661 G Street, Arcata, CA 95521 | Tel: 707.633.8321 | web: www.motherearthengineering.com

22 August 2019

APPS
11414

Kasey Sirkin
601 Startare Drive, Box 14
Eureka, CA 95501

Subject: Corps File Number 2017-627N: Request for Preliminary Jurisdictional Determination, Panther Rock Growers, MBC, Humboldt County APN 210-162-007

Dear Kasey Sirkin,

I would like to respectfully request you review the enclosed site information and process a preliminary jurisdictional determination for this site at your earliest convenience.

The subject site is located on the East side of Burr Valley Road, approximately 4.5 miles South from the intersection of Elderberry Lane and Burr Valley Road, and approximately 2.5 miles South from the intersection of Burr Valley Road and a private drive in the Dinsmore area of Humboldt County, California and is identified as APN 210-162-007. The 40-acre property is located in Section 11, Township 1 South and Range 5 East in the Dinsmore USGS 7.5-minute topographic quadrangle. The site can be characterized as partially cleared timberlands in a mixed montane hardwood-conifer habitat.

Observations

Field observations were made during site visits on 22 May 2019 and 9 July 2019 in accordance with the 1987 Corps of Engineers Wetland Delineation Manual and the Regional Supplement: Western Mountains, Valleys, and Coast Region (Version 2.0). Weather for both visits were overcast, and last significant rainfall occurred on 25 May 2019. The study area included the subject parcel at APN 210-162-007 and a portion of the adjacent parcel owned by the same property owner at APN 210-162-011. The study area was walked and observed for evidence of potentially jurisdictional water features.

The 22 May 2019 visit focused on an ephemeral watercourse that drained into a mild depression that showed presence of surface water and was dominated primarily of *Equisetum arvense*. Another pit dug at SP-2 showed evidence of problematic soils. The area at SP-2 was disturbed and contained a mix of potting soils and fill. There was a restrictive layer at 12 inch depth. However, SP-2 did not contain any hydrology or hydrophytic vegetation to convey wetland indications. The SP-2 area upslope was dominated by oaks and Douglas firs.

The 9 July 2019 visit focused on a west-facing convergence of two intermittent watercourses that are conveyed under a seasonal dirt road by culvert. Due to compromised road conditions, the area had been reshaped and altered, creating problematic wetland soil indicators with evidence of altered drainages,

channelization and highly disturbed, compacted soils. Visual observations of vegetation types and changes in hydrology were used to locate areas of extent. Soil pits were not dug due to the problematic soils. Observation point at SP-3 contained a rock layer at 6 inch depth. However, the soil was still saturated, and the area contained evidence of surface hydrology and algal matting.

The riverine and other waters of the U.S. were delineated using indicators of Ordinary High Water Marks (OHWM). Indicators observed include sediment sorting, change in vegetation, and breaks in elevation.

Waters of the U.S.

The site contains five features that meet the definition of Section 404 waters of the U.S. Three of the features can be classified as riverine and two can be classified as palustrine emergent. The three riverine features flow from east to west across the site, one partially conveyed by culvert. The three riverine features display indicators of OHWM, and thus fall within Corps Jurisdiction.

The two wetland features, classified as palustrine emergent wetlands, displayed indicators of surface hydrology, algal matting, surface cracks, sediment deposits and dominant hydrophytic vegetation and thus would fall within Corps Jurisdiction. Due to recent disturbances, soils were problematic and therefore unreliable. The enclosed map delineates the extent of jurisdictional features within the study area (enclosure 1). The enclosed preliminary jurisdictional determination form has been completed to include all necessary site and waters information (enclosure 2).

Conclusion

The approximately 40-acre study area was found to contain 0.34 acres of Section 404, intermittent, riverine waters of the U.S. as well as 0.18 acres of Section 404, emergent waters of the U.S. Please see attached photos. If you would like to perform a site visit for verification, please call (707) 633-8321, or email Risa@motherearthengineering.com, and we can schedule one at your earliest convenience. I would like to thank you for taking the time to verify the information presented in this delineation.

Kindest Regards,

Risa Okuyama, Staff Biologist

Mother Earth Engineering

Figure 1: View of W-1 taken on 7/9/19

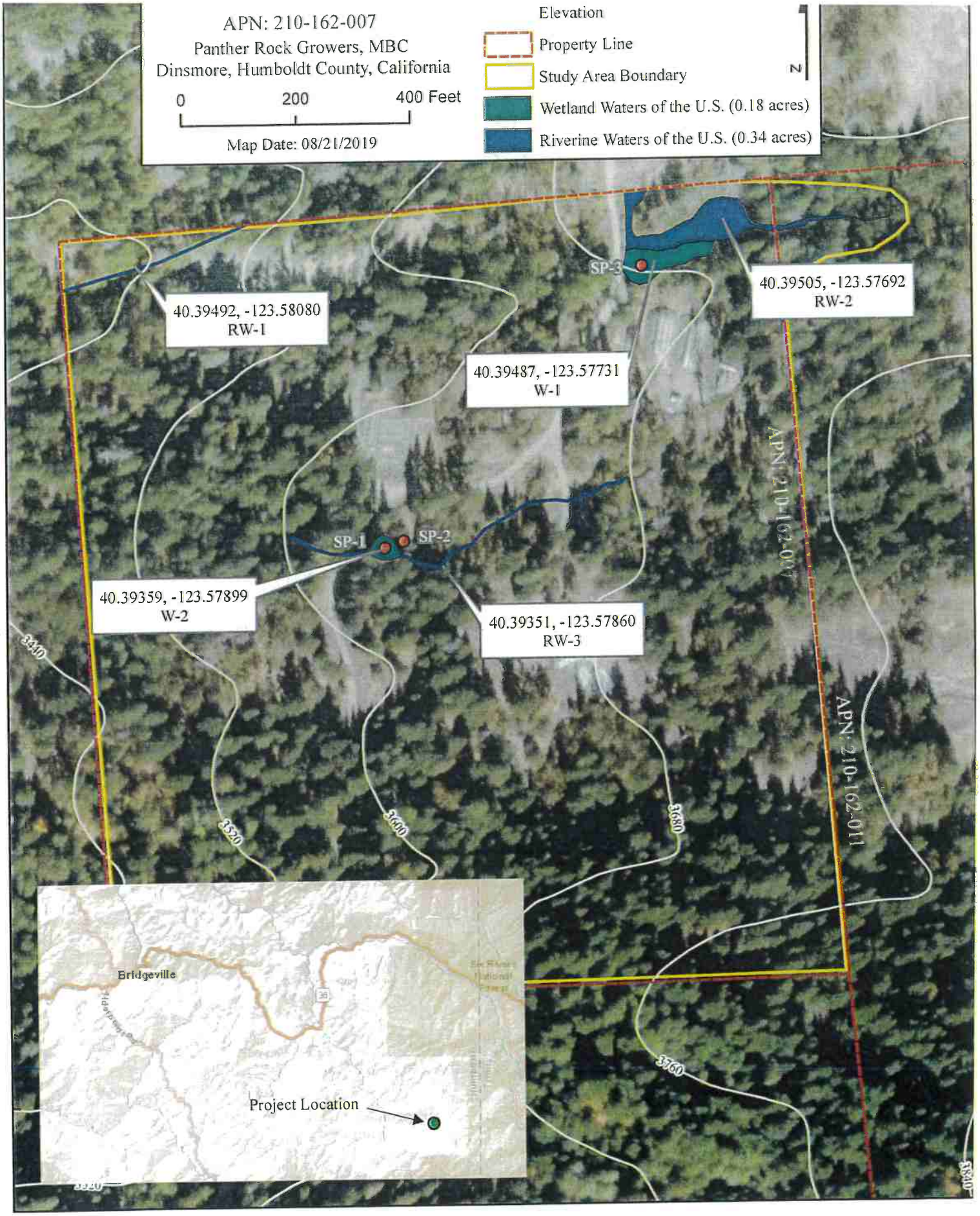
Figure 2: Evidence of algal matting at W-1. Photo taken 7/9/19.

Figure 3: Surface cracks at W-1 taken on 7/9/19.

Figure 4: View of W-2 taken on 5/22/19.

Figure 5: View of RW-2 taken on 7/9/19.

Figure 6-7: Views downslope (left) and upslope (right) of the intermittent watercourse that converges with RW-2. Photo taken 7/9/19.


APN: 210-162-007
Panther Rock Growers, MBC
Dinsmore, Humboldt County, California
0
200
400 Feet
Map Date: 08/21/2019
Elevation
Property Line
Study Area Boundary
Wetland Waters of the U.S. (0.18 acres)
Riverine Waters of the U.S. (0.34 acres)
N
SP-3
40.39505, -123.57692
RW-2
40.39492, -123.58080
RW-1
40.39487, -123.57731
W-1
APN: 210-162-007
SP-1
SP-2
40.39359, -123.57899
W-2
40.39351, -123.57860
RW-3
APN: 210-162-011
3440
3520
3600
3680
3760
3840
Bridgeville
Project Location

ARN-

Project/Site: 210-162-007-000 City/County: Dunsmuir / Humboldt Sampling Date: 5/22/19

Applicant/Owner: Curtis Tatum / Panther Rock Growers, MRC State: CA Sampling Point: SP-1

Investigator(s): R. Okuyama Section, Township, Range: S11, T1S, R5E

Landform (hillslope, terrace, etc.): mild depression Local relief (concave, convex, none): _____ Slope (%): _____

Subregion (LRR): A Lat: 40.39359 Long: -123.57899 Datum: WGS84

Soil Map Unit Name: No data available NWI classification: _____

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

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ 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 ✓	No _____	Is the Sampled Area within a Wetland? Yes ✓ No _____
Hydric Soil Present?	Yes ✓	No _____	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks: Sample site is a mild depression where an ephemeral watercourse with OHWM & surface water drains into.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Quercus garryana	5	No	FacU
2. Pseudotsuga menziesii	3	No	FacU
3. Pinus contorta	3	No	FacU
4.			
	11 = Total Cover		

Sapling/Shrub Stratum (Plot size: 15 ft)			
1. Pseudotsuga menziesii	5	No	FacU
2.			
3.			
4.			
5.			
	5 = Total Cover		

Herb Stratum (Plot size: 5 ft)			
1. Equisetum arvense	70	Yes	Fac
2. Osmorhiza berteroi	8	No	FacU
3. Luzula parviflora	5	No	Fac
4. Vicia americana	5	No	Fac
5. Galium aparine	5	No	FacU
6. Calystegia sepium	2	No	Fac
7. Nemophilia parviflora	1	No	FacU
8.			
9.			
10.			
11.			
	96 = Total Cover		

Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (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
- ✓ 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 ✓ No _____

Remarks:

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
0-10	10YR 2/2	100					loamy clay	

[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.)

- X Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 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)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: Rock / hardpan

Depth (inches): 10

Hydric Soil Present? Yes X No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one 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 along 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)**
- X 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 X No ___ Depth (inches): 6"

Saturation Present? (Includes capillary fringe) Yes X No ___ Depth (inches): surface

Wetland Hydrology Present? Yes X No ___

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

Remarks:

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

APN: 210-162-007-000

Project/Site: _____ City/County: Dinsmore / Humboldt Sampling Date: 5/22/19

Applicant/Owner: Curtis Tatum / Panther Rock Growers, MBC State: CA Sampling Point: SP-2

Investigator(s): R. Okuyama Section, Township, Range: S11, T1S, R5E

Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): _____ Slope (%): _____

Subregion (LRR): A Lat: 40.39362 Long: -123.57889 Datum: _____

Soil Map Unit Name: No data available NWI classification: _____

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

Are Vegetation _____, Soil X, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ 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 _____	No ✓	Is the Sampled Area within a Wetland? Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks: Sample site is adjacent and upslope of SP-1. No hydrology or veg. However soils were problematic due to evidence of perlite and fill disposed years earlier.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 20 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Quercus garryana	25	Y	FACU
2. Pinus contorta	5	N	FACU
3. Pseudotsuga menziesii	15	N	FACU
4.			
	45 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft)			
1. Pinus contorta	2	N	FACU
2.			
3.			
4.			
5.			
	2 = Total Cover		
Herb Stratum (Plot size: 5 ft)			
1. Festuca californica	15	Y	FACU
2. Agrostis stolonifera	15	Y	FAC
3. Ranunculus acris	10	N	FAC
4. Galium aparine	5	N	FACU
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	45 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 45

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.33 (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

___ 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 _____ No ✓

Remarks:

Sampling Point: SP-2

SOIL

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
0-12	topsoil							

[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)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 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)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: hardpan

Depth (inches): 12

Hydric Soil Present? Yes ___ No ✓

Remarks:

problematic soil, disturbed area with soils mixed with potting soil and fill - lots of perlite

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one 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 along 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 ✓ Depth (inches): ___

Water Table Present? Yes ___ No ✓ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No ✓ Depth (inches): ___

Wetland Hydrology Present? Yes ___ No ✓

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

Remarks:

Project/Site: APN: 210-162-007-000 City/County: Dinsmore / Humboldt Sampling Date: 7/09/19
Applicant/Owner: Curtis Tatum / Panther Rock Growers, MBC State: CA Sampling Point: SP-3
Investigator(s): R. Okuyama Section, Township, Range: S11, T1S, R5E
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): _____ Slope (%): _____
Subregion (LRR): A Lat: 40.39486 Long: -123.57786 Datum: WGS84
Soil Map Unit Name: No data available NWI classification: _____
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)
Are Vegetation _____, Soil ~~N~~, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ 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 ✓	No _____	Is the Sampled Area within a Wetland? Yes ✓ No _____
Hydric Soil Present?	Yes ✓	No _____	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks: Sample site adjacent to riverine system w/ restrictive gravel bed layer. Lots of algal matting and surface cracks indicate prolonged saturation.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 20 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft)			
1. Salix lasiolepis	20	yes	FACW
2.			
3.			
4.			
5.			
	20 = Total Cover		
Herb Stratum (Plot size: 5 ft)			
1. Juncus sp	30	yes	OBL/FAC
2. Equisetum arvense	18	yes	Fac
3. Rumex crispus	3	N	Fac
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	~~48~~ 51 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	0 = Total Cover		
% Bare Ground in Herb Stratum _____			

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 (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
✓ 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)
___ 6 - 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 ✓ No _____

Remarks:

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
0-8	10YR 3/1	100					loamy ~~sand~~ - silty loam	

[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)
- X Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 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)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: Gravel / Rock bed

Depth (inches): 8

Hydric Soil Present? Yes ✓ No ___

Remarks:

Hit gravel bar at 8", but soil was still very moist, silty loam w/ very low chroma. Lots of organic material.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one 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 along 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 ✓ Depth (inches): ___

Water Table Present? Yes ___ No ✓ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ✓ No ___ Depth (inches): 5

Wetland Hydrology Present? Yes ✓ No ___

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

Remarks:

all aquatic features on the site that could be affected by the proposed activity, based on the following information:

District Office	San Francisco District	File/ORM #	2017-627N
PJD Date:			
State	CA	City/County	Dinsmore /Humboldt County
Nearest Waterbody:	Panther Creek		
Location: TRS, LatLong or UTM:	40.395032, -123.577028	Name/ Address of Person Requesting PJD	Risa Okuyama, Staff Biologist Mother Earth Engineering 661 G Street, Arcata, California 95521

Identify (Estimate) Amount of Waters in the Review Area:

Non-Wetland Waters: linear ft | width 0.34 acres | Stream Flow: Intermittent

Wetlands: 0.18 acre(s) | Cowardin Class: Palustrine, emergent

Name of Any Water Bodies on the Site Identified as Section 10 Waters: Tidal: | Non-Tidal:

☐ Office (Desk) Determination
☐ Field Determination: Date of Field Trip:

SUPPORTING DATA: Data reviewed for preliminary JD (check all that apply - checked items should be included in case file and, where checked and requested, appropriately reference sources below):

- ☑ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: Maps
- ☑ Data sheets prepared/submitted by or on behalf of the applicant/consultant.
  - ☐ Office concurs with data sheets/delineation report.
  - ☐ Office does not concur with data sheets/delineation report.
- ☐ Data sheets prepared by the Corps
- ☐ Corps navigable waters' study:
- ☐ U.S. Geological Survey Hydrologic Atlas:
  - ☐ USGS NHD data.
  - ☐ USGS 8 and 12 digit HUC maps.
- ☐ U.S. Geological Survey map(s). Cite quad name:
- ☐ USDA Natural Resources Conservation Service Soil Survey. Citation:
- ☐ National wetlands inventory map(s). Cite name:
- ☐ State/Local wetland inventory map(s):
- ☐ FEMA/FIRM maps:
- ☐ 100-year Floodplain Elevation is:
- ☑ Photographs: ☑ Aerial (Name & Date): Google Earth
  ☑ Other (Name & Date): Risa Okuyama, 5/22/19 & 7/9/19
- ☐ Previous determination(s). File no. and date of response letter:
- ☑ Other information (please specify): Site Observations

IMPORTANT NOTE: The information recorded on this form has not necessarily been verified by the Corps and should not be relied upon for later jurisdictional determinations.

30 AUG 2019
Signature and Date of Regulatory Project Manager (REQUIRED)

30 AUG 2019
Signature and Date of Person Requesting Preliminary JD (REQUIRED, unless obtaining the signature is impracticable)

EXPLANATION OF PRELIMINARY AND APPROVED JURISDICTIONAL DETERMINATIONS:

1. The Corps of Engineers believes that there may be jurisdictional waters of the United States on the subject site, and the permit applicant or other affected party who requested this preliminary JD is hereby advised of his or her option to request and obtain an approved jurisdictional determination (JD) for that site. Nevertheless, the permit applicant or other person who requested this preliminary JD has declined to exercise the option to obtain an approved JD in this instance and at this time.

2. In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring "preconstruction notification" (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an approved JD for the activity, the permit applicant is hereby made aware of the following: (1) the permit applicant has elected to seek a permit authorization based on a preliminary JD, which does not make an official determination of jurisdictional waters; (2) that the applicant has the option to request an approved JD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an approved JD could possibly result in less compensatory mitigation being required or different special conditions; (3) that the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) that the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary; (5) that undertaking any activity in reliance upon the subject permit authorization without requesting an approved JD constitutes the applicant's acceptance of the use of the preliminary JD, but that either form of JD will be processed as soon as is practicable; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a preliminary JD constitutes agreement that all wetlands and other water bodies on the site affected in any way by that activity are jurisdictional waters of the United States, and precludes any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7) whether the applicant elects to use either an approved JD or a preliminary JD, that JD will be processed as soon as is practicable. Further, an approved JD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331, and that in any administrative appeal, jurisdictional issues can be raised (see 33 C.F.R. 331.5(a)(2)). If, during that administrative appeal, it becomes necessary to make an official determination whether CWA jurisdiction exists over a site, or to provide an official delineation of jurisdictional waters on the site, the Corps will provide an approved JD to accomplish that result, as soon as is practicable.

Appendix A - Sites

District Office: San Francisco District | File/ORM #: 2017-627N | PJD Date:

State: CA | City/County: Dinsmore, Humboldt County | Person Requestinq PJD: Risa Okuyama

Site Number	Latitude	Longitude	Cowardin Class	Est. Amount of Aquatic Resource in Review Area	Class of Aquatic Resource
W-I	40.39487	-123.57731	Palustrine, emergent	0.14 acres	Non-Section 10 wetland
W-2	40.39359	-123.57899	Palustrine, emergent	0.04 acres	Non-Section 10 wetland
RW-1	40.39492	-123.5808	Riverine	0.02 acres	Non-Section 10 non-wetlanc
RW-2	40.39505	-123.57692	Riverine	0.30 acres	Non-Section 10 non-wetlanc
RW-3	40.39351	-123.57860	Riverine	0.015 acres	Non-Section 10 non-wetlanc

Notes: