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July 10, 2023

Jill Demers, Executive Director
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RE: Comments on Draft Environmental Impact Report (DEIR) for "Russ Creek and Centerville Slough Restoration Project" near Centerville, Humboldt County (SCH No. 2022040559)

Dear Ms. Demers:

Thank you for soliciting input from the California Coastal Commission (Commission) staff on the above-referenced environmental document. We received the public notice for the draft document on May 26, 2023. Our office is familiar with the project site, having visited the properties several times, reviewed and commented on the previous Eel River Estuary Preserve Ecosystem Enhancement Project proposed 2016, and through our processing of at least a dozen permits and waivers on the subject properties over the past dozen years. In addition, our office still has multiple pending incomplete applications on file for development on the subject properties, including an incomplete CDP application from The Wildlands Conservancy (TWC, CDP Application No. 1-17-0328) for the Eel River Estuary and Centerville Slough Enhancement Project (for which the Commission approved an application fee waiver request in 2017) and an incomplete Vested Rights Claim application from Russ Ranch and Timber Co., LLC (VRC Application No. 1-10-038-VRC) for routine maintenance operations of various drainage ditches, levees, tide gates, crossings, and other features.[1]

As noted in the DEIR, the project involves development in the coastal zone, which requires a coastal development permit (CDP). Portions of the project may fall within the CDP jurisdiction of Humboldt County, though the majority of the project area is in the Commission's retained CDP jurisdiction. Where a project area bisects multiple CDP jurisdictions, if requested by the applicant and the County and agreed to by the Commission's Executive Director, the Commission has the authority to process a single consolidated CDP application for the project, using the Coastal Act as the standard of review. The DEIR also notes that a federal consistency determination (CD) may be required instead of a CDP. Where there's a required federal permit to conduct an

[1] We request the applicants formally withdraw these applications if no longer proposed due to the current proposed project.

activity affecting any land or water use or natural resources in the coastal zone, a CDP may serve as the Commission's review of a project under the federal Coastal Zone Management Act (CZMA). If the project is a federal project being undertaken by a federal agency with primary responsibility for implementing the project activities, a CZMA CD may be appropriate in lieu of, or in some cases in addition to, a CDP. Whether a CDP and/or CD is required is determined on a case-by-case basis and should be discussed with Commission staff. The standard of review that the Commission will apply to its evaluation of the proposed project in either case is consistency of the proposed development with the Coastal Act chapter 3 policies.

We offer the following comments regarding project itself and the content of the DEIR and supporting appendices, and we look forward to reviewing and providing more detailed feedback on the project during the CDP and/or CD application review process.

General Comments on Proposed Project

The project summary states the project would enhance existing tidal wetlands and restore marginal diked pastureland to a mosaic of natural habitats, including estuarine and tidal slough channels, freshwater streams, and agricultural pastures, all within the context of promoting the resilience of the project area and viability of adjacent agricultural lands outside of the project area. The project's principal goals of restoring and enhancing habitats for native fisheries and aquatic species, restoring coastal dunes, enhancing agricultural productivity, and increasing public access and recreation opportunities are laudable and largely aligned with the fundamental goals of the Coastal Act's resource management policies to protect and restore where feasible coastal resources, maximize public access and recreation, and address sea-level rise in project planning. However, we have some concerns with the proposed project and suggest additional analyses and consideration of additional alternatives:

1. <u>Proposed Realignment of Centerville Slough</u>

The project proposes to abandon the historic alignment of Centerville Slough as a tributary to Cutoff Slough and the Salt River. Centerville Slough's newly proposed alignment tracks north through the "inner marsh" and "outer marsh." The EIR should evaluate in more detail the permanent conversion of marsh habitat to aquatic habitat, the exposure of these areas to more rapid conversion and inundation via sea level rise, and the loss of aquatic habitat resulting from the abandonment of the remnant Centerville Slough channel.

Because the proposed project appears to abandon the historic and remnant Centerville Slough and Cutoff Slough channels, the EIR should evaluate the likely aggradation and ultimately infilling of this aquatic habitat. The EIR should analyze what effect the proposed revisions would have on existing conditions or habitat quality resulting from this realignment. Furthermore, the EIR should analyze the sustainability and stability of the proposed Centerville Slough channel considering its proximity to the dunes and its direct connection to the mouth of the Eel River.

In addition, the EIR should evaluate the extent to which the abandonment of this historic alignment will reduce the sustainability of the Salt River Ecosystem Restoration Project, which depends in large part on tidal prism to maintain channel form and to reduce maintenance costs resulting from channel aggradation. The EIR should also examine whether the proposed new alignment of Centerville Slough would adversely affect the use of the Salt River by salmonids and whether this proposed reconfiguration would affect channel stability of the Salt River.

While we agree that the proposed project will enhance tidal prism, we are concerned that the project proposes to relocate the alignment of the entrance of Centerville Slough to the mouth of the Eel River rather than within its historical alignment into the lower Salt River. During the Commission's review of the project, findings must be made that the project's proposed diking, dredging, and filling activities (evaluated under Coastal Act section 30233) and "substantial alterations of rivers and streams" (evaluated under Coastal Act section 30236) constitute "restoration" and "fish and wildlife habitat improvement" purposes (respectively), and it's unclear that those findings can be made. The EIR should confirm that velocities within the entrance to proposed Centerville Slough would permit passage of juvenile salmonids.

2. <u>New Setback Berm Alignment</u>

Except for the portion of the berm on the east side of inner marsh to be elevated, most of the 4-mile-long berm would be a new structure built on top of existing estuarine (including brackish marsh, muted tidal, and brackish pasture) wetlands. The EIR should explain the rationale for the proposed siting and design of the new berm under the proposed alternative (other than its intent to be sited within the confines of the NRCS easement area) and how this alternative could be considered the least environmentally damaging feasible alternative with respect to wetland fill under section 30233 of the Coastal Act. Extensive areas within the vicinity of Angels Camp Marsh and northward have already (in recent years due to ocean wave overwash) been naturally converted to estuarine marsh and aquatic habitat, and the project as proposed would install a berm either immediately on the edge of or in some cases westward (seaward of) of a portion of these existing natural estuarine wetlands as well as directly through them in some areas. Thus, the project would reclaim and convert hundreds of acres of existing wetlands classified as estuarine to agricultural uplands subject to beneficial reuse of sediment, inconsistent with Coastal Act section 30233. The Commission has in past CDPs and CDs authorized new setback berms for restoration purposes, which have provided benefits to surrounding agricultural lands (e.g., Riverside Ranch, lower Jacoby Creek estuary restoration on Arcata Bay, and others). These tidal restoration projects have restored to tidal function significant expanses of diked former tidelands (farmed freshwater wetlands) by breaching dikes and building new setback berms to prevent existing structures and critical infrastructure inland of dikes from flooding and/or to protect remaining agricultural lands inland of the new berms. In past cases, dikes have been located on farmed wetlands. But this project is different in that it proposes a new agricultural dike within and bifurcating in part an estuarine area that already has been tidal for some time or more recently has converted back to tidal habitat since wave

overwash events over the past 20+ years. Essentially, portions of the new setback berm would function as an ocean-front “seawall”-type structure built along an existing estuary for the purpose of reclaiming and protecting agricultural lands. Such structures alter natural shoreline processes and are generally disallowed under the Coastal Act.

3. Limits of Creek Restoration

Although the project includes realignment and restoration of 1,500 feet of Russ Creek, restoration is limited to areas within the TWC property boundary, and no restoration is proposed along Shaw Creek. Added beneficial measures upstream from the TWC property and NRCS easement boundaries could include buffering of creek banks from cattle grazing to minimize the contribution of related water quality impacts to downstream restoration areas and planting riparian habitat along the creek reaches that fish will be able to access through the proposed new fish-friendly gates. Expanding creek restoration to include areas upstream of the property/easement boundaries would align with the project’s overall restoration goals of increasing habitat for salmonids and other sensitive aquatic species within the restored project area reach.

Alternatives

We recommend the EIR evaluate alternative project designs that address the above project concerns, including, but not limited to: (1) alternative restoration alignments for Centerville Slough that maintain its connection with the Salt River, ensure the preservation of historic and remnant Centerville Slough and Cutoff Slough channels, and promote sea level rise resiliency not only for agricultural lands but for the primary restoration elements of the project; and (2) alternative setback berm alignments that reduce the amount of wetland fill (especially fill in estuarine habitats), avoid reclamation of hundreds of acres of existing estuarine (largely brackish marsh) habitat, and potentially increase wetland and creek restoration opportunities and provide greater resiliency to sea-level rise by being located further inland.

Additional General Comments

1. Baseline Conditions

The DEIR throughout includes general descriptions of the project setting and baseline conditions. Although the DEIR acknowledges that “historic” anthropogenic actions altered the project area and its hydrology, few details of the scope of more recent and current maintenance activities are presented. There is reference (e.g., in Table 3-1) to project area maintenance occurring prior to project construction, though it’s unclear what entails the full extent of maintenance activities included in that scope. There is discussion of a drainage easement established in 2008 that allows grantees to perform certain drainage maintenance functions (e.g., removal of sand and sediment from the western drainage ditch and maintenance of tide gates and dikes) to the extent that such actions are legally permissible, but details on those maintenance activities and whether associated permits are in place are lacking. Similarly, it remains unclear to what extent certain infrastructure such as elevated berms and ranch roads and even Cutoff Slough tide gate are baseline conditions in the context of having obtained necessary permits

(the DEIR states that the existing Cutoff Slough tide gate was “replaced” in 1979, but it’s not clear that CDP or CD authorization for that tide gate replacement work was ever obtained).

To increase understanding of what is considered baseline based on legally permitted infrastructure and ongoing maintenance actions (and how the project will affect baseline conditions based on the impact analyses), we recommend the EIR describe more fully the current/ongoing anthropogenic actions that have contributed in part to baseline conditions [e.g., levee/berm maintenance and new construction (e.g., from dredge spoils placement), tide gate repairs, creek and ditch channel dredging, channel realignments, etc.].

Importantly, the EIR should make clear how brackish wetlands and aquatic habitat that apparently are proposed to be reclaimed for agriculture are evaluated in the context of baseline conditions, what habitat conditions they are currently providing (e.g., to migratory birds), and what assumptions are made with respect to habitat conversion.

2. Upland Delineation

The DEIR relies on an assumption that certain areas dominated by FAC-ranked plants that lack evidence of hydric soil or wetland hydrology indicators are “three parameter uplands,” and the FAC-dominated vegetation in these areas should not be considered indicative of wetland conditions, because the plants are not actually growing as hydrophytes. This assumption affects some of the calculations in the impact/mitigation tables presented in the DEIR (and related Appendix C). The description of hydrology methodology is confusing but seems to suggest that upland delineations were based largely on data collected 8-10 years ago during drought conditions. Given the outdatedness of the older data collected during drought, it’s unclear why in some cases it was relied upon to override more recently collected data in 2021-2022 during a period of more typical rainfall. While we note that acreage of delineated uplands decreased with the more recent delineations, it remains unclear that the proposed delineation relies on sufficient evidence to rebut the presumption of wetland hydrology in areas dominated by FAC-ranked vegetation. The EIR should elaborate on its relied upon wetland hydrology analysis to demonstrate that hydrology is absent in areas dominated by hydrophytic vegetation classified as “three parameter uplands.”

3. Wetland Mitigation

As proposed, mitigation for wetland fill impacts from the proposed new or improved setback berm (the construction of which will result in fill exceedance over the area of wetlands to be created by lowering the existing dike separating the outer and inner marshes) will be provided by converting agricultural uplands within the project area to wetlands that will continue to be used for agricultural purposes of presumably lesser productivity. The agricultural wetlands identified for mitigation appear to be an area that is both historical upland habitat and an area of high agricultural productivity. The EIR should evaluate whether the proposed conversion of highly productive agricultural land is suitable for wetland mitigation.

The EIR should also evaluate if the proposed mitigation will adequately compensate for the specific types of wetlands to be lost/converted. We recognize that wetland mitigation opportunities are limited on the properties, and we understand the rationale in proposing to create agricultural wetlands of higher function and value than the impacted wetlands for impacts to farmed wetlands from the berm placement. However, in this case the impacted wetlands, according to the DEIR information, are largely estuarine in nature (some in the process of converting back to estuarine function). The primary purpose of the wetland mitigation should be wetland restoration (vs. agriculture) that adequately compensates for the types and amounts of impacted wetlands, and which provides similar or greater habitat functions and values as the impacted wetlands. Normally the Commission requires mitigation ratios greater than 1:1 to account for the anticipated temporal loss of wetland area and function between the timing of impact relative to timing of mitigation as well as to account for the uncertainty of success associated with the proposed wetland mitigation project. We recommend the EIR consider alternative mitigation options (including alternative locations for mitigation) if additional mitigation is necessary. Any wetland mitigation proposal should be informed by a detailed wetland mitigation monitoring and reporting plan.

4. Monitoring and Maintenance

The MMP (Appendix D to the DEIR) proposes various activities, including removing sediment from restored channels over time and placing excavated sediments on surrounding wetlands. Under the Coastal Act, placement of fill material in wetlands is allowed only for certain specified uses. Although statements such as “Sediment reuse on wetland areas would only occur if wetland function would be unimpacted and the purpose of the reuse is to promote habitat restoration and/or sea level rise resiliency for habitat diversity purposes” are included, under the Commission’s review process any proposal for wetland diking, dredging, and filling activities as part of the main project construction or during the post-construction monitoring and maintenance phase will need to demonstrate that sediment placed in wetlands is allowable under Section 30233 of the Coastal Act and willrequire development of site-specific restoration and monitoring plans, consideration of alternatives to wetland diking/dredging/filling, a description of feasible mitigation measures to minimize adverse environmental effects associated with any authorized diking/dredging/fill placement for restoration purposes (sea level rise resiliency is not an allowed use for wetland fill under the Coastal Act), and demonstration through monitoring that the functional capacity wetlands will be maintained.

The MMP describes post-construction project performance monitoring as consisting of NRCS performing an annual desktop review of certain documents and imagery and a general qualitative annual onsite inspection. To ensure that the project achieves the restoration goals and objectives set forth in DEIR section 2.3 and elsewhere in the document with respect to enhancement of native plant and aquatic habitats and no net loss of coastal wetlands, a detailed post-construction habitat restoration monitoring and reporting plan (prepared by a qualified biologist) should be developed that includes measurable (quantitative) performance standards to be monitored for at least five years

by a qualified biologist and to be reported to permitting agencies annually for review that will assure achievement of the project restoration goals and objectives, including, but not limited to, expansion of rare plant habitat, improved access to the restored project reach by salmonids and other native aquatic life, continued use of the restored habitats by populations of sensitive birds and amphibians that currently are known to occupy wetlands and dunes in the project area, and persistence of ecological function of proposed restored wetlands, dunes, and waters in the project area. We also recommend the habitat restoration and reporting plan include provisions for site remediation if monitoring results indicate that the site is not meeting the goals, objectives, and performance standards identified in the final approved plan.

Comments on Impact Evaluations

Aesthetics

This section does not include an evaluation of (1) the historic barns or the impact that their proposed demolition would have on scenic vistas in an area accessible to the public, or (2) the proposed new berm segments that would be visible from Centerville Road and Centerville Beach (e.g., the southernmost segment of new berm proposed). We recommend the EIR analyze these visual changes.

Agriculture Resources

Related to the comments above regarding locating the wetland mitigation site within a productive agricultural upland, there may be conflicts with siting wetland mitigation at this location and the Coastal Act limitations on conversions of agricultural lands to non-agricultural uses. We understand that as proposed the wetland mitigation area would be maintained in agricultural production and therefore may not be considered a conversion. However, as discussed above, this proposal conflicts with the Commission's typical mitigation requirements that require the primary purpose of wetland mitigation to provide appropriate and sufficient compensation for impacts based on the specific types and amounts of impacted wetlands. As recommended above, the EIR should consider other mitigation options if additional mitigation is necessary.

In addition to these issues, please also reconsider the assumptions and analyses in this chapter to address the following:

- The DEIR assigns a 0 lb/acre value to converted farmland. Similarly, Angels Camp is described as "devoid of agricultural productivity, capacity or potential" due to wave overwash and conversion. It therefore is unclear why the project proposes to install a new setback berm within this area – presumably to "reclaim" valuable agricultural land that has no "potential." The EIR should clarify the assumptions made about specific areas within and adjacent to the project footprint and provide evidence to support the assumptions and projections made in the DEIR.

- In the context of wave overwash and habitat conversions, the DEIR (page 3.2-6) states "…*absent dune stabilization and planned retreat planning for the future,*

future agricultural productivity in the study area appears to be threatened." This discussion does not acknowledge that dune stabilization, via the planting and proliferation of *Ammophila*, may be a contributing factor to the avulsions that have occurred. The EIR should explain where appropriate how stabilization will not adversely impact dune habitat.

- The DEIR discusses agricultural productivity, factors used in determining productivity, and changes in productivity valuation that occurred in areas where wave overwash caused a modification in habitat (resulting in a decrease in agricultural productivity). The DEIR acknowledges that certain assumptions about productivity were made in certain areas due to a lack of data. Although various other factors were considered, the DEIR does not explain how or to what extent those factors influenced productivity (e.g., many of the considered factors are conceivably dominant factors, such as prolonged inundation with freshwater). The EIR should explain with site-specific examples how and to what extent various factors have influenced productivity. In addition, it's confusing that the analysis assigns the same valuation to all "other areas that did not transition to another habitat type due to wave overwash" as the valuation presented in the 2016 agricultural analysis. The EIR should present the findings of the two analyses in an "apples to apples" format to ensure the veracity of this comparison.

- The agricultural analysis assumes the value of hay to be $150/ton. The EIR should provide a valuation that averages the cost of hay over differing years and that reflects the increasing value of this crop in an era of cyclical drought and increased demand.

- The DEIR assumes that isolation of agricultural land east of the new berm from wave overwash alone will dramatically increase productivity on those agricultural lands. The EIR should explain this anticipated improvement in productivity and how it would not be compromised by factors such as groundwater intrusion from saline water sources, ponding, channel avulsion, and other factors.

- There is an assertion that the productivity of the proposed wetland mitigation area "*is not anticipated to significantly change post Project due to the freshwater nature of the proposed wetlands and similar rate of growth of pasture grasses under existing and proposed conditions and proposed to be grazed as currently is occurring*" (pgs. 3.2-22-23). The premise under the DEIR analysis in this chapter is that by creating a new setback berm, agricultural productivity will rise dramatically by hundreds of pounds per acre, yet converting the highest productivity pasture in the project area to freshwater wetland for mitigation purposes will not affect productivity. The EIR should explain this paradox and describe how the conversion of this area will not adversely impact productivity levels.

Biological Resources

In addition to comments above (related to slough realignment from the Salt River to the Eel; potential impacts to existing aquatic habitats that are likely to aggrade; assumptions of project benefits to fish that are not fully substantiated; concerns with the upland delineation; concerns with the amount of wetland fill and its placement in an existing estuary; concerns with the location and adequacy of the wetland mitigation; concerns with project sustainability and resiliency to SLR; and concerns related to habitat mitigation and monitoring), please also reconsider the biological resources assumptions and analyses to address the following:

- The EIR should analyze how locating the discharge of Centerville Slough at the mouth of the Eel River may increase velocities there and impact the existing harbor seal pupping area in the vicinity as well as promote (or prevent) fish passage into the estuary due to high velocities at the mouth.

- Where the EIR asserts fish passage benefits, it should explain the benefits in the context of quality and extent of habitat that access will be provided and should consider existing areas accessible to fish that may be impacted by the project.

- The proposed repairs to Cutoff Slough tide gate make no provision for fish passage or improvement of tidal exchange. While the DEIR mentions capture of coho during 2014-2016 monitoring of the Salt River and Riverside Ranch areas (pg. 3.4-39), no improvements are proposed in this area upstream. And while the DEIR in several places asserts that the proposed repairs will reduce leakage, it does not address the potential impacts to fish passage caused by this activity. Also, as mentioned, the proposed abandonment of the historic and remnant Centerville and Cutoff Slough channels will likely lead to aggradation and ultimately infilling of existing historic salmonid habitat.

- We appreciate that the project proposes to control invasive *Spartina* prior to construction using various methods. While the project also proposes to control *Spartina* post-construction in compliance with the permitted regional *Spartina* eradication plan and the associated EIR, note that the CDP term for *Spartina* removal under that Plan ends in 2025. Given that other nearby restoration sites (namely Riverside Ranch) have shown rapid conversion to *Spartina* marsh within just a few years of restoration, it should be expected that the proposed restoration area will be similarly dominated within a short period. This would affect the presumption that rare plants such as Humboldt Bay owl's clover will proliferate as much as anticipated to compensate for the direct impacts to rare plants caused by project construction and associated habitat conversions. The EIR should provide assurance that the performance targets identified can be met for a reasonable period of time assuming full dominance of marsh by *Spartina* within a short period.

- MM-BIO-7 proposes to avoid and buffer beach layia plants from the proposed from haul route impacts, or, if plants cannot be avoided, to employ a relatively elaborate

and at this point undetermined mitigation process involving either collecting seeds and scattering them in nearby areas, or growing plants out in a nursery and replanting in "a stable portion of the Project Area," or relocating plants, and/or preparing an SSMP that will figure out the mitigation details at a later time in consultation with the USFWS. It's unclear whether any of the proposed mitigation options would be successful for this federally listed annual plant. Another mitigation option not suggested is *Ammophila* removal, which we recommend be added as an option. We recommend mitigation details be better defined in the EIR to provide assurance that mitigation will be successful to fully mitigate for impacts.

- Impact BIO-2 finds that there will be no net loss of riparian habitat since 2.3 acres will be converted, but 2.8 acres will be planted along Russ Creek. This evaluation does not account for temporal loss and the time it will take for the planted riparian community to achieve the same level of maturity and function as the habitat to be lost. We recommend adding mitigation to increase the riparian planting at a higher ratio to account for this temporal loss. Any restored riparian should be buffered from cattle and other agricultural uses.

- MM-BIO-8 states that if "high quality" dune mat cannot be avoided, it will be mitigated at a 1:1 ratio, but there is no description of mitigation or of "high quality dune mat." We recommend that all dune mat, not just "high quality," be appropriately mitigated. We also again recommend considering removal of invasive *Ammophila* or other meaningful mitigation strategies. Consider expanding the scope of MM BIO-9 to add *Ammophila* removal as mitigation for impacts to sensitive listed species and habitats (beach layia and dune mat).

- With respect to impacts of the project on tidal wetlands, Impact BIO-2 finds that "*Project activities are anticipated to result in a net increase in tidal wetlands with the reintroduction of tidal influence south of the existing levee*." However, Table 3.4-7 shows that the project will actually reduce tidal habitats in the project area by almost 245 acres (considering total changes in Aquatic, Brackish Marsh, Full Tidal Wetlands, Muted Tidal Wetlands, and Brackish Pasture habitats) due to the proposed reclamation and conversion of tidelands for upland pasture use. The EIR should address this significant impact.

- In the Impact BIO-3 analysis, the DEIR states "*Overall, the Project will result in an increase in tidal wetlands and a reduction in agricultural/grazed wetlands. The change in wetland type is not deemed a significant impact since habitat value will be enhanced in the Inner Marsh and west of the proposed berm through improved tidal prism and associated habitat quality*." Based on the mapping of grazed and "not grazed" lands (Fig. 3.2-4), agricultural/grazed wetlands include brackish marsh, muted tidal wetlands, brackish pasture, freshwater pasture, and open water habitats. The EIR should further elaborate on the habitat values that will be enhanced through these wetland changes and identify assurances that that enhancements will be successful.

- MM-BIO-10 proposes to mitigate temporary and short-term impacts to permanent, transitional, and seasonal wetlands by seeding almost an acre of uplands with wetland-oriented species (FAC, FACW, and OBL) "*to create one-parameter wetlands in the Project Area. Up to 0.41 acre will be seeded around the margin of the upland pasture and up to 0.44 acre will be seeded on the east side of the new levee*." This mitigation measure should be refined to ensure that the proposed mitigation compensates for the specific types and amounts of wetlands to be impacted. It's also unclear whether the mitigation will be successful, as seeding upland areas (which, by definition, lack wetland hydrology) with wetland plants will not result in the creation of coastal wetlands. The Commission assumes wetland hydrology is present in so-called "one-parameter" wetlands (thus, they're actually two parameter wetlands); if evidence shows the absence of wetland hydrology in so-called "one parameter" areas, then such areas are not actually wetlands under the Coastal Act. The EIR should consider additional mitigation options for this impact to ensure the impact is reduced to a less than significant level.

Hydrology and Water Quality

In addition to comments above related to slough realignment and potential related impacts to existing aquatic and marsh habitats that are likely to aggrade, please also reconsider the hydrology assumptions and analyses to address the following:

- The chapter discusses how "*The saline groundwater from the ocean and inner tidal areas is denser than the freshwater flowing from the upper reaches, which causes the saltwater to migrate inland and under the Project Area. The saltwater and fresh groundwater meet and mix through advection and dispersion, creating a transition zone in the shallow unconfined aquifer*." Considering this, the EIR should explain how the increased introduction of tidal exchange into the project area will not impact groundwater quality and explain how these trends will or will not impact agricultural productivity assumptions presented elsewhere in the DEIR.

- It's unclear how the SLR analysis presented on page 3.10-32 relates to the discussion of SLR projections presented on pages 3.10-5 and 3.10-6, because the analysis lacks specificity as to which scenarios/projections are being considered in drawing the conclusion that the proposed system of new levees and rehabilitated levees would prevent flooding, and for how long the flood prevention is expected (stating vaguely "for the foreseeable future"). If the assumptions and conclusions in the analysis are based on certain scenarios and projections listed in Table 3.10-2, we recommend adding that clarification.

- We also recommend updating the discussion of SLR projections and analysis to follow the Commission's adopted SLR guidance (2018), which recommends consideration of a more precautionary approach than appears to be presented in the DEIR. Consider updating Table 3.10-2 to include SLR ranges from the upper limit of "likely range" (66% probability) to the 1-in-200 chance (0.5% probability)

and supplement the discussion in the SLR analysis to consider a range of possible changes and sea level rise risks to inform conclusions on impacts and mitigation.

- The Coastal Act requires that projects be sited and designed to minimize hazard risks, and as discussed above, we recommend the EIR evaluate certain project alternatives that may provide greater resiliency to SLR for the restoration components of the project. In any case, the Commission's SLR guidance recommends that while projects need not be designed in all cases for the local hazard conditions that will result from higher-projected sea level rise scenarios, projects should plan for adaptation pathways and mitigation measures if conditions change more than anticipated in the initial design.

- The Impact HWQ-6 discussion should be expanded to consider potential impacts to drainage and sedimentation rates within the Salt River.

Recreation

- The analysis should be revised to recognize that existing conditions at the Eel River Estuary Preserve (ERAP) enable the public to access the beach for recreational purposes. The DEIR does not discuss the fact that the proposed development will terminate this access and prohibit the public from accessing the beach. Because the impact is not discussed, no finding of significance is made nor is any mitigation offered. Centerville Beach is frequently subject to the same overwash events the project area experiences and is of decreasing utility in the context of sea level rise. There are no other nearby sites to access the beach other than Ocean Ranch across the Eel River several miles to the north.

- Page 3.14-4 erroneously states that the Commission issued a CDP in 2021 for an increase in public access to three days per week. Because TWC has not yet obtained authorization from the Commission for new or increased public access on the site as was obtained for the portion of the property within the County's jurisdiction, consider revising the assumption that three days per week visitation is the appropriate baseline for the recreation analysis and updating related estimates and the environmental impact evaluations in the recreation analysis.

Thank you for considering these comments. We look forward to engaging further on the project during the CDP and/or CD application review.

Sincerely,

Melissa Kraemer
North Coast District Manager