12015

Aquatic Resources Survey

Humboldt Headless Chicken Ranch
(APN: 218-151-005)

Humboldt County

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May 2020 (revised January 5, 2021)

SUMMARY
An aquatic resources survey was conducted on a portion of APN: 218-151-005 to identify wetlands and other aquatic resources on the property that could be impacted by cannabis cultivation. The portion of the parcel surveyed includes Chamise Creek and a Class II tributary that are both Waters of the United States. There are no wetlands within or near the cultivation areas or related infrastructure.

1. INTRODUCTION

This report includes the results an aquatic resources survey conducted on a portion of APN:218-151-005 near Harris in Humboldt County. The purpose of the survey was to identify aquatic resources on the parcel that could be impacted by cannabis cultivation and fulfill the requirement (Item 4) of the October 3, 2018 from the Humboldt County Planning and Building Department requesting a wetland/Waters of the United States report including mapping of Streamside Management Areas (SMAs). The project site plan is provided Appendix A.

2. DEFINITIONS

Waters of the United States

Waters of the United States are regulated by the Army Corps under the Clean Water Act. Waters of the United States include, but are not limited to, territorial seas, waters used for interstate or foreign commerce and their tributaries, and waters adjacent to the aforementioned, including wetlands.

Army Corps jurisdiction in waters such as creeks and rivers includes the area below the ordinary high water mark, which is the line on the bank established by fluctuations of water that leave physical characteristics such as a distinct line on the bank, shelving, destruction of terrestrial vegetation, and presence of debris.

The Army Corps defines wetlands as:

> "... areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal conditions do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas."

Waters of the State

Waters of the state are regulated by the State Water Resources Control Board (Water Board) under the Porter-Cologne Water Quality Control Act. Waters of the state are defined as:

> "... any surface water or groundwater, including saline waters, within the boundaries of the state."

Waters of the State includes water in both natural and artificial channels.

The Water Board's definition of a wetland is:

> *"An area is wetland if, under normal circumstances, (1) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both; (2) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and (3) the area's vegetation is dominated by hydrophytes or the area lacks vegetation."*

Streamside Management Areas
The Streamside Management Areas and Wetland Ordinance of the County of Humboldt (SMAWO § 314-61.1) defines Streamside Management Areas (SMAs) along streams and wetlands. The boundary for SMAs along streams is defined as:

> "One Hundred (100) feet, measured as the horizontal distance from the top of bank or edge of riparian drip-line whichever is greater on either side of perennial streams."
>
> "Fifty (50) feet, measured as the horizontal distance from the top of bank or edge of riparian drip-line whichever is greater on either side of intermittent streams."

The SMA boundary for wetlands is defined as:

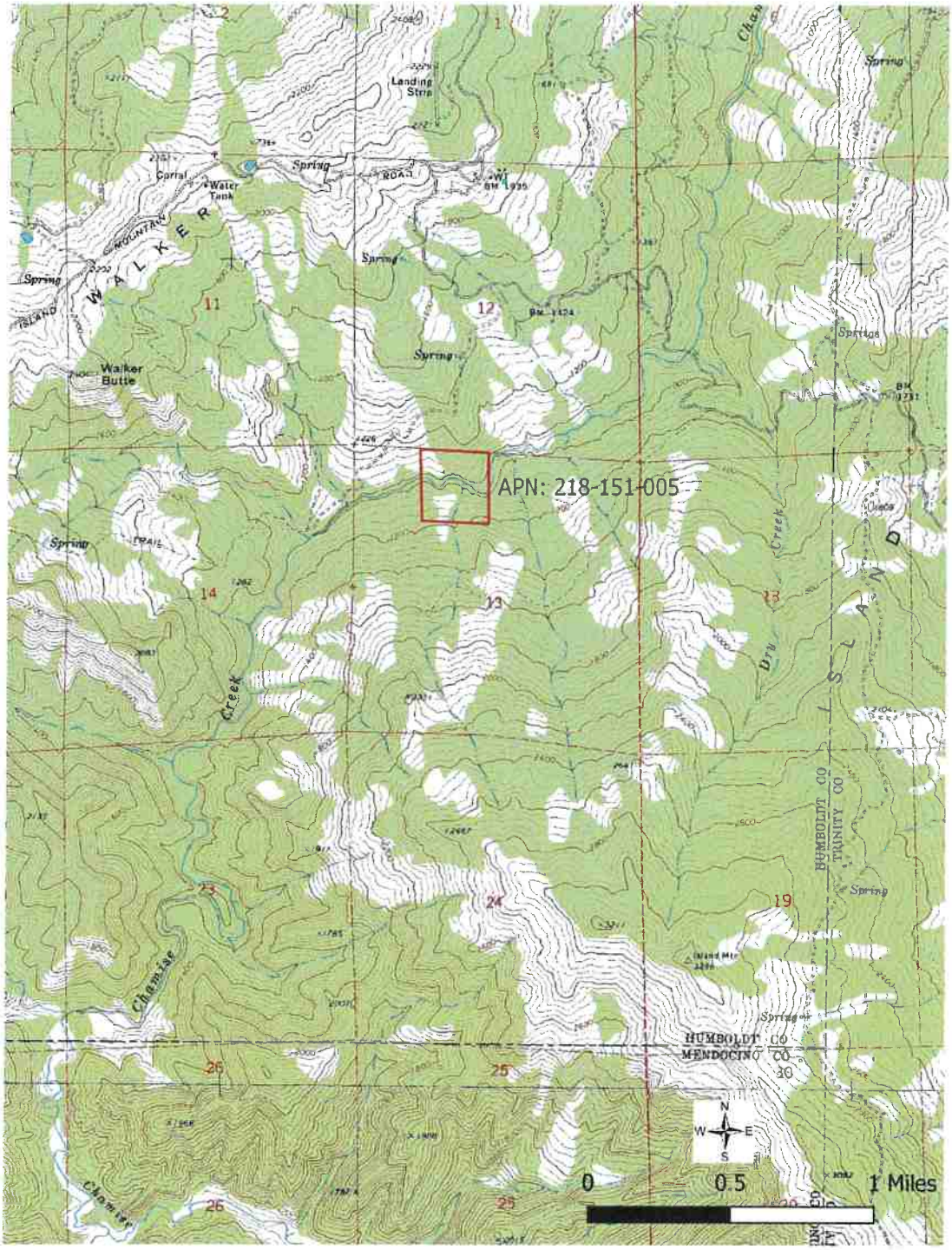
> Seasonal wetlands = Fifty (50) feet
> Perennial wetlands = One hundred fifty (150) feet

3. ENVIRONMENTAL SETTING

Project Location
The parcels are located at 1530 D Road off Island Mountain Road approximately 12.5 miles southeast of Garberville in Humboldt County on the Jewett Rock USGS quadrangle (Section 13, T5S, R5E) (Figure 1).

Soil, Topography, and Hydrology
Two soil types are mapped on the portion of the parcel evaluated on the north side of Chamise Creek, Yorknorth-Witherell Complex, 15 to 30 percent slopes and Burgsblock-Coolyork-Tannin complex, 30-50 percent slopes (United States Department of Agriculture, Natural Resource Conservation Service (NRCS) 2020) These soil types are derived from sandstone, mudstone, and schist parent material. The soil types and their minor components have non-hydric soil ratings. The cultivation sites and related infrastructure are on an approximately 30% south facing slope. The area is bordered by Chamise Creek and includes a Class II stream and a spring. Chamise Creek is a tributary of the Eel River. The elevation ranges from approximately 1,000 to 1,180 feet above sea level.

Figure 1. Location Map.



4. METHODS

The survey for wetlands and other aquatic resources was conducted on March 11, 2020 on the portion of the parcel north of Chamise Creek where the cultivation sites and related infrastructure is located. There are no cultivation activities on the south side of Chamise Creek. Additional GPS mapping of the watercourses was conducted on March 26, 2020.

The field work was conducted by Kyle Wear, M.A. Mr. Wear has over 25 years of experience conducting floristic surveys and other botanical work in northern California and 15 years of experience conducting wetland delineations. Mr. Wear is also trained in wetland delineation by the Wetland Training Institute.

Wetlands

Federal, State, and County wetland delineation methods follow the *1987 Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual Western Mountains, Valleys, and Coast Region (Version 2.0)* (Army Corps 2010). A positive wetland determination is made when all three wetland parameters (hydrophytic vegetation, hydric soil, and wetland hydrology) are present.

Hydrophytic Vegetation

The presence of hydrophytic vegetation is determined by the wetland indicator status of each plant species present using the *Western Mountains Valleys and Coast 2016 Regional Wetland Plant List* (Army Corps 2016). The indicator status of plants is based on the estimated probability of the species occurring in wetlands. The indicator status categories are:

Obligate Wetland Plants (OBL)	Almost always occur in wetlands	>99% frequency
Facultative Wetland Plants (FACW)	Usually occur in wetlands	67%-99%
Facultative Plants (FAC)	Equally occur wetlands and non-wetlands	33%-67%
Facultative Upland Plants (FACU)	Sometimes occur in wetlands	1%-33%
Obligate Upland Plants (UPL)	Rarely occur in wetlands	<1%

If more than 50% of the dominant plants across all vegetation strata (i.e. trees, shrubs, herbs) are OBL, FACW, or FAC, the vegetation is considered to be hydrophytic. Dominance of plants within the plots is determined using the "50/20" rule. This method involves estimating absolute cover of each plant in each vegetation stratum. Dominant plants include the plants with the highest cover that collectively or individually account for 50% of the total vegetation cover. Additional plants are considered dominant if their cover is at least 20%.

Hydric Soil

Indicators of hydric soil include, but are not limited to, a strong hydrogen sulfide (rotten egg) odor, redox concentrations, depleted matrix, and high organic matter content. Soil colors are determined by using a standard Munsell soil color chart (Gretag Macbeth 2000).

Wetland Hydrology

Indicators of wetland hydrology include, but are not limited to, surface water, high water table, soil saturation, sediment deposits, soil cracks, and oxidized root channels along living roots.

Other Aquatic Resources

Other aquatic resources include streams, rivers, ponds, lakes, and other waterbodies and any adjacent riparian habitat.

5. RESULTS AND DISCUSSION

Wetlands

There are no wetlands within or near the cultivation areas or related infrastructure on the parcel. The area includes upland vegetation including grasslands, coyote brush (*Baccharis pilularis*) scrub, and stands of conifers and hardwoods including Douglas-fir (*Pseudtsuga menziesii*), oaks (*Quercus* spp.), tanoak (*Notholithocarpus densiflorus* var. *densiflorus*), California bay (*Umbellularia californica*), and madrone (*Arbutus menziesii*). No indicators of wetland hydrology or hydric soils were observed.

Other Aquatic Resources

The project area includes Chamise Creek and Class II tributary (Figure 2). There is riparian habitat along Chamise Creek with a canopy of alder. There were still no leaves on the trees during the March survey, but the SHN biological report for the parcel identifies red alder (*Alnus rubra*).

Streamside Management Areas

Both the County SMAs and setbacks under the Water Board 2015 Regional Order are shown in Figure 2. The SMAs include the areas within 100 feet of the top of the bank or the alder dripline, whichever is most landward along Chamise Creek and 50 feet from the top of the bank along the Class II stream that lacks riparian vegetation. The 2015 Regional Order setbacks are measured 100 feet from the top of the bank of both watercourses.

Existing infrastructure within or on the 100-foot setback of the Class II stream includes several existing structures and water tanks. It also appears the edge of the immature plant area/greenhouse #2 (GH2) is on or within the 100-foot setback. There are two water tanks and a structure in or on the setback for Chamise Creek.

6. REFERENCES

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Figure 2. Aquatic Resources Map.

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Appendix A. HHCR Premises Diagram.