



U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
WASHINGTON, DC 20410-1000

This Worksheet was designed to be used by those “Partners” (including Public Housing Authorities, consultants, contractors, and nonprofits) who assist Responsible Entities and HUD in preparing environmental reviews, but legally cannot take full responsibilities for these reviews themselves. Responsible Entities and HUD should use the RE/HUD version of the Worksheet.

Wetlands (CEST and EA) – Partner

<https://www.hudexchange.info/environmental-review/wetlands-protection>

1. Does this project involve new construction as defined in Executive Order 11990, expansion of a building’s footprint, or ground disturbance?

The term "new construction" includes draining, dredging, channelizing, filling, diking, impounding, and related activities and construction of any any structures or facilities.

No → *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below.*

Yes → *Continue to Question 2.*

2. Will the new construction or other ground disturbance impact a wetland as defined in E.O. 11990?

No → *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide a map or any other relevant documentation to explain your determination.*

Yes → *Work with HUD or the RE to assist with the 8-Step Process.* *Continue to Question 3.*

3. Does Section 55.12 state that the 8-Step Process is not required?

No, the 8-Step Process applies.

This project will require mitigation and may require elevating structure or structures. See the link to the HUD Exchange above for information on HUD’s elevation requirements.

→ *Work with the RE/HUD to assist with the 8-Step Process. Continue to Worksheet Summary.*

5-Step Process is applicable per 55.12(a).

Provide the applicable citation at 24 CFR 55.12(a) here.

[Click here to enter text.](#)

→ *Work with the RE/HUD to assist with the 5-Step Process. This project may require mitigation or alternations. Continue to Worksheet Summary.*

8-Step Process is inapplicable per 55.12(b).

Provide the applicable citation at 24 CFR 55.12(b) here.

[Click here to enter text.](#)

→ If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to Worksheet Summary.

8-Step Process is inapplicable per 55.12(c).

Provide the applicable citation at 24 CFR 55.12(c) here.

[Click here to enter text.](#)

→ If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to Worksheet Summary.

Worksheet Summary

Provide a full description of your determination and a synopsis of the information that it was based on, such as:

- Map panel numbers and dates
- Names of all consulted parties and relevant consultation dates
- Names of plans or reports and relevant page numbers
- Any additional requirements specific to your program or region

Include all documentation supporting your findings in your submission to HUD.

An 8-Step Review Process was completed for the proposed wetlands on site. The site visit identified several named and unnamed stream channels and four freshwater emergent wetlands, primarily in the western section of the project, mostly contained within the Phase 2 area (See figure attached). These stream channels and wetlands cover a total of 1.45 acres within the project site.

Approximately 0.19 linear miles of Dry Creek runs through the western portion of the project site, starting north of Cypress Lane and running south towards Adam Road. Approximately 0.12 linear miles of unnamed Stream Channel 1 runs through the project site west of and parallel to Dry Creek, with a perpendicular portion that juts out south of Cypress Lane. Approximately 0.09 linear miles of unnamed Stream Channel 2 runs through the southeastern corner of the project site. The stream channels were bordered by approximately 0.79 acres of riparian habitat dominated by Himalayan blackberries and arroyo willows.

Unnamed Wetland A covers approximately 0.21 acres west of the streams and north of Cypress Lane. Unnamed Wetland B covers 0.24 acres bordering the west side of Dry Creek in the western portion of the project site, just south of Cypress Lane. Unnamed Wetland C and D cover approximately 0.14 acres bordering the east and west side of Dry Creek in the southwestern portion of the project site.

The project has been designed to avoid impacts to wetlands and stream channels. However, the improvement and widening of Cypress Lane and installation of a new driveway and walkway to provide access to the project site during Phases 1 and 2 will require installing new culverts and fill within 0.02 acres of stream channels. Any impact to regulated waters and wetlands will require regulatory permitting from the USACE, CDFW and RWQCB prior to the issuance of grading permits. These regulatory permits are designed to fully mitigate impacts on these resources, and have been submitted for agency review and approval.

Mitigation Measure: Aquatic Resources

Prior to issuing a grading permit, the Town shall require the project proponent to determine the exact quantity of aquatic resources to be impacted and obtain regulatory permits from the USACE (Section 404 permit), CDFW (Streambed Alteration agreement), and RWQCB (Section 401 permit) to comply with federal and state regulations. The project proponent shall purchase mitigation bank credits or provide on-

site mitigation/restoration for impacts to aquatic resources at a ratio agreed to between the Town, USACE, RWQCB, and CDFW.

Please see attachment for 8-step process and Aquatic Resources Delineation Report.

8-STEP WETLANDS REVIEW

Cypress Family and Senior Housing Project

**1620, 1623, and 1633 Cypress Lane, 6900 Clark Road, and 1567 and 1580 Adams Road,
Paradise, CA**

Step 1: Determine whether the action is located in a 100-year floodplain (or a 500-year floodplain for critical actions) or wetland

The US Department of Housing and Urban Development (HUD) has authorized the Town of Paradise (Town) to use Project Based Vouchers to build affordable housing within the Town. The Town will also receive partial funding from the Community Development Block Grant-Disaster Recovery Program administered by the California Department of Housing and Community Development (HCD). The proposed project would construct 140 affordable housing units in two phases, as well as a community building and several additional features for residents to use within the housing complex. The proposed project would be constructed on a nearly 24-acre site consisting of 7 parcels that were largely cleared after the 2018 Camp Fire at 1620, 1623, and 1633 Cypress Lane, 6900 Clark Road, and 1567 and 1580 Adams Road, in the Town of Paradise (APNs: 050-140-050, 050-140-151, 050-140-053, 050-140-155, 050-140-160, 050-140-161, and 050-140-162).

Cypress Family Housing (Phase 1) would construct seventy (70) units of family rental housing with a mix of one-, two-, and three-bedroom units. The resident population would be households with incomes and affordable rents from 30% to 60% of the Area Median Income (AMI); twenty-five (25) project-based Section 8 vouchers are assumed to be available to subsidize affordability further. Amenities for Phase 1 would include eighty-six (86) surface parking spaces, a shared 5,730 square foot (sf) community center, two (2) playgrounds, and open space, including a central green in the middle of the buildings located on the former hospital site. The Family Housing project will utilize the existing large wastewater disposal field located on APN 050-140-155. This field served the Cypress Acres Convalescent Hospital (CACH) and has a historical capacity of 10,800 gallons per day per Operating Permit (Northstar 2022). Cypress Road would be widened and improved in Phase 1.

Phase 2, Cypress Senior Housing, would construct seventy (70) one-bedroom units for senior rental. The Phase 2 population would be households with incomes and affordable rents from 30% to 50% of the AMI; twenty-five (25) of the units are assumed to have project-based Section 8 vouchers to further subsidize affordability. Amenities for Phase 2 would include eighty-four (84) surface parking spaces, a community garden, and open space. The Senior Housing project would utilize new disposal fields located primarily on APN 050-140-162. It may also utilize existing disposal fields that served California Vocations (CV). The existing fields have a historical capacity of 2,415 gpd per Operating Permit (Northstar 2022).

A separate wastewater collection, treatment, and disposal system would also be designed, permitted, and constructed for each phase. Typical residential-strength wastewater is expected from each system. Each septic system would be designed to include secondary wastewater treatment (considered Advanced Treatment in the Paradise Code). The secondary wastewater treatment systems would be designed to include a minimum of two days hydraulic retention time septic tank capacity, per Paradise Code.

The project area contains 1.45-acres of seasonal wetlands and streams. Four seasonal wetlands and two stream channels are located in the western section of the project area and largely contained within the Phase 2 project area. Two culverts convey stream flow under Cypress Lane. A third stream channel is located in the southeastern corner of the project area. The stream channels are bordered by riparian habitat dominated by Himalayan blackberries and arroyo willows. Phase 1 and 2 of the project have been

designed to avoid impacts to wetlands and stream channels. However, the improvement and widening of Cypress Lane and the installation of a new driveway and walkway to provide access to the project site will require installing new culverts and fill within stream channels. The overall project is expected to directly impact 0.02 acres of stream channels.

Prior to issuing a grading permit, the Town shall require the project proponent to determine the exact quantity of aquatic resources to be impacted and obtain regulatory permits from the US Army Corps of Engineers (USACE) Section 404 permit, California Department of Fish and Wildlife (CDFW) Streambed Alteration agreement, and Regional Water Quality Control Board (RWQCB) Section 401 permit to comply with federal and state regulations. The project proponent shall purchase mitigation bank credits or provide on-site mitigation/restoration for impacts to aquatic resources at a ratio agreed to between the Town, USACE, RWQCB, and CDFW. These regulatory permits are designed to fully mitigate impacts on these resources.

Whereas the project proposes construction within a wetland, Executive Order 11990-Wetlands applies. Executive Order 11990 requires Federal activities to avoid impacts to wetlands and to avoid direct and indirect support of wetland development to the extent practicable. This project does not meet the exceptions identified at 24 CFR 55.12 and therefore requires an 8-step analysis of the direct and indirect impacts associated with the construction, occupancy, and modification of the wetland.

Step 2: Early Public Review

A public notice of the proposed activity in a wetland was published in the Paradise Post, a general-circulation newspaper for the Paradise area, on February 17, 2023. The notice targeted residents in the community and a copy of the published notification was kept in the project's environmental review record; the notice is provided as Attachment 1. The required 15 calendar days were allowed for public comment. As required by regulation, the notice also included the name, proposed location, and description of the activity, the Town contact for information, and the location and hours of the office where a full description of the proposed action could be viewed.

No concerns were expressed by the public concerning this notice.

Step 3: Alternatives Considered

Alternative 1: Preferred Alternative. Development of Community building, two one-story residential buildings, and ten two-story residential buildings

Alternative 1 would construct a community building, two (2) one-story residential buildings, and ten (10) two-story residential buildings that would provide a total of 140 new affordable housing units. The site contains 1.45-acres of seasonal wetlands and streams. The improvement and widening of Cypress Lane and the installation of a new driveway and walkway to provide access to the project site will require the installation of new culverts and fill within 0.02-acres of stream channels. Prior to issuing a grading permit, the Town shall require the project proponent to determine the exact quantity of aquatic resources to be impacted and obtain regulatory permits from the USACE (Section 404 permit), CDFW (Streambed Alteration agreement), and RWQCB (Section 401 permit) to comply with federal and state regulations. The project proponent shall purchase mitigation bank credits or provide on-site mitigation/restoration for impacts to aquatic resources at a ratio agreed to between the Town, USACE, RWQCB, and CDFW. These regulatory permits are designed to fully mitigate impacts on these resources. The site is zoned appropriately for affordable housing and was previously developed.

Alternative 2: Alternative Site Plans

The original site plans for Phase 2 encroached on the large wetland in the northwest quadrant of the project area, which was identified during the aquatic resources delineation. A plan was developed which moved buildings further south and out of the wetlands. However, that would require improving a gravel private driveway, and the owner would not agree to allow access. The current preferred Phase 2 Alternative removed all improvements from the wetlands except the required culvert modifications for the roadway improvements. None of the alternative site plans could avoid widening of Cypress Lane, which the Town requires to develop the site and provide safe access.

Alternative 3: Review of Alternative Sites

Alternative 2 reviewed other potential sites for affordable housing. However, site identification has proven to be a major obstacle in providing affordable housing units. Sites zoned appropriately and at reasonable cost are extremely limited within the Town of Paradise. No other sites were found in the Town that meet the cost and zoning, as well as feasibility, location, and affordability criteria required to meet the purpose and needs of this project.

Alternative 4: No Action/Other Actions that Serve the Same Purpose.

The No Action Alternative would leave the demolished site vacant and would fail to meet the Town's goals to recover from the Camp Fire and provide needed additional affordable supportive housing units. The site could be developed with market rate housing without HUD funding, which would fail to meet a critical need for affordable housing in this area. The site is zoned C-S, Community Service, which the Town has specifically intended to be used to provide housing affordable to low- and moderate-income households. The project has been designed to set aside much of the site for stream and wetland protection, and the project proponent must fully mitigate impacts to aquatic resources by purchasing mitigation bank credits or providing on-site mitigation/restoration before receiving a regulatory permit to build.

Step 4: Potential Impacts of the Proposed Project

The project has been designed to avoid impacts to wetlands and stream channels. However, the improvement and widening of Cypress Lane and the installation of a new driveway and walkway to provide access to the project site will require installing new culverts and fill within stream channels. The project is expected to directly impact 0.02-acre of stream channels. Prior to issuing a grading permit, the Town will require the project proponent to determine the exact quantity of aquatic resources to be impacted and obtain regulatory permits from the USACE (Section 404 permit), CDFW (Streambed Alteration agreement), and RWQCB (Section 401 permit) to comply with federal and state regulations. The project proponent will be required to purchase mitigation bank credits or provide on-site mitigation/restoration for impacts to aquatic resources at a ratio agreed to between the Town, USACE, RWQCB, and CDFW. These regulatory permits are designed to fully mitigate impacts on these resources.

No special status animal species were observed within the seasonal wetlands. Aquatic habitat found within the project site provides potential breeding habitat for California red-legged and foothill yellow-legged frogs. However, neither frog species was identified during biological surveys at the project site. Foothill yellow-legged frogs have been identified approximately 1,300 feet (0.25 miles) to the northwest of the project site, while California red-legged frogs have not been documented within 1 mile of the project site. Based on the survey findings, these species are not expected to occur. However, the possibility exists that these species could become established prior to construction of the project. In order to avoid or reduce potential impacts to these species to a less than significant level, the Town will

implement standard United States Fish and Wildlife Service Mitigation and Avoidance Measures before, during, and after construction.

A Special Status Plant Survey Report was performed in 2022. The Report reviewed the special status species databases including the California Natural Diversity Database, United States Fish and Wildlife Service Information for Planning and Conservation Database, and the California Native Plant Society's Inventory of Rare and Endangered Plants of California in order to identify special status species that may occur within the project area. The site was observed to contain weedy vegetation and no federally listed species were observed during the site visit. Therefore, no cumulative loss of wetlands or special status species habitat would occur.

Step 5: Where practicable, design or modify the proposed action to minimize the potential adverse impacts to lives, property, and natural values within the wetlands and to restore, and preserve the values of the wetlands

The project has been redesigned to avoid impacting wetlands and stream channels based on the aquatic resources delineation. Except at the culvert improvements, wetlands within the project area will be preserved as open space. However, the improvement and widening of Cypress Lane and the installation of a new driveway and walkway to provide access to the project site will require installing new culverts and fill within stream channels. The overall project is expected to directly impact 0.02-acres of stream channels. Prior to issuing a grading permit, the Town will require the project proponent to determine the exact quantity of aquatic resources to be impacted and obtain regulatory permits from the USACE (Section 404 permit), CDFW (Streambed Alteration agreement), and RWQCB (Section 401 permit) to comply with federal and state regulations. The project proponent will purchase mitigation bank credits or provide on-site mitigation/restoration for impacts to aquatic resources at a ratio agreed to between the Town, USACE, RWQCB, and CDFW. These regulatory permits are designed to fully mitigate impacts on these resources.

The fill of 0.02-acres of seasonal streams on the site would not pose any danger to lives or property within the area. Local ordinance requires property stormwater design for new development. In addition to concerns for life and property, the Town considered the natural and beneficial values of the wetlands and streams. The natural resources of the wetland include the potential as habitat for special status species. The habitat within the project area is characterized by stands of fire-damaged native ponderosa pine and incense cedar in the northeastern and southern portions of the site, with non-native brush dominating the understory. The western portion of the site is characterized by several stream channels with riparian habitat dominated by Himalayan blackberries and arroyo willows. Additionally, patches of native black oak woodland occur throughout the site, as well as open fields dominated by non-native brush and weedy herbaceous species. Based on an assessment of local, state, and national databases, a biologist determined it is unlikely that any special status plant or animal species would occur within or adjacent to the project area. However, the possibility exists that frog or bird species could become established prior to construction of the project. The Town shall implement standard California Department of Fish and Wildlife, and United States Fish and Wildlife Service Mitigation and Avoidance Measures to prevent mortality of individual frogs or birds that may be found in the project area during project activities. These mitigation measures reduce potential adverse effects to frog and bird species to less than significant. Therefore, the project would have less than significant effect on special status plant or animal species.

Step 6: Reevaluation of the Alternatives

The proposed project would fill 0.02-acre of seasonal streams on the site and would fully mitigate impacts to wetlands and streams. The proposed project would have minimal, if any, impact on endangered species

or critical habitat. Because this site is zoned appropriately for affordable, low-density housing and the project has been designed to avoid impacts to existing wetlands, no alternative sites were identified that met the appropriate cost and zoning criteria, and no alternative sites were identified to protect wetlands.

The no action alternative, which means no federal funding, would not satisfy the project's purpose and need. The price of land and cost of development does not allow market rate construction of affordable housing without government assistance. No action would leave a demolished lot vacant, or future development of the site with housing priced out of reach for families making 60 percent or less of the area median income. Additionally, future development of the site may not be designed to avoid impacts to wetlands. Physical impacts to the environment would occur with or without federal funding, yet no benefits to the human environment would occur. The Town has determined the project is consistent with all Town land use plans, policies, and regulations for the project site, and the loss of a small portion of seasonal streambed will be fully mitigated. No federal funding for this site would not meet the Town's goals to rebuild housing lost in the Camp Fire and to bring affordable housing that is needed within the Town of Paradise. There are no benefits to the physical or human environment by taking no federal action for this project.

Step 7: Determination of No Practicable Alternative

It is the Town's determination that there is no practicable alternative to locating the project near and partially in a wetlands because:

- There is a need for federal funding to support Paradise in providing affordable supportive housing units.
- The proposed project is cost efficient for affordable housing which benefits the human environment.
- The minor loss of 0.02-acres of wetlands will be mitigated through a Section 404 Permit with the USACE, a Streambed Alteration agreement with the CDFW, and a Section 401 permit with the RWQCB.
- The proposed improvements would have no adverse effects on human health, public property, and endangered species.

A final notice was published in the Paradise Post consistent with the prior notice. The notice explains the reasons why the project must be located near and partially in the wetlands, offers a list of alternatives considered at Steps 3 and 6, and describes any measures at Step 5 taken to minimize adverse impacts and preserve natural and beneficial wetland values. The notice is attached to this document.

Step 8: Review the Implementation and Post-Implementation Phases of the Proposed Action

Prior to issuing a grading permit, the Town will require the project proponent to determine the exact quantity of aquatic resources to be impacted and obtain regulatory permits from the USACE (Section 404 permit), CDFW (Streambed Alteration agreement), and RWQCB (Section 401 permit) to comply with federal and state regulations. The project proponent must purchase mitigation bank credits or provide on-site mitigation/restoration for impacts to aquatic resources at a ratio agreed to between the Town, USACE, RWQCB, and CDFW. These regulatory permits are designed to fully mitigate impacts on these resources. The Town would take an active role in monitoring construction processes to ensure that no unnecessary impacts occur, nor unnecessary risks are taken.

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<u>Ad Order Number</u> 0006732309	<u>Customer</u> TOWN OF PARADISE - COMMERCIAL DEVELOPMENT	<u>Payor Customer</u> TOWN OF PARADISE - COMMERCIAL DEVELOPMENT	<u>PO Number</u>
<u>Sales Representative</u> House NVER	<u>Customer Account</u> 2123937	<u>Payor Account</u> 2123937	<u>Ordered By</u> Melanie Elvis
<u>Order Taker</u> Zofia Sparlin	<u>Customer Address</u> 5555 SKYWAY PARADISE, CA 95969	<u>Payor Address</u> 5555 SKYWAY PARADISE, CA 95969	<u>Customer Fax</u>
<u>Order Source</u>	<u>Customer Phone</u> 530-872-6291 x 127	<u>Payor Phone</u> 530-872-6291 x 127	<u>Customer Email</u> smiller@townofparadise.com
<u>Current Queue</u> Ready	<u>Invoice Text</u> Early Notice for Cypress Lane project		
<u>Tear Sheets</u> 2	<u>Blind Box</u>	<u>Materials</u>	<u>Special Pricing</u>
	<u>Affidavits</u> 0	<u>Promo Type</u>	

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External Ad Number

Color

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Production Color

Ad Type

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Production Method

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Production Notes

Advertising Order Confirmation

Town of Paradise Early Notice and Public Review of a Proposed Activity in a Wetland

Date: February 15, 2023

To: All interested Agencies Groups and Individuals

This is to give notice that the Town of Paradise has conducted an evaluation as required by Executive Order 11990, in accordance with HUD regulations at 24 CFR 55.20 Subpart C Procedures for Making Determinations on Floodplain Management and Protection of Wetlands, to determine the potential affect that its activity in the wetland will have on the human environment for the proposed Cypress Family and Senior Housing Project (project). The project would be located at 1620, 1623, and 1633 Cypress Lane, 6900 Clark Road, and 1567 and 1580 Adams Road in Paradise, Butte County, California. Phase 1 will include 70 units of family rental housing with a mix of one-, two-, and three- bedroom units. The resident population will be households with incomes and affordable rents from 30% to 60% of the Area Median Income (AMI). Seventeen project-based Section 8 vouchers are assumed to be available to further subsidize affordability. Phase 2 will include 70 one-bedroom units for senior rental. The Phase 2 population will be households with incomes and affordable rents from 30% to 50% of the AMI; 34 of the units are assumed to have project-based Section 8 vouchers to further subsidize affordability.

There are three primary purposes for this notice. First, people who may be affected by activities in wetlands and those who have an interest in the protection of the natural environment should be given an opportunity to express their concerns and provide information about these areas. Second, an adequate public notice program can be an important public educational tool. The dissemination of information and request for public comment about wetlands can facilitate and enhance Federal efforts to reduce the risks and impacts associated with the occupancy and modification of these special areas. Third, as a matter of fairness, when the Federal government determines it will participate in actions taking

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place in wetlands, it must inform those who may be put at greater or continued risk.

Written comments must be received by the Town of Paradise **on or before March 17, 2023**, at the following address: Town of Paradise, 6295 Skyway, Community Development Department, Paradise, California 95969, Attention: Susan Hartman, during the office hours of 9:00am to 5:00pm. Comments may also be submitted via email to shartman@townofparadise.com. A full description of the project may also be requested via mail or email at the addresses above.

Product Paradise Post	Requested Placement Legals CLS NC	Requested Position General Legal NC - 1076~	Run Dates 02/15/23	# Inserts 1
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Net Amount	153.60	Tax Amount	0.00	Total Amount	153.60	Payment Amount	0.00	Amount Due	\$153.60
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2123937

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2123937

Ordered By

Dina Volenski

Order Taker

Zofia Sparlin

Customer Address

5555 SKYWAY
PARADISE, CA 95969

Payor Address

5555 SKYWAY
PARADISE, CA 95969

Customer Fax

Order Source

Customer Phone

530-872-6291 x 127

Payor Phone

530-872-6291 x 127

Customer EMail

smiller@townofparadise.com

Current Queue

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Invoice Text

Public Hearing, Cypress Lane Final Notice

Tear Sheets

2

Affidavits

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ENTERPRISE-RECORD MERCURY-REGISTER PARADISE POST RED BLUFF DAILY NEWS

03/17/23 1:27:26PM

Page 2

Ad Number

0006740078-01

Color

Production Color

Ad Attributes

Production Method

Production Notes

AdBooker

External Ad Number

Pick Up

Ad Type

Released for Publication

Legal Liner

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Town of Paradise Final Notice and Public Explanation of a Proposed Activity in a Wetland

Date: March 22, 2023

To: All interested Agencies Groups and Individuals

This is to give final notice that the Town of Paradise has conducted an evaluation as required by Executive Order 11990 to determine the potential affect that its activity in a wetland will have on the human environment for the proposed project Cypress Family and Senior Housing Project (project). The project would be located at 1620, 1623, and 1633 Cypress Lane, 6900 Clark Road, and 1567 and 1580 Adams Road in Paradise, Butte County, California, and is anticipated to receive Community Development Block Grant – Disaster Recovery funding. Phase 1 will include 70 units of family rental housing with a mix of one-, two-, and three- bedroom units. The resident population will be households with incomes and affordable rents from 30% to 60% of the Area Median Income (AMI). Seventeen project-based Section 8 vouchers are assumed to be available to further subsidize affordability. Phase 2 will include 70 one-bedroom units for senior rental. The Phase 2 population will be households with incomes and affordable rents from 30% to 50% of the AMI; 34 of the units are assumed to have project-based Section 8 vouchers to further subsidize affordability.

The Town has considered the following alternatives and mitigation measures to be taken to minimize adverse impacts and to restore and preserve natural and beneficial values: alternative site plans, alternative sites, no action, and the preferred alternative. Alternative site plans to avoid wetlands were considered, and the preferred alternative reflects a revised site plan that avoids all wetlands except those at the roadway culverts. Alternative Sites that do not contain wetlands that would meet the need for affordable housing is extremely limited within the Town; sites that do not meet cost and zoning criteria were eliminated as alternatives. The project site was chosen from several potential properties considered based upon feasibility, location, and affordability. The No Action Alternative would leave the fire damaged

and cleared site vacant or developed with market rate housing and would fail to provide needed additional affordable family and senior housing. The preferred alternative would fill less than 0.1-acres of seasonal streams at the roadway culverts and would fully mitigate for any impacts to wetlands and streams through mitigation requirements that will be outlined in the US Army Corps of Engineers (USACE) Section 404 permit, California Department of Fish and Wildlife (CDFW) Streambed Alteration agreement, and Regional Water Quality Control Board (RWQCB) Section 401 permit. The proposed project would have minimal, if any, impact on endangered species or critical habitat. Because this site is zoned appropriately for affordable, low-density housing and the project has been redesigned to avoid impacts to existing wetlands, no alternative sites were identified that met the appropriate cost and zoning criteria.

This activity will not have a significant impact on wetlands or the human environment for the following reasons:

- There is a need for federal funding to support Paradise in providing affordable supportive housing units.
- The proposed project is cost efficient for affordable housing.
- The loss of wetlands shall be mitigated through a Section 404 Permit with the USACE, a Streambed Alteration agreement with the CDFW, and a Section 401 permit with the RWQCB.
- The proposed improvements would have no adverse effects on human health, public property, and endangered species.

Environmental files that document compliance with steps 3 through 6 of Executive Order 11990 are available for public inspection, review, and copying upon request at the times and location delineated in the last paragraph of this notice for receipt of comments.

There are three primary purposes for this notice. First, people who may be affected by activities in wetlands and those who have an interest in the protection of the natural environment should be given an opportunity to express their concerns and provide information about these areas. Second, an adequate public notice program can be an important public educational tool. The dissemination of information and request for public

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comment about wetlands can facilitate and enhance Federal efforts to reduce the risks and impacts associated with the occupancy and modification of these special areas. Third, as a matter of fairness, when the Federal government determines it will participate in actions taking place in wetlands, it must inform those who may be put at greater or continued risk.

Written comments must be received by the Town of Paradise **on or before April 3, 2023**, at the following address: Town of Paradise, 6295 Skyway, Community Development Department, Paradise, California 95969, Attention: Susan Hartman, during the office hours of 9:00am to 5:00pm. Comments may also be submitted via email to shartman@townofparadise.com. A full description of the project may also be requested via mail or email at the addresses above.

<u>Product</u>	<u>Requested Placement</u>	<u>Requested Position</u>	<u>Run Dates</u>	<u># Inserts</u>
Paradise Post	Legals CLS NC	General Legal NC - 1076~	03/22/23	1

Order Charges:	<u>Net Amount</u>	<u>Tax Amount</u>	<u>Total Amount</u>	<u>Payment Amount</u>	<u>Amount Due</u>
	288.24	0.00	288.24	0.00	\$288.24

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Aquatic Resources Delineation Report

Cypress Family and Senior Housing Project
May 2023



Richmond, CA

501 Canal Blvd., Suite I
Richmond, CA 94804



Mercy Housing California

Jeffrey Riley
Senior Project Developer
2512 River Plaza Dr., Suite 200
Sacramento, CA 95833

**Aquatic Resources Delineation Report
Cypress Family and Senior Housing Project
Paradise, California**

May 2023

Prepared for:

Mercy Housing California

Jeffrey Riley
Senior Project Developer
2512 River Plaza Drive, Suite 200
Sacramento, CA 95833

Prepared by:

A handwritten signature in blue ink that reads "Cord Hute".

Cord Hute
Senior Biologist

A handwritten signature in blue ink that reads "Annabel Li".

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NCE Project No. 621.09.55

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Executive Summary

NCE performed a field investigation on October 18/19, 2022, evaluating the potential jurisdictional status of waters of the United States for the Cypress Family and Senior Housing Project in Paradise, California.

The United States Fish and Wildlife Service (USFWS), National Wetlands Inventory (NWI), identified a freshwater forested/shrub wetland in the western portion of the survey area. This wetland corresponds to Dry Creek, as identified by the United States Geological Survey (USGS).

NCE surveyed approximately 23.6 acres. Within the survey area, NCE delineated three seasonal streams and four freshwater emergent wetlands which are potentially jurisdictional waters of the United States (**Appendix A, Figure 1**):

- Dry Creek: This creek is a seasonal stream, Cowardin classified as Forested, Palustrine, and is approximately 0.58 acres in size and 0.19 linear miles in length within the survey area.
- Stream Channel 1: This seasonal stream is Cowardin classified as Forested, Palustrine, and is approximately 0.15 acres in size and 0.12 linear miles in length within the survey area.
- Stream Channel 2: This seasonal stream is Cowardin classified as Forested, Palustrine, and is approximately 0.13 acres in size and 0.09 linear miles in length within the survey area.
- Wetland A: This seasonal wetland is Cowardin classified as Emergent, Palustrine and is approximately 0.21 acres in size within the survey area.
- Wetland B: This seasonal wetland is Cowardin classified as Emergent, Palustrine and is approximately 0.24 acres in size within the survey area.
- Wetland C: This seasonal wetland is Cowardin classified as Emergent, Palustrine and is approximately 0.05 acres in size within the survey area.
- Wetland D: This seasonal wetland is Cowardin classified as Emergent, Palustrine and is approximately 0.09 acres in size within the survey area.

These findings should be considered preliminary until the United States Army Corps of Engineers issues a final approved jurisdictional determination. This delineation was conducted in accordance with the following guidance:

- 1987 Corps of Engineers Wetland Delineation Manual;
- Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0), May 2010; and,
- A Field Guide to the Identification of the Ordinary High-Water Mark (OHWM) in the Arid West Region of the Western United States, August 2008.

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List of Abbreviations

Abbreviation	Definition
County	Butte County
MSL	Mean Sea Level
NWI	National Wetlands Inventory
NRCS	Natural Resource Conservation Service
OHWM	Ordinary High Water Mark
Project	Cypress Family and Senior Housing Project
RPW	Relatively Permanent Water
TNW	Traditional Navigable Waterway
Town	Town of Paradise
USACE	United States Army Corps of Engineers
USDA	United States Department of Agriculture
USFS	United States Forest Service
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
WOUS	Waters of the United States

1 Introduction

1.1 CONTACT AND PROJECT INFORMATION

On behalf of Mercy Housing California, NCE conducted a formal United States Army Corps of Engineers (USACE) aquatic resources delineation within the survey area of the Cypress Family and Senior Housing Project (Project). The Mercy Housing California contact is Jeffrey Riley:

Jeffrey Riley

Mercy Housing California, Senior Project Developer

2512 River Plaza Drive, Suite 200

Sacramento, CA 95833

(916) 414-4406

jriley@mercyhousing.org

Cord Hute of NCE conducted the aquatic resources delineation on October 18/19, 2022. Cord Hute will function as the agent for Mercy Housing California.

The Project is located at 1620, 1623, and 1633 Cypress Lane, 6900 Clark Road, and 1567 and 1580 Adams Road, in Paradise, California (**Appendix B, Figure 2**). The nearly 24-acre site consists of 7 parcels that were largely cleared after the 2018 Camp Fire, although there are remnants remaining such as asphalt, septic tanks and leach fields, gazebos, concrete, and driveways. Some parts of the proposed site previously contained a vocational rehabilitation facility, nursing home, and church. Three seasonal streams and three freshwater emergent wetlands are located throughout the survey area. Surrounding the survey area is formerly residential areas that were destroyed in the 2018 Camp Fire.

The survey area may be found on United States Geological Survey (USGS) 7.5-minute series topographic Paradise East quadrangle map (**Appendix B, Figure 3**).

1.2 PURPOSE

The purpose of this report is to identify and describe aquatic resources and to identify the potential for sensitive plant, fish, and wildlife species in the survey area. This report facilitates efforts to:

- Avoid or minimize impacts to aquatic resources during the project development process
- Document aquatic resource boundary determinations for review by the USACE
- Provide early indications of known sensitive species within the survey area

- Provide background information
- Support possible future permit applications

2 Background

2.1 SITE DESCRIPTION

2.1.1 Location

The survey area is located in Paradise, California, at 1620, 1623, and 1633 Cypress Lane, 6900 Clark Road, and 1567 and 1580 Adams Road (**Appendix B, Figures 1 and 2**). The survey area is located within Section 12, Township 22 North, Range 3 East of the Mount Diablo Meridian. The survey area is within the Paradise East USGS 7.5-minute quadrangle map (**Appendix B, Figure 3**). At the northeastern corner of the site, the latitude is 39.784913 N and the longitude is -121.582798 W.

2.1.2 Site Access

To access the project site from the City of Chico west of the Town of Paradise, take California State Route 99 South, then take exit 383 toward Skyway/Park Ave and turn left onto Skyway, continue east on Skyway for 12.5 miles, turn right onto Bille Road and continue for 0.8 miles, turn left onto Clark Road and continue for 1.1 miles, turn right onto Cypress Lane and into the project site.

2.1.3 Land Use

The land within the survey area consists of 7 parcels that were largely cleared after the 2018 Camp Fire. Some parts of the site previously contained a vocational rehabilitation facility, nursing home, and church. Surrounding the survey area is formerly residential areas that were destroyed in the 2018 Camp Fire (**Appendix B, Figure 2**).

2.1.4 Vegetation

Based on the California Wildlife Habitat Relationships (CWHR) dataset (CDFW, 2023), the survey area and surrounding area contains Aspen, Annual Grassland, Douglas Fir, Eastside Pine, Freshwater Emergent Wetland, Lacustrine, Low Sage, Mixed Chaparral, Montane Chaparral, Montane Hardwood-Conifer, Montane Hardwood, Montane Riparian, Perennial Grassland, Rice, Riverine, Sagebrush, Sierran Mixed Conifer, Urban, White Fir, and Wet Meadow habitats. According to the United States Forest Service (USFS) Existing Vegetation Data (CALVEG), the survey area and surrounding area primarily contains Ponderosa Pine, Lower Montane Mixed Chaparral, and Blue Oak (**Appendix B, Figure 6**).

2.1.5 Soils

The soils at the survey area have been mapped by the Department of Agriculture, Natural Resource Conservation Service (NRCS), and were downloaded from the Web Soil Survey (NRCS 2023b) NRCS identified one soil type within the survey area

(**Appendix B, Figure 5**). The soil type and its hydric status is presented below and in **Table 1**.

829 – Paradiso loam, 2 to 15 percent slopes

Paradiso loam, 2 to 15 percent slopes is a soil component that occurs on ridges. The parent material consists of clayey residuum weathered from volcanic rock. This soil is well drained with medium amounts of runoff, and is not hydric (NRCS 2023a).

Table 1. Soils within the Survey Area

Map Unit Symbol	Name	Acres in Survey Area	Percent of Survey Area	NRCS Hydric List
829	Paradiso loam, 2 to 15 percent slopes	23.6	100%	No
Totals for the Survey Area		23.6	100%	

2.1.6 Hydrology

Direct precipitation, storm water runoff, and upstream ponds are the primary sources of surface water for the six seasonal wetlands and streams, which are hydrologically connected to Dry Creek, which is hydrologically connected to a traditional navigable waterway (TNW). Dry Creek flows south through the survey area, and eventually discharges into the Cherokee Canal, which flows into Butte Creek, which then deposits into the Sacramento River, which is a TNW.

2.1.7 National Wetland Inventory

The USFWS NWI identifies Dry Creek as a freshwater forest/shrub wetland in the western portion of the survey area (**Appendix B, Figure 4**).

3 Methods

3.1 RESEARCH AND FIELD METHODOLOGY

Prior to the field investigation, USGS topographic maps, aerial photographs, USFWS NWI mapping, and a NRCS custom soil report of the survey area were reviewed for indications of ephemeral, intermittent, and perennial drainages as well as mapped wetlands and spring locations.

Wetlands

The survey area was investigated for the presence of wetlands utilizing the USACE 1987 three-parameter (vegetation, hydrology, and soils) methodology. This methodology was refined in the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0), May 2010 and requires the collection of data on soils, vegetation, and hydrology at several locations to establish the potential jurisdictional boundary of wetlands. Arid West Region Wetland Determination Data Forms were completed for each wetland identified.

Drainage

The survey area was delineated for drainages utilizing the presence of Ordinary High Water Mark (OHWM) indicators, evidence of frequent surface water flows, and a connection to a TNW. These characteristics were indicative of a jurisdictional waters of the United States (WOUS). Arid West Ephemeral and Intermittent Stream OHWM Data Sheets were completed for each drainage with the presence of OHWM indicators. If the drainage had OHWM indicators present, the drainage was followed to determine if the drainage flowed into another drainage with OHWM indicators or if these indicators terminated. Where the drainage exhibited OHWM indicators, width measurements were taken to be used in determining an average width of the drainage and height measurements from the OHWM to the drainage bottom were taken. When drainages with OHWM indicators left the survey area, an attempt was made to follow the drainage to determine if OHWM indicators terminated or a connection to a TNW. The OHWM indicator locations were recorded with a Trimble Geo7x GPS unit and representative photographs were taken.

3.2 SURVEY DATA INTEGRATION

Boundaries of the potential aquatic resources within the survey area were mapped using a Trimble Geo7x GPS unit and digitized in ESRI ArcGIS Pro software. The horizontal datum is NAD 1983 and no vertical data was collected.

3.3 PROPERTY OWNER ACCESS

A signed letter from the property owner allowing the USACE to access the property is not required, as the survey area is located within Town and County right-of-way. Please notify the project proponent prior to visiting the site.

4 Results

4.1 LANDSCAPE SETTING

The survey area is approximately 23.6 acres. The entire survey area was field delineated by NCE on October 18/19, 2022. There are 7 aquatic wetlands throughout the project area. East and west of the survey area are two river valleys where topography slopes downward away from the survey area (**Appendix B, Figure 3**). Elevation of the survey area ranges from 2090 feet above mean sea level (msl) to 2126 feet above msl.

4.2 AQUATIC RESOURCES

Seven aquatic resources were delineated and are presented below. The photographs are noted as Photograph Points (PP) in **Appendix C**, and photo directions are indicated in **Appendix B, Figure 7**. A list of the plants identified within the survey is in **Appendix D**. The OHWM datasheet is in **Appendix E**.

Although the Paradiso loam within the survey area is not a USDA listed hydric soil, the soils within Wetlands A, B, C, and D displayed multiple hydric soil indicators, and were thus determined to be hydric.

4.2.1 Dry Creek

Dry Creek covers 0.58 acres through the western portion of the survey area, perpendicular to Cypress Lane and Adams Road. Dry Creek flows south through the survey area, and eventually discharges into the Cherokee Canal. The Cherokee Canal flows into Butte Creek, which then deposits into the Sacramento River. OHWM indicators were a break in bank slope and changes in vegetation species and cover.

Dry Creek contained low flow at the OHWM data points at the time of delineation. Within the survey area, Dry Creek is approximately 0.19 miles in length (including the culvert). The average OHWM width is 19 feet. Data points OHWM3 and OHWM4 were taken at representative locations of Dry Creek within the survey area:

- OHWM3 contains an approximate OHWM width of 19 feet with approximately 4 inches from water to top of muck.
- OHWM4 contains an approximate OHWM width of 19.5 feet with approximately 4 inches from water to top of muck.

Dry Creek is identified by USGS as Dry Creek within the survey area (**Appendix B, Figure 3**). USFWS, NWI identified Dry Creek as a freshwater forested/shrub wetland (**Appendix B, Figure 6**). Dry Creek connects to the Sacramento River, a TNW.

4.2.2 Stream Channel 1

Stream Channel 1 covers 0.15 acres east of Wetland A and west of Dry Creek, with a perpendicular portion that juts out south of Cypress Lane. OHWM indicators were a break in bank slope and changes in vegetation species and cover.

Stream Channel 1 contained low flow at the OHWM data points at the time of delineation. Within the survey area, Stream Channel 1 is approximately 0.12 miles in length (including culverts). The average OHWM width is 7 feet. Data points OHWM1 and OHWM2 were taken at representative locations of Stream Channel 1 within the survey area:

- OHWM1 contains an approximate OHWM width of 8 feet with approximately 4 inches from water to top of muck.
- OHWM2 contains an approximate OHWM width of 6.5 feet with approximately 4 inches from water to top of muck.

Stream Channel 1 is not identified by USGS or USFWS, NWI. Stream Channel 1 connects to the Sacramento River, a TNW.

4.2.3 Stream Channel 2

Stream Channel 2 covers 0.13 acres in the southeastern corner of the survey area. OHWM indicators were a break in bank slope and changes in vegetation species and cover.

Stream Channel 2 did not contain flow the OHWM data point at the time of delineation. Within the survey area, Stream Channel 2 is approximately 0.09 miles in length. The average OHWM width is 14 feet. Data point OHWM5 was taken at a representative location of Stream Channel 2 within the survey area:

- OHWM5 contains an approximate OHWM width of 14 feet with approximately 4 inches from water to top of muck.

Stream Channel 2 is not identified by USGS or USFWS, NWI. Stream Channel 2 connects to the Sacramento River, a TNW.

4.2.4 Wetland A

Wetland A covers 0.21 acres west of the streams and north of Cypress Lane. Wetland A contained hydrophytic vegetation, hydric soil, wetland hydrology, and surface water at the time of delineation.

Wetland A is not identified by USGS or USFWS, NWI. Wetland A connects to the Sacramento River, a TNW.

4.2.5 Wetland B

Wetland B covers 0.24 acres bordering the west side of Dry Creek in the western portion of the survey area, just south of Cypress Lane. Wetland B flows into Dry Creek, which eventually discharges into the Cherokee Canal. The Cherokee Canal flows into Butte Creek, which then deposits into the Sacramento River. Wetland B contained hydrophytic vegetation, hydric soil, wetland hydrology, and surface water at the time of delineation.

Wetland B is not identified by USGS or USFWS, NWI. Wetland B connects to the Sacramento River, a TNW.

4.2.6 Wetland C

Wetland C covers 0.05 acres bordering the west side of Dry Creek in the southwestern portion of the survey area. Wetland C flows into Dry Creek, which eventually discharges into the Cherokee Canal. The Cherokee Canal flows into Butte Creek, which then deposits into the Sacramento River. Wetland C contained hydrophytic vegetation, hydric soil, wetland hydrology, and surface water at the time of delineation.

Wetland C is not identified by USGS or USFWS, NWI. Wetland C connects to the Sacramento River, a TNW.

4.2.7 Wetland D

Wetland D covers 0.09 acres bordering the east side of Dry Creek in the southwestern portion of the survey area. Wetland D flows into Dry Creek, which eventually discharges into the Cherokee Canal. The Cherokee Canal flows into Butte Creek, which then deposits into the Sacramento River. Wetland D contained hydrophytic vegetation, hydric soil, wetland hydrology, and surface water at the time of delineation.

Wetland D is not identified by USGS or USFWS, NWI. Wetland C connects to the Sacramento River, a TNW.

4.3 AQUATIC RESOURCES TYPES AND AMOUNTS AND FEDERAL JURISDICTIONAL STATUS

Table 2 presents the aquatic resources identified within the survey area.

Table 2. Aquatic Resources within the Survey Area

Aquatic Resource Name	Aquatic Resources Classification		Aquatic Resource Size (acre)*	Aquatic Resource Size (linear feet)**
	Cowardin	Location (lat/long)		
Dry Creek	PFO – Forested, Palustrine	39.78328052/ -121.58541857	0.58	1,003

Aquatic Resource Name	Aquatic Resources Classification		Aquatic Resource Size (acre)*	Aquatic Resource Size (linear feet)**
	Cowardin	Location (lat/long)		
Stream Channel 1	PFO – Forested, Palustrine	39.78427669/ -121.58559484	0.15	634
Stream Channel 2	PFO – Forested, Palustrine	39.78181413/ -121.58322845	0.13	475
Wetland A	PEM – Emergent, Palustrine	39.78442771/ -121.58584614	0.21	N/A
Wetland B	PEM – Emergent, Palustrine	39.78351394/ -121.58554527	0.24	N/A
Wetland C	PEM – Emergent, Palustrine	39.78259066/ -121.58558936	0.05	N/A
Wetland D	PEM – Emergent, Palustrine	39.78262844/ -121.58551996	0.09	N/A

*Required for all resources

**Required only for stream channels

Appendix A, Figure 1 depicts the proposed jurisdictional aquatic resources and **Table 3** presents the proposed jurisdictional status of the aquatic resources within the survey area.

Table 3. Waters of the U.S. Proposed Jurisdictional Status

Class	Total Acres	Jurisdictional	Non-Jurisdictional
PFO – Forested, Palustrine	0.86	0.86	0
PEM – Emergent, Palustrine	0.59	0.59	0
Total	1.45	1.45	0

4.4 SIGNIFICANT NEXUS

The U.S Army Corps of Engineers Jurisdictional Determination Form Instructional Guidebook (USACE 2007) was consulted to aid in the preliminary determination whether an area would be subject to USACE jurisdiction under Section 404 of the Clean Water Act. The significant nexus test, outlined in a memorandum jointly authored by the U.S. Environmental Protection Agency and USACE, was applied to each potentially jurisdictional habitat type (Grumbles and Woodley 2008). To facilitate potentially jurisdictional determination consistent with the guidance, each

water body delineated was evaluated as a TNW, Relatively Permanent Water (RPW), or non-RPW, based on the following definitions:

- TNWs include all waters subject to the ebb and flow the tide, or waters that are presently used, have been used in the past, or may be used in the future to transport interstate or foreign commerce, and all waters that are navigable in fact under federal law for any purpose.
- RPWs are waters that flow continuously at least seasonally (typically at least 3 months of the year) and are not TNWs.
- Non-RPWs are waters that do not have continuous flow at least seasonally.

The following types of water bodies are subject to Clean Water Act jurisdiction:

- All TNWs and adjacent wetlands;
- Relatively permanent tributaries of TNWs and wetlands with a continuous surface connection to such tributaries; and
- Non-relatively permanent tributaries of TNWs and adjacent wetlands if they have a significant nexus to a TNW. Non-RPWs and adjacent wetlands are determined to have a significant nexus to a TNW if they significantly affect the chemical, physical, or biological integrity of a downstream TNW.

NCE's professional opinion is that Dry Creek, Stream Channels 1-2, and Wetlands A-D are hydrologically connected to the Sacramento River, which is a TNW.

Appendix F contains the Aquatic Resources Excel Sheet.

The above findings should be considered preliminary until the USACE makes an approved jurisdictional determination. Areas deemed jurisdictional will then be subject to the regulatory requirements of the federal Clean Water Act.

5 Other Studies

On April 12 and May 4, 2022, NCE conducted reconnaissance-level field surveys to inventory habitats and survey for special status species and non-special status species that have the potential to occur within the study area. Prior to the survey, NCE completed a literature and database review to identify biological resources within and adjacent to the study area. The purpose of this review was to identify vegetation communities and to develop a list of potential special status species and critical habitat occurring within and adjacent to the study area. Special status species includes all listed biological or botanical species with special protections or consideration under federal, state, and local regulations. The database research focused on the following resources:

- California Natural Diversity Database
 - 2022 Natural Diversity Data
- California Native Plant Society
 - 2022 Inventory of Rare and Endangered Plants
- California Department of Fish and Wildlife Special Animals List
 - State listed species that may occur in or be affected by the project
- NOAA Fisheries Species List
 - The project is located outside of NOAA Fisheries jurisdiction; therefore, a NOAA Fisheries species list is not required
- USFWS Information for Planning and Consultation
 - 2022 Federally endangered and threatened species that may occur or be affected by the project

No SSS plants or wildlife were observed during the survey (NCE, 2023).

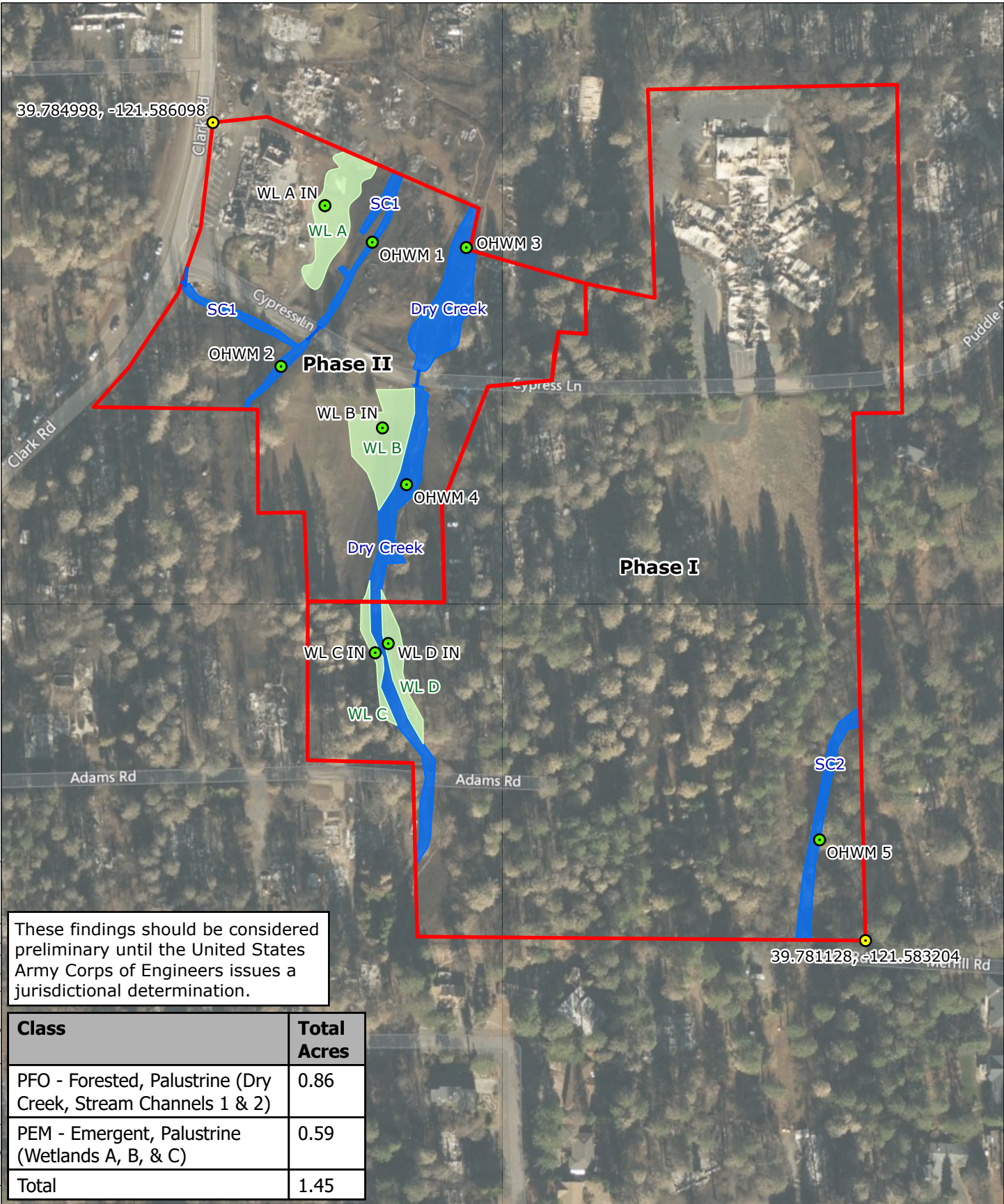
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Appendix A

DELINEATION MAP



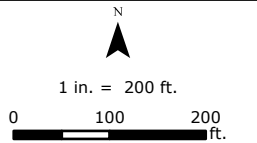
These findings should be considered preliminary until the United States Army Corps of Engineers issues a jurisdictional determination.

Class	Total Acres
PFO - Forested, Palustrine (Dry Creek, Stream Channels 1 & 2)	0.86
PEM - Emergent, Palustrine (Wetlands A, B, & C)	0.59
Total	1.45

- Project Site
- Palustrine Forested Stream
- Palustrine Emergent Wetland
- Culvert
- Reference
- Wetland Data Point



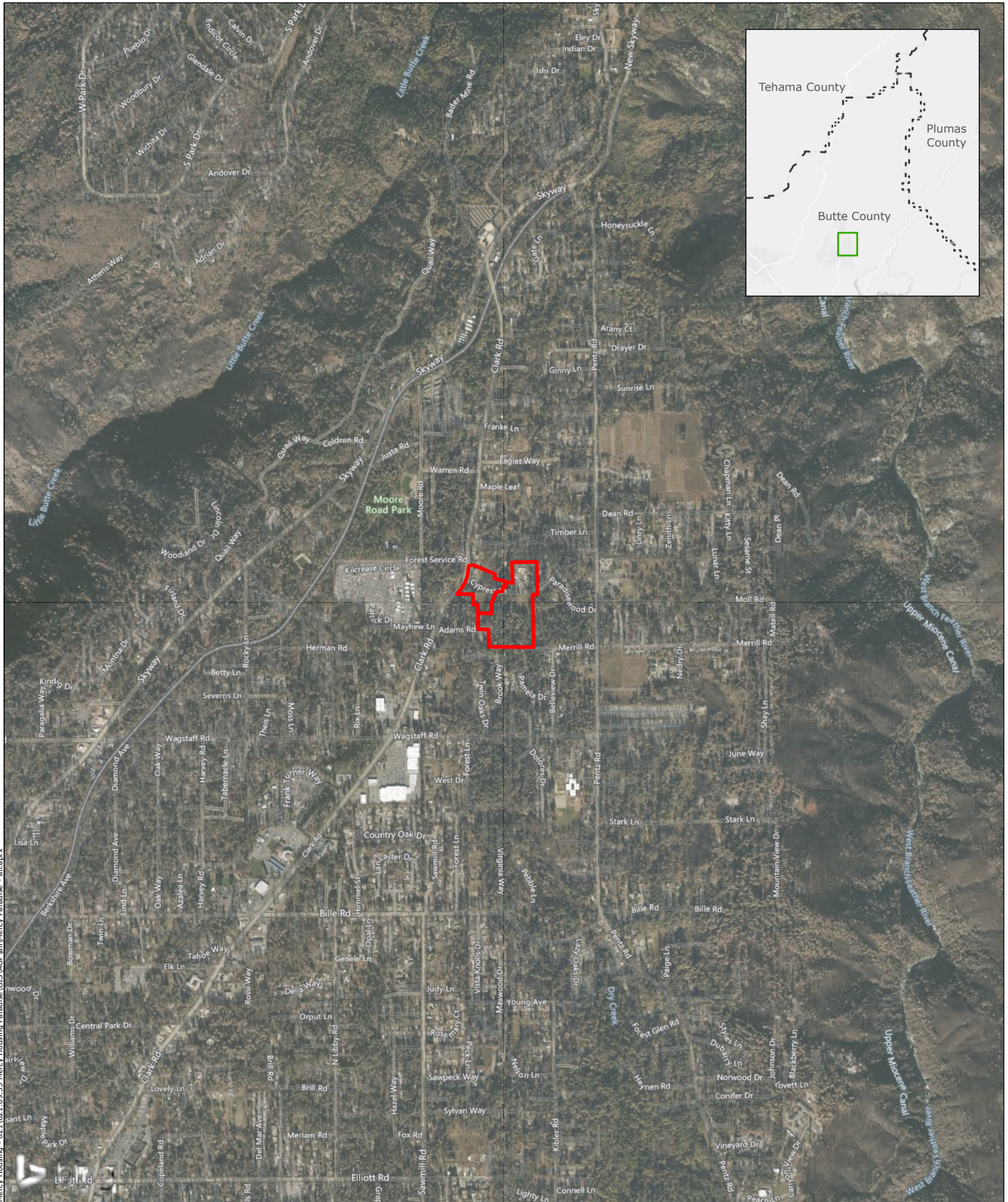
**Cypress Lane Housing Project
Town of Paradise, Butte County
Proposed Delineation Map**



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Appendix B

FIGURES



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Legend
 Project Site



Cypress Lane Housing Project
Town of Paradise, Butte County
Project Area Vicinity Map

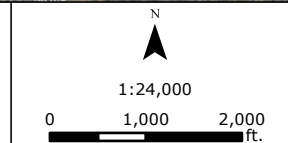


FIGURE
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Legend

Project Site

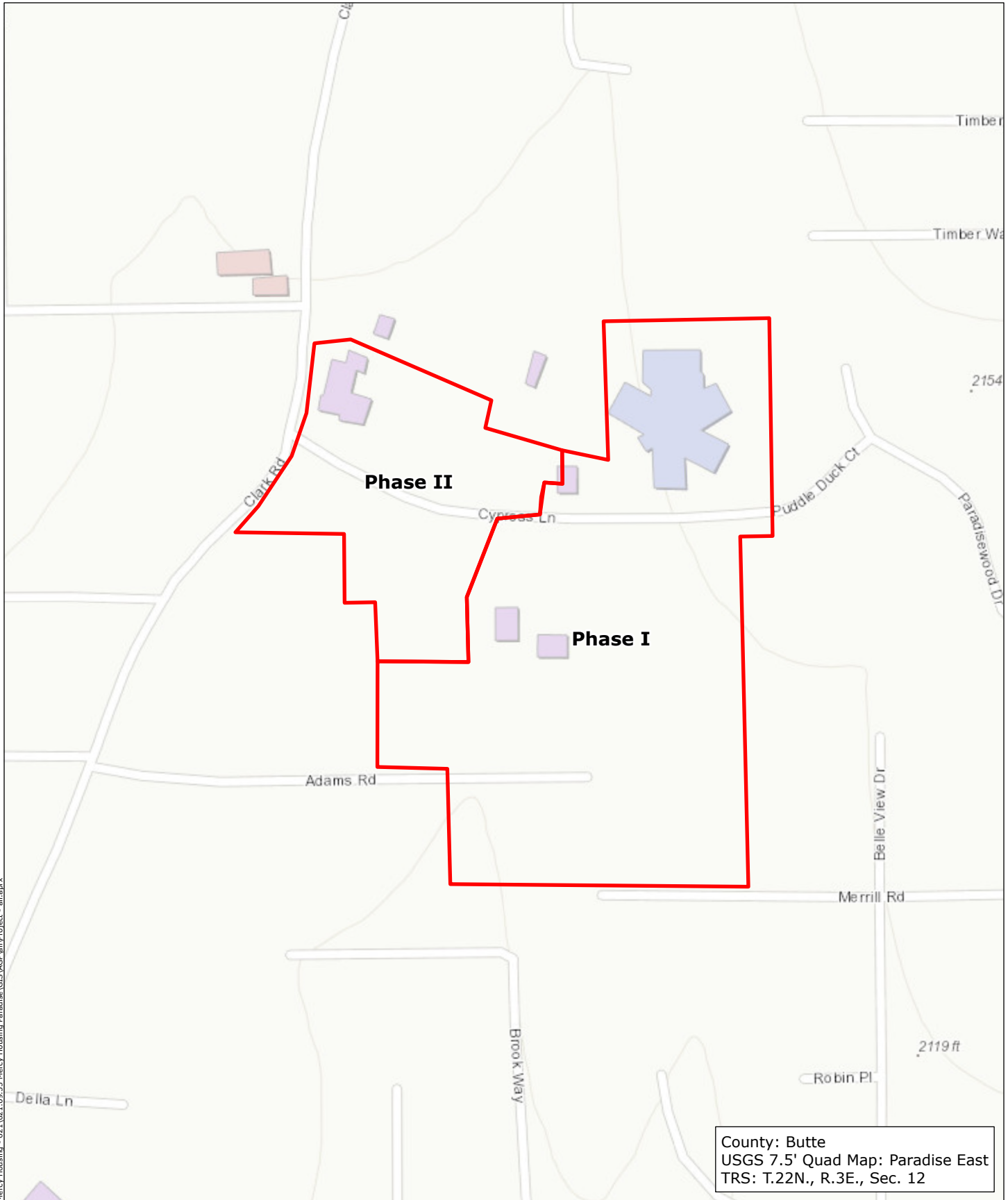


Cypress Lane Housing Project
Town of Paradise, Butte County
 Project Area Detail Map



FIGURE
2

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County: Butte
 USGS 7.5' Quad Map: Paradise East
 TRS: T.22N., R.3E., Sec. 12

Legend
 Project Site



Cypress Lane Housing Project
 Town of Paradise, Butte County
 USGS Topographic Map

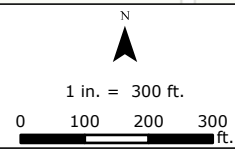


FIGURE
3

SOURCE
 ESRI USGS Topographic Basemap

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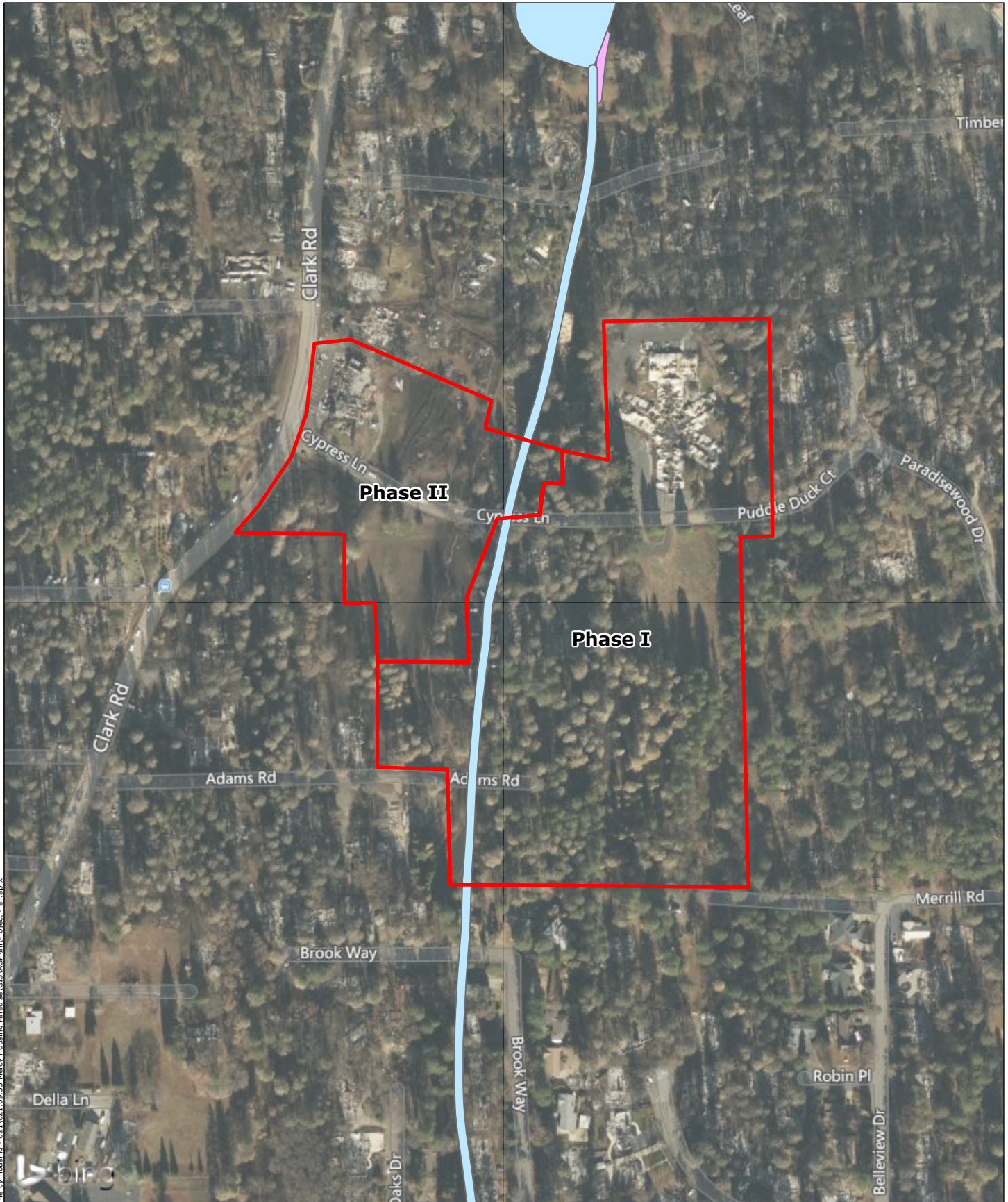
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Legend

- Project Site
- Freshwater Forested/Shrub Wetland
- Riverine



**Cypress Lane Housing Project
Town of Paradise, Butte County
USFWS National Wetlands Inventory Map**

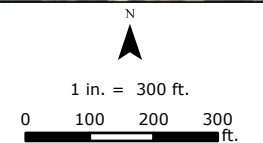
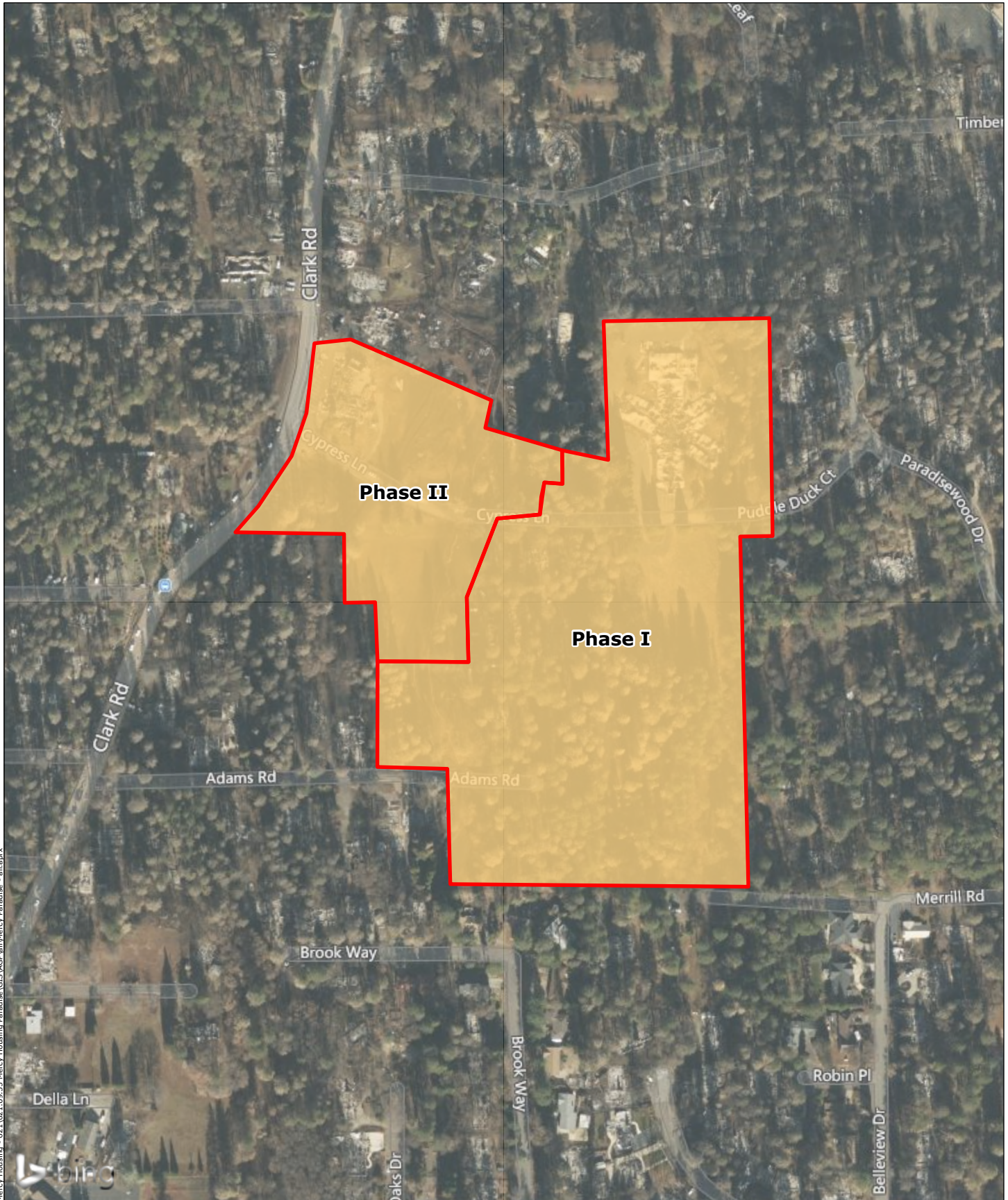


FIGURE
4

SOURCE Bing Aerial Basemap; USFWS 2022	JOB NUMBER 621.09.55	DRAWN ali	DATE 2/1/2023	REVISED -	APPROVED chute
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Legend

- Project Site
- Soil Type**
- 829 - Paradiso loam, 2 to 15 percent slopes

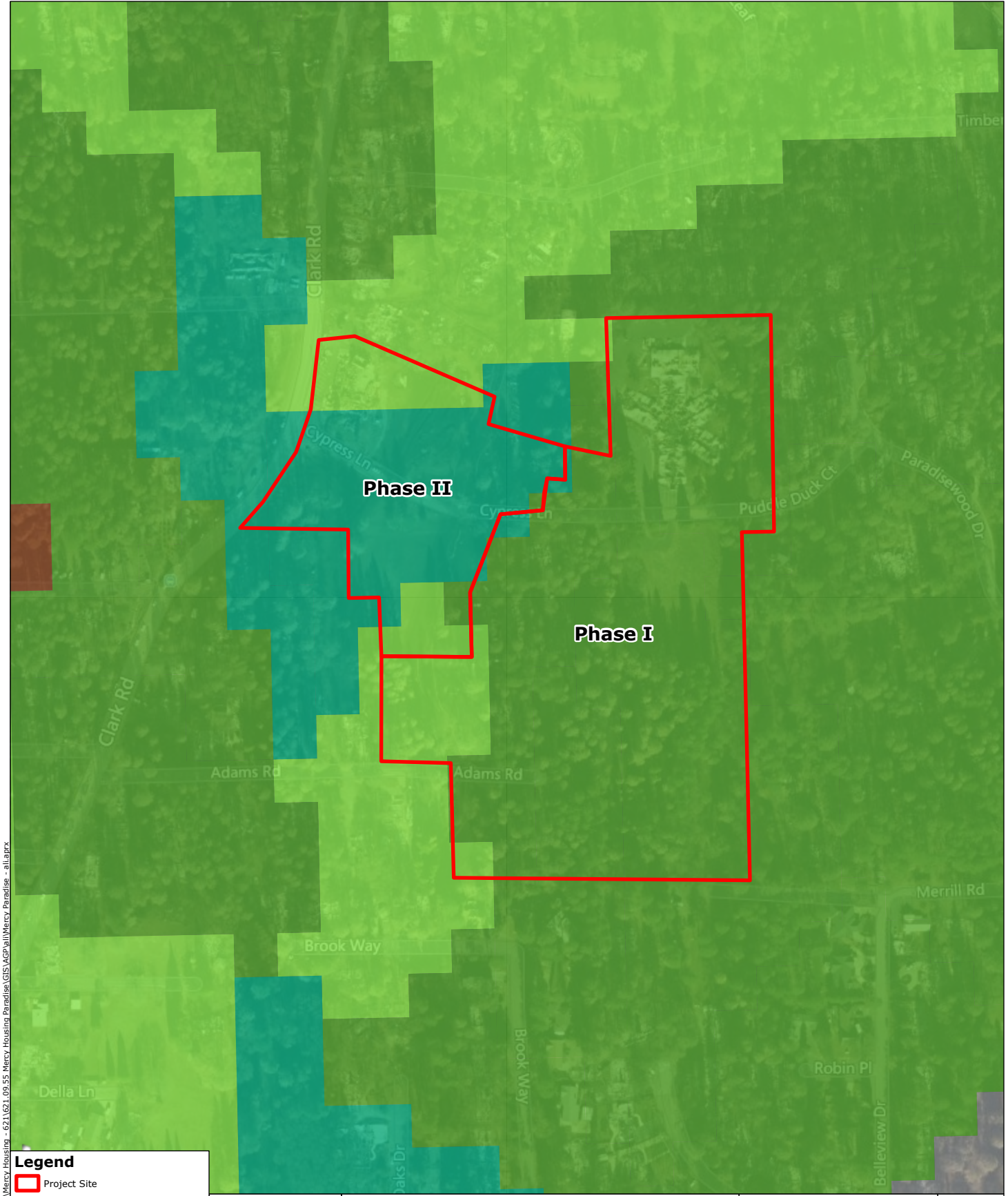
Cypress Lane Housing Project
Town of Paradise, Butte County
USDA Soil Map

1 in. = 300 ft.

FIGURE
5
APPROVED
 chute

Document Path: P:\Active Projects\Mercy Housing - 621.09.55 Mercy Housing Paradise\GIS\AGP\all\Mercy Paradise - all.aprx

SOURCE Bing Aerial Basemap; USDA 2023	JOB NUMBER 621.09.55	DRAWN ali	DATE 3/7/2023	REVISED -	APPROVED chute
--	-------------------------	--------------	------------------	--------------	-------------------



Document Path: P:\Active Projects\Mercy Housing Paradise\GIS\AGP\all\Mercy Paradise - all.aprx

Legend

- Project Site
- Vegetation Type**
- Barren
- Blue Oak
- Lower Montane Mixed Chaparral
- Ponderosa Pine
- Urban/Developed (General)



Cypress Lane Housing Project
Town of Paradise, Butte County
Vegetation Map

N
 ↑

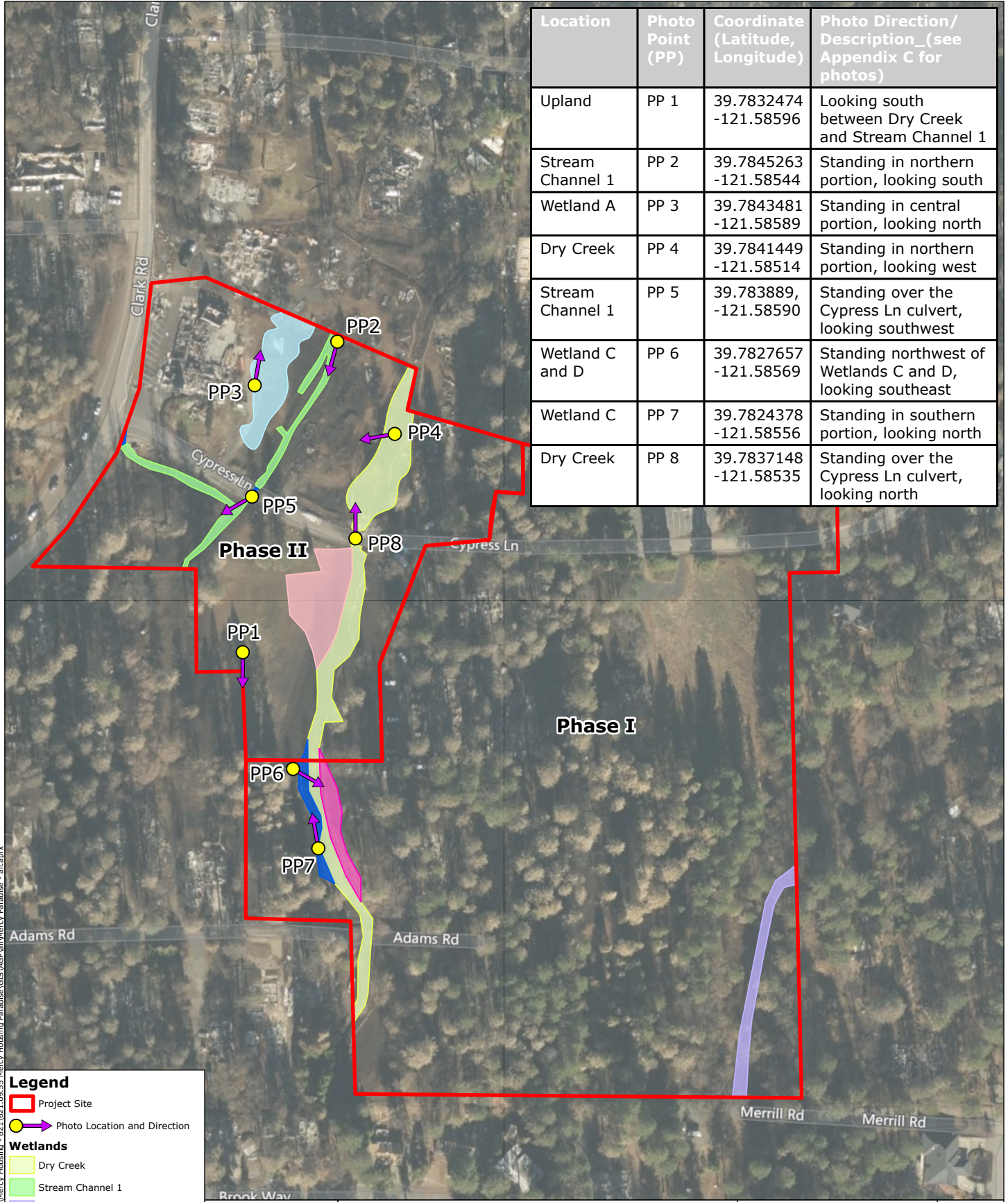
1 in. = 300 ft.

0 100 200 300
 ft.

FIGURE
6

SOURCE Bing Aerial Basemap; USFS 2019	JOB NUMBER 621.09.55	DRAWN ali	DATE 2/1/2023
			REVISED - APPROVED chute

Location	Photo Point (PP)	Coordinate (Latitude, Longitude)	Photo Direction/Description_(see Appendix C for photos)
Upland	PP 1	39.7832474 -121.58596	Looking south between Dry Creek and Stream Channel 1
Stream Channel 1	PP 2	39.7845263 -121.58544	Standing in northern portion, looking south
Wetland A	PP 3	39.7843481 -121.58589	Standing in central portion, looking north
Dry Creek	PP 4	39.7841449 -121.58514	Standing in northern portion, looking west
Stream Channel 1	PP 5	39.783889, -121.58590	Standing over the Cypress Ln culvert, looking southwest
Wetland C and D	PP 6	39.7827657 -121.58569	Standing northwest of Wetlands C and D, looking southeast
Wetland C	PP 7	39.7824378 -121.58556	Standing in southern portion, looking north
Dry Creek	PP 8	39.7837148 -121.58535	Standing over the Cypress Ln culvert, looking north



Legend

- Project Site
- → Photo Location and Direction

Wetlands

- Dry Creek
- Stream Channel 1
- Stream Channel 2
- Wetland A
- Wetland B
- Wetland C
- Wetland D
- Culvert



Cypress Lane Housing Project
Town of Paradise, Butte County
Photo Location Map

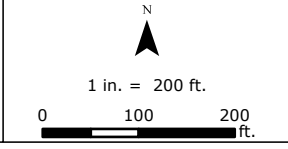


FIGURE
7

SOURCE Bing Aerial Basemap; NCE	JOB NUMBER 621.09.55	DRAWN ali	DATE 3/22/2023	REVISED 5/19/2023	APPROVED chute
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Document Path: P:\Active Projects\Mercy Housing - 621.09.55 Mercy Housing Paradise\GIS\AGP\all\Mercy Paradise - all.aprx

Appendix C

PHOTOS

APPENDIX C



Photograph Point (PP) 1: Standing between Dry Creek and Stream Channel 1, looking south



PP2: Standing in the northern portion of Stream Channel 1, looking south



PP3: Standing in Wetland A, looking north



PP4: Standing in the northern portion of Dry Creek, looking west

APPENDIX C



PP5: Standing over the Cypress Ln culvert of Stream Channel 1, looking southwest



PP6: Standing northwest of Wetland C and D, looking southeast

APPENDIX C



PP7: Standing in the southern portion of Wetland C, looking north



PP8: Standing over the Cypress Ln culvert of Dry Creek, looking north

Appendix D

PLANT LIST

**Plants Identified Within the Survey Area
October 2022 Aquatic Resource Delineation**

Scientific Name	Common Name	Native: Y/N	WIS*
<i>Acacia melanoxylon</i>	Blackwood acacia	N	NI
<i>Acer macrophyllum</i>	Big leaf maple	Y	FACU
<i>Albizia julibrissin</i>	Persian silk tree	N	NI
<i>Aletris farinosa</i>	white colicroot	N	FAC
<i>Apocynum cannabinum</i>	Hemp dogbane	Y	FAC
<i>Arctostaphylos glauca</i>	Big berry manzanita	Y	NI
<i>Artemisia douglasiana</i>	California mugwort	Y	FACW
<i>Brassica nigra</i>	Black mustard	N	NI
<i>Calocedrus decurrens</i>	Incense cedar	Y	NI
<i>Carex obnupta</i>	slough sedge	Y	OBL
<i>Carex sprengeii</i>	long-beak sedge	N	FAC
<i>Ceanothus cuneatus</i>	Buck brush	N	NI
<i>Ceanothus integerrimus</i>	Deer brush	Y	NI
<i>Centaurea solstitialis</i>	Yellow starthistle	N	NI
<i>Cirsium vulgare</i>	Bull thistle	N	FACU
<i>Cynosurus echinatus</i>	Hedgehog dogtail grass	N	NI
<i>Dianthus armeria</i>	Deptford pink	N	FACU
<i>Diospyros kaki</i>	Japanese persimmon	N	NI

ERROR! REFERENCE SOURCE NOT FOUND.

Scientific Name	Common Name	Native: Y/N	WIS*
<i>Echium vulgare</i>	Viper's bugloss	Y	NI
<i>Epilobium brachycarpum</i>	Tall annual willow herb	Y	FAC
<i>Erigeron canadensis</i>	Horseweed	Y	FACU
<i>Eschscholzia californica</i>	California poppy	Y	NI
<i>Frangula californica</i>	California coffeeberry	Y	NI
<i>Genista monspessulana</i>	French broom	N	NI
<i>Heteromeles arbutifolia</i>	Toyon	Y	NI
<i>Juglans hindsii</i>	Northern California black walnut	Y	FAC
<i>Juncus effusus</i>	Common rush	Y	FACW
<i>Juncus xiphioides</i>	iris-leaved rush	Y	OBL
<i>Lagerstroemia indica</i>	Crepe myrtle	N	NI
<i>Lathyrus latifolius</i>	Perennial sweet pea	N	NI
<i>Ligustrum lucidum</i>	Glossy privet	N	NI
<i>Lupinus sp.</i>	Lupine	Y	FAC
<i>Mentha canadensis</i>	Mint	Y	NI
<i>Persicaria hydropiper</i>	Smartweed	Y	OBL
<i>Phacelia imbricata</i>	Imbricate phacelia	Y	NI
<i>Phytolacca americana</i>	Common pokeweed	N	FACU
<i>Pinus ponderosa</i>	Ponderosa pine	Y	FACU

ERROR! REFERENCE SOURCE NOT FOUND.

Scientific Name	Common Name	Native: Y/N	WIS*
<i>Plantago major</i>	Common plantain	N	FAC
<i>Polypogon monspeliensis</i>	rabbitsfoot grass	N	FACW
<i>Poterium sanguisorba</i>	Small burnet	N	UPL
<i>Pteridium aquilinum</i>	Bracken Fern	Y	FACU
<i>Quercus agrifolia</i>	Coast live oak	Y	NI
<i>Quercus kelloggii</i>	Black oak	Y	NI
<i>Quercus lobata</i>	Valley oak	Y	FACU
<i>Ranunculus occidentalis</i>	western buttercup	Y	FAC
<i>Ribes montigenum</i>	Alpine prickly current	Y	NI
<i>Rubus armeniacus</i>	Himalayan blackberry	N	FAC
<i>Salix lasiolepis</i>	Arroyo willow	Y	FACW
<i>Sericocarpus linifolius</i>	Narrowleaf whitetop aster	Y	NI
<i>Solidago missouriensis</i>	Missouri goldenrod	Y	NI
<i>Symphotrichum chilense</i>	Pacific aster	Y	FAC
<i>Toxicodendron diversilobum</i>	Poison oak	Y	FAC
<i>Typha latifolia</i>	Broad-leaved cattail	Y	OBL
<i>Verbascum blattaria</i>	Moth mullein	N	UPL
<i>Verbascum thapsus</i>	Common mullein	N	FACU
<i>Vitis californica</i>	California wild grape	Y	FACU

*Wetland Indicator Status (WIS):

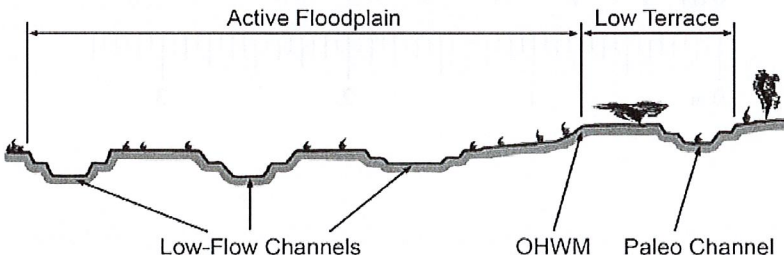
ERROR! REFERENCE SOURCE NOT FOUND.

- OBL = occurs in aquatic resources >99% of time
- FACW = occurs in aquatic resources 67-99% of time
- FAC = occurs in aquatic resources 34-66% of time
- FACU = occurs in aquatic resources 1-33% of time
- UPL = occurs in uplands >99% of time
- NI = indicator status not known in this region
- ~ = unsure as to FAC or FACU

Appendix E

OHWL DATASHEETS

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

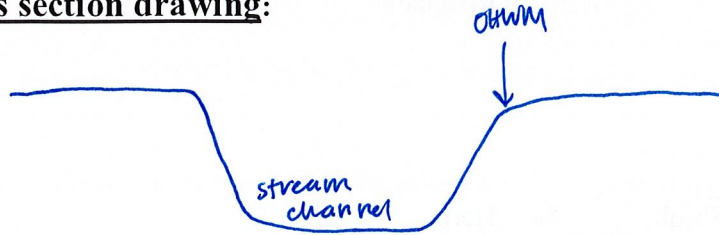
Project: CYPRESS FAMILY + SENIOR HOUSING Project Number: 621.09.55 Stream: STREAM CHANNEL 2 (OHWM 2) Investigator(s): CORD HUTE, ANNABEL LI	Date: 10/18/2022 Town: PARADISE Photo begin file#:	Time: State: CA Photo end file#:				
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Is the site significantly disturbed?	Location Details: RUNS EAST OF CLARK RD (PARALLEL) WITH A PERPENDICULAR LEG SOUTH OF CYPRESS LN. Projection: NAD 1983 Datum: MDBM Coordinates: 39.78427669 / -121.58559484					
Potential anthropogenic influences on the channel system: STREAM IS CULVERTED UNDER CYPRESS LN. SITE WAS PREVIOUSLY DEVELOPED, DESTROYED DURING 2018 CAMP FIRE, + DISTURBED BY CLEANUP / DEMOLITION ACTIVITIES. STREAM IS CHANNELIZED.						
Brief site description: SEE ABOVE.						
Checklist of resources (if available): <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> <input checked="" type="checkbox"/> Aerial photography Dates: 7/2022 <input checked="" type="checkbox"/> Topographic maps <input type="checkbox"/> Geologic maps <input checked="" type="checkbox"/> Vegetation maps <input checked="" type="checkbox"/> Soils maps <input type="checkbox"/> Rainfall/precipitation maps <input type="checkbox"/> Existing delineation(s) for site <input checked="" type="checkbox"/> Global positioning system (GPS) <input type="checkbox"/> Other studies </td> <td style="width: 50%; vertical-align: top;"> <input type="checkbox"/> Stream gage data Gage number: Period of record: <input type="checkbox"/> History of recent effective discharges <input type="checkbox"/> Results of flood frequency analysis <input type="checkbox"/> Most recent shift-adjusted rating <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event </td> </tr> </table>			<input checked="" type="checkbox"/> Aerial photography Dates: 7/2022 <input checked="" type="checkbox"/> Topographic maps <input type="checkbox"/> Geologic maps <input checked="" type="checkbox"/> Vegetation maps <input checked="" type="checkbox"/> Soils maps <input type="checkbox"/> Rainfall/precipitation maps <input type="checkbox"/> Existing delineation(s) for site <input checked="" type="checkbox"/> Global positioning system (GPS) <input type="checkbox"/> Other studies	<input type="checkbox"/> Stream gage data Gage number: Period of record: <input type="checkbox"/> History of recent effective discharges <input type="checkbox"/> Results of flood frequency analysis <input type="checkbox"/> Most recent shift-adjusted rating <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event		
<input checked="" type="checkbox"/> Aerial photography Dates: 7/2022 <input checked="" type="checkbox"/> Topographic maps <input type="checkbox"/> Geologic maps <input checked="" type="checkbox"/> Vegetation maps <input checked="" type="checkbox"/> Soils maps <input type="checkbox"/> Rainfall/precipitation maps <input type="checkbox"/> Existing delineation(s) for site <input checked="" type="checkbox"/> Global positioning system (GPS) <input type="checkbox"/> Other studies	<input type="checkbox"/> Stream gage data Gage number: Period of record: <input type="checkbox"/> History of recent effective discharges <input type="checkbox"/> Results of flood frequency analysis <input type="checkbox"/> Most recent shift-adjusted rating <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event					
Hydrogeomorphic Floodplain Units 						
Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM: <ol style="list-style-type: none"> 1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site. 2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units. 3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units. <ol style="list-style-type: none"> a) Record the floodplain unit and GPS position. b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit. c) Identify any indicators present at the location. 4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section. 5. Identify the OHWM and record the indicators. Record the OHWM position via: <table style="width: 100%; border: none; margin-top: 5px;"> <tr> <td style="width: 50%;"><input type="checkbox"/> Mapping on aerial photograph</td> <td style="width: 50%;"><input checked="" type="checkbox"/> GPS</td> </tr> <tr> <td><input type="checkbox"/> Digitized on computer</td> <td><input type="checkbox"/> Other:</td> </tr> </table> 			<input type="checkbox"/> Mapping on aerial photograph	<input checked="" type="checkbox"/> GPS	<input type="checkbox"/> Digitized on computer	<input type="checkbox"/> Other:
<input type="checkbox"/> Mapping on aerial photograph	<input checked="" type="checkbox"/> GPS					
<input type="checkbox"/> Digitized on computer	<input type="checkbox"/> Other:					

Project ID:

Cross section ID:

Date: 10/18/2022 Time:

Cross section drawing:



OHWM

GPS point: OHWM1

Indicators:

- | | |
|--|---|
| <input type="checkbox"/> Change in average sediment texture | <input checked="" type="checkbox"/> Break in bank slope |
| <input checked="" type="checkbox"/> Change in vegetation species | <input type="checkbox"/> Other: _____ |
| <input checked="" type="checkbox"/> Change in vegetation cover | <input type="checkbox"/> Other: _____ |

Comments:

DRAINAGE IS 8 FEET WIDE AND 3 FEET DEEP

Floodplain unit: Low-Flow Channel Active Floodplain Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: FINE SILT

Total veg cover: 85 % Tree: 0 % Shrub: 55 % Herb: 30 %

Community successional stage:

- | | |
|---|--|
| <input type="checkbox"/> NA | <input checked="" type="checkbox"/> Mid (herbaceous, shrubs, saplings) |
| <input type="checkbox"/> Early (herbaceous & seedlings) | <input type="checkbox"/> Late (herbaceous, shrubs, mature trees) |

Indicators:

- | | |
|--|--|
| <input type="checkbox"/> Mudcracks | <input checked="" type="checkbox"/> Soil development |
| <input type="checkbox"/> Ripples | <input type="checkbox"/> Surface relief |
| <input checked="" type="checkbox"/> Drift and/or debris | <input type="checkbox"/> Other: _____ |
| <input checked="" type="checkbox"/> Presence of bed and bank | <input type="checkbox"/> Other: _____ |
| <input type="checkbox"/> Benches | <input type="checkbox"/> Other: _____ |

Comments:

WATER FLOW PRESENT AT TIME OF SURVEY.
STREAM COURSE HAS BEEN CHANNELIZED.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: CYPRESS FAMILY + SENIOR HOUSING Project Number: 621.09.55 Stream: STREAM CHANNEL 2 (OHWM 2) Investigator(s): CORD HUTE, ANNABEL LI	Date: 10/18/2022 Town: PARADISE Photo begin file#:	Time: State: CA Photo end file#:				
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Is the site significantly disturbed?	Location Details: RUNS EAST + PARALLEL OF CLARK RD WITH A PERPENDICULAR LEG SOUTH OF CYPRESS LN Projection: NAD 1983 Datum: MOBM Coordinates: 39.78376841 / -121.5860839					
Potential anthropogenic influences on the channel system: STREAM IS CULVERTED UNDER CYPRESS LN. SITE WAS PREVIOUSLY DEVELOPED, DESTROYED DURING 2018 CAMP FIRE, + DISTURBED BY CLEANUP/DEMOLITION ACTIVITIES. STREAM IS CHANNELIZED.						
Brief site description: SEE ABOVE.						
Checklist of resources (if available): <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> <input checked="" type="checkbox"/> Aerial photography Dates: 7/2022 <input checked="" type="checkbox"/> Topographic maps <input type="checkbox"/> Geologic maps <input checked="" type="checkbox"/> Vegetation maps <input checked="" type="checkbox"/> Soils maps <input type="checkbox"/> Rainfall/precipitation maps <input type="checkbox"/> Existing delineation(s) for site <input checked="" type="checkbox"/> Global positioning system (GPS) <input type="checkbox"/> Other studies </td> <td style="width: 50%; vertical-align: top;"> <input type="checkbox"/> Stream gage data Gage number: Period of record: <input type="checkbox"/> History of recent effective discharges <input type="checkbox"/> Results of flood frequency analysis <input type="checkbox"/> Most recent shift-adjusted rating <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event </td> </tr> </table>			<input checked="" type="checkbox"/> Aerial photography Dates: 7/2022 <input checked="" type="checkbox"/> Topographic maps <input type="checkbox"/> Geologic maps <input checked="" type="checkbox"/> Vegetation maps <input checked="" type="checkbox"/> Soils maps <input type="checkbox"/> Rainfall/precipitation maps <input type="checkbox"/> Existing delineation(s) for site <input checked="" type="checkbox"/> Global positioning system (GPS) <input type="checkbox"/> Other studies	<input type="checkbox"/> Stream gage data Gage number: Period of record: <input type="checkbox"/> History of recent effective discharges <input type="checkbox"/> Results of flood frequency analysis <input type="checkbox"/> Most recent shift-adjusted rating <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event		
<input checked="" type="checkbox"/> Aerial photography Dates: 7/2022 <input checked="" type="checkbox"/> Topographic maps <input type="checkbox"/> Geologic maps <input checked="" type="checkbox"/> Vegetation maps <input checked="" type="checkbox"/> Soils maps <input type="checkbox"/> Rainfall/precipitation maps <input type="checkbox"/> Existing delineation(s) for site <input checked="" type="checkbox"/> Global positioning system (GPS) <input type="checkbox"/> Other studies	<input type="checkbox"/> Stream gage data Gage number: Period of record: <input type="checkbox"/> History of recent effective discharges <input type="checkbox"/> Results of flood frequency analysis <input type="checkbox"/> Most recent shift-adjusted rating <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event					
Hydrogeomorphic Floodplain Units 						
Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM: <ol style="list-style-type: none"> 1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site. 2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units. 3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units. <ol style="list-style-type: none"> a) Record the floodplain unit and GPS position. b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit. c) Identify any indicators present at the location. 4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section. 5. Identify the OHWM and record the indicators. Record the OHWM position via: <table style="width: 100%; border: none; margin-top: 5px;"> <tr> <td style="width: 50%;"><input type="checkbox"/> Mapping on aerial photograph</td> <td style="width: 50%;"><input checked="" type="checkbox"/> GPS</td> </tr> <tr> <td><input type="checkbox"/> Digitized on computer</td> <td><input type="checkbox"/> Other:</td> </tr> </table> 			<input type="checkbox"/> Mapping on aerial photograph	<input checked="" type="checkbox"/> GPS	<input type="checkbox"/> Digitized on computer	<input type="checkbox"/> Other:
<input type="checkbox"/> Mapping on aerial photograph	<input checked="" type="checkbox"/> GPS					
<input type="checkbox"/> Digitized on computer	<input type="checkbox"/> Other:					

Project ID:

Cross section ID:

Date: 10/18/22

Time:

Cross section drawing:



OHWM

GPS point: OHWM 2

Indicators:

- | | |
|--|---|
| <input type="checkbox"/> Change in average sediment texture | <input checked="" type="checkbox"/> Break in bank slope |
| <input checked="" type="checkbox"/> Change in vegetation species | <input type="checkbox"/> Other: _____ |
| <input checked="" type="checkbox"/> Change in vegetation cover | <input type="checkbox"/> Other: _____ |

Comments:

DRAINAGE IS 6.5 FEET WIDE + 3 FEET DEEP

Floodplain unit:

- Low-Flow Channel Active Floodplain Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: FINE SILT

Total veg cover: 85 % Tree: 0 % Shrub: 55 % Herb: 30 %

Community successional stage:

- | | |
|---|--|
| <input type="checkbox"/> NA | <input checked="" type="checkbox"/> Mid (herbaceous, shrubs, saplings) |
| <input type="checkbox"/> Early (herbaceous & seedlings) | <input type="checkbox"/> Late (herbaceous, shrubs, mature trees) |

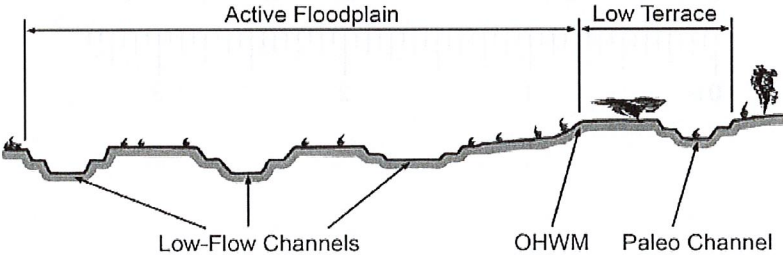
Indicators:

- | | |
|--|--|
| <input type="checkbox"/> Mudcracks | <input checked="" type="checkbox"/> Soil development |
| <input type="checkbox"/> Ripples | <input type="checkbox"/> Surface relief |
| <input checked="" type="checkbox"/> Drift and/or debris | <input type="checkbox"/> Other: _____ |
| <input checked="" type="checkbox"/> Presence of bed and bank | <input type="checkbox"/> Other: _____ |
| <input type="checkbox"/> Benches | <input type="checkbox"/> Other: _____ |

Comments:

WATER FLOW PRESENT AT TIME OF SURVEY.
 STREAM COURSE HAS BEEN CHANNELIZED.
 CONTINUATION OF STREAM CHANNEL 1 NORTH OF CYPRESS LN.
 ALSO RECEIVES FLOW FROM ULVERTS BELOW CLARK RD.

Arid West Ephemeral and Intermittent Streams OCHWM Datasheet

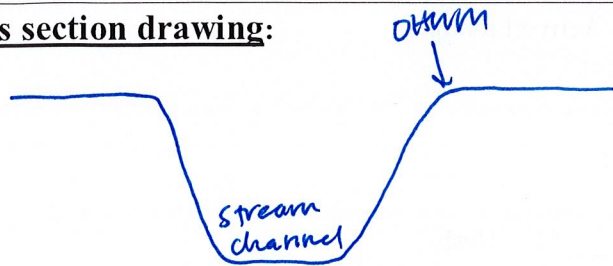
Project: CYPRESS FAMILY + SENIOR HOUSING Project Number: 621.09.55 Stream: DRY CREEK (OCHWM 3) Investigator(s): LORR HUTE, ANNABEL LI	Date: 10/18/2022 Town: PARADISE Photo begin file#:	Time: State: CA Photo end file#:				
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Is the site significantly disturbed?	Location Details: PUNS EAST + PARALLEL OF STORM CHANNEL 1 Projection: NAD 1983 Datum: MDBM Coordinates: 39.78425298 / -121.58509464					
Potential anthropogenic influences on the channel system: CREEK IS COVERTED UNDER CYPRESS LN. SITE WAS PREVIOUSLY DEVELOPED, DESTROYED DURING 2018 CAMP FIRE, + DISTURBED BY CLEARUP/DEMOLITION ACTIVITIES. STREAM IS CHANNELIZED.						
Brief site description: SEE ABOVE.						
Checklist of resources (if available): <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> <input checked="" type="checkbox"/> Aerial photography Dates: 7/2022 <input checked="" type="checkbox"/> Topographic maps <input type="checkbox"/> Geologic maps <input checked="" type="checkbox"/> Vegetation maps <input checked="" type="checkbox"/> Soils maps <input type="checkbox"/> Rainfall/precipitation maps <input type="checkbox"/> Existing delineation(s) for site <input checked="" type="checkbox"/> Global positioning system (GPS) <input type="checkbox"/> Other studies </td> <td style="width: 50%; vertical-align: top;"> <input type="checkbox"/> Stream gage data Gage number: Period of record: <input type="checkbox"/> History of recent effective discharges <input type="checkbox"/> Results of flood frequency analysis <input type="checkbox"/> Most recent shift-adjusted rating <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event </td> </tr> </table>			<input checked="" type="checkbox"/> Aerial photography Dates: 7/2022 <input checked="" type="checkbox"/> Topographic maps <input type="checkbox"/> Geologic maps <input checked="" type="checkbox"/> Vegetation maps <input checked="" type="checkbox"/> Soils maps <input type="checkbox"/> Rainfall/precipitation maps <input type="checkbox"/> Existing delineation(s) for site <input checked="" type="checkbox"/> Global positioning system (GPS) <input type="checkbox"/> Other studies	<input type="checkbox"/> Stream gage data Gage number: Period of record: <input type="checkbox"/> History of recent effective discharges <input type="checkbox"/> Results of flood frequency analysis <input type="checkbox"/> Most recent shift-adjusted rating <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event		
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Hydrogeomorphic Floodplain Units 						
Procedure for identifying and characterizing the floodplain units to assist in identifying the OCHWM: <ol style="list-style-type: none"> 1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site. 2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units. 3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units. <ol style="list-style-type: none"> a) Record the floodplain unit and GPS position. b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit. c) Identify any indicators present at the location. 4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section. 5. Identify the OCHWM and record the indicators. Record the OCHWM position via: <table style="width: 100%; border: none; margin-top: 5px;"> <tr> <td style="width: 50%;"><input type="checkbox"/> Mapping on aerial photograph</td> <td style="width: 50%;"><input checked="" type="checkbox"/> GPS</td> </tr> <tr> <td><input type="checkbox"/> Digitized on computer</td> <td><input type="checkbox"/> Other:</td> </tr> </table> 			<input type="checkbox"/> Mapping on aerial photograph	<input checked="" type="checkbox"/> GPS	<input type="checkbox"/> Digitized on computer	<input type="checkbox"/> Other:
<input type="checkbox"/> Mapping on aerial photograph	<input checked="" type="checkbox"/> GPS					
<input type="checkbox"/> Digitized on computer	<input type="checkbox"/> Other:					

Project ID:

Cross section ID: 10/18/2022 Date:

Time:

Cross section drawing:



OHWM

GPS point: OHWM3

Indicators:

- Change in average sediment texture
- Change in vegetation species
- Change in vegetation cover
- Break in bank slope
- Other: _____
- Other: _____

Comments:

DRAINAGE IS 19 FEET WIDE AND 3 FEET DEEP

Floodplain unit:

- Low-Flow Channel
- Active Floodplain
- Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: FINE SILT

Total veg cover: 90 % Tree: 15 % Shrub: 45 % Herb: 30 %

Community successional stage:

- NA
- Early (herbaceous & seedlings)
- Mid (herbaceous, shrubs, saplings)
- Late (herbaceous, shrubs, mature trees)
WILLOW SHRUBS / TREES

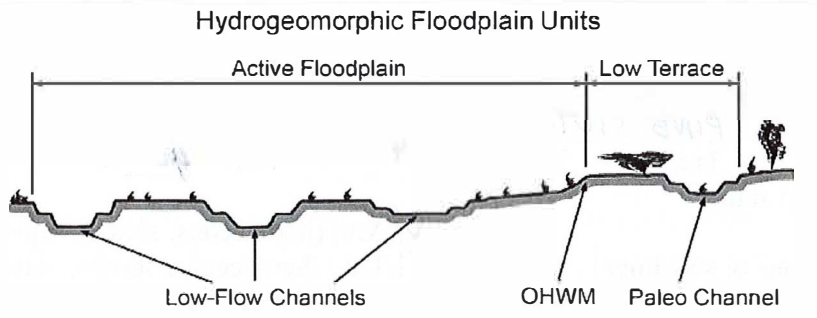
Indicators:

- Mudcracks
- Ripples
- Drift and/or debris
- Presence of bed and bank
- Benches
- Soil development
- Surface relief
- Other: _____
- Other: _____
- Other: _____

Comments:

WATER FLOW PRESENT AT TIME OF SURVEY.
CREEK HAS BEEN CHANNELIZED.

Arid West Ephemeral and Intermittent Streams OTHM Datasheet

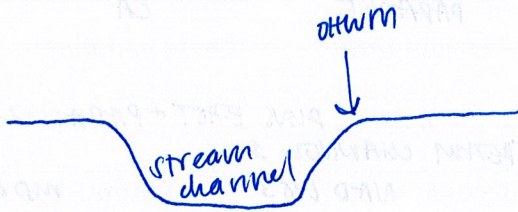
Project: CYPRESS FAMILY & SENIOR HOUSING Project Number: 621.09.55 Stream: DRY CREEK (OTHM 4) Investigator(s): CORD HUTE, ANNABEL LI	Date: 10/18/2022 Town: PARADISE Photo begin file#:	Time: State: CA Photo end file#:				
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Is the site significantly disturbed?	Location Details: PUNKS EAST + PARALLEL OF STREAM CHANNEL 1 Projection: NAD 1983 Datum: MDBM Coordinates: 39.78328052 / -121.68543857					
Potential anthropogenic influences on the channel system: CREEK IS CULVERTED UNDER CYPRESS LN. SITE WAS PREVIOUSLY DEVELOPED, DESTROYED DURING 2018 CAMP FIRE, & DISTURBED BY CLEANUP/DEMOLITION ACTIVITIES. STREAM IS CHANNELIZED.						
Brief site description: SEE ABOVE.						
Checklist of resources (if available): <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> <input checked="" type="checkbox"/> Aerial photography Dates: 7/2022 <input checked="" type="checkbox"/> Topographic maps <input type="checkbox"/> Geologic maps <input checked="" type="checkbox"/> Vegetation maps <input checked="" type="checkbox"/> Soils maps <input type="checkbox"/> Rainfall/precipitation maps <input type="checkbox"/> Existing delineation(s) for site <input checked="" type="checkbox"/> Global positioning system (GPS) <input type="checkbox"/> Other studies </td> <td style="width: 50%; vertical-align: top;"> <input type="checkbox"/> Stream gage data Gage number: Period of record: <input type="checkbox"/> History of recent effective discharges <input type="checkbox"/> Results of flood frequency analysis <input type="checkbox"/> Most recent shift-adjusted rating <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event </td> </tr> </table>			<input checked="" type="checkbox"/> Aerial photography Dates: 7/2022 <input checked="" type="checkbox"/> Topographic maps <input type="checkbox"/> Geologic maps <input checked="" type="checkbox"/> Vegetation maps <input checked="" type="checkbox"/> Soils maps <input type="checkbox"/> Rainfall/precipitation maps <input type="checkbox"/> Existing delineation(s) for site <input checked="" type="checkbox"/> Global positioning system (GPS) <input type="checkbox"/> Other studies	<input type="checkbox"/> Stream gage data Gage number: Period of record: <input type="checkbox"/> History of recent effective discharges <input type="checkbox"/> Results of flood frequency analysis <input type="checkbox"/> Most recent shift-adjusted rating <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event		
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Hydrogeomorphic Floodplain Units 						
Procedure for identifying and characterizing the floodplain units to assist in identifying the OTHM: <ol style="list-style-type: none"> 1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site. 2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units. 3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units. <ol style="list-style-type: none"> a) Record the floodplain unit and GPS position. b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit. c) Identify any indicators present at the location. 4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section. 5. Identify the OTHM and record the indicators. Record the OTHM position via: <table style="width: 100%; border: none; margin-top: 5px;"> <tr> <td style="width: 50%;"><input type="checkbox"/> Mapping on aerial photograph</td> <td style="width: 50%;"><input checked="" type="checkbox"/> GPS</td> </tr> <tr> <td><input type="checkbox"/> Digitized on computer</td> <td><input type="checkbox"/> Other:</td> </tr> </table> 			<input type="checkbox"/> Mapping on aerial photograph	<input checked="" type="checkbox"/> GPS	<input type="checkbox"/> Digitized on computer	<input type="checkbox"/> Other:
<input type="checkbox"/> Mapping on aerial photograph	<input checked="" type="checkbox"/> GPS					
<input type="checkbox"/> Digitized on computer	<input type="checkbox"/> Other:					

Project ID:

Cross section ID: ~~#1822~~

Date: 10/16/2022 Time:

Cross section drawing:



OHWM

GPS point: OHWM 4

Indicators:

- | | |
|--|---|
| <input type="checkbox"/> Change in average sediment texture | <input checked="" type="checkbox"/> Break in bank slope |
| <input checked="" type="checkbox"/> Change in vegetation species | <input type="checkbox"/> Other: _____ |
| <input checked="" type="checkbox"/> Change in vegetation cover | <input type="checkbox"/> Other: _____ |

Comments:

DRAINAGE IS 19.5 FEET WIDE AND 1.5 FEET DEEP

Floodplain unit: Low-Flow Channel Active Floodplain Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: FINE SILT

Total veg cover: 80 % Tree: _____ % Shrub: 40 % Herb: 40 %

Community successional stage:

- | | |
|---|--|
| <input type="checkbox"/> NA | <input checked="" type="checkbox"/> Mid (herbaceous, shrubs, saplings) |
| <input type="checkbox"/> Early (herbaceous & seedlings) | <input type="checkbox"/> Late (herbaceous, shrubs, mature trees) |

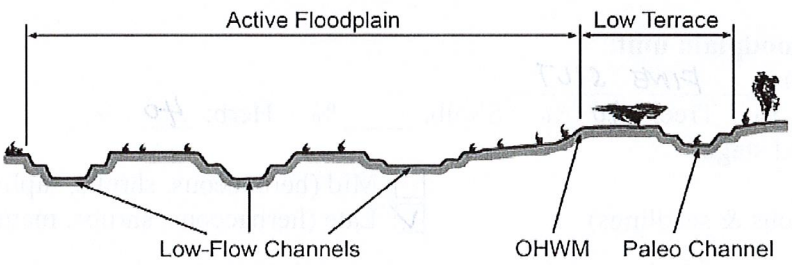
Indicators:

- | | |
|--|--|
| <input type="checkbox"/> Mudcracks | <input checked="" type="checkbox"/> Soil development |
| <input type="checkbox"/> Ripples | <input type="checkbox"/> Surface relief |
| <input checked="" type="checkbox"/> Drift and/or debris | <input type="checkbox"/> Other: _____ |
| <input checked="" type="checkbox"/> Presence of bed and bank | <input type="checkbox"/> Other: _____ |
| <input type="checkbox"/> Benches | <input type="checkbox"/> Other: _____ |

Comments:

WATER FLOW PRESENT AT TIME OF SURVEY.
CREEK HAS BEEN CHANNELIZED.

Arid West Ephemeral and Intermittent Streams OCHWM Datasheet

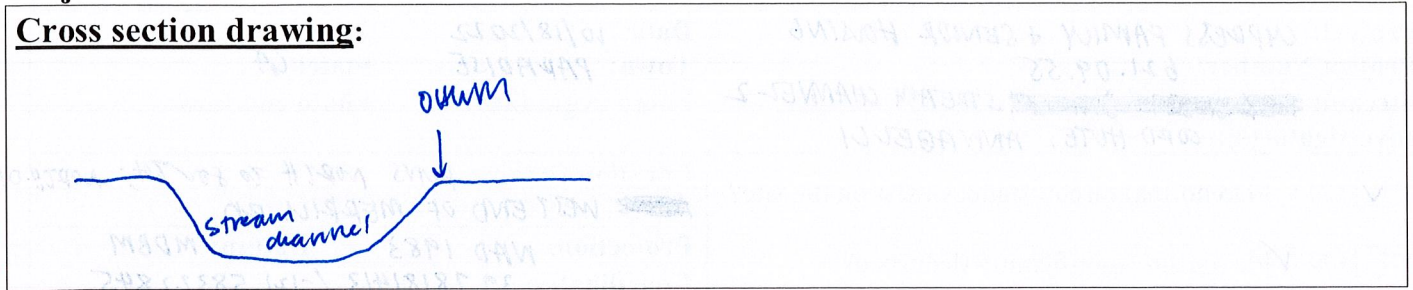
Project: CYPRESS FAMILY + SENIOR HOUSING Project Number: 621.09.55 Stream: XXXXXXXXXXXXXXXXXXXX STREAM CHANNEL 2 Investigator(s): WARD HUTE, ANNABELLI	Date: 10/18/2022 Town: PARADISE Photo begin file#: 001 Time: State: CA Photo end file#:					
Y <input checked="" type="checkbox"/> / N <input type="checkbox"/> Do normal circumstances exist on the site? Y <input type="checkbox"/> / N <input checked="" type="checkbox"/> Is the site significantly disturbed?	Location Details: RUNS NORTH TO SOUTH; NORTH OF XXXX WEST END OF MERRILL RD Projection: NAD 1983 Datum: MDBM Coordinates: 39.78181413 / -121.58322845					
Potential anthropogenic influences on the channel system: STREAM APPEARS TO BE NATURAL + FREE FLOWING						
Brief site description: OAK FORESTED AREA						
Checklist of resources (if available): <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> <input checked="" type="checkbox"/> Aerial photography Dates: 7/2022 <input checked="" type="checkbox"/> Topographic maps <input type="checkbox"/> Geologic maps <input checked="" type="checkbox"/> Vegetation maps <input checked="" type="checkbox"/> Soils maps <input type="checkbox"/> Rainfall/precipitation maps <input type="checkbox"/> Existing delineation(s) for site <input checked="" type="checkbox"/> Global positioning system (GPS) <input type="checkbox"/> Other studies </td> <td style="width: 50%; vertical-align: top;"> <input type="checkbox"/> Stream gage data Gage number: Period of record: <input type="checkbox"/> History of recent effective discharges <input type="checkbox"/> Results of flood frequency analysis <input type="checkbox"/> Most recent shift-adjusted rating <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event </td> </tr> </table>			<input checked="" type="checkbox"/> Aerial photography Dates: 7/2022 <input checked="" type="checkbox"/> Topographic maps <input type="checkbox"/> Geologic maps <input checked="" type="checkbox"/> Vegetation maps <input checked="" type="checkbox"/> Soils maps <input type="checkbox"/> Rainfall/precipitation maps <input type="checkbox"/> Existing delineation(s) for site <input checked="" type="checkbox"/> Global positioning system (GPS) <input type="checkbox"/> Other studies	<input type="checkbox"/> Stream gage data Gage number: Period of record: <input type="checkbox"/> History of recent effective discharges <input type="checkbox"/> Results of flood frequency analysis <input type="checkbox"/> Most recent shift-adjusted rating <input type="checkbox"/> Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event		
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Hydrogeomorphic Floodplain Units 						
Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM: <ol style="list-style-type: none"> 1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site. 2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units. 3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units. <ol style="list-style-type: none"> a) Record the floodplain unit and GPS position. b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit. c) Identify any indicators present at the location. 4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section. 5. Identify the OHWM and record the indicators. Record the OHWM position via: <table style="width: 100%; border: none; margin-top: 5px;"> <tr> <td style="width: 50%;"><input type="checkbox"/> Mapping on aerial photograph</td> <td style="width: 50%;"><input checked="" type="checkbox"/> GPS</td> </tr> <tr> <td><input type="checkbox"/> Digitized on computer</td> <td><input type="checkbox"/> Other:</td> </tr> </table> 			<input type="checkbox"/> Mapping on aerial photograph	<input checked="" type="checkbox"/> GPS	<input type="checkbox"/> Digitized on computer	<input type="checkbox"/> Other:
<input type="checkbox"/> Mapping on aerial photograph	<input checked="" type="checkbox"/> GPS					
<input type="checkbox"/> Digitized on computer	<input type="checkbox"/> Other:					

Project ID:

Cross section ID:

Date: 10/18/2022 Time:

Cross section drawing:



OHWM

GPS point: OHWM5

Indicators:

- Change in average sediment texture
- Change in vegetation species
- Change in vegetation cover
- Break in bank slope
- Other: _____
- Other: _____

Comments:

DRAINAGE IS 14 FEET WIDE AND 2 FEET DEEP

Floodplain unit: Low-Flow Channel Active Floodplain Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: FINE SILT

Total veg cover: 80 % Tree: 40 % Shrub: _____ % Herb: 40 %

Community successional stage:

- NA
- Early (herbaceous & seedlings)
- Mid (herbaceous, shrubs, saplings)
- Late (herbaceous, shrubs, mature trees)

Indicators:

- Mudcracks
- Ripples
- Drift and/or debris
- Presence of bed and bank
- Benches
- Soil development
- Surface relief
- Other: _____
- Other: _____
- Other: _____

Comments:

NO WATER FLOW PRESENT AT TIME OF SURVEY.

STREAM CHANNEL IS NOT CHANNELIZED.

FREE FLOWING, NATURAL.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Cypress Family & Senior Housing Project City/County: Paradise/Butte Sampling Date: 10/18/22
 Applicant/Owner: Mercy Housing State: CA Sampling Point: WL A
 Investigator(s): Cord Hute Section, Township, Range: Section 12, Township 22N, Range 03E
 Landform (hillslope, terrace, etc.): Valley Local relief (concave, convex, none): Concave Slope (%): <2%
 Subregion (LRR): California Lat: 39.78442771 Long: -121.58584614 Datum: NAD1983
 Soil Map Unit Name: Paradiso loam, 2 to 15 percent slopes (829) NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: Feature is a wetland. Top 2 inches of orange soil covering natural wetland soils are from bulldozing activities.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>None</u>				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
2. _____				
3. _____				
4. _____				
_____ = Total Cover				
Sapling/Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>None</u>				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>60</u> x 1 = <u>60</u> FACW species <u>30</u> x 2 = <u>60</u> FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: <u>90</u> (A) <u>120</u> (B) Prevalence Index = B/A = <u>1.33</u>
2. _____				
3. _____				
4. _____				
5. _____				
_____ = Total Cover				
Herb Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Juncus effusus</u>	<u>30</u>	<u>Codom</u>	<u>FACW</u>	Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
2. <u>Carex obnupta</u>	<u>60</u>	<u>Codom</u>	<u>OBL</u>	
3. <u>Mentha canadensis</u>	<u>10</u>	<u>Subdom</u>	<u>NI</u>	
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
_____ = Total Cover				
Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. _____				
_____ = Total Cover				
% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____				
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				

Remarks:
 Feature has hydrophytic vegetation dominant.

SOIL

Sampling Point: WLA

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-2	2.5 YR 6/8							
Oi (2-4)	No color identifiable							
A (4-6)	7.5YR 4/4, 5YR 4/4							slightly hard, slightly sticky/plastic
ABt (6-11)	5YR 5/4, 5YR 4/4							slightly hard, friable, mod sticky
Bt1 (11-16)	2.5YR 5/4, 2.5YR 4/4							slightly hard, friable, mod sticky
Bt2 (16-21)	2.5YR 5/4, 2.5YR 4/4							slightly hard, friable, mod sticky
Bt3 (21-27)	5YR 6/6, 5YR 4/4							slightly hard, friable, mod sticky

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input checked="" type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (TF2)
<input checked="" type="checkbox"/> Stratified Layers (A5) (LRR C)	<input checked="" type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input checked="" type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)		

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

Restrictive Layer (if present): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
--	---

Remarks:
Soil is hydric

HYDROLOGY

Wetland Hydrology Indicators:	
Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (2 or more required)
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)
<input checked="" type="checkbox"/> Saturation (A3)	<input checked="" type="checkbox"/> Aquatic Invertebrates (B13)
<input checked="" type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input checked="" type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input checked="" type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input checked="" type="checkbox"/> Thin Muck Surface (C7)
<input checked="" type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)
	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)

Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>2</u> Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>2</u>	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
--	---

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

Remarks:
Evidence of wetland hydrology observed during site visit.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Cypress Family & Senior Housing Project City/County: Paradise/Butte Sampling Date: 10/18/22
 Applicant/Owner: Mercy Housing State: CA Sampling Point: WL B
 Investigator(s): Cord Hute Section, Township, Range: Section 12, Township 22N, Range 03E
 Landform (hillslope, terrace, etc.): Valley Local relief (concave, convex, none): Concave Slope (%): <2%
 Subregion (LRR): California Lat: 39.78351394 Long: -121.58554527 Datum: NAD1983
 Soil Map Unit Name: Paradiso loam, 2 to 15 percent slopes (829) NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: Feature is a wetland.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>None</u>				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
2. _____				
3. _____				
4. _____				
_____ = Total Cover				
Prevalence Index worksheet:				
Total % Cover of: _____		Multiply by: _____		
OBL species	<u>30</u>	x 1 =	<u>30</u>	
FACW species	<u>0</u>	x 2 =	<u>0</u>	
FAC species	<u>65</u>	x 3 =	<u>195</u>	
FACU species	_____	x 4 =	_____	
UPL species	_____	x 5 =	_____	
Column Totals:	<u>95</u>	(A)	<u>225</u>	(B)
Prevalence Index = B/A = <u>2.37</u>				
Hydrophytic Vegetation Indicators:				
<input checked="" type="checkbox"/> Dominance Test is >50%				
<input checked="" type="checkbox"/> Prevalence Index is ≤3.0 ¹				
<input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)				
<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				
Herb Stratum (Plot size: _____) 1. <u>Ranunculus occidentalis</u> 40 <u>Codom</u> <u>FAC</u> 2. <u>Juncus xiphioides</u> 30 <u>Codom</u> <u>OBL</u> 3. <u>Carex sprengeii</u> 20 <u>Subdom</u> <u>FAC</u> 4. <u>Aletris farinosa</u> 5 <u>Subdom</u> <u>FAC</u> 5. _____ 6. _____ 7. _____ 8. _____ _____ = Total Cover Woody Vine Stratum (Plot size: _____) 1. _____ 2. _____ _____ = Total Cover % Bare Ground in Herb Stratum <u>5</u> % Cover of Biotic Crust <u>0</u>				
Remarks: Feature has hydrophytic vegetation dominant.				

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Cypress Family & Senior Housing Project City/County: Paradise/Butte Sampling Date: 10/18/22
 Applicant/Owner: Mercy Housing State: CA Sampling Point: WL C
 Investigator(s): Cord Hute Section, Township, Range: Section 12, Township 22N, Range 03E
 Landform (hillslope, terrace, etc.): Valley Local relief (concave, convex, none): Concave Slope (%): <2%
 Subregion (LRR): California Lat: 39.78259066 Long: -121.58558936 Datum: NAD1983
 Soil Map Unit Name: Paradiso loam, 2 to 15 percent slopes (829) NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: Feature is a wetland.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>None</u>				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
2. _____				
3. _____				
4. _____				
_____ = Total Cover				
Sapling/Shrub Stratum (Plot size: _____)				
1. <u>Rubus armeniacus</u>	<u>5</u>	<u>Subdom</u>	<u>FAC</u>	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>35</u> x 1 = <u>35</u> FACW species <u>55</u> x 2 = <u>110</u> FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: <u>90</u> (A) <u>145</u> (B) Prevalence Index = B/A = <u>1.61</u>
2. _____				
3. _____				
4. _____				
5. _____				
<u>5</u> = Total Cover				
Herb Stratum (Plot size: _____)				
1. <u>Juncus effusus</u>	<u>50</u>	<u>Codom</u>	<u>FACW</u>	Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
2. <u>Polypogon monspeliensis</u>	<u>5</u>	<u>Subdom</u>	<u>FACW</u>	
3. <u>Carex obnupta</u>	<u>35</u>	<u>Codom</u>	<u>OBL</u>	
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
<u>90</u> = Total Cover				
Woody Vine Stratum (Plot size: _____)				
1. _____				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. _____				
_____ = Total Cover				
% Bare Ground in Herb Stratum <u>5</u> % Cover of Biotic Crust <u>0</u>				

Remarks:
 Feature has hydrophytic vegetation dominant.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Cypress Family & Senior Housing Project City/County: Paradise/Butte Sampling Date: 10/18/22
 Applicant/Owner: Mercy Housing State: CA Sampling Point: WL D
 Investigator(s): Cord Hute Section, Township, Range: Section 12, Township 22N, Range 03E
 Landform (hillslope, terrace, etc.): Valley Local relief (concave, convex, none): Concave Slope (%): <2%
 Subregion (LRR): California Lat: 39.78262844 Long: -121.58551996 Datum: NAD1983
 Soil Map Unit Name: Paradiso loam, 2 to 15 percent slopes (829) NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: Feature is a wetland.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>None</u>				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
2. _____				
3. _____				
4. _____				
_____ = Total Cover				
<u>Sapling/Shrub Stratum</u> (Plot size: _____)				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>15</u> x 1 = <u>15</u> FACW species <u>55</u> x 2 = <u>110</u> FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: <u>70</u> (A) <u>125</u> (B) Prevalence Index = B/A = <u>1.79</u>
1. <u>Rubus armeniacus</u>	<u>5</u>	<u>Subdom</u>	<u>FAC</u>	
2. _____				
3. _____				
4. _____				
<u>5</u> = Total Cover				
<u>Herb Stratum</u> (Plot size: _____)				Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
1. <u>Juncus effusus</u>	<u>45</u>	<u>Dom</u>	<u>FACW</u>	
2. <u>Persicaria hydropiper</u>	<u>5</u>	<u>Subdom</u>	<u>OBL</u>	
3. <u>Polypogon monspeliensis</u>	<u>10</u>	<u>Subdom</u>	<u>FACW</u>	
4. <u>Carex obnupta</u>	<u>10</u>	<u>Subdom</u>	<u>OBL</u>	
5. _____				
6. _____				
7. _____				
<u>70</u> = Total Cover				
<u>Woody Vine Stratum</u> (Plot size: _____)				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. _____				
2. _____				
_____ = Total Cover				
% Bare Ground in Herb Stratum <u>25</u> % Cover of Biotic Crust _____		Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		

Remarks:
 Feature has hydrophytic vegetation dominant.

Appendix F

AQUATIC RESOURCES SPREADSHEET

See separate attachments for the Aquatic Resources Spreadsheet.