

22 August 2019

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



APPS
11494

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.

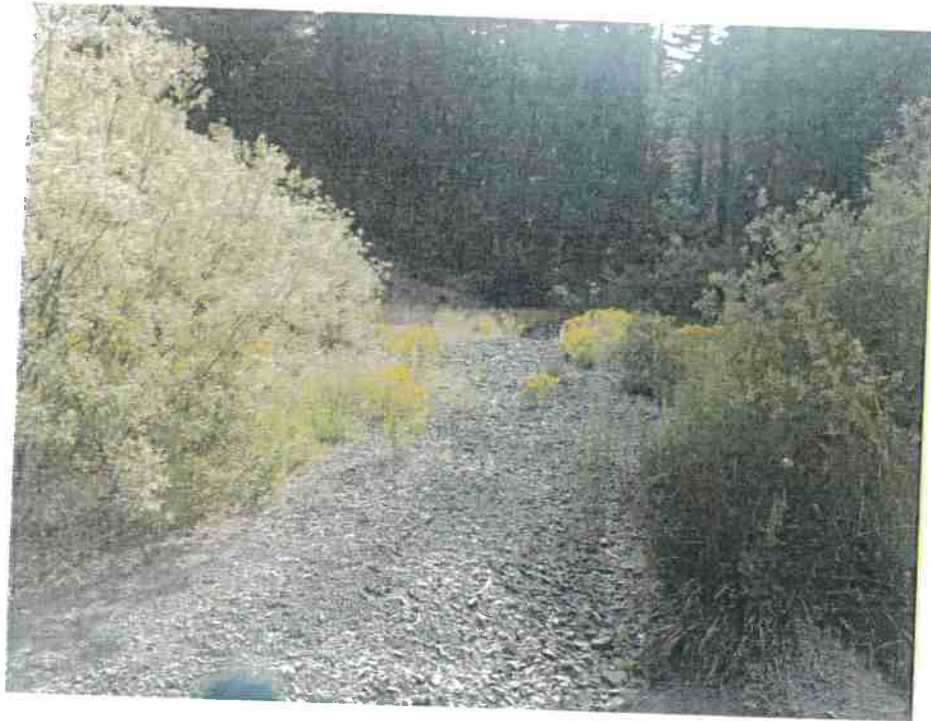
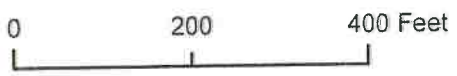


Figure 5: View of RW-2 taken on 7/9/19.



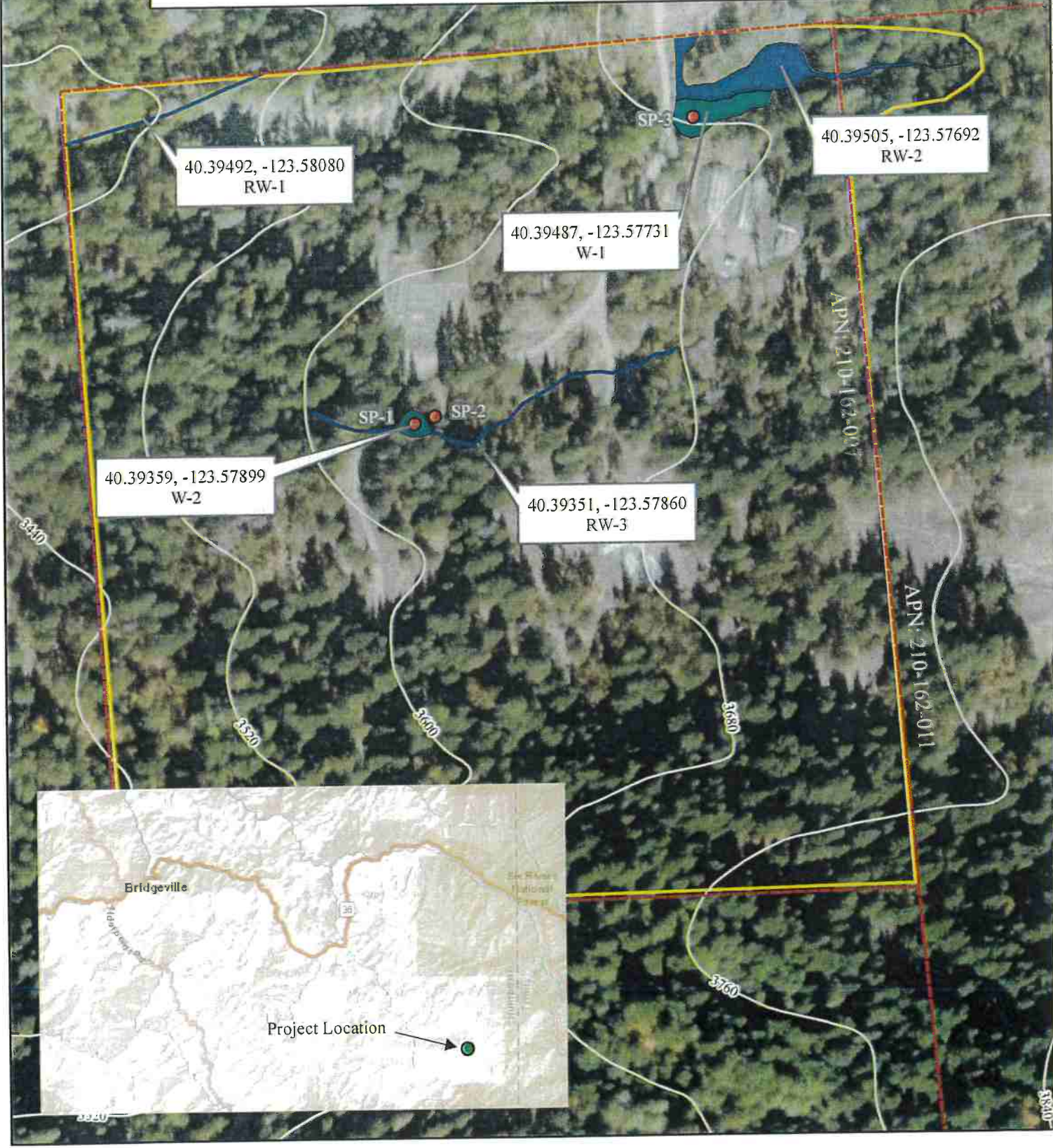
Figure 6-7: Views downslope (left) and upslope (right) of the intermittent watercourse that converges with RW-2. Photo taken 7/9/19.

APN: 210-162-007
Panther Rock Growers, MBC
Dinsmore, Humboldt County, California



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)



Project/Site: 210-162-007-000 City/County: Russumore / Humboldt Sampling Date: 5/22/19
 Applicant/Owner: Curtis Tatum / Panther Rock Growers, MBC 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 <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	
Remarks: <u>Sample site is a mild depression where an ephemeral watercourse with OHWM & surface water drains into.</u>	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30 ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
1. <u>Quercus garryana</u>	<u>5</u>	<u>No</u>	<u>FACU</u>	
2. <u>Pseudotsuga menziesii</u>	<u>3</u>	<u>No</u>	<u>FACU</u>	
3. <u>Pinus contorta</u>	<u>3</u>	<u>No</u>	<u>FACU</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>11</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15 ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 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.
1. <u>Pseudotsuga menziesii</u>	<u>5</u>	<u>No</u>	<u>FACU</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>5</u> = Total Cover				
Herb Stratum (Plot size: <u>5 ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____
1. <u>Equisetum arvense</u>	<u>70</u>	<u>Yes</u>	<u>FAC</u>	
2. <u>Osmunda cinnamomea</u>	<u>8</u>	<u>No</u>	<u>FACU</u>	
3. <u>Luzula parviflora</u>	<u>5</u>	<u>No</u>	<u>FAC</u>	
4. <u>Vicia americana</u>	<u>5</u>	<u>No</u>	<u>FACU</u>	
5. <u>Galium aparine</u>	<u>5</u>	<u>No</u>	<u>FACU</u>	
6. <u>Calystegia sepium</u>	<u>2</u>	<u>No</u>	<u>FAC</u>	
7. <u>Nemophila parviflora</u>	<u>1</u>	<u>No</u>	<u>FACU</u>	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
<u>96</u> = Total Cover				
Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
<u>0</u> = Total Cover				
Remarks: _____				

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

APN: 210-162-007-000 City/County: Dunsmuir / Humboldt Sampling Date: 5/22/19
 Applicant/Owner: Curtis Tatum / Panther Rock Growers, LLC State: CA Sampling Point: SP-2
 Investigator(s): R. Okuyama Section, Township, Range: S11, T15, 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 <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes _____ No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes _____ No <input checked="" type="checkbox"/>	
Remarks: <u>Sample site is adjacent to and upslope of SP-1. No hydrology or veg. However soils were problematic due to evidence of perlite and fill disposed years earlier.</u>		

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: <u>20 ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.33</u> (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.
1. <u>Quercus garryana</u>	<u>25</u>	<u>Y</u>	<u>FACU</u>	
2. <u>Pinus contorta</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
3. <u>Pseudotsuga menziesii</u>	<u>15</u>	<u>N</u>	<u>FACU</u>	
4. _____	_____	_____	_____	
<u>45</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>15 ft</u>)				
1. <u>Pinus contorta</u>	<u>2</u>	<u>N</u>	<u>FACU</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>2</u> = Total Cover				
Herb Stratum (Plot size: <u>5 ft</u>)				
1. <u>Festuca californica</u>	<u>15</u>	<u>Y</u>	<u>FACU</u>	
2. <u>Arostic stolonifera</u>	<u>15</u>	<u>Y</u>	<u>FACU</u>	
3. <u>Panunculus acris</u>	<u>10</u>	<u>N</u>	<u>FACU</u>	
4. <u>Galium aparine</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
<u>45</u> = Total Cover				
Woody Vine Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
<u>0</u> = Total Cover				
% Bare Ground in Herb Stratum <u>45</u>				
Remarks: _____				
Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>				

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		Redox Features		Type ¹	Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%				
<u>0-2/12</u>	<u>light</u>							

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

Restrictive Layer (if present):
 Type: hardpan
 Depth (Inches): 12
 Hydric Soil Present? Yes No

Remarks:
problematic soil, disturbed area with soils mixed with putting soil and fill - lots of perlite

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (2 or more required)
Primary Indicators (minimum of one required; check all that apply)		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		

Field Observations:
 Surface Water Present? Yes No Depth (Inches): _____
 Water Table Present? Yes No Depth (Inches): _____
 Saturation Present? Yes No Depth (Inches): _____
 (Includes capillary fringe)
 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): P. 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: NAD83
 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 SL, 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 <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No _____	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No _____	
Remarks: <u>Sample site adjacent to riverine system w/ restrictive gravel bed layer. lots of algal matting and surface cracks indicate prolonged saturation.</u>		

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>20 ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____				Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)
2. _____				Total Number of Dominant Species Across All Strata: <u>3</u> (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4. _____				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:				
<input checked="" type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation				
<input checked="" type="checkbox"/> 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 <input checked="" type="checkbox"/> No _____				
Remarks:				

Sapling/Shrub Stratum (Plot size: <u>15 ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Salix lasiolepis</u>	<u>20</u>	<u>yes</u>	<u>FACW</u>
2. _____			
3. _____			
4. _____			
5. _____			
Total Cover: <u>20</u>			

Herb Stratum (Plot size: <u>5 ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Juncus sp</u>	<u>30</u>	<u>yes</u>	<u>OBL/FACW</u>
2. <u>Equisetum arvense</u>	<u>18</u>	<u>yes</u>	<u>FAC</u>
3. <u>Rumex crispus</u>	<u>3</u>	<u>N</u>	<u>FAC</u>
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			
Total Cover: <u>51</u>			

Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
Total Cover: <u>0</u>			

% Bare Ground In Herb Stratum	Total Cover
_____	<u>0</u>

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

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-8	10YR 8/1	100					loamy clayey - silty loam	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input checked="" type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

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:		Secondary Indicators (2 or more required)
Primary Indicators (minimum of one required; check all that apply)		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input checked="" type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Shallow Aquitard (D3)
<input checked="" type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
<input checked="" type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		

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): 8
 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, Lat/Long 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.

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

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

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 Requesting PJD Risa Okuyama

Site Number	Latitude	Longitude	Cowardin Class	Est. Amount of Aquatic Resource in Review Area	Class of Aquatic Resource
W-1	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-wetland
RW-2	40.39505	-123.57692	Riverine	0.30 acres	Non-Section 10 non-wetland
RW-3	40.39351	-123.57860	Riverine	0.015 acres	Non-Section 10 non-wetland

Notes: