#Remand-25-1

Applicant
Testimony and Rebuttal

ALTERMAN
LAW GROUP

DEAN N. ALTERMAN
ATTORNEY

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DEAN@ALTERMAN.LAW

August 19, 2025

Via e-mail only to cityplanner@corb.us

The Mayor and Councilors
City of Rockaway Beach
PO Box 5
Rockaway Beach, OR 97136

Re: Remand of Nedonna Development for Phase 2 PUD approval
City file # Remand-25-1
Our File No.: 5701.001

Dear Mayor McNeilly and Councilors:

I'm submitting this letter on behalf of Anna Song and Nedonna Development, LLC, in response to the remand of the Phase 2 development of Nedonna Wave, now before the City Council, and to specifically address the location of the R-1 and SA zones on the property.

LUBA remanded this application to you to consider two questions. The first question is to identify the boundaries of the R-1 and SA zones at the property, and more generally how the city sets the boundary between the R-1 and the SA zones. The second is to determine whether the city code requires the recipient of an approval for a phased planned unit development (PUD) who completes the first phase on time to begin the second and subsequent phases within any particular time period.

Nedonna Development suggests that the answer to the first question is that the city sets the boundary of the SA zone for a particular property when an applicant first proposes to develop the property, based on a wetlands delineation at the time. In this case, the city set the boundary of the SA zone on the Nedonna Development property when it accepted the wetlands delineation for the PUD in 2008, and that boundary remains the boundary for the PUD and the property.

The answer to the second question is that if the developer of a phased PUD plats the first phase within the time the code allows, then the code does not place any time limit on when the developer must complete the second and any later phases. You may decide as a matter of policy that you want to change the code

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for future PUD applications. In this case you are bound by the code as it existed when Nedonna Development received its PUD approval.

The applicant is proposing to place the lots in Phase 2 entirely within the areas that the city approved for residential development in Phase 1. Accordingly, the city should approve Phase 2.

I. History

In 2007 Nedonna Development applied to the city to build a 28-lot planned unit development in one phase. In February 2008 the city approved the preliminary plan and imposed the condition that Nedonna Wave complete all improvements within one year, unless the city granted an extension.

Later in 2008 Nedonna Development applied to modify the approval to allow it to construct the PUD in two phases, composed of 8 lots in Phase 1 and 20 lots in Phase 2. The city granted the approval and amended the zoning map to designate the entire property as "PUD."

Within the year after the city approved the PUD, Nedonna Development built all of the utilities for both phases, all of the streets for Phase 1, and most of the streets for Phase 2. The city approved the final plat of Phase 1. Phase 1 included the 8 lots and also included Tracts A, B, and D as common area and Tracts C, E, F, and G for future development. Tract C was later developed as Partition Plat 12-02.

In 2024 Nedonna Development applied to modify the PUD approval, adjust some lot boundaries within the previously approved area, and build the remainder of the PUD in a Phase 2 and a Phase 3 instead of entirely in Phase 2. The city approved most of the lot modifications and denied the request to split Phase 2 into two subphases. Ocean Shores Conservation Coalition appealed the city's approval to the Land Use Board of Appeals. In July 2025 LUBA remanded the case to the city on two specific issues. First, do the approved lots in Phase 2 extend into the SA zone? Second, did the PUD approval expire because Nedonna Wave did not complete all of the Phase 2 improvements within one year after the city approved the request to build the PUD in phases?

II. When the Nedonna Wave Final Plan was approved all 28 proposed lots were within the R-1 zone, and they are therefore within the R-1 zone today.

The city's zoning code contains three relevant provisions. RBZO §2.050 states that "Unless otherwise specified, zone boundaries are section lines, subdivision lines, lot lines, center lines of street or railroad rights-of-way, or such lines extended."

RBZO §3.080(1) describes the purpose of the Special Area Wetlands (SA) zone as being "to conserve significant freshwater wetlands and the shoreland and aquatic environment of Rockaway Beach's lakes." RBZO §3.080(5) states how the city determines the boundaries of the SA zone: "At such time that a development is proposed in the vicinity of an area designated Special Area Wetlands, the City may require an investigation to determine the exact location of the zone boundary. The site investigation shall be performed by a qualified agent such as a biologist from the U.S. Army Corps of Engineers or the Division of State Lands."

In 2007 Nedonna Development submitted a wetlands delineation for its entire parcel. In 2008 the city approved the delineation, the PUD plan, and the plat of Phase 1 that relied on the delineation. Phase 1 included a Tract A identified as common area and that consisted entirely or nearly entirely of delineated wetlands. Because the presumption is that zone lines follow lot lines, the city's 2008 approval of the PUD plan and Phase 1 sets Tract A within the SA zone.

The applicant today is not proposing any residential development within Tract A.

In 2008 the city approved Lots 1 to 8 for present development and the areas identified as future lots for future residential development. Almost all of Tract G and about half of Tract F were identified as areas for future lots. Because the presumption is that zone lines follow lot lines and the SA zone does not allow residential development, the city's 2008 approval of the PUD plan sets the areas for future phases (outlined in yellow on Exhibit 8) **outside** the SA zone and within the R1 zone.

The city made that determination in 2008 and it has become final. Those areas are outside the SA zone. Jackson Street, having been approved and dedicated as a public street, is equally outside the SA zone.

The record contains ample evidence that in 2008 the city considered the areas approved for building lots to be zoned R-1 and not SA.

First is that the entire Nedonna Wave site before development was delineated in 2006 as containing 1.858 acres of wetlands. As part of the overall project Nedonna Development filled 0.332 acres of wetlands and created 0.509 acres of new wetlands in mitigation, resulting in total wetlands of 2.035 acres. In approving #SPUD 07-19 the city a slightly higher figure: the city's decision states that 2.33 acres was zoned SA and 3.9 acres was zoned R-1. Exhibit 1 at pg. 5.

Consistent with RBZO §3.080(5), the city further indicated that the location of the SA zone was determined by a wetland delineation and survey

which was verified by the Oregon Department of State Lands ("DSL") on August 1, 2006. *Id.* Throughout the application process of #SPUD 07-19, the city consistently noted the development zones on the property, their respective acreages, and how the location of the SA zone was determined. Exhibit 1 at pg. 1, 3, 5, 8, 10, 23, & 31.

The 2006 wetland delineation, verified by DLS, showed the bulk of the wetlands located in middle of the property with an overall 1.858 acres of wetlands on the property. Exhibit 2. In order to create lots within large parcels of R-1 property and to conserve tracts of contiguous SA property, the applicant submitted a joint application to the US Army Corps of Engineers ("CoE") and DSL to excavate and fill 0.332 acres of wetland. This would allow for the construction of roadways, the placement of residential lots in accordance with density requirement, and create contiguous wetland areas for preservation. In approving the removal-fill permit ("RF-36702"), Nedonna Development was required to create approximately 0.51 acres of wetland to be consolidated for permanent preservation. This resulted in an increase in overall wetlands and SA zoned land on the property from 1.857 acres to 2.33 acres and shifted the location of the SA zone boundary. As a result of the wetlands delineation and RF-36702, all 28 residential lots would be placed outside of the wetlands and the SA zone. Exhibit 3. This city submitted findings to this effect when it approved the final plan for the Nedonna Wave PUD in 2008.[1] Exhibit 1 at pg. 10.

Tract A, the common area from Phase 1, is indicated as 1.42 acres on the current tax map, which means that Phase 2 contains at most 0.91 acres of land zoned SA. The two small areas of delineated wetland along Riley Street next to Lots 9 and 14 are perhaps 2,000 to 2,500 SF together, or about 0.05 acre. If all of the remaining 0.86 acres of SA land is in Tract F (a tract to be subdivided in Phase 2), which is 1.73 acres, then Tract F contains 0.87 acres of R-1 land. If less than all of the remaining SA land is in Tract F and the two slivers along Riley Street, then Tract F contains more than 0.87 acres of R-1 land.

Thirteen of the residential lots in Phase 2 are within Tract F. Those are lots numbered from 10 to 22. Their areas total 37,444 SF, which is 0.86 acre, less than the minimum 0.87 acre of R-1 land that must exist within Tract F.

It's therefore consistent with the record and the city's 2008 decision to find that the 13 lots within Tract F are zoned R-1 because of the 2008 decision, and are eligible for residential development.

[1]The City would not have issued final approval for the PUD if any of the proposed residential development were within the SA zone because the SA zone does not allow any residential use within the zone.

III. The overall location of the proposed residential lots has not changed and neither has the wetland boundary.

a. This application does not change the area where residential lots are to be placed.

This application only seeks to modify prior approvals in the number of residential lots to be developed and their configuration. These lots continue to be in the same area as proposed in the 2008 final plan approval. Comparing the site plan maps submitted as part of the 2008 approvals to the tentative plans submitted as part of this application illustrates that this is the case. *Compare* Exhibit 4 to Exhibit 5. The only notable changes are the reconfiguration of lots to allow for the two additional proposed lots within the area that the City previously approved for residential development. These changes are:

1. Splitting the lot numbered Lot 24 on the approved plan to create two lots numbered Lots 21 and 22 on the submitted plan.
2. Reconfiguring the three lots numbered as 14, 15, and 16 on the approved plan to create four lots numbered as 13, 14, 15, and 16 on the submitted plan.

All residential lots are still within the area of the property depicted in the approved PUD plan for residential lots.

b. The wetland boundary continues to be in approximately the same location as was determined in 2008.

The 2006 wetland delineation expired in 2011. In December 2024, the applicant's environmental consultant Christine McDonald prepared a new wetlands study and submitted it to DSL. Exhibit 6. The study area for this new delineation covered approximately 3.23 acres and encompassed tax lot 10200 and 10500, and portions of tax lots 10300 and 10400 T2N, R10W 20AB, as depicted on page 10 of Exhibit 6. The study area is the portion of the property covered by Phase 2 of the PUD. On May 20, 2025, DSL approved and validated the new wetlands delineation. Exhibit 7.

Inside the 3.23-acre study area, a total of 0.76 acres of wetlands were documented. Overall, the 2024 delineation report noted the study's findings were consistent with the previous wetland delineation and the wetland creation and fill maps for RF-36702. *Compare* page 7 of Exhibit 7 with Exhibit 2 and Exhibit 3. In addition to depicting the current wetland boundary, the 2024 wetland delineation survey demonstrates that the applicant created new wetlands and filled

portions of the wetlands from 2006 in accordance with the state approval. Exhibit 7 at page 7.

The only area that deviates from the prior wetland delineation is a 0.07-acre area, described as Wetland B in the wetland delineation report, confined to a depression in the Jackson Street right of way. The study determined backflows of water caused by beaver damming created surface water to pool within the depression. This is the same Jackson Street wetland which I addressed in my previous letter dated June 27, 2024. To summarize the previous letter, the depression in Jackson Street occurred when the area was excavated in preparation for rockfill and paving, but the filling and paving was never completed resulting in a depression. This and the beaver damming resulted in surface water pooling in the area.

Other than Wetland B, the 2024 wetland delineation is consistent with the previous wetland delineation and the RF-36702 maps. Overall, the current wetland boundary has not significantly shifted since the 2008 final plan approval, and the City may reasonably approve the applicant's proposal for Phase 2 of the PUD as being consistent with the City's approval of the PUD.

Nedonna Development offers the following finding for you to adopt:

> The City interprets the purpose of RBZO §3.080(1) to be to apply the SA zone to significant wetlands within the City. The City interprets RBZO 3.080(5) to allow the city to determine the boundary between the SA zone and adjoining zones at the time that development is initially proposed in or near wetlands by requiring the applicant to provide a wetlands delineation at the time of the initial proposal. In this instance the City accepted the applicant's wetlands delineation when the City approved the tentative plan of the PUD, and that delineation fixed the boundary between the R-1 zone and the SA zone for the applicant's parcel. In Phase 2 the applicant is proposing residential development to be entirely within the areas that the City found to be within the R-1 zone in 2008. The applicant is not proposing residential development for any area that the City found to be within the SA zone in 2008 and the City may therefore approve Phase 2 as being consistent with the City's findings for the PUD's tentative plan and for Phase 1.

IV. The City's approval of the PUD plan has not expired.

The relevant standard today is at RBZO §10.060, which states that "within one year after concept approval or modified approval of a preliminary development plan, the applicant shall file a final plan for the entire development or, when submission in stages has been authorized, for the first unit of the PUD, with the Planning Commission." Nedonna Development complied with that requirement.

In this case, Nedonna Development obtained approval of its preliminary plan. A few months later the City authorized Nedonna Development to develop the PUD in stages or phases, and within one year Nedonna Development filed its final plan for the first unit of the PUD. As long as the applicant files the final plan for the first unit of the PUD within one year after the City approves the preliminary plan for the PUD, the PUD approval remains valid. Nothing in the code suggests that it expires if the applicant takes more than one year to file a final plan for the second or later stages of a PUD.

The City did include a condition of approval in its February 2008 decision that required the applicant to complete all improvements within one year, unless the city granted an extension. LUBA quoted that condition only in part. The condition appears on page 1465 of the LUBA record and reads in full:

> Final Plat:
>
> 1. The developer shall complete the improvements within one year of tentative plan approval unless an extension is granted by the City to complete improvements. Final plat review shall conform to the procedures of RBZO Article 10 and Article 13.

The underlying PUD decision was not a "tentative plan approval." Rather, it was part of a "Final Approval" of the PUD.

All this condition means is that the applicant must complete the public improvements within one year of obtaining the tentative plan approval for a plat or phase of the PUD before the City will approve the final plat of the phase. The condition does not require Nedonna Development to complete the improvements within one year of the final approval of the PUD plan. If the City had meant to require Nedonna Development to complete all the streets within one year after the City issued the final approval of the PUD, the City would have said so.

Even if the condition in the February 2008 final PUD approval meant that Nedonna Development had to construct all improvements within one year of the final PUD approval, the City implicitly modified that condition in September 2008 when it authorized Nedonna Development to develop the PUD in stages instead of all at once, because that modification implicitly authorized Nedonna Development to build the improvements for each stage with that stage as is customary for subdivisions.

Nedonna Development suggests the following finding for your consideration:

Condition No. 1 of the City's 2008 order that granted final approval of the PUD for Nedonna Wave required only that the applicant complete public improvements within one year after the City issued its tentative approval of the plan for a phase of the PUD. The final approval of the PUD was not itself a "tentative plan approval" and did not commence the period for the applicant to construct improvements.

V. Conclusion.

In 2008 the City determined the boundary between the SA portion and the R-1 portion of the Nedonna Wave tract. Nedonna Development is proposing all of the Phase 2 lots within the area that the City must have found in 2008 to be zoned R-1.

The condition of approval from February 2008 did not limit the PUD approval by time, but merely required that the applicant would have one year from obtaining tentative approval of a plat to construct the improvements for the plat.

The City should again approve Phase 2 of Nedonna Wave.

Very truly yours,

Dean N. Alterman

Dean N. Alterman

Attachments: Final Orders for SPUD #07-19
2006 Wetland Delineation Map
RF-36702 Wetland Mitigation Maps
SPUD #07-19 Site Plan Maps
Phase 2 Tentative Plan Maps
2024 Wetland Delineation Report
DSL Wetland Delineation Verification Letter

Copy: Ms. Anna Song (e-mail only)

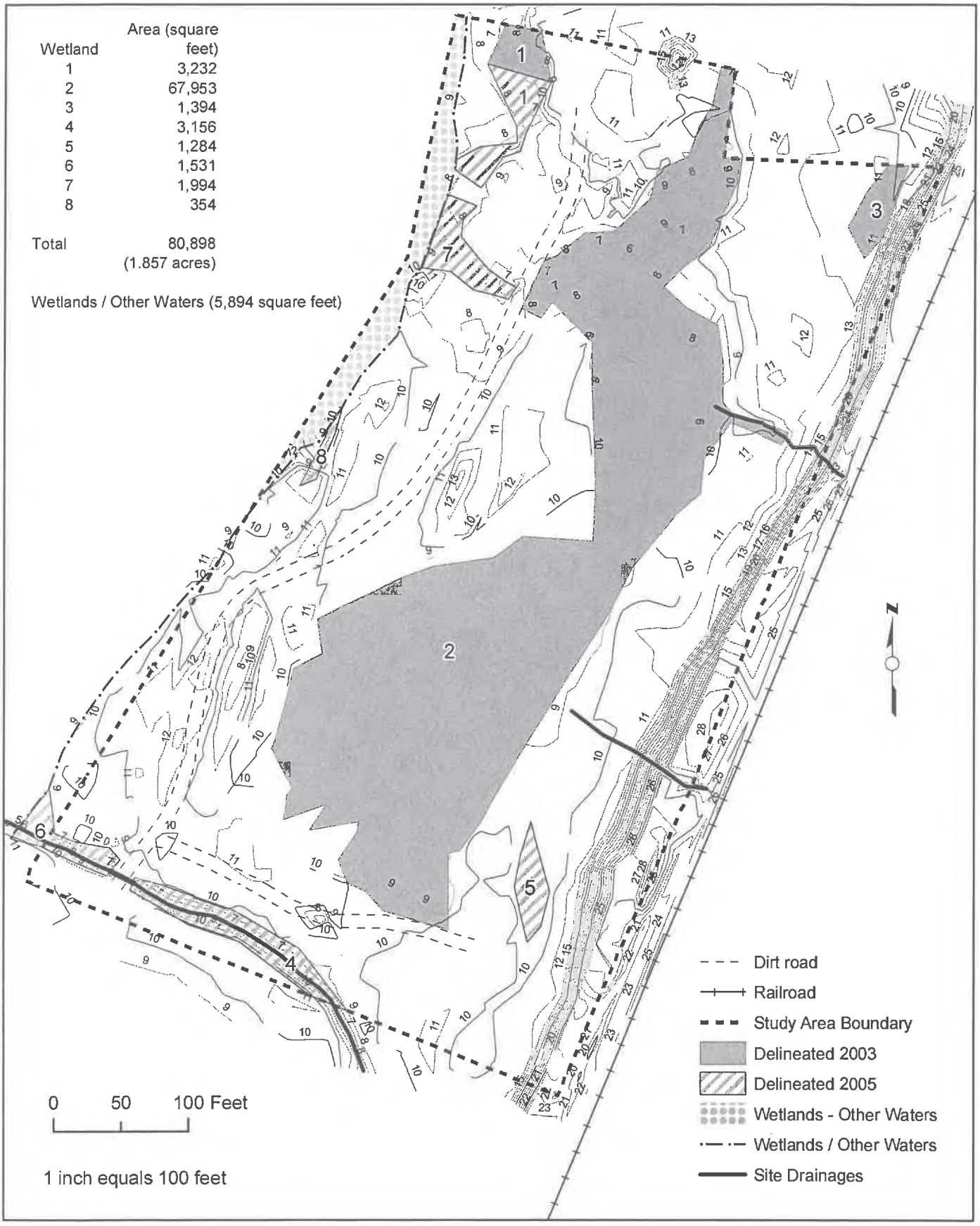


Figure 5 Wetlands map (revised 7-26-06).

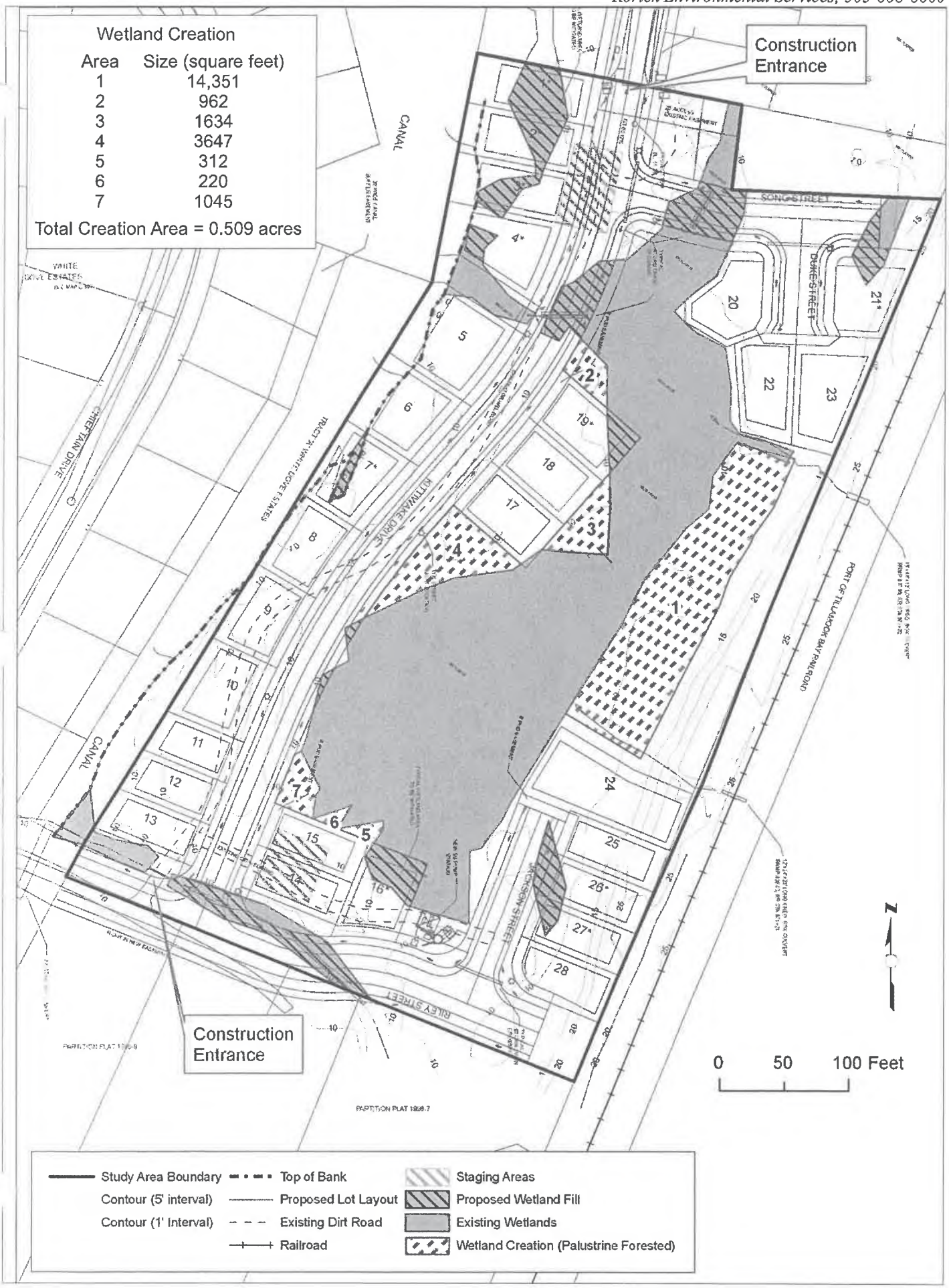


Figure 10 Site plan and proposed alternative.

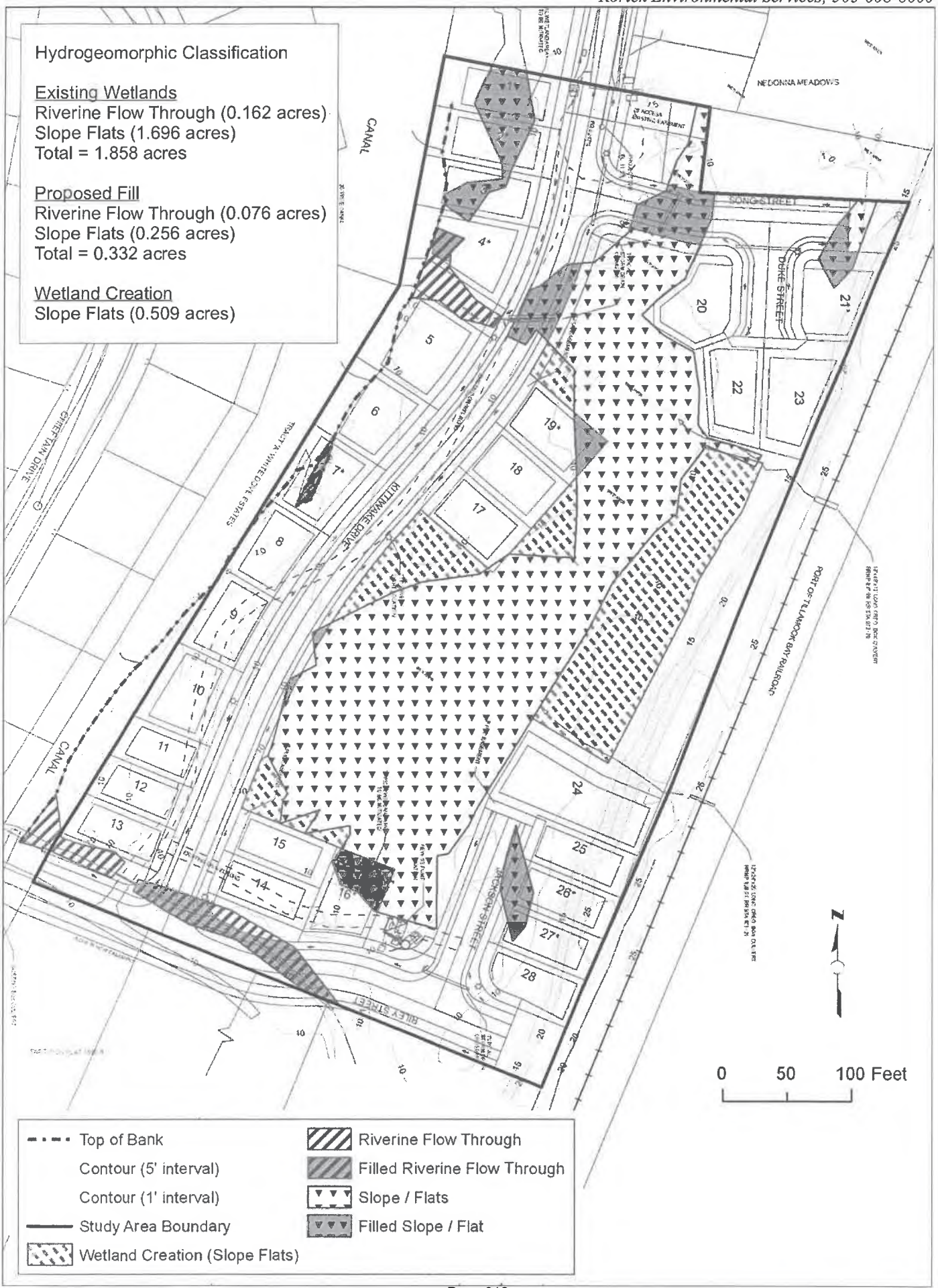
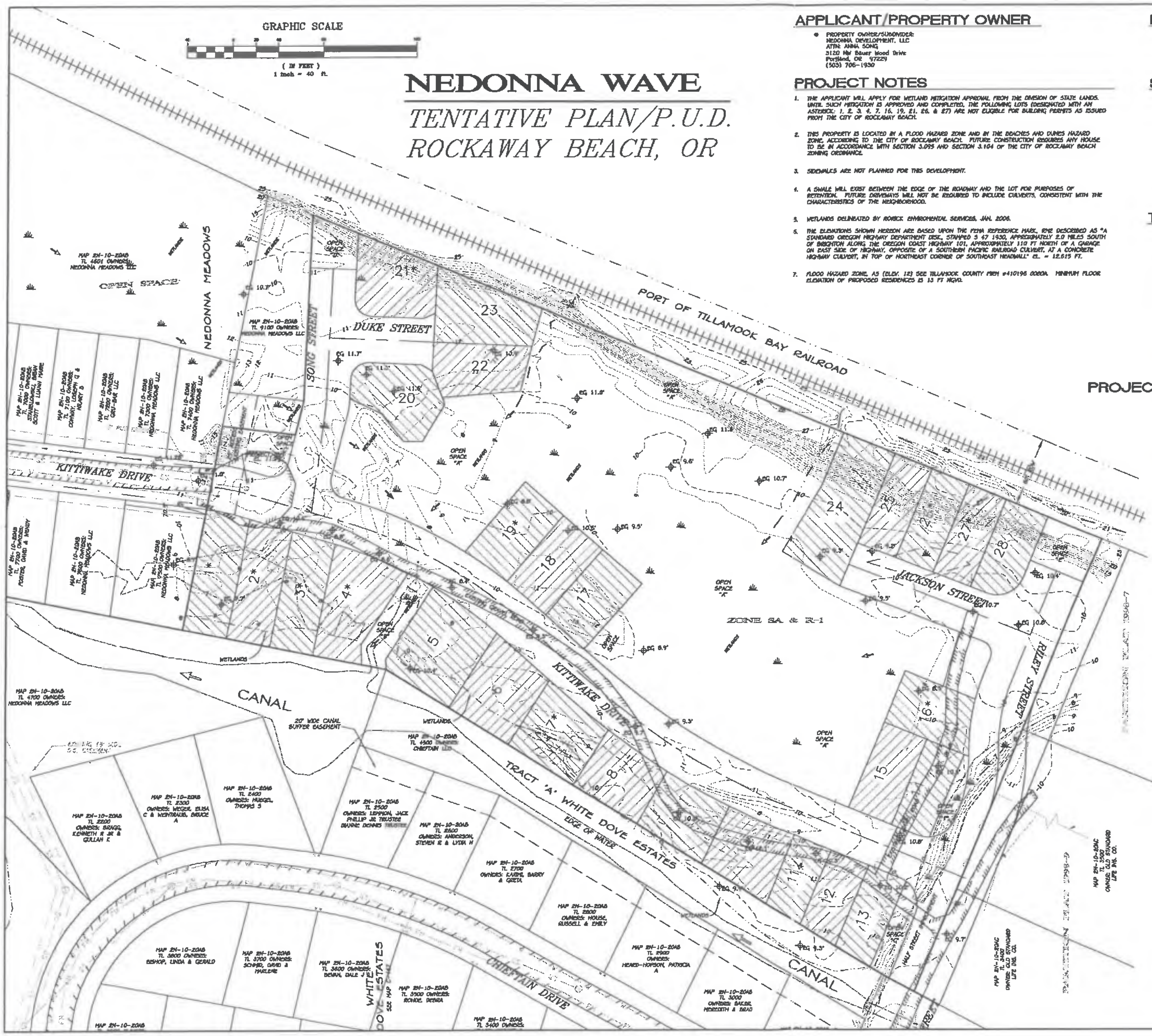


Figure 11 HGM classification of existing wetlands, impacted wetlands and created wetlands.

EXHIBIT 4

NEDONNA WAVE

TENTATIVE PLAN/P.U.D.
ROCKAWAY BEACH, OR



APPLICANT/PROPERTY OWNER

- PROPERTY OWNER/SUBDIVIDER:
  NEDONNA DEVELOPMENT, LLC
  ATTN: ANNA SONG
  3120 NW Bauer Wood Drive
  Portland, OR 97229
  (503) 706-1930

PROJECT NOTES

1. THE APPLICANT WILL APPLY FOR WETLAND MITIGATION APPROVAL FROM THE DIVISION OF STATE LANDS. UNTIL SUCH MITIGATION IS APPROVED AND COMPLETED, THE FOLLOWING LOTS (DESIGNATED WITH AN ASTERICK: 1, 2, 3, 4, 7, 16, 19, 21, 26, & 27) ARE NOT ELIGIBLE FOR BUILDING PERMITS AS ISSUED FROM THE CITY OF ROCKAWAY BEACH.
2. THIS PROPERTY IS LOCATED IN A FLOOD HAZARD ZONE AND IN THE BEACHES AND DUNES HAZARD ZONE, ACCORDING TO THE CITY OF ROCKAWAY BEACH. FUTURE CONSTRUCTION REQUIRES ANY HOUSE TO BE IN ACCORDANCE WITH SECTION 3.095 AND SECTION 3.104 OF THE CITY OF ROCKAWAY BEACH ZONING ORDINANCE.
3. SIDEWALKS ARE NOT PLANNED FOR THIS DEVELOPMENT.
4. A SWALE WILL EXIST BETWEEN THE EDGE OF THE ROADWAY AND THE LOT FOR PURPOSES OF RETENTION. FUTURE DRIVEWAYS WILL NOT BE REQUIRED TO INCLUDE CULVERTS, CONSISTENT WITH THE CHARACTERISTICS OF THE NEIGHBORHOOD.
5. WETLANDS DELINEATED BY ROBICK ENVIRONMENTAL SERVICES, JAN. 2006.
6. THE ELEVATIONS SHOWN HEREON ARE BASED UPON THE FEMA REFERENCE MARK, RM2 DESCRIBED AS "A STANDARD OREGON HIGHWAY DEPARTMENT DISK, STAMPED 5 47 1930, APPROXIMATELY 2.0 MILES SOUTH OF BRIGHTON ALONG THE OREGON COAST HIGHWAY 101, APPROXIMATELY 110 FT NORTH OF A GARAGE ON EAST SIDE OF HIGHWAY, OPPOSITE OF A SOUTHERN PACIFIC RAILROAD CULVERT, AT A CONCRETE HIGHWAY CULVERT, IN TOP OF NORTHEAST CORNER OF SOUTHEAST HEADWALL" EL. = 12.615 FT.
7. FLOOD HAZARD ZONE, A5 (ELEV. 12) SEE TILLAMOOK COUNTY FIRM #410196 0080A. MINIMUM FLOOR ELEVATION OF PROPOSED RESIDENCES IS 13 FT NGVD.

ENGINEERING TEAM

- ENGINEER/SURVEYOR:
  HLB Otak, INC.
  ATTN: RONALD G. LARSON, PE, PLS
  10445 NEAH-KAH-NIE CRK. RD.
  MANZANITA, OR 97130

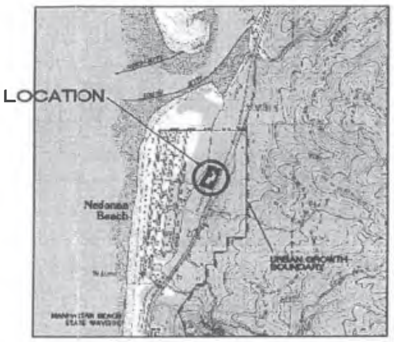
SERVICE PROVIDERS

- WATER, SEWER, STORM DRAINAGE, ROADS
  CITY OF ROCKAWAY BEACH
  P.O. BOX 5
  ROCKAWAY BEACH, OR 97136
  (503) 355-2291
- TELEPHONE
  SPRINT UNITED TELEPHONE
  2714 FOURTH STREET
  TILLAMOOK, OR 97141
  (503) 815-3024
- ELECTRICITY
  TILLAMOOK PUBLIC UTILITY DISTRICT
  1115 PACIFIC AVE.
  TILLAMOOK, OR 97141
  (503) 842-2535
- CABLE TELEVISION
  CHARTER COMMUNICATIONS
  1344 NO. HWY 101
  LINCOLN CITY, OR 97367
  (541) 557-3709

TOTAL AREA AND DENSITY INFORMATION

	SQ. FT. (ACRES)
A) TOTAL GROSS AREA	271,241 (6.23)
B) TOTAL R.O.W AREA	49,568 (1.14)
C) EXISTING WETLANDS	79,145 (1.82)
D) CREATED WETLANDS	22,182 (0.51)
E) TOTAL NET DEVELOPABLE AREA (A – (C+D)	169,914 (3.90)
F) MINIMUM ALLOWED LOT SIZE IN PARENT ZONE	5000
G) NUMBER OF LOTS ALLOWED IN PARENT ZONE (E / F)	34
H) NUMBER OF LOTS PROPOSED	28
I) CALCULATED NET DENSITY (H / G)	82.35%

PROJECT LOCATION



VICINITY MAP
NO SCALE

SHEET INDEX

SHT. 1: COVER SHEET & EXISTING TOPOGRAPHY
SHT. 2: LOT DIMENSIONS & ROADWAY DETAILS
SHT. 3: UTILITIES & HOME STYLES
SHT. 4: PRELIMINARY GRADING, STORM DRAINAGE, & WETLAND MITIGATION.

LEGEND

- PROPOSED PROPERTY LINE
- EXISTING PROPERTY LINE
- FUTURE PROPERTY/ROW LINE
- PROPOSED ASPHALT PAVEMENT
- EXISTING ASPHALT PAVEMENT
- CENTERLINE
- EXISTING GRAVITY SEWER MAIN
- EXISTING WATER MAIN
- EXISTING SEWER FORCE MAIN
- PROPOSED SEWER MAIN
- EXISTING MANHOLE
- POWER POLE
- FIRE HYDRANT
- EXISTING/PROPOSED WATER METER
- WETLANDS BOUNDARY

HLB otak

- SURVEYING
- CIVIL ENGINEERING
- PLANNING
- WATER RIGHTS
- WETLAND CONSULTING

PACIFIC COUNTY
1715-B N. PACIFIC AVE.
LONG BEACH, WA 98631
(360) 642-4454
FAX: (360) 642-4054

CLATSOP COUNTY
4253-A HWY 101 N.
GEARHART, OR 97138
(503) 738-3425
FAX: (503) 738-7455

TILLAMOOK COUNTY
10445 NEAH-KAH-NIE CRK. RD.
MANZANITA, OR 97130
(503) 368-5394
FAX: (503) 368-5847

WWW.HLB-OTAK.COM

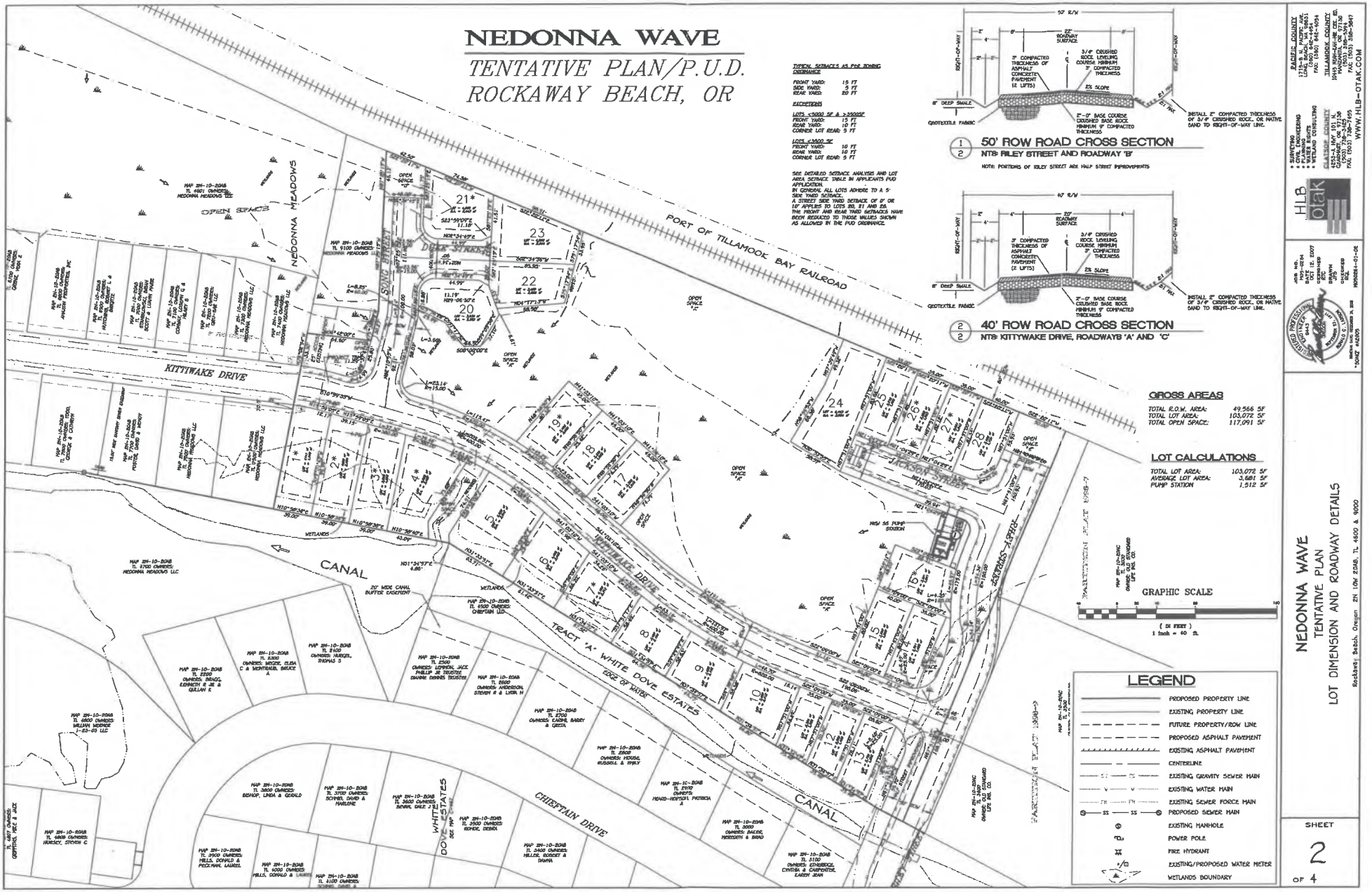
REGISTERED PROFESSIONAL ENGINEER 9443 OREGON SEPTEMBER 23, 1977 RONALD G. LARSON
RENEWAL DATE: DECEMBER 31, 2008
*SONG #A2005

JOB NO. ND5-0264
DATE OCT 12, 2007
DESIGNED RTC
DRAWN JPS
CHECKED RGL
ND50264-01-02

NEDONNA WAVE
TENTATIVE PLAN
COVER SHEET & EXISTING TOPOGRAPHY
Rockaway Beach, Oregon 2N 10W 20AB, TL 4600 & 9000

SHEET
1
OF 4

001607


NEDONNA WAVE
TENTATIVE PLAN/P.U.D.
ROCKAWAY BEACH, OR
TYPICAL SETBACKS AS PER ZONING ORDINANCE
FRONT YARD: 15 FT
SIDE YARD: 5 FT
REAR YARD: 20 FT
EXCEPTIONS
LOTS <5000 SF & >3500SF
FRONT YARD: 15 FT
REAR YARD: 10 FT
CORNER LOT REAR: 5 FT
LOTS <3500 SF
FRONT YARD: 10 FT
REAR YARD: 10 FT
CORNER LOT REAR: 5 FT
SEE DETAILED SETBACK ANALYSES AND LOT AREA SETBACK TABLE IN APPLICANTS PUD APPLICATION.
IN GENERAL ALL LOTS ADHERE TO A 5' SIDE YARD SETBACK.
A STREET SIDE YARD SETBACK OF 8' OR 10' APPLIES TO LOTS 20, 21 AND 23.
THE FRONT AND REAR YARD SETBACKS HAVE BEEN REDUCED TO THOSE VALUES SHOWN AS ALLOWED IN THE PUD ORDINANCE.
50' ROW ROAD CROSS SECTION
NTS- RILEY STREET AND ROADWAY 'B'
NOTE: PORTIONS OF RILEY STREET ARE HALF STREET IMPROVEMENTS
40' ROW ROAD CROSS SECTION
NTS- KITTYWAKE DRIVE, ROADWAYS 'A' AND 'C'
GROSS AREAS
TOTAL R.O.W. AREA: 49,566 SF
TOTAL LOT AREA: 103,072 SF
TOTAL OPEN SPACE: 117,091 SF
LOT CALCULATIONS
TOTAL LOT AREA: 103,072 SF
AVERAGE LOT AREA: 3,681 SF
PUMP STATION 1,512 SF
GRAPHIC SCALE
1 inch = 40 ft.
LEGEND
PROPOSED PROPERTY LINE
EXISTING PROPERTY LINE
FUTURE PROPERTY/ROW LINE
PROPOSED ASPHALT PAVEMENT
EXISTING ASPHALT PAVEMENT
CENTERLINE
EXISTING GRAVITY SEWER MAIN
EXISTING WATER MAIN
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EXISTING/PROPOSED WATER METER
WETLANDS BOUNDARY
NEDONNA WAVE
TENTATIVE PLAN
LOT DIMENSION AND ROADWAY DETAILS
SHEET 2 OF 4
PACIFIC COUNTY
TILLAMOOK COUNTY
HLB otak

PROJECT NOTES

1. WATER, SEWER, ROAD, AND UTILITY PLAN TO BE COMPLETED AND REVIEWED BY THE CITY OF ROCKAWAY PUBLIC WORKS DEPARTMENT. ALL PROPOSED CONSTRUCTION SHALL CONFORM TO CITY, DEQ, OSHD STANDARDS. APPLICANT PROPOSES TO WORK CLOSELY WITH THE CITY DURING THE FINAL CERTIFICATION STAGE TO ENSURE CITY SATISFACTION. HYDRANT SPACING PROPOSED AT +/- 400 FT. MAXIMUM DISTANCE FROM HYDRANT TO HOUSE +/- 200 FT. ALL MANHOLES WITH A RIM ELEVATION LESS THAN 13.0' NGVD SHALL BE CONSTRUCTED WITH WATER-TIGHT RIMS AND LIDS. ALL LOTS SHALL HAVE A FINISH GRADE OF NOT LESS THAN 11.0' NGVD. ALL BUILDING AND ROADWAY CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE GEOLOGIC HAZARD REPORT PUBLISHED BY HLB & ASSOCIATES, INC. & PSI INC.
2. BUILDING AREAS SHOWN HERON ARE TYPICAL AND MAY VARY WITHIN THE APPROVED BUILDING SETBACK AREAS SHOWN ON THE PLANS. SEE SUBMITTAL INFORMATION ON INDIVIDUAL LOT YARD SETBACKS ESTABLISHED WITHIN THE REQUIREMENTS OF THE PUD.

LEGEND

- PROPOSED PROPERTY LINE
- EXISTING PROPERTY LINE
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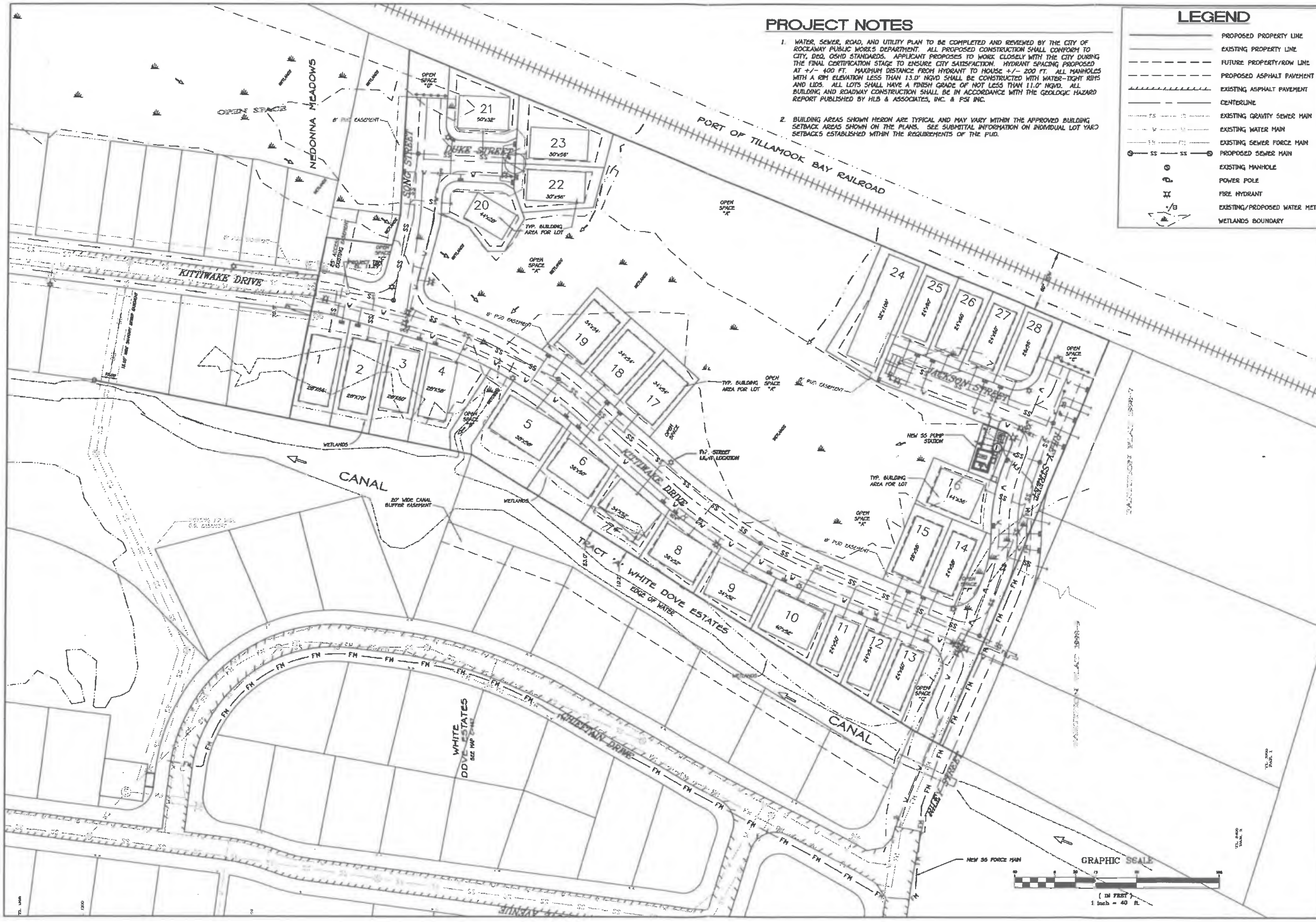

NEDONNA WAVE
TENTATIVE PLAN
UTILITIES & BUILDING ENVELOPE
Rockaway Beach, Oregon 2N 10W 20AB. TL 4600 & 9000

JOB NO. M05-0284
DATE OCT 12, 2007
DESIGNED RTC
DRAWN JPG
CHECKED RGL
M050284-01-02

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(503) 738-3425 FAX: (503) 738-7455

TILLAMOOK COUNTY
10445 NEAH-KAH-NIE DR., RD. MANZANITA, OR 97130
(503) 368-5394 FAX: (503) 368-5847

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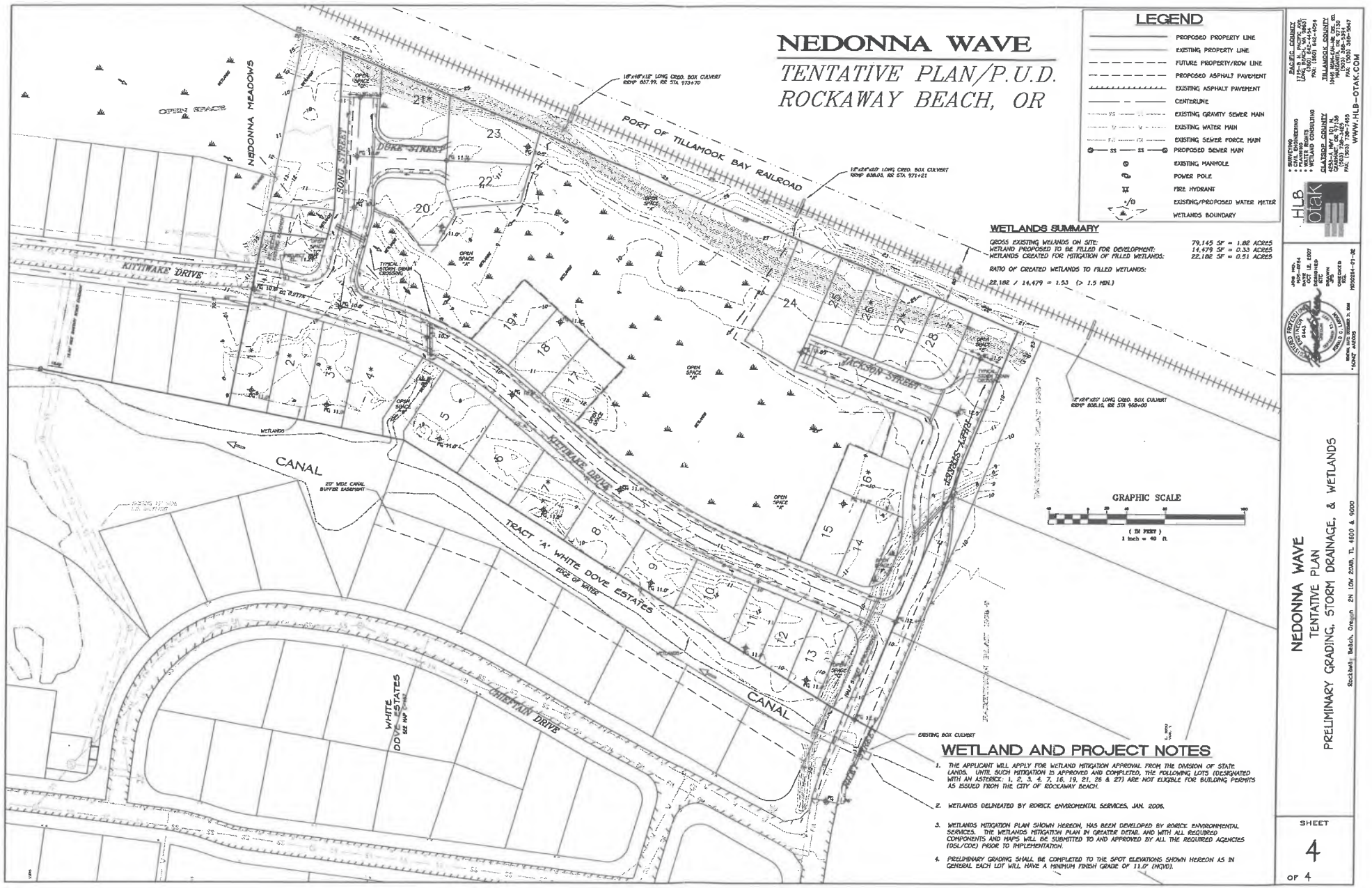
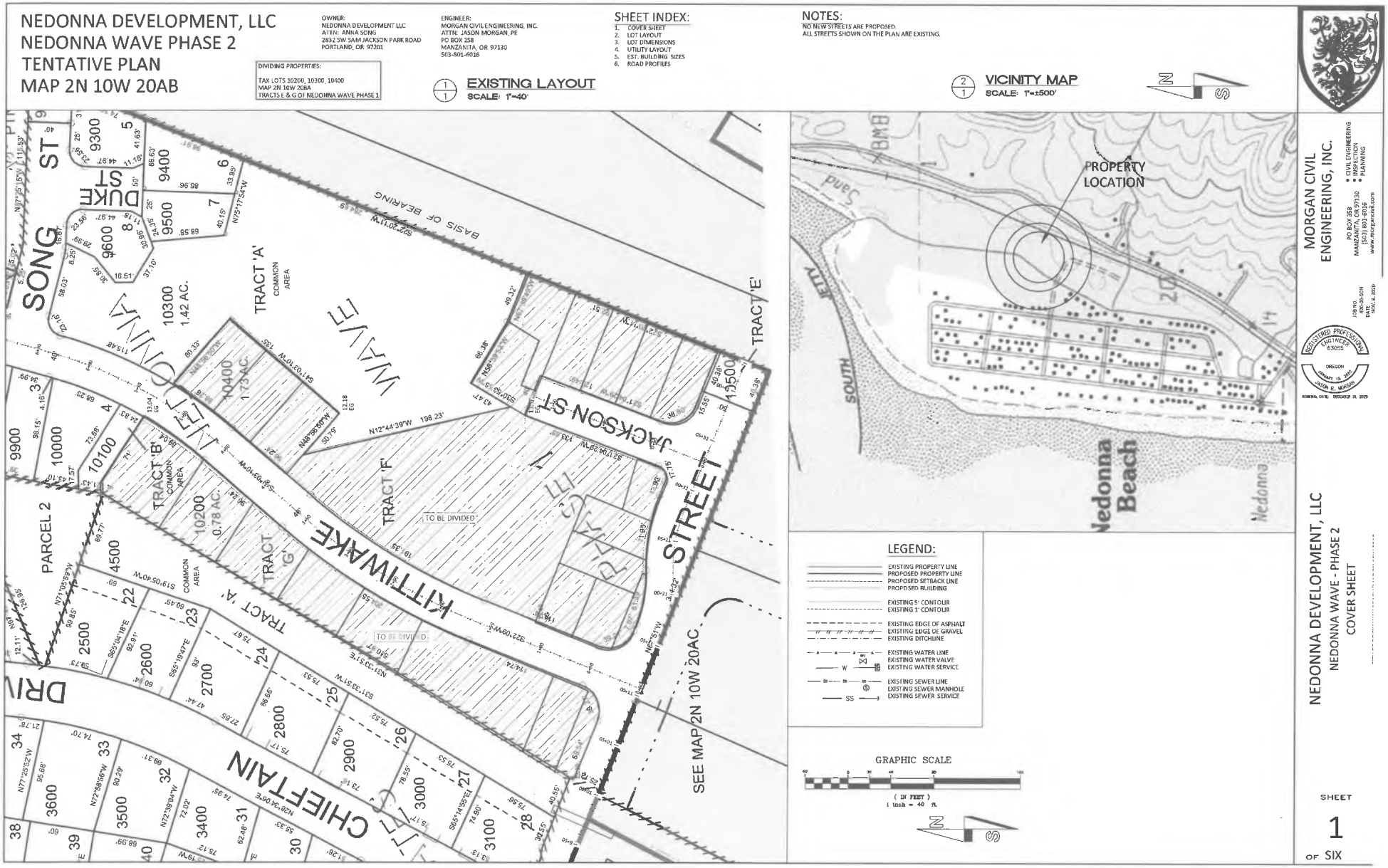
SHEET 3 OF 4


NEDONNA WAVE
TENTATIVE PLAN/P.U.D.
ROCKAWAY BEACH, OR
LEGEND
PROPOSED PROPERTY LINE
EXISTING PROPERTY LINE
FUTURE PROPERTY/ROW LINE
PROPOSED ASPHALT PAVEMENT
EXISTING ASPHALT PAVEMENT
CENTERLINE
EXISTING GRAVITY SEWER MAIN
EXISTING WATER MAIN
EXISTING SEWER FORCE MAIN
PROPOSED SEWER MAIN
EXISTING MANHOLE
POWER POLE
FIRE HYDRANT
EXISTING/PROPOSED WATER METER
WETLANDS BOUNDARY
WETLANDS SUMMARY
GROSS EXISTING WETLANDS ON SITE: 79,145 SF = 1.82 ACRES
WETLAND PROPOSED TO BE FILLED FOR DEVELOPMENT: 14,479 SF = 0.33 ACRES
WETLANDS CREATED FOR MITIGATION OF FILLED WETLANDS: 22,182 SF = 0.51 ACRES
RATIO OF CREATED WETLANDS TO FILLED WETLANDS:
22,182 / 14,479 = 1.53 (> 1.5 MIN.)
GRAPHIC SCALE
(IN FEET)
1 inch = 40 ft.
WETLAND AND PROJECT NOTES
1. THE APPLICANT WILL APPLY FOR WETLAND MITIGATION APPROVAL FROM THE DIVISION OF STATE LANDS. UNTIL SUCH MITIGATION IS APPROVED AND COMPLETED, THE FOLLOWING LOTS (DESIGNATED WITH AN ASTERICK: 1, 2, 3, 4, 7, 16, 19, 21, 26 & 27) ARE NOT ELIGIBLE FOR BUILDING PERMITS AS ISSUED FROM THE CITY OF ROCKAWAY BEACH.
2. WETLANDS DELINEATED BY ROBICK ENVIRONMENTAL SERVICES, JAN. 2006.
3. WETLANDS MITIGATION PLAN SHOWN HEREON, HAS BEEN DEVELOPED BY ROBICK ENVIRONMENTAL SERVICES. THE WETLANDS MITIGATION PLAN IN GREATER DETAIL AND WITH ALL REQUIRED COMPONENTS AND MAPS WILL BE SUBMITTED TO AND APPROVED BY ALL THE REQUIRED AGENCIES (DSL/COE) PRIOR TO IMPLEMENTATION.
4. PRELIMINARY GRADING SHALL BE COMPLETED TO THE SPOT ELEVATIONS SHOWN HEREON AS IN GENERAL EACH LOT WILL HAVE A MINIMUM FINISH GRADE OF 11.0' (NGVD).
PORT OF TILLAMOOK BAY RAILROAD
KITTIWAKE DRIVE
JACKSON STREET
DUKE STREET
SONG STREET
NEDONNA MEADOWS
OPEN SPACE
CANAL
TRACT 'A' WHITE DOVE ESTATES
EDGE OF WATER
WHITE DOVE ESTATES
CHIEFTAIN DRIVE
WETLANDS
EXISTING BOX CULVERT
NEDONNA WAVE
TENTATIVE PLAN
PRELIMINARY GRADING, STORM DRAINAGE, & WETLANDS
Rockaway Beach, Oregon 2N 10W 2DAB, TL 4600 & 9000
SHEET
4
OF 4

001610

EXHIBIT 5



001386

NEDONNA DEVELOPMENT, LLC
NEDONNA WAVE PHASE 2
TENTATIVE PLAN
MAP 2N 10W 20AB

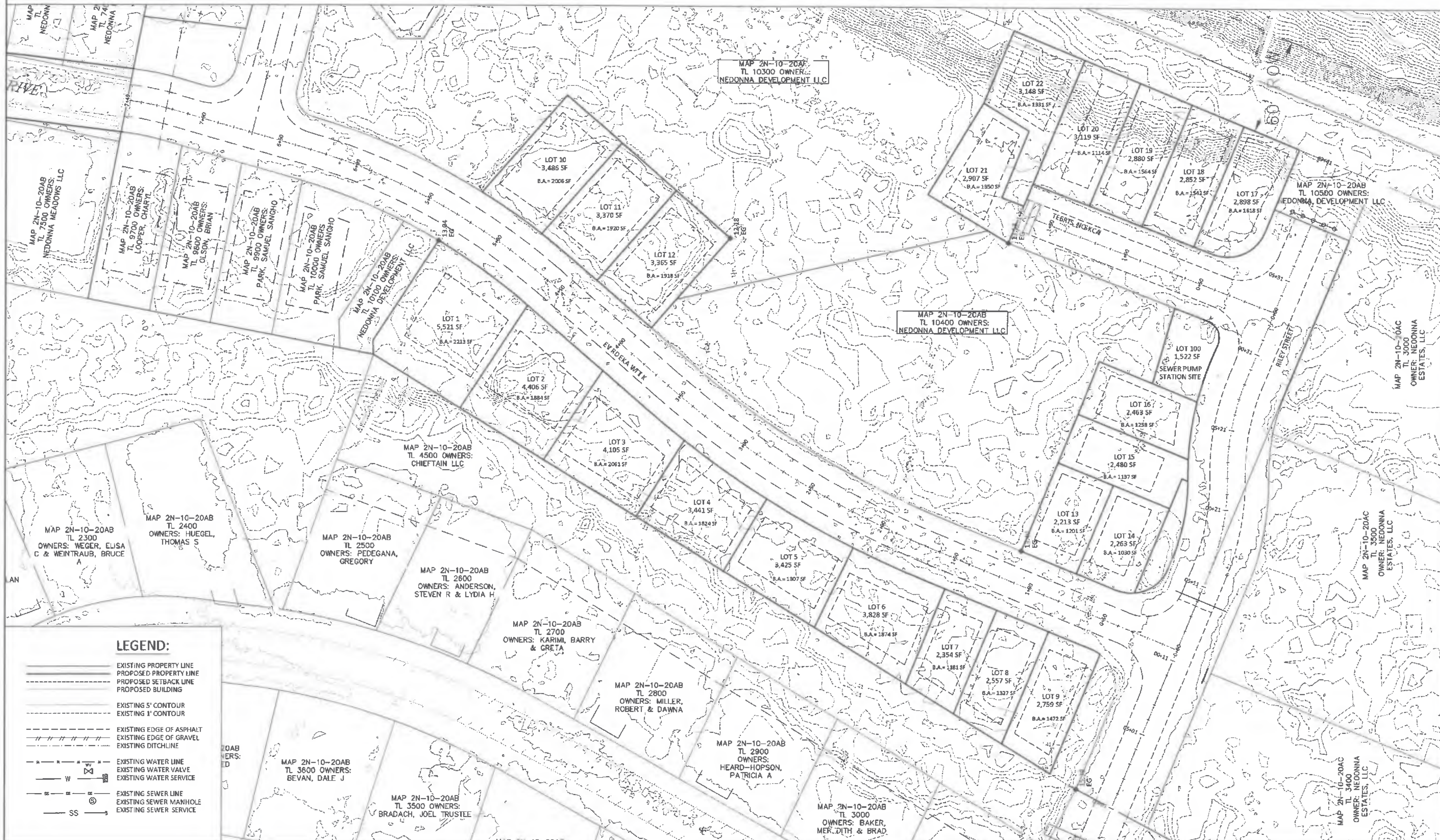
DIVIDING PROPERTIES:
TAX LOTS 10200 & 10400
MAP 2N 10W 20BA
TRACTS F & G OF NEDONNA WAVE PHASE 1

NOTES:
NO NEW STREETS ARE PROPOSED.
ALL STREETS SHOWN ON THE PLAN ARE EXISTING.

ELEVATIONS BASED ON 2008 DOGAMI LIDAR PROGRAM. NAVD88 DATUM.

GRAPHIC SCALE
(IN FEET)
1 inch = 30 ft.

1/2 PROPOSED LOT LAYOUT
SCALE: 1"=30"



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REGISTERED PROFESSIONAL ENGINEER 83065
OREGON
JASON R. MORGAN

NEDONNA DEVELOPMENT, LLC
NEDONNA WAVE - PHASE 2
LOT LAYOUT

SHEET
2
OF SIX

001387

NEDONNA DEVELOPMENT, LLC
NEDONNA WAVE PHASE 2
TENTATIVE PLAN
MAP 2N 10W 20AB

1/3 PROPOSED LOT DIMENSIONS
SCALE: 1"=30'

GRAPHIC SCALE
(IN FEET)
1 inch = 30 ft.

MAP 2N-10-20AB TL 10300 OWNERS: NEDONNA DEVELOPMENT LLC
MAP 2N-10-20AB TL 10400 OWNERS: NEDONNA DEVELOPMENT LLC
MAP 2N-10-20AB TL 10560 OWNERS: NEDONNA DEVELOPMENT LLC
MAP 2N-10-20AB TL 7500 OWNERS: NEDONNA MEADOWS LLC
MAP 2N-10-20AB TL 9700 OWNERS: LOOPER, CHARYL
MAP 2N-10-20AB TL 9800 OWNERS: OLSON, BRIAN
MAP 2N-10-20AB TL 9900 OWNERS: PARK, SAMUEL SANGHO
MAP 2N-10-20AB TL 10000 OWNERS: PARK, SAMUEL SANGHO
MAP 2N-10-20AB TL 10100 OWNERS: NEDONNA DEVELOPMENT LLC
MAP 2N-10-20AB TL 4500 OWNERS: CHIEFTAIN LLC
MAP 2N-10-20AB TL 2300 OWNERS: WEGER, ELISA C & WEINTRAUB, BRUCE A
MAP 2N-10-20AB TL 2400 OWNERS: HUEGEL, THOMAS S
MAP 2N-10-20AB TL 2500 OWNERS: PEDEGANA, GREGORY
MAP 2N-10-20AB TL 2600 OWNERS: ANDERSON, STEVEN R & LYDIA H
MAP 2N-10-20AB TL 2700 OWNERS: KARIMI, BARRY & GRETA
MAP 2N-10-20AB TL 2800 OWNERS: MILLER, ROBERT & DAWNA
MAP 2N-10-20AB TL 2900 OWNERS: HEARD-HOPSON, PATRICIA A
MAP 2N-10-20AB TL 3000 OWNERS: BAKER, MEREDITH & BRAD
MAP 2N-10-20AB TL 3500 OWNERS: BRADACH, JOEL TRUSTEE
MAP 2N-10-20AB TL 3600 OWNERS: BEVAN, DALE J
MAP 2N-10-20AC TL 3300 OWNER: NEDONNA ESTATES, LLC
MAP 2N-10-20AC TL 3500 OWNER: NEDONNA ESTATES, LLC
MAP 2N-10-20AC TL 3400 OWNER: NEDONNA ESTATES, LLC
LOT 1 5,521 SF
LOT 2 4,406 SF
LOT 3 4,105 SF
LOT 4 3,441 SF
LOT 5 3,425 SF
LOT 6 3,828 SF
LOT 7 2,354 SF
LOT 8 2,557 SF
LOT 9 2,759 SF
LOT 10 3,486 SF
LOT 11 3,370 SF
LOT 12 3,365 SF
LOT 13 2,213 SF
LOT 14 2,263 SF
LOT 15 2,480 SF
LOT 16 2,463 SF
LOT 17 2,898 SF
LOT 18 2,852 SF
LOT 19 2,850 SF
LOT 20 3,119 SF
LOT 22 3,148 SF
SEWER PUMP STATION SITE
RILEY STREET
60' ROW
LEGEND:
EXISTING PROPERTY LINE
PROPOSED PROPERTY LINE
PROPOSED SETBACK LINE
PROPOSED BUILDING
EXISTING 5' CONTOUR
EXISTING 1' CONTOUR
EXISTING EDGE OF ASPHALT
EXISTING EDGE OF GRAVEL
EXISTING DITCHLINE
EXISTING WATER LINE
EXISTING WATER VALVE
EXISTING WATER SERVICE
EXISTING SEWER LINE
EXISTING SEWER MANHOLE
EXISTING SEWER SERVICE

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NEDONNA DEVELOPMENT, LLC
NEDONNA WAVE - PHASE 2
LOT DIMENSIONS

SHEET
3
OF SIX

001388

NEDONNA DEVELOPMENT, LLC
NEDONNA WAVE PHASE 2
TENTATIVE PLAN
MAP 2N 10W 20AB

1/4 UTILITY LAYOUT
SCALE: 1"=30"

GRAPHIC SCALE
(IN FEET)
1 inch = 30 ft.

MAP 2N-10-20AB
TL 10300 OWNERS:
NEDONNA DEVELOPMENT LLC
60' ROW
LOT 22
3,148 SF
LOT 20
3,119 SF
LOT 19
2,880 SF
LOT 18
2,852 SF
LOT 17
2,898 SF
SS CO #3
MAP 2N-10-20AB
TL 10500 OWNERS:
NEDONNA DEVELOPMENT LLC
SS MH #7
SS CO #4
LOT 10
3,486 SF
LOT 11
3,370 SF
LOT 12
3,365 SF
MAP 2N-10-20AB
TL 10400 OWNERS:
NEDONNA DEVELOPMENT LLC
MAP 2N-10-20AB
TL 7350 OWNERS:
NEDONNA MEADOWS LLC
MAP 2N-10-20AB
TL 9700 OWNERS:
COOPER, CHARYL
MAP 2N-10-20AB
TL 9800 OWNERS:
OLSON, BRIAN
MAP 2N-10-20AB
TL 9900 OWNERS:
PARK, SAMUEL SANGHO
MAP 2N-10-20AB
TL 10000 OWNERS:
PARK, SAMUEL SANGHO
MAP 2N-10-20AB
TL 10100 OWNERS:
NEDONNA DEVELOPMENT LLC
LOT 1
5,521 SF
LOT 2
4,406 SF
LOT 3
4,105 SF
LOT 4
3,441 SF
LOT 5
3,425 SF
LOT 6
3,828 SF
LOT 7
2,354 SF
LOT 8
2,557 SF
LOT 9
2,759 SF
LOT 13
2,213 SF
LOT 14
2,263 SF
LOT 15
2,480 SF
LOT 16
2,463 SF
SEWER PUMP STATION SITE
SS MH #4
SS MH #5
SS MH #6
EVREKA WALK
RILEY STREET
McMILLAN CREEK
MAP 2N-10-20AB
TL 4500 OWNERS:
CHIEFTAIN LLC
MAP 2N-10-20AC
TL 3500
OWNER: NEDONNA ESTATES, LLC
MAP 2N-10-20AC
TL 3400
OWNER: NEDONNA ESTATES, LLC
MAP 2N-10-20AB
TL 2300
OWNERS: WEGER, ELISA C & WEINTRAUB, BRUCE A
MAP 2N-10-20AB
TL 2400
OWNERS: HUEGEL, THOMAS S
MAP 2N-10-20AB
TL 2500
OWNERS: PEDEGANA, GREGORY
MAP 2N-10-20AB
TL 2600
OWNERS: ANDERSON, STEVEN R & LYDIA H
MAP 2N-10-20AB
TL 2700
OWNERS: KARIMI, BARRY & GRETA
MAP 2N-10-20AB
TL 2800
OWNERS: MILLER, ROBERT & DAWNA
MAP 2N-10-20AB
TL 2900
OWNERS: HEARD-HOPSON, PATRICIA A
MAP 2N-10-20AB
TL 3000
OWNERS: BAKER, MEREDITH & BRAD
MAP 2N-10-20AB
TL 3600 OWNERS:
BEVAN, DALE J
MAP 2N-10-20AB
TL 3500 OWNERS:
BRADACH, JOEL TRUSTEE
LEGEND:
EXISTING PROPERTY LINE
PROPOSED PROPERTY LINE
PROPOSED SETBACK LINE
PROPOSED BUILDING
EXISTING 5' CONTOUR
EXISTING 1' CONTOUR
EXISTING EDGE OF ASPHALT
EXISTING EDGE OF GRAVEL
EXISTING DITCHLINE
EXISTING WATER LINE
EXISTING WATER VALVE
EXISTING WATER SERVICE
EXISTING SEWER LINE
EXISTING SEWER MANHOLE
EXISTING SEWER SERVICE

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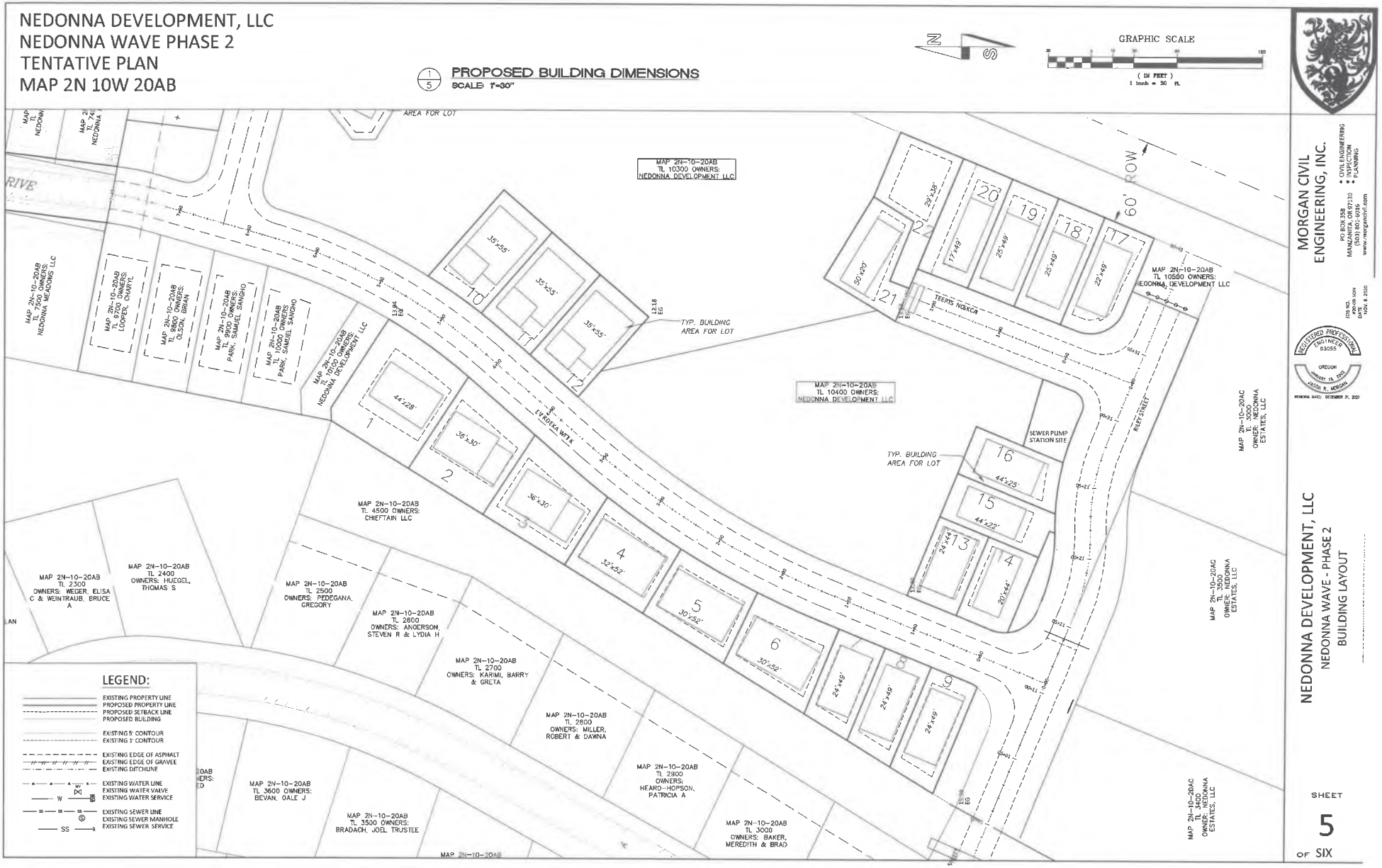
NEDONNA DEVELOPMENT, LLC
NEDONNA WAVE - PHASE 2
UTILITY LAYOUT

SHEET
4
OF SIX

001389


NEDONNA DEVELOPMENT, LLC
NEDONNA WAVE PHASE 2
TENTATIVE PLAN
MAP 2N 10W 20AB
PROPOSED BUILDING DIMENSIONS
SCALE: 1"=30'
GRAPHIC SCALE
(IN FEET)
1 inch = 30 ft.
MAP 2N-10-20AB TL 10300 OWNERS: NEDONNA DEVELOPMENT LLC
MAP 2N-10-20AB TL 10400 OWNERS: NEDONNA DEVELOPMENT LLC
MAP 2N-10-20AB TL 10500 OWNERS: EDONNA, DEVELOPMENT LLC
TYP. BUILDING AREA FOR LOT
SEWER PUMP STATION SITE
TEEMS NORCA
RUBY STREET
EVERGREEN WAY
MAP 2N-10-20AB TL 4500 OWNERS: CHIEFTAIN LLC
MAP 2N-10-20AB TL 2300 OWNERS: WEGER, ELISA C & WEINTRAUB, BRUCE A
MAP 2N-10-20AB TL 2400 OWNERS: HUEGEL, THOMAS S
MAP 2N-10-20AB TL 2500 OWNERS: PEDEGANA, GREGORY
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MAP 2N-10-20AC TL 3400 OWNER: NEDONNA ESTATES, LLC
LEGEND:
EXISTING PROPERTY LINE
PROPOSED PROPERTY LINE
PROPOSED SETBACK LINE
PROPOSED BUILDING
EXISTING 5' CONTOUR
EXISTING 1' CONTOUR
EXISTING EDGE OF ASPHALT
EXISTING EDGE OF GRAVEL
EXISTING DITCHLINE
EXISTING WATER LINE
EXISTING WATER VALVE
EXISTING WATER SERVICE
EXISTING SEWER LINE
EXISTING SEWER MANHOLE
EXISTING SEWER SERVICE
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OREGON
JANUARY 15, 2002
JASON R. MORGAN
RENEWAL DATE: DECEMBER 31, 2020
FOR PUBLIC VIEW
DATE: NOV. 8 2020
NEDONNA DEVELOPMENT, LLC
NEDONNA WAVE - PHASE 2
BUILDING LAYOUT
SHEET
5
OF SIX

001390

1.0 Landscape Setting and Land Use (previous and current) *OAR141-090-0035 (12) (a)*

The 3.23-acre study area in Nedonna Beach, Tillamook County, Oregon encompasses tax lot 10200 and 10500, and portions of tax lots 10300 and 10400 T2N, R10W 20AB (see Figure 2). Riley Street, Kittiwake Drive and Jackson Street are included within the study area boundary as shown on Figure 5. The study area and surrounding wetlands are within the existing and mitigated wetlands (RF-36702) for Tracts F and G of the Nedonna Wave Development.

Rorick Environmental Services delineated wetlands and designed the wetland mitigation plan which was approved and implemented in 2008. The project is in compliance with RF-36702 permit conditions for the mitigation of wetlands; however, an as-built construction plan set was not completed before the permit expired. Since more than five years have elapsed since the previous delineation was approved, an updated wetland determination is necessary within Tracts F and G. The bounds of the study area was discussed and approved by DSL prior to the field study.

McMillan Creek flows along the west boundary of the study area and drains into Nehalem Bay about a quarter mile to the northwest. A railway and forestland border the property to the east. Two unnamed perennial tributaries flow through the study area from the east. To the northeast of the study area an unnamed stream flows through a 24 inch culvert under Kittiwake Drive before emptying into McMillan Creek. Another stream enters the study area from the south along Riley Street, flows northwest through a 24 inch culvert under Riley Street, and a second 24-inch culvert under Kittiwake Drive before emptying into McMillan Creek. The Pacific Ocean is less than a quarter mile to the west. Beavers have been active within the study area and have placed dams at culvert crossings. All of the Nedonna Wave planned development roads except Jackson Street have been built within the study area.

The lot is located on stable duneland with subtle elevation difference between high and low points. Within the study area boundary, the Natural Resources Conservation Service (NRCS) has mapped the Haceta fine sand, 0-3 percent slopes (14A) and the Waldport thin surface-Haceta fine sands, 0-5% slopes (13B). The Haceta is a hydric soil (Figure 3).

Vegetation within the study area is composed of forested and shrubby duneland. Wetlands are common along the waterways and in low-lying areas. Common vascular plant species found within the study area are included in Table 1.

Table 1. List of vascular plants observed within the study area 2024.

Scientific Name	Common Name	Indicator Status	Native, Non-native, or Invasive
Agrostis capillaris	Colonial Bentgrass	FAC	NN
Alnus rubra	Red Alder	FAC	N
Athyrium filix-femina	Lady Fern	FAC	N
Carex obnupta	Slough Sedge	OBL	N
Cytisus scoparius	Scotch Broom	UPL/NL	I
Dactylis glomerata	Orchardgrass	FACU	NN
Equisetum arvense	Horsetail	FAC	N
Gaultheria shallon	Salal	FACU	N

Scientific Name	Common Name	Indicator Status	Native, Non-native, or Invasive
Holcus lanatus	Common Velvetgrass	FAC	NN
Lonicera involucrata	Black Twin-Berry	FAC	N
Lysichiton americanus	Skunk Cabbage	OBL	N
Maianthemum dilatatum	False Lily-of-the-Valley	FAC	N
Malus fusca	Crabapple	FACW	N
Oenanthe sarmentosa	Water Parsley	OBL	N
Phalaris arundinacea	Reed Canary Grass	FACW	I
Picea sitchensis	Sitka Spruce	FAC	N
Polystichum munitum	Sword Fern	FACU	N
Pteridium aquilinum	Bracken Fern	FACU	N
Rubus armeniacus	Himalayan Blackberry	FAC	I
Rubus ursinus	California Dewberry	FACU	N
Rubus spectabilis	Salmonberry	FAC	N
Salix hookeriana	Hooker's Willow	FACW	N
Sambucus racemosa	Red Elderberry	FACU	N
Spiraea douglasii	Hardhack	FACW	N
Stachys mexicana	Mexican Hedge Nettle	FAC	N
Thuja plicata	Red Cedar	FAC	N
Vaccinium ovatum	Evergreen Blueberry	UPL	N

Previous and current land uses

Prior to development, there was a mix of wetland and upland species on dunelands and along waterways. Excluding the roads, the land within the study area supports fish and wildlife habitat. The land is currently zoned R. Future development in Tracts F and G partitions the remaining land within the study area into 28 parcels. Mitigation restrictions as specified in RF-36702 restrict development within created wetlands.

2.0 Site Alterations *OAR141-090-0035 (10(a-b), (12)(b), (14)(e)*

Mitigation of fill areas in wetlands was achieved by creation of .537 acres of wetland in 7 locations (Appendix D of RF-36702). The mitigated wetlands were released from further obligation on August 26, 2013, by DSL. The permit expired before an an-built plan was submitted to agencies for approval.

Since 2008, Kittiwake Drive and Song Street have been paved, and sewer and water lines installed. Culverts were placed as planned on Kittiwake Drive and Riley Street. Jackson Street was cleared in preparation for the road base however the project was never completed. A low-lying depression remains today with an elevated water table. A pumping station in the southeast corner of lot 1040 is in the planning stages. A summary of the area of wetland or non-wetland with the proposed fill areas can be found in Appendix C of this report.

Access for construction of wetlands and roads created site disturbance and introduction of non-native or invasive species. Beavers are present and have girdled trees and dammed culverts which have altered hydrology by elevating the water table.

3.0. Precipitation Data and Analysis *OAR141-090-0035 (12)(c)*

Climate data from the Tillamook AgACIS Station and the Western Regional Climate Center (RAWS) in Tillamook at www.ocs.edu/oregon-climate-dataRAWS was used for this study and is summarized in Table 2.

Table 2. AgACIS Tillamook Observed Precipitation for the dates of fieldwork and the Water Year October 2023 to May 2024.

Observed Precipitation					
Date of Field Visit	Date of Visit (.in)	2 Weeks Prior (.In)	Water year to Date (in.)	Normal Water Year (in.)	% of Normal Water Year
June 19 and 21, 2024	0	.99	76.24	79.84	-5%
June 24, 2024	0	1.05	76.24	79.84	-5%

Table 3 compares the 2024 data with the WETS data (1971-2023) using the Direct Antecedent Rainfall Evaluation Method (DAREM). For this study the climatic conditions were considered typical for this time of year. The hydrologic conditions were problematic where beaver dams at culvert crossings were elevating ground and surface water. The August 12, 2024, DAREM Climatic Summary is included Appendix B.

Table 3. Assessing Rainfall for the Preceding 3-Month Period)
Direct Antecedent Rainfall Evaluation Method (DAREM

	Prior Month	WETS Rainfall Percentile		Measured Rainfall	Condition*: Dry, Wet, Normal	Condition Value (1=dry, 2=normal, or 3=wet)	Month weight	Multiply Previous two columns
	Name	30th	70th	---------inches----------				
1st (most recent)+A6	May	3.02	5.2	4.66	Normal	2	3	6
2nd	April	4.81	7.75	5.48	Normal	2	2	4
3rd	March	7.51	11.89	8.85	wet	2	1	2
							Sum	**12**

Rainfall of prior period was: **drier** than normal (sum is 6-9), **normal** (sum is 10-14), **wetter** than normal (sum is 15-18)	Dry/Normal, standard met

WETS Station: TILLAMOOK, 358494, OR 1948-2024
Measured Rainfall: Tillamook, OR, 35894 March-May 2024

* Normal: measured within WETS normal range
Dry: measured below WETS normal range
Wet: measured above WETS normal range

4.0. Methods (site-specific methods for field investigation, determining wetland boundaries and geographic extent of other waters) *OAR141-090-0030, OAR141-090-0035 (7)(a-g), (8),(9), (10)(a-b), (11) (a-c) (12)(d-h), (15), (16)(a-e)*

Field investigation was conducted on June 19, 21 and 24, 2024. A site visit in mid-August validated the OHW boundary and supplemented mitigated wetland fill at SP-12 within lot 10200. The focus of this study is within Tracts F and G. Prior to the field investigations, meetings were held with Anna Song and DSL to discuss the area to be included in the study area. A review of the NRCS Soil Mapping, the National Wetland Inventory (NWI), the 2008 wetland mapping by Rorick (WD-0153) and RF-36702 maps and figures were also reviewed. Bill Howard with

EarthWorks Construction used a brush cutter to clear blackberries within the study area on June 19, 2024. A hedge trimmer was used to clear brush as needed.

Christine McDonald and Kurt Heckeroth evaluated the site using the Corps of Engineers *Wetland Delineation Manual: Western Mountains, Valleys and Coast Region* (May, 2010) supplement. The Corps of Engineers 2010 manual provides technical criteria, field indicators, and recommended procedures to be used in determining whether an area is a jurisdictional wetland. For wetlands to exist, there must be a prevalence of hydrophytic vegetation, hydric soils, and wetland hydrology. Under normal circumstances, all three parameters must be present to satisfy the criteria for jurisdictional wetlands.

Wetland scientists estimated vegetation cover visually at each sample point, identified all vascular plant species, and recorded the indicator status for each plant species from national wetland indicator lists. The 50/20 rule was used to determine dominance. The 2020 U.S. Army Corps of Engineers Plant List for the State of Oregon was used for this study.

Data for the contribution of coastal fog drip or groundwater to wetland hydrology is unavailable. Fog drip may be contributing to wetland hydrology in the late summer months when coastal fog is frequent. The study area was visited in mid-June following precipitation when wetland indicators could be documented during the growing season. Climatic patterns are typical for this time of year however hydrologic conditions were problematic where beavers have been active.

Beavers are increasing surface water area and water storage and delay and elevating the groundwater table. Beavers have likely been present in McMillan Creek and its tributaries for decades. However, the damming of culverts along Kittiwake Drive and Riley Streets is a more recent activity that increased surface water within stream channels and wetlands. All of these factors were taken into consideration when evaluating wetland hydrology.

Ordinary High Water Line (OHWL)
We used bank morphology as expressed in topographic relief, slope, channel confinement, presence of high water, and changes in vegetation and soil to determine the OHW line along McMillan Creek and the unnamed tributaries.

5.0. Description of All Wetlands and Other Non-Wetland Waters (their characteristics and boundaries, e.g. whether they extend offsite) *OAR141-090-0035 (2), (7)(a-g), (8), (9), (10)(a-b), (11)(a-c), (12)(e), (14)(a-i),(15), & (16)(a-e)*

Within the 3.23-acre study area, .76 acres of jurisdictional wetlands and waterways were documented on the June and August site visits. The NWI wetland classification is Palustrine Forest (PFO) and Palustrine Scrub Shrub (PSS). Wetlands are seasonally flooded. Because of the circumstances that created the Jackson Street wetland it is listed separately as Wetland B.

Table 4. Summary of Wetlands and Water Bodies Within the Study Area

Wetland or Waterbody	Acres/Length (ft)	Cowardin/ HGM Class	Comments	Extends Off-Site
OHWL R1	.08/287’	R2SB4	McMillan Creek and unnamed	North, East,

			tributary to Kittiwake Drive (S1)	West, South
OHWL S1 and S2	.04/83’	R2SB4	Unnamed tributary adjacent to Riley Street (S2)	East, South
Wetland A	.57	PSSC/PFOC Slopes-Flats	Connects to interior and mitigated wetlands	North, East
Wetland B	.07	PSSC/Flats-Depression	Wetland area within the excavated Jackson Street ROW	West, Connects to Wetland A

Wetland A includes the wetlands created for mitigation credit (RF-36702) and those that connect to the larger interior wetland to the north and east. The wetland boundary is defined by the concave slopes within wetland swales. We consistently found a difference in relief of 6-20 inches of relief that defined the wetland boundary. Vegetation is dominated by Sitka Spruce, Western Red Cedar, Red Alder, Hooker’s Willow, Black Twinberry, Slough Sedge, Water Parsley, and Skunk Cabbage. Soils are deep, moderately to very poorly drained sands or mucky sands with very dark brown surfaces, and dark or very dark greyish brown to brown sandy subsurface horizons with reddish brown or brown redoximorphic features. The wetland soils met the Sandy Redox (S5) or Sandy Mucky Mineral (S1) hydric indicators. Organic carbon was estimated at 5-8% in the mucky sands. Wetland hydrology and soil moisture levels were observed during the late spring when ground and surface waters were higher than normal due to restricted flow at culvert crossings from beaver damming. The geomorphic position (D2), soil moisture and ground water levels within the soil profile (A1, A2 and A3), and professional judgement were used to determine wetland hydrology.

Wetland B (PSSC/Flats-Depression) is located within the confines of Jackson Street in a depression that slopes to the north and then drains west into Wetland A. The excavated edge defines the wetland boundary where slopes change from concave in the wetlands to flat or convex in the non-wetlands.

Backflow of waters by beaver damming within the depression have created surface water and a high-water table for extended periods. Surface water levels were concentrated to the north on the day of the site visit. Soil indicators within the upper six inches of soil met the Sandy Mucky (S1) or Sandy Redox (S5) classification. Overstory vegetation is composed of young Red Alder and Hookers Willow with a dominance of Slough Sedge in the herbaceous layer. A wetland was identified in the wetland delineation and the mitigated fill plan by Rorick (2007). This study found that the proposed fill had been placed in 67% of the wetland, before the road was constructed. The remaining 33% are within the Jackson Street ROW.

Ordinary High Water Line (OHWL) R1-.08 acres R2SB4
The top of the bank was used to demarcate the **OHWL** R1 along McMillan Creek and S1. Water flow is slow moving as McMillan Creek flows across an incised low gradient floodplain. Stream substrate is sandy. Channel width is more than 20 feet and channel depth are 3-6 feet. On the day of the site visit in June the water depth was 16- 20 + inches. The banks are vegetated with Red Alder, Black Twinberry, Salal, Salmonberry, Red Elderberry, Slough Sedge and Sword Fern. Flow is perennial. Woody debris is abundant. Beaver activity is present although no dams were observed within the main channel. Fish presence isunknown.

OHWL S1 (.03 acres) and S2 (.01 acres) R2SB4
An unnamed stream enters the study area from the south and flows through a 24-inch culvert crossing under Riley Street and then another 24-inch culvert crossing under Kittiwake Drive before emptying into McMillan Creek. S1 is the 44-foot segment of the stream that flows between Kittiwake Drive and McMillan Creek. S2 is another 44-foot section between Riley Street and Kittiwake Drive. The top of the bank, relief and channel confinement was used to demarcate the OHWL. Flow is believed to be perennial. On the day of the site visit 4-8 inches of water was present. The gradient is low (1-3%) and stream substrate is sandy to mucky sands. Channel width is 6-8 feet and channel depth are 3-5 feet. The banks are vegetated with Red Alder, Black Twinberry, Himalayan Blackberry, Red Elderberry, Salal, Crabapple, Hardhack, Sword Fern, and Slough Sedge. Beaver activity was not observed on the day of the site visit. Fish presence is unknown.

Non-Wetlands Vegetation is dominated by Red Alder, Sitka Spruce, Himalayan Blackberry, Scotch Broom, Salal, Black Twinberry, Red Elderberry, Evergreen Blueberry, California Dewberry, Sword Fern, Colonial Bentgrass, Reed Canary Grass, Slough Sedge and other non-native grasses. Non-wetlands are present on dune terraces with level to concave relief. Soils throughout the study area were deep, moderately to well-drained sands with brown and dark brown surfaces, and dark brown to brown subsurface horizons. Soil moisture levels were observed during the late spring and summer growing season. Beaver activity has elevated the water table within swales and low-lying areas, however the non-wetland soil pits within the study area did not have elevated ground water or saturation within 12 inches of the soil surface.

6.0 Deviation from LWI or NWI (if any, wetland determination data or explanation required.)
OAR141-090-0035 (7)(e), (12)(f)

The National Wetlands Inventory (NWI) map shows extensive wetlands throughout the study area (Figure 4). Our study shows that the NWI overestimated scrub-shrub and forested wetlands within the boundary of the study area. Non-wetlands were found on elevated dune terraces. The NWI maps are generated primarily on the basis of interpretation of color infrared photography (scale of 1:58,000) with limited ground-truthing to confirm interpretations. This study is mostly consistent with the 2007 wetland study by Rorick. See Figure 6.

7.0 Mapping Method (including mapping precision estimate) *OAR141-090-0035 (3), (5)(a-b), (11)(a-c), (12)(f)(g), (13)(a-g), (14)(a-i) & (15)*

Christine McDonald and Kurt Heckeroth flagged the wetland boundary with blue pin flags and flagging. Sample points were flagged with yellow flagging and pin flags. The OHWL Boundary was flagged with stripped blue or white, and blue flagging. The study area boundary and non-wetland sample points were then professionally land surveyed by Onion Peak Design. A Topcon GPT-8205A TDS NOMAD was used for the survey. The estimated accuracy is +/- 0.25 feet.

8.0 Additional Information (i.e., if needed to establish state jurisdiction) *OAR141-085-0015 (1-7), OAR141-090-0030 (2), OAR141-090-0035 (9), (10)(a-b), (12)(h), & (A-J)*

See Appendix C for the Updated As-Built Plan Summary

9.0 Results and Conclusions of the Investigation *OAR141-090-0035 (12)(i)*

Within the 3.23-acre study area a total of .64 acres of jurisdictional wetlands and .12 acres of jurisdictional waterways were documented on the June and August 2024 site visits.

10.0 Required Disclaimer *OAR141-090-0035 (12)(j)*

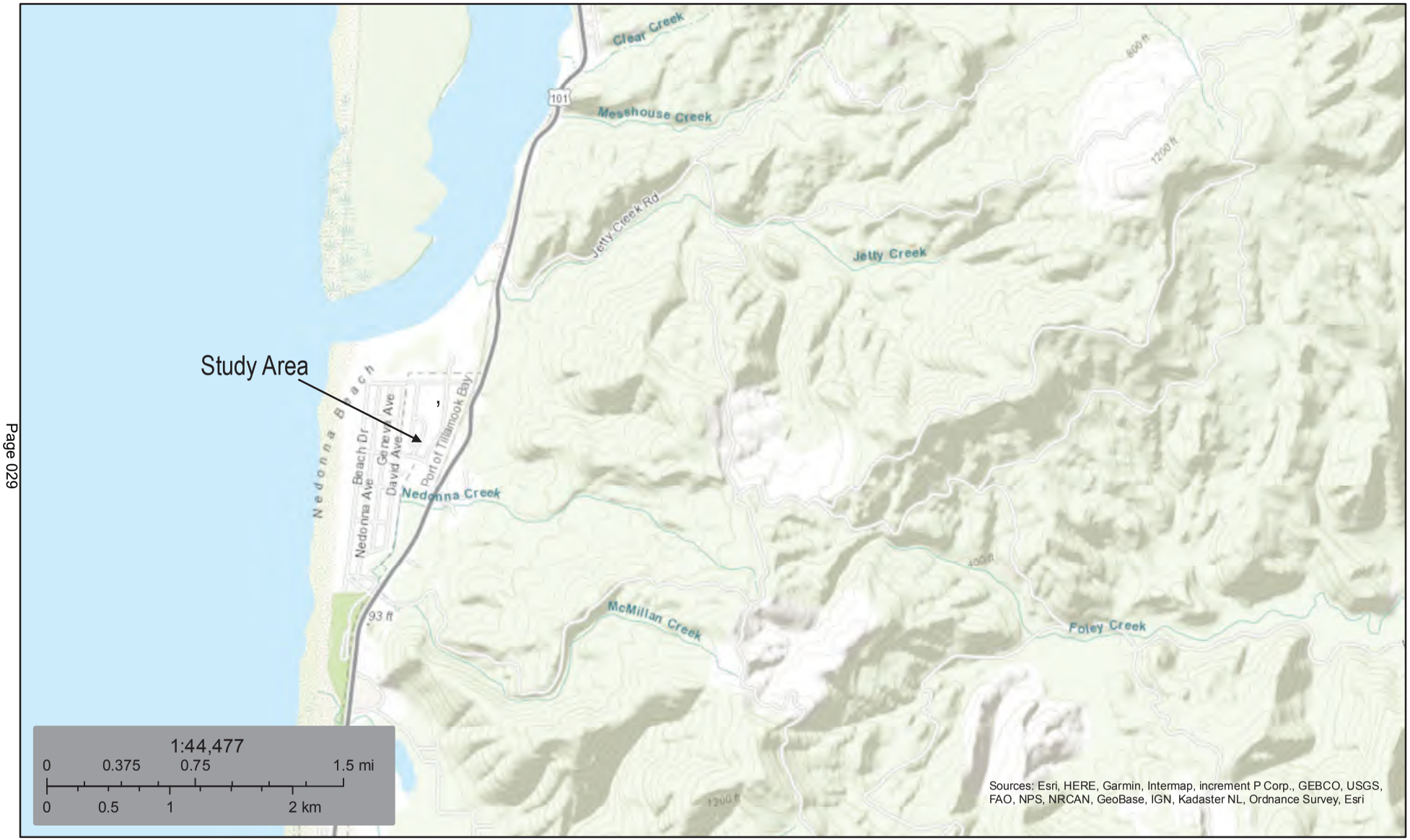
This report documents the investigation, best professional judgment, and conclusions of the investigators. It is correct and complete to the best of our knowledge. It should be considered a Preliminary Jurisdictional Determination of wetlands and other waters and used at your own risk unless it has been reviewed and approved in writing by the Oregon Department of State Lands in accordance with OAR 141-090-0005 through 141-090-0055.

References

- Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys and Coast Region (May 2010), U. S. Army Corps of Engineer Waterways Experiment Station, Vicksburg, MS.
- NRCS National Water and Climate Center WETS data available online at http://www.wcc.nrcs.usda.gov/climate/wetlands.htm
- NRCS Wetland Climate Evaluation Database (AgACIS http://agacis.rcc-acis.org/?fips=41057) for the station in Cloverdale
- Natural Resource Conservation Service, National Cooperative Soil Survey, Web Soil Survey 1.1, available online at http://websoilsurvey.nrcs.usda.gov
- USDA, Natural Resources Conservation Service, Hydric Soil List available online at http://www.or.nrcs.gov/pnw_soil/ordata.html

U.S. Fish and Wildlife Service
National Wetlands Inventory

Figure 1. Location Map with Study Area



June 20, 2020

Figure 1a. 2022 NAIP Air Photo

Printed 6 / 14 / 2024

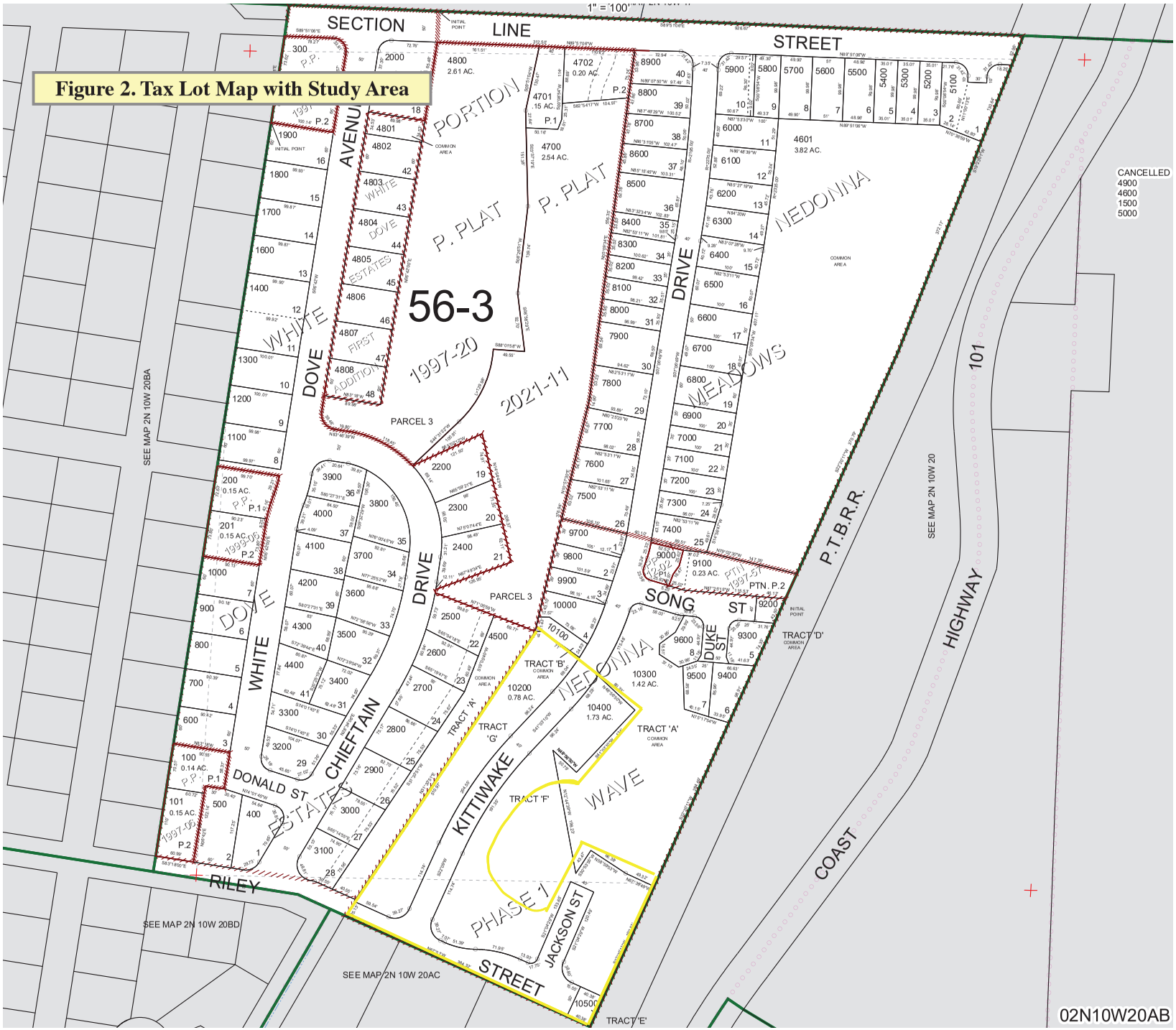
THIS MAP WAS PREPARED FOR ASSESSMENT PURPOSE ONLY

0 50 100 150 200 Feet

N.W.1/4 N.E.1/4 SEC.20 T.2N. R.10W. W.M.
TILLAMOOK COUNTY

02N10W20AB

Figure 2. Tax Lot Map with Study Area



Revised 12/15/21, WS

Soil Map—Tillamook County, Oregon
(Figure 3. WEB Soil Survey)

Map Scale: 1:3,010 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 40 80 160 240

Feet: 0 100 200 400 600

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 10N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Tillamook County, Oregon
Survey Area Data: Version 16, Sep 7, 2023

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: May 28, 2020—Jun 22, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
13B	Waldport,thin surface-Heceta fine sands, 0 to 5 percent slopes	15.9	46.3%
14A	Heceta fine sand, 0 to 3 percent slopes	11.9	34.7%
29D	Templeton-Klootchie complex, 5 to 30 percent slopes	6.6	19.1%
Totals for Area of Interest		**34.4**	**100.0%**

U.S. Fish and Wildlife Service
National Wetlands Inventory

Figure 4. NWI Anna Song

October 22, 2023

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

NOTES

THIS MAP DOES NOT CONSTITUTE A BOUNDARY SURVEY OF THE SUBJECT PROPERTY. THE PURPOSE OF THIS MAP IS TO SHOW THE LOCATION OF WETLAND BOUNDARY AND SAMPLE POINTS AS FLAGGED BY CHRISTINE MCDONALD.
THE EXTERIOR BOUNDARY WAS HELD AT RECORD VALUES PER MAP C-573.

AREAS

AREAS WITHIN THE STUDY AREA BOUNDARY FOR 2N 10 20 AB TAX LOT 10200.
WETLAND AREA = 0.11 ACRES. NON-WETLAND AREA = 0.67 ACRES.

AREAS WITHIN THE STUDY AREA BOUNDARY FOR 2N 10 20 AB TAX LOT 10300.
WETLAND AREA = 0.13 ACRES. NON-WETLAND AREA = 0.03 ACRES.

AREAS WITHIN THE STUDY AREA BOUNDARY FOR 2N 10 20 AB TAX LOT 10400.
WETLAND AREA = 0.43 ACRES. NON-WETLAND AREA = 0.89 ACRES.

AREAS WITHIN THE STUDY AREA BOUNDARY FOR 2N 10 20 AB TAX LOT 10500.
WETLAND AREA = 0.00 ACRES. NON-WETLAND AREA = 0.05 ACRES.

AREAS WITHIN THE STUDY AREA BOUNDARY AND JACKSON STREET RIGHT-OF-WAY.
WETLAND AREA = 0.07 ACRES. NON-WETLAND AREA = 0.06 ACRES.

AREAS WITHIN THE STUDY AREA BOUNDARY AND KITTIWAKE DRIVE RIGHT-OF-WAY.
WETLAND AREA = 0.01 ACRES. NON-WETLAND AREA = 0.46 ACRES

AREAS WITHIN THE STUDY AREA BOUNDARY AND RILEY STREET RIGHT-OF-WAY.
WETLAND AREA = 0.01 ACRES. NON-WETLAND AREA = 0.31 ACRES

LEGEND

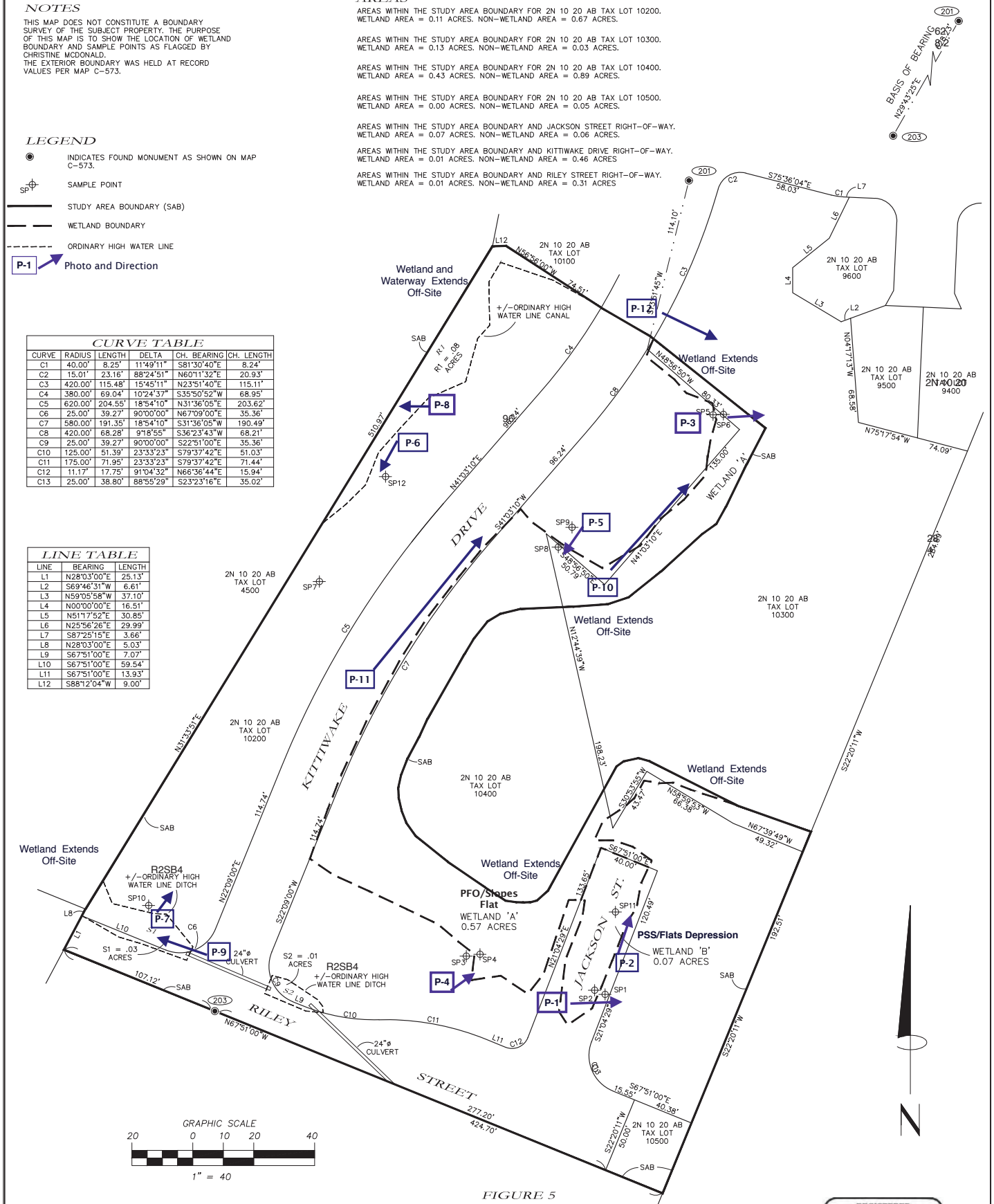
- INDICATES FOUND MONUMENT AS SHOWN ON MAP C-573.
- SP — SAMPLE POINT
- STUDY AREA BOUNDARY (SAB)
- WETLAND BOUNDARY
- ORDINARY HIGH WATER LINE
- P-1 — Photo and Direction

CURVE TABLE

CURVE	RADIUS	LENGTH	DELTA	CH. BEARING	CH. LENGTH
C1	40.00'	8.25'	11°49'11"	S81°30'40"E	8.24'
C2	15.01'	23.16'	88°24'51"	N60°11'32"E	20.93'
C3	420.00'	115.48'	15°45'11"	N23°51'40"E	115.11'
C4	380.00'	69.04'	10°24'37"	S35°50'52"W	68.95'
C5	620.00'	204.55'	18°54'10"	N31°36'05"E	203.62'
C6	25.00'	39.27'	90°00'00"	N67°09'00"E	35.36'
C7	580.00'	191.35'	18°54'10"	S31°36'05"W	190.49'
C8	420.00'	68.28'	9°18'55"	S36°23'43"W	68.21'
C9	25.00'	39.27'	90°00'00"	S22°51'00"E	35.36'
C10	125.00'	51.39'	23°33'23"	S79°37'42"E	51.03'
C11	175.00'	71.95'	23°33'23"	S79°37'42"E	71.44'
C12	11.17'	17.75'	91°04'32"	N66°36'44"E	15.94'
C13	25.00'	38.80'	88°55'29"	S23°23'16"E	35.02'

LINE TABLE

LINE	BEARING	LENGTH
L1	N28°03'00"E	25.13'
L2	S69°46'31"W	6.61'
L3	N59°05'58"W	37.10'
L4	N00°00'00"E	16.51'
L5	N51°17'52"E	30.85'
L6	N25°56'26"E	29.99'
L7	S87°25'15"E	3.66'
L8	N28°03'00"E	5.03'
L9	S67°51'00"E	7.07'
L10	S67°51'00"E	59.54'
L11	S67°51'00"E	13.93'
L12	S88°12'04"W	9.00'



GRAPHIC SCALE
20 0 10 20 40
1" = 40

FIGURE 5
WETLAND SURVEY FOR:
NEDONNA DEVELOPMENT LLC
2N 10 20 AB
TAX LOTS
10200, 10300, 10400 & 10500
NW 1/4 OF THE NE 1/4, SECTION 29, T3N, R10W, W.M.
TILLAMOOK COUNTY
SEPTEMBER 18, 2024

REGISTERED PROFESSIONAL LAND SURVEYOR
Erick M White
OREGON
APRIL 28, 2014
ERICK M. WHITE
78572
RENEWS 6/30/2026

ONION PEAK DESIGN
11460 EVERGREEN WAY
NEHALEM, OR 97131
(503) 440-4403

"SONG" #A2024
SONG2407-W.DWG

Appendix A

Wetland Determination Field Data Forms

U.S. Army Corps of Engineers

WETLAND DETERMINATION DATA SHEET – Western Mountains, Valleys, and Coast Region

See ERDC/EL TR-10-3; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Nedonna Wave updated Wetland Delineation | City/County: Rockaway Beach/Tillamook | Sampling Date: 6/19/24

Applicant/Owner: Anna Song | State: OR | Sampling Point: SP-1

Investigator(s): CM. KH | Section, Township, Range: 2N 10W 20 Lot 10400

Landform (hillside, terrace, etc.): dune terrace | Local relief (concave, convex, none): none | Slope (%): 1-2

Subregion (LRR/MLRA): LRR A | Lat: 45.64668 | Long: -123.93504 | Datum: NAD 83

Soil Map Unit Name: 13B Waldport, thin surface- Haceta fine sand, 0-5 percent slopes | NWI classification: -

Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes x No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** **Yes** ____ **No** X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No x	

Remarks:
Sample point in 2008 mitigation area RF36702. In 2008, Fill was partially placed outside the road base for Jackson St.The road base for was excavated for construction in 2008 but was never completed. More than 5 years "Normal Circumstances". See hydrology for Climatic remarks. PP at WB.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Alnus rubra*	95	Yes	FAC
2.			
3.			
4.			
	95	=Total Cover	
Sapling/Shrub Stratum (Plot size: 20)			
1. *Rubus spectabilis*	2	No	FAC
2. *Rubus armeniacus*	50	Yes	FAC
3.			
4.			
5.			
	52	=Total Cover	
Herb Stratum (Plot size: 10)			
1. *Carex obnupta*	2	No	OBL
2. *Ranunculus repens*	2	No	FAC
3. *Equisetum arvense*	15	Yes	FAC
4. *Oenanthe sarmentosa*	1	No	OBL
5. *Scirpus americanus*	2	No	OBL
6. *Polystichum munitum*	3	No	FACU
7. *Galium triflorum*	1	No	FACU
8. *Stachys mexicana*	10	Yes	FACW
9.			
10.			
11.			
	36	=Total Cover	
Woody Vine Stratum (Plot size: 20)			
1. *Rubus ursinus*	20	Yes	FACU
2.			
	20	=Total Cover	

% Bare Ground in Herb Stratum 10

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 80.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ____	x 1 = ____
FACW species ____	x 2 = ____
FAC species ____	x 3 = ____
FACU species ____	x 4 = ____
UPL species ____	x 5 = ____
Column Totals: ____ (A)	____ (B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:

- ____ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- ____ 3 - Prevalence Index is ≤3.0[1]
- ____ 4 - Morphological Adaptations[1](Provide supporting data in Remarks or on a separate sheet)
- ____ 5 - Wetland Non-Vascular Plants[1]
- ____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** X **No** ____

Remarks:

SOIL

Sampling Point: SP-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	7.5YR 3/3	100					Sandy	
2-19	7.5YR 5/3	100					Sandy	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ 1 cm Muck (A9) **(LRR D, G)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(LRR A, E)**
- ___ Iron-Manganese Masses (F12) **(LRR D)**
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:
Soil is moist at 18"

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes ___	No x	Depth (inches): ___
Water Table Present?	Yes ___	No x	Depth (inches): ___
Saturation Present? (includes capillary fringe)	Yes ___	No x	Depth (inches): ___

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
No precipitation on the day of the site visit.and .99 in the previous 2 weeks. Climatic conditions are typical for this time of year.. Beaver activity has altered hydrologic conditons by damming culverts. Ground water levels are higher than normal for this time of year.

U.S. Army Corps of Engineers

WETLAND DETERMINATION DATA SHEET – Western Mountains, Valleys, and Coast Region

See ERDC/EL TR-10-3; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Nedonna Wave updated Wetland Delineation | City/County: Rockaway Beach/Tillamook | Sampling Date: 6/19/24

Applicant/Owner: Anna Song | State: OR | Sampling Point: SP-2

Investigator(s): CM. KH | Section, Township, Range: 2N 10W 20 Lot 10400

Landform (hillside, terrace, etc.): dune swale manmade | Local relief (concave, convex, none): concave | Slope (%): 0-1

Subregion (LRR/MLRA): LRR A | Lat: 45.64917 | Long: -123.93412 | Datum: NAD 83

Soil Map Unit Name: 13B Waldport, thin surface- Haceta fine sand, 0-5 percent slopes | NWI classification: PSSC

Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes x No ____

Are Vegetation ____, Soil x, or Hydrology x naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes X No ____

Hydric Soil Present? Yes x No ____

Wetland Hydrology Present? Yes x No ____

Is the Sampled Area within a Wetland? **Yes** x **No** ____

Remarks:
Sample point is in mitigation area for 2008 RF36702. Road base for Jackson Creek was excavated for construction in2008 but was never completed.Sample point is in the depression. More than 5 years "Normal Circumstances". See hydrology for Climatic remarks. Piared Plot at WB.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Alnus rubra* (saplings)	90	Yes	FAC
2.			
3.			
4.			
	90	=Total Cover	
Sapling/Shrub Stratum (Plot size: 20)			
1. *Salix hookeriana*	10	Yes	FACW
2.			
3.			
4.			
5.			
	10	=Total Cover	
Herb Stratum (Plot size: 10)			
1. *Carex obnupta*	80	Yes	OBL
2. *Galium triflorum*	2	No	FACU
3. *Equisetum arvense*	1	No	FAC
4. *Oenanthe sarmentosa*	1	No	OBL
5. *Stachys mexicana*	5	No	FACW
6. *Polystichum munitum*	2	No	FACU
7.			
8.			
9.			
10.			
11.			
	91	=Total Cover	
Woody Vine Stratum (Plot size: 20)			
1. *Rubus ursinus*	5	Yes	FACU
2.			
	5	=Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ____	x 1 = ____
FACW species ____	x 2 = ____
FAC species ____	x 3 = ____
FACU species ____	x 4 = ____
UPL species ____	x 5 = ____
Column Totals: ____ (A)	____ (B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

____ 3 - Prevalence Index is ≤3.0[1]

____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

____ 5 - Wetland Non-Vascular Plants[1]

____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** X **No** ____

Remarks:
Photos. Alder trees are about 30-40'. Slopes to the north where alder is replaced SAHO.

SOIL

Sampling Point: SP-2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	7.5YR 2.5/2	100					Sandy	
2-4	7.5YR 4/2	100					Sandy	
4-10	7.5YR 5/2	90	7.5YR 4/4	10	C	M	Sandy	Distinct redox concentrations

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ 1 cm Muck (A9) **(LRR D, G)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G)**
- ___ Sandy Gleyed Matrix (S4)
- X Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(LRR A, E)**
- ___ Iron-Manganese Masses (F12) **(LRR D)**
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** _ . _

Remarks:
The pit filled up with water. The 2007 wetland study mapped a long narrow wetland in this area and in proposed wetland fill area. Road base has been excavated. Connects to the larger wetlands to the west.Litter 2-1 7.5YR 3/3 leaves, OM. Redox increases with depth. Connects to larger wetland to the west.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- X High Water Table (A2)
- x Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- x Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- X FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes ___	No x	Depth (inches): ___		
Water Table Present?	Yes x	No ___	Depth (inches): 5		
Saturation Present? (includes capillary fringe)	Yes x	No ___	Depth (inches): 5	**Wetland Hydrology Present?**	**Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
No precipitation on the day of the site visit.and .99 in the previous 2 weeks. Climatic conditions are typical for this time of year.. Beaver activity has altered hydrologic conditons by damming culverts and streams Ground water levels are higher than normal for this time of year.

U.S. Army Corps of Engineers

WETLAND DETERMINATION DATA SHEET – Western Mountains, Valleys, and Coast Region

See ERDC/EL TR-10-3; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Nedonna Wave updated Wetland Delineation | City/County: Rockaway Beach/Tillamook | Sampling Date: 6/19/24

Applicant/Owner: Anna Song | State: OR | Sampling Point: SP-3

Investigator(s): CM. KH | Section, Township, Range: 2N 10W 20 Lot 10400

Landform (hillside, terrace, etc.): dune terrace (filled) | Local relief (concave, convex, none): none | Slope (%): 1-2

Subregion (LRR/MLRA): LRR A | Lat: 45.64922 | Long: -123.93442 | Datum: NAD 83

Soil Map Unit Name: 13B Waldport, thin surface- Haceta fine sand, 0-5 percent slopes | NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes x No ____

Are Vegetation ____, Soil ____, or Hydrology x naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** **Yes** ____ **No** x
Hydric Soil Present?	Yes ____	No x	
Wetland Hydrology Present?	Yes ____	No x	

Remarks:
Sample point is in mitigation area for 2008 RF36702. Documents non-wetlands in fill area Lot 23. Sample point is paired along the wetland edge. More than 5 years "Normal Circumstances". See hydrology for Climatic remarks. Piared Plot at WB. Beaver acitivity in wetlands.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Alnus rubra*	65	Yes	FAC
2.			
3.			
4.			
	65	=Total Cover	
Sapling/Shrub Stratum (Plot size: 20)			
1. *Rubus armeniacus*	50	Yes	FAC
2. *Sambuccus racemosa*	2	No	FACU
3.			
4.			
5.			
	52	=Total Cover	
Herb Stratum (Plot size: 10)			
1. *Carex obnupta*	20	Yes	OBL
2. *Stachys mexicana*	30	Yes	FACW
3. *Equisetum arvense*	20	Yes	FAC
4. *Athyrium filix-femina*	2	No	FAC
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	72	=Total Cover	
Woody Vine Stratum (Plot size: 20)			
1.			
2.			
		=Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ____	x 1 = ____
FACW species ____	x 2 = ____
FAC species ____	x 3 = ____
FACU species ____	x 4 = ____
UPL species ____	x 5 = ____
Column Totals: ____ (A)	____ (B)
Prevalence Index = B/A = ____	

Hydrophytic Vegetation Indicators:

- ____ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- ____ 3 - Prevalence Index is ≤3.0[1]
- ____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ____ 5 - Wetland Non-Vascular Plants[1]
- ____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** X **No** ____

Remarks:
RUAR was mowed the day of the site vist on lot 23. Plot is outside the mowed area on edge of fill and under alder.

SOIL

Sampling Point: SP-3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	7.5YR 4/3	100					Sandy	
10-16	7.5YR 4/3	72	10YR 3/1	6	C	M	Sandy	Distinct redox concentrations
16-20	7.5YR 4/2	20	7.5YR 4/3	2	C	M	Sandy	Faint redox concentrations

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ 1 cm Muck (A9) **(LRR D, G)**
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G)**
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

___ 2 cm Muck (A10) **(LRR A, E)**
___ Iron-Manganese Masses (F12) **(LRR D)**
___ Red Parent Material (F21)
___ Very Shallow Dark Surface (F22)
___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ____ **No** x

Remarks:
The test pit is located on the outermost edge of fill and may have settled since 2008. Slightly lower elevation the interior of lot that has more fill.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Surface Soil Cracks (B6)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
___ Salt Crust (B11)
___ Aquatic Invertebrates (B13)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Stunted or Stressed Plants (D1) (**LRR A**)
___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

___ Water-Stained Leaves (B9) (**MLRA 1, 2 4A, and 4B**)
___ Drainage Patterns (B10)
___ Dry-Season Water Table (C2)
___ Saturation Visible on Aerial Imagery (C9)
___ Geomorphic Position (D2)
___ Shallow Aquitard (D3)
X FAC-Neutral Test (D5)
___ Raised Ant Mounds (D6) (**LRR A**)
___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes ____	No x	Depth (inches): ____		
Water Table Present?	Yes X	No ____	Depth (inches): 20		
Saturation Present? (includes capillary fringe)	Yes x	No ____	Depth (inches): 20	**Wetland Hydrology Present?**	**Yes** ____ **No** x

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
No precipitation on the day of the site visit.and .99 in the previous 2 weeks. Climatic conditions are typical for this time of year.. Beaver activity has altered hydrologic conditons by damming culverts and streams Ground water levels are higher than normal/problematic.

U.S. Army Corps of Engineers

WETLAND DETERMINATION DATA SHEET – Western Mountains, Valleys, and Coast Region

See ERDC/EL TR-10-3; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Nedonna Wave updated Wetland Delineation | City/County: Rockaway Beach/Tillamook | Sampling Date: 6/19/24

Applicant/Owner: Anna Song | State: OR | Sampling Point: SP-4

Investigator(s): CM. KH | Section, Township, Range: 2N 10W 20 Lot 10400

Landform (hillside, terrace, etc.): dune swale | Local relief (concave, convex, none): concave | Slope (%): 0-1

Subregion (LRR/MLRA): LRR A | Lat: 45.64920 | Long: -123.93459 | Datum: NAD 83

Soil Map Unit Name: 13B Waldport, thin surface- Haceta fine sand, 0-5 percent slopes | NWI classification: PFO/PSS

Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No x (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes x No ____

Are Vegetation ____, Soil ____, or Hydrology x naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes X No ____

Hydric Soil Present? Yes x No ____

Wetland Hydrology Present? Yes x No ____

Is the Sampled Area within a Wetland? **Yes** x **No** ____

Remarks:
Sample point is adjacent to the mitigation area for 2008 RF36702. Sample point is on the other side of silt fence in wetland. See hydrology for Problematic/Climatic remarks. Beaver activity has altered ground water levels. Plot at WB.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Alnus rubra*	95	Yes	FAC
2.			
3.			
4.			
	95	=Total Cover	
Sapling/Shrub Stratum (Plot size: 20)			
1. *Rubus spectabilis*	5	Yes	FAC
2. *Loinicera involucrata*	2	Yes	FAC
3. *Sambucus racemosa*	2	Yes	FACU
4.			
5.			
	9	=Total Cover	
Herb Stratum (Plot size: 10)			
1. *Carex obnupta*	80	Yes	OBL
2. *Stachys mexicana*	5	No	FACW
3. *Equisetum arvense*	5	No	FAC
4. *Athyrium filix-femina*	5	No	FAC
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	95	=Total Cover	
Woody Vine Stratum (Plot size: 20)			
1.			
2.			
		=Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 80.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ____	x 1 = ____
FACW species ____	x 2 = ____
FAC species ____	x 3 = ____
FACU species ____	x 4 = ____
UPL species ____	x 5 = ____
Column Totals: ____ (A)	____ (B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

____ 3 - Prevalence Index is ≤3.0[1]

____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

____ 5 - Wetland Non-Vascular Plants[1]

____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** X **No** ____

Remarks:
AT WB 20A

SOIL

Sampling Point: SP-4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 3/2	100					Mucky Sand	6-9% OC/fibers + muck

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ 1 cm Muck (A9) **(LRR D, G)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- X Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(LRR A, E)**
- ___ Iron-Manganese Masses (F12) **(LRR D)**
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** x **No** ___

Remarks:

The pit filled up with water and there is surface water nearby. Too wet to dig out muck near the surface. Very wet.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- X Surface Water (A1)
- X High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- x Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- X FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes x	No ___	Depth (inches):	2
Water Table Present?	Yes x	No ___	Depth (inches):	0
Saturation Present? (includes capillary fringe)	Yes x	No ___	Depth (inches):	0

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No precipitation on the day of the site visit.and .99 in the previous 2 weeks. Climatic conditions are typical for this time of year.. Beaver activity has altered hydrologic conditons by damming culverts and streams Ground water levels are higher than normal for this time of year.

U.S. Army Corps of Engineers

WETLAND DETERMINATION DATA SHEET – Western Mountains, Valleys, and Coast Region

See ERDC/EL TR-10-3; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Nedonna Wave updated Wetland Delineation | City/County: Rockaway Beach/Tillamook | Sampling Date: 6/19/24

Applicant/Owner: Anna Song | State: OR | Sampling Point: SP-5

Investigator(s): CM, KH | Section, Township, Range: 2N 10W 20 Lot 10400

Landform (hillside, terrace, etc.): dune terrace | Local relief (concave, convex, none): uneven | Slope (%): 1-2

Subregion (LRR/MLRA): LRR A | Lat: 45.65013 | Long: -123.93390 | Datum: NAD 83

Soil Map Unit Name: 13B Waldport, thin surface- Haceta fine sand, 0-5 percent slopes | NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes x No ____

Are Vegetation ____, Soil ____, or Hydrology x naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** **Yes** ____ **No** x
Hydric Soil Present?	Yes ____	No x	
Wetland Hydrology Present?	Yes ____	No x	

Remarks:
Sample point is in wetland mitigation area for 2008 RF36702. Documents edge of non-wetlands in Lot 19. The corner of the lot is topographically lower than the filled area in the remainder of the lot. More than 5 years "Normal Circumstances". See hydrology for remarks. Plot at WB.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Alnus rubra*	5	No	FAC
2. *Picea stichensis*	90	Yes	FAC
3.			
4.			
	95	=Total Cover	
Sapling/Shrub Stratum (Plot size: 20)			
1. *Gaultheria shallon*	25	Yes	FACU
2. *Loinicera involucrata*	20	Yes	FAC
3. *Vaccinium ovatum*	15	Yes	FACU
4. *Salix hookeriana*	5	No	FACW
5. *Myrica californica*	5	No	FACW
	70	=Total Cover	
Herb Stratum (Plot size: 10)			
1. *Carex obnupta*	20	Yes	OBL
2. *Hedera helix*	1	No	UPL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	21	=Total Cover	
Woody Vine Stratum (Plot size: 20)			
1.			
2.			
		=Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 60.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ____	x 1 = ____
FACW species ____	x 2 = ____
FAC species ____	x 3 = ____
FACU species ____	x 4 = ____
UPL species ____	x 5 = ____
Column Totals: ____ (A)	____ (B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:

- ____ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- ____ 3 - Prevalence Index is ≤3.0[1]
- ____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ____ 5 - Wetland Non-Vascular Plants[1]
- ____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** X **No** ____

Remarks:
Frangula purshiana 2% FAC. The vegetation has not been disturbed in this corner and there is a drop of at least a foot from the rest of lot 19.

SOIL

Sampling Point: SP-5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	7.5YR 3/2	100					Sandy	
2-18	7.5YR 5/3	96					Sandy	7.5YR 4/4 4%

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ 1 cm Muck (A9) **(LRR D, G)**
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G)**
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

___ 2 cm Muck (A10) **(LRR A, E)**
___ Iron-Manganese Masses (F12) **(LRR D)**
___ Red Parent Material (F21)
___ Very Shallow Dark Surface (F22)
___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____
Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** x

Remarks:
Duff layer 4-0 7.5YR 2.5/2 litter, needles and OM. Indicators are not present even with the elevated water table from beaver activity. This may have been an island of upland that was mapped as wetland in the 2007 delineation.Sampled the soil at 2-18" to confirm the colors.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Surface Soil Cracks (B6)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
___ Salt Crust (B11)
___ Aquatic Invertebrates (B13)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Stunted or Stressed Plants (D1) (**LRR A**)
___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

___ Water-Stained Leaves (B9) (**MLRA 1, 2 4A, and 4B**)
___ Drainage Patterns (B10)
___ Dry-Season Water Table (C2)
___ Saturation Visible on Aerial Imagery (C9)
x Geomorphic Position (D2)
___ Shallow Aquitard (D3)
___ FAC-Neutral Test (D5)
___ Raised Ant Mounds (D6) (**LRR A**)
___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ___ No x Depth (inches): ___
Water Table Present? Yes ___ No x Depth (inches): ___
Saturation Present? (includes capillary fringe) Yes x No ___ Depth (inches): 17

Wetland Hydrology Present? **Yes** ___ **No** x

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
No precipitation on the day of the site visit.and .99 in the previous 2 weeks. Climatic conditions are typical for this time of year.. Beaver activity has altered hydrologic conditons by damming culverts and streams Ground water levels are higher than normal-problematic.

U.S. Army Corps of Engineers

WETLAND DETERMINATION DATA SHEET – Western Mountains, Valleys, and Coast Region

See ERDC/EL TR-10-3; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Nedonna Wave updated Wetland Delineation | City/County: Rockaway Beach/Tillamook | Sampling Date: 6/21/24

Applicant/Owner: Anna Song | State: OR | Sampling Point: SP-6

Investigator(s): CM. KH | Section, Township, Range: 2N 10W 20 Lot 10400

Landform (hillside, terrace, etc.): dune swale | Local relief (concave, convex, none): concave | Slope (%): 0-1

Subregion (LRR/MLRA): LRR A | Lat: 45.65018 | Long: -123.93397 | Datum: NAD 83

Soil Map Unit Name: 13B Waldport, thin surface- Haceta fine sand, 0-5 percent slopes | NWI classification: PFO/PSS

Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No x (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes x No ____

Are Vegetation ____, Soil ____, or Hydrology x naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes X No ____

Hydric Soil Present? Yes x No ____

Wetland Hydrology Present? Yes x No ____

Is the Sampled Area within a Wetland? **Yes** x **No** ____

Remarks:
Beaver activity has elevated water table and blocked waterflow at the culvert oin Kittiwake Drive. See hydrology for Climatic remarks. Piared Plot at WB-44a.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Alnus rubra*	20	Yes	FAC
2. *Picea sitchensis*	50	Yes	FAC
3.			
4.			
	70	=Total Cover	
Sapling/Shrub Stratum (Plot size: 20)			
1. *Salix hookeriana*	25	Yes	FACW
2. *Loinicera involucrata*	25	Yes	FAC
3. *Spiraea douglasii*	25	Yes	FACW
4. *Gaultheria shallon*	2	No	FACU
5. *Vaccinium ovatum*	2	No	FACU
	79	=Total Cover	
Herb Stratum (Plot size: 10)			
1. *Carex obnupta*	60	Yes	OBL
2. *Polystichum munitum*	2	No	FACU
3. *Marah oregonus*	1	No	FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	63	=Total Cover	
Woody Vine Stratum (Plot size: 20)			
1.			
2.			
		=Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ____	x 1 = ____
FACW species ____	x 2 = ____
FAC species ____	x 3 = ____
FACU species ____	x 4 = ____
UPL species ____	x 5 = ____
Column Totals: ____ (A)	____ (B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

____ 3 - Prevalence Index is ≤3.0[1]

____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

____ 5 - Wetland Non-Vascular Plants[1]

____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** X **No** ____

Remarks:
Standing water. Pisi along the edge shading wetland .

SOIL

Sampling Point: SP-6

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 4/4	75					Mucky Sand	25% 10YR 3/1 -6-9% OC/fibers muck

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ 1 cm Muck (A9) **(LRR D, G)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- X Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(LRR A, E)**
- ___ Iron-Manganese Masses (F12) **(LRR D)**
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** x **No** ___

Remarks:

The pit filled up with water and there is surface water nearby. .

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- X Surface Water (A1)
- X High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- x Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- X FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes x	No ___	Depth (inches): 0	
Water Table Present?	Yes x	No ___	Depth (inches): 0	
Saturation Present? (includes capillary fringe)	Yes x	No ___	Depth (inches): 0	**Wetland Hydrology Present?** **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No precipitation on the day of the site visit.and .99 in the previous 2 weeks. Climatic conditions are typical for this time of year.. Beaver activity has altered hydrologic conditons by damming culverts and streams Ground water levels are higher than normal for this time of year.

U.S. Army Corps of Engineers

WETLAND DETERMINATION DATA SHEET – Western Mountains, Valleys, and Coast Region

See ERDC/EL TR-10-3; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Nedonna Wave updated Wetland Delineation | City/County: Rockaway Beach/Tillamook | Sampling Date: 6/21/24

Applicant/Owner: Anna Song | State: OR | Sampling Point: SP-7

Investigator(s): CM. KH | Section, Township, Range: 2N 10W 20 Lot 10200)

Landform (hillside, terrace, etc.): dune terrace | Local relief (concave, convex, none): none | Slope (%): 1-2

Subregion (LRR/MLRA): LRR A | Lat: 45.64996 | Long: -123.93493 | Datum: NAD 83

Soil Map Unit Name: 13B Waldprot thin surface Haceta fine sand, 0-5 percent slopes | NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes x No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** **Yes** ____ **No** x
Hydric Soil Present?	Yes ____	No x	
Wetland Hydrology Present?	Yes ____	No x	

Remarks:
Sample point is mid way of lot 10200. OHWL on McMillan Creek is to the west. There are stakes in the ground and we thought this was the area filled as past of the mitigation plan. See hydrology for Climatic remarks. .

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Alnus rubra*	5	Yes	FAC
2.			
3.			
4.			
	5	=Total Cover	
Sapling/Shrub Stratum (Plot size: 20)			
1. *Rubus armeniacus*	10	No	FAC
2. *Gaultheria shallon*	20	Yes	FACU
3. *Loinicera involucrata*	45	Yes	FAC
4. *Spiraea douglasii*	5	No	FACW
5.			
	80	=Total Cover	
Herb Stratum (Plot size: 10)			
1. *Carex obnupta*	15	No	OBL
2. *Agrostis tenuis*	40	Yes	FAC
3. *Holcus lanatus*	20	Yes	FAC
4. *Epilobium cilatum*	1	No	FAC
5. *Digitalis purpurea*	1	No	FACU
6.			
7.			
8.			
9.			
10.			
11.			
	77	=Total Cover	
Woody Vine Stratum (Plot size: 20)			
1.			
2.			
		=Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 80.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ____	x 1 = ____
FACW species ____	x 2 = ____
FAC species ____	x 3 = ____
FACU species ____	x 4 = ____
UPL species ____	x 5 = ____
Column Totals: ____ (A)	____ (B)
Prevalence Index = B/A = ____	

Hydrophytic Vegetation Indicators:

- ____ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- ____ 3 - Prevalence Index is ≤3.0[1]
- ____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ____ 5 - Wetland Non-Vascular Plants[1]
- ____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** X **No** ____

Remarks:
Photos RUAR mowed on the day of the site visit.Equipment access into the lot from Kittiwake.

SOIL

Sampling Point: SP-7

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-20	7.5YR 4/3	55					Sandy	7.5YR 3/2 5%
								7.5YR 5/2 40%

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ 1 cm Muck (A9) **(LRR D, G)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(LRR A, E)**
- ___ Iron-Manganese Masses (F12) **(LRR D)**
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** x

Remarks:
Sandy soil with mixed soil color.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes ___	No x	Depth (inches): ___
Water Table Present?	Yes ___	No x	Depth (inches): ___
Saturation Present? (includes capillary fringe)	Yes ___	No x	Depth (inches): ___

Wetland Hydrology Present? **Yes** ___ **No** x

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
No precipitation on the day of the site visit.and .99 in the previous 2 weeks. Climatic conditions are typical for this time of year.

U.S. Army Corps of Engineers

WETLAND DETERMINATION DATA SHEET – Western Mountains, Valleys, and Coast Region

See ERDC/EL TR-10-3; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Nedonna Wave updated Wetland Delineation | City/County: Rockaway Beach/Tillamook | Sampling Date: 6/21/24

Applicant/Owner: Anna Song | State: OR | Sampling Point: SP-8

Investigator(s): CM. KH | Section, Township, Range: 2N 10W 20 Lot 10400

Landform (hillside, terrace, etc.): dune swale | Local relief (concave, convex, none): concave | Slope (%): 0-1

Subregion (LRR/MLRA): LRR A | Lat: 45.64996 | Long: -123.93433 | Datum: NAD 83

Soil Map Unit Name: 13B Waldport, thin surface- Haceta fine sand, 0-5 percent slopes | NWI classification: PFO/PSS

Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes x No ____

Are Vegetation ____, Soil ____, or Hydrology x naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes X No ____

Hydric Soil Present? Yes x No ____

Wetland Hydrology Present? Yes x No ____

Is the Sampled Area within a Wetland? **Yes** x **No** ____

Remarks:
Sample point is in mitigation area for 2008 RF36702 created wetland. Beaver activity has elevated water table above normal conditions. Wetland boundary is linear and coincides with the lot line. See hydrology for Climatic remarks. Piared Plot at WB.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Alnus rubra*	20	Yes	FAC
2.			
3.			
4.			
	20	=Total Cover	
Sapling/Shrub Stratum (Plot size: 20)			
1. *Salix hookeriana*	50	Yes	FACW
2. *Loinicera involucrata*	5	No	FAC
3. *Spiraea douglasii*	5	No	FACW
4. *Rubus armeniacus*	10	No	FAC
5.			
	70	=Total Cover	
Herb Stratum (Plot size: 10)			
1. *Carex obnupta*	70	Yes	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	70	=Total Cover	
Woody Vine Stratum (Plot size: 20)			
1.			
2.			
		=Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ____	x 1 = ____
FACW species ____	x 2 = ____
FAC species ____	x 3 = ____
FACU species ____	x 4 = ____
UPL species ____	x 5 = ____
Column Totals: ____ (A)	____ (B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

____ 3 - Prevalence Index is ≤3.0[1]

____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

____ 5 - Wetland Non-Vascular Plants[1]

____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** X **No** ____

Remarks:
Thpl outside the plot is doing well. They have beaver cages.

SOIL

Sampling Point: SP-8

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 3/2	100					Sandy	25% 10YR 3/1 -6-9% OC/fibers muck
3-15	10YR 4/2	94	5YR 4/4	5	C	M	Sandy	?
								1% 5YR 4/5 C,M

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ 1 cm Muck (A9) **(LRR D, G)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G)**
- ___ Sandy Gleyed Matrix (S4)
- X Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(LRR A, E)**
- ___ Iron-Manganese Masses (F12) **(LRR D)**
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** x **No** ___

Remarks:

The pit filled up with water and there is surface water nearby. .

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- X High Water Table (A2)
- x Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- x Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- X FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes ___	No x	Depth (inches): 0		
Water Table Present?	Yes x	No ___	Depth (inches): 10		
Saturation Present? (includes capillary fringe)	Yes x	No ___	Depth (inches): 10	**Wetland Hydrology Present?**	**Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No precipitation on the day of the site visit.and .99 in the previous 2 weeks. Climatic conditions are typical for this time of year.. Beaver activity has altered hydrologic conditons by damming culverts and streams Ground water levels are higher than normal for this time of year.

U.S. Army Corps of Engineers

WETLAND DETERMINATION DATA SHEET – Western Mountains, Valleys, and Coast Region

See ERDC/EL TR-10-3; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Nedonna Wave updated Wetland Delineation | City/County: Rockaway Beach/Tillamook | Sampling Date: 6/21/24

Applicant/Owner: Anna Song | State: OR | Sampling Point: SP-9

Investigator(s): CM. KH | Section, Township, Range: 2N 10W 20 Lot 10400 (7)

Landform (hillside, terrace, etc.): dune terrace | Local relief (concave, convex, none): none | Slope (%): 1-2

Subregion (LRR/MLRA): LRR A | Lat: 45.64999 | Long: -123.93429 | Datum: NAD 83

Soil Map Unit Name: 14AHaceta fine sand, 0-3 percent slopes | NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes x No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** **Yes** ____ **No** x
Hydric Soil Present?	Yes ____	No x	
Wetland Hydrology Present?	Yes ____	No x	

Remarks:
Sample point is in mitigation area for 2008 RF36702 filled wetland. More than 5 years "normal Circumstances". See hydrology for Climatic remarks. Piared Plot at WB.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Alnus rubra*	20	Yes	FAC
2.			
3.			
4.			
	20	=Total Cover	
Sapling/Shrub Stratum (Plot size: 20)			
1. *Rubus armeniacus*	70	Yes	FAC
2. *Salix hookeriania*	20	No	FACW
3. *Loinicera involucrata*	10	No	FAC
4. *Spiraea douglasii*	2	No	FACW
5.			
	102	=Total Cover	
Herb Stratum (Plot size: 10)			
1. *Carex obnupta*	2	No	OBL
2. *Holcus lanatus*	2	No	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	4	=Total Cover	
Woody Vine Stratum (Plot size: 20)			
1.			
2.			
		=Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ____	x 1 = ____
FACW species ____	x 2 = ____
FAC species ____	x 3 = ____
FACU species ____	x 4 = ____
UPL species ____	x 5 = ____
Column Totals: ____ (A)	____ (B)
Prevalence Index = B/A = ____	

Hydrophytic Vegetation Indicators:

- ____ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- ____ 3 - Prevalence Index is ≤3.0[1]
- ____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ____ 5 - Wetland Non-Vascular Plants[1]
- ____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** X **No** ____

Remarks:
Photos SE Salix is rooted in the OHWL along McMillan Creek. Plot is close to silt fence placed prior to wetland filling.

SOIL

Sampling Point: SP-9

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	7.5YR 3/2	100					Sandy	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ 1 cm Muck (A9) **(LRR D, G)**
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G)**
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

___ 2 cm Muck (A10) **(LRR A, E)**
___ Iron-Manganese Masses (F12) **(LRR D)**
___ Red Parent Material (F21)
___ Very Shallow Dark Surface (F22)
___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____
Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** x

Remarks:
The area has been filled/settled.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Surface Soil Cracks (B6)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
___ Salt Crust (B11)
___ Aquatic Invertebrates (B13)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Stunted or Stressed Plants (D1) (**LRR A**)
___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

___ Water-Stained Leaves (B9) (**MLRA 1, 2 4A, and 4B**)
___ Drainage Patterns (B10)
___ Dry-Season Water Table (C2)
___ Saturation Visible on Aerial Imagery (C9)
___ Geomorphic Position (D2)
___ Shallow Aquitard (D3)
X FAC-Neutral Test (D5)
___ Raised Ant Mounds (D6) (**LRR A**)
___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ___ No x Depth (inches): ___
Water Table Present? Yes ___ No x Depth (inches): ___
Saturation Present? (includes capillary fringe) Yes ___ No x Depth (inches): ___

Wetland Hydrology Present? **Yes** ___ **No** x

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
No precipitation on the day of the site visit.and .99 in the previous 2 weeks. Climatic conditions are typical for this time of year.

U.S. Army Corps of Engineers

WETLAND DETERMINATION DATA SHEET – Western Mountains, Valleys, and Coast Region

See ERDC/EL TR-10-3; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Nedonna Wave updated Wetland Delineation | City/County: Rockaway Beach/Tillamook | Sampling Date: 6/24/24

Applicant/Owner: Anna Song | State: OR | Sampling Point: SP-10

Investigator(s): CM. KH | Section, Township, Range: 2N 10W 20 Lot 10200

Landform (hillside, terrace, etc.): dune terrace | Local relief (concave, convex, none): concave/convex | Slope (%): 3-5

Subregion (LRR/MLRA): LRR A | Lat: 45.64999 | Long: -123.93535 | Datum: NAD 83

Soil Map Unit Name: 13B Waldport thin surface - Haceta fine sand, 0-5 percent slopes | NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes x No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** **Yes** ____ **No** x
Hydric Soil Present?	Yes ____	No x	
Wetland Hydrology Present?	Yes ____	No x	

Remarks:
Sample point is in the low spot ol non-wetlands within the parcel west of Kittiwak Drive. SP is north of the OHWL line on the unnamed stream bordering Riley St. See hydrology for Climatic remarks. Piared Plot at WB.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Alnus rubra*	60	Yes	FAC
2. *Picea sitchensis*	5	No	FAC
3.			
4.			
	65	=Total Cover	
Sapling/Shrub Stratum (Plot size: 20)			
1. *Gaultheria shallon*	25	Yes	FACU
2. *Sambucus racemosa*	1	No	FACU
3. *Loinicera involucrata*	25	Yes	FAC
4. *Spiraea douglasii*	50	Yes	FACW
5. *Malus fusca*	12	No	FACW
	113	=Total Cover	
Herb Stratum (Plot size: 10)			
1. *Carex obnupta*	15	Yes	OBL
2. *Polystichum munitum*	10	Yes	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	25	=Total Cover	
Woody Vine Stratum (Plot size: 20)			
1.			
2.			
		=Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66.7% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ____	x 1 = ____
FACW species ____	x 2 = ____
FAC species ____	x 3 = ____
FACU species ____	x 4 = ____
UPL species ____	x 5 = ____
Column Totals: ____ (A)	____ (B)
Prevalence Index = B/A = ____	

Hydrophytic Vegetation Indicators:

- ____ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- ____ 3 - Prevalence Index is ≤3.0[1]
- ____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ____ 5 - Wetland Non-Vascular Plants[1]
- ____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** X **No** ____

Remarks:
Photos SE

SOIL

Sampling Point: SP-10

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	7.5YR 4/3	100					Sandy	
5-18	7.5YR 5/2	50					Sandy	7.5YR 5/3 50%

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ 1 cm Muck (A9) **(LRR D, G)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(LRR A, E)**
- ___ Iron-Manganese Masses (F12) **(LRR D)**
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** x

Remarks:

7.5YR 3/2 3-0" leaves, OM Despite the low chroma there was no signs of redox concentrations.Soil is dry to 16".

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes ___	No x	Depth (inches): ___
Water Table Present?	Yes ___	No x	Depth (inches): ___
Saturation Present? (includes capillary fringe)	Yes ___	No x	Depth (inches): ___

Wetland Hydrology Present? **Yes** ___ **No** x

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No precipitation on the day of the site visit.and .99 in the previous 2 weeks. Climatic conditions are typical for this time of year.Stream adjacent and poutside plot is 2-3 feet lower than the SP.

U.S. Army Corps of Engineers

WETLAND DETERMINATION DATA SHEET – Western Mountains, Valleys, and Coast Region

See ERDC/EL TR-10-3; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Nedonna Wave updated Wetland Delineation | City/County: Rockaway Beach/Tillamook | Sampling Date: 6/24/24

Applicant/Owner: Anna Song | State: OR | Sampling Point: SP-11

Investigator(s): CM | Section, Township, Range: 2N 10W 20 Lot 10400

Landform (hillside, terrace, etc.): dune swale manmade | Local relief (concave, convex, none): concave | Slope (%): 0-1

Subregion (LRR/MLRA): LRR A | Lat: 45.64931 | Long: -123.93538 | Datum: NAD 83

Soil Map Unit Name: 13B Waldport, thin surface- Haceta fine sand, 0-5 percent slopes | NWI classification: PSSC

Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes x No ____

Are Vegetation ____, Soil x, or Hydrology x naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** **Yes** x **No** ____
Hydric Soil Present?	Yes x	No ____	
Wetland Hydrology Present?	Yes x	No ____	

Remarks:
Sample point is in mitigation area for 2008 RF36702. The road base for Jackson St. was not completed leaving a depression. Sample point is in the concave surface of road. "normal Circumstances". See hydrology for Climatic remarks.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Alnus rubra*	40	Yes	FAC
2.			
3.			
4.			
	40	=Total Cover	
Sapling/Shrub Stratum (Plot size: 20)			
1. *Salix hookeriana*	75	Yes	FACW
2. *Rubus spectabilis*	2	No	FAC
3.			
4.			
5.			
	77	=Total Cover	
Herb Stratum (Plot size: 10)			
1. *Carex obnupta*	65	Yes	OBL
2. *Equisetum arvense*	3	No	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	68	=Total Cover	
Woody Vine Stratum (Plot size: 20)			
1.			
2.			
		=Total Cover	

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ____	x 1 = ____
FACW species ____	x 2 = ____
FAC species ____	x 3 = ____
FACU species ____	x 4 = ____
UPL species ____	x 5 = ____
Column Totals: ____ (A)	____ (B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:

- ____ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- ____ 3 - Prevalence Index is ≤3.0[1]
- ____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ____ 5 - Wetland Non-Vascular Plants[1]
- ____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** X **No** ____

Remarks:
SP is representive of wetlands.

SOIL

Sampling Point: SP-11

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	7.5YR 5/2	100	5YR 5/4	5	C	M	Mucky Sand	5-6% OC/Fibers

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ 1 cm Muck (A9) **(LRR D, G)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- X Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G)**
- ___ Sandy Gleyed Matrix (S4)
- X Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(LRR A, E)**
- ___ Iron-Manganese Masses (F12) **(LRR D)**
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

The pit filled up with water. The 2007 wetland study mapped a long narrow wetland in this area that was in the mitigation plan to be filled. Wetland in the Jackson Street road way was not completed Wetland connects to the larger wetlands to the west.Litter 2-1 7.5YR 3/1 leaves, OM.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- X Surface Water (A1)
- X High Water Table (A2)
- x Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- x Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- X FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes	x	No ___	Depth (inches):	2
Water Table Present?	Yes	x	No ___	Depth (inches):	0
Saturation Present? (includes capillary fringe)	Yes	x	No ___	Depth (inches):	0

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No precipitation on the day of the site visit.and .99 in the previous 2 weeks. Climatic conditions are typical for this time of year.. Beaver activity has altered hydrologic conditons by damming culverts and streams Ground water levels are higher than normal for this time of year.

U.S. Army Corps of Engineers

WETLAND DETERMINATION DATA SHEET – Western Mountains, Valleys, and Coast Region

See ERDC/EL TR-10-3; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Nedonna Wave updated Wetland Delineation | City/County: Rockaway Beach/Tillamook | Sampling Date: 8/12/24

Applicant/Owner: Anna Song | State: OR | Sampling Point: SP-12

Investigator(s): CM | Section, Township, Range: 2N 10W 20 Lot 10200)

Landform (hillside, terrace, etc.): dune terrace | Local relief (concave, convex, none): none | Slope (%): 1-2

Subregion (LRR/MLRA): LRR A | Lat: 45.65006 | Long: -123.93476 | Datum: NAD 83

Soil Map Unit Name: 13B Waldprot thin surface Haceta fine sand, 0-5 percent slopes | NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes x No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes x No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** **Yes** ____ **No** x
Hydric Soil Present?	Yes ____	No x	
Wetland Hydrology Present?	Yes ____	No x	

Remarks:
Site visit in August to check the OHWL line. The site visit confirmed that a drafing error was made on preliminary map of the OHWL line by OnionPeak. The sample point documents fill i as planned in 36702. Wood stakes and remnants of erosion cloth extends S toward SP-7.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Alnus rubra*	20	Yes	FAC
2. *Picea stichensis*	20	Yes	FAC
3.			
4.			
	40	=Total Cover	
Sapling/Shrub Stratum (Plot size: 20)			
1. *Rubus armeniacus*	10	Yes	FAC
2. *Gaultheria shallon*	30	Yes	FACU
3. *Loinicera involucrata*	10	Yes	FAC
4.			
5.			
	50	=Total Cover	
Herb Stratum (Plot size: 10)			
1. *Carex obnupta*	10	No	OBL
2. *Agrostis tenuis*	40	Yes	FAC
3. *Holcus lanatus*	10	No	FAC
4. *Juncus effusus*	1	No	FACW
5. *Polystichum munitum*	2	No	FACU
6. *Equisetum arvense*	2	No	FAC
7.			
8.			
9.			
10.			
11.			
	65	=Total Cover	
Woody Vine Stratum (Plot size: 20)			
1.			
2.			
		=Total Cover	

% Bare Ground in Herb Stratum 5

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 83.3% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ____	x 1 = ____
FACW species ____	x 2 = ____
FAC species ____	x 3 = ____
FACU species ____	x 4 = ____
UPL species ____	x 5 = ____
Column Totals: ____ (A)	____ (B)
Prevalence Index = B/A = ____	

Hydrophytic Vegetation Indicators:

- ____ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- ____ 3 - Prevalence Index is ≤3.0[1]
- ____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ____ 5 - Wetland Non-Vascular Plants[1]
- ____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** X **No** ____

Remarks:
Photos RUAR mowed in June. Beaver activity on trees along the bank. PhotoS and SW

SOIL

Sampling Point: SP-12

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	7.5YR 4/3	100					Sandy	
5-20	7.5YR 5/3	100					Sandy	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ 1 cm Muck (A9) **(LRR D, G)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 2.5 cm Mucky Peat or Peat (S2) **(LRR G)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(LRR A, E)**
- ___ Iron-Manganese Masses (F12) **(LRR D)**
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** x

Remarks:

Well drained soil in a wetland that was filled in 2008 as part of RF36702.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present?	Yes ___	No x	Depth (inches): ___
Water Table Present?	Yes ___	No x	Depth (inches): ___
Saturation Present? (includes capillary fringe)	Yes ___	No x	Depth (inches): ___

Wetland Hydrology Present? **Yes** ___ **No** x

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No precipitation on the day of the site visit.and .01" in the previous 2 weeks. Climatic conditions are typical for this time of year.McMillan Creek to the west.

Table 3. Assessing Rainfall for the Preceding 3-Month Period)
Direct Antecedent Rainfall Evaluation Method (DAREM

	Prior Montl	WETS Rainfall Percentile		Measure d Rainfall	Condition*: Dry, Wet, Norma	ondition Value (1=dry, 2=normal, or 3=wet)	Month weight	Multiply Previous two columns
	Name	30th	70th					
		---------inches----------						
1st (most recent)+A6	July	0.5	1.49	0.54	Normal	2	3	6
2nd	June	2	3.74	3.39	Normal	2	2	4
3rd	May	3.02	5.2	4.66	Normal	2	1	2
							Sum	**12**

Rainfall of prior period was: **drier** than normal (sum is 6-9), **normal** (sum is 10-14), **wetter** than normal (sum is 15-18)	Dry/Normal, standard met

WETS Station: TILLAMOOK, 358494, OR 1948-2024
Measured Rainfall: Tillamook, OR, 35894 May-July 2024

* Normal: measured within WETS normal range
Dry: measured below WETS normal range
Wet: measured above WETS normal range

Appendix A. Nedonna Wave Wetland Delineation Photos with Direction

Figure 1. Looking east from SP-2 (wetland) in the foreground to SP-1 in the background. SP2 is within Jackson Street ROW (P-1).

Figure 2. Jackson Street on left of blue dotted line and non-wetland on right looking north (P-2).

Appendix A. Nedonna Wave Wetland Delineation Photos with Direction

Figure 3. Looking east into wetland from SP 6. Elevated water levels are from restricted flow at culvert crossing at Kittiwake Drive. June 21, 2024 (P-3)

Figure 4. Lot 23 looking northeast from edge of fell at SP-3 non-wetland (yellow dot.) Kurt is in the background at SP-4. (P-4)

Appendix A. Nedonna Wave Wetland Delineation Photos with Direction

Figure 5. SP 9 in foreground looking south into wetland at SP 8 background. Blue flag is the wetland boundary. (P-5)

Figure 6. Lot 10200-Left-Yellow pin flag at SP-12. Right-Blue Stripe falling at OHWL-12 looking south. Filled wetland in the background. Beaver activity along McMillan Creek. August 12, 2024 (P-6)

Appendix A. Nedonna Wave Wetland Delineation Photos with Direction

Figure 7. SP-10 looking north into non-wetland. (P-7)

Figure 8. Looking west into McMillan Creek from the top of the bank. (P-8)

Appendix A. Nedonna Wave Wetland Delineation Photos with Direction

Figure 9. Riley Street to the left of unnamed stream OHWL (blue flag). Photo taken from the edge of Kittiwake Drive looking west. (P-9)

Figure 10. Corner of lot 17 looking north along the edge of fill (left) and wetland (right). P-10

Appendix A. Nedonna Wave Wetland Delineation Photos with Direction

Figure 11. Edge of Kittiwake Drive looking northeast into wetland. (P-11)

Figure 12. Beaver activity us of culvert crossing on Kittiwake Drive looking east into unnamed stream. June 20, 2024 (P-12)

Appendix C
Updated As-Built Plan

Jackson Street, Kittiwake Drive and Riley Street were included within the study area boundary along the perimeter of tracts F and G. The roadways are currently being maintained by the City of Rockaway Beach.

The project was in compliance with the permit conditions of 36702, however DSL did not receive an as-built plan set confirming the fill was entirely installed. The as-built plan would have confirmed that all fill was installed, as part of conclusion of a permit. However, the permit was requested to expire instead of closed out.

Time and other environmental factors like restricted flow at culvert crossing by beaver can alter the hydrology, therefore affecting the wetland boundary. In an effort to provide updated As-Built information to DSL, the following table was generated comparing the 2024 wetland study with the 2007 proposed fill. The 2007 lot numbers are used for reference only.

The 2024 wetland delineation provides area information (not volume) that can be used to determine if the permitted fill was placed. The 2007 elevation data is not available to compute the volumes of the areas filled. The areas that were not filled are identified as F1, F2 and F3 on Figure 6.

Table 5. Summary of Proposed Wetland Fill and 2024 Overlay to Generate As-Built

2007 Lot # or ID	Proposed Fill RF-36702	As-Built 2024 Area	+/- difference	Comments
7	354 sq. ft.	354 sq. ft.	0	Lot 10200
19	634 sq. ft.	310 sq. ft.	-324 sq. ft.	Lot 10400 NE corner of SAB Non-Filled in wetland ID is **F3**
16	1256 sq. ft.	782 sq. ft.	- 474 sq. ft.	Lot 10400 **F2**
26/27	860 sq. ft.	860 sq. ft.	0	Connects to unfilled wetland and created wetland in Jackson Street
Riley Street	2603 sq. ft.	2470 sq. ft.	-133 sq. ft.	Two 24" culverts plus fill unnamed stream S1 and S2 on Fig 5
2007 wetland within Jackson St.*	426 sq. ft.	244 sq. ft.	-182 sq. ft.	Connects to filled wetland in lot 26/27 **F1**
Kittiwake Drive	215 sq. ft.	116 sq. ft.	-99 sq. ft.	East of Kittiwake Dr.
Total	**6,348 sq. ft.**	**5,136 sq. ft.**	**-1212 sq ft**	**81% of planned**
Jackson St. excavated road surface but not completed		2,623 sq ft		Excludes proposed fill of 426 sq. ft.* (.07x43,560)-426 ft sq. **F4**

NOTES

THIS MAP DOES NOT CONSTITUTE A BOUNDARY SURVEY OF THE SUBJECT PROPERTY. THE PURPOSE OF THIS MAP IS TO SHOW THE LOCATION OF WETLAND BOUNDARY AND SAMPLE POINTS AS FLAGGED BY CHRISTINE MCDONALD.
THE EXTERIOR BOUNDARY WAS HELD AT RECORD VALUES PER MAP C-573.
THE DATA WAS OBTAINED USING A GT-505 TOTAL STATION AND TOPCON 6400 DATA COLLECTOR.
HORIZONTAL ACCURACY IS 0.25'.

LEGEND

- INDICATES FOUND MONUMENT AS SHOWN ON MAP C-573.
- SP — SAMPLE POINT
- STUDY AREA BOUNDARY (SAB)
- CURRENT WETLAND BOUNDARY
- ORDINARY HIGH WATER LINE
- CREATED WETLAND AREAS PER RF-36702
- WETLANDS FILLED PER RF-36702
- PROPOSED FILL AREA PER RF-36702, NOT FILLED F3

AREAS

AREAS WITHIN THE STUDY AREA BOUNDARY FOR 2N 10 20 AB TAX LOT 10200.
WETLAND AREA = 0.11 ACRES. NON-WETLAND AREA = 0.67 ACRES.

AREAS WITHIN THE STUDY AREA BOUNDARY FOR 2N 10 20 AB TAX LOT 10300.
WETLAND AREA = 0.13 ACRES. NON-WETLAND AREA = 0.03 ACRES.

AREAS WITHIN THE STUDY AREA BOUNDARY FOR 2N 10 20 AB TAX LOT 10400.
WETLAND AREA = 0.43 ACRES. NON-WETLAND AREA = 0.89 ACRES.

AREAS WITHIN THE STUDY AREA BOUNDARY FOR 2N 10 20 AB TAX LOT 10500.
WETLAND AREA = 0.00 ACRES. NON-WETLAND AREA = 0.05 ACRES.

AREAS WITHIN THE STUDY AREA BOUNDARY AND JACKSON STREET RIGHT-OF-WAY.
WETLAND AREA = 0.07 ACRES. NON-WETLAND AREA = 0.06 ACRES.

AREAS WITHIN THE STUDY AREA BOUNDARY AND KITTIWAKE DRIVE RIGHT-OF-WAY.
WETLAND AREA = 0.01 ACRES. NON-WETLAND AREA = 0.46 ACRES

AREAS WITHIN THE STUDY AREA BOUNDARY AND RILEY STREET RIGHT-OF-WAY.
WETLAND AREA = 0.01 ACRES. NON-WETLAND AREA = 0.31 ACRES

CURVE TABLE

CURVE	RADIUS	LENGTH	DELTA	CH. BEARING	CH. LENGTH
C1	40.00'	8.25'	11°49'11"	S81°30'40"E	8.24'
C2	15.01'	23.16'	88°24'51"	N60°11'32"E	20.93'
C3	420.00'	115.48'	15°45'11"	N23°51'40"E	115.11'
C4	380.00'	69.04'	10°24'37"	S35°50'52"W	68.95'
C5	620.00'	204.55'	18°54'10"	N31°36'05"E	203.62'
C6	25.00'	39.27'	90°00'00"	N67°09'00"E	35.36'
C7	580.00'	191.35'	18°54'10"	S31°36'05"W	190.49'
C8	420.00'	68.28'	9°18'55"	S36°23'43"W	68.21'
C9	25.00'	39.27'	90°00'00"	S22°51'00"E	35.36'
C10	125.00'	51.39'	23°33'23"	S79°37'42"E	51.03'
C11	175.00'	71.95'	23°33'23"	S79°37'42"E	71.44'
C12	11.17'	17.75'	91°04'32"	N66°36'44"E	15.94'
C13	25.00'	38.80'	88°55'29"	S23°23'16"E	35.02'

LINE TABLE

LINE	BEARING	LENGTH
L1	N28°03'00"E	25.13'
L2	S69°46'31"W	6.61'
L3	N59°05'58"W	37.10'
L4	N00°00'00"E	16.51'
L5	N51°17'52"E	30.85'
L6	N25°56'26"E	29.99'
L7	S87°25'15"E	3.66'
L8	N28°03'00"E	5.03'
L9	S67°51'00"E	7.07'
L10	S67°51'00"E	59.54'
L11	S67°51'00"E	13.93'
L12	S88°12'04"W	9.00'

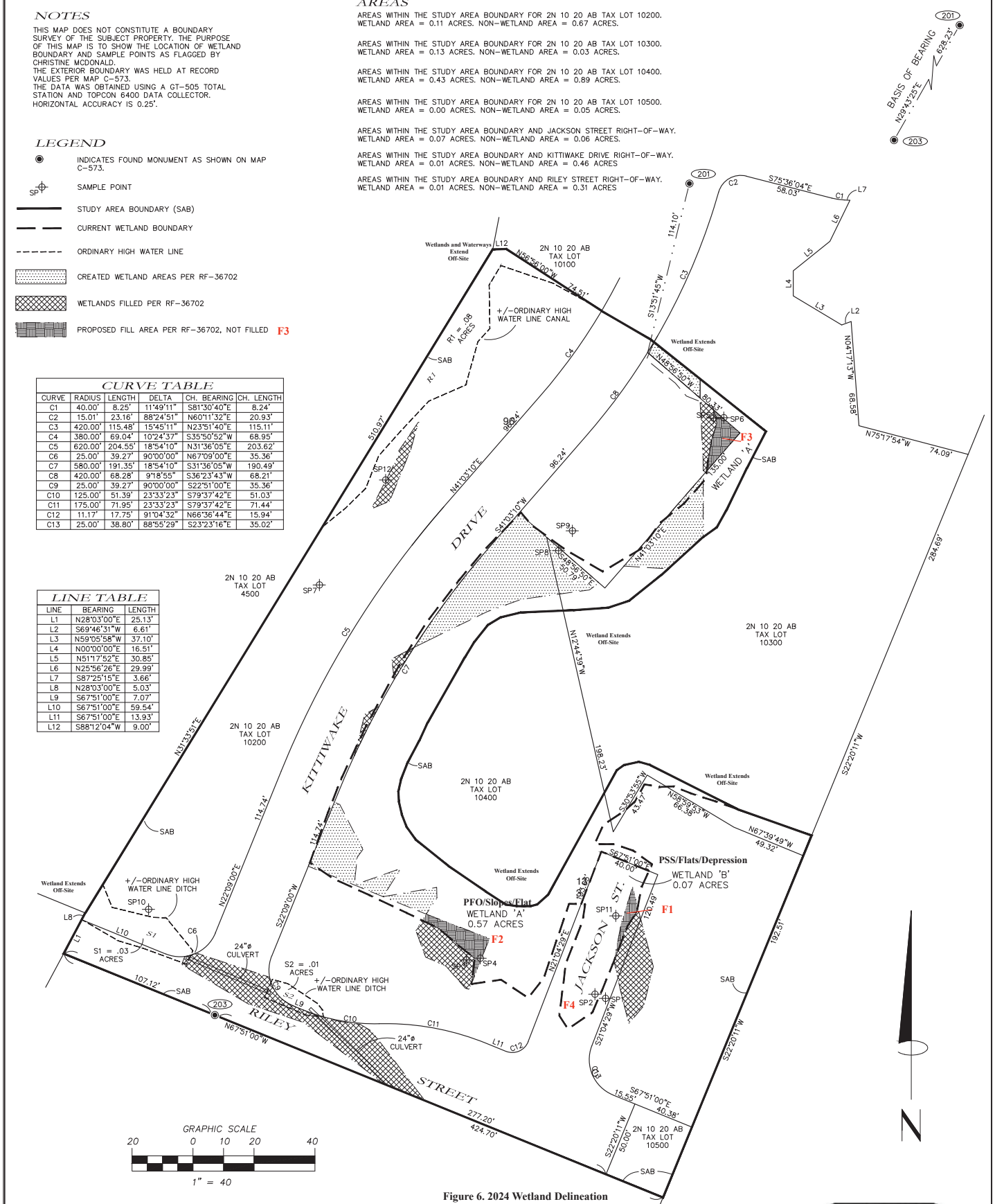


Figure 6. 2024 Wetland Delineation overlaid with the 2007 Proposed Fill

NEDONNA DEVELOPMENT LLC
2N 10 20 AB
TAX LOTS
10200, 10300, 10400 & 10500
NW 1/4 OF THE NE 1/4, SECTION 29, T3N, R10W, W.M.
TILLAMOOK COUNTY
DECEMBER 2, 2024

ONION PEAK DESIGN
11460 EVERGREEN WAY
NEHALEM, OR 97131
(503) 440-4403

"SONG" #A2024
SONG2411-W.DWG

REGISTERED PROFESSIONAL LAND SURVEYOR
Erick M White
OREGON
APRIL 28, 2014
ERICK M. WHITE
78572
RENEWS 6/30/2026

EXHIBIT 7

Oregon
Tina Kotek, Governor

Department of State Lands
775 Summer Street NE, Suite 100
Salem, OR 97301-1279
(503) 986-5200
FAX (503) 378-4844
www.oregon.gov/dsl

May 20, 2025

Nedonna Wave Development LLC
Attn: Anna Song
2848 SW Sam Jackson Park Road
Portland, OR 97201

Re: WD # 2024-0657 **Approved**
Wetland Delineation Report for the Nedonna Wave site,
Tillamook County; T2N R10W S20AB TL 10200, 10500 and Portions of TLs 10300, 10400
APP # 36702, RGL # 2928

Dear Anna Song:

The Department of State Lands has reviewed the wetland delineation report prepared by Christine McDonald for the site referenced above. Please note that the study area includes only a portion of the tax lots described above (see the attached maps). Based upon the information presented in the report, and additional information submitted upon request, we concur with the wetland and waterway boundaries as mapped in revised Figure 6 of the report. Please replace all copies of the preliminary wetland map with this final Department-approved map.

Within the study area, five wetlands (Wetland A, B, S1, S2 and R1), totaling approximately 0.76 acres, one tributary, and McMillian Creek, were identified. The wetlands, tributary, and McMillian Creek are subject to the permit requirements of the state Removal-Fill Law. Under current regulations, a state permit is required for cumulative fill or annual excavation of 50 cubic yards or more in wetlands or below the ordinary high-water line (OHWL) of the waterway (or the 2-year recurrence interval flood elevation if OHWL cannot be determined). However, portions of Wetland A are mitigation for previous onsite development. Please contact Aquatic Resource Coordinator, Heather Dimke, at 503-856-6517 to discuss the prior mitigation efforts and to determine if additional mitigation is required for the proposed future impacts.

This concurrence is for purposes of the state Removal-Fill Law only. We recommend that you attach a copy of this concurrence letter to any subsequent state permit application to speed application review. Federal, other state agencies or local permit requirements may apply as well. The U.S. Army Corps of Engineers will determine jurisdiction under the Clean Water Act, which may require submittal of a complete Wetland Delineation Report.

Please be advised that state law establishes a preference for avoidance of impacts to waters of this state. Because measures to avoid and minimize impacts to waters of this

state may include reconfiguring parcel layout and size or development design, we recommend that you work with Department staff on appropriate site design before completing the city or county land use approval process.

This concurrence is based on information provided to the agency. The jurisdictional determination is valid for five years from the date of this letter unless new information necessitates a revision. Circumstances under which the Department may change a determination are found in OAR 141-090-0045 (available on our web site or upon request). In addition, laws enacted by the legislature and/or rules adopted by the Department may result in a change in jurisdiction; individuals and applicants are subject to the regulations that are in effect at the time of the removal-fill activity or complete permit application. The applicant, landowner, or agent may submit a request for reconsideration of this determination in writing within six months of the date of this letter.

Thank you for having the site evaluated. If you have any questions, please contact Chris Stevenson, PWS the Wetland Ecologist for Tillamook County at (503) 798-7622.

Sincerely,

Daniel Evans

Digitally signed by Daniel Evans
Date: 2025.05.20 16:31:53
-07'00'

Daniel Evans, PWS
Wetland Ecology Specialist

Enclosures

ec: Christine McDonald
City of Rockaway Beach Planning Department
Megan Biljan, Corps of Engineers
Heather Dimke, DSL
Oregon Coastal Management Program

WETLAND DELINEATION / DETERMINATION REPORT COVER FORM

A complete report and signed report cover form, along with applicable review fee, are required before a report review timeline can be initiated by the Department of State Lands. All applicants will receive an emailed confirmation that includes the report's unique file number and other information.

Ways to submit report:

- **Under 50MB** - A single unlocked PDF can be emailed to: wetland.delineation@dsl.oregon.gov.
- **50MB or larger** - A single unlocked PDF can be uploaded to DSL's website. After upload notify DSL by email at: wetland.delineation@dsl.oregon.gov.
- OR a hard copy of the unbound report and signed cover form can be mailed to: Oregon Department of State Lands, 775 Summer Street NE, Suite 100, Salem, OR 97301-1279.

Ways to pay review fee:

- By credit card on DSL's epayment portal after receiving the unique file number from DSL's emailed confirmation.
- By check payable to the Oregon Department of State Lands attached to the unbound mailed hardcopy OR attached to the complete signed cover form if report submitted electronically.

Contact and Authorization Information

☒ Applicant ☒ Owner Name, Firm and Address:
Nedonna Wave Development LLC
Anna Song
2848 SW Sam Jackson Park Rd.
Portland, OR 97201

Business phone # (503) 706-1930
Mobile phone # (optional)
E-mail: kebsinc@yahoo.com

☐ Authorized Legal Agent, Name and Address (if different):

Business phone #
Mobile phone # (optional)
E-mail:

I either own the property described below or I have legal authority to allow access to the property. I authorize the Department to access the property for the purpose of confirming the information in the report, after prior notification to the primary contact.

Typed/Printed Name: Anna Song **Signature:** Kathleen N. Song

Date: 12-2-2024 Special instructions regarding site access: ____

Project and Site Information

Project Name: Nedonna Wave Updated WD

Latitude: 45.64920 Longitude: 123.93459
decimal degree - centroid of site or start & end points of linear project

Proposed Use:
subdivision and development

Tax Map # 2N10W20AB
Tax Lot(s) 10200, 10300, 10400, 10500

Tax Map #
Tax Lot(s)

Project Street Address (or other descriptive location):
Kittiwake Drive and Riley Street in Nedonna Beach

Township 02N Range 10W Section 20 QQ AB
Use separate sheet for additional tax and location information

City: Rockaway Beach County: Tillamook

Waterway: McMillan Ck / PACIFIC River Mile: .3

Wetland Delineation Information

Wetland Consultant Name, Firm and Address:
Christine McDonald
2901 Brayton Road
Pullman, WA 99163

Phone # (503) 801-2243
Mobile phone # (if applicable)
E-mail: contactchris100@gmail.com

The information and conclusions on this form and in the attached report are true and correct to the best of my knowledge.

Consultant Signature: Christine McDonald | Date: 12-2-24

Primary Contact for report review and site access is ☒ Consultant ☐ Applicant/Owner ☐ Authorized Agent

Wetland/Waters Present? ☒ Yes ☐ No | Study Area size: 3.23 Total Wetland Acreage: 0.7600

Check Applicable Boxes Below

☐ R-F permit application submitted
☐ Mitigation bank site
☐ EFSC/ODOE Proj. Mgr: ____
☐ Wetland restoration/enhancement project (not mitigation)
☒ Previous delineation/application on parcel
If known, previous DSL # ____

☒ Fee payment submitted $ 559
☐ Resubmittal of rejected report ($100)
☐ Request for Reissuance. See eligibility criteria. (no fee)
DSL # ____ Expiration date____
☐ LWI shows wetlands or waters on parcel
Wetland ID code ____

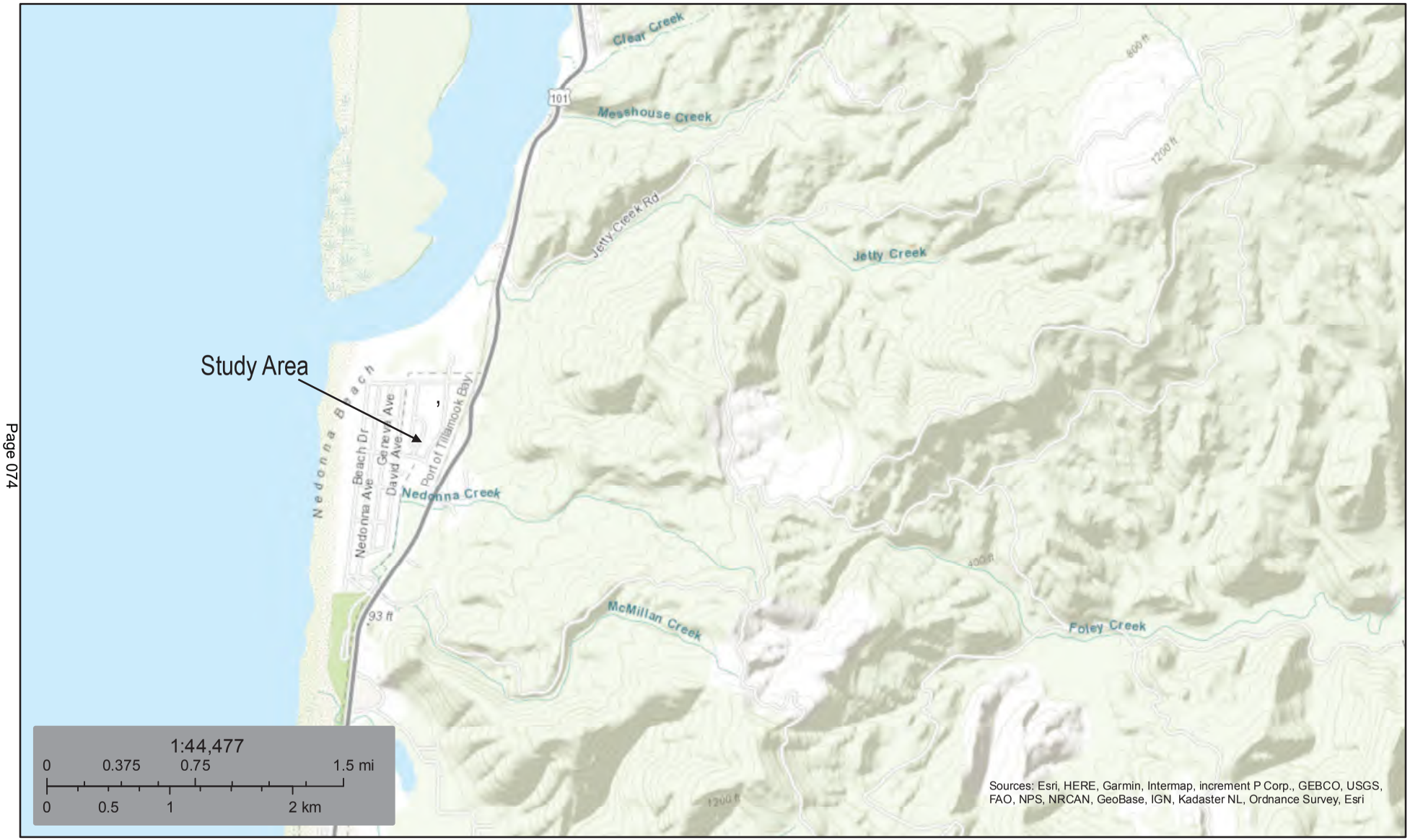
For Office Use Only

DSL Reviewer: DE Fee Paid Date: ____/____/____ DSL WD # 2024-0657

Date Delineation Received: 12/02/2024 DSL App.# ____

U.S. Fish and Wildlife Service
National Wetlands Inventory

Figure 1. Location Map with Study Area



Page 074

June 20, 2020

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

Figure 1a. 2022 NAIP Air Photo

Printed 6 / 14 / 2024

THIS MAP WAS PREPARED FOR ASSESSMENT PURPOSE ONLY

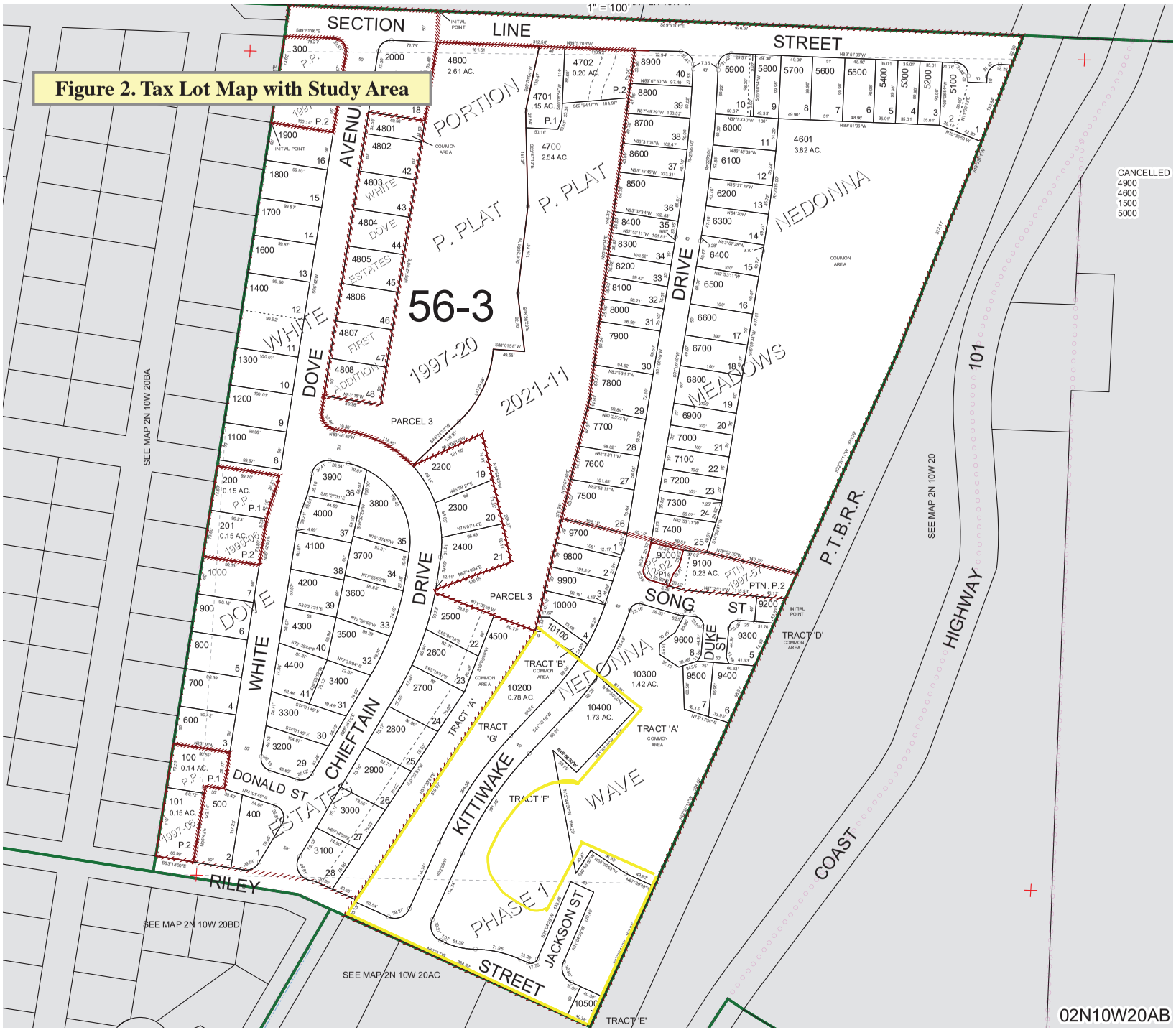
0 50 100 150 200 Feet

N.W.1/4 N.E.1/4 SEC.20 T.2N. R.10W. W.M.
TILLAMOOK COUNTY

02N10W20AB

1" = 100'

Figure 2. Tax Lot Map with Study Area



Revised 12/15/21, WS

NOTES

THIS MAP DOES NOT CONSTITUTE A BOUNDARY SURVEY OF THE SUBJECT PROPERTY. THE PURPOSE OF THIS MAP IS TO SHOW THE LOCATION OF WETLAND BOUNDARY AND SAMPLE POINTS AS FLAGGED BY CHRISTINE MCDONALD.
THE EXTERIOR BOUNDARY WAS HELD AT RECORD VALUES PER MAP C-573.
THE DATA WAS OBTAINED USING A GT-505 TOTAL STATION AND TOPCON 6400 DATA COLLECTOR.
HORIZONTAL ACCURACY IS 0.25'.

LEGEND

- INDICATES FOUND MONUMENT AS SHOWN ON MAP C-573.
- SP — SAMPLE POINT
- STUDY AREA BOUNDARY (SAB)
- CURRENT WETLAND BOUNDARY
- ORDINARY HIGH WATER LINE
- WETLAND AREA
- WETLAND BELOW ORDINARY HIGH WATER LINE
- 2 — CREATED WETLAND AREAS PER RF-36702
- WETLANDS FILLED PER RF-36702

AREAS

AREAS WITHIN THE STUDY AREA BOUNDARY FOR 2N 10 20 AB TAX LOT 10200.
WETLAND AREA = 0.11 ACRES. NON-WETLAND AREA = 0.67 ACRES.

AREAS WITHIN THE STUDY AREA BOUNDARY FOR 2N 10 20 AB TAX LOT 10300.
WETLAND AREA = 0.13 ACRES. NON-WETLAND AREA = 0.03 ACRES.

AREAS WITHIN THE STUDY AREA BOUNDARY FOR 2N 10 20 AB TAX LOT 10400.
WETLAND AREA = 0.43 ACRES. NON-WETLAND AREA = 0.89 ACRES.

AREAS WITHIN THE STUDY AREA BOUNDARY FOR 2N 10 20 AB TAX LOT 10500.
WETLAND AREA = 0.00 ACRES. NON-WETLAND AREA = 0.05 ACRES.

AREAS WITHIN THE STUDY AREA BOUNDARY AND JACKSON STREET RIGHT-OF-WAY.
WETLAND AREA = 0.07 ACRES. NON-WETLAND AREA = 0.06 ACRES.

AREAS WITHIN THE STUDY AREA BOUNDARY AND KITTIWAKE DRIVE RIGHT-OF-WAY.
WETLAND AREA = 0.01 ACRES. NON-WETLAND AREA = 0.46 ACRES

AREAS WITHIN THE STUDY AREA BOUNDARY AND RILEY STREET RIGHT-OF-WAY.
WETLAND AREA = 0.01 ACRES. NON-WETLAND AREA = 0.31 ACRES

CURVE TABLE

CURVE	RADIUS	LENGTH	DELTA	CH. BEARING	CH. LENGTH
C1	40.00'	8.25'	11°49'11"	S81°30'40"E	8.24'
C2	15.01'	23.16'	88°24'51"	N60°11'32"E	20.93'
C3	420.00'	115.48'	15°45'11"	N23°51'40"E	115.11'
C4	380.00'	69.04'	10°24'37"	S35°50'52"W	68.95'
C5	620.00'	204.55'	18°54'10"	N31°36'05"E	203.62'
C6	25.00'	39.27'	90°00'00"	N67°09'00"E	35.36'
C7	580.00'	191.35'	18°54'10"	S31°36'05"W	190.49'
C8	420.00'	68.28'	9°18'55"	S36°23'43"W	68.21'
C9	25.00'	39.27'	90°00'00"	S22°51'00"E	35.36'
C10	125.00'	51.39'	23°33'23"	S79°37'42"E	51.03'
C11	175.00'	71.95'	23°33'23"	S79°37'42"E	71.44'
C12	11.17'	17.75'	91°04'32"	N66°36'44"E	15.94'
C13	25.00'	38.80'	88°55'29"	S23°23'16"E	35.02'

LINE TABLE

LINE	BEARING	LENGTH
L1	N28°03'00"E	25.13'
L2	S69°46'31"W	6.61'
L3	N59°05'58"W	37.10'
L4	N00°00'00"E	16.51'
L5	N51°17'52"E	30.85'
L6	N25°56'26"E	29.99'
L7	S87°25'15"E	3.66'
L8	N28°03'00"E	5.03'
L9	S67°51'00"E	7.07'
L10	S67°51'00"E	59.54'
L11	S67°51'00"E	13.93'
L12	S88°12'04"W	9.00'

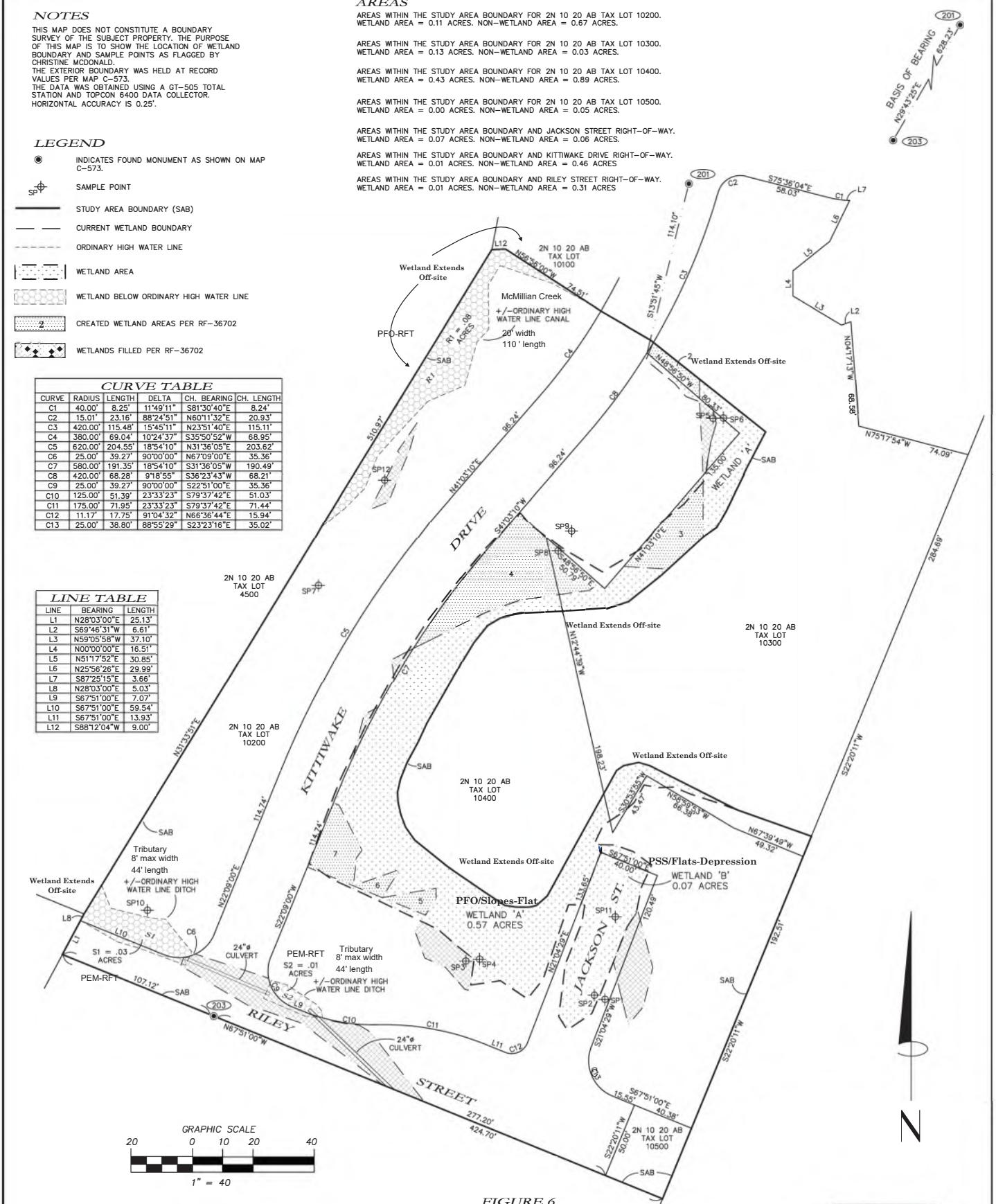


FIGURE 6
WETLAND SURVEY FOR:

NEDONNA DEVELOPMENT LLC

2N 10 20 AB
TAX LOTS
10200, 10300, 10400 & 10500
NW 1/4 OF THE NE 1/4, SECTION 29, T3N, R10W, W.M.
TILLAMOOK COUNTY
MARCH 7, 2025

DSL WD # 2024-0657
Approval Issued:5/20/2025
Approval Expires:5/20/2030

REGISTERED PROFESSIONAL LAND SURVEYOR
Erick M White
OREGON
APRIL 28, 2014
ERICK M. WHITE
78572
RENEWS 6/30/2026

ONION PEAK DESIGN
11460 EVERGREEN WAY
NEHALEM, OR 97131
(503) 440-4403

"SONG" #A2024
SONG2503-W.DWG

EXHIBIT 8

NEDONNA DEVELOPMENT, LLC
NEDONNA WAVE PHASE 2
TENTATIVE PLAN
MAP 2N 10W 20AB

DIVIDING PROPERTIES:
TAX LOTS 10200, 10300, 10400
MAP 2N 10W 20BA
TRACTS F & G OF NEDONNA WAVE PHASE 1

OWNER:
NEDONNA DEVELOPMENT LLC
ATTN: ANNA SONG
2832 SW SAM JACKSON PARK ROAD
PORTLAND, OR 97201

ENGINEER:
MORGAN CIVIL ENGINEERING, INC.
ATTN: JASON MORGAN, PE
PO BOX 258
MANZANITA, OR 97130
503-801-6016

1/1 EXISTING LAYOUT
SCALE: 1"=40'

SHEET INDEX:
1. COVER SHEET
2. LOT LAYOUT
3. LOT DIMENSIONS
4. UTILITY LAYOUT
5. EST. BUILDING SIZES
6. ROAD PROFILES

The tentative plan for Nedonna Wave PUD indicated the four areas outlined in yellow as the sites of future lots.

NOTES:
NO NEW STREETS ARE PROPOSED.
ALL STREETS SHOWN ON THE PLAN ARE EXISTING.

2/1 VICINITY MAP
SCALE: 1"=±500'

LEGEND:
- EXISTING PROPERTY LINE
- PROPOSED PROPERTY LINE
- PROPOSED SETBACK LINE
- PROPOSED BUILDING
- EXISTING 5' CONTOUR
- EXISTING 1' CONTOUR
- EXISTING EDGE OF ASPHALT
- EXISTING EDGE OF GRAVEL
- EXISTING DITCHLINE
- EXISTING WATER LINE
- EXISTING WATER VALVE
- EXISTING WATER SERVICE
- EXISTING SEWER LINE
- EXISTING SEWER MANHOLE
- EXISTING SEWER SERVICE

GRAPHIC SCALE
40 0 20 40 80 160
(IN FEET)
1 inch = 40 ft.

NEDONNA DEVELOPMENT, LLC
NEDONNA WAVE - PHASE 2
COVER SHEET

CITY OF ROCKAWAY BEACH/MAP 2N 10W 20AB

REGISTERED PROFESSIONAL ENGINEER 63055 OREGON JANUARY 15, 2002 JASON R. MORGAN
RENEWAL DATE: DECEMBER 31, 2020

JOB NO. #20-09-SON
DATE NOV. 8. 2020

MORGAN CIVIL ENGINEERING, INC.
PO BOX 358
MANZANITA, OR 97130
(503) 801-6016
www.morgancivil.com
• CIVIL ENGINEERING
• INSPECTION
• PLANNING

NEDONNA DEVELOPMENT, LLC
NEDONNA WAVE PHASE 2
TENTATIVE PLAN
MAP 2N 10W 20AB

DIVIDING PROPERTIES:

TAX LOTS 10200 & 10400
MAP 2N 10W 20BA
TRACTS F & G OF NEDONNA WAVE PHASE 1

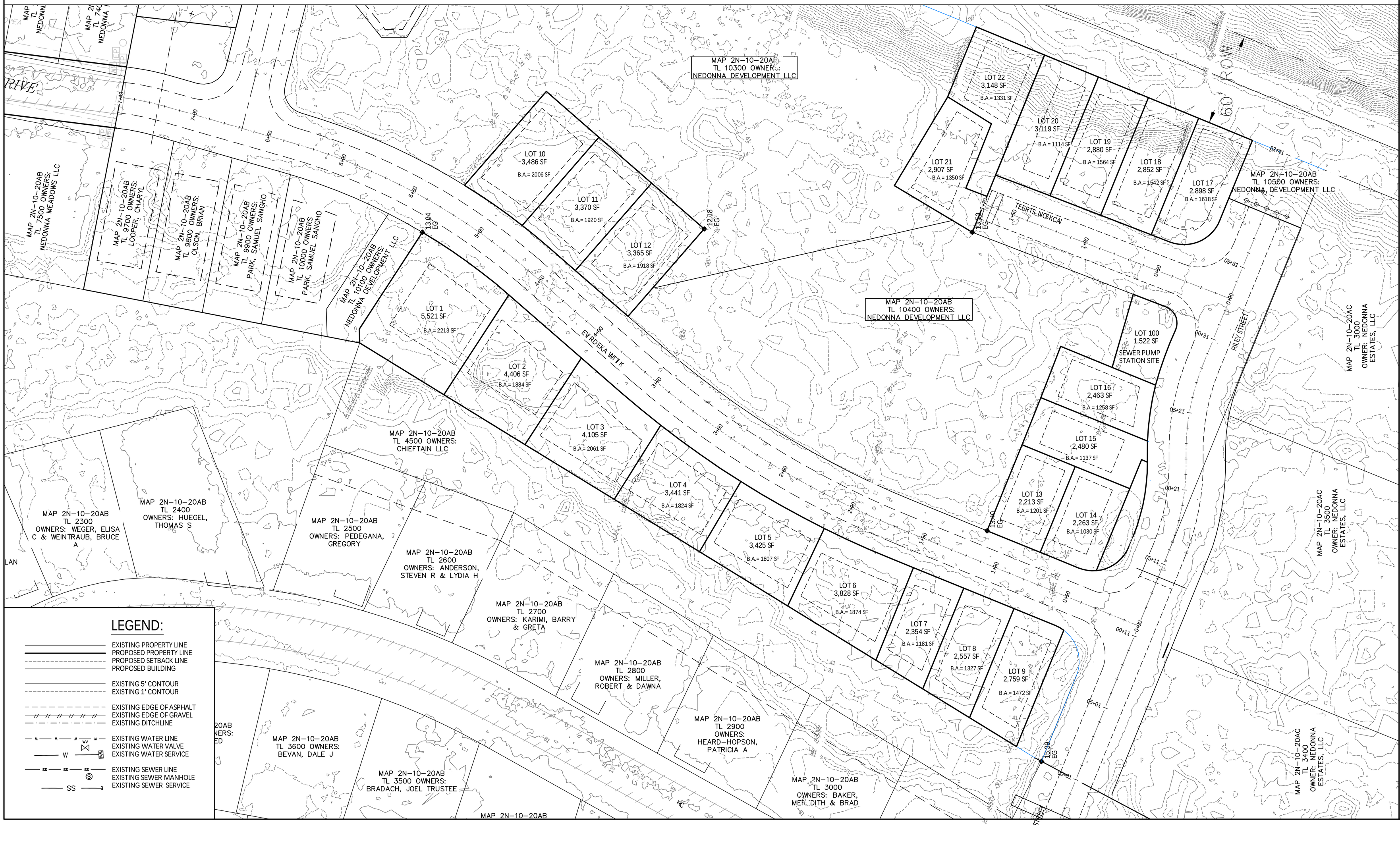
NOTES:
NO NEW STREETS ARE PROPOSED.
ALL STREETS SHOWN ON THE PLAN ARE EXISTING.

ELEVATIONS BASED ON 2008 DOGAMI LIDAR PROGRAM. NAVD88 DATUM.

N S

GRAPHIC SCALE
30 0 15 30 60 120
(IN FEET)
1 inch = 30 ft.

1/2 **PROPOSED LOT LAYOUT**
SCALE: 1"=30"



LEGEND:

- EXISTING PROPERTY LINE
- PROPOSED PROPERTY LINE
- PROPOSED SETBACK LINE
- PROPOSED BUILDING
- EXISTING 5' CONTOUR
- EXISTING 1' CONTOUR
- EXISTING EDGE OF ASPHALT
- EXISTING EDGE OF GRAVEL
- EXISTING DITCHLINE
- EXISTING WATER LINE
- EXISTING WATER VALVE
- EXISTING WATER SERVICE
- EXISTING SEWER LINE
- EXISTING SEWER MANHOLE
- EXISTING SEWER SERVICE

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• INSPECTION
• PLANNING
PO BOX 358
MANZANITA, OR 97130
(503) 801-6016
www.morgancivil.com

JOB NO. #2019-SON
DATE NOV. 8, 2020

REGISTERED PROFESSIONAL ENGINEER
63055
OREGON
JANUARY 15, 2002
JASON R. MORGAN
RENEWAL DATE: DECEMBER 31, 2020

NEDONNA DEVELOPMENT, LLC
NEDONNA WAVE - PHASE 2
LOT LAYOUT

SHEET 2 OF SIX


NEDONNA DEVELOPMENT, LLC
NEDONNA WAVE PHASE 2
TENTATIVE PLAN
MAP 2N 10W 20AB
PROPOSED LOT DIMENSIONS
SCALE: 1"=30'
LEGEND:
EXISTING PROPERTY LINE
PROPOSED PROPERTY LINE
PROPOSED SETBACK LINE
PROPOSED BUILDING
EXISTING 5' CONTOUR
EXISTING 1' CONTOUR
EXISTING EDGE OF ASPHALT
EXISTING EDGE OF GRAVEL
EXISTING DITCHLINE
EXISTING WATER LINE
EXISTING WATER VALVE
EXISTING WATER SERVICE
EXISTING SEWER LINE
EXISTING SEWER MANHOLE
EXISTING SEWER SERVICE
LOT 1 5,521 SF
LOT 2 4,406 SF
LOT 3 4,105 SF
LOT 4 3,441 SF
LOT 5 3,425 SF
LOT 6 3,828 SF
LOT 7 2,354 SF
LOT 8 2,557 SF
LOT 9 2,759 SF
LOT 10 3,486 SF
LOT 11 3,370 SF
LOT 12 3,365 SF
LOT 13 2,213 SF
LOT 14 2,263 SF
LOT 15 2,480 SF
LOT 16 2,463 SF
LOT 17 2,898 SF
LOT 18 2,852 SF
LOT 19 2,880 SF
LOT 20 3,119 SF
LOT 22 3,148 SF
SEWER PUMP STATION SITE
RILEY STREET
60' ROW
GRAPHIC SCALE
(IN FEET)
1 inch = 30 ft.
MAP 2N-10-20AB TL 10400 OWNERS: NEDONNA DEVELOPMENT LLC
MAP 2N-10-20AB TL 10300 OWNERS: NEDONNA DEVELOPMENT LLC
MAP 2N-10-20AB TL 10500 OWNERS: NEDONNA DEVELOPMENT LLC
MAP 2N-10-20AC TL 3400 OWNER: NEDONNA ESTATES, LLC
MAP 2N-10-20AC TL 3500 OWNER: NEDONNA ESTATES, LLC
MAP 2N-10-20AC TL 3000 OWNER: NEDONNA ESTATES, LLC

The areas outlined in yellow were all indicated on the tentative plan as sites for lots in future phases.

NEDONNA DEVELOPMENT, LLC
NEDONNA WAVE - PHASE 2
LOT DIMENSIONS

SHEET 3 OF SIX

REGISTERED PROFESSIONAL ENGINEER 63025 OREGON JANUARY 14, 2002 JASON R. MORGAN
RENEWAL DATE: DECEMBER 31, 2020

JOB NO. #20-09-SON
DATE NOV. 8, 2020

MORGAN CIVIL ENGINEERING, INC.
PO BOX 358
MANZANITA, OR 97130
(503) 801-6016
www.morgancivil.com

- CIVIL ENGINEERING
- INSPECTION
- PLANNING

ALTERMAN
LAW GROUP

DEAN N. ALTERMAN
ATTORNEY

D: (503) 517-8201
DEAN@ALTERMAN.LAW

August 26, 2025

By e-mail only to cityplanner@corb.us

The Mayor and Councilors
City of Rockaway Beach
PO Box 5
Rockaway Beach, OR 97136

Re: Remand of Nedonna Development for Phase 2 PUD approval
City file # Remand-25-1
Our File No.: 5701.001

Dear Mayor McNeilly and Councilors:

I'm submitting this letter on behalf of Anna Song and Nedonna Development, LLC in response to written evidence and testimony submitted on August 19th about the remand of the city's approval of Phase 2 of the Nedonna Wave planned unit development. I will take the issues raised in turn.

LUBA remanded this application to the City Council to address only two questions:

1. Where is the boundary between the R-1 zone and the SA zone?
2. Does the city's one-year time limit for an applicant to construct public improvements after a **tentative** plan approval require the holder of a **final** PUD approval to construct all improvements within one year after the final PUD approval?

Because Ocean Shores Conservation Coalition ("Oregon Shores") appealed only those two issues to LUBA, and because LUBA remanded the case on only those two issues, no other issues are before you now. The city's decision on all other criteria and issues is now final.

Mrs. Song and Nedonna Development submit to you that:

805 SW BROADWAY
SUITE 1580
PORTLAND, OREGON 97205

T: (503) 517-8200

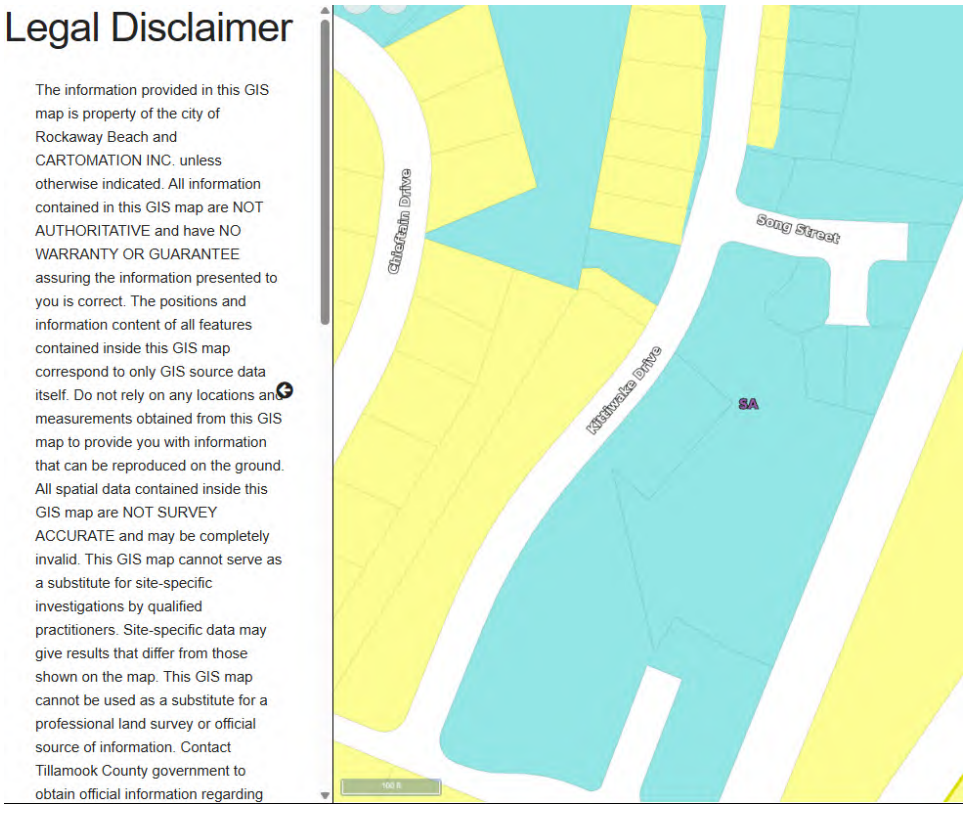
WWW.ALTERMAN.LAW

1. The City determined in 2008 that the area proposed for development is zoned R-1.

The city issued three approvals to Nedonna Development in 2008: the **final** approval of the PUD plan, a later approval to develop the PUD in two phases, and the **tentative** approval of Phase 1 of the PUD. The final PUD approval marked some areas for buildings lots, others for streets, and others as open space.

In 2008 the city had the same restriction against residential development in the SA zone that it does today. It follows that in 2008 the city must have found that the areas proposed for residential development were all **outside** the SA zone, or else the city would not have approved the final PUD plan.

Several commenters used various mapping tools and images to suggest that the lots in Phase 2 are within the SA zone. Two commenters based their arguments on the City's online GIS mapping tool.[1] This mapping tool states that the information on the GIS map is not authoritative, the city does not guarantee that the information is correct, and the map cannot be used as a substitute for official information. The map does not override the City's three land use decisions in 2008 that determined the zone boundary.



[1] Gary Corbin letter of August 16, 2025 and Oregon Shores Conservation Coalition letter of August 19, 2025.

One commenter, Danny Wilhelmi, submitted a map he created by overlaying a satellite image of the property over the City's zoning map.[2] While this image could be useful for as a general reference, like the City's GIS mapping tool, it is not authoritative.[3]

Another commenter, Nancy Webster, submitted mapping images to show informal wetland delineations in the Nedonna Beach neighborhood.[4] The submitted maps are online GIS mapping tools from the Department of State Lands (DSL), U.S. Fish & Wildlife Service, and Federal Emergency Management Agency. These mapping tools, like the City's GIS map, provide legal disclaimers stating that the GIS maps are for "informational purposes and may not be suitable for legal, engineering, or surveying purposes."[5] The maps are not zoning maps and do not dictate the location of the City's zoning boundaries. In addition, these maps do not amount to a zone boundary determination under RBZO § 3.080(5), which requires a site investigation by a qualified agent, and they do not override the wetland delineation of the property that DSL validated and approved on May 20, 2025.

In short, neither the mapping tools nor the images override the City's three 2008 approvals, all of which have become final and unappealable. None of the maps provide any insight into how the City interpreted RBZO § 3.080(5) in 2008.

The authoritative statement of the boundary line is in the first of the City's three decisions in 2008, which states that the PUD includes 3.9 acres in the R-1 zone and 2.33 acres in the SA zone, "determined by a wetland delineation report and survey concurred with by DSL." The Phase 2 lots are all within the area that the City declared to be R-1 in 2008.

2. Condition of Approval No. 1 of the 2008 Final Approval applies only to tentative plan approvals of subdivisions, not to final approvals of PUDs.

The final approval for the PUD contains several relevant conditions of approval, including condition no. 2 under "Improvement Agreement" and condition no. 1 under "Final Plat."

Improvement Agreement condition no. 2 is: "Prior to final plat approval, all on-site improvements shall be completed as necessary to serve the project."

---

[2] Danny Wilhelmi letter of August 19, 2025.
[3] Note that the City's online GIS map places all of the houses on Song Street, and many of the houses on Kittiwake Drive north of Song Street, in the SA zone, meaning that if the map is correct, none of those houses should exist.
[4] Nancy Webster letter of August 19, 2025.
[5] Quoting a portion of DSL's legal disclaimer.

Final Plat condition no. 1 is "The developer shall complete the improvements within one year of **tentative** plan approval unless an extension is granted by the City to complete improvements. **Final** plat review shall conform to the procedures of RBZO Article 10 and Article 13." [Emphasis added.]

Oregon Shores argues that because Nedonna Development did not complete the public improvements for Phase 2 within one year after the city issued its final approval for the PUD, the city's approval of the PUD has expired.

Oregon Shores misconstrues Final Plat condition no. 1, both as to its plain language and as to its context.

Final Plat condition no.1 gives a developer one year to "complete the improvements." That one-year period begins when the city issues a "tentative plan approval." The PUD approval was not a tentative plan approval – it states that it is a final approval – and it has no relation to this condition.

The City **did** issue a tentative plan approval for Phase 1. Less than one year later the City reviewed and approved the final plat for Phase 1. The final plat for Phase 1 was recorded in February 2009, less than one year after the city issued its tentative approval of Phase 1.

Improvement Agreement condition no. 2 states that the City will not issue final plat approval until "all on-side improvements [are] completed as necessary to serve the project." The City issued its final plat approval for Phase 1, signed the plat, and approved the plat to be recorded. The City could not have issued its final plat approval for Phase 1 unless the City found that Nedonna Development had completed all on-site improvements necessary to serve the project.

The argument of Oregon Shores also overlooks Exhibit D of the City's 2008 final approval in which the City discusses and lists the required improvements for each phase. This discussion can be found on page 1487 to 1493 of the LUBA record. Oregon Shores' interpretation of Final Plat condition no. 1 conflicts with the plain wording of condition no. 1 and the context of the City's approval of the PUD and of Phase 1.

Nedonna Development is now seeking City approval of the tentative plan for Phase 2. When the City's approval becomes final, Nedonna Development will have one year to build the improvements unless it obtains an extension. This is what occurred with Phase 1. In early 2008, Phase 1 received tentative plan approval. Within one year the applicant completed the required improvements and received final plat approval. The City's subdivision ordinance further supports this interpretation because the requirements for obtaining final plat approval of a subdivision mirror the language of Final Plat condition No. 1.[6]

[6] *See* §5 and §11 of the Rockaway Beach Subdivision Ordinance, Exhibit 1 at pages 3-6.

3. Emergency Ingress and Egress is not before you on remand.

Three commenters submitted testimony regarding emergency ingress and egress from the Nedonna Wave property.[7] The planning commission responded to similar concerns by applying two conditions to its approval of this application. The conditions appear on page 331 and 332 of the LUBA record and requires the following:

> p. The Applicant shall provide a traffic study for the development, including peak season and emergency evacuation needs, as well as the intersection of US Highway 101 and Beach Street.
>
> t. The Applicant shall submit evidence that tsunami evacuation routes are sufficient to meet the proportional evacuation needs created by the proposed development.

If a local government limits the issues on remand to the issues that LUBA has remanded to the local government, then opponents may not challenge the application based on any issues that they could have raised in the first appeal, if they did not actually raise those issues. *McCulloh v. City of Jacksonville*, 49 Or LUBA 345 (2005); see also *Beck v. City of Tillamook*, 313 Or 148 (1992).

The City made findings on emergency ingress and egress. No participant appealed those findings to LUBA, LUBA's remand did not include any issue relating to ingress and egress, and the issue is not before the City Council now.

4. Much of the new testimony is unrelated to the remaining issues.

Most of the other testimony submitted on August 19 was unrelated to the two issues that remain in the case. That unrelated testimony included statements about flooding and runoff, city drinking water and storage, fish and wildlife protections, and alleged FEMA requirements. One commenter, Delta Holderness, raised issues about compliance with the 2008 condition of approval No. 7, home building permits on property associated with Phase 1, and a comprehensive build-out schedule.[8] No one appeals those issues to LUBA and they are not before the City Council on remand.

[7] Mary Erwert letter of August 14, 2025, Kenneth and Gullan Bragg letter of August 19, 2025, and Kathie Raisler letters of August 19, 2025.
[8] Delta Holderness letter of August 19, 2025.

The City Council is only to consider testimony and evidence related solely to the boundaries of the R-1 and SA zones on the property and whether the City's approval of the PUD plan has expired, and then make findings on those two issues.

5. Conclusion.

The 2008 PUD approval was a final approval, not a tentative approval. It has not expired. The City has already found that the lots in Phase 2 are outside the SA zone and can thus be legally developed for residential use.

As your prior decision stated, the proposed tentative plan for Phase 2 complies with your zoning code and the other applicable requirements. Mrs. Song and I ask that you again approve her application to build Phase 2 of the Nedonna Wave PUD.

Very truly yours,

ALTERMAN LAW GROUP PC

Dean N. Alterman

Dean N. Alterman

Exhibit 1: Rockaway Beach Subdivision Ordinance, in part

Copy: Mrs. Anna Song (e-mail only)