Director CDP Staff Report with Attachments

THE CITY OF EUREKA
DEVELOPMENT SERVICES

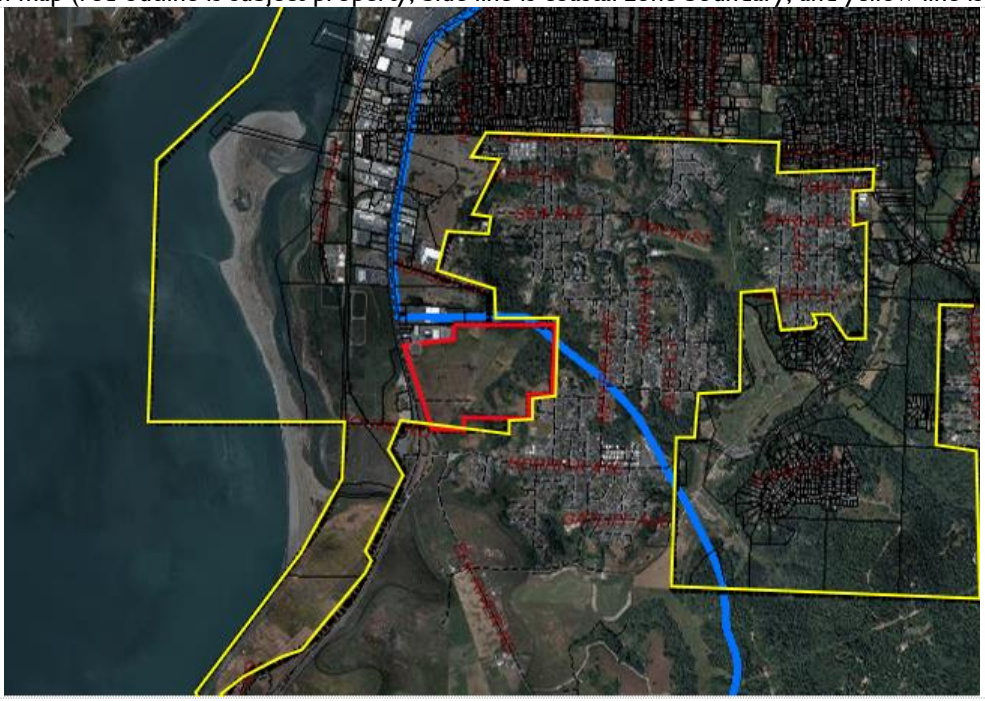
DIRECTOR OF DEVELOPMENT SERVICES

STAFF REPORT

November 13, 2023

Title:	Carrington Company Lot Line Adjustment Coastal Development Permit
Project:	Coastal Development Permit CDP-23-0003
Location:	4775 Broadway (aka 4635 Broadway)
APN:	302-171-035
Applicant:	The Carrington Company
Property Owner:	Francis and Carole Carrington, Trustee of the Carrington Family 2000 Trust
Purpose/Use:	Lot line adjustment between three parcels resulting in three parcels
Application Date:	May 8, 2023
General Plan:	Coastal Agriculture (A), and Inland Agriculture (A) and Residential Estates (RE)
Zoning:	Coastal Agriculture (AC), and Inland Agriculture (A) and Residential Estates (RE)
CEQA:	Exempt under §15305, Class 5 Minor Alterations in Land Use Limitation
Staff Contact:	Caitlin Castellano, Senior Planner
Recommendation:	Hold a public hearing; and Adopt a resolution finding the project exempt from CEQA, and approving with conditions
Action:	*"I hereby adopt a resolution finding the project exempt from CEQA, and approving with conditions a coastal development permit for a lot line adjustment at 4775 Broadway (APN 302-171-035)."*
Appeal Status:	The City's final action on the coastal development permit is appealable to the California Coastal Commission.

Figure 1: Location map (red outline is subject property, blue line is coastal zone boundary, and yellow line is City limits



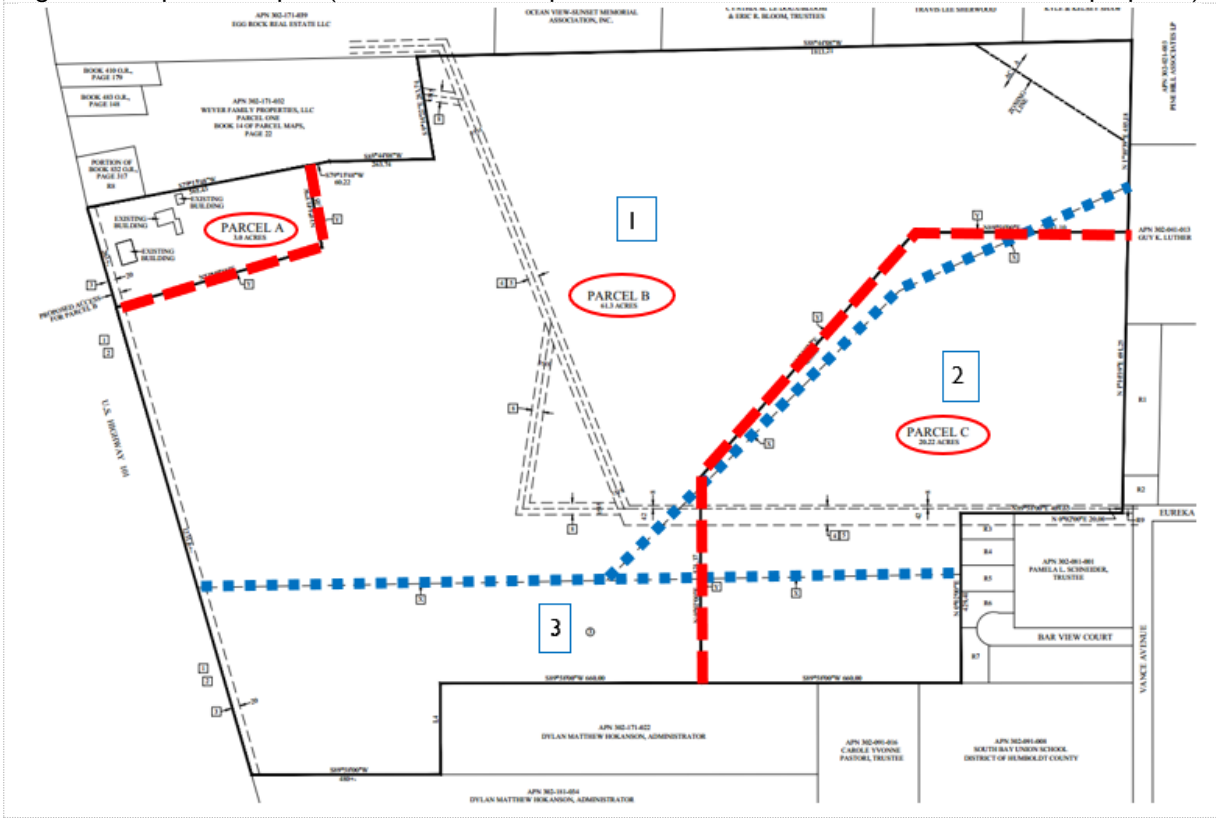
PROJECT SUMMARY

The applicant is proposing to adjust the lot lines between three parcels (identified as one Assessor's Parcel Number), resulting in three parcels (see Table 1 below, and Figures 2 and 3) all under the same ownership. The property is in the Coastal Zone and the proposed Lot Line Adjustment (Project No. LLA-23-0001) is considered development as defined by the Coastal Act; therefore, approval of a Coastal Development Permit (CDP) is required prior to processing with the LLA. The City's final action on the CDP is appealable to the California Coastal Commission.

able 1. Existing and Proposed Parcels

Parcel	Acres	
	Before LLA	After LLA
1/A	54.7 (1)	3 (A)
2/B	14.0 (2)	61.3 (B)
3/C	15.83 (3)	20.23 (C)

Figure 2: Proposed site plan (blue broken lines represent current lot lines, and red broken lines are proposed)

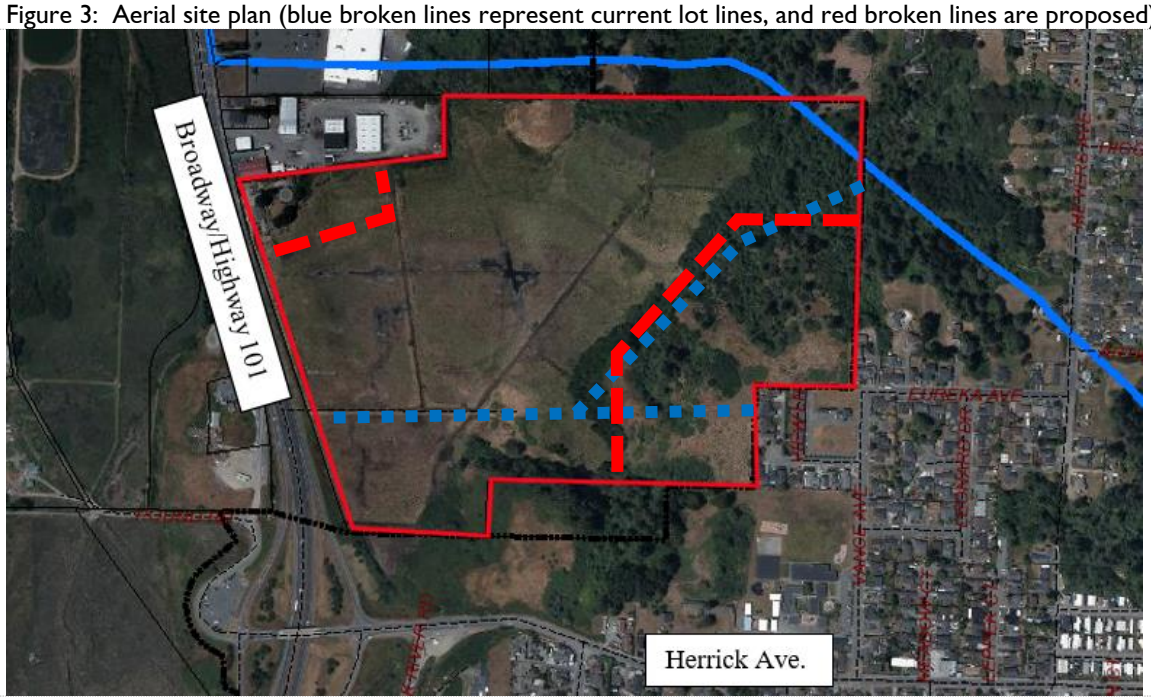


Background

The City performed a legal parcel review, which confirmed there are three legal parcels under one Assessor Parcel Number (APN). Per the applicant, Parcel 1 is developed with existing buildings used as a day care and farm for individuals needing assistance with daily tasks (i.e. the Carole Sund Center farm and garden day care for adults with disabilities, operated by Butler Valley, Inc, a non-profit agency) and the remaining potion of Parcel 1 is separately leased and used for a commercial grazing operation; Parcels 2 and 3 are undeveloped and the lowland portions of each parcel are also included in the leased commercial grazing operation, and the upland portions of Parcels 2 and 3 are open space (Figures 3 and 4). The purpose of the LLA is to convey proposed resultant Parcel A to Butler Valley, Inc., retain resultant Parcel B and continue leasing it for grazing, and potentially sell resultant Parcel C in the future. No development is proposed

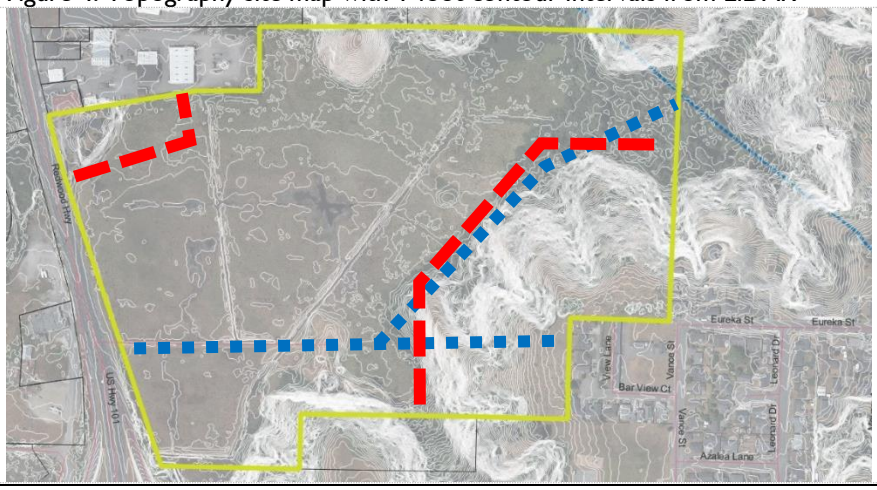
on any of the resultant parcels at this time. A review of City records shows the Butler Valley, Inc. farming operations were permitted in 2012 under CDP-12-0008 and have been in operation since. Existing development on Parcel 1 (and used by Butler Valley, Inc.) include a1,860-square-foot[sf] barn/agriculture building, 1,675-sf craftsman-style farmhouse, 760-sf accessory structure, 280-sf greenhouse (attached to the barn), raised planter beds, 96-sf animal pen, 40-sf chicken coop, and orchard.

Figure 3: Aerial site plan (blue broken lines represent current lot lines, and red broken lines are proposed)



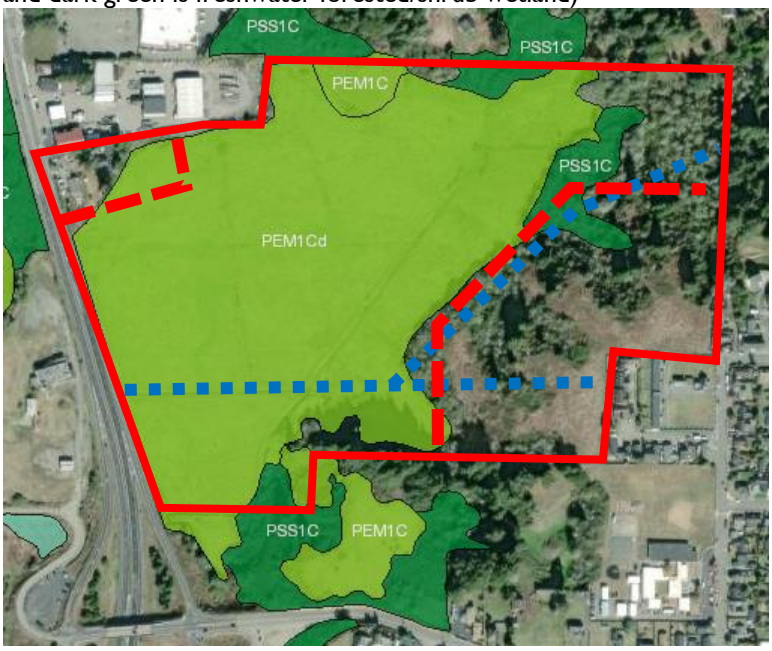
The subject property is approximately (~) 85 acres and has three distinct areas: (1) the small raised terrace (at ~10 to 25 feet in elevation) at the northwestern corner of the property used by Butler Valley, Inc. where farm-related structures are concentrated; (2) the large lowland area of grazed wetlands (at ~5 to 10 feet in elevation); and (3) the large upper terrace area along the eastern side of the property (sloping up from the grazed wetlands to ~119 feet in elevation comprised of shrub and grassland). The LLA would move existing lot lines to roughly separate these three areas into distinct parcels (Figure 4).

Figure 4: Topography site map with 1-foot contour intervals from LiDAR



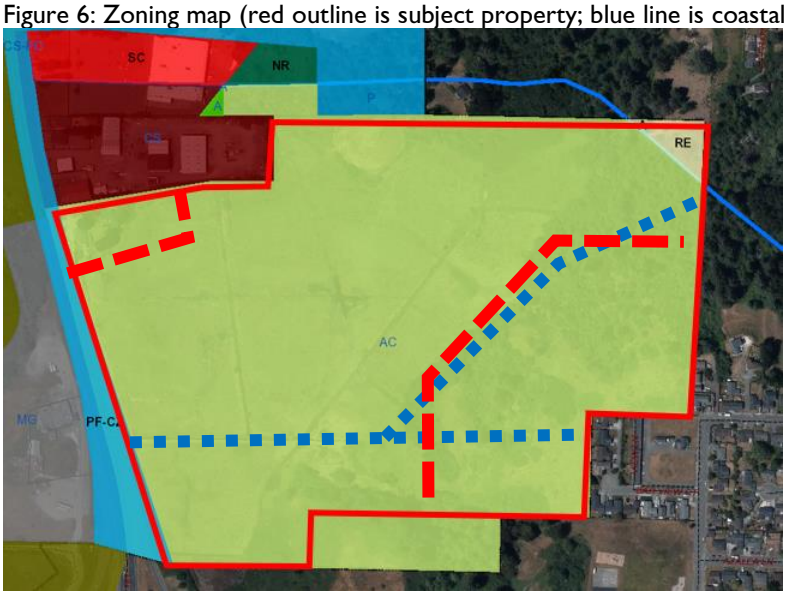
In total, ~54 acres of the property are lowland (mapped as wetland in the U.S. Fish and Wildlife Service's National Wetlands Inventory [Figure 5]) and ~31 acres are upland (~1.4 acres located in the northwestern portion of the property are associated with the existing development, and ~29.5 acres are located on the eastern portion of the property). Resultant Parcel A would contain all existing development and contain upland and lowland, resultant Parcel B would contain mostly lowland and continue to be used as grazed wetland, and resultant Parcel C would be mostly upland. In 2012, a wetland delineation (Attachment 3) was completed for the eastern upland-portion of the property (proposed resultant Parcel C) when the property owner previously contemplated development there, and it showed that the upland terrace could be accessed and developed without filling wetlands. However, no wetland delineation has been submitted as part of this application, and given the National Wetlands Inventory mapping shows most of resultant Parcel B is wetland, it can't be assumed that resultant Parcel B would have an upland footprint that could be accessed and developed without filling wetlands.

Figure 5: U.S. Fish and Wildlife Service's National Wetlands Inventory (light green is freshwater emergent wetland, and dark green is freshwater forested/shrub wetland)



Most of the property is located within the Coastal Zone with an Agriculture (A) land use designation, and a small area at the northeastern corner of the property is located outside of the Coastal Zone (in the Inland Zone) and is designated inland Agriculture and Estate Residential (ER). (Figure 6).

Figure 6: Zoning map (red outline is subject property; blue line is coastal zone boundary)



Applicable Regulations

Within the Coastal Zone, a LLA is considered "development" per Eureka Municipal Code (EMC) §10-5.2906.2(u); therefore, a Coastal Development Permit (CDP) is required pursuant to EMC §10-5.29302. The City of Eureka has permit jurisdiction for issuing the CDP, and the City's decision to approve the CDP is appealable to the California Coastal Commission. The LLA also requires separate approval by the Development Services Director under the City's subdivision ordinance (EMC Chapter 154) which implements the Subdivision Map Act. Following the action on the CDP, the Director will take action on the LLA.

COASTAL DEVELOPMENT PERMIT ANALYSIS

Pursuant to EMC §10-5.29310.1, to approve the CDP, the Development Services Director must find the proposed development conforms to the policies of the Certified Local Coastal Program. The Local Coastal Program is divided into two components: the Land Use Plan (LUP) and Implementation Plan (IP). The first component, the LUP, is the General Plan specific to land in the Coastal Zone. It outlines the permitted uses and policies needed to achieve the goals of the Coastal Act and includes the general plan map.

LAND USE PLAN (LUP) ALALYSIS

1. A – Agriculture land use designation

The property is designated A – Agriculture. The purpose of the A land use designation is "to protect agricultural lands and give special protection to lands which are also farmed or grazed wetlands, for long-term productive agricultural and wildlife habitat uses." Farm-related structures such as barns, sheds, and farmer-occupied housing are principally permitted under the A designation, while resource-dependent activities (e.g., wetland restoration) and incidental public purposes (e.g., burying sewer pipes), are conditionally permitted. No development is proposed on any of the resultant parcels. The primary purpose of the LLA is to convey proposed resultant Parcel A to the current tenants operating the Carole Sund Farm which provides an agricultural-

based environment for their adult day program participants. Although resultant Parcel A will be smaller than any of the existing three parcels (see Table 1 above), it will be adequately sized to fit the Carole Sund Farm operation. The other two parcels will become larger and no additional parcels will be created. The LLA will create a more logical legal separation between the Carole Sund Farm operation and the separately leased grazing land. The existing agricultural (e.g. grazing) use of resultant Parcel B, and the existing open space (e.g. wildlife habitat) use of resultant Parcel C, will continue. Therefore, the proposed LLA and each resultant parcel is consistent with the purpose and allowable uses of the A land use designation.

2. LUP Goals and Policies

Conformance of the proposed LLA with applicable LUP goals and policies is discussed below.

Goal 1.A. To establish and maintain a land use pattern and mix of development in the Eureka area that protects residential neighborhoods, promotes economic choices and expansion, facilitates logical and cost-effective service extensions, and protects valuable natural and ecological resources.

> *Policy 1.A.4 To promote the public safety, health, and welfare, and to protect private and public property, to assure the long-term productivity and economic vitality of coastal resources, and to conserve and restore the natural environment, the City shall protect the ecological balance of the Coastal Zone and prevent its deterioration and destruction.*

The proposed LLA does not change the existing land use pattern and mix of development in Eureka as it only changes the configuration of three parcels and does not propose any other new development. The reconfiguration of lot lines does result in the separation of the elevated, northwestern corner of the property (adjoining Broadway) where agricultural buildings are concentrated from the grazed wetlands below, resulting in a 61.3-acre parcel (resultant Parcel B) which may not have an accessible developable footprint outside of wetlands. To ensure the LLA is not creating a need and right to fill wetlands as a result of creating a parcel that does not have land that can be accessed and developed without filling wetlands, this CDP is conditioned to record a restrictive land use covenant limiting development on the resultant Parcel in perpetuity. Development allowed in grazed or farmed wetlands pursuant to LUP Policy 6.A.15 and EMC §10-5.2942.13 would continue to be allowed (including agricultural operations, agricultural accessory structures, resource-dependent activities, and incidental public service purposes), except: (1) farm-related residential development (e.g., housing for the farm owner and employees) would be prohibited; and (2) agricultural accessory structures would only be allowed if an upland location is identified to accommodate the structure and access thereto, or if the structure, because of its function, could not be concentrated in an upland location, such as cattle fencing, bridges, and agricultural equipment. As a result, the LLA CDP protects resultant Parcel B's long-term agricultural productivity as well as its valuable natural and ecological resources.

Resultant Parcel A will be conveyed to Butler Valley, Inc., who will continue to operate their adult day center with farming operations. Although the underlying parcel is being reduced from 54.7 acres to 3 acres, Butler Valley's operations and associated development (animal pens, barn, barnyard, garden beds, chicken coop, orchard, greenhouse, farmhouse and accessory building), will continue to fit on the parcel. As a result, the LLA CDP protects resultant Parcel A's long-term agricultural productivity.

The LLA will separate off most of the upper terrace along the eastern side of the property as resultant Parcel C. Resultant Parcel C's legal separation from the grazed wetlands below makes it more likely to be separately sold and operated. However, a subsequent CDP for any new agriculture development or use will be required. Future property owners may desire residential development rather than agricultural development, given the upland terrace land is adjacent to existing residential development. However, if residential development is proposed in the future, in addition to a CDP for the development, an LCP Amendment will be required to change land use and zoning, and to move the City's Urban Limit Line to allow utility service extensions to serve the parcel. Therefore, given any new agricultural development or any proposal for residential development would require additional discretionary review and authorization, the LLA CDP protects valuable natural and ecological resources on resultant Parcel C.

Furthermore, referrals were sent to agencies and City departments with interest or jurisdiction over the property. The California Coastal Commission reiterated City subdivision standards and wetland/ESHA protection policies which prohibit creating reconfigured parcels that don't have sufficient uplands where development could be sited; a restrictive land use covenant is conditioned for resultant Parcel B to not allow wetland fill for agricultural accessory structures that, pre-LLA, would be required to be concentrated with existing structures in the northwestern corner of the parcel in order to minimize adverse environmental effects on the farmed wetlands, and therefore addresses this comment. Additionally, the California Department of Fish and Wildlife (CDFW) acknowledged there is existing extensive wetlands dominating the central portion of the project site (i.e. proposed resultant Parcel B) which represent valuable habitat with restoration potential for coho and other sensitive fish and wildlife species dependent on wetland and estuarine habitats. CDFW also recommended a deed restriction limiting development on resultant Parcel B to only allow for existing agricultural uses and activities consistent with wetland resource values (a restrictive land use covenant is included as a condition of approval).

Humboldt County Department of Public Works – Land Use Division provided comments regarding access requirements for proposed resultant Parcel C from Eureka Avenue, a County maintained roadway, which are pertinent to any future development proposals and have been provided to the applicant. And, Caltrans (and the City's Surveyor) recommended an access easement be granted over resultant Parcel A for the benefit of resultant Parcel B since the sole access to both parcels is from a shared driveway from Broadway/Highway 101, which has been included as a condition of approval. Caltrans also requested the owner work with them regarding an encroachment permit for the existing access driveway from Broadway should any modifications be desired in the future; the applicant has been made aware of this request.

No other comments were received indicating the proposed LLA CDP will be detrimental to the public health, safety, or welfare, or injurious to private and public property, and the LLA CDP as conditioned will preserve the long-term productivity and economic vitality of coastal resources and the natural environment. Therefore, for these reasons, the proposed LLA CDP as conditioned is consistent with Goal 1.A and associated Policy 1.A.4, and will protect the ecological balance of the Coastal Zone and prevent its deterioration and destruction.

Goal 4.A To ensure the effective and efficient provision of public facilities and services for existing and new development.

All utilities (water, sewer, power, etc.) are existing and serve the existing development on resultant Parcel A. Resultant Parcel B will be preserved for agriculture and open space uses through a restrictive land use covenant (included as a condition of approval), and any new agriculture development on resultant Parcel B or Parcel C will be subject to CDP requirements. Additionally, any future development of resultant Parcel C with residential uses will require extensive permitting as outlined above under *Goal 1.A/Policy 1.A.4*. Therefore, the proposed LLA CDP conforms to Goal 4.A and it's associated policies.

Goal 6.A To protect and enhance the natural qualities of the Eureka area's aquatic resources and to preserve the area's valuable marine, wetland, and riparian habitat.

> *Policy 6.A.3 The City shall maintain and, where feasible, restore biological productivity and the quality of coastal waters, streams, wetlands, and estuaries appropriate to maintain optimum populations of aquatic organisms and for the protection of human health through, among other means, minimizing adverse effects of wastewater and stormwater discharges and entrainment, controlling the quantity and quality of runoff, preventing depletion of groundwater supplies and substantial interference with surface water flow, encouraging wastewater reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.*
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> *Policy 6.A.6 The City declares the following to be environmentally sensitive habitat areas within the Coastal Zone:*
>
> a. *Rivers, creeks, sloughs, gulches and associated riparian habitats, including but not limited to Eureka Slough, Fay Slough, Cut-Off Slough, Freshwater Slough, Cooper Slough, Second Slough, Third Slough, Martin Slough, Ryan Slough, Swain Slough, and Elk River.*
> b. *Wetlands and estuaries, including that portion of Humboldt Bay within the City's jurisdiction, riparian areas, and vegetated dunes.*
> c. *Indian Island, Daby Island, and the Woodley Island wildlife area.*
> d. *Other unique habitat areas, such as waterbird rookeries, and habitat for all rare or endangered species on state or federal lists.*
> e. *Grazed or farmed wetlands (i.e., diked former tidelands).*
>
> *Policy 6.A.7 Within the Coastal Zone, the City shall ensure that environmentally sensitive habitat areas are protected against any significant disruption of habitat values, and that only uses dependent on such resources shall be allowed within such areas. The City shall require that development in areas adjacent to environmentally sensitive habitat areas be sited and designed to prevent impacts which would significantly degrade such areas, and be compatible with the continuance of such habitat areas.*
>
> *Policy 6.A.8 Within the Coastal Zone, prior to approval of a development, the City shall require that all development on lots or -s designated NR (Natural Resources) on the Land Use Diagram or within 250 feet of such designation, or development potentially affecting an environmentally sensitive habitat area, shall be found to be in conformity with the applicable habitat protection policies of the General Plan. All development plans, drainage*

plans, and grading plans submitted as part of an application shall show the precise location of the habitat(s) potentially affected by the proposed project and the manner in which they will be protected, enhanced or restored.

6.A.9 The City shall permit the diking, filling, or dredging of open coastal waters, wetlands, or estuaries only under the following conditions:

- *a. The diking, filling or dredging is for a permitted use in that resource area;*
- *b. There is no feasible, less environmentally damaging alternative;*
- *c. Feasible mitigation measures have been provided to minimize adverse environmental effects;*
- *d. The functional capacity of the resource area is maintained or enhanced.*

6.A.14 Consistent with all other applicable policies of this General Plan, the City shall limit development or uses within wetlands that are neither farmed nor grazed, or within estuaries, to the following:

- *a. Port facilities.*
- *b. Energy facilities.*
- *c. Coastal-dependent industrial facilities, including commercial fishing facilities.*
- *d. Maintenance of existing or restoration of previously dredged depths in navigation channels, turning basins, vessel berthing and mooring areas, and boat launching ramps.*
- *e. Incidental public service purposes which temporarily impact the resources of the area, such as burying cables or pipes, inspection of piers, and maintenance of existing intake and outfall lines.*
- *f. Restoration projects.*
- *g. Nature study, aquaculture, or similar resource-dependent activities.*
- *h. New or expanded boating facilities in estuaries, consistent with the demand for such facilities.*
- *i. Placement of structural piling for public recreational piers that provide public access and recreational opportunities.*

6.A.15 The City shall limit uses and development in grazed or farmed wetlands to the following:

- *a. Agricultural operations limited to accessory structures, apiaries, field and truck crops, livestock raising, greenhouses (provided they are not located on slab foundations and crops are grown in the existing soil on site), and orchards;*
- *b. Farm-related structures, including barns, sheds, and farmer-occupied housing, necessary for the performance of agricultural operations. Such structures may be located on an existing grazed or farmed wetland parcel only if no alternative upland location is available for such purpose and the structured are sited and designed to minimize adverse environmental effects on the farmed wetland. No more than one permanent residential structure per parcel shall be allowed.*
- *c. Restoration projects, including the PALCO on-site restoration and enhancement program.*
- *d. Nature study, aquaculture, and similar resource-dependent activities; and,*
- *e. Incidental public service purposes which may temporarily impact the resources of the area, such as burying cables or pipes.*

As outlined in the Background section above, a majority of the property is comprised of lowland wetland which are being utilized for grazing. The City's LCP declares wetlands, including grazed or farmed wetlands, Environmentally Sensitive Habitat Areas (ESHA), and protects ESHA against any significant disruption of habitat values (Policies 6.A.6 and 6.A.7). In addition, the City only permits filling, diking, or dredging of grazed wetlands if: (1) there is no feasible, less environmentally damaging alternative; (2) feasible mitigation measures have been provided to minimize adverse environmental effects; (3) the functional capacity of the resource area is maintained or enhanced; and (4) the filling, diking, or dredging is for a permitted use (Policy 6.A.9). Policy 6.A.15 lists uses allowed within grazed or farmed wetlands, which are limited to agricultural operations, farm-related structures, restoration projects, resource-dependent activities, and incidental public service purposes. Policy 6.A.15 further limits farm-related structures in grazed wetlands, only allowing such structures if no alternative upland location is available for such purpose and the structures are sited and designed to minimize adverse environmental effects on the farmed wetland.

Existing Parcel 1 includes both the majority of grazed wetlands, as well as the cluster of existing farm-related structures on a raised terrace. Under Policy 6.A.15, newly proposed farm-related structures on existing Parcel 1 would likely be required to be concentrated with the existing structures on the raised terrace in order to minimize adverse environmental effects on the farmed wetland consistent with Policy 6.A.15. However, after the LLA, the raised terrace will be on resultant Parcel A and the grazed wetlands will be located on resultant Parcel B. If resultant Parcel A is then sold separately as intended, an upland location may no longer be available for new farm-related structures necessary for agricultural operations on resultant Parcel B, and additional wetland fill could be justified under the wetland fill minimization language of Policy 6.A.15. Therefore, the deed restriction described above under *Policy 1.A.4* is necessary to ensure the LLA does not facilitate additional wetland fill on resultant Parcel B contrary to the ESHA and wetland protection policies of the LCP, which require maintenance of the biological productivity and the quality of coastal wetlands, and protection of wetlands against any significant disruption of habitat values.

Resultant Parcel A includes a raised terrace already developed with a number of agricultural structures, and resultant Parcel C includes the upland terrace that could potentially be developed and accessed from adjacent County roads without filling wetlands. As a result, deed restrictions are not necessary to ensure wetland protection on these two parcels.

Furthermore, any new development on any of the resultant parcels in the future would require a subsequent CDP and environmental review. Any proposed development would be required to be sited and designed to be prevent impacts which would significantly degrade the existing wetland/ESHA areas, and all development plans, drainage plans, and grading plans would need to show the precise location of the ESHA potentially affected by the proposed development and describe and show how the ESHA would be protected, enhanced or restored.

Therefore, for these reasons, the CDP LLA as conditioned is consistent with Goal 6.A and associated policies.

Goal 6.B: Agricultural Preservation - To protect agricultural lands for their resource, aesthetic, and economic values.

Policy 6.B.2 The City shall require the retention in agricultural use of agricultural lands within the Coastal Zone with soils other than Classes I or II in agricultural use, except under the following conditions:

- *a. Continued or renewed agricultural use is demonstrated to be infeasible,*
- *b. Conversion to urban uses would locate development within, contiguous with, or in close proximity to, existing developed areas, or*
- *c. Farmed wetlands are proposed and funded through a wetland management and restoration program for restoration of resource-dependent activities.*

Policy 6.B.3 The City shall limit uses in grazed or farmed wetlands to the following:

- *a. Agricultural operations (except for greenhouses on slab foundations).*
- *b. Farm-related structures (including barns, sheds, and farmer-occupied housing) necessary for the continuance of the agricultural operation. Such structures may be located on an existing grazed or farmed wetland parcel only if no alternative upland location is available for such purpose and the structures are sited and designed to minimize the adverse environmental effects on the farmed wetland. No more than one primary residential structure per parcel shall be allowed.*
- *c. Restoration and enhancement projects.*
- *d. Nature study, aquaculture, and similar resource-dependent activities.*
- *e. Incidental public service purposes which may temporarily impact the resources of the area, such as burying cable and pipes.*

Policy 6.B.5 Consistent with the Coastal Act (California Resources Code Section 3025(a)), the City shall prohibit land division of existing agriculturally-designated land within the Coastal Zone, other than for leases for agricultural uses.

The proposed LLA will reconfigure three existing parcels and will not result in any additional parcels beyond what exists currently; therefore, the LLA can be found consistent with Policy 6.B.5. Currently, the property is used for agricultural and open space purposes, with Butler Valley, Inc.'s farming operation being associated with an adult day center program. The proposed LLA does not contemplate any new development, which would require subsequent permitting and environmental review. The existing adult day center and farming operation will continue on resultant Parcel A, and resultant Parcel B will continue to be used as grazed wetland/farmland, with a more logical parcel boundary between the two. Resultant Parcel C will continue to be used for open space, but any future development of resultant Parcel C with residential uses will require extensive environmental review and permitting as outlined above under *Goal 1.A/Policy 1.A.4*, and would be consistent with Policy 6.B.2.b because the residential development would be sited adjacent to an existing developed area with residential uses located in the County's jurisdiction near Eureka and Vance Avenues. Additionally, Goal 6.A and it's associated policies above address Policy 6.B.3 regarding uses in grazed wetlands. Therefore, the LLA CDP as conditioned protects agricultural lands for their resource, aesthetic, and economic values, consistent with Goal 6.B and associated policies.

Goal 7.A To minimize loss of life, injury, and property damage due to seismic hazards; and
Goal 7.B To minimize loss of life, injury, and property damage due to geological hazards.
Goal 7.D To minimize the risk of loss of life, injury, damage to property and economic and social dislocations resulting from flood hazards.

The entire property is subject to liquefaction (which may impact ground surface strength in response to strong ground shaking from earthquakes) but is relatively flat and stable except for the eastern portion (proposed resultant Parcel C) which slopes upward (with moderate instability) to an upland area with low instability (Figure 7). A majority of the entire property is located in the 100-year high flood risk FEMA mapped flood zone (Figure 8); however, the existing development of resultant Parcel A, and almost all of resultant Parcel C, are outside of the flood zone. All of resultant Parcel A, a majority of resultant Parcel B, and a sliver of resultant Parcel C are located in the mapped tsunami inundation area on the Tsunami Inundation Map for Emergency Planning (Figure 8).

Figure 7: Seismic safety and slope stability map (gray is relatively stable; yellow is low instability, and green is moderate stability) per Humboldt County WebGIS Hazards layer

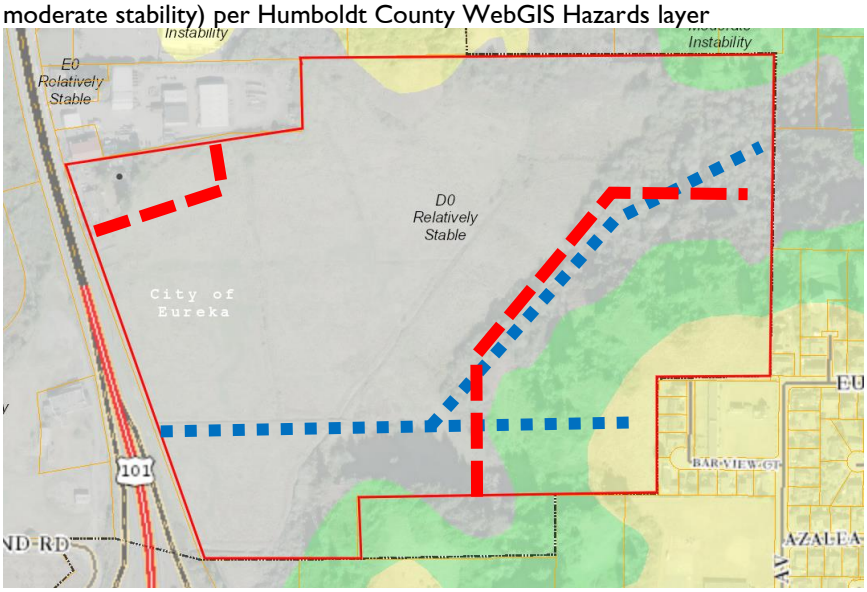
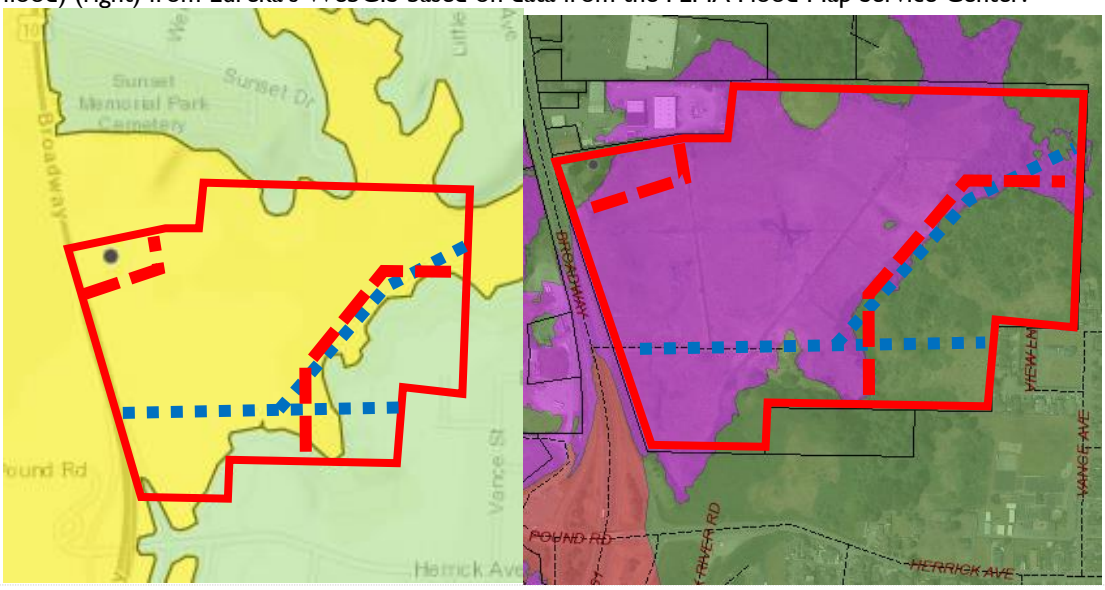


Figure 8: Tsunami hazard area map (yellow is tsunami risk area) (left) from the Department of Conservation's California Tsunami Hazard Area Maps; and 2017 FEMA data flood map (purple is high flood risk for 100-year flood) (right) from Eureka's WebGIS based on data from the FEMA Flood Map Service Center.



Although the entire property and all resultant parcels are within an area at risk of liquefaction and storm and tsunami flooding, the risk after the LLA is no greater than the risk at this time. The proposed LLA also does not contemplate any new development, and only changes the configuration of three parcels to allow conveyance of resultant Parcel A to Butler Valley, Inc. (per the applicant). However, any future proposed development will require subsequent permitting and environmental review as outlined above under *Goal 1.A/Policy 1.A.4.* Future development permitting would require appropriate geological and soils reports by a geologist or engineer with expertise in seismic and geological engineering, and require the development be sited and designed to minimize risk to the safety of occupants and neither be subject to, or contribute to, significant geological instability or flooding for the life span of the project. Also, a flood development permit from the City pursuant to EMC Title XV, Chapter 153: Flood Hazard Regulations would be required for new structures in the high risk flood zone (Figure 8) which may require elevating the structure above the Base Flood Elevation (BFE)(which is 10 feet for this area) or flood proofing and designing the structure so it's capable of resisting hydrostatic and hydrodynamic loads, which minimizes the risk of loss of life, injury, damage to property and economic and social dislocations resulting from flood hazards. Therefore, the project is consistent with Goals 7.A, 7.B, and 7D and associated policies.

Based on the discussion above, the finding can be made the proposed project conforms to the A land use designation, and applicable LUP goals and policies.

IMPLEMENTATION PLAN (IP) Analysis

As described in the Background section above, the property is located in the AC – Coastal Agriculture zoning district (Figure 6), with an extremely small portion being located in the Inland Zone in the RE – Residential Estates and A – Agriculture zoning districts (the inland zoning is not being considered as part of this CDP). The minimum parcel size in the AC zoning district is 3 acres, and each resultant parcel meets the minimum parcel size requirements (see Table 1 in the Project Summary section above for a list of parcel sizes), with resultant Parcel A being exactly 3

acres in size. An existing 760-sf accessory structure associated with the existing development (occupied by Butler Valley, Inc.) proposed for resultant Parcel A is non-conforming as it does not meet the 30-foot minimum setback standard to the existing north lot line (it appears to be setback less than 10 feet) and may continue as it was constructed prior to the property being zoned AC in 1984 when the City's LCP was initially certified. All other existing structures on resultant Parcel A meet the AC development standards for 30-foot minimum front, rear and side setbacks, and 35-foot-tall maximum height; there are no minimum lot width or depth standards, and no maximum Floor Area Ratio (FAR) standard, in the AC zoning district. Proposed resultant Parcels B and C are undeveloped and therefore conform to the AC zoning district development standards. There are also standards regarding the impact of odors, fumes, and other objectional impacts farming can create for adjoining properties, and no complaints to the City's knowledge have been logged against the existing Butler Valley, Inc. farm operations or the existing cattle grazing.

In addition to specifying the regulations pertaining to specific zoning districts, EMC §10-5.2940 et. seq. specifies development standards which apply to all development in the Coastal Zone, including standards for public access, environmental resources, natural hazards, visual resources, public works, and new development. These standards largely reiterate certified LUP policies discussed in the LUP policy analysis above, and the applicable findings are incorporated as if set forth in full herein.

There is one additional standard not covered under the LUP policy analysis above, which is §10-5.2946.9:

10-5.2946.9 Archaeological areas.

a) *When development is proposed within a known archaeological area, project design shall avoid or minimize impacts to the resource.*
b) *When development in archaeological sites cannot be avoided, adequate mitigation measures shall be required. Mitigation shall be designed in accord with guidelines of State Office of Historic Preservation and the State of California Native American Heritage Commission. When, in the course of grading, excavation, or any other development activity, evidence of archaeological artifacts is discovered, all work which could damage or destroy such resources shall cease and the City Planning Director shall be notified immediately of the discovery.*
c) *The City Planning Director shall notify the State Historic Preservation Officer and the Sonoma State University Cultural Resources Facility of the find. At the request of the State Historic Preservation Officer, development of the site may be halted until an archaeological survey can be made and appropriate and feasible mitigation measures are developed.*

No development is proposed as part of the LLA; therefore, no ground disturbance is anticipated. The proposed LLA CDP was referred to the Bear River Band, Blue Lake Rancheria and Wiyot Tribe Tribal Historic Preservation Officers (THPOs), and the Bear River Band THPO responded with no comments or requests, and the Wiyot Tribe THPO responded with no concerns for the proposed LLA.

Based on the discussion above, the finding can be made the proposed project as conditioned conforms with the certified IP.

ENVIRONMENTAL ASSESSMENT

The City of Eureka, as Lead Agency, has determined the proposed project is categorically exempt from the provisions of the California Environmental Quality Act, in accordance with §15305, Minor Alterations in Land Use Limitation, Class 5 of the CEQA Guidelines. Class 5 exempts minor alterations in land use limitations in areas with an average slope of less than 20%, which do not result in any changes in land use or density, including minor lot line adjustments not resulting in the creation of any new parcel. The overall property has an average slope of less than 20% (at approximately 11%), and the proposed lot line adjustment will not result in the creation of any new parcel, just the reconfiguration of three existing parcels resulting in three parcels. Further, the City of Eureka as the lead agency has determined none of the exceptions to the Class 5 exemption are applicable to the project as no subsequent development after the LLA is proposed at this time.

PUBLIC HEARING NOTICE

Public notification consisted of notification by mail of property owners within a 300-foot radius of the site on or before November 3, 2023, meeting the required 10-calendar-day noticing period. In addition, the notice was posted on the City's website and bulletin boards the same day the notice was mailed, and a public hearing sign was posted on the site on or before November 3, 2023.

CONCLUSION

Based on the analysis above, the proposed project as conditioned is consistent with the certified and adopted Local Coastal Program. Conditions have been added to ensure avoidance of impacts to coastal resources, including, limiting future development in the environmentally sensitive habitat areas on resultant Parcel B, and ensuring resultant Parcel B maintains legal access over resultant Parcel A, which will protect agricultural lands for their resource, aesthetic, and economic values.

STAFF CONTACT

Caitlin Castellano, Senior Planner, 531 K Street, Eureka, CA 95501; planning@ci.eureka.ca.gov; (707) 441-4160

DOCUMENTS ATTACHED

DIRECTOR OF DEVELOPMENT SERVICES RESOLUTION NO. 2023-xx

A RESOLUTION OF THE DIRECTOR OF DEVELOPMENT SERVICES OF THE CITY OF EUREKA CONDITIONALLY APPROVING A COASTAL DEVELOPMENT PERMIT FOR A LOT LINE ADJUSTMENT TO ADJUST THE LOT LINES BETWEEN THREE PARCELS (IDENTIFIED AS ONE ASSESSOR PARCEL NUMBER), RESULTING IN THREE PARCELS AT 4775 BROADWAY (APN: 302-171-035)

WHEREAS, the applicant/owner, The Carrington Company, is proposing a Lot Line Adjustment (LLA) to adjust the lot lines between three parcels (identified as one Assessor's Parcel Number), resulting in three parcels all under the same ownership at 4775 Broadway (APN 302-171-035); and

WHEREAS, subject property is approximately (~) 85 acres and has three distinct areas: (1) a small raised terrace at the northwestern corner of the property used by Butler Valley, Inc. where farm-related structures are concentrated; (2) a large lowland area of grazed wetlands; and (3) a large upper open space terrace area along the eastern side of the property, and the LLA would move existing lot lines to roughly separate these three areas into distinct parcels; ; and

WHEREAS, the purpose of the LLA is to convey proposed resultant Parcel A (3 acres) to Butler Valley, Inc., retain resultant Parcel B (61.3 acres) and continue grazing operations, and potentially sell resultant Parcel C (20.23 acres) in the future or maintain it as open space; no development is proposed on any of the resultant parcels; and

WHEREAS, the project site is located in the Coastal Zone portion of the City, and the proposed LLA constitutes development, and therefore requires a Coastal Development Permit (CDP) pursuant to Eureka Municipal Code (EMC) §10-5.29302; and

WHEREAS, the City of Eureka has permit jurisdiction for issuing the CDP, and the CDP for the LLA is appealable to the State Coastal Commission; and

WHEREAS, the project site is zoned AC – Coastal Agriculture with an A – Agriculture land use designation, and an extremely small area at the northeast corner of the project site is located outside of the Coastal Zone; no changes to existing land uses are proposed as part of the LLA; and

WHEREAS, EMC Chapter 154: Subdivision Regulations gives authority for action on the LLA to the Development Services Director; no other discretionary permit is required for the proposed LLA, therefore the Director has authority to take action on the CDP at a public hearing pursuant to EMC §10-5.29304.6; and

WHEREAS, the CDP approval is a discretionary action subject to environmental review in accordance with the California Environmental Quality Act (CEQA); and

WHEREAS, the Director of Development Services of the City of Eureka did hold a duly noticed public hearing at Eureka City Hall in Conference Room 207 and via Zoom on Monday, November

13, 2023 at 10:00 a.m. to consider the subject CDP; and

WHEREAS, the Director of Development Services the City of Eureka has reviewed the subject application for the CDP in accordance with EMC Title 10, Chapter 5, and the certified Local Coastal Program, and after due consideration of all testimony, evidence, and reports offered at the public hearing, does hereby find and determine the following facts:

A. The LLA as conditioned conforms with the policies of the certified Local Coastal Program.

B. The proposed LLA is categorically exempt from the provisions of the California Environmental Quality Act (CEQA), in accordance with §15305, Minor Alterations in Land Use Limitation, Class 5 of the CEQA Guidelines. Class 5 consists of minor alterations in land use limitations in areas with an average slope of less than 20%, which do not result in any changes in land use or density, and do not create any new parcels. The area involved in the LLA has an average slope of less than 20% (at approximately 11%), the LLA will not change the current land use or density, and will not create any new parcels as it only reconfigures three parcels resulting in three parcels. Therefore, the proposed project is exempt from CEQA.

WHEREAS, in the opinion of the Director of Development Services of the City of Eureka, the proposed application for a Coastal Development Permit should be approved subject to the following conditions:

1. **Effective Date of CDP.** This Coastal Development Permit will not become effective until the subsequent Lot Line Adjustment (Project No. LLA-23-0001) is approved.

2. **Future Development Restriction for Resultant Parcel B.**
   A. No development, as defined in §30106 of the Coastal Act, shall occur on resultant Parcel B, except for the following development, if all necessary permits and authorizations are obtained prior to development, including a Coastal Development Permit:
      i. Agricultural operations limited to apiaries, field and truck crops, livestock raising and orchards;
      ii. Wetland restoration and enhancement projects;
      iii. Nature study and similar resource-dependent activities;
      iv. Incidental public service purposes which may temporarily impact the resources of the area, such as burying cable and pipes; and
      v. Agricultural accessory structures necessary for the performance of agricultural operations, except for farmer or farm employee-occupied housing or any other residential development. Agricultural accessory structures, and any necessary associated vehicular access thereto, must be located outside of wetlands, except for those structures, that because of their function, could not be concentrated in an upland location if one were available on Resultant Parcel B, such as bridges, cattle fencing, and irrigation equipment.
   B. Prior to recordation of the Notice of Lot Line Adjustment and Certificate of Subdivision Compliance document, the applicant shall submit to the City Attorney for

review and approval, documentation demonstrating the applicant has executed and recorded a restrictive land use covenant (i.e., deed restriction) against resultant Parcel B for the items outlined in condition 2.A above, in a form and content acceptable to the City Attorney.

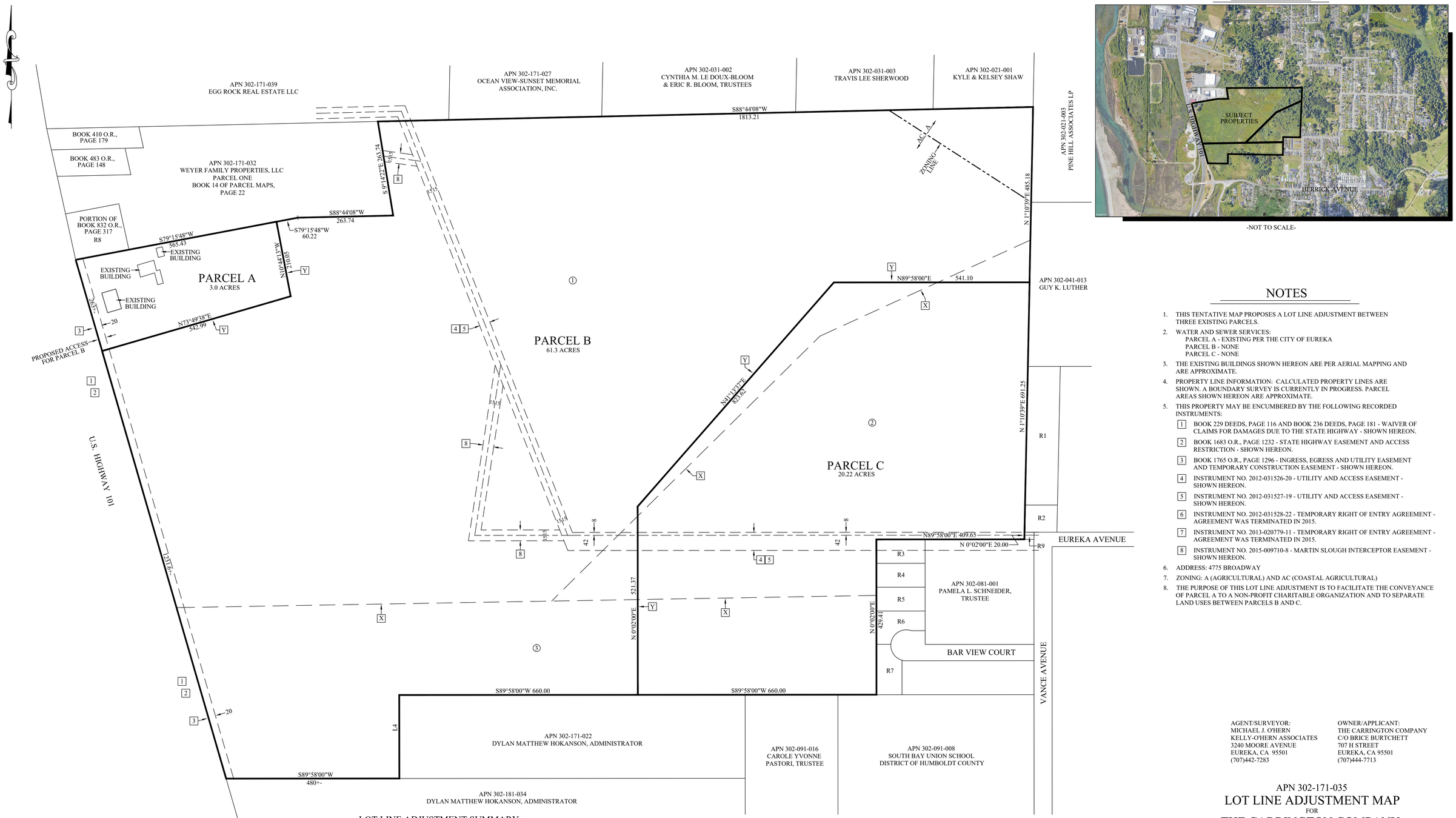
3. **Access Easement Over Resultant Parcel A for the Benefit of Resultant Parcel B.** The applicant shall dedicate a non-exclusive ingress/egress access easement over resultant Parcel A for the benefit of resultant Parcel B by recording an a Notice of Future Easement or Access Easement (if resultant Parcel A is conveyed to Butler Valley, Inc. concurrently with recording the LLA), prior to, or concurrently with, the recordation of the of the Notice of Lot Line Adjustment and Certificate of Subdivision Compliance document; and, the applicant shall update the LLA map prior to recordation to clearly indicate the access easement, to the satisfaction of Public Works – Engineering.

NOW THEREFORE, BE IT RESOLVED the Director of Development Services of the City of Eureka does hereby approve the application, subject to the conditions listed above.

PASSED, APPROVED AND ADOPTED by the Director of Development Services of the City of Eureka in the County of Humboldt, State of California, on the 13 day of November, 2023.

_____

Cristin Kenyon, AICP, Development Services Director



VICINITY MAP

-NOT TO SCALE-

NOTES

1. THIS TENTATIVE MAP PROPOSES A LOT LINE ADJUSTMENT BETWEEN THREE EXISTING PARCELS.
2. WATER AND SEWER SERVICES:
   PARCEL A - EXISTING PER THE CITY OF EUREKA
   PARCEL B - NONE
   PARCEL C - NONE
3. THE EXISTING BUILDINGS SHOWN HEREON ARE PER AERIAL MAPPING AND ARE APPROXIMATE.
4. PROPERTY LINE INFORMATION: CALCULATED PROPERTY LINES ARE SHOWN. A BOUNDARY SURVEY IS CURRENTLY IN PROGRESS. PARCEL AREAS SHOWN HEREON ARE APPROXIMATE.
5. THIS PROPERTY MAY BE ENCUMBERED BY THE FOLLOWING RECORDED INSTRUMENTS:
   [1] BOOK 229 DEEDS, PAGE 116 AND BOOK 236 DEEDS, PAGE 181 - WAIVER OF CLAIMS FOR DAMAGES DUE TO THE STATE HIGHWAY - SHOWN HEREON.
   [2] BOOK 1683 O.R., PAGE 1232 - STATE HIGHWAY EASEMENT AND ACCESS RESTRICTION - SHOWN HEREON.
   [3] BOOK 1765 O.R., PAGE 1296 - INGRESS, EGRESS AND UTILITY EASEMENT AND TEMPORARY CONSTRUCTION EASEMENT - SHOWN HEREON.
   [4] INSTRUMENT NO. 2012-031526-20 - UTILITY AND ACCESS EASEMENT - SHOWN HEREON.
   [5] INSTRUMENT NO. 2012-031527-19 - UTILITY AND ACCESS EASEMENT - SHOWN HEREON.
   [6] INSTRUMENT NO. 2012-031528-22 - TEMPORARY RIGHT OF ENTRY AGREEMENT - AGREEMENT WAS TERMINATED IN 2015.
   [7] INSTRUMENT NO. 2013-020779-11 - TEMPORARY RIGHT OF ENTRY AGREEMENT - AGREEMENT WAS TERMINATED IN 2015.
   [8] INSTRUMENT NO. 2015-009710-8 - MARTIN SLOUGH INTERCEPTOR EASEMENT - SHOWN HEREON.
6. ADDRESS: 4775 BROADWAY
7. ZONING: A (AGRICULTURAL) AND AC (COASTAL AGRICULTURAL)
8. THE PURPOSE OF THIS LOT LINE ADJUSTMENT IS TO FACILITATE THE CONVEYANCE OF PARCEL A TO A NON-PROFIT CHARITABLE ORGANIZATION AND TO SEPARATE LAND USES BETWEEN PARCELS B AND C.

LOT LINE ADJUSTMENT SUMMARY

[X] LINE TO BE DELETED BY LOT LINE ADJUSTMENT
[Y] LINE TO BE ADDED BY LOT LINE ADJUSTMENT

PARCEL ORIGIN:
(1) BOOK 161 DEEDS, PAGE 199 - EXCEPTING BOOK 410 O.R., PAGE 179, BOOK 483 O.R., PAGE 148, BOOK 832 O.R., PAGE 317, PARCEL ONE OF BOOK 14 OF PARCEL MAPS, PAGE 22 AND PARCELS DEEDED TO THE STATE OF CALIFORNIA FOR HIGHWAY 101
(2) BOOK 227 DEEDS, PAGE 237 - EXCEPTING BOOK H DEEDS, PAGE 67
(3) BOOK H DEEDS, PAGE 67 - EXCEPTING PARCELS DEEDED TO THE STATE OF CALIFORNIA FOR HIGHWAY 101

PARCEL	AREA BEFORE LLA	AREA AFTER LLA
(1)	54.70 ACRES +-	
(2)	14.00 ACRES +-	
(3)	15.83 ACRES +-	
PARCEL A		3.0 ACRES +-
PARCEL B		61.3 ACRES +-
PARCEL C		20.22 ACRES +-

ASSESSOR'S PARCEL NUMBER TABLE

R1	APN 302-051-008	CAMAS ET AL
R2	APN 302-051-009	JOHN R. BUELL
R3	APN 302-081-012	HOWARD RYAN & HEATHER ANN HILL
R4	APN 302-081-011	KENNETH L. & JOYCE A. CANEPA, TRUSTEES
R5	APN 302-081-010	SILVESTRE ORITZ & IRMA GARCIA
R6	APN 302-081-009	MARY ANNE BALDWIN, TRUSTEE
R7	APN 302-081-008	BRIAN & TRICIA MCKENZIE
R8	APN 302-171-020	DANIEL E. & DEBORAH K. MEALHOUSE, TRUSTEES
R9	APN 302-051-003	FRANCIS L. & CAROLE A. CARRINGTON, TRUSTEES

LICENSED LAND SURVEYOR
MICHAEL J. O'HERN
No. 4829
STATE OF CALIFORNIA

PREPARED BY:
MICHAEL J. O'HERN LS 4829
DATED: APRIL 6, 2023

AGENT/SURVEYOR:
MICHAEL J. O'HERN
KELLY-O'HERN ASSOCIATES
3240 MOORE AVENUE
EUREKA, CA 95501
(707)442-7283

OWNER/APPLICANT:
THE CARRINGTON COMPANY
C/O BRICE BURTCHETT
707 H STREET
EUREKA, CA 95501
(707)444-7713

APN 302-171-035

LOT LINE ADJUSTMENT MAP

FOR

THE CARRINGTON COMPANY

IN

SECTION 4 T4N, R1W, HUMBOLDT MERIDIAN
WITHIN THE LIMITS OF THE CITY OF EUREKA
MARCH 2023 SCALE 1" = 120'

HUMBOLDT COUNTY
STATE OF CALIFORNIA

KELLY-O'HERN ASSOCIATES
EUREKA, CALIFORNIA

SCALE 1" = 120'
0 60 120

Streamline Planning Consultants

• PLANNING • PERMITTING • ENVIRONMENTAL CONSULTING

Wetland Delineation

Carrington Company Subdivision

4775 Broadway, Eureka, CA 95501

July 26, 2012

View looking south across the top of the subdivision site on July 23, 2012.

Prepared by:
Streamline Planning Consultants

For:
The Carrington Company

STREAMLINE PLANNING CONSULTANTS
www.streamlineplanning.net 1062 G St. Suite I, Arcata, CA 95521 Ph (707) 822-5785 Fax (707) 822-5786

TABLE OF CONTENTS

1. INTRODUCTION

The Carrington Company Subdivision is a proposed four parcel subdivision located at the southern end of Eureka, California (Attachment 1). This report includes a detailed wetland delineation of the Carrington Company Subdivision to determine possible development boundaries and mitigation opportunities based on wetland and environmentally sensitive habitat area (ESHA) boundaries. The site-specific assessment for this report was performed by Streamline Planning Consultants on July 23 and 24, 2012. This delineation included thorough site evaluation using the Army Corps three parameters of hydrophytic vegetation, wetland hydrology and hydric soils. Table 1 lists which of these parameters were met at each assessment site.

2. BACKGROUND

The project has been on hold since the Army Corps of Engineers requested a wetland delineation. On May 9, 2012, Streamline Planning staff scoped the site to ascertain the presence of wetlands or ESHAs. This scoping included walking the site and flagging likely boundaries based on visual field observations of vegetation, landforms and hydrology. Two transects were run from south to north, over which flags were placed at likely wetland boundaries. During this scoping, four ESHAs containing three wetlands were found within or adjacent to the site. With a significant area of dry upland available for development, the landowner decided to continue with a wetland delineation.

3. BIOLOGICAL SETTING AND SCOPING

The Carrington site, located at 4775 Broadway in Eureka, CA, lies on Assessor Parcel Number 302-171-035, which comprises a shrub and grass landscape, as seen on the cover and aerial photograph (Attachment 2). The subdivision (upland) site is zoned Rural Residential, while the lower area of the property (bottomland) is zoned Coastal Agriclture (Humboldt County Web GIS Planning accessed via http://gis.co.humboldt.ca.us). The elevation at this site ranges from approximately 108 feet above sea level, down to 40 feet, at 40°45'34.66"N Latitude, 124°11'02.66"W Longitude. Annual rainfall at this site is approximately 40 inches (100cm). The vegetation type is primarily Palustrine Shrub Scrub, Riparian Scrub and Annual Grassland (Cowardin 1979). Jurisdiction for this site is within the City of Eureka and lies within the Coastal Zone.

This site lies on an old coastal terrace. The 1965 soil survey classified the upper portion of this property as residential, urban and industrial, while the new soil survey has not been performed at this site. An adjacent vegetated upland area is classified as the Larabee series under the old survey, so the soil at this site could be the Larabee series (McLaughlin and Harradine 1965). The lower portion of this property is classified as the Bayside Soil Series. While the soils were variable depending on topography and the degree of historical erosion, the common characteristics throughout the upland areas were sandy loam texture and deep, dark profiles. In wetland and adjacent areas, the surface horizon was dark, with heavy redoximorphic features found within 15 to 60 centimeters. A soil health assessment revealed that the overall health of the soil at this site is good (Attachment 3).

The dominant geomorphic characteristic of this site is the gullying that dissects the terrace slope faces. These gullies are filled with riparian plant species providing excellent habitat for a wide variety of bird species (Photo 1, Attachment 4). As rainwater infiltrates the terrace, it hits the lower, compacted layers where it flows laterally to the west. The subterranean water reaches the gullies where it comes close to, or even emerges from, the soil surface and flows downhill (Photo 2, Attachment 4). This water creates riparian/wetland habitat along the gullies (Photo 3, Attachment 4). In some areas of the site, the water table remains too deep to be classified as a Corps wetland, but deep-rooted riparian plants such as willow and ferns are able to grow on the site (Pits 9&10 and associated gully).

This site has historically been used for cattle grazing, extending into the wet season when hoof traffic had its maximum negative impact via erosion and soil compaction throughout the site, particularly in the streams (Photo 4, Attachment 4). Soil compaction leads to increased runoff volume and velocity, which degrades adjacent waterways. Furthermore, unrestricted access to the streams would allow animal feces and urine to enter streams directly. Bacterial, protozoan and viral pathogens can comprise biological pollution in these settings (Atwill et al. 2011). Additionally, concentrated animal traffic has led to areas favoring invasive species such as *Anthemis cotula* (Photo 5, Attachment 4).

4. METHODS

On July 23, 2012, Streamline Staff traversed the site within, and adjacent to, the boundary of the development seeking additional potential wetlands that might have been missed in the May assessment. This assessment was conducted by looking for the criteria of geomorphic depressions, surface water or saturation and hydrophytic vegetation. One additional wetland was found in the northeastern corner of the property. Five areas, distributed somewhat uniformly around the site, met this examination criteria (Attachment 2).

This delineation was performed on July 23 & 24, 2012, in accordance with the 1987 Corps of Engineers Wetlands Delineation Manual (Technical Report 87-1) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountain Valleys, and Coast Region. At each sample site, the vegetation was surveyed and analyzed using the dominance test, with the 2012 National Wetland Plant List (Lichvar & Kartesz 2009) used to determine wetland indicator status. At pits where the dominance test resulted in 50%, the prevalence index was used. Wetland hydrology and hydric soil indicators were then assessed. An 18 inch-deep hole was dug and soils were examined for matrix (base) color and redox (reduction/oxidation reaction) color using the Munsell Soil Color Charts (Munsell Color 2000). Redox characteristics, texture, horizon depth, saturation depth and water table depth were also examined. Field observations were recorded on the Regional Supplement to the Corps of Engineers Wetlands Delineation Manual: Western Mountain Valleys, and Coast Region data sheets (Attachment 5).

A total of 15 pits were dug and described throughout the site (Attachment 2). Pits 1, 2, 7 and 8 were dug in upland areas to characterize the upland soils and for comparison to the wetland soils. Additionally, pits 2, 7 and 8 were dug in areas where apparent wetland vegetation indicated the potential for wetland conditions to be present on the uplands (Photos #7 & 8). The remaining pits were in or adjacent to likely wetland sites. A number of other unrecorded pits were dug to quickly ascertain

the similarity with the upland versus the wetland pits to help determine the wetland boundaries. The difference between upland pits and wetland pits was easily delineated at this site (Photos 9 & 10, respectively).

5. LIMITATIONS

There are problems associated with all three wetland parameters, which can give a false positive indication of wetland presence. Conversely, sometimes one or two of the parameters are not met when a site is an obvious wetland. These facts often leave an experienced professional with using best judgment to determine if a wetland is present.

5.1 Vegetation

As seen on the Davison Ranch north of Orick, purchased by Redwood National and State Parks, the hydrophytic vegetation parameter is often misleading in coastal Humboldt County. In some cases, obligate species (those requiring wetland conditions) are found dominating upland areas (Popenoe 1996). Plants listed as facultative (found in wetlands 34-66% of the time) are often more typical of upland areas on the coast. Two examples of this occurrence include *Festuca (Lolium) perenne* (Italian ryegrass) and *Holcus lanatus* (velvet grass). Moderate temperatures and regular heavy fog and stratus layers combine with relatively high annual rainfall to create an environment favorable for wetland indicator species to grow where wetland hydrology and hydric soils do not exist. The lack of these parameters is due to the absence of the seven consecutive day inundation, during five out of ten years, required to meet the definition of a wetland.

5.2 Soils

Soils often exhibit hydric soil features when a wetland is absent. This phenomenon can result from a previously wet area being drained, after which hydric soil features remain, as well as from irrigation or livestock compaction (Popenoe 1996). Geologic uplift can cause this effect as well. Urban settings can replicate these scenarios with prior construction-induced compaction and roof runoff. These types of sites can revert back to non-wetland conditions after several years of bio-disturbance. This site was heavily grazed until 2011, as evidenced by severely compacted areas and the heavily hoof-marked landscape (Photo #6, Attachment 4). This compaction can complicate wetland determinations. Furthermore, low-chroma soils due to high organic matter loads from dense vegetative growth complicate the detection of soil redoximorphic features.

5.3 Hydrology

The problem with wetland hydrology is that the inspector must try to determine if the observed hydrology is normal. Both dry and wet extremes can give false perceptions of the normal hydrology at a site. The month of April was at approximately 143% of normal rainfall, while the March total was 227% and the June total was 267% of normal rainfall (NOAA 2012). This excessive rainfall creates the potential to exhibit false positive wetland hydrology indicators. Soil conditions such as compaction can also give

false positive results for wetland hydrology. At this site, however, the July delineation showed little difference from the May assessment, revealing consistent hydrology indicators.

6. RESULTS AND DISCUSSION

6.1 Wetland Areas

Four jurisdictional wetlands were found in the study area (Table 1 and Attachment 2). The four wetland areas are visually revealed by either surface water or saturation, along with hydrophytic vegetation and geomorphic position (photos 2 & 3). A total of six wetland pits were dug, with wetland Pits 6, 11 and 12 in the same wetland. Pit #s 3, 4, 6, 11, 12 and 15 fell into this category. Generally the presence of hydric soil indicators corresponded well with surface hydrology, hydrophytic vegetation and geomorphic position, all of which were found at the wetland pits (Photos 11-14, respectively).

6.2 Potential Wetland Areas Revealed to be Upland

The only exception to this correspondence between wetland parameters was the presence of hydrophytic vegetation at Pit #s 2, 8, 10, 13 and 14, where wetland hydrology and hydric soils were lacking (Photo #s 14 & 15). These pits represented areas that appeared to be potential wetlands when looking at the vegetation, but lacked the obvious hydrology. These areas included slumps and the areas below the terrace slope breaks where large patches of sedge or *Equisetum* were found. Examination of soil pits at these sites revealed a lack of wetland hydrology or hydric soils.

As discussed in Section 4.1, hydrophytic vegetation is the least reliable parameter in coastal Humboldt County, particularly when dealing with facultative species (Joe Seney, Soil Science and Geology Lead, Redwood National and State Parks, personal communication, 2/21/12). Many of these plants thrive on sandy loam uplands. When these facultative plants are found in areas with no wetland hydrology or hydric soils, they are not indicative of wetlands. This situation is further aggravated by cowpaction, which is a recently coined NRCS term for compaction caused by cattle continuously grazing the site during wet weather. This compaction decreases infiltration, allowing plants associated with wetlands to grow where they might have been out-competed under natural conditions. Furthermore, as rodents and plant growth decompact the soil upon removal of livestock, this condition may be reversed.

Additionally, the proximity to the wetland area near Pits 13 and 14, as well as the swale near Pit 10, allow groundwater to exist approximately 18 inches below the soil surface during the summer, below the 12 inches required to cause hydric soil indicators or wetland hydrology to develop (Photo #15). This water, however, is easily accessed by the deeper roots of many facultative plants. Pit 2 was found below a slope break where sedges were growing, while Pit 5 was adjacent to wetland Pit 4, but slightly higher in elevation. Site inspection revealed that these five pits are not functioning as wetlands or wetland habitat.

Pits 5 and 9 revealed visual wetland potential similar to Pits 2, 8, 10, 13 and 14 due to apparent hydrophytic vegetation (and geomorphic position at pit 9). Delineation revealed a lack of indicators for

all three wetland parameters. Pit 9 was found in a branch of the ravine where Pit 10 was located. Silverweed was growing in Pit 9, which gave the appearance of a wetland. Pit 8 was in a slump full of horsetail. Like Pits 2, 5 and 9, it did not have hydric soils or wetland hydrology. The slump itself was likely related to historic grazing, compaction and erosion.

Pits 9, 10, 13 and 14, while not classified as wetlands, lie within areas of geomorphic position and riparian habitat that make them valuable for both wildlife habitat and groundwater protection. Groundwater in these areas makes its way to the surface at the base of the hill, where it enters the wetlands below. This function and proximity make these pits important to protect.

Table 1. Summary of Parameters Met at Each Sample Point

Sample Point	Hydrophytic Vegetation	Hydric Soil	Wetland Hydrology	Jurisdictional Wetland
WD#1				
WD#2	√			
WD#3	√	√	√	√
WD#4	√	√	√	√
WD#5				
WD#6	√	√	√	√
WD#7				
WD#8	√			
WD#9				
WD#10	√			
WD#11	√	√	√	√
WD#12	√	√	√	√
WD#13	√			
WD#14	√			
WD#15	√	√	√	√

6.3 Upland Areas

Pits 1 and 7 were dug in obvious upland areas. These areas were covered with grass on the upper terrace and slightly below the shoulder, respectively. Profile examination revealed a complete absence of hydric soil or wetland hydrology indicators. While the wetland pits had saturated soils, these upland pits were completely dry. *Equisetum* at Pit 7 gave the appearance of wetland potential, but did not constitute hydrophytic vegetation.

6.4 ESHAs and Overall Visual Assessment

On June 28, 2012, a site visit was conducted with the City of Eureka Community Development Director and a California Department of Fish and Game (DFG) environmental scientist. The primary DFG concern is that it is not just the wetlands that are sensitive, but the entire brush-filled ravines (Photo 16). These ravines comprise riparian habitat that intermittently dissects the upland habitat. These riparian corridors not only provide excellent wildlife habitat, but provide critical ecological function to maintain clean water, particularly since they are the headwaters for the wetlands and bay below. These areas are vulnerable because residents could dump lawn clippings or trash into the ravines, as well as use them for recreational purposes like all terrain vehicle routes. Since these areas are sensitive to soil compaction, vegetation removal, increased strormwater runon or pollution, the riparian habitat associated with the wetland areas, including the ravine and associated riparian habitat found at Pits 9 and 10 (which classified as upland), needs to be protected. The five ravines comprising this riparian habitat were classified as ESHA #s 1-5, with #1 at the northeastern corner of the development, wrapping around to #5 at the southwestern end of the development (Attachment 2 and Table 2).

Table 2. Summary of ESHAs

ESHA	Location	Pits Contained	Hydrophytic Vegetation	Hydric Soil	Wetland Hydrology	Jurisdictional Wetland Present
#1	Northeastern corner/ Parcel 1; 40°45'40.67"N, 124 10'52.99"W	1,2,3	√	√	√	√
#2	Mid-north; 40°45'41.18"N, 124°10'57.13"W	4,5	√	√	√	√
#3	Northwest/central area; 40°45'39.99"N, 124°10'59.10"	6,7,11,12,13,14	√	√	√	√
#4	Midwest/Parcel 3; 40°45'37.78N, 124°11'01.24"W	8, 9, 10	√			
#5	South/Parcel 4; 40°45'35.75"N, 124°11'01.57"W	15	√	√	√	√

7. RECOMMENDATIONS

The DFG expressed there could be compatible development at this site as long as the ESHAs are protected. This protection should include the use of low impact development (LID) practices and 100 foot buffers between ESHAs and hardscapes where possible. Additionally, habitat disturbing influences, such as floodlights or street lights should be avoided. While the legal wetlands have been delineated in this report, the actual areas to be protected (ESHAs) will be slightly expanded to include the surrounding riparian vegetation below the slope breaks of the ravines (Attachment 2). This includes the ravine in ESHA zone 4, which contains no wetland. The hundred foot buffers will begin at the outer boundaries of these riparian ESHAs, rather than the boundaries of the wetlands. Additionally, split-rail fencing should be installed around these ESHAs to delineate them and discourage disturbances such as foot, bike or motorcycle traffic. The easement description, parcel maps and new deeds should delineate these ESHAs and describe prohibitions within both the ESHAs and their buffers to incorporate

protection into the project.

The corner of the proposed access road at the northeastern corner of Parcel 3, including the sidewalk, protrudes approximately 50 feet into the 100 foot buffer of ESHA 3. It is recommended that an area equal to the infringing hardscape be planted with native vegetation approximately 280 feet northwest of the northwest corner of adjacent parcel number 302-081-012 to mitigate for the buffer infringement (see Attachment 2). Since there will be no actual loss of habitat, only a buffer infringement, this 1:1 mitigation will be a net gain of riparian habitat. A bioswale vegetated with native perennial bunchgrasses should run along the outside of the sidewalk to infiltrate any additional runoff produced by the access road.

8. CONCLUSION

The proposed development contains enough land outside of the jurisdictional wetlands and ESHAs to construct approximately four residential units. To protect these sensitive areas, the following conditions should be required:

1. The four lots should be reconfigured to maximize hardscape on the areas shown outside of the ESHA buffer on the map.
2. The five ESHAs should be protected with split-rail fences placed 50 feet out from the ESHA boundaries.
3. LID practices such as permeable pavement and bioswales should be used in development to match post development runoff with pre-development runoff.
4. 100 foot buffers should be maintained around ESHAS where feasible; if hardscapes must enter ESHA buffers, an equal area should be planted with riparian vegetation as close to the encroachment as possible
5. The easement description, parcel maps and deeds should delineate the ESHAs and describe prohibitions within the ESHAs as well as within their associated buffers. Prohibitions in the ESHAs would include activities such as lighting that shines on natural areas, disposal of green waste or any motor vehicle usage.

Four jurisdictional wetlands were found on this site. These wetlands were easily located by visual inspection and confirmed during the wetland delineation. The riparian vegetation in which these wetlands were found comprises environmentally sensitive habitat that needs to be protected. An additional sensitive habitat area was located on the western edge of Parcel 3. This ESHA appeared similar to the others, but lacked the hydric soil and wetland hydrology indicators to meet the wetland designation.

Apparent wetlands with *Equisetum* and sedge below slope breaks are not wetlands, but are likely the result of cowpaction decreasing the drainage and aeration of the soils in these areas, or aspect which reduces evapotranspiration and soil drying. Additionally, historic grazing likely decreased the amount of topsoil due to erosion on these sloped areas. Topsoil reduction leaves the less aerated subsoil closer to the surface or even exposed.

All five ESHAs have groundwater within 18 inches of the soil surface during the summer, as well as excellent wildlife habitat. Cattle grazing on this upper site is a poor use of the land due to the amount of ESHA on the proposed development area. Installing buffers around the ESHAs will protect the soils around all of the pits examined in this delineation, except for upland Pit #1. If the above recommendations are incorporated into this project, a low impact development at this site will afford an opportunity to protect the five ESHAs, as well as the wetlands below.

9. REFERENCES

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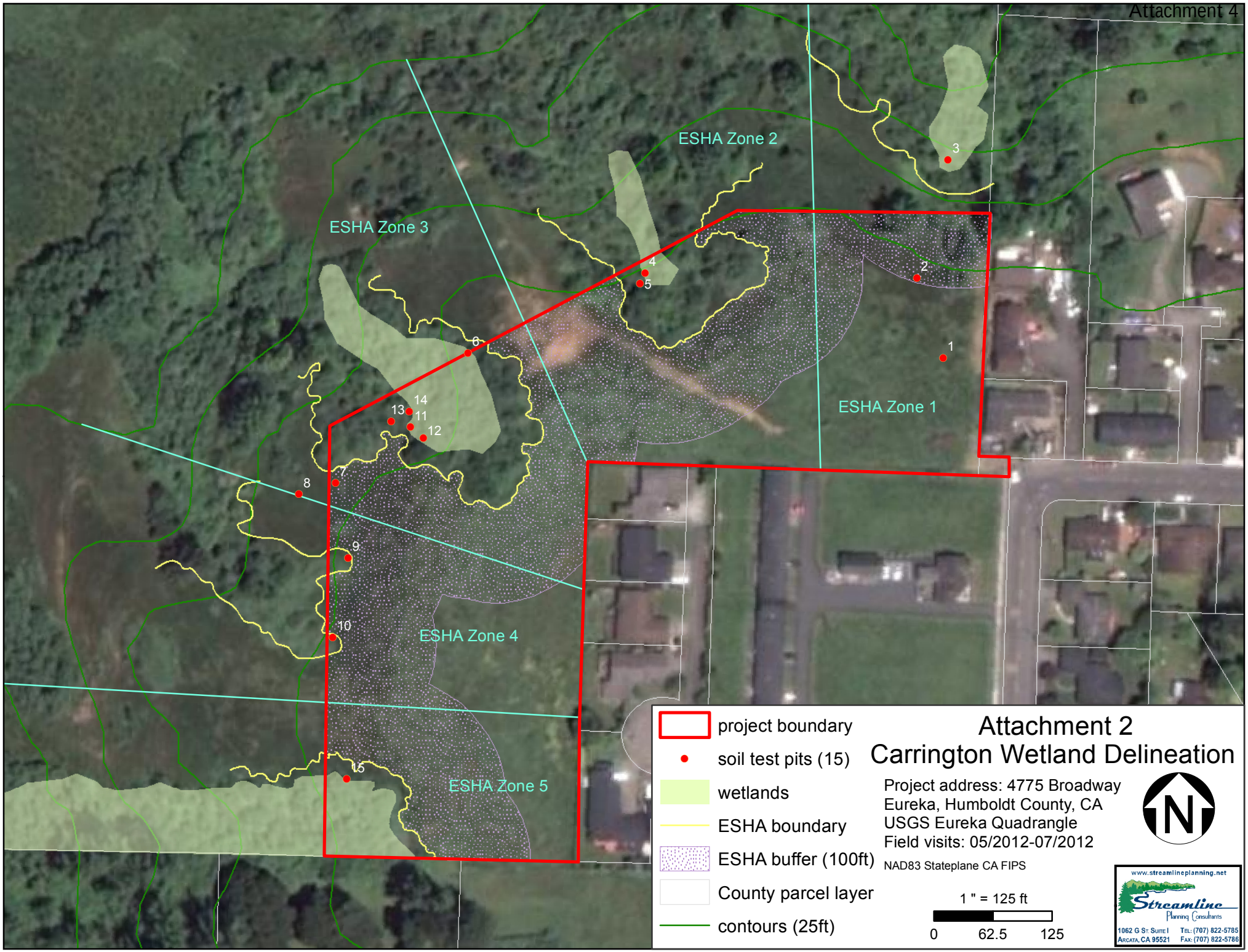
ATTACHMENTS

ATTACHMENT 1: Site Map
ATTACHMENT 2: Aerial Photograph
ATTACHMENT 3: Soil Health Assessment
ATTACHMENT 4: Photographs
ATTACHMENT 5: Field Data Sheets

Google

ATTACHMENT 1. Site Map

X = Project Site


ESHA Zone 1
ESHA Zone 2
ESHA Zone 3
ESHA Zone 4
ESHA Zone 5
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
project boundary
soil test pits (15)
wetlands
ESHA boundary
ESHA buffer (100ft)
County parcel layer
contours (25ft)
Attachment 2
Carrington Wetland Delineation
Project address: 4775 Broadway
Eureka, Humboldt County, CA
USGS Eureka Quadrangle
Field visits: 05/2012-07/2012
NAD83 Stateplane CA FIPS
1 " = 125 ft
0
62.5
125
N
www.streamlineplanning.net
Streamline
Planning Consultants
1062 G St. Suite I
Arcata, CA 95521
Tel: (707) 822-5785
Fax: (707) 822-5786

ATTACHMENT 3: Soil Health Assessment

Soil Health

Soil Health Check-up

Soil Series NA Location Carrington Property Land Use Grazing up to 2011

Parameter	Criteria	Value	Score
1. Soil Depth	>90 cm	10	10
	60-90 cm	4	
	<60	2	
2. A horizon (cm)	>6 cm	10	10
	4-6 cm	4	
	<4 cm	2	
3. pH	6.0-7.5	10	4
	<6.0	4	
	>7.5	2	
4. Humus % (Estimated)	>3%	10	10
	1-3%	4	
	<1%	2	
5. Structure	Granular	10	10
	Fine Granular	5	
	Structureless/compacted	2	
6. Texture (Feel)	10-40% clay	10	10
	>40% clay	4	
	<10% clay	2	
7. Biomass (Harvest Ring)	>2500 lbs/ac	10	10
	1000-2000	4	
	<100	2	
8. Slope (Clinometer)	<2%	10	4
	2-8%	4	
	>8%	2	
9. Mottles	None in top 90 cm	10	10
	Mottles 60-90cm	4	
	Mottles in top 60 cm	2	
10. Bioactivity	Worm signs, ants present	10	10
	No worm signs	4	
	No organisms present	2	
11. Health Check (Adjustment)	Severe erosion evident	-10	X
	> 10% stoniness	-10	
	Subject to flooding	-10	

Add points in boxes 1-10 and subtract box 11 to get Soil Health Score.

Soil Health Check Score 88

Use the Health Guide below to get rating: **Soil Health Rating** Good (70-100)

70-100 = good, 40-70 = moderate, 0-40 = poor

ATTACHMENT 4: Photographs

Photo 1. Ravine top showing geomorphic position, hydrophytic vegetation and wildlife habitat.

Photo 2. Obvious wetland hydrology at Pit #3.

Photo 3. Hydrophytic vegetation at Pit #11.

Photo 4. Cowpaction preventing plant growth.

Photo 5. Invasive *Anthemis cotula* revealing livestock-induced compaction.

Photo 6. Compacted cow trail where grass barely grows during height of growing season.

Photo 7. Sedge growing on upland below slope break.

Photo 8. Equisetum growing below slope break.

Photo 9. Loamy Mucky Mineral revealing wetland.

Photo 10. Dark red upland soil with no indicators.

Photo 11. Loamy Mucky Mineral with gleyed subsoil indicating hydric soil.

Photo 12. Surface water and iron deposit wetland hydrology indicators.

Photo 13. Hydrophytic vegetation including skunk cabbage.

Photo 14. Geomorphic position at head of ravine (ESHA #4).

Photo 15. Groundwater too deep to form hydric soil or meet wetland hydrology indicator status.

Photo 16. Slope break dropping into ravine above Pit #s 11-14 showing beginning of riparian habitat.

ATTACHMENT 5: Field Data Sheets

Note: Landform, Section, Township & Range are the same for all sheets; as such they are only listed on sheet 1.

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

Project/Site: 4775 Broadway, Eureka, CA City/County: Eureka / Humboldt Sampling Date: 7/23/12

Applicant/Owner: Carrington Company State: CA Sampling Point: #1

Investigator(s): Sam Polly & Sarah Caldwell Section, Township, Range: SE¼, NE¼ Sec 4, T4N, R1W HBM

Landform (hillslope, terrace, etc.): Terrace Top (Summit) Local relief (concave, convex, none): Convex Slope (%): 4

Subregion (LRR): A Lat: 40°45'40.67"N Long: 124°10'52.99"W Datum: WGS84

Soil Map Unit Name: _____ 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: "Normal" conditions exist, but include recent cattle grazing & associated compaction.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: 5' diam)			
1. Dactylis glomerata	20	✓	FACU
2. Holcus lanatus	10		FAC
3. Anthoxanthum odoratum	15		FACU
4. Agrostis stolonifera	30	✓	FAC
5. Rumex crispus	1		FAC
6. Rumex acetosella	6		FACU
7. Plantago lanceolata	5		FACU
8. Trifolium pratense	5		FACU
9. Festuca perennis (Lolium)	5		FAC
10. Aster chilensis	1		FAC
11.			
	98 = Total Cover 49/19.6		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum _____

Dominance Test worksheet: 49/19.6

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (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:

SOIL

Sampling Point: #1

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
0-2.4"	10YR 2/1	100					SL	
2.4-9.6"	10YR 3/2	↓					SL	
9.6-18"	7.5YR 3/3	↓					SL	

[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: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks: Soil compacted from historic wet-season grazing

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: Soil bone dry

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

Project/Site: 4775 Broadway City/County: Elk/Hum Sampling Date: 7/23/12
Applicant/Owner: Carrington State: CA Sampling Point: #2
Investigator(s): SP & SC Section, Township, Range:
Landform (hillslope, terrace, etc.): Local relief (concave, convex, none): linear Slope (%): 15
Subregion (LRR): Lat: Long: Datum:
Soil Map Unit Name: 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: Compaction severe on the upper grasslands

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size:)			
1. Carex sp. (Praticola)	45	✓	FACW
2. Holcus l.	4		FAC
3. Anthoxanthum o.	4		FACU
4. Rumex q.	3		FACU
5. Plantago l.	7		FACU
6. Agrostis gigantea	25	✓	FAC
7. Lotus corniculatus	4		FAC
8. Hypochaeris radicata	2		FACU
9.			
10.			
11.			
	94 = Total Cover 47/188		
Woody Vine Stratum (Plot size:)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum

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 (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: FAC & FACW plants expected on compacted soils not indicative of wetlands (No hydric soils or wetland hydrology)

SOIL

Sampling Point: #2

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 %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-8.4"	10YR 3/2	100					SL	
8.4-18"	10YR 4/3	83	10YR 4/6	1	C	PL	↓	
	10YR 3/2	16					↓	Rototilled

[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: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks: Soil Compacted + bumpy from grazing

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:

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

Project/Site: 4775 Broadway, Eureka, CA City/County: Eureka / Hum Sampling Date: 7/31/12

Applicant/Owner: Carrington Company State: CA Sampling Point: #3

Investigator(s): Same Section, Township, Range: Same

Landform (hillslope, terrace, etc.): Local relief (concave, convex, none): Slope (%): 25

Subregion (LRR): A Lat: 40° 45' 42.41" N Long: 124° 10' 53.23" W Datum:

Soil Map Unit Name: 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:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1. Alnus rubra	20	✓	FAC
2.			
3.			
4.			
	20 = Total Cover		10/4
Sapling/Shrub Stratum (Plot size: ____)			
1. Rubus spectabilis	2	✓	FAC
2.			
3.			
4.			
5.			
	2 = Total Cover		1/.02
Herb Stratum (Plot size: ____)			
1. Veronica americana	12		OBL
2. Ranunculus repens	40	✓	FAC
3. Juncus effusus	18		FACW
4. Holcus lanatus	15		FAC
5. Antho xanthum odoratum	2		FACU
6. Agrostis gigantea	20	✓	FAC
7. ~~Athyrium f~~ Dryopteris expansa	10		FACW
8.			
9.			
10.			
11.			
	117 = Total Cover		58.5/23.4
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ = Total Cover		

% Bare Ground in Herb Stratum ____

Dominance Test worksheet:

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

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

SOIL

Sampling Point: #3

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
0-6	10YR 3/2	60	10YR 3/6	17	C	PL	SCL	
			5GY 4/1	23	D	M		
6-12	10YR 3/1	79	2.5YR 2.5/3	5	C	M		
			5YR 4/6	6	C	PL		
			2.5Y 4/3	10	C	M		
12-18	10YR 2/1	90	2.5YR 2.5/3	8	C	M		
			5G 4/2	2	D	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)
- ___ 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: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No ___

Remarks: 2% Charcoal throughout to 18"

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): 0.25

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

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

Wetland Hydrology Present? Yes ✓ 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

Project/Site: 4775 Broadway, Eureka, CA City/County: Eka/Hum Sampling Date: 7/23/12

Applicant/Owner: Carrington State: CA Sampling Point: #4

Investigator(s): SP & SC Section, Township, Range: same

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): linear Slope (%): 10

Subregion (LRR): A Lat: 40°45'41.18" N Long: 124°10'57.13" W Datum: _____

Soil Map Unit Name: _____ 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: -

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. Sambucus racemosa	20	✓	FACU
2.			
3.			
4.			
	20	= Total Cover	
Sapling/Shrub Stratum (Plot size: _____)			
1. Rubus ursinus	15	✓	FACU
2. Rubus armeniacus	11	✓	
3. Rubus spectabilis	13	✓	↓
4.			
5.			
	39	= Total Cover 19.5/7.8	
Herb Stratum (Plot size: _____)			
1. Dryopteris expansa	60	✓	FACW
2. Equisetum telmateia	60	✓	FACW
3. Holcus lanatus	7		FAC
4. Tolmiea menziesii	4		FAC
5. Polystichum spp.	8		FACU
6.			
7.			
8.			
9.			
10.			
11.			
	139	= Total Cover 69.5/27.8	
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
		= 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: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	120	x 2 =	240
FAC species	24	x 3 =	72
FACU species	54	x 4 =	216
UPL species	0	x 5 =	0
Column Totals:	198 (A)		528 (B)

Prevalence Index = B/A = 2.67

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:

SOIL

Sampling Point: #4

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
0-2.4"	10YR 3/1	100					Sandy Peat	
2.4-14.4"	10YR 3/1	100					Mucky L	
14.4-20.4"	N 4/	60	5YR 5/8	4	C	PL	CL	
	10YR 4/1	36						

[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: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No ___

Remarks:

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): 1/8

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

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

Wetland Hydrology Present? Yes ✓ 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

Project/Site: 4775 Broadway, Eka, CA City/County: Eka/Hum Sampling Date: 7/23/12

Applicant/Owner: Carrington State: CA Sampling Point: #5

Investigator(s): SP & SC Section, Township, Range: _____

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): linear Slope (%): 12

Subregion (LRR): A Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: _____ 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:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. Sambucus racemosa	5	✓	FACU
2.			
3.			
4.			
	5 = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1. Rubus armeniacus	7	✓	FACU
2. ursinus	7	✓	FACU
3. spectabilis	12	✓	FAC
4.			
5.			
	26 = Total Cover		
Herb Stratum (Plot size: _____)			
1. Equisetum telmateia	20	✓	FACW
2. Stachys ajugoides	15		OBL
3. Ranunculus repens	35	✓	FAC
4. Holcus lanatus	7		FAC
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	137 = Total Cover 68.5/27.4		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum _____

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (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: No hydric soil or wetland hydrology = prevalence index doesn't qualify

SOIL

Sampling Point: #5

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
0-10.8"	10YR 2/1	100					SCL	
10.8-19.2"	10YR 3/4	63	10YR 5/8	5	C	m	SL	
~~19.2-22.8"~~	~~10YR 4/6~~		10YR 3/2	17	C	m		om
			10YR 5/1	15	D	m		
19.2-22.8"	10YR 4/6	70	5G 5/1	30	D	m	CL	lots of orange+gley

[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: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

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:

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

Project/Site: 4775 Broadway, Eka, CA City/County: Eka, Hum Sampling Date: 7/23/12

Applicant/Owner: Carrington State: CA Sampling Point: #6

Investigator(s): SP + SC Section, Township, Range:

Landform (hillslope, terrace, etc.): Local relief (concave, convex, none): linear Slope (%): 25

Subregion (LRR): A Lat: 40°45'39.99"N Long: 124°10'59.10"W Datum:

Soil Map Unit Name: 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:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix hookeriana	70	✓	FACW
2.			
3.			
4.			
	70 = Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1. Lonicera involucrata	5	✓	FAC
2. Rubus ~~discolor~~ armeniacus	5	✓	FACU
3.			
4.			
5.			
	10 = Total Cover		
Herb Stratum (Plot size: ____)			
1. Lysichiton americanus	23	✓	OBL
2. Equisetum telmateia	43	✓	FACW
3. Tolmiea menziesii	23	✓	FAC
4. Ranunculus repens	20		FAC
5. Veronica americana	3		OBL
6. Dryopteris expansa	11		FACW
7.			
8.			
9.			
10.			
11.			
	123 = Total Cover 61.5/24.6		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ = Total Cover		

% Bare Ground in Herb Stratum ____

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 (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:

SOIL

Sampling Point: #6

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
0-18"	10YR 2/1	100					Mucky SL	
18-21.6"	10Y 5/1	100					S	gleyed zone
21.6-24"	7.5YR 4/6	100					S	

[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: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No _____

Remarks:

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): to surface

Wetland Hydrology Present? Yes ✓ 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

Project/Site: 4775 Broadway, Eka, CA City/County: Eka/Hum Sampling Date: 7/23/12

Applicant/Owner: Carrington State: CA Sampling Point: #7

Investigator(s): SP+SE Section, Township, Range:

Landform (hillslope, terrace, etc.): Local relief (concave, convex, none): Convex Slope (%): 17

Subregion (LRR): A Lat: Long: Datum:

Soil Map Unit Name: 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:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: ____)			
1. Equisetum telmateia	50	✓	FACW
2. Anthoxanthum odoratum	15	✓	FACU
3. Holcus lanatus	12		FAC
4. Dactylis glomerata	7		FACU
5. Elymus repens	8		FAC
6. Agrostis gigantea	6		FAC
7. Rumex crispus	9		FAC
8.			
9.			
10.			
11.			
	107 = Total Cover		53.5/214
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum ____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1/2 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	50	x 2 =	100
FAC species	27	x 3 =	81
FACU species	22	x 4 =	88
UPL species	0	x 5 =	0
Column Totals:	99 (A)		269 (B)

Prevalence Index = B/A = 2.72

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: No hydric soil or wetland hydro

SOIL

Sampling Point: #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
0-16.8"	10 YR 2/1	98	10 YR 4/4	2			SL	the 2% is Krotovinas
16.8-21.6"	10 YR 3/2	98	10 YR 2/2	2			SL	" "

[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: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks: Plum dark grassland soil
Appeared Compacted

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: bone dry to 21.6"

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

Project/Site: 4775 Broadway, Elk, CA City/County: Elk / Hum Sampling Date: 7/23/12

Applicant/Owner: Carrington State: CA Sampling Point: #8

Investigator(s): SP + SC Section, Township, Range:

Landform (hillslope, terrace, etc.): Local relief (concave, convex, none): Concave Slope (%): 15

Subregion (LRR): A Lat: Long: Datum:

Soil Map Unit Name: 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: Plants are poor indicators, particularly Holcus, on N. Coast... often found on dry upland soils (Sandy loam). Absence of Hydric Soil & Wet Hydro = not wetland

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____ = Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	____ = Total Cover		
Herb Stratum (Plot size: ____)			
1. Equisetum telmateia	25	✓	FACW
2. Holcus lanatus	18	✓	FAC
3. Lotus corniculatus	2		FAC
4. Rubus ursinus	20	✓	FACU
5. Ranunculus repens	13		FAC
6. Rumex crispus	12		FAC
7. Anthoxanthum odoratum	5		FACU
8. Dactylis glomerata	5		FACU
9. Agrostis gigantea	3		FAC
10.			
11.			
	103 = Total Cover		51.5/20
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ = Total Cover		

% Bare Ground in Herb Stratum ____

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 67 (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:

SOIL

Sampling Point: #8

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
0-19.2"	10YR 2/1	100					SL	

[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: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks: similar to #7 but less compacted

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: bone dry to 1.5'+, no sign of hydro

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

Project/Site: 4775 Broadway City/County: Eka/Hum Sampling Date: 7/23/12

Applicant/Owner: Carrington State: CA Sampling Point: #9

Investigator(s): SP + SC Section, Township, Range:

Landform (hillslope, terrace, etc.): Local relief (concave, convex, none): Concave Slope (%): 20

Subregion (LRR): A Lat: 40° 45' 37.78" N Long: 124° 11' 01.24" W Datum:

Soil Map Unit Name: 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:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____ = Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1. Rubus armeniacus	60	✓	FACU
2. " ursinus	5	✓	FACU
3.			
4.			
5.			
	15 = Total Cover		7.5/3
Herb Stratum (Plot size: ____)			
1. Equisetum telmateia	70		FACW
2. Holcus l.	27		FAC
3. Anthoxanthum o.	8		FACU
4. Lotus c.	4		FAC
5. Argentina a.	5		OBL
6.			
7.			
8.			
9.			
10.			
11.			
	114 = Total Cover		57/22.8
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ = Total Cover		

% Bare Ground in Herb Stratum ____

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (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:

SOIL

Sampling Point: #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
0-10.8"	10YR 2/1	100					SL	
10.8-15.6"	10YR 2/2	81	10YR 3/2	15	C	M	SCL	
~~15.6-24"~~			7.5YR 5/8	4	C	M	↓	
15.6-24"	2.5Y 4/2	60	10YR 2/2	10	C	M	SCL	Heavily Mottled
			10YR 6/8	16	C	M		
			2.5Y 3/1	24	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)
- ___ 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: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

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: water table @ 18"

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

Project/Site: 4775 Broadway City/County: Eur/Hum Sampling Date: 7/24/12

Applicant/Owner: Carrington State: CA Sampling Point: #10

Investigator(s): SPA SC Section, Township, Range:

Landform (hillslope, terrace, etc.): Local relief (concave, convex, none): Convex Slope (%): 6

Subregion (LRR): Lat: see # 9 Long: Datum:

Soil Map Unit Name: 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: Compaction present

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____ = Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1. Lonicera involucrata	15	✓	FAC
2. Rubus discolor	25	✓	FACW
3.			
4.			
5.			
	40 = Total Cover		
Herb Stratum (Plot size: ____)			
1. Holcus l.	28	✓	FAC
2. Equisetum t.	48	✓	FACW
3. Plantago l.	5		FAC
4. Ranunculus r.	15		FAC
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	96 = Total Cover 48/19.2		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ = 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: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (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: These FAC plants grow well on sandy loam uplands, combined w/ lack of wet hydro & hydric soil - not wetland indicative

SOIL

Sampling Point: #10

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 %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-24"	10YR 2/1	98					SL	
		2						gravel/pres

[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: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks: bone dry, homogenous profile

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:

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

Project/Site: 4775 Broadway City/County: Ella/Hum Sampling Date: 7/24/12
Applicant/Owner: Carrington State: CA Sampling Point: #11
Investigator(s): Section, Township, Range:
Landform (hillslope, terrace, etc.): Local relief (concave, convex, none): linear Slope (%): 3
Subregion (LRR): Lat: 40°45'39.69"W Long: 124°11'00.29"W Datum:
Soil Map Unit Name: 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:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1. Holly - Ilex aquifolium	33	✓	NI
2.			
3.			
4.			
	33 = Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1. Berberis darwinii	27	✓	NI
2. Rubus spectabilis	3		FAC
3.			
4.			
5.			
	30 = Total Cover		15/6
Herb Stratum (Plot size: ____)			
1. Lysichitum americanus	18	✓	OBL
2. Stachys adjugoides	2		OBL
3. Ranunculus r.	30	✓	FAC
4. Equisetum t.	8		FACW
5. Juncus effusus	2		FACW
6. ~~Athyrium~~ Pryopteris expansa	2		FACW
7. Polystichum	1		FACU
8.			
9.			
10.			
11.			
	63 = Total Cover		31.5/12.6
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ = Total Cover		

% Bare Ground in Herb Stratum ____

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 (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: NI = no indicator status listed

SOIL

Sampling Point: #11

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
0-6	10YR 2/1	100					Mucky SEL	
6-18	10YR 4/1	60	5GY 5/1	30	D	M	LS	
			10YR 2/1	2	C	M		
			7.5YR 5/8	8	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)
- ✓ 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: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No _____

Remarks:

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): 4/16"

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

Saturation Present? (includes capillary fringe) Yes ✓ No ___ Depth (inches): 9.6"

Wetland Hydrology Present? Yes ✓ 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

Project/Site: 4775 Broadway City/County: Eld & Hum Sampling Date: 7/24/12
Applicant/Owner: Carrington State: CA Sampling Point: #12
Investigator(s): SP + SC Section, Township, Range:
Landform (hillslope, terrace, etc.): Local relief (concave, convex, none): linear Slope (%): 6
Subregion (LRR): Lat: see #11 Long: Datum:
Soil Map Unit Name: 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:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix h.	5	✓	FACW
2.			
3.			
4.			
	5 = Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1. Rubus u.	8		FACU
2. spec.	12	✓	FAC
3. armeniacus	19	✓	FACU
4. Lonicera involucrata	12	✓	FAC
5.			
	51 = Total Cover		
Herb Stratum (Plot size: ____)			
1. Dryopteris e.	80	✓	FACW
2. Blechnum spicant	5		FAC
3. Equisetum t.	10		FACW
4. Rubus u.	2		FACU
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	97 = Total Cover 48.5/19.4		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ = Total Cover		

% Bare Ground in Herb Stratum ____

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 (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:

SOIL

Sampling Point: #12

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"	10YR 3/1	72	10YR 3/4	23	C	M	SCL	
			10Y 3/1	5	D	M		
12-18"	10YR 2/1	60	2.5Y 3/2	40			SCL	

[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: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No ___

Remarks:

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): 1/8"

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

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

Wetland Hydrology Present? Yes ✓ 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

Project/Site: 4775 Broadway City/County: Eld / Hum Sampling Date: 7/24/12

Applicant/Owner: Carrington State: CA Sampling Point: #13

Investigator(s): SP & SC Section, Township, Range: _____

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): Convex Slope (%): 18

Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: _____ 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: Compaction present

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. Ilex aquifolium	40		NI
2. Salix h.	1		FACW
3.			
4.			
	41 = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1. Rubus spect.	3	✓	FAC
2.			
3.			
4.			
5.			
	3 = Total Cover		
Herb Stratum (Plot size: _____)			
1. Holcus l.	4		FAC
2. Equisetum t.	35	✓	FACW
3. Ranunculus r.	40	✓	FAC
4. Plantago l.	4		FACU
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	83 = Total Cover 41.5/16.6		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = 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)
- ___ 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: North slope + shade from trees plus low paction allows soil to remain moist + these FAC plants aren't good wetland indicators

SOIL

Sampling Point: #13

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 %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-14.4"	10YR 2/1	100					SL	
14.4-19.2"	10YR 2/2	60	10YR 5/6	5	C	M	SL	
	10YR 3/2	35						

[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: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

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:

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

Project/Site: 4775 Broadway City/County: Eka/Hum Sampling Date: 7-24-12
Applicant/Owner: Carrington State: CA Sampling Point: #14
Investigator(s): SP & SC Section, Township, Range: _____
Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): convex Slope (%): 18
Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: _____ 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: Previous grazing disturbance

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: _____)			
1. Juncus e.	10		FACW
2. Plantago l.	6		FAC
3. Equisetum f.	70	✓	FACW
4. Ranunculus r.	40	✓	FAC
5. Holcus l.	20		FAC
6.			
7.			
8.			
9.			
10.			
11.			
	146 = Total Cover		73/29.2
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum _____

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 (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: Surrounded by dead Cascara trees – slumpage?

SOIL

Sampling Point: #14

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
0-10.8	10YR 2/1	100					SL	
10.8-16.2	2.5Y 3/2	82	2.5Y 6/2	17	C	M		
			10YR 2/1	1	C	M		
16.2-18	2.5Y 3/3	60	10YR 2/1	5	C	M		
			10Y 6/1	15	D	M		
			5YR 4/6	5	C	M		
			7.5Y 4/4	15	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)
- ___ 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: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

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:

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

Project/Site: 4775 Broadway, Eka City/County: Eka/Hum Sampling Date: 7/24/12

Applicant/Owner: Carrington State: CA Sampling Point: #15

Investigator(s): SP & SE Section, Township, Range:

Landform (hillslope, terrace, etc.): Local relief (concave, convex, none): linear Slope (%): 4

Subregion (LRR): A Lat: 40° 45' 35.75" N Long: 124° 11' 01.57" Datum:

Soil Map Unit Name: 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:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____ = Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1. Rubus ursinus	5	✓	FACU
2. Rubus ~~discolor~~ armeniacus	15	✓	FACU
3.			
4.			
5.			
	20 = Total Cover		
Herb Stratum (Plot size: ____)			
1. Argentina a.	35	✓	OBL
2. Scirpus microcarpus	8		OBL
3. Juncus e.	45	✓	FACW
4. Plantago l.	5		FAC
5. Ranunculus r.	16		FAC
6. Holcus l.	17		FAC
7. Stachys a.	2		OBL
8.			
9.			
10.			
11.			
	128 = Total Cover 64/25.6		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ = Total Cover		

% Bare Ground in Herb Stratum ____

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	45	x 1 =	45
FACW species	45	x 2 =	90
FAC species	38	x 3 =	114
FACU species	20	x 4 =	80
UPL species	0	x 5 =	0
Column Totals:	148 (A)		329 (B)

Prevalence Index = B/A = 2.22

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:

SOIL

Sampling Point: #15

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 %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-7.2"	10YR 2/1	100					Mucky SCL	
7.2"-19.2"	10YR 2/1	84	5YR 3/4	14	C	PL	SCL	
	~~5YR 3/4~~	~~14~~	2.5Y 4/4	2	C	M		
	~~2.5Y 4/4~~	~~2~~						

[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: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No _____

Remarks:

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): 6

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

Wetland Hydrology Present? Yes ✓ No _____

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

Remarks: