | |
| 50% =, 20% = | | = Total Cove | er | Vegetation Yes | □ No | |
| % Bare Ground in Herb Stratum | | | | Present? | | |
| | | | | | | |

SOIL

| SOIL | | | | | | | | Sampling Point: [| <u>)P#5</u> | | | |
|-------------|-----------------------------|--------------|--------------|---------------------|----------------------|------------------------|---------------|--|-------------|---------|------|-------------|
| Profile I | Description: (Describe to | the depth | needed to de | ocument the indica | tor or confi | rm the absenc | e of indicate | ors.) | | | | |
| Dept | th Matrix | | | Redox Fea | atures | | | | | | | |
| (inches) |) Color (moist) | % | Color (mo | ist) % | Type ¹ | Loc ² | Texture | | Rem | narks | | |
| <u>0-16</u> | <u>6 10 YR 4/4</u> | <u>100</u> | | | | | gravel lo | <u>am</u> | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
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| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | C= Concentration, D=Deplet | , | | , | oated Sand | Grains. ² L | | Pore Lining, M=Mat | | | | |
| - | Soil Indicators: (Applicabl | le to all LF | | | | | | ators for Problema | | ric Soi | ls³: | |
| | istosol (A1) | | | Sandy Redox (S5) | | | | 2 cm Muck (A10) | | | | |
| 🗆 Hi | istic Epipedon (A2) | | | Stripped Matrix (S6 | 5) | | | Red Parent Mate | rial (TF2) |) | | |
| 🗆 ві | lack Histic (A3) | | | Loamy Mucky Mine | eral (F1) (ex | cept MLRA 1) | | Very Shallow Dar | k Surface | e (TF1 | 2) | |
| | ydrogen Sulfide (A4) | | | Loamy Gleyed Mat | rix (F2) | | | Other (Explain in | Remarks | 5) | | |
| | epleted Below Dark Surface | e (A11) | | Depleted Matrix (F3 | 3) | | | | | | | |
| TI 🗌 | hick Dark Surface (A12) | | | Redox Dark Surfac | e (F6) | | | | | | | |
| 🗆 Sa | andy Mucky Mineral (S1) | | | Depleted Dark Surf | ace (F7) | | | cators of hydrophytic etland hydrology mu | | | d | |
| 🔲 Sa | andy Gleyed Matrix (S4) | | | Redox Depressions | s (F8) | | | nless disturbed or pr | | | | |
| Restrict | tive Layer (if present): | | | | | | | | | | | |
| Type: | | | | | | | | | | | | |
| Depth (i | nches): | | | | | Hydric Soils | Present? | Ye | es 🗆 | | No | \boxtimes |
| Remark | s: | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |

| Wetl | and Hydrology Indicate | ors: | | | | | | |
|-------|---|-----------|----------|----------|---|--|--------------------------------|---|
| Prima | ary Indicators (minimum | of one re | quired; | check | all that | apply) | Sec | ondary Indicators (2 or more required) |
| | Surface Water (A1) | | | | | Water-Stained Leaves (B9) | | Water-Stained Leaves (B9) |
| | High Water Table (A2) | | | | | (except MLRA 1, 2, 4A, and 4B) | | (MLRA 1, 2, 4A, and 4B) |
| | Saturation (A3) | | | | | Salt Crust (B11) | | Drainage Patterns (B10) |
| | Water Marks (B1) | | | | | Aquatic Invertebrates (B13) | | Dry-Season Water Table (C2) |
| | Sediment Deposits (B2 | 2) | | | | Hydrogen Sulfide Odor (C1) | | Saturation Visible on Aerial Imagery (C9) |
| | Drift Deposits (B3) | | | | | Oxidized Rhizospheres along Living Roots (C3) | 3) 🗆 | Geomorphic Position (D2) |
| | Algal Mat or Crust (B4 |) | | | | Presence of Reduced Iron (C4) | | Shallow Aquitard (D3) |
| | Iron Deposits (B5) | | | | | Recent Iron Reduction in Tilled Soils (C6) | | FAC-Neutral Test (D5) |
| | Surface Soil Cracks (B | 6) | | | Stunted or Stresses Plants (D1) (LRR A) | | Raised Ant Mounds (D6) (LRR A) | |
| | Inundation Visible on A | erial Ima | agery (E | 87) | | Other (Explain in Remarks) | | Frost-Heave Hummocks (D7) |
| | Sparsely Vegetated Co | oncave S | urface | (B8) | | | | |
| Field | Observations: | | | | | | | |
| Surfa | ce Water Present? | Yes | | No | \boxtimes | Depth (inches): | | |
| Wate | r Table Present? | Yes | | No | \boxtimes | Depth (inches): | | |
| | ation Present? des capillary fringe) | Yes | | No | \boxtimes | Depth (inches): Wet | etland Hy | drology Present? Yes 🗌 No 🛛 |
| Desc | ribe Recorded Data (stre | eam gau | ge, mor | nitoring | well, a | erial photos, previous inspections), if available: | | |
| Rem | arks: Dry | | | | | | | |

| Project Site: | Parcel 03 | 2308-9 | 9160 | | | Ci | ty/County: | | /King | 1 | | Sampling D | Date: | <u>2-1</u> - | -23 | |
|-------------------------|----------------|---------|--------------------|-----------|--------------------|-------------|-------------|----------|---------|---------|----------------|--------------------|----------------|--------------|------------|---|
| Applicant/Owner: | Nevelle | | | | | | | | | State: | WA | Sampling F | oint: | DP | <u> #2</u> | |
| Investigator(s): | John Altn | nann, J | ason Panzera, | Dain A | <u>ltmann</u> | | | Se | ection, | Towns | hip, Rang | je: <u>S3, T23</u> | <u>3N, R8E</u> | | | |
| Landform (hillslope, te | rrace, etc.) |): | | | | Local relie | ef (concave | , conve | ex, non | e): | <u>concave</u> | | Slop | e (%): | | _ |
| Subregion (LRR): | <u>A</u> | | | La | t: <u>47.50535</u> | | | Long: | -121.7 | 7771 | | | Datum: | NAD8 | <u>3</u> | |
| Soil Map Unit Name: | <u>236, 53</u> | | | | | | | | | | NWI class | sification: | PFOC | | | |
| Are climatic / hydrolog | c conditio | ns on t | he site typical fo | or this t | ime of year? | Yes | \boxtimes | No | | (lf no, | explain ir | n Remarks.) | | | | |
| Are Vegetation , | Soil | □, | or Hydrology | □, | significantly dis | turbed? | Are "Nor | mal Ci | rcumst | ances" | present? | | Yes | \boxtimes | No | |
| Are Vegetation | Soil | □, | or Hydrology | □, | naturally proble | matic? | (If neede | ed, expl | ain an | y answ | ers in Re | marks.) | | | | |

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

| Hydrophytic Vegetation Present? | Yes | No | \boxtimes | | | | |
|--|-----|----|-------------|--|-----|----|-------------|
| Hydric Soil Present? | Yes | No | | Is the Sampled Area within a Wetland? | Yes | No | \boxtimes |
| Wetland Hydrology Present? | Yes | No | \boxtimes | | | | |
| Remarks: Located in upland off of OHW 1-24 | | | | | | | |

VEGETATION – Use scientific names of plants Absolute Dominant Indicator Tree Stratum (Plot size: 10') Dominance Test Worksheet: % Cover Species? Status 1. Thuja plicata 100 FAC yes Number of Dominant Species 2 (A) That Are OBL, FACW, or FAC: 2. 3. Total Number of Dominant 4 (B) Species Across All Strata: 4. 50% = <u>50</u>, 20% = <u>20</u> 100 = Total Cover Percent of Dominant Species (A/B) 50 That Are OBL, FACW, or FAC: Sapling/Shrub Stratum (Plot size: 10') 1. Rubus laciniatus FACU Prevalence Index worksheet: 2 yes 2. Oemleria cerasiformis FACU Total % Cover of: 1 <u>yes</u> Multiply by: 3. OBL species x1 = 4. **FACW** species x2 = FAC species 5. x3 = <u>190</u> <u>570</u> 50% = <u>1.5</u>, 20% = <u>0.6</u> FACU species x4 = 3 = Total Cover 13 <u>52</u> Herb Stratum (Plot size: 10') UPL species x5 = 1. Ranunculus repens <u>90</u> <u>yes</u> FAC Column Totals: <u>203</u> (A) 622 (B) 2. Taraxacum officinale FACU <u>5</u> Prevalence Index = B/A = 3.06no 3. Geranium robertianum 5 FACU Hydrophytic Vegetation Indicators: no 4. 1 – Rapid Test for Hydrophytic Vegetation 5. _____ 2 - Dominance Test is >50% 6. 3 - Prevalence Index is <3.01 7. 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) 8. ____ 9. 5 - Wetland Non-Vascular Plants¹ 10. Problematic Hydrophytic Vegetation¹ (Explain) 11. _____ ¹Indicators of hydric soil and wetland hydrology must 50% = , 20% = = Total Cover be present, unless disturbed or problematic. Woody Vine Stratum (Plot size: 10') 1. Hydrophytic 2. Vegetation \boxtimes Yes No 50% = ____, 20% = ____ = Total Cover Present? % Bare Ground in Herb Stratum Remarks:

SOIL

| SOI | L | | | | | | | | Samplir | ng Point: <u>DP</u> # | <u> </u> | | |
|-------|------------|----------------------|--------------|--------------|------------------|--------------------------|------------------------|--------------|---------------------------------|-----------------------|-----------|--------|-------------|
| Prof | ile Desc | ription: (Describe t | o the depth | needed to d | ocument the indi | icator or confir | m the absenc | e of indicat | ors.) | | | | |
| D | Depth | Matrix | | | Redox | Features | | | | | | | |
| (incl | hes) | Color (moist) | % | Color (mo | oist) % | Type ¹ | Loc ² | Texture | | l | Remarks | ; | |
| (| 0-16 | <u>10 YR 3/2</u> | 100 | | | | | sandy o | lay | _ | | | |
| _ | | | | | | | | | | _ | | | |
| _ | | | | | | | | | | _ | | | |
| _ | | | | | | | | | | _ | | | |
| _ | | | | | | | | | | _ | | | |
| _ | | | | | | | | | | _ | | | |
| _ | | | | | | | | | | _ | | | |
| _ | | | | | | | | | | _ | | | |
| ¹Тур | e: C= Co | ncentration, D=Dep | letion, RM=I | Reduced Matr | ix, CS=Covered o | r Coated Sand | Grains. ² L | ocation: PL | =Pore Lining, | , M=Matrix | | | |
| Hyd | ric Soil I | ndicators: (Applica | ble to all L | RRs, unless | otherwise noted. |) | | Indi | cators for Pi | roblematic H | lydric S | oils³: | |
| | Histoso | l (A1) | | | Sandy Redox (S | 65) | | | 2 cm Muc | k (A10) | | | |
| | Histic E | pipedon (A2) | | | Stripped Matrix | (S6) | | | Red Pare | nt Material (1 | F2) | | |
| | Black F | listic (A3) | | | Loamy Mucky N | lineral (F1) (exc | ept MLRA 1) | | Very Shal | low Dark Su | rface (TF | 12) | |
| | Hydrog | en Sulfide (A4) | | | Loamy Gleyed N | Matrix (F2) | | | Other (Ex | plain in Rem | arks) | | |
| | Deplete | ed Below Dark Surfa | ce (A11) | | Depleted Matrix | (F3) | | | | | | | |
| | Thick D | ark Surface (A12) | | | Redox Dark Sur | face (F6) | | | | | | | |
| | Sandy | Mucky Mineral (S1) | | | Depleted Dark S | Surface (F7) | | | icators of hyd vetland hydro | | | | |
| | Sandy | Gleyed Matrix (S4) | | | Redox Depressi | ons (F8) | | | inless disturb | | | , | |
| Rest | trictive L | ayer (if present): | | | | | | | | | | | |
| Туре | e: | | | | | | | | | | | | |
| Dept | th (inches | s): | | | | | Hydric Soils I | Present? | | Yes | | No | \boxtimes |
| Rem | narks: | No redoximorphic fe | eatures | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |

| Wetla | Vetland Hydrology Indicators: | | | | | | | | | | | |
|-------|---|-----------|-----------------------|----------|-------------|--|----------------------|---------------------------|--------------|---------|----|--|
| Prima | ary Indicators (minimum | of one re | equired | ; check | all tha | apply) | Se | econdary Indicators (2 or | more requir | ed) | | |
| | Surface Water (A1) | | | | | Water-Stained Leaves (B9) | | Water-Stained Leave | s (B9) | | | |
| | High Water Table (A2) |) | | | | (except MLRA 1, 2, 4A, and 4B) | | (MLRA 1, 2, 4A, and | 4B) | | | |
| | Saturation (A3) | | | | | Salt Crust (B11) | | Drainage Patterns (B | 10) | | | |
| | Water Marks (B1) | | | | | Aquatic Invertebrates (B13) | | Dry-Season Water Ta | able (C2) | | | |
| | Sediment Deposits (B | 2) | | | | Hydrogen Sulfide Odor (C1) | | Saturation Visible on | Aerial Image | ery (C9 |) | |
| | Drift Deposits (B3) | | | | | Oxidized Rhizospheres along Living Roots (C3) | 5) (| Geomorphic Position | (D2) | | | |
| | Algal Mat or Crust (B4 |) | | | | | Shallow Aquitard (D3 |) | | | | |
| | Iron Deposits (B5) | | FAC-Neutral Test (D5) | | | | | | | | | |
| | Surface Soil Cracks (E | 36) | | | | Raised Ant Mounds (D6) (LRR A) | | | | | | |
| | | | | | | | | | | | | |
| | Sparsely Vegetated C | oncave S | Surface | (B8) | | | | | | | | |
| Field | Observations: | | | | | | | | | | | |
| Surfa | ce Water Present? | Yes | | No | \boxtimes | Depth (inches): | | | | | | |
| Wate | r Table Present? | Yes | | No | \boxtimes | Depth (inches): | | | | | | |
| | ation Present? des capillary fringe) | Yes | | No | \boxtimes | Depth (inches): We | tland H | ydrology Present? | Yes | | No | |
| Desc | ribe Recorded Data (str | eam gau | ge, mor | nitoring | well, a | erial photos, previous inspections), if available: | | | | | | |
| | | | | | | | | | | | | |
| Rem | Remarks: Dry | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |

| Project Site: | Parcel 03 | 32308-9 | 9160 | | | С | ity/County: | | /King | 1 | Sampling D | Date: | <u>2-1-</u> | 23 | |
|--------------------------|----------------|---------|--------------------|-----------|--------------------|------------|-------------|----------|--------------|---------------------|--------------------|----------------|-------------|-----------|--|
| Applicant/Owner: | Nevelle | | | | | | | | | State: <u>WA</u> | Sampling F | oint: | DP# | <u>#3</u> | |
| Investigator(s): | John Altn | nann, J | lason Panzera, | Dain A | <u>ltmann</u> | | | Se | ection, | Township, Ran | ge: <u>S3, T23</u> | <u>8N, R8E</u> | | | |
| Landform (hillslope, ter | rrace, etc. |): | | | | Local reli | ef (concave | e, conve | ex, nor | ie): <u>concave</u> | | Slop | be (%): | | |
| Subregion (LRR): | <u>A</u> | | | La | t: <u>47.50535</u> | | | Long: | <u>-121.</u> | 7771 | | Datum: | NAD8 | <u>3</u> | |
| Soil Map Unit Name: | <u>236, 53</u> | | | | | | | | | NWI clas | sification: | PFOC | | | |
| Are climatic / hydrologi | c conditio | ns on t | he site typical fo | or this t | ime of year? | Yes | \boxtimes | No | | (If no, explain i | n Remarks.) | | | | |
| Are Vegetation 🛛 🔀, | Soil | □, | or Hydrology | □, | significantly dis | sturbed? | Are "No | rmal Ci | rcumst | ances" present | ? | Yes | \bowtie | No | |
| Are Vegetation | Soil | □, | or Hydrology | □, | naturally proble | ematic? | (If neede | ed, exp | ain an | y answers in Re | emarks.) | | | | |

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| Hydrophytic Vegetation Present? | Yes | No | | | | | |
|--|-----|----|-------------|--|-----|----|-------------|
| Hydric Soil Present? | Yes | No | | Is the Sampled Area within a Wetland? | Yes | No | \boxtimes |
| Wetland Hydrology Present? | Yes | No | \boxtimes | | | | |
| Remarks: Located in upland area, see map | | | | | | | |

VEGETATION – Use scientific names of plants

| <u>Tree Stratum</u> (Plot size: <u>10'</u>) | Absolute <u>% Cover</u> | Dominant Species? | Indicator <u>Status</u> | Dominance Test Worksheet: |
|---|----------------------------|----------------------|----------------------------|---|
| 1 | | | | Number of Dominant Species (A) |
| 2 | | | | That Are OBL, FACW, or FAC: |
| 3 | | | | Total Number of Dominant (B) |
| 4 | | | | Species Across All Strata: |
| 50% =, 20% = | | = Total Cover | | Percent of Dominant Species (A/B) |
| Sapling/Shrub Stratum (Plot size: 10') | | | | That Are OBL, FACW, or FAC: |
| 1 | | | | Prevalence Index worksheet: |
| 2 | | | | Total % Cover of: Multiply by: |
| 3 | | | | OBL species x1 = |
| 4 | | | | FACW species x2 = |
| 5 | | | | FAC species x3 = |
| 50% =, 20% = | | = Total Cover | | FACU species x4 = |
| <u>Herb Stratum (</u> Plot size: <u>10'</u>) | | | | UPL species x5 = |
| 1. unidentified mowed lawn | <u>100</u> | yes | | Column Totals:(A)(B) |
| 2. <u>ranunculus repens</u> | <u>10</u> | <u>no</u> | FAC | Prevalence Index = B/A = |
| 3 | | | | Hydrophytic Vegetation Indicators: |
| 4 | | | | 1 – Rapid Test for Hydrophytic Vegetation |
| 5 | | | | □ 2 - Dominance Test is >50% |
| 6 | | | | \Box 3 - Prevalence Index is $\leq 3.0^1$ |
| 7 | | | | 4 - Morphological Adaptations ¹ (Provide supporting |
| 8 | | | | data in Remarks or on a separate sheet) |
| 9 | | | | 5 - Wetland Non-Vascular Plants ¹ |
| 10 | | | | Problematic Hydrophytic Vegetation ¹ (Explain) |
| 11 | | | | |
| 50% =, 20% = | | = Total Cover | | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| Woody Vine Stratum (Plot size: 10') | | | | |
| 1 | | | | |
| 2 | | | | Hydrophytic |
| 50% =, 20% = | | = Total Cover | | Vegetation Yes □ No ⊠ Present? |
| % Bare Ground in Herb Stratum | | | | |
| Remarks: | | | | |
| | | | | |

SOIL

| SOI | L | | | | | | | | Sampl | ing Point: <u>DP</u> | <u>#3</u> | | |
|-------|--|---------------------|--------------|---------------|-----------------|-------------------------|----------------------------|---------------|-------------|-------------------------------|----------------------|------|-------------|
| Prof | ile Descr | iption: (Describe t | o the depth | n needed to d | ocument the in | dicator or confi | rm the absend | ce of indicat | tors.) | | | | |
| D | epth | Matrix | | | Redo | x Features | | | | | | | |
| (incł | nes) | Color (moist) | % | Color (mo | oist) % | Type ¹ | Loc ² | Texture | 9 | Remarks | | | |
| (| 0-16 | <u>10 YR 5/3</u> | 100 | | | | | sandy lo | bam | _ | | | |
| _ | | | | | | | | | | _ | | | |
| _ | | | | | | | | | | _ | | | |
| _ | | | <u> </u> | | | | | | | _ | | | |
| _ | | | <u> </u> | | | | | | | _ | | | |
| _ | | | | | | | | | | _ | | | |
| _ | | | <u> </u> | | | | | | | _ | | | |
| _ | | | <u> </u> | | | | | | | _ | | | |
| ¹Тур | ¹ Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Location: PL=Pore Lining, M=Matrix | | | | | | | | | | | | |
| Hydı | ric Soil Ir | dicators: (Applica | ble to all L | RRs, unless o | otherwise noted | | Indi | cators for F | Problematic | Hydric S | Soils ³ : | | |
| | Histoso | (A1) | | | Sandy Redox | (S5) | | | 2 cm Mu | ck (A10) | | | |
| | Histic E | pipedon (A2) | | | Stripped Matrix | k (S6) | | | Red Par | TF2) | | | |
| | Black H | istic (A3) | | | Loamy Mucky | Mineral (F1) (ex | cept MLRA 1) | | Very Sha | allow Dark Su | irface (T | F12) | |
| | Hydroge | en Sulfide (A4) | | | Loamy Gleyed | Matrix (F2) | Other (Explain in Remarks) | | | | | | |
| | Deplete | d Below Dark Surfa | ce (A11) | | Depleted Matri | x (F3) | | | | | | | |
| | Thick D | ark Surface (A12) | | | Redox Dark Su | urface (F6) | | | | | | | |
| | Sandy M | /lucky Mineral (S1) | | | Depleted Dark | Surface (F7) | | | | drophytic veo ology must b | | | |
| | Sandy 0 | Gleyed Matrix (S4) | | | Redox Depres | sions (F8) | | | | bed or proble | | it, | |
| Rest | rictive L | ayer (if present): | | | | | | | | | | | |
| Туре | e: | | | | | | | | | | | | |
| Dept | Depth (inches): | | | | | | | Present? | | Yes | | No | \boxtimes |
| Rem | arks: | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |

| Wetla | Wetland Hydrology Indicators: | | | | | | | | | | | | | | |
|---|---|-----------|---------|----------|-------------|--|-------------|---|---|---|--|--|--|--|--|
| Prima | ary Indicators (minimum | of one re | equired | ; check | all tha | apply) | Se | Secondary Indicators (2 or more required) | | | | | | | |
| | Surface Water (A1) | | | | | Water-Stained Leaves (B9) | | Water-Stained Leaves (B9) | | | | | | | |
| | High Water Table (A2) | | | | | (except MLRA 1, 2, 4A, and 4B) | | (MLRA 1, 2, 4A, and 4B) | | | | | | | |
| | Saturation (A3) | | | | | Salt Crust (B11) | | Drainage Patterns (B10) | | | | | | | |
| | Water Marks (B1) | | | | | Aquatic Invertebrates (B13) | | Dry-Season Water Table (C2) | | | | | | | |
| | Sediment Deposits (B2) | | | | | Hydrogen Sulfide Odor (C1) | | Saturation Visible on | Saturation Visible on Aerial Imagery (C9) | | | | | | |
| | Drift Deposits (B3) | | | | | Oxidized Rhizospheres along Living Roots (C3) | 5) (| Geomorphic Position (D2) | | | | | | | |
| | Algal Mat or Crust (B4) | | | | | Presence of Reduced Iron (C4) | | Shallow Aquitard (D3) |) | | | | | | |
| | Iron Deposits (B5) | | | | | Recent Iron Reduction in Tilled Soils (C6) | | FAC-Neutral Test (D5) | | | | | | | |
| | Surface Soil Cracks (E | 36) | | | | Stunted or Stresses Plants (D1) (LRR A) | | Raised Ant Mounds (I | D6) (LRR A |) | | | | | |
| | Inundation Visible on Aerial Imagery (B7) | | | | | Other (Explain in Remarks) | | Frost-Heave Hummo | cks (D7) | | | | | | |
| Sparsely Vegetated Concave Surface (B8) | | | | | | | | | | | | | | | |
| Field | Observations: | | | | | | | | | | | | | | |
| Surfa | ce Water Present? | Yes | | No | \boxtimes | Depth (inches): | | | | | | | | | |
| Wate | r Table Present? | Yes | | No | \boxtimes | Depth (inches): | | | | | | | | | |
| | ation Present? des capillary fringe) | Yes | | No | \boxtimes | Depth (inches): We | etland H | land Hydrology Present? Yes 🔲 No 🛛 | | | | | | | |
| Desc | ribe Recorded Data (str | eam gau | ge, mor | nitoring | well, a | erial photos, previous inspections), if available: | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| Rem | arks: Dry | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |

| Project Site: | Parcel 03 | 32308-9 | 9160 | | | С | ity/County: | | /King | 1 | | Sampling [| Date: | <u>2-1-</u> | 23 | |
|--|--|---------|--------------------|-----------|-------------------|----------|-------------|------------|---------------|---------|------------|--------------------|----------------|-------------|-----------|--|
| Applicant/Owner: | Nevelle | | | | | | | | | State: | WA | Sampling F | Point: | DP# | <u>‡4</u> | |
| Investigator(s): John Altmann, Jason Panzera, Dain Altmann | | | | | | | | Se | ection, | Towns | hip, Rang | je: <u>S3, T23</u> | <u>3N, R8E</u> | | | |
| Landform (hillslope, ter | Local relief (concave, convex, none): <u>concave</u> | | | | | | | Slope (%): | | | | | | | | |
| Subregion (LRR): | <u>A</u> | | | Lat | : <u>47.50535</u> | | | Long: | <u>-121.7</u> | 7771 | | | Datum: | NAD8 | <u>3</u> | |
| Soil Map Unit Name: | <u>236, 53</u> | | | | | | | | | | NWI class | sification: | PFOC | | | |
| Are climatic / hydrologi | c conditio | ns on t | he site typical fo | or this t | ime of year? | Yes | \boxtimes | No | | (lf no, | explain ir | n Remarks.) | | | | |
| Are Vegetation 🛛 🔀, | Soil | □, | or Hydrology | □, | significantly dis | sturbed? | Are "Nor | rmal Ci | rcumsta | ances" | present? | | Yes | \bowtie | No | |
| Are Vegetation | Soil | □, | or Hydrology | □, | naturally proble | ematic? | (If neede | ed, expl | ain an | y answ | ers in Re | marks.) | | | | |

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| Hydrophytic Vegetation Present? Hydric Soil Present? | Yes Yes | No No | Is the Sampled Area | Yes | No | X |
|---|------------|----------|---------------------|-----|----|---|
| Wetland Hydrology Present? | Yes | No | within a Wetland? | 103 | NO | |
| Remarks: Located in upland area, see map | | | | | | |

VEGETATION – Use scientific names of plants

| <u>Tree Stratum</u> (Plot size: <u>10'</u>) | Absolute % Cover | Dominant Species? | Indicator Status | Dominance Test Worksheet: |
|---|---------------------|----------------------|---------------------|---|
| 1 | | | | Number of Dominant Species |
| 2 | | | | That Are OBL, FACW, or FAC: (A) |
| 3 | | | | Total Number of Dominant (B) |
| 4 | | | | Species Across All Strata: |
| 50% =, 20% = | | = Total Cover | | Percent of Dominant Species (A/B) |
| Sapling/Shrub Stratum (Plot size: 10') | | | | That Are OBL, FACW, or FAC: |
| 1 | | | | Prevalence Index worksheet: |
| 2 | | | | Total % Cover of: Multiply by: |
| 3 | | | | OBL species x1 = |
| 4 | | | | FACW species x2 = |
| 5 | | | <u> </u> | FAC species x3 = |
| 50% =, 20% = | | = Total Cover | | FACU species x4 = |
| <u>Herb Stratum (</u> Plot size: <u>10'</u>) | | | | UPL species x5 = |
| 1. <u>unidentified mowed lawn</u> | <u>100</u> | <u>yes</u> | | Column Totals:(A)(B) |
| 2 | | | | Prevalence Index = B/A = |
| 3 | | | | Hydrophytic Vegetation Indicators: |
| 4 | | | | 1 – Rapid Test for Hydrophytic Vegetation |
| 5 | | | | □ 2 - Dominance Test is >50% |
| 6 | | | | \Box 3 - Prevalence Index is $\leq 3.0^1$ |
| 7 | | | | 4 - Morphological Adaptations ¹ (Provide supporting |
| 8 | | | | data in Remarks or on a separate sheet) |
| 9 | | | | 5 - Wetland Non-Vascular Plants ¹ |
| 10 | | | | Problematic Hydrophytic Vegetation ¹ (Explain) |
| 11 | | | | |
| 50% =, 20% = | | = Total Cover | | ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| Woody Vine Stratum (Plot size: <u>10'</u>) | | | | |
| 1 | | | | |
| 2 | | | | Hydrophytic Vegetation Yes □ No ⊠ |
| 50% =, 20% = | | = Total Cover | | Vegetation Yes □ No ⊠ Present? |
| % Bare Ground in Herb Stratum | | | | |
| Remarks: | | | | |
| | | | | |

SOIL

| SOI | L | | | | | | | | | Sampli | ng Point: <u>DP</u> | #4 | | | | | |
|-------|--|---------------------|--------------|---------------|----------------|--------------------|----------------------------|-----------|-------------------|------------|-------------------------------|----------|------|-------------|--|--|--|
| Prof | ile Descr | iption: (Describe t | o the depth | n needed to d | ocument the in | dicator or conf | irm the absen | ce of inc | dicato | ors.) | | | | | | | |
| D | epth | Matrix | | | Redo | x Features | | | | | | | | | | | |
| (incł | nes) | Color (moist) | % | Color (mo | oist) % | Type ¹ | Loc ² | Te | xture | | Remarks | | | | | | |
| (| 0-16 | <u>10 YR 5/3</u> | 100 | | | | | san | <u>sandy loam</u> | | _ | | | | | | |
| _ | | | | | | | | - | | | _ | | | | | | |
| _ | | | | | | | | - | | | _ | | | | | | |
| _ | | | | | | | | - | | | _ | | | | | | |
| _ | | | | | | | | - | | | _ | | | | | | |
| _ | | | | | | <u> </u> | | - | | · | _ | | | | | | |
| _ | | | | | | | | _ | | | _ | | | | | | |
| _ | | | | | | | | - | | | _ | | | | | | |
| ¹Тур | ¹ Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Location: PL=Pore Lining, M=Matrix | | | | | | | | | | | | | | | | |
| Hydı | ric Soil Ir | dicators: (Applica | ble to all L | RRs, unless o | d.) | | | Indic | ators for P | roblematic | Hydric S | Soils³: | | | | | |
| | Histoso | (A1) | | | Sandy Redox | (S5) | | | \boxtimes | 2 cm Muo | ck (A10) | | | | | | |
| | Histic E | pipedon (A2) | | | Stripped Matri | x (S6) | | | | Red Pare | nt Material (| TF2) | | | | | |
| | Black H | istic (A3) | | | Loamy Mucky | Mineral (F1) (ex | (cept MLRA 1) |) | | Very Sha | llow Dark Su | rface (T | F12) | | | | |
| | Hydroge | en Sulfide (A4) | | | Loamy Gleyed | l Matrix (F2) | Other (Explain in Remarks) | | | | | | | | | | |
| | Deplete | d Below Dark Surfa | ce (A11) | | Depleted Matr | pleted Matrix (F3) | | | | | | | | | | | |
| | Thick D | ark Surface (A12) | | | Redox Dark S | urface (F6) | | | | | | | | | | | |
| | Sandy M | /lucky Mineral (S1) | | | Depleted Dark | Surface (F7) | | | | | drophytic veg blogy must b | | | | | | |
| | Sandy 0 | Gleyed Matrix (S4) | | | Redox Depres | sions (F8) | | | | | biogy must b bed or proble | | it, | | | | |
| Rest | rictive L | ayer (if present): | | | | | | | | | | | | | | | |
| Туре | e: | | | | | | | | | | | | | | | | |
| Dept | Depth (inches): | | | | | | | Presen | t? | | Yes | | No | \boxtimes | | | |
| Rem | arks: | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |

| Wetla | Wetland Hydrology Indicators: | | | | | | | | | | | | | | |
|---|---|-----------|---------|----------|-------------|--|-------------|---|---|---|--|--|--|--|--|
| Prima | ary Indicators (minimum | of one re | equired | ; check | all tha | apply) | Se | Secondary Indicators (2 or more required) | | | | | | | |
| | Surface Water (A1) | | | | | Water-Stained Leaves (B9) | | Water-Stained Leaves (B9) | | | | | | | |
| | High Water Table (A2) | | | | | (except MLRA 1, 2, 4A, and 4B) | | (MLRA 1, 2, 4A, and 4B) | | | | | | | |
| | Saturation (A3) | | | | | Salt Crust (B11) | | Drainage Patterns (B10) | | | | | | | |
| | Water Marks (B1) | | | | | Aquatic Invertebrates (B13) | | Dry-Season Water Table (C2) | | | | | | | |
| | Sediment Deposits (B2) | | | | | Hydrogen Sulfide Odor (C1) | | Saturation Visible on | Saturation Visible on Aerial Imagery (C9) | | | | | | |
| | Drift Deposits (B3) | | | | | Oxidized Rhizospheres along Living Roots (C3) | 5) (| Geomorphic Position (D2) | | | | | | | |
| | Algal Mat or Crust (B4) | | | | | Presence of Reduced Iron (C4) | | Shallow Aquitard (D3) |) | | | | | | |
| | Iron Deposits (B5) | | | | | Recent Iron Reduction in Tilled Soils (C6) | | FAC-Neutral Test (D5) | | | | | | | |
| | Surface Soil Cracks (E | 36) | | | | Stunted or Stresses Plants (D1) (LRR A) | | Raised Ant Mounds (I | D6) (LRR A |) | | | | | |
| | Inundation Visible on Aerial Imagery (B7) | | | | | Other (Explain in Remarks) | | Frost-Heave Hummo | cks (D7) | | | | | | |
| Sparsely Vegetated Concave Surface (B8) | | | | | | | | | | | | | | | |
| Field | Observations: | | | | | | | | | | | | | | |
| Surfa | ce Water Present? | Yes | | No | \boxtimes | Depth (inches): | | | | | | | | | |
| Wate | r Table Present? | Yes | | No | \boxtimes | Depth (inches): | | | | | | | | | |
| | ation Present? des capillary fringe) | Yes | | No | \boxtimes | Depth (inches): We | etland H | land Hydrology Present? Yes 🔲 No 🛛 | | | | | | | |
| Desc | ribe Recorded Data (str | eam gau | ge, mor | nitoring | well, a | erial photos, previous inspections), if available: | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| Rem | arks: Dry | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |